Need To Know Book

Year 11

2024/2025

Name:_____

Form Group: _____

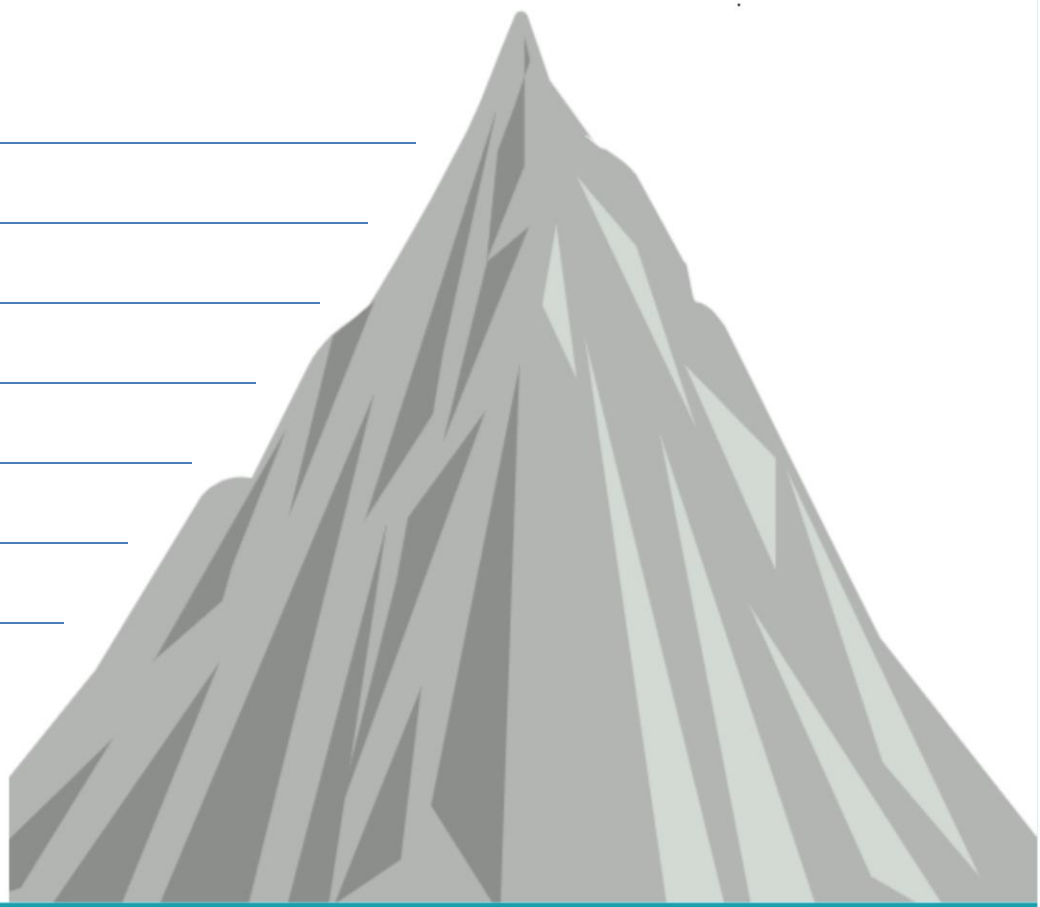
Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

My Aspirational Sentence.

Little Lever School
be kind | work hard | take responsibility

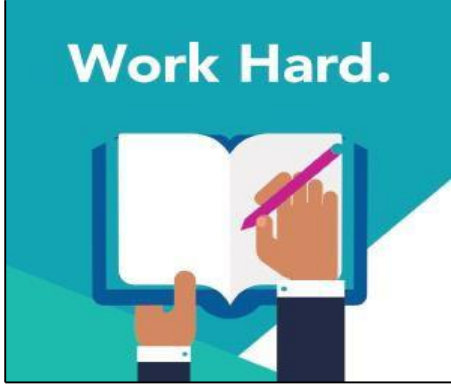
What does the top of my mountain look like?



Contents Page

Content	Page Number
Need to Know Instructions	5
Art	
• Art	7 – 12
• Fashion	13 - 16
• Photography	17 - 22
Computing	
• Business	23 - 50
• Computer Science	51 - 70
• DIT	71 - 88
• Media	89 - 122
Design and Technology	
• Hospitality and catering	123 - 150
• Design Tech	151 - 174
Drama	175- 186
English	187 - 246
Geography	247 - 266
History	267- 300
Maths	301 - 322
Modern Foreign Languages	
• French	323- 346
• Spanish	347 - 368
Music	
• Music	369 - 402
• Performing Arts	403 - 410
PE	
• Core PE	411 - 418
• Option PE	419 - 432
Religious Education	433 - 448
Science	449 - 486

Knowledge Retrieval Sheet



What are knowledge retrieval sheets?

Here at Little Lever School, we think it is really important that you know what the essential knowledge is for each subject that you study. Learning takes place not only in the classroom, but in all areas of the school building, and at home. These knowledge retrieval sheets contain all the essential knowledge you will need to help revise and make progress towards achieving your best in all of your subjects.

By using your knowledge retrieval sheets each week you will be able to transfer your knowledge from your short-term memory, and make it stick. Within all your lessons, you will be asked to retrieve knowledge from your long-term memory. This might be in the form of quizzes or longer responses. These might require you to use lots of information you have already stored from previous lessons and from your own life experiences. These Need to Know Books will help you to check how much you can remember.

We have designed your knowledge retrieval sheets so that they are simple for you to use both in school and at home. You can even get others to help you. Below are some options for how you might use each sheet to make the knowledge stick in your brain so that you will be able to remember it.

Using Knowledge Retrieval Sheets- 5 Top Tips:

1. **'Look, Cover, Say, Write, Check'-** Look at a fact on your sheet, cover it up with your hand or a piece of paper. Say it out loud, write the fact down without checking and then uncover and check if you were correct.
2. **'If this is the answer, what is the question?'-** Quiz yourself by covering up facts on your sheet. For example, you could cover up the definition of key vocabulary and try to remember what the key vocabulary means.
3. **Independent low-stakes quizzing-** Use the questions on the back of each sheet to test yourself. You should write the answers on a separate sheet of paper so that you can use the question sheet again in future.
4. **Paired low-stakes quizzing-** Give your book or a sheet to someone else. (Could be a friend, teacher or family). They can ask you the questions on the back of any sheet and use the facts on the front to check if you are correct.
5. **Flashcard Revision-** Make flashcards using your knowledge sheets. Can you summarise the essential knowledge into your own words to put onto a pocket-sized revision card?

Art, Fashion and Photography

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 Art: Assessment Objectives (AO1 +AO2)

AO1

EXPLORE

DEVELOP

DEVELOP IDEAS

INVESTIGATE & RESEARCH

OTHER ARTISTS WORK

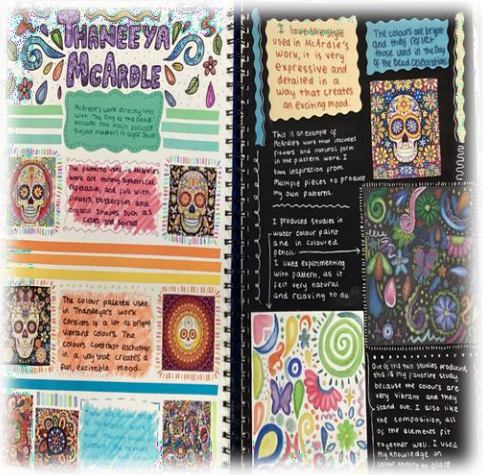
ANALYSE

ANNOTATE

AO1

These are the things that you should consider including in AO1:

- Artist research pages.
- Visits to exhibitions and galleries.
- Your own responses in the style of the artist.
- Interviews with artists/ photographers.
- Annotate and analyse what you have found out.



AO2

These are the things that you should consider including in AO2

- Experimenting in response to your chosen artists.
- Use relevant materials and techniques to experiment with
- Experiment with new materials, tools and techniques as well as familiar ones.
- Try out different combinations of media and techniques
- Practise and refine your use of your chosen media, tools and techniques

AO2

REVIEW

REFINE

EXPERIMENT

EXPLORE DIFFERENT IDEAS AND MEDIA

A RANGE OF TECHNIQUES & PROCESSESS

SELECT

IMPROVE

Year 11 Art: Assessment Objectives (AO1 +AO2)

AO1

EXPLORE

DEVELOP

DEVELOP IDEAS

INVESTIGATE & RESEARCH

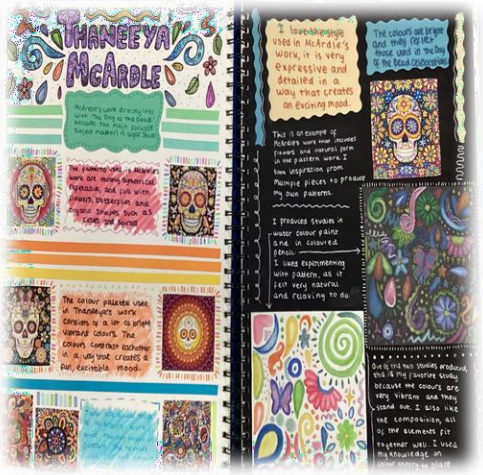
OTHER ARTISTS WORK

ANALYSE

ANNOTATE

What are the things you should consider including in AO1?

List at least 5 things that you would include.



What are the things you should consider including in AO2?

List at least 5 things that you would include.

AO2

REVIEW

REFINE

EXPERIMENT

EXPLORE DIFFERENT IDEAS

AND MEDIA

A RANGE OF TECHNIQUES & PROCESSESS

SELECT

IMPROVE

Year 11 Art: Assessment Objectives (AO3 + AO4)

AO3 EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

DRAWING, PAINTING, PRINTING, PHOTGRAPHY, WRITING, PHOTPGRAPY...

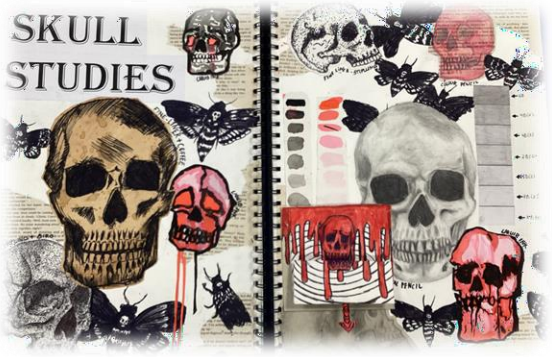
ANNOTATE

DIFFERENT MEDIA

AO3

These are the things that you should consider including in AO3:

- Title page.
- Mind Map.
- Mood-boards.
- Bullet points
- Notes/Annotation
- Longer paragraphs
- Photographs.
- Observational drawings
- Sketches
- Designs
- Diagrams
- Drawing using Photoshop



AO4

These are the things that you should consider including in AO2

- Plans and drawings of final piece ideas.
- Mini mock-ups and experiments for final piece.
- Creating an original final piece, that is clearly inspired by your research and creative journey.
- Evaluation of final piece (how does your piece link to the project theme?)

AO4 OUTCOME

PRESENT

FINAL IDEAS

DEVELOPED AS PLANNED

CLEARLY RESPONDS TO ARTISTS EXPLORED

CONNECTION

CONCLUSION

Year 11 Art: Assessment Objectives (AO3 + AO4)

AO3 EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

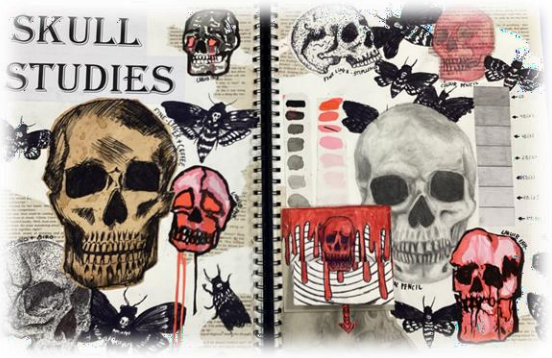
DRAWING, PAINTING, PRINTING, PHOTGRAPHY, WRITING, PHOTPGRAPY...

ANNOTATE

DIFFERENT MEDIA

What are the things you should consider including in AO3?

List at least 5 things that you would include.



What are the things you should consider including in AO4?

List at least 4 things that you would include.

AO4 OUTCOME

PRESENT

FINAL IDEAS

DEVELOPED AS PLANNED

CLEARLY RESPONDS TO ARTISTS EXPLORED

CONNECTION

CONCLUSION

Year 11 Fashion: (A01 + AO2)

AO1

EXPLORE

DEVELOP

DEVELOP IDEAS

INVESTIGATE & RESEARCH OTHER ARTISTS WORK

ANALYSE

ANNOTATE

AO1 is about developing ideas from a starting point to a final piece.

You could start your development work by:

- Making observational studies
- Looking at the work of other artists or designers
- Experimenting with materials, processes or techniques.

A primary source is one that you study directly from a first hand experience. A secondary source is a material produced by others.

AO2 is about refining you ideas through selecting and experimenting.

Your choice of resources should be linked of the media and materials used by artists and designers.

When selecting and using appropriate resources and media have you?

- Considered how other artists and designers have used media and processes?
- Experimented and practiced with your chosen materials and techniques?
- Worked with familiar as well as new media and techniques.
- Used contextual references in your development work?

AO2

REVIEW

REFINE

EXPERIMENT

EXPLORE DIFFERENT IDEAS AND MEDIA

A RANGE OF TECHNIQUES & PROCESSESS

SELECT

IMPROVE

Year 11 Fashion: (A01 + AO2)

AO1

EXPLORE

DEVELOP

DEVELOP IDEAS

INVESTIGATE & RESEARCH

OTHER ARTISTS WORK

ANALYSE

ANNOTATE

AO1 is about...

You could start your development work by:

A primary source is one that you study directly from a _____ ____ _____.
A secondary source is a material produced by_____.

AO2 is about….

Your choice of resources should be linked of the _____ and _____ used by artists and designers.

When selecting and using appropriate resources and media have you?

AO2

REVIEW

REFINE

EXPERIMENT

EXPLORE DIFFERENT IDEAS

AND MEDIA

A RANGE OF TECHNIQUES & PROCESSESS

SELECT

IMPROVE

Year 11 Fashion: (A03 + AO4)

A03 EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

DRAWING, PAINTING, PRINTING, PHOTGRAPHY, WRITING, PHOTPGRAPY...

ANNOTATE

DIFFERENT MEDIA

A03 is about recording your ideas, observations, insights which can be visual, written or in other forms.

To reflect on your work you need to develop your critical ideas and understanding by-

- Studying other artists and designers and exploring aspects of their work
- Analytical sketches, diagrams or annotated illustrations
- Development studies that record variation

Don't just describe what you have done. Try to analyse or evaluate what you have done at each stage, demonstrating your critical understanding.

A04 is about presenting a personal, informed and meaningful response, from your initial research to your final piece.

In order to make a meaningful response it is important to demonstrate that you have selected a suitable source material and media.

When making a personal response you should:

- Consider different themes or approaches
- Carefully select and study your source materials
- Make a personal choice about materials
- Experiment with media, materials and techniques
- Record and develop your ideas in a personal way
- Presented your work carefully

A04 OUTCOME

PRESENT

FINAL IDEAS

DEVELOPED AS PLANNED

CLEARLY RESPONDS TO ARTISTS EXPLORED

CONNECTION

CONCLUSION

Year 11 Fashion: (A03 + AO4)

A03 EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

DRAWING, PAINTING, PRINTING, PHOTGRAPHY, WRITING, PHOTPGRAPY…

ANNOTATE

DIFFERENT MEDIA

A03 is about…

To reflect on your work you need to develop your critical ideas and understanding by-

Don’t just describe what you have____ . Try to _____or _____ what you have done at each stage, demonstrating your critical understanding.

A04 is about….

In order to make a meaningful response it is important to _____ that you have selected a suitable source _____ and media.

When making a personal response you should:

A04 OUTCOME

PRESENT

FINAL IDEAS

DEVELOPED AS PLANNED

CLEARLY RESPONDS TO ARTISTS EXPLORED

CONNECTION

CONCLUSION

Year 11 Photography:

Term	Terminology Definitions:
1. Shutter Speed	The amount of time the camera's shutter is open for. Longer shutter speeds (1/10s, 1s, 3s, etc) allow more light in but will cause blurring of anything moving. Shorter shutter speeds let less light in and can capture moving subjects as still or 'frozen'.
2. Exposure	This is the **amount of light entering the camera's sensor**. Too much light and the image is overexposed, not enough light and it's under exposed. Exposure is determined by **a combination of shutter speed, aperture, and ISO**.
3. Aperture	**The opening (or 'pupil') of your lens** is called aperture, which can be made smaller or bigger to change the amount of light being let in. A wide aperture (such as f/1.4) lets more light in, allowing for a faster shutter speed or lower ISO, and a shallow depth of field (How much of the image is in focus). A narrower aperture (such as f/8) lets less light through, requiring a slower shutter speed or higher ISO, but results in more of your image being in focus.
4. F-Stop	F-Stop or F-number is the aperture size or aperture stop in a number that controls the size of the lens opening. Therefore **controlling the amount of light entering the camera**. Smaller f-stops, like f/1.4 or f/2, indicate a wider aperture, while larger F stops, like f/11 or f/16, indicate a narrower aperture.
5. Bokeh	This is produced by **blurring the background of an image** and is popular in portraits as it forces you to focus on the subject. Most photographers look for smooth bokeh so as to not distract from the rest of the image. Using this technique, **light sources can appear as smooth blobs of colour**.

Year 11 Photography:

Term	Terminology Definitions:
1. Shutter Speed	
2. Exposure	
3. Aperture	
4. F-Stop	
5. Bokeh	

Year 11 Photography:

Term	Terminology Definitions:
6. Depth of Field	The **distance between the closest and furthest subjects** in a scene that looks sharp in an image. A wide aperture (f/1.4, f/2, etc.) produces a shallow depth of field, which can be used to isolate a subject. And narrow aperture (f/11 or f/16), produces a wide depth of field which keeps everything in focus.
7. Focal Point	This is the way to describe the **main part of the image or a point of interest within the image**. It is where the viewers eye is drawn to the most.
8. Rule of Thirds	A common compositional tool that states that one should **divide the image frame into equal vertical and horizontal thirds, then place points of interest at the intersections of the dividing lines.**
9. Macro	Photographing objects that are extremely small. Macro lenses can **usually capture more detail than we can see with the naked eye**. Normally macro photographers would use a lens with a 1:1 ratio, which is the size of the subject on the sensor.
10. Raw	A raw file is the data **taken from the sensor without any sort of image processing applied**. As opposed to a JPEG produced by the camera. Though bigger in file size, photographers prefer RAW files because they allow for more creative range in post processing and higher image quality before exporting the final image in a file format such as JPEG.

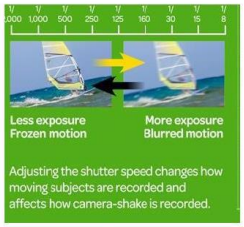
Year 11 Photography:

Term	Terminology Definitions:
6. Depth of Field	
7. Focal Point	
8. Rule of Thirds	
9. Macro	
10. Raw	

Year 11 Photography:

Shutter Speed

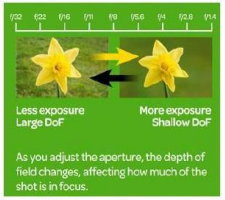
The amount of time the camera's shutter is open for.



Longer shutter speeds (1/10 s, 1 s, 3 s, etc.) allow more light in but will cause blurring of anything moving.
Shorter shutter speeds (1/200 s, 1/1,000 s, etc.) let less light in and can capture moving subjects as still or 'frozen'

Aperture

The opening (or 'pupil') of your lens is called aperture, which can be made smaller or bigger to change the amount of light being let in.

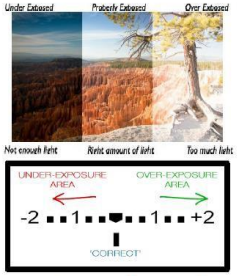


A wide aperture (such as f/1.4) lets more light in, allowing for a faster shutter speed or lower ISO, and a shallow depth of field (how much of the image is in focus).

A narrower aperture (such as f/8) lets less light through, requiring a slower shutter speed or higher ISO, but results in more of your image being in focus.

Exposure

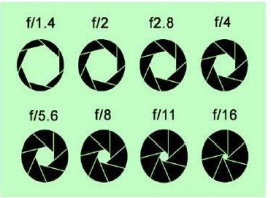
Is the amount of light entering the camera's sensor. Too much light and the image is overexposed and not enough light and it's underexposed.



Exposure is determined by a combination of shutter speed, aperture, and ISO.

F-Stop

Or f-number is the aperture size or aperture stop in a number that controls the size of the lens opening. Therefore controlling the amount of light entering the camera.



Smaller f-stops, like f/1.4 or f/2, indicate a wider aperture, while larger f-stops, like f/11 or f/16, indicate a narrower aperture.

Bokeh

Is produced by blurring the background of an image and is popular in portraits as it forces you to focus on the subject.

Most photographers look for smooth bokeh so as to not distract from the rest of the image. Using this technique, light sources can appear as smooth blobs of colour.

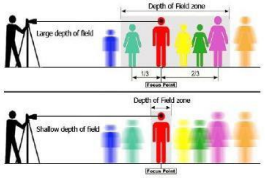
GCSE Photo Terminology

Focal Point

Is a way to describe the main part of the image or a point of interest within the image. It is where the viewer's eye is drawn to most.

Depth of Field

The distance between the closest and farthest subjects in a scene that look sharp in an image (abbreviated to DOF).



A wide aperture (f/1.4, f/2, etc.) produces a shallow depth of field, which can be used to isolate a subject.
A narrow aperture (f/11, f/16, etc.) produces a wide depth of field, which keeps everything in focus.

Rule of Thirds

A common compositional tool that states that one should divide the image frame into equal vertical and horizontal thirds, then place points of interest at the intersections of the dividing lines.

Macro

Photographing objects that are extremely small.

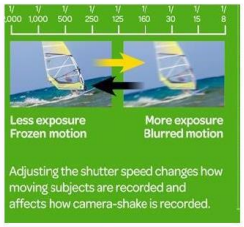
Macro lenses can usually capture more detail that we can see with the naked eye. Normally macro photographers would use a lens with a 1:1 ratio, which is the size of the subject on the sensor.

Raw

A raw file is the data taken from the sensor without any sort of image processing applied (as opposed to a JPEG produced by the camera). Though bigger in file size, photographers prefer raw files because they allow for more creative range in post-processing and higher image quality before exporting the final image in a file format like JPEG.

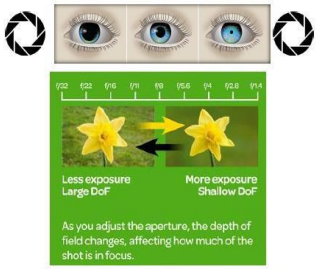
Year 11 Photography:

The amount of time the camera's shutter is open for.



Longer shutter speeds (1/10 s, 1 s, 3 s, etc.) allow more light in but will cause blurring of anything moving.
Shorter shutter speeds (1/200 s, 1/1,000 s, etc.) let less light in and can capture moving subjects as still or 'frozen'

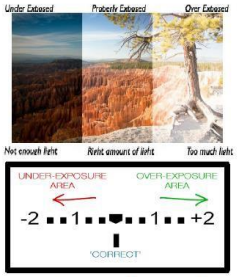
The opening (or 'pupil') of your lens is called aperture, which can be made smaller or bigger to change the amount of light being let in.



A wide aperture (such as f/1.4) lets more light in, allowing for a faster shutter speed or lower ISO, and a shallow depth of field (how much of the image is in focus).

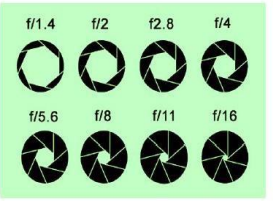
A narrower aperture (such as f/8) lets less light through, requiring a slower shutter speed or higher ISO, but results in more of your image being in focus.

Is the amount of light entering the camera's sensor. Too much light and the image is overexposed and not enough light and it's underexposed.



Exposure is determined by a combination of shutter speed, aperture, and ISO.

Or f-number is the aperture size or aperture stop in a number that controls the size of the lens opening. Therefore controlling the amount of light entering the camera.



Smaller f-stops, like f/1.4 or f/2, indicate a wider aperture, while larger f-stops, like f/11 or f/16, indicate a narrower aperture.

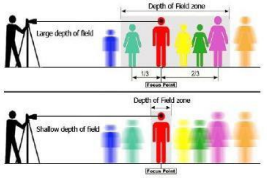
Is produced by blurring the background of an image and is popular in portraits as it forces you to focus on the subject.

Most photographers look for smooth bokeh so as to not distract from the rest of the image. Using this technique, light sources can appear as smooth blobs of colour.

GCSE Photo Terminology- what are the key terms?

Is a way to describe the main part of the image or a point of interest within the image. It is where the viewer's eye is drawn to most.

The distance between the closest and farthest subjects in a scene that look sharp in an image (abbreviated to DOF).



A wide aperture (f/1.4, f/2, etc.) produces a shallow depth of field, which can be used to isolate a subject.
A narrow aperture (f/11, f/16, etc.) produces a wide depth of field, which keeps everything in focus.

A common compositional tool that states that one should divide the image frame into equal vertical and horizontal thirds, then place points of interest at the intersections of the dividing lines.

Photographing objects that are extremely small.

Macro lenses can usually capture more detail that we can see with the naked eye. Normally macro photographers would use a lens with a 1:1 ratio, which is the size of the subject on the sensor.

A raw file is the data taken from the sensor without any sort of image processing applied (as opposed to a JPEG produced by the camera). Though bigger in file size, photographers prefer raw files because they allow for more creative range in post-processing and higher image quality before exporting the final image in a file format like JPEG.

Computing, Business studies, DIT and Media

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11: GCSE Business

The Dynamic Nature of Business

Why do new business ideas come about:

- Changes in technology
- Changes in what consumers want
- Products & services becoming obsolete

How do new business ideas come about?

- Original ideas
- Adapting existing products/services/ideas

Risk and Reward

Risk:

- Business failure
- Financial loss
- Lack of security

For example:

One risk is lack of security as an entrepreneur may have previously had a job and guaranteed income however income will depend on how well the enterprise performs.

Reward:

- Business success
- Profit
- Independence

For example:

One reward is independence as previously the entrepreneur would have had a manager telling them what to do. This independence may result in higher motivation because the entrepreneur is free to make their own decisions.

Revenues, Costs and Profits

Total costs

TC (total cost) = TFC (total fixed costs) + TVC (total variable costs)

Revenue

Revenue = price × quantity

Break even

$$\text{Break even point in units} = \frac{\text{fixed cost}}{(\text{sales price} - \text{variable cost})}$$

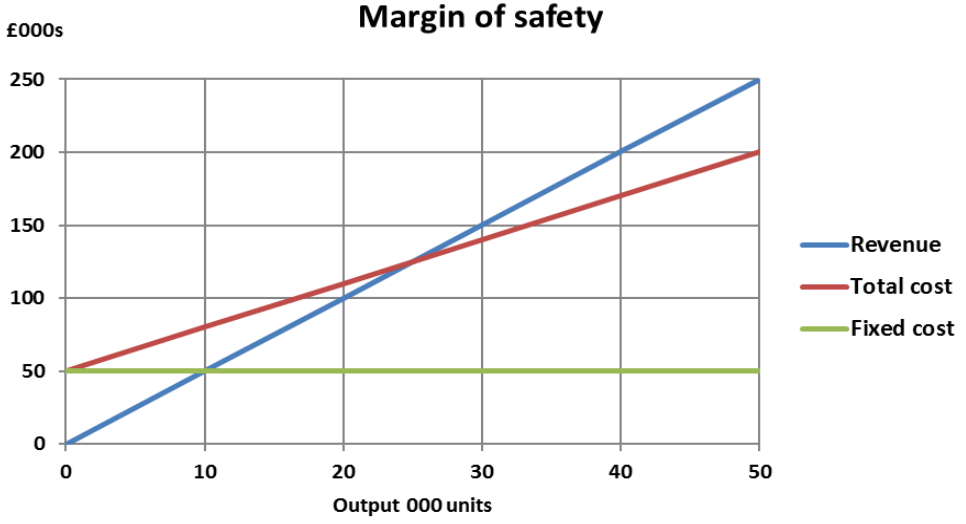
Break even point in costs / revenue = break even point in units × sales price

Margin of safety

Margin of safety = actual or budgeted sales – break even sales

Interest (on loans)

$$\text{Interest (on loans) in \%} = \frac{\text{total repayment} - \text{borrowed amount}}{\text{borrowed amount}} \times 100$$



Year 11: GCSE Business

The Dynamic Nature of Business

Why do new business ideas come about:

- -
- -
- -

How do new business ideas come about?

- -
- -

Risk and Reward

What is risk?

- -
- -
- -

For example:

What is reward?

- -
- -
- -

For example:

Revenues, Costs and Profits

Total costs

TC (total cost) = +

Revenue

Revenue =

Break even

$$\text{Break even point in units} = \frac{\text{fixed cost}}{(\text{sales price} - \text{variable cost})}$$

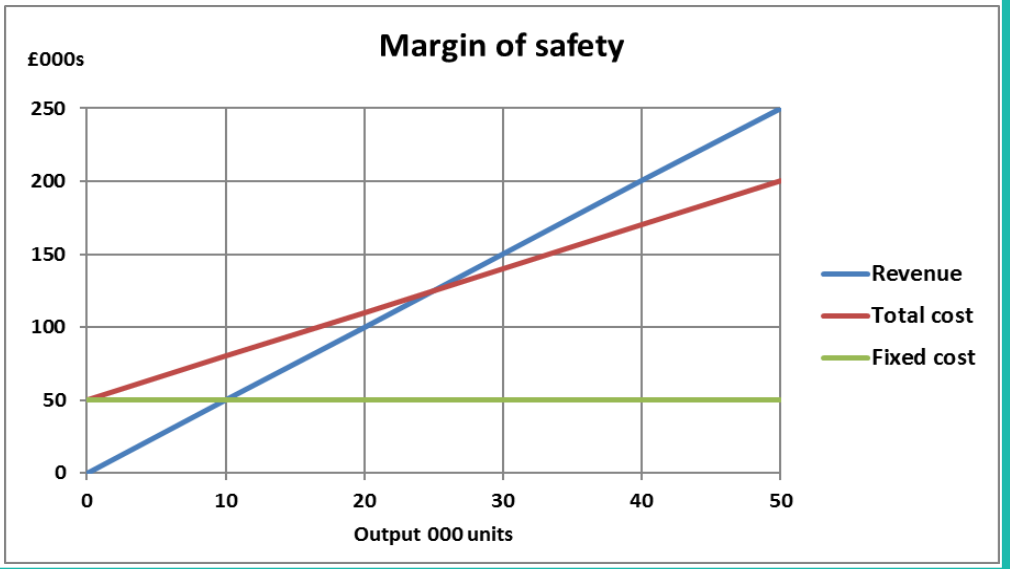
Break even point in costs / revenue = break even point in units × sales price

Margin of safety

Margin of safety = −

Interest (on loans)

$$\text{Interest (on loans) in \%} = \frac{\quad}{\quad} \times 100$$



Year 11: GCSE Business

Revenues, Costs and Profits

Break Even Level of output is where Total Costs = **Total Revenue**.

In this example, the break even level of output is 25

Margin of Safety is the difference between the break even level of output and the actual level of output. If the actual output in this example was 50, the margin for safety would be 25 (50 – 25).

Calculating the Break Even Level of Output

Examples: Sony's fixed costs for the PlayStation 3 are £2,400,000 and variable costs are £140 per console. Calculate the break-even point when the PlayStation 3 was priced at £300. Show your working out and the formula used.

$$\text{Break even point in units} = \frac{\text{fixed cost}}{(\text{sales price} - \text{variable cost})}$$

- The selling price of a PlayStation 3 is £300.
- The variable cost of production is £140.
- Every time a PlayStation is sold, Sony makes £160 above the variable cost of production (300 – 140).
- This £160 is called a **contribution**

How many £160s are needed to pay off the fixed cost of £2 400 000?

- £2,400,000 / 160 = 15 000
- The break-even level of output is 15 000.

Cash and Cash Flow

Net cash-flow

Net cash-flow = cash inflows – cash outflows in a given period

Opening and closing balances

Opening balance = closing balance of the previous period

Closing balance = opening balance + net cash-flow

Cash flow forecasts

- A forecast of all the cash flowing into and out of the business.
- Shows opening balance at start of each month and closing balance at end.
- Normally produced monthly but can be any time frame e.g. weekly.

Opening Balance

- Cash available at the start of the month.

Closing Balance

- Cash available at the end of the month.

Year 11: GCSE Business

Revenues, Costs and Profits

Break Even Level of output is where…

Margin of Safety is…

Calculating the Break Even Level of Output

Examples: Sony's fixed costs for the PlayStation 3 are £2,400,000 and variable costs are £140 per console. Calculate the break-even point when the PlayStation 3 was priced at £300. Show your working out and the formula used.

$$\text{Break even point in units} = \frac{\text{fixed cost}}{(\text{sales price} - \text{variable cost})}$$

- -
- -
- -
- -

How many £160s are needed to pay off the fixed cost of £2 400 000?

- -
- -

Cash and Cash Flow

Net cash-flow

Net cash-flow = [ ] – [ ]

Opening and closing balances

Opening balance = [ ]

Closing balance = [ ]

What are cash flow forecasts?

- -
- -
- -

What is an opening balance?

- -

What is a closing balance?

- -

Year 11: GCSE Business

What does a cash flow forecast look like?

Remember: a number in brackets means it is a negative (-) number

Why is having cash important for a business?

- The importance of cash to a business:
- To pay suppliers, overheads and employees
- To prevent business failure (insolvency)
- The difference between cash and profit
- Cash can only be recorded when it has actually been received by the business.
- Profit is recorded as soon as the sale is agreed (even though no money may have changed hands)

Stakeholders

Stakeholder	Impact on business activity
Shareholders (Owners)	• Sets aims and objectives • Provide funding and investment to start and expand the business
Employees	• Provide good service which results in repeat purchase • Impacts on business reputation if they don't do their job well
Customers	• Buy products and services • Make recommendations on how to improve (reviews, research) • Recommend the business to friends and on social media
Managers	• Manage employees and monitor quality • Communicate the business' needs to employees
Suppliers	• Provide the business with the materials it needs • Affects the amount that can be sold (e.g. if the supplier cannot provide raw materials on time, production stops) • Their prices impact on the business' costs
Local Community	• Support the business by buying its goods and services • Object to the business if it has a negative impact on the community / environment
Pressure Groups	• Challenges the business' behaviour, such as the packaging it uses • Improves employees' conditions, such as health and safety or fair wages • Influences customers' opinions of the business
The Government	• Can change the amount of tax the business has to pay which impacts on the business' costs • Passes new laws that may affect how and what the business does (and impact on costs to make changes)

Year 11: GCSE Business

What does a cash flow forecast look like?

Remember: a number in brackets means it is a negative (-) number

Why is having cash important for a business?

- -
- -
- -
- -
- -
- -

Stakeholders

Stakeholder	Impact on business activity
Shareholders (Owners)	
Employees	
Customers	
Managers	
Suppliers	
Local Community	
Pressure Groups	
The Government	

Year 11: GCSE Business

Discuss the impact of pressure groups on a business

Pressure groups highlight the negative activity of a business therefore this can damage the business' company image. This could mean that customers are less likely to buy from the business. Therefore revenue will decrease.

However, if the business changes its behaviour as a result of pressure group activity then their company image will be improved. This may lead to an increase in customers which would lead to higher market share.

Conflict (disagreement) between stakeholders

- Shareholders (Owners) want the highest profit possible
- Employees want the highest wages possible
- Customers want the lowest prices possible
- Managers want the highest bonus possible
- Suppliers want to sell at the highest prices possible
- Local Community want the smallest environmental impact possible
- Pressure Groups want the business to behave in an ethical way
- The Government want the business to follow laws and pay their taxes

Question 1: What are some factors that can lead to the emergence of new business ideas?

Answer: Changes in technology, changes in consumer preferences, and the obsolescence of products and services can all contribute to the emergence of new business ideas.

Question 2: How do new business ideas come about?

Answer: New business ideas can originate from original thinking or by adapting existing products, services, or ideas to meet the needs of the market.

Question 3: What are some risks associated with starting a business?

Answer: Some risks include the possibility of business failure, financial loss, and a lack of security, as entrepreneurs often rely on the performance of their venture for income.

Question 4: What are some rewards that can be obtained from starting a business?

Answer: Starting a business can lead to rewards such as business success, profitability, and independence. Entrepreneurs have the opportunity to make their own decisions and experience higher motivation compared to working under a manager's direction.

Question 5 Explain one possible conflict that may exist between stakeholders.

Answer: Shareholders will want the highest profit possible so that they receive high dividends (share of the profits). However, employees will want the highest wages possible. Paying higher wages would increase the business' costs and therefore (if revenue stays the same) profit would be lower meaning that the shareholders would be unhappy.

Question 6: What does a cash flow forecast typically show?

Answer: A cash flow forecast shows the projected cash inflows and outflows for a business, usually on a monthly basis. It includes the opening balance at the start of each month and the closing balance at the end.

Question 7: Why is having cash important for a business?

Answer: Cash is important for a business because it is necessary to pay suppliers, cover overhead expenses, and compensate employees. It helps prevent business failure or insolvency. It is important to understand that cash and profit are not the same, as cash is recorded only when it is actually received by the business, whereas profit is recorded when a sale is agreed, even if no money has changed hands yet.

Year 11: GCSE Business

Discuss the impact of pressure groups on a business

Conflict (disagreement) between stakeholders

- -
- -
- -
- -
- -
- -
- -
- -

Question 1: What are some factors that can lead to the emergence of new business ideas?

Answer:

Question 2: How do new business ideas come about?

Answer:

Question 3: What are some risks associated with starting a business?

Answer:

Question 4: What are some rewards that can be obtained from starting a business?

Answer:

Question 5 Explain one possible conflict that may exist between stakeholders.

Answer:

Question 6: What does a cash flow forecast typically show?

Answer:

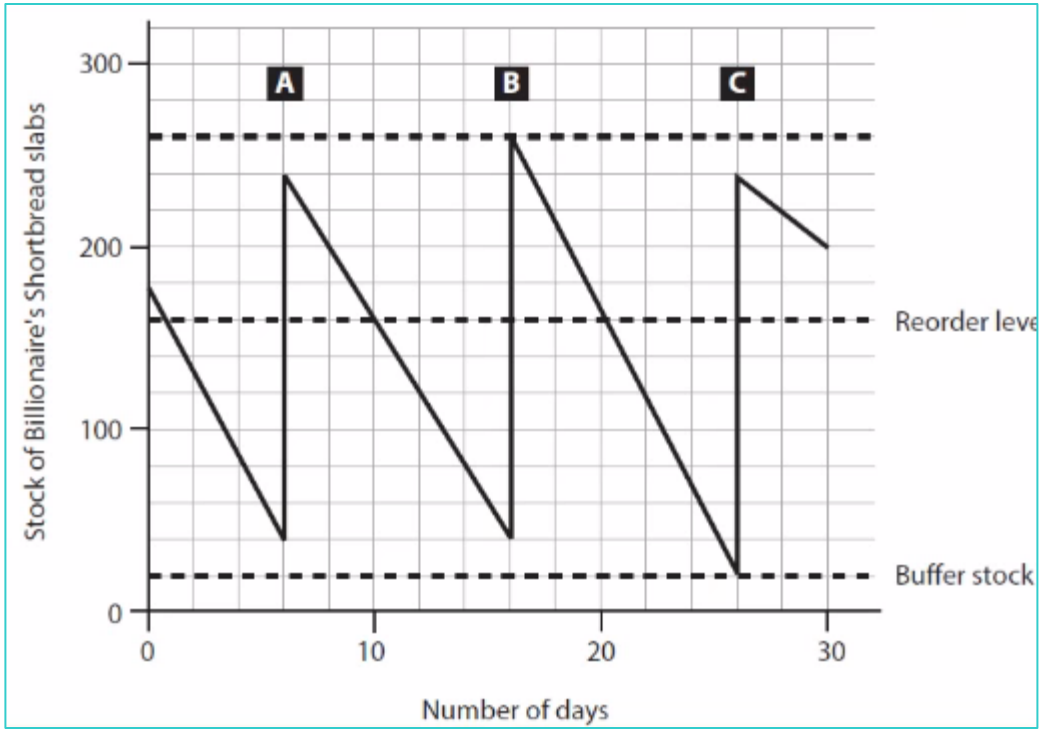
Question 7: Why is having cash important for a business?

Answer:

Year 11 GCSE Business: Working with suppliers

Procurement: is the process of finding a supplier and agreeing to terms, and buying goods or services from them.

Managing stock: Interpretation of bar gate stock graphs

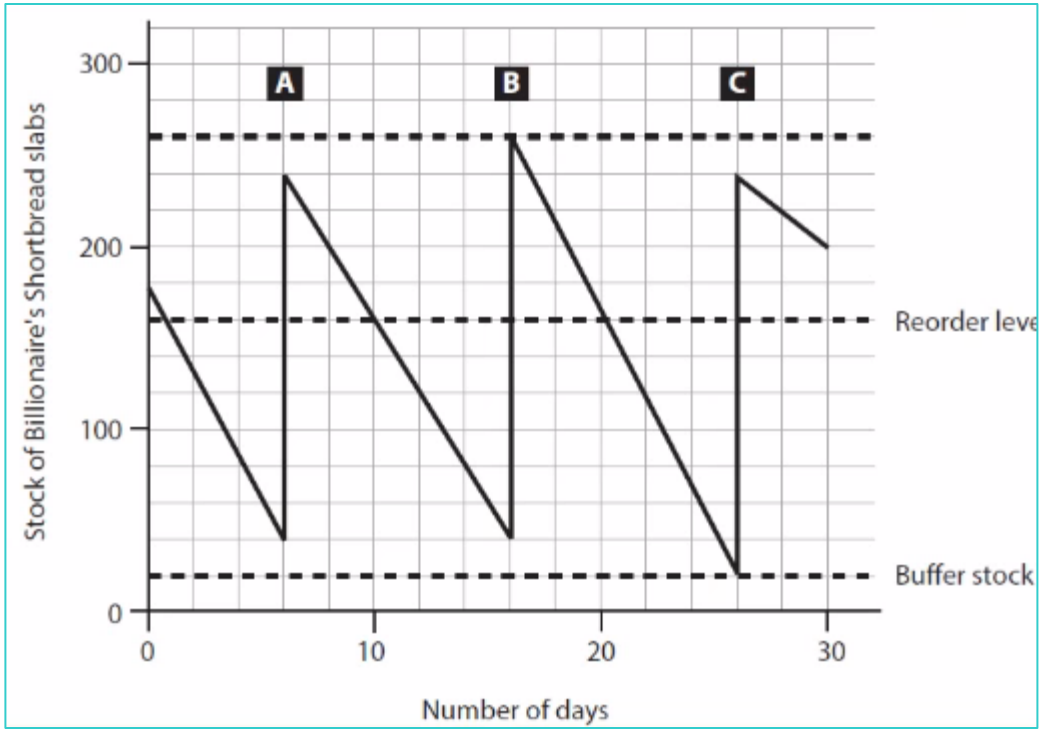


When a business holds stock, they can use a bar gate stock graph. This will help them manage when they need to reorder the stock.

Bar gate stock graph description:

- A - a new delivery of stock has arrived. Stock is then sold to consumers slowly over time.
- Reorder level - A new order of stock is triggered when the stock falls below this level. It will take some time for the ordered stock to arrive.
- B - The reordered stock has arrived, and the stock level increases once more.
- Buffer stock - businesses won't want stock to fall below this level. Otherwise, they may run out and customers will notice.
- Lead Time - the number of days between stock being order and it arriving

Year 11 GCSE Business: Working with suppliers



Year 11 GCSE Business: Working with suppliers

Advantages and disadvantages of holding stock:

Advantage	Disadvantages
Able to fulfill unexpected large orders quickly My benefit from economies of scale as buying large amounts.	Stock may go out of date Storing stock can be costly Lots of cash is tied up in stock that is just being stored

The use of just in time (JIT) stock control - procuring stock only when it is needed rather than holding stock in a warehouse.

Advantages and disadvantages of Just in Time (JIT) stock control:

Advantages	**Disadvantages**
No storage & insurance costs Less likelihood of perishing & out-of-date stock Cash is not tied up in stock that is just being stored so is available to pay for other things.	Dependency on suppliers - if they let you down, your production stops. Difficulty in meeting unexpected orders Limited economies of scale as not buying in very large quantities.

Characteristics of an effective supplier:
Quality
Delivery (cost, speed, reliability)
Cost
Trust

Year 11 GCSE Business: Working with suppliers

Advantages and disadvantages of holding stock:

Advantage	Disadvantages

Advantages and disadvantages of Just in Time (JIT) stock control:

Advantages	**Disadvantages**
	.

Characteristics of an effective supplier:

Year 11 GCSE Business: Working with suppliers

Logistics: The process of transporting goods to the customer. Logistics can impact on the business in the following ways:

Aspect	Description
Costs	Effective logistics can help reduce costs by improving transportation and managing stock.
Reputation	Effective logistics contribute to a positive reputation by making customers happy. Poor logistics can reflect very badly on the business if a customer is left waiting for their product to arrive.
Customer Satisfaction	Good logistics enhance customer satisfaction by ensuring on-time delivery, accurate order fulfillment, and efficient customer service.

Year 11 GCSE Business: Working with suppliers

Logistics:

Aspect	Description

Year 11 GCSE Business: Managing quality and the Sales process

	Description	Advantages	Disadvantages
Quality Control	The product quality is checked at the end.	Does not slow down the production process.	Lots of waste as defects are detected only when the product is finished.
Quality Assurance	The product quality is checked throughout the production process and is the responsibility of everybody.	Increased employee motivation as they are now responsible for the product quality.	Time consuming as there are more checks.

- Product knowledge
- Speed and efficiency of service
- Customer engagement
- Responses to customer feedback
- Post sales service

Good customer service:

- Builds customer satisfaction and loyalty
- Improves the business' reputation
- Attracts new customers through positive word-of-mouth
- Ultimately, leads to increased sales and business growth

Year 11 GCSE Business: Managing quality and the Sales process

	Description	Advantages	Disadvantages
Quality Control			
Quality Assurance			

Good customer service:

Calculations you need to learn:

Gross profit

Gross profit = sales revenue – cost of sales

Gross profit margin

$$\text{Gross profit margin (\%)} = \frac{\text{gross profit}}{\text{sales revenue}} \times 100$$

Net profit

Net profit = gross profit – other operating expenses and interest

Net profit margin

$$\text{Net profit margin (\%)} = \frac{\text{net profit}}{\text{sales revenue}} \times 100$$

Average rate of return

$$\text{Average rate of return (\%)} = \frac{\text{average annual profit (total profit / no. of years)}}{\text{cost of investment}} \times 100$$

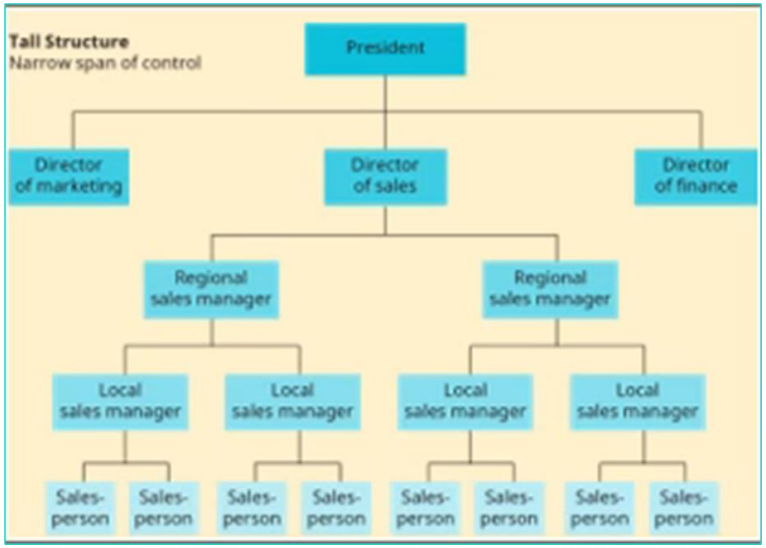
Quantitative data is data in the form of numbers and statistics.
Qualitative data is data in the form of opinions.

Year 11 GCSE Business: Making financial decisions and Understanding business performance

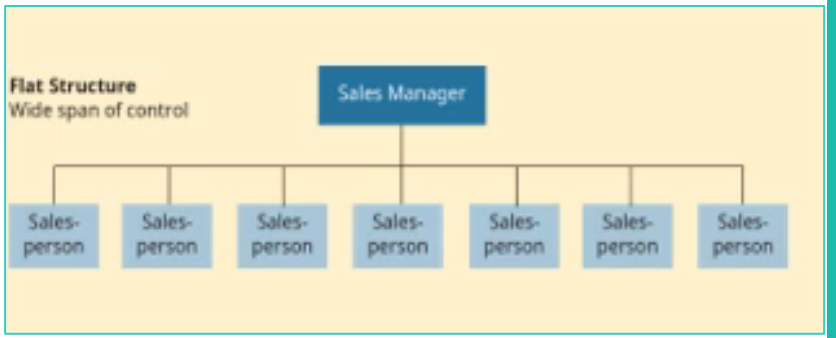
Calculations you need to learn:

Year 11 GCSE Business: Organisational structures

Tall Structure (Hierarchy)	
Benefits	Drawbacks
●Managers have a narrow span of control, so staff gain more support and supervision. ●Less mistakes and increased efficiency as staff are closely supervised. ●More promotion opportunities.	●The chain of command is long, making communication slower as instructions take longer to travel through the levels of the organisation. ●Can cost more as there are more layers.

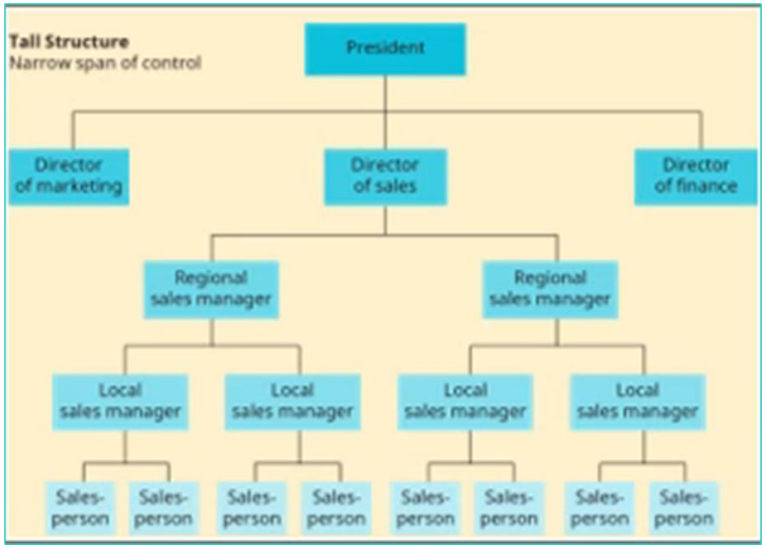


Flat Structure	
Benefits	Drawbacks
●Staff are empowered to work independently and take on more responsibility. ●Reduces costs as fewer layers of management.	●Employees may not get the support they need from their line manager. ●If the line manager is not good, then a lot more employees suffer. ●Fewer opportunities for promotion

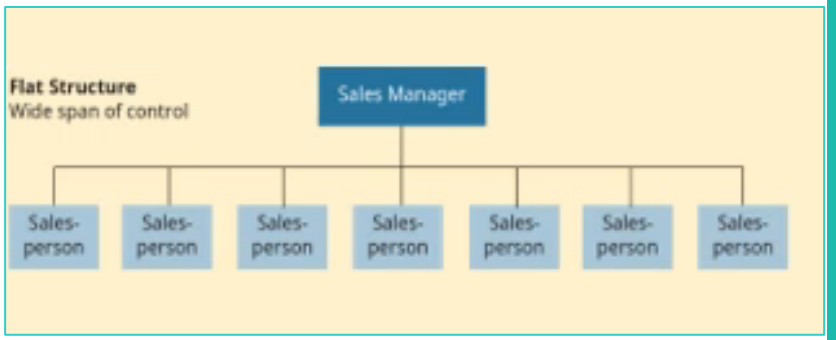


Year 11 GCSE Business: Organisational structures

Tall Structure (Hierarchy)	
Benefits	Drawbacks



Flat Structure	
Benefits	Drawbacks



Year 11 GCSE Business: Organisational structures

Centralised Structure - Decision-making concentrated at the top of the organisational hierarchy, usually head office.	
Benefits	Drawbacks
● Control / decision making made by highest level of management ● Consistency between different branches. ● Economies of scale (bulk buying) - all branches using the same supplier.	● Middle and junior managers lack authority so may have less motivation as do not feel trusted to make decisions. ● Senior managers at head office will not understand the local needs of each branch and therefore customer needs may not be fully met.
Decentralised Structure - distribute decision-making across various levels or units within the organisation.	

Benefits	**Drawbacks**
● Motivation - employees feel empowered, more productive, more creative ● More flexibility in decision making - local managers will have a better understanding of the customer needs in their area.	● Customer experience is different across different branches ● Not able to take full advantage of economies of scale (bulk buying) as different branches are doing different things.

Year 11 GCSE Business: Organisational structures

Centralised Structure -	
Benefits	Drawbacks

Benefits	**Drawbacks**

Year 11 GCSE Business: Different ways of working

Different ways of working	Description	Benefit	Drawback
Part-time	Typically less than 35 hours per week.	Can be flexible to fit around needs of the business.	Limited availability of part-time employees during peak hours.
Full-time	Usually around 35-40 hours a week.	Consistent and reliable workforce.	Higher labor costs compared to part-time or temporary workers.
Flexible hours	Employees to choose when they start and finish work, within certain limits set by the employer.	Improved work-life balance for employees.	Coordination challenges if team members have vastly different schedules.
Permanent	Employed by an organization indefinitely, until the time they are made redundant or wish to leave or retire.	Development of long-term employee skills and loyalty.	Potentially higher costs associated with benefits and training.
Temporary	Involves hiring workers for a specific period or project.	Flexibility to adjust workforce size based on demand.	Lower employee loyalty.
Freelance	Self-employed individuals who provide services on a project-by-project basis.	Access to specialized skills without a long-term commitment.	Freelancer may not be loyal to the business.

Year 11 GCSE Business: Different ways of working

Year 11 GCSE Business: Effective Recruitment

Key roles within a business:

Role	Responsibilities
Directors	• Decision-making at the highest level. • Ensuring the company meets its objectives.
Senior Managers	• Implementing the strategies set by directors.
Supervisors/Team Leaders	• Managing and leading a team of employees.
Operational Staff	• Carrying out day-to-day tasks related to the core operations.
Support Staff	• Providing administrative support e.g photocopying

Recruitment documents:

Recruitment document	Description
Person Specification:	Details the skills, qualifications, and attributes required for the job
Job Description	Outlines the duties, responsibilities, and expectations for the role.
Application Form:	Sent to applicant by the business: Standardized document for collecting personal and professional information from candidates.
CV (Curriculum Vitae):	Written by the applicant: A summary of an individual's education, work experience, skills, and achievements.

Recruitment Methods:

Method	Definition	Benefits	How it meets business needs:
Internal recruitment	Filling job vacancies with existing employees.	Promotes employee loyalty, understanding of company culture, and minimizes recruitment costs.	Suitable for promoting employee development and filling positions quickly.
External recruitment	Seeking candidates from outside the organization.	Access to a broader talent pool, infusion of new ideas and perspectives.	Useful when seeking fresh perspectives, specific skills, or handling expansion.

Year 11 GCSE Business: Effective Recruitment

Key roles within a business:

Recruitment documents:

Recruitment Methods:

Year 11: GCSE Computer Science

Python Programming Language Subset

Data Types

There are 4 data types used in the Python Programming Language:

- **Integer** – a whole number (e.g. 5, 71, -23)
- **Float / Real** – a number with a decimal place (e.g. 45.76, 3.1236, -56.1)
- **String** – a sequence of characters, that can contain text, symbols and numbers, that the computer is not expected to understand (e.g. "Fred", "The cat sat on the mat", "%$£1234ABC")
- **Boolean** – a condition set to either True, or False.

Data type	PLS
integer	int
real	float
Boolean	bool
character	str

Structured data types

A structured data type is a sequence of items, which themselves are typed. Sequences start with an index of zero.

Data type	Explanation	PLS
string	A sequence of characters	str
array	A sequence of items with the same (homogeneous) data type	list
record	A sequence of items, usually of mixed (heterogenous) data types	list

Operators

Arithmetic operators

Arithmetic operator	Meaning
/	division
*	multiplication
**	exponentiation
+	addition
–	subtraction
//	integer division
%	modulus

Relational operators

Logical operator	Meaning
==	equal to
!=	not equal to
>	greater than
>=	greater than or equal to
<	less than
<=	less than or equal to

Logical/Boolean operators

Operator	Meaning
and	both sides of the test must be true to return true
or	either side of the test must be true to return true
not	inverts

Year 11: GCSE Computer Science

Python Programming Language Subset

Data Types

There are 4 data types used in the Python Programming Language:

- -
- -
- -
- -

Data type	PLS
integer	
real	
Boolean	
character	

Structured data types

A structured data type is a sequence of items, which themselves are typed. Sequences start with an index of zero.

Data type	Explanation	PLS
string		str
array		list
record		list

Operators

Arithmetic operators

Arithmetic operator	Meaning
/	
*	
**	
+	
–	
//	
%	

Relational operators

Logical operator	Meaning
==	
!=	
>	
>=	
<	
<=	

Logical/Boolean operators

Operator	Meaning
and	
or	
not	

Year 11: GCSE Computer Science

Programming Constructs

Assignment

Assignment is used to set or change the value of a variable.

<variable identifier> = <value>
<variable identifier> = <expression>

Variable Example:

```
1 name = "Fred"
```

Constants:

Constants are conventionally named in all uppercase characters .

```
1 ROOMS = 100
```

The value of a variable can change, if necessary, while a program is running, however the value of a constant will not change while a program is running.

Section

if <expression>: <command>	If <expression> is true, then command is executed.

if <expression>:
  <command>
else:
  <command>
	If <expression> is true, then first <command> is executed, otherwise second <command> is executed.

if <expression>:
  <command>
elif <expression>:
  <command>
else:
  <command>
	If <expression> is true, then first <command> is executed, otherwise the second <expression> test is checked. If true, then second <command> is executed, otherwise third <command> is executed.
	
	Supports multiple instances of 'elif'.
	
	The 'else' is optional with the 'elif'.

```
1  age = int(input("How old are you? "))
2
3  if age < 4:
4      print("You don't need to go to school yet.")
5  elif age >=4 and age < 11:
6      print("You are in primary school.")
7  elif age >= 11 and age < 16:
8      print("You need to go to high school.")
9  else:
10     print("You no longer need to go to school.")
```

Repetition

while <condition>: <command>	Pre-conditioned loop. This executes <command> while <condition> is true.

Year 11: GCSE Computer Science

Programming Constructs

Assignment

Assignment is used to :

```
<variable identifier> = <value>
<variable identifier> = <expression>
```

Variable Example:

```
1 name = "Fred"
```

Constants:

Constants are conventionally named in all

```
1 ROOMS = 100
```

The value of a variable can change, if necessary, while a program is running, however the value of a constant will not change while a program is running.

Section

`if <expression>:` `  <command>`	If

`if <expression>:`
`  <command>`
`else:`
`  <command>`
	If

`if <expression>:`
`  <command>`
`elif <expression>:`
`  <command>`
`else:`
`  <command>`
	If

```
1  age = int(input("How old are you? "))
2
3  if age < 4:
4      print("You don't need to go to school yet.")
5  elif age >=4 and age < 11:
6      print("You are in primary school.")
7  elif age >= 11 and age < 16:
8      print("You need to go to high school.")
9  else:
10     print("You no longer need to go to school.")
```

Repetition

`while <condition>:` `  <command>`	

Year 11: GCSE Computer Science

Iteration

`for <id> in <structure>:` `  <command>`	Executes <command> for each element of a data structure, in one dimension.
`for <id> in range (<start>, <stop>):` `  <command>`	Count-controlled loop. Executes <command> a fixed number of times, based on the numbers generated by the range function. <stop> is required. <start> is optional.

`for <id> in range (<start>, <stop>,`
`  <step>):`
`  <command>`
	Same as above, except that <step> influences the numbers generated by the range function. <stop> is required. <start> and <step> are optional.

Iteration Example 1:

The following example of iteration will store each item from the array in the 'name' variable in turn:

```
1 namesList = ["Tina","Bob","Jane","Fred"]
2
3 for name in namesList:
4     print(name)
```

Iteration Example 2:

The following example of iteration will use the index variable as a counter, that will increase by +1 on each loop, starting at 0 and ending when the stop value is reached:

```
1 for index in range(0,11):
2     number = index * 4
3     print(index, "x 4 =",number)
```

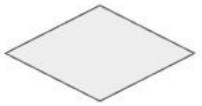
Inputs and Outputs

Screen and keyboard

`print (<item>)`	Displays <item> on the screen
`input (<prompt>)`	Displays <prompt> on the screen and returns the line typed in

```
1 school = input("What school do you go to? ")
2 print(school,"is a great school.")
```

Flowcharts

Symbol	Name	Function
	Start/Stop	Represents the beginning (start) and end (stop) of a program.
	Arrows	Connects the flowchart symbols together and defines the 'flow' of the program.
	Input/Output	Input of digital data or digital output such as on or off, or move forward or backward.
	Process	Pauses the processing of the flowchart for a given number of seconds.
	Decision	Creates a 'branch' in the program with two outcomes. True (yes) or False (no).

Year 11: GCSE Computer Science

Iteration

for <id> in <structure>: <command>	
for <id> in range (<start>, <stop>): <command>	
for <id> in range (<start>, <stop>, <step>): <command>	

Iteration Example 1:

The following example of iteration will store each item from the array in the 'name' variable in turn:

```
1 namesList = ["Tina","Bob","Jane","Fred"]
2
3 for name in namesList:
4     print(name)
```

Iteration Example 2:

The following example of iteration will use the index variable as a counter, that will increase by +1 on each loop, starting at 0 and ending when the stop value is reached:

```
1 for index in range(0,11):
2     number = index * 4
3     print(index, "x 4 =",number)
```

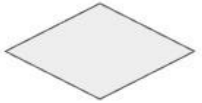
Inputs and Outputs

Screen and keyboard

print (<item>)	
input (<prompt>)	

```
1 school = input("What school do you go to? ")
2 print(school,"is a great school.")
```

Flowcharts

Symbol	Name	Function
	Start/Stop	
	Arrows	
	Input/Output	
	Process	
	Decision	

Year 11: GCSE Computer Science

Flowchart Algorithm

Example:

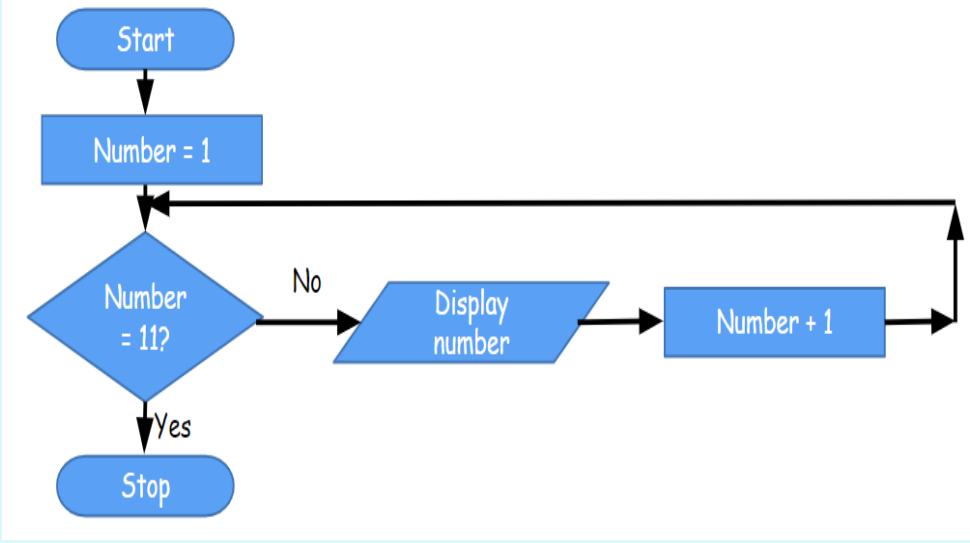
Written Description of the Problem:

Write an algorithm that will display the numbers 1 to 10 only.

Decomposed Problem:

- PROCESS: Set number to 1
- DECISION: Is number equal to 11?
- FALSE OUTPUT: Display number, number = number+1
- TRUE OUTPUT: Stop

Flowchart Algorithm:



Questions

1. State the names of the 4 data types used in the Python programming language and give examples**. Complete the table below.**

2. **State the type of operator that the examples below belong to.**

3. Write the code, in the box below, that would initialise a variable called '**num_1**' and you should assign it any suitable **integer** value.

Year 11: GCSE Computer Science

Questions

4. Write the code, in the box below, that would initialise the **constant 'SIDES'** and assign it the integer value of 6.

5. Write the code, in the box below, using **selection** (an IF Statement), that will ask a user if it is raining, and if the response is yes, it will output the string "Take an umbrella.", and if the response is not yes, it should output the string "Enjoy the outdoors."

6. Write the code, in the box below, using **repetition** (a WHILE loop), that will output only the numbers from 10 down to 1 on separate lines.

7. Write the code, in the box below, using **iteration** (a FOR loop), that will output each of the strings in the array called animals below.

animals = ["Dog" , "Cat" , "Horse" , "Cow"]

8. Write the code, in the box below, using **iteration** (FOR loop), that will output the 8 times table from 1 x 8, up to 20 x 8.

Example output format:
1 x 8 = 8
2 x 8 = 16 etc…

9. Draw a flowchart that for the following **algorithm**
The user will be asked for two integers.

- If the numbers are the same, the algorithm should output "The numbers are equal."
- If the first number is greater than the second, the algorithm should output "The first number is greater than the second number"
- If the second number is greater, the algorithm should output "The second number is greater than the first number"

Year 11 GCSE Computer science: Computers

Components of the CPU

Main components of the CPU. .

Control Unit – Fetches program instructions from main memory (RAM) one at a time, decodes them and directs the operations of the other parts of the system to execute the commands.

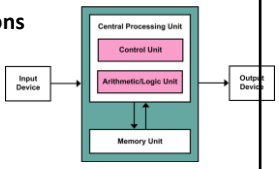
Clock – Synchronises the actions of the CPU. Clock speed is measured in cycles per second (hertz), 1 hertz (Hz) = 1 cycle per second. (e.g. 3 gigahertz (3GHz) = 3 billion cycles per second. The higher the clock speed the more instructions can be carried out per second.

Arithmetic Logic Unit (ALU) – Carries out mathematical and logic operations on data.

Registers – Small and fast memory locations within the CPU.

State the two items stored in main memory (RAM), as binary, in the fetch-decode-execute cycle:

1. **Data**
2. **Instructions**



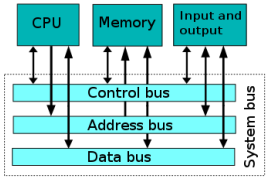
Fetch-Decode-Execute Cycle (FDE) and System Bus

Fetch-Decode-Execute Cycle

The sequence of steps carried out when a program is being executed. Program instructions are fetched one at a time from memory (RAM) to be decoded and executed by the CPU.

What are the 3 types of bus in the system bus, and what is their role in the fetch decode-execute cycle?

1. Control Bus – carries signals between the CPU and other parts of the computer
2. Address Bus – holds the address of the memory location that the CPU will read from, or write to. The bigger the Address Bus (number of wires), the more addressable memory there is
3. Data Bus – transfers program instructions and data between the memory and CPU



Secondary Storage

Physical secondary storage

1. **Magnetic Storage** – Uses tiny magnets on a spinning metal platter. The magnet's north and south poles are used to represent binary (0 and 1) data

2. **Optical Storage**– e.g. CDs DVDs, Bluray. Uses lasers to read and write binary data stored as lands (1) and pits (0) burned onto the disk.

3. **Solid State**– Uses transistor gates/switches to store the binary. Electrical current is applied to the transistor to trapping electrons in pools (full = 1, empty = 0)

Embedded Systems

Embedded systems

An embedded system is a small computer with a microcontroller, that performs a specific task within a bigger system.

What are some of the features of an embedded system?

> They are small,
> Low energy consumption
> Low cost
> They are usually robust
> Only have a limited user interface, or no interface at all.

Give an example of an embedded system and explain how it works.

Washing Machine:

Input – Temperature Sensor detects the water temperature/ **Microcontroller** – detects signal from the sensor and instructs the heating element to turn on until the desired temperature is reached.

Output – Heating element heats water.

The Operating System

Operating system's

- **File Management:**

  Files are organised in directories, folders and sub-folders. File management manages the saving, opening, renaming and deletion of files. It also controls file permissions.

- **Peripheral Management:**

  The operating system uses device driver software to control the operation of input and output I/O peripheral devices (e.g. keyboard, mouse, monitor etc…)

- **User management:**

Users can be added and removed from the network, allowing for network hardware to be shared. Users can authenticate themselves with a username and password. It can control the amount of storage a user can have, so storage can be shared.

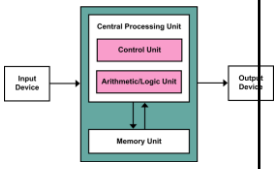
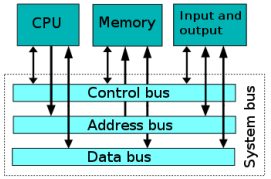
- **Process Management:**

  Process Management – allocates time with the processor (CPU) to each task / process that need to be completed.

- **Round Robin Scheduling:**

Round Robin scheduling allocates time slices with the CPU, with higher priority tasks receiving more slices. Processes wait in a queue waiting to the executed by the CPU.

Year 11 GCSE Computer science: Computers

Components of the CPU	Fetch-Decode-Execute Cycle (FDE) and System Bus	Secondary Storage	Embedded Systems	The Operating System
Main components of the CPU. . **State the two items stored in main memory (RAM), as binary, in the fetch-decode-execute cycle:** **1.** **2.** 	**Fetch-Decode-Execute Cycle** **What are the 3 types of bus in the system bus, and what is their role in the fetch decode-execute cycle?** **1.** **2.** **3.** 	**Physical secondary storage** **1.** **2.** **3.** 	**Embedded systems** **What are some of the features of an embedded system?** **Give an example of an embedded system and explain how it works.** 	**Operating system's** • **File Management:** • **Peripheral Management:** • **User management:** • **Process Management:** • **Round Robin Scheduling:**

Year 11 GCSE Computer science: Computers

Utility Software

Describe the role of each type of utility software:

- **File repair:**

File Repair Software – Recovers data and repairs corrupted files

- **Backup:**

Backup Software – keep a copy of files so that, they can be restored if they are lost or damaged.

- **Data Compression:**

Reduces file size, to save storage space and reduce transmission time over networks.

- **Disk Defragmentation:**

Defragmentation Software – rearranges **blocks** in storage to speed up file access on a **magnetic hard disk**.

- **Anti-Malware:**

Anti-Malware Software – To protect the computer and data from damage caused by malware (e.g. viruses, spyware, worms and trojans).

Robust Software

What does the term robust mean, in terms of software?

Robust software is software that can handle unexpected actions without crashing, producing incorrect output, and it is free from vulnerabilities that cyber criminals might exploit.

What are the common vulnerabilities that software code can have?

- > Specific programming language vulnerabilities
- > Security
- > Weak design
- > Not tested well enough
- > Unencrypted sensitive data
- > Lack of validation, allowing incorrect input
- > Lack of authentication, allowing hackers to gain access

What is a code review and what is its purpose?

Code Review – a check to see that software meets standards, is efficient, and looks for potential vulnerabilities

If software code is not up to standard, inefficient, or vulnerable to attack, it can be identified and fixed.

What is an audit trail and what is its purpose?

An audit trail keeps track of who made what changes and when during an audit.

Advantages:

- ➢ Problems can be tracked back to source if discovered.
- ➢ Code can be rolled back to a previous version before a problem / weakness occurred.

High and Low Level Programming Languages

What is a low level language?

Machine code, or assembly language, that interacts directly with the computer hardware.

Name an advantage of a low level language:

Memory is used efficiently as it interacts directly with hardware.

Name two disadvantages of low level languages:

Difficult and time consuming to use

Machine specific, won't run on other devices.

What is a high level language?

More human like programming language (e.g. Python) .

Name two advantages of high level languages:

Programmer friendly (easier to use)

Maintenance and debugging tools

Name one disadvantage of high level languages:

Less memory efficient (uses more memory and system resources).

Translators

What is the role of translator software?

To translate from a higher level language into binary machine code.

What are the two types of translators used of high level languages and how do they work?

1. **Interpreter**

Translates line-by-line.

When errors are found they can be debugged immediately

Not Platform specific and can be run on different OSs

Easily edited as it is always source code

Slow to run as it is line-by-line

2. **Compiler**

Translation is done in one go.

Once translated the program will run more quickly

Errors are only reported at the end.

Cannot change the program without editing source code.

Year 11 GCSE Computer science: Computers

Utility Software

Describe the role of each type of utility software:

- **File repair:**

- **Backup:**

- **Data Compression:**

- **Disk Defragmentation:**

- **Anti-Malware:**

Robust Software

What does the term robust mean, in terms of software?

What are the common vulnerabilities that software code can have?

-
-
-

What is a code review and what is its purpose?

What is an audit trail and what is its purpose?

High and Low Level Programming Languages

What is a low level language?

Name an advantage of a low level language:

Name two disadvantages of low level languages:

What is a high level language?

Name two advantages of high level languages:

Name one disadvantage of high level languages:

Translators

What is the role of translator software?

What are the two types of translators used of high level languages and how do they work?

1.

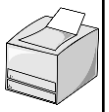
2.

Year 11 GCSE Computer science: Networks

Why computers are connected in a network

List reasons why computers are connected together in a network.

- **Can share peripherals (printers, speakers);**



Allows communication.

- **Can share connectivity (Internet connection, hotspot);**

Can share files/data;

- **Can share applications/software;**

- **Can collaborate;**

- **Can provide centralised support and backup.**

Understand the difference between LANs and WANs

Describe what a Local Area Network (LAN) is?

A LAN is a network, which connects together computers at a single building, or site

Describe what a Wide Area Network (WAN) is?

A WAN is a network, which connects together LANs across a large geographical area (i.e. town, country, the world).

IP Addressing

Describe what an IP Address is?

A unique numerical address, providing the location of a device connected to the Internet. To allow devices to send and receive data packets.

What is a Domain Name?

A human friendly identification for locations on the WWW.

What is the role of the Domain Name Server (DNS)?

Holds a list of domain names and their corresponding IP addresses, required when clients request a web-page, or data from a web-server.

What happens when a web-page is requested by a web-browser?

The user sends the request via their web-browser, which is carried by the Internet Service Provider (ISP). The ISP sends the request to the DNS, which returns the correct IP address for the website/data, the request is then sent to the web-server on the Internet at the specified IP address and the web-page/data is then returned to the original requester's IP address via the ISP.

Packet Switching

Describe what a data packet is.

Before a file can be transmitted across a network / the Internet it must be broken into smaller sized data packets, this speeds up transfer, it reduces the need to send data down a single pathway (use of packet switching), and reduces data corruption.

What is the contents of a Data Packet?

- Recipient IP Address
- Sender's IP Address
- Sequence number
- Total Number of Packets
- Checksum

Header:

The part of data being sent web-page, email, or other type of file (e.g. an image)

Payload:

End of packet flag

Footer:

Routers form a physical connection between networks and forward data packets from one network to another.

What is the role of a Router in a network?

The routing table is used to find the most efficient route for a data packet on the next leg of its journey.

Wired Vs Wireless

Name the two types of wired network connectivity types and describe how each transmits data:

Copper cable – electricity /

- electrons passed down the cable representing 0 and 1.

Fibre-optic cable – light / photons

- passed down the cable representing 0 and 1.

Which type of wired connectivity will transmit data at the highest speed (largest bandwidth):

Fibre-optic cable – light photons travel faster than electrons

Wi-Fi and Bluetooth are Wireless connectivity types, how do they transmit data:

Radio waves

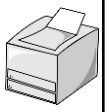
What are the benefits of using the RFID (*used in security tags*) and NFC (*used for smartphone contactless payments*) wireless transmission methods compared to Wi-Fi:

RFID and NFC require much less power compared to WiFi.

RFID chips do not require a power source.

NFC also has a very short range which is important for making payments securely, as data transmission is less likely to be intercepted by a 3rd party.

Year 11 GCSE Computer science: Networks

Why computers are connected in a network	Understand the difference between LANs and WANs	IP Addressing	Packet Switching	Wired Vs Wireless
List reasons why computers are connected together in a network. •  • • • • •	**Describe what a Local Area Network (LAN) is?** **Describe what a Wide Area Network (WAN) is?** 	**Describe what an IP Address is?** **What is a Domain Name?** **What is the role of the Domain Name Server (DNS)?** **What happens when a web-page is requested by a web-browser?**	**Describe what a data packet is.** **What is the contents of a Data Packet?** **Header:** **Payload:** **Footer:** **What is the role of a Router in a network?**	**Name the two types of wired network connectivity types and describe how each transmits data:** • • **Which type of wired connectivity will transmit data at the highest speed (largest bandwidth):** **Wi-Fi and Bluetooth are Wireless connectivity types, how do they transmit data:** **What are the benefits of using the RFID (*used in security tags*) and NFC (*used for smartphone contactless payments*) wireless transmission methods compared to Wi-Fi:**

Year 11 GCSE Computer science: Networks

Data Transmission Speed and Latency

How do we calculate the transmission time of a file if we know the size in Mebibytes (MiB) and the Transmission Speed in Megabits per second (Mbps)?

$$\frac{\text{File size in bits}}{\text{Speed in bps}}$$

e.g. A 10MiB file, transferred at 50Mbps:

MiB> KiB> Bytes> Bits

$$\frac{10 \times 1024 \times 1024 \times 8}{50 \times \mathbf{1{,}000{,}000}}$$

Describe what latency is.

The delay between a data signal being sent and it being received on a computer network.

Protocols

What are the 3 email protocols and describe how they work.

- **IMAP – The emails are stored on the email server, they don't have to be downloaded, and can be accessed from multiple devices (that have internet access).**
- **POP – Removes the email from the email server, when the email is downloaded by the email client, to a single device. The downloaded emails are stored on the users device so they can be viewed offline.**
- **SMTP – Provides the rules for sending emails from client to server and from server to server until it reaches its destination.**

Describe the purpose of the following communication protocols:

HTTP / HTTPS:

Rules for requesting, sending and receiving data through a web-browser (e.g. web-pages). Client web-browsers will request web-content from a web-server. HTTPS is the secure (encrypted) version of HTTP

FTP:

File Transfer Protocol – rules for file transfer between computers. Used to transfer files that are too large to transfer by email.

TCP / IP Model

Describe the purpose of each layer of the TCP/IP protocol stack:

Application Layer

Sending:

Displays received information to the user (e.g. a web-page, or social media app newsfeed).

Receiving:

Interface and protocols needed by the user (e.g. HTTP when using a web-browser)

Transport Layer

Sending:

Splits files into data packets, and assigns a sequence number and checksum to the packets.

Receiving:

Checks incoming packets for missing/damaged ones and reassembles the packets in order.

Internet Layer

Sending:

Adds destination IP address to packets, to be read by routers, so they can be forwarded to the receiver.

Receiving:

Strips address information from incoming packet headers.

Link/Network Layer

Sending:

Converts data into either electrical (copper cable), light (fibre-optic), or radio wave (Wi-Fi), depending on network media used for transmission.

Receiving:

Converts incoming signals into binary data.

Network Topologies

Give 2 advantages and 2 disadvantages for each network topology:

Advantages of a Star Topology:

- Efficiency – Network traffic kept to minimum with connection to each device.
- Easy to add new devices without disruption

Disadvantages of a Star Topology:

- If the central point fails the entire network fails.
- Requires a lot of cabling to connect each device to a central hub/switch.

Advantages of a Mesh Topology:

- If one component fails the there is always and alternate route for data.
- Can handle high volumes of data efficiently.

Disadvantages of a Mesh Topology:

- Overall cost is high due to caballing, unless wireless is used.
- Difficult to manage and required expert supervision.

Advantages of a Bus Topology:

- Easy to setup. Cheap to install.
- Easy to add additional devices.

Disadvantages of a Bus Topology:

- Lots of data collisions when multiple devices transmit data at the same time.
- If the main cable is damaged the network fails.

Network Security

What is the purpose of network security?

Ensures only authorized users can access a system, that users can only access data relevant to them and prevents misuse of data and hardware.

Why is network security important for a business?

Network data is vital for running a business. Sensitive data must be kept private. The data might be financially valuable.

Describe the purpose of penetration testing:

Used to test a computer system, or network to find vulnerabilities that attackers can exploit, so they can be fixed/patched.

What is white-box penetration testing?

The tester is given access to the network/system, they use this to identify vulnerabilities.

What is black-box penetration testing?

The tester is given no information about the network/system and must try to breach security using techniques used by real hackers.

What is an ethical hacker?

White-hat hacker – looks for vulnerabilities in systems to warn organisations about their security weaknesses.

Year 11 GCSE Computer science: Networks

Data Transmission Speed and Latency

How do we calculate the transmission time of a file if we know the size in Mebibytes (MiB) and the Transmission Speed in Megabits per second (Mbps)?

Describe what latency is.

Protocols

What are the 3 email protocols and describe how they work.

-
-
-

Describe the purpose of the following communication protocols:

HTTP / HTTPS:

FTP:

TCP / IP Model

Describe the purpose of each layer of the TCP/IP protocol stack:

Application Layer
Sending:

Receiving:

Transport Layer
Sending:

Receiving:

Internet Layer
Sending:

Receiving:

Link/Network Layer
Sending:

Receiving:

Network Topologies

Give 2 advantages and 2 disadvantages for each network topology:

Advantages of a Star Topology:

-
-

Disadvantages of a Star Topology:

-
-

Advantages of a Mesh Topology:

-
-

Disadvantages of a Mesh Topology:

-
-

Advantages of a Bus Topology:

-
-

Disadvantages of a Bus Topology:

-
-

Network Security

What is the purpose of network security?

Why is network security important for a business?

Describe the purpose of penetration testing:

What is white-box penetration testing?

What is black-box penetration testing?

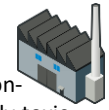
What is an ethical hacker?

Year 11 GCSE Computer science: Issues and Impacts

Environmental Issues

Give two examples of the environmental issues related to the following areas of computing:

Manufacturing:



- Some raw materials are non-renewable, and some highly toxic.
- Mining for raw materials damages the environment.
- Pollution is a by-product of manufacturing.

Disposal of computer hardwar

- Disposal creates large amounts of e-waste.
- E-waste is sometimes illegally dumped in landfill sites, toxic elements can then pollute the environment causing health issues for humans and wildlife.
- Some e-waste cannot be recycled.

Energy Consumption:

- Energy consumption is used when producing computer equipment; running computing devices; running online data centres; and recycling of equipment.
- Much of the energy used in computing is generated by non-renewable energy sources, which can be highly polluting.

Environmental Issues

What is a 'Short Replacement Cycle?'

Users will trade old devices in for newer models roughly every 3 years. This adds to the problem of e-waste generation and manufacturing issues.

Describe three ways that computing energy consumption can be reduced:

Adjusting energy settings on devices, e.g. screen brightness.

Turn off wireless connectivity to save power.

Choose low energy devices when replacing computing equipment.

Describe 3 ways responsible recycling of computing equipment can address some of the problems associated e-waste:

> It will reduce the potential for toxic / chemical leaks and fires at landfill sites
> It will recover valuable metals.
> Reduce the need for mining.
> Enable recycling of plastics.
> Reduce the amount of harmful toxins in the air.

Describe a positive impact that digital technology can have on the environment:

Smart lighting can turn off lights when not in use, reducing energy consumption.

Personal Data

Describe what a digital footprint is:

The trail of personal data left behind each time someone uses the Internet e.g. website visits, online posts; and emails.

Describe 2 benefits to 'Data Subjects' of organisations collecting their personal data:

1. Personalisation -Advertisements can be personalised, by analysing our preferences.
2. Convenience - It can be more convenient for our payment information to be stored for future purchases.

Describe 2 drawbacks / concerns to 'Data Subjects' of organisations collecting their personal data:

Our privacy is invaded by organisations analysing our personal data.

People could be discriminated against because of their personal data.

If a data breach happens personal data can end up in the hands of criminals.

Describe 2 ethical issues linked to the ownership of data and who can use it:

1. Some data is not owned by the data subject e.g. NHS patient data.
2. Online retailers sell customer data to 3rd parties. Google sells people's search history

Legislation

Give examples of rules / principles that organisations must follow, in relation to the Data Protection Act and GDPR, when collecting personal data from customers.

The user must give consent

The user can say no / refuse consent

Users are not denied service, if they say no

Users must be told what the data is being collected for

Users told what processing will be done on their data/purpose of the processing/how data will be processed
Users can withdraw consent at any time

Users informed if the data will be shared (with third parties)

Users told how long it will be stored

The data will be stored securely

Artificial Intelligence

Describe what Artificial Intelligence (A.I.) is:

Computer systems capable of performing tasks that would typically require human intelligence, such as pattern recognition, decision making, and problem solving.

Describe the process of 'Machine Learning':

Learning algorithms, that can learn by looking for rules and patterns in data. The get progressively better at this and can learn from their mistakes.

Describe what is meant by the term 'Narrow A.I.':

Machine learning systems designed to perform a single task, or limited range of tasks. They cannot perform tasks outside of their intended use.

Describe 2 causes of 'Algorithmic Bias':

The dataset used to train the AI is biased.
There is a flaw in the design of the algorithm.
Developers introduce their own biases.

Describe 2 ways Algorithmic Bias can be prevented:

1. Using a diverse and representative data set to train algorithms, can reduce biases.
2. Adopting ethical guidelines and best practices for the development and use of algorithms, to ensure they are developed in a fair and responsible. manner

Year 11 GCSE Computer science: Issues and Impacts

Environmental Issues	Environmental Issues	Personal Data	Legislation	Artificial Intelligence
Give two examples of the environmental issues related to the following areas of computing: Manufacturing: • • Disposal of computer hardwar • • Energy Consumption: • •	What is a 'Short Replacement Cycle?' Describe three ways that computing energy consumption can be reduced: Describe 3 ways responsible recycling of computing equipment can address some of the problems associated e-waste: Describe a positive impact that digital technology can have on the environment:	Describe what a digital footprint is: Describe 2 benefits to 'Data Subjects' of organisations collecting their personal data: 1. 2. Describe 2 drawbacks / concerns to 'Data Subjects' of organisations collecting their personal data: Describe 2 ethical issues linked to the ownership of data and who can use it: 1. 2.	Give examples of rules / principles that organisations must follow, in relation to the Data Protection Act and GDPR, when collecting personal data from customers.	Describe what Artificial Intelligence (A.I.) is: Describe the process of 'Machine Learning': Describe what is meant by the term 'Narrow A.I.': Describe 2 causes of 'Algorithmic Bias': Describe 2 ways Algorithmic Bias can be prevented: 1. 2.

Year 11 GCSE Computer science: Issues and Impacts

Protecting Intellectual Property

What is intellectual property?

Intellectual property is creations of the mind (original ideas), such as inventions; literary and artistic works; software; and symbols etc…

What are the 4 ways that different types of intellectual property can be protected, and what type of intellectual property is each designed to protect?

1. Copyright describes the rights creators automatically gain to their original creations. This can cover books, music, films, computer programs, databases.

2. A Patent is an exclusive right granted for an invention. You must apply for a patent by disclosing technical information of the invention to the Intellectual Property Office.

3. A licence can be given by the copyright holder, allowing someone to use their work (e.g software licence), following a set of legally binding rules for its use.

TM

4. A Trademark is a name or symbol that uniquely identifies the products or services of a company and is protected by intellectual property rights. You need to register a trademark with the Intellectual Property Office.

Open Source Vs Proprietary Software

Describe what Open Source Software is:

Software that is distributed with a licence that allows anyone to use, view, modify and share the source code.

Give 3 benefits of Open Source software:

1. Users have access to the source code and can modify it and then
2. redistribute it.
   It can be installed on any number of
3. machines at the same time.
   It is usually free to use.

Give a drawback of Open Source software:

- It may have bugs, or not be fully tested.
  Users might need special knowledge to install/use it.

Describe what Proprietary Software is:

Software that is owned by an individual, or an organisation. The source code is protected and it is illegal to modify it.

Give 3 benefits of Proprietary software:

Thoroughly tested by developer.

1. Supported by a dedicated team of developers.
2. Extensive support.

Give 2 drawbacks of Proprietary software:

1. Users do not have permission to modify the software, it's protected
2. by copyright.
   Usually paid for, on a user, or per-machine basis.

Malware Threats to Systems

Describe how following Malware threats work:

Virus:

Viruses – insert themselves into another program, waiting for the host program to run.

Worm:

Worms - move from one network device to the next independently, by making copies of themselves

Trojan

Trojan – pretends to be a legitimate piece of software that tricks users into downloading and running it

Ransomware:

Ransomware – encrypts a victim's data and demands that a ransom is paid to recover the data.

Spyware - Keyloggers:

Keylogger – secretly records keystrokes by the user and allows a hacker get valuable information, such as passwords.

Botnet:

Botnet – allows a hacker to control a large number of infected computers and other networked devices. These can be used to commit DDoS attacks

Technical Vulnerabilities and Social Engineering

Describe the following Technical Vulnerabilities:

Unpatched software:

Security flaws in software can be exploited by hackers in zero-day attacks. Unpatched software is vulnerable

Out-of-Date anti-malware:

Anti-malware only works if it is kept up-to-date with the latest definitions for new malware types.

Open ports:

Hackers can scan for open internet ports on systems using software services that access the Internet and target these ports for attack.

Default Admin Passwords:

Some hardware devices e.g. routers, modems, servers, might have factory set passwords, if unchanged hackers can exploit this weakness

Describe the following Social Engineering methods used by cyber-criminals:

Phishing:

Fraudulent emails are sent pretending to be from a genuine organisation. They trick users into clicking links to fake sites that will ask for personal information.

Pretexting (blagging):

Backups mean that an organisation's data can be restored if it lost, or damaged. Full backup saves all system data, incremental saves only the changes, since the last backup.

Shoulder Surfing:

Looking over a victim's shoulder, or videoing them, while they type in PIN, or passwords.

Baiting:

Free giveaways, leaving infected USB sticks on the floor, tricking a victim into installing malware on their device.

Protecting Digital Systems

Describe how the following protection methods protect data and systems:

Firewall:

A firewall prevents unwanted internet traffic from accessing a system. It filters data, blocking illegitimate access, or cyber threats

Anti-Malware:

Anti-malware scans files for malware signature patterns, if found files can be cleaned, viruses can be quarantined, or removed.

Encryption of data:

Scammers will communicate with victims, using a pre-text of an emergency situation, or issue to trick them out of financial information, or passwords.

Backups:

Encryption scrambles data using a key, if the data is intercepted by unauthorised users they cannot read it.

Describe what an 'Acceptable Use Policy' is:

An Acceptable Use Policy (AUP) can protect systems against social engineering, where users might be tricked into making mistakes, or using a system foolishly.
AUPs set the rules for use of digital systems, such as appropriate behaviour (e.g. logging off / lock devices after use; use secure passwords and don't share them; scan email attachments before opening; Don't install downloaded software; Don't use USB sticks etc…).

Year 11 GCSE Computer science: Issues and Impacts

Protecting Intellectual Property

What is intellectual property?

What are the 4 ways that different types of intellectual property can be protected, and what type of intellectual property is each designed to protect?

1.

2.

3.

TM

4.

Open Source Vs Proprietary Software

Describe what Open Source Software is:

Give 3 benefits of Open Source software:

1.

2.

3.

Give a drawback of Open Source software:

•

Describe what Proprietary Software is:

Give 3 benefits of Proprietary software:

1.

2.

Give 2 drawbacks of Proprietary software:

1.

2.

Malware Threats to Systems

Describe how following Malware threats work:

Virus:

Worm:

Trojan

Ransomware:

Spyware - Keyloggers:

Botnet:

Technical Vulnerabilities and Social Engineering

Describe the following Technical Vulnerabilities:

Unpatched software:

Out-of-Date anti-malware:

Open ports:

Default Admin Passwords:

Describe the following Social Engineering methods used by cyber-criminals:

Phishing:

Pretexting (blagging):

Shoulder Surfing:

Baiting:

Protecting Digital Systems

Describe how the following protection methods protect data and systems:

Firewall:

Anti-Malware:

Encryption of data:

Backups:

Describe what an 'Acceptable Use Policy' is:

Year 11 BTEC DIT: Cyber Security

Why are systems attacked? pg22

- **Data theft** – e.g. stealing customer payment information.
- **Personal fun/challenge** – some hackers enjoy the challenge of defeating system security and gain notoriety from peers.
- **Industrial Espionage** – Some businesses or individuals may try to access other businesses' systems to steal designs, plans, or trade secrets to get an edge on the competition.
- **Financial gain** – some cyberattacks are motivated by money. e.g. theft of payment details, stealing goods, and Ransomware.
- **Personal attack** – e.g. disgruntled form employees, or customers with a grudge my attack an organisations systems.
- **Disruption** – Individuals, organisations and countries may try to prevent an organisation from functioning.

External Threats pg23+24

- **Social Engineering** – Shoulder surfing and phishing.
- **Malware**:
  - Viruses
  - Worms
  - Trojans
  - Spyware
  - Botnets
  - Rootkits
  - Ransomware

- **Hackers**
- **Denial of Service (DDoS)**
- **Man in the middle attacks**
- **Natural Disasters**

Internal Threats pg25

Visiting untrustworthy websites:
Employees might visit untrustworthy sites, or follow links in emails, which could install malware on the system.

Accidental/Unintended disclosure of data:
Unwittingly giving out personal, or confidential data with good intention.

Stealing/leaking information:
Employees might be approached by rival organisations to supply them with data, plans, or trade secrets.

Overriding security controls:
Employees might override security controls to allow them to install unauthorised software, gain confidential information, or to allow unauthorised users to use the system.

Use of portable storage devices (USB sticks):
Employees might insert USB memory sticks that might contain viruses into a work computer, which then could infect the system.

Downloading from the internet:
Employees could download music, games, or other files from the internet, which could contain malware. Many organisations have policies and firewalls

Impact of a Security Breach pg26

Data loss:
If data is deleted, lost, or encrypted by ransomware is could be difficult, impossible, or costly to retrieve.

Damage to public image:
If a security breach is reported in the media, customers might lose trust in an organisation and choose not to buy from them again.

Financial loss:
If a company loses money as the result of an attack, from fines, or theft, or ransom, it could affect profits and reduce future investment in the business.

Reduced productivity:
Time take to deal with a security breach and resolve problems might mean staff are not working normally, time is wasted and productivity lost.

Downtime:
When a security breach is discovered, systems my need to be shut down for investigation. This may affect the running of the organisation

Legal action:
If a security breach affects personal data, this could lead to fines as a result of legal action , and damages being paid to those affected.

Year 11 BTEC DIT: Cyber Security

Describe why systems are attacked	What are external threats?	Describe internal threats	What are the impacts of a security breach?
• Data theft –		Visiting untrustworthy websites:	• -
• Personal fun/challenge –		Accidental/Unintended disclosure of data:	• -
• Industrial Espionage –		Stealing/leaking information:	• -
• Financial gain –		Overriding security controls:	• -
• Personal attack –		Use of portable storage devices (USB sticks):	• -
• Disruption –		Downloading from the internet:	• -

Year 11 BTEC DIT: Cyber Security

User Access Restrictions pg27+28

Advantage of physical security:
Electronic locks record who enters or leaves.

Disadvantage of physical security:
Keys/swipe cards may be lost, copied, or stolen. PIN numbers might be written down by users.

Advantage of passwords:
Simple and cheap security method to set up

Disadvantage of passwords:
Strong passwords are difficult to remember, and do not protect from phishing.

Advantage of biometric security:
Alternative to hard to remember passwords, and difficult to copy.

Disadvantage of biometric security:
Expensive to setup as specialist equipment is needed.

Advantage of access restrictions:
Users who need to view files can do so but cannot cause problems by making unauthorised changes

Disadvantage of access restrictions:
Technical staff needed to setup. Access levels need to be just right.

Advantage of 2FA:
Higher level of security than just a password, nothing additional to remember

Disadvantage of 2FA:
It can require additional hardware or software.

Data Level Protection pg29

How a firewall protects a system:
A firewall prevents unwanted internet traffic from accessing a system. It filters data, blocking illegitimate access, or cyber threats.

Benefits of using a firewall:
- Firewalls help block suspicious or malicious data, such as hackers trying to access a system.
- Software firewalls are easy to install and update.

Drawbacks of using firewalls:
- Hardware firewalls can be expensive.
- Configuring firewalls can be complex.
- They sometimes block legitimate traffic.

Ways that interface design can be used to protect data:
- Obscuring data entry, covering passwords with ****
- Using autocomplete for login details avoids typing in usernames and passwords.
- CAPTCHA tests can prevent bots from making repeated logins.

Data Level Protection (Device Hardening) pg29

Measures that can be taken to 'harden' or protect a device against malware and cyber attacks:

- Antivirus / anti-malware software protects computers from known malware and removes, or quarantines malware.
- Restrict user access with authentication (e.g. passwords, biometrics, 2FA etc…)
- Ensure security patches are installed and up to date.
- Install firewall software
- Uninstall software that is no longer required, or unsupported
- Remove old user accounts
- Use strong passwords
- Ensure default passwords on routers and other devices are changed.

Year 11 BTEC DIT: Cyber Security

Explain user access restrictions below:

Advantage of physical security:

Disadvantage of physical security:

Advantage of passwords:

Disadvantage of passwords:

Advantage of biometric security:

Disadvantage of biometric security:

Advantage of access restrictions:

Disadvantage of access restrictions:

Advantage of 2FA:

Disadvantage of 2FA:

Describe data level protection below:

How a firewall protects a system:

Benefits of using a firewall:

Drawbacks of using firewalls:

Ways that interface design can be used to protect data:

What is data level protection?

Measures that can be taken to 'harden' or protect a device against malware and cyber attacks:

- -
- -
- -
- -
- -
- -

Year 11 BTEC DIT: Cyber Security

Improving System Security pg32

Key term: Penetration testing

- Penetration testing involves ethical white-hat hackers attempting to break into a system to test whether it is properly protected.
- The ethical hacker will then explain to an organisation, how to tighten security vulnerabilities.

Advantage of penetration testing:

Testing uses methods that real hackers use so is a realistic test. Vulnerabilities can be spotted and fixed

Disadvantage of penetration testing:

Can be expensive, and just because one hacker could not breach the system, other hackers still could.

Key Term: Ethical Hackers

White-hat hackers:

An independent security specialist who is authorised to test a system for security weaknesses.

Grey-hat hackers:

An independent security specialist who might discover an organisation's security vulnerabilities without permission and sometimes break the law.

Policies pg33

Internet usage policy: What internet websites and apps can and cannot be visited/used when at work.

Email policy: Appropriate use of email and how to deal with attachments from unknown sources.

External devices policy: Rules on whether USB sticks and portable hard drives are permitted.

Password policy: Rules for making a strong password (complexity) and guidelines for keeping passwords secure.

Software policy: Rules on how software should be used and on downloading and installing software (is it allowed?).

Personal devices policy: Rules about use of personal devices, such as smartphones and connecting them to company systems.

Disposal of equipment policy: Rules about deleting data before disposing of a device and following environmentally friendly rules for disposal.

Backup policy: How data is backed up, who backs it up and how often.

Disaster Recovery Policy pg36+37

Disaster recovery policy: A disaster recovery policy sets out a plan for what to do if digital systems become unavailable, due to a cyber attack, equipment failure, data loss, fire, terrorism, or other problem/threat.

1. Investigate

Identify the type of attack. When did it start? How bad is it? What parts of the system are affected?

2. Respond

Depending how bad the attack is: Inform relevant stakeholders, such as customers and ICO; Report to the police if a crime has been committed.

3. Manage

Contain the attack: Disconnect, or shut down affected systems to prevent spread. Keep evidence for an investigation.

4. Recover

Disinfect digital systems, restore data from backups, return systems to full working order.

5. Analyse

Identify the source of the attack. How did they gain access? Modify procedures, policies and system configuration as required to protect from further attack. Train staff how to prevent similar problems.

Year 11 BTEC DIT: Cyber Security

Improving System Security

Key term: Penetration testing

- Penetration testing involves ethical white-hat hackers attempting to break into a system to test whether it is properly protected.
- The ethical hacker will then explain to an organisation, how to tighten security vulnerabilities.

Advantage of penetration testing:

Disadvantage of penetration testing:

Key Term: Ethical Hackers

White-hat hackers:

Grey-hat hackers:

Describe each policy below:

Internet usage policy:

Email policy:

External devices policy:

Password policy:

Software policy:

Personal devices policy:

Disposal of equipment policy:

Backup policy:

What are the steps to disaster recovery policy?

Disaster recovery policy: A disaster recovery policy sets out a plan for what to do if digital systems become unavailable, due to a cyber attack, equipment failure, data loss, fire, terrorism, or other problem/threat.

1. _____

Identify the type of attack. When did it start? How bad is it? What parts of the system are affected?

2. _____

Depending how bad the attack is: Inform relevant stakeholders, such as customers and ICO; Report to the police if a crime has been committed.

3. _____

Contain the attack: Disconnect, or shut down affected systems to prevent spread. Keep evidence for an investigation.

4. _____

Disinfect digital systems, restore data from backups, return systems to full working order.

5. _____

Identify the source of the attack. How did they gain access? Modify procedures, policies and system configuration as required to protect from further attack. Train staff how to prevent similar problems.

Year 11 BTEC DIT: Modern technology

Communication Technologies

Ad hoc networks –

What is 'Open Wi-Fi'?

Usually free, public access wireless network, offering internet access, provided in cafes, hotels, airports etc…

What is 'tethering'?

Connecting an internet enabled device (e.g. Smartphone), to another device (e.g. laptop) to share an internet connection.

What is a 'personal hotspot'?

Devices can be tethered to each other using a personal Wi-Fi, or Bluetooth hotspot.

List some advantages of using ad hoc networks like open Wi-Fi, tethering and hotspots:

- Personal hotspots can provide internet access to devices without their own connectivity.
- Open Wi-Fi allows internet access without using your own data allowance.
- Users can work remotely with mobile internet connections.
- Simple to setup and connect
- Internet can be accessed in most locations

Issues with Ad-Hoc Networks

What are the security issues (dangers) when using open Wi-Fi networks?

Open Wi-Fi is usually unencrypted, which means data in not secure, it can be easily intercepted, by an eavesdropper. If the data is not encrypted it can then be read.

What are the issues that affect performance with ad hoc networks?

- When tethering devices to share an internet connection, it can slow the connection for each device due to the bandwidth being shared
- Public Wi-Fi hotspots may be slow if lots of people are using them.
- Ad hoc networks have a limited range, so any device using the network needs to be fairly close.
- Mobile internet signal may be weak if you are not close to a transmitter.

What issues can affect network availability?

- **Blackspots** – buildings and geographical features can block the network signal.

- **Mobile network coverage** can be poor in certain areas.

- **Location** – Rural areas, and less well developed countries might not have the same access to high speed internet.

Cloud Storage

What is cloud storage?

Storing files and data online, on remote servers. This data can be accessed via an internet connection.

List 5 benefits of cloud storage:

1. Files and data can be accessed on multiple devices with an internet connection.
2. Cloud storage offers 24/7/365 access to data.
3. Files are automatically synchronised and changes are updated across all devices instantly.
4. It can be used to store backups of files and automatically backed up by the cloud provider.
5. **Scalability** – Storage space can be easily increased / decreased depending on need.

List 5 drawbacks of cloud storage:

1. >Internet access is required to access cloud storage.
2. >Slow internet connections will affect upload and download speed of files.
3. >Once free storage limits are reached, additional cloud storage will need to be paid for.
4. >There may be delays in synchronisation if the service also stores data locally
5. >Users have to trust that the cloud provider will secure and protect their data

Cloud Computing

What is cloud computing?

Applications software that is accessed online (WWW) through a web-browser e.g. Google Docs.

What are the benefits of using cloud computing instead of locally installed software applications?

1. Consistent versions of files across each device / user.
2. Can work collaboratively.

3. Access applications 24/7 with internet connection.

4. Can use different devices to access applications.

5. Access applications remotely (at home)

6. Maintenance is done by cloud service provider e.g. automatic updates, patches/fixes etc…

7. Automatic Backups.

Collaboration Tools

Describe what the benefits are of the following collaboration tools:

Sharing a single instance of a file (*the same file at the same time*):

Colleagues can work collaboratively on the same file at the same time. Changes can be accepted and rejected by other users.

Comments feature:

Users can leave comments in a document which allows them to ask questions and make suggestions, which can be relied to.

Version history (track-changes):

Changes made to documents can be tracked. The person who made the changes can be identified and previous versions can be restored.

Chat (Instant message and Video Calls):

Allows people to chat in real time to discuss a document and work collaboratively.

Suggested edits:

Users edits show up as suggested changes before agreeing to them.

Year 11 BTEC DIT: Modern technology

Communication Technologies	Issues with Ad-Hoc Networks	Cloud Storage	Cloud Computing	Collaboration Tools
Ad hoc networks – **What is 'Open Wi-Fi'?** **What is 'tethering'?** **What is a 'personal hotspot'?** **List some advantages of using ad hoc networks like open Wi-Fi, tethering and hotspots:** • • • • •	**What are the security issues (dangers) when using open Wi-Fi networks?** **What are the issues that affect performance with ad hoc networks?** • • • • **What issues can affect network availability?** • • • •	**What is cloud storage?** **List 5 benefits of cloud storage:** 1. 2. 3. 4. 5. **List 5 drawbacks of cloud storage:** 1. 2. 3. 4. 5.	**What is cloud computing?** **What are the benefits of using cloud computing instead of locally installed software applications?** 1. 2. 3. 4. 5. 6. 7.	**Describe what the benefits are of the following collaboration tools:** **Sharing a single instance of a file (*the same file at the same time*):** **Comments feature:** **Version history (track-changes):** **Chat (Instant message and Video Calls):** **Suggested edits:**

Year 11 BTEC DIT: Modern technology

Selection of Platform when Choosing Cloud Services

Describe the following considerations that organisations might consider when choosing a platform (device e.g. smartphone, laptop, desktop etc…), or cloud service:

Screen size and portability:

Desktop and laptop screens are larger and easier to use, but they are not as portable as a smartphone.

Interface Design:

Some functionality might not be available on small screens, or on different versions of an app.

Suitability for the intended purpose:

The application might not be suitable for the task it is required for.

Compatibility with existing systems:

Mobile and desktop versions of apps/applications might be different and incompatible with each other.

Speed of connectivity:

If an application is dependant on internet connectivity then a user experience will be poor if the signal strength is weak.

Hardware:

Cloud services do not require lots of local storage and high speed processors as applications are accessed through a web-browser online.

Features of Cloud Services

Describe the following features of cloud services:

Frequency of updates:

Cloud service providers will update software automatically, which is cheaper and gives access to new functions immediately.

Accessibility across devices:

Organisations need to be sure they can reach cloud services across a range of devices.

Methods of working:

Cloud services might be less feature rich, but support file sharing and collaborative working.

Ease of use:

Cloud services need to be easy to use, to avoid additional support needs and costs.

Storage:

Once free storage limits are reached, additional cloud storage will need to be paid for, which can be scaled up or down. .

Free or paid for:

Most cloud services are free, with limitations, which might require additional spending.

Security:

Advanced data security on cloud services may cost more.

Synchronisation:

Offline documents can be synchronised with online versions, when internet access becomes available, sharing latest versions.

Modern Teams

Describe the following benefits of using technology to work collaboratively in a modern team:

Working 24/7/365:

Teams working across different time zones can communicate through email, messaging and document sharing, this means teams can communicate at any times and working hours are more flexible.

Working Flexibly:

People can work in places and at times that suit them an their needs.

Working Globally:

Organisations can employ workers with the right skillsets from around the world using collaborative technologies.

Inclusivity (for workers with accessibility needs):

Collaborative technologies enable individuals with health-related issues to work actively in a team. Accessibility features allow people with disabilities to work within a team.

Collaboration and Communication Tools

Describe how an organisation might use the following communication and collaboration tools:

Email:

Messages sent between the team or a group email to everyone in the team

Social Media:

Social media – it can be used to communicate with public, or private groups with an organisation.

Online Meetings and chat apps:

Video chat (VoIP) – to hold face-to-face meetings between staff.

To-do lists:

Used to identify tasks the team needs to complete and allocate a team member to them.

Shared message boards:

Allow users to ask, or answer questions.

Shared online calendar:

Enables teams to schedule meeting and send email invites to meetings.

Online scheduling and planning tools

Enable teams to plan how a project is completed and when goals and objectives should be met.

Impact on Infrastructure

Give one advantage and one disadvantage of using a locally installed platform:

Advantage:

It may run faster than a web-based app.

Disadvantage:

Only accessible on the users computer, which limits collaborative working.

Give one advantage and one disadvantage of using a web-based platform:

Advantage:

Accessible anywhere via an internet connection.

Disadvantage:

Requires an internet connection to function, which might be slow if the connection is poor.

Year 11 BTEC DIT: Modern technology

Selection of Platform when Choosing Cloud Services	Features of Cloud Services	Modern Teams	Collaboration and Communication Tools	Impact on Infrastructure
Describe the following considerations that organisations might consider when choosing a platform (device e.g. smartphone, laptop, desktop etc…), or cloud service: Screen size and portability: Interface Design: Suitability for the intended purpose: Compatibility with existing systems: Speed of connectivity: Hardware:	Describe the following features of cloud services: Frequency of updates: Accessibility across devices: Methods of working: Ease of use: Storage: Free or paid for: Security: Synchronisation:	Describe the following benefits of using technology to work collaboratively in a modern team: Working 24/7/365: Working Flexibly: Working Globally: Inclusivity (for workers with accessibility needs):	Describe how an organisation might use the following communication and collaboration tools: Email: Social Media: Online Meetings and chat apps: To-do lists: Shared message boards: Shared online calendar: Online scheduling and planning tools	Give one advantage and one disadvantage of using a locally installed platform: Advantage: Disadvantage: Give one advantage and one disadvantage of using a web-based platform: Advantage: Disadvantage:

Year 11 BTEC DIT: Cyber security

Why are systems attacked?

List the reasons why systems are attacked:

- Data theft – e.g. stealing customer payment information.
- Personal fun/challenge – some hackers enjoy the challenge of defeating system security and gain notoriety from peers.
- Industrial Espionage – Some businesses or individuals may try to access other businesses' systems to steal designs, plans, or trade secrets to get an edge on the competition.
- Financial gain – some cyberattacks are motivated by money. e.g. theft of payment details, stealing goods, and Ransomware.
- Personal attack – e.g. disgruntled former employees, or customers with a grudge may attack an organisations systems.
- Disruption – Individuals, organisations and countries may try to prevent an organisation from functioning.

External Threats

Describe as many external threats to data and computer systems as you can think of:

Social Engineering – Shoulder surfing and phishing.

Malware:

- Viruses
- Worms
- Trojans
- Spyware
- Botnets
- Rootkits
- Ransomware

Hackers

Denial of Service (DDoS)

Man in the middle attacks

Internal Threats

Describe the following internal threats:

Visiting untrustworthy websites:

Employees might visit untrustworthy sites, or follow links in emails, which could install malware on the system.

Accidental / unintended disclosure of data:

Unwittingly giving out personal, or confidential data with good intention.

Stealing /leaking information:

Employees might be approached by rival organisations to supply them with data, plans, or trade secrets.

Overriding security controls:

Employees might override security controls to allow them to install unauthorised software, gain confidential information, or to allow unauthorised users to use the system.

Use of portable storage devices (USB sticks)

Employees might inset USB memory sticks that might contain viruses into a work computer, which then could infect the system.

Downloading from the internet:

Employees could download music, games, or other files from the internet, which could contain malware. Many organisations have policies and firewalls to prevent this.

Impact of a Security Breach

Describe the following impacts of a security breach:

Data Loss:

If data is deleted, lost, or encrypted by ransomware is could be difficult, impossible, or costly to retrieve.

Damage to public image

If a security breach is reported in the media, customers might lose trust in an organisation and choose not to buy from them again.

Financial Loss:

If a company loses money as the result of an attack, from fines, or theft, or ransom, it could affect profits and reduce future investment in the business.

Reduced productivity:

Time take to deal with a security breach and resolve problems might mean staff are not working normally, time is wasted and productivity lost.

Downtime:

When a security breach is discovered, systems my need to be shut down for investigation. This may affect the running of the organisation

Legal Action:

If a security breach affects personal data, this could lead to fines as a result of legal action , and damages being paid to those affected.

User Access Restrictions

An Advantage of physical security:

Electronic locks record who enters or leaves.

An Disadvantage of physical security:

> Keys/swipe cards may be lost, copied, or stolen. PIN numbers might be written down by users.

An Advantage of passwords:

> Simple and cheap security method to setup

An Disadvantage of passwords:

> Strong passwords are difficult to remember, and do not protect from phishing.

An Advantage of biometric securi

> Alternative to hard to remember passwords, and difficult to copy.

An Disadvantage of biometric security:

> Expensive to setup as specialist equipment is needed.

An Advantage of access restrictions:

> Users who need to view files can do so but cannot cause problems by making unauthorised changes

An Disadvantage of access restrictions:

> Technical staff needed to setup. Access levels need to be just right.

An Advantage of 2FA:

> Higher level of security than just a password, nothing additional to remember

An Disadvantage of 2FA:

> It can require additional hardware or software.

Year 11 BTEC DIT: Cyber security

Why are systems attacked?	External Threats	Internal Threats	Impact of a Security Breach	User Access Restrictions
List the reasons why systems are attacked: • • • • • •	**Describe as many external threats to data and computer systems as you can think of:**	**Describe the following internal threats:** **Visiting untrustworthy websites:** **Accidental / unintended disclosure of data:** **Stealing /leaking information:** **Overriding security controls:** **Use of portable storage devices (USB sticks)** **Downloading from the internet:**	**Describe the following impacts of a security breach:** **Data Loss:** **Damage to public image** **Financial Loss:** **Reduced productivity:** **Downtime:** **Legal Action:**	**An Advantage of physical security:** Electronic locks record who enters or leaves. > **An Disadvantage of physical security:** > **An Advantage of passwords:** > **An Disadvantage of passwords:** > **An Advantage of biometric securi** > **An Disadvantage of biometric security:** > **An Advantage of access restrictions:** > **An Disadvantage of access restrictions:** > **An Advantage of 2FA:** > **An Disadvantage of 2FA:** >

Year 11 BTEC DIT: Cyber security

Data Level Protection (Firewalls and Interface Design)

Describe how a firewall protects a system:

A firewall prevents unwanted internet traffic from accessing a system. It filters data, blocking illegitimate access, or cyber threats

Two benefits of using a firewall:

1. Firewalls help block suspicious or malicious data, such as hackers trying to access a system.
2. Software firewalls are easy to install and update.

Two drawbacks of firewalls:

1. Hardware firewalls can be expensive. Configuring firewalls can be complex.
2. They sometimes block legitimate traffic.

List ways that interface design can be used to protect data:

- Obscuring data entry, covering passwords with ****
- Using autocomplete for login details avoids typing in usernames and passwords.
- CAPTCHA tests can prevent bots from making repeated logins.

Data Level Protection (Device Hardening)

List the measures that can be take to 'harden' / protect a device against malware and cyber attack:

Antivirus / anti-malware software protects computers from known malware and removes, or quarantines malware.

Restrict user access with authentication (e.g. passwords, biometrics, 2FA etc…)

Ensure security patches are installed and up to date.

Install firewall software

Uninstall software that is no longer required, or un supported

Remove old user accounts.

Use strong passwords.

Ensure default passwords on routers and other devices are changed.

Improving System Security

Describe what 'Penetration Testing' is:

Penetration testing involves ethical white-hat hackers attempting to break into a system to test whether it is properly protected.

The ethical hacker will then explain to an organisation, how to tighten security vulnerabilities.

Give an Advantage of Penetration Testing:

> Can be expensive, and just because one hacker could not breach the system, other hackers still could.
> Testing uses methods that real hackers use so is a realistic test. Vulnerabilities can be spotted and fixed

An Disadvantage of Penetration Testing:

> An independent security specialist who is authorised to test a system for security weaknesses.

Describe what an 'ethical hacker' is:

➢ **White-hat hackers**

An independent security specialist who might discover an organisation's security vulnerabilities without permission and sometimes break the law.

➢ **Grey-hat hackers**

Policies

Describe what the following types of policy cover:

Internet Usage Policy:

What internet websites and apps can and cannot be visited/used when at work.

Email Policy:

Appropriate use of email and how to deal with attachments from unknown sources.

External Devices Policy:

Rules on whether USB sticks and portable hard drives are permitted.

Password Policy:

Rules for making a strong password (complexity) and guidelines for keeping passwords secure.

Software Policy:

Rules on how software should be used and on downloading and installing software (is it allowed?).

Personal Devices Policy:

Rules about use of personal devices, such as smartphones and connecting them to company systems.

Disposal of Equipment Policy:

Rules about deleting data before disposing of a device and following environmentally friendly rules for disposal.

Backup Policy:

How data is backed up, who backs it up and how often.

Disaster Recovery Policy

Describe what a 'Disaster Recovery Policy' is:

A disaster recovery policy sets out a plan for what to do if digital systems become unavailable, due to a cyber attack, equipment failure, data loss, fire, terrorism, or other problem/threat.

Describe the following steps to take after a Cyberattack:

1. INVESTIGATE:

Identify the type of attack. When did it start? How bad is it? What parts of the system are affected?

2. RESPOND:

Depending how bad the attack is: Inform relevant stakeholders, such as customers and ICO; Report to the police if a crime has been committed.

3. MANAGE:

Contain the attack: Disconnect, or shut down affected systems to prevent spread. Keep evidence for an investigation.

4. RECOVER:

Disinfect digital systems, restore data from backups, return systems to full working order.

5. ANALYSE:

Identify the source of the attack. How did they gain access? Modify procedures, policies and system configuration as required to protect from further attack. Train staff how to prevent similar problems.

Year 11 BTEC DIT: Cyber security

Data Level Protection (Firewalls and Interface Design)	Data Level Protection (Device Hardening)	Improving System Security	Policies	Disaster Recovery Policy
Describe how a firewall protects a system: **Two benefits of using a firewall:** **1.** **2.** **Two drawbacks of firewalls:** **1.** **2.** **List ways that interface design can be used to protect data:** • • •	**List the measures that can be take to 'harden' / protect a device against malware and cyber attack:** 	**Describe what 'Penetration Testing' is:** **Give an Advantage of Penetration Testing:** **>** **An Disadvantage of Penetration Testing:** **>** **Describe what an 'ethical hacker' is:** ➢ **White-hat hackers** ➢ **Grey-hat hackers**	**Describe what the following types of policy cover:** **Internet Usage Policy:** **Email Policy:** **External Devices Policy:** **Password Policy:** **Software Policy:** **Personal Devices Policy:** **Disposal of Equipment Policy:** **Backup Policy:**	**Describe what a 'Disaster Recovery Policy' is:** **Describe the following steps to take after a Cyberattack:** **1. INVESTIGATE:** **2. RESPOND:** **3. MANAGE:** **4. RECOVER:** **5. ANALYSE:**

Year 11 BTEC DIT: Wider implications of Technology

Shared Data

Describe a benefit to companies sharing their customer's location-based data:
Location-based data can be used to show relevant online content to website visitors.

Describe a drawback to companies sharing their customer's location-based data:
If personal tracking data was hacked it could pose a risk to an individual's personal safety.

Describe a benefit to companies sharing their customer's transactional data:
Sales data can be used to increase, or decrease the number of products a company produces, in line with need.

Describe a drawback to companies sharing their customer's transactional data:
Stored payment/card details could be stolen if a website is hacked, which cyber-criminals could use to commit fraud.

Describe a benefit to companies sharing their customer's Cookie data:
Cookies can keep you logged in to sites, or items stored in customer online shopping baskets

Describe a drawback to companies sharing their customer's Cookie data:
There a privacy concerns about cookies being used to track people's internet use and habits.

Describe a benefit to companies sharing data exchange between services:
Online payments and e-commerce would not be possible without data exchange services.

Describe a drawback to companies sharing data exchange between services:
Unencrypted data can be intercepted by criminals, however data is usually encrypted when exchanged across networks

Environmental Impact

Give two examples of the environmental issues related to the following areas of computing:

Manufacturing:

- Manufacturing computing devices uses a lot of energy and raw materials, much of the energy and materials are non-renewable.
- Batteries from computing devices require lithium and nickel, which creates pollution and toxic waste when mined for and processed.

Disposal of computer hardware:

- Short life-cycle of devices (e.g. phones), means that they are replaced every 2-3 years, creating more e-waste.
- Ink toner cartridges are mostly made of plastic, which if not recycled, contributes to landfill.

Use:

- Computers are powered by electricity, which requires huge amounts of energy to be generated.
- Batteries need to be recharged from a power supply.

Describe what an organisation's 'Environmental Policy' is:
A company policy that might include reducing paper and ink usage. Staff may be asked to consider how to reduce printing documents and use electronic copies only, this reduces waste.
Computers might have power saving modes enabled to reduce power consumption and older computers might be upgraded, rather than replaced reducing e-waste.

Equal Access

Describe what 'Equal Access' means:
Equal access is about ensuring that organisations and individuals are able to benefit from the full range of technology services and information

Describe what 'Unequal Access' means:
Not everyone has the same level of access to digital information technology (e.g. slower internet in rural areas), this creates inequality and division.

Describe a benefit of Equal Access for Organisations:
High speed internet allows businesses to choose less expensive locations to run their business from.
Accessibility features on computers and flexible working makes the workplace more inclusive and allows businesses to choose from a wider pool of staff.

Describe a benefit of Equal Access for Individuals:
Social media allows people to communicate more quickly and easily with friends and family.
Web access allows for flexibility of online shopping.

Describe a benefit of Equal Access for Society:
Modern technologies promote equality and fairness, allowing more people to work in flexible ways.

What grounds, Legally, must organisations not discriminate against people for:
It is illegal to discriminate against someone because of: age; race; gender; sexuality; religion; pregnancy; and disability.

Legally, what must employers provide for staff with accessibility needs:
Equipment to assist them to use IT equipment e.g. a different type of keyboard, or speech input equipment.
Allow the employee to adjust accessibility options within the operating system.

Net Neutrality

Describe what is meant by the term 'Net Neutrality':

The principle that internet service providers (ISPs) and mobile network providers treat all internet traffic equally. They cannot slow down, or prioritise internet traffic for specific individuals, or organisations.

Describe two things that organisations would be allowed to do if there was NO Net Neutrality:

- ISPs that offer cloud storage, could slow down, or block access to other online cloud storage providers.
- ISPs could favour media streaming services that they offer, slowing down access to their rival's services.

Describe two benefits to organisations of Net Neutrality:

- All internet traffic is treated the same, which can help smaller companies develop.
- Promotes a fair balanced web, which is good for individuals and small start-up companies

Describe two drawbacks to organisations of Net Neutrality:

- Prevents ISPs exploiting a potential competitive advantage, by prioritising their own services.
- Stops ISPs from profiteering from setting up internet fast lanes.

Year 11 BTEC DIT: Wider implications of Technology

Shared Data

Describe a benefit to companies sharing their customer's location-based data:

Describe a drawback to companies sharing their customer's location-based data:

Describe a benefit to companies sharing their customer's transactional data:

Describe a drawback to companies sharing their customer's transactional data:

Describe a benefit to companies sharing their customer's Cookie data:

Describe a drawback to companies sharing their customer's Cookie data:

Describe a benefit to companies sharing data exchange between services:

Describe a drawback to companies sharing data exchange between services:

Environmental Impact

Give two examples of the environmental issues related to the following areas of computing:

Manufacturing:

-
-

Disposal of computer hardware:

-
-

Use:

-
-

Describe what an organisation's 'Environmental Policy' is:

Equal Access

Describe what 'Equal Access' means:

Describe what 'Unequal Access' means:

Describe a benefit of Equal Access for Organisations:

Describe a benefit of Equal Access for Individuals:

Describe a benefit of Equal Access for Society:

What grounds, Legally, must organisations not discriminate against people for:

Legally, what must employers provide for staff with accessibility needs:

Net Neutrality

Describe what is meant by the term 'Net Neutrality':

Describe two things that organisations would be allowed to do if there was NO Net Neutrality:

-
-

Describe two benefits to organisations of Net Neutrality:

-
-

Describe two drawbacks to organisations of Net Neutrality:

-
-

Year 11 BTEC DIT: Wider implications of Technology

Acceptable Use Policy

Describe what an 'acceptable use policy' (AUP) is:

An AUP sets out the rules for how an organisation's IT systems should be used, and states what is not allowed.

Give two hardware rules that might be in an AUP:

Employees must not use USB memory drives, for security reasons.

Employees might be allowed to use their own devices to connect to the company systems, so long as they install specific security software.

Give two software and data rules that might be in an AUP:

- What software apps are acceptable to use for specific work tasks.
- Reminds employees of their responsibilities under the Data Protection Act, to keep data secure.

Give three methods an organisation can use to monitor acceptable use of their computer systems:

- CCTV, telephone records, and audit trails of who logged on and what they accessed.
- Web filters to block inappropriate websites.
- Email filters to block emails with inappropriate text going out, and block SPAM coming in.

Social and Business Boundaries

Give 3 examples of the ways in which organisations can use social media networks;

- Targeted advertising at their target audience (gender, age, location etc…)
- Provide data analytics about the effectiveness of their posts (e.g. how many people viewed a post.
- Companies can interact directly with customers, for feedback and promotion of their brand and products, or services.

Describe 2 benefits of the impact of digital systems on professional life:

- Career focussed social media (e.g. Linkedin) allows users to upload their work history and employers can search for people with their skills and experience.
- Many organisations advertise jobs through job websites. Making it easier for applicants to find employment.

Describe a drawback of the impact of digital systems on professional life:

Organisations commonly use social media to vet/screen applicants to avoid choosing applicants with a poor digital footprint, or displaying behaviours and attitudes that do not fit with the company.

Data Protection Principles

Describe the 8 principles of the Data Protection Act?

1. Data must be used fairly and lawfully.

2. Data may only be used for the specified purposes.

3. Data must be used in a way that is adequate, relevant and limited to only what is necessary.
   Data must be accurate and kept up to date.
4. Data must not be kept for longer than necessary.

5. Data must be kept securely and protected against, loss, theft, or damage.

6. Data subjects have the right to be forgotten

7. Data must not be transferred to countries that do not have sufficient data protection laws

Intellectual Property

What is intellectual property?

A unique creation of the mind, such as computer software, music, artworks, inventions, trademarks and logos etc…

It is important to companies because they may spend large amounts of money on developing products, designs and inventions. They aim to make money from selling these unique creations, if people steal their ideas then it can hurt them financially.

What is copyright?

Copyright protects intellectual property such as music, computer software, artworks, TV/Film. The creator must give permission for their work to be used.

What is a Trade Mark?

Trademarks protect brands logos, company name and product names from being copied. Companies can take legal action against organisations and individuals that try to copy their brand

What is a patent?

A patent protects inventions from being copied. Patents must be applied for and lasts for 20 years. If someone wants to use their invention in a product then they must get permission , or the patent holder can take legal action.

Criminal Use of Computer Systems

Describe the purpose of the Computer Misuse Act (1990):

The Computer Misuse Act makes it illegal to access a computer system without permission. It is also illegal to change data on a computer system without permission e.g. creating malware that will delete, encrypt, change data.

Describe 4 unlawful uses of computer systems that are covered by the Computer Misuse Act:

1. Unauthorised access, accessing a system without permission, using usernames and passwords that do not belong to you, to access files you should not have access to.
2. Intentional spreading of malware, deliberately infecting computer systems.
3. Creation of malware, writing malware, such as viruses and ransomware.
4. Unauthorised modification of information. Changin editing, or deleting data on a computer system.

Year 11 BTEC DIT: Wider implications of Technology

Acceptable Use Policy	Social and Business Boundaries	Data Protection Principles	Intellectual Property	Criminal Use of Computer Systems
Describe what an 'acceptable use policy' (AUP) is: **Give two hardware rules that might be in an AUP:** • • **Give two software and data rules that might be in an AUP:** • • **Give three methods an organisation can use to monitor acceptable use of their computer systems:** • • •	**Give 3 examples of the ways in which organisations can use social media networks:** • • • **Describe 2 benefits of the impact of digital systems on professional life:** • • **Describe a drawback of the impact of digital systems on professional life:**	**Describe the 8 principles of the Data Protection Act?** 1. 2. 3. 4. 5. 6. 7.	**What is intellectual property?** **What is copyright?** **What is a Trade Mark?** **What is a patent?**	**Describe the purpose of the Computer Misuse Act (1990):** **Describe 4 unlawful uses of computer systems that are covered by the Computer Misuse Act:** 1. 2. 3. 4.

Year 11: BTEC Media

Media Research Methods

Quantitative data: data collected in the form of numbers, statistics. Large amounts can be easily analysed.

Qualitative data: data collected in the form of people's thoughts and opinions. Gain deeper insights into reasons for choices but much harder to analyse.

Research Methods

Primary Research Methods:

1. **Observations**: Actively observing media products and audience behaviours. Example: , monitoring viewers' reactions to a film or watching how people interact with a website interface.
2. **Discussions**: Engaging in conversations with peers to gather a range of different perspectives and insights on media-related topics. Example: discussion on the impact of social media on youth culture.
3. **Interviews**: Conducting one-on-one or group interviews with target audience members to gain in-depth information about their views and perspectives. Example: asking viewers about their media consumption habits.
4. **Surveys**: Using questionnaires or online surveys to collect quantitative data from a large number of respondents. Example: surveying viewers about their favourite TV shows and reasons for watching.
5. **Focus groups**: Bringing together a small group of individuals to participate in a guided discussion. Example: gather feedback from the audience about their specific thoughts and feelings about a new TV show.

Secondary Research Methods:

1. **Television**: You can watch TV shows or interviews about the media product to understand its production process and the intentions of the creators.
2. **Magazines**: You can read magazine articles or interviews with the creators or critics to gain insights and opinions about the media product.
3. **Films**: You can watch documentaries or behind-the-scenes features about the making of the media product to learn about its impact and techniques used.
4. **Internet**: You can search for online reviews, analysis, or fan discussions to gather different perspectives and opinions on the media product.
5. **Books**: You can read books written by experts or scholars that analyse similar media products or explore relevant theories and concepts to gain a deeper understanding and context for your analysis.

Year 11: BTEC Media

Media Research Methods

Type of research	What are the advantages?	What are the disadvantages?
Primary New information, collected first-hand.	• - • - • - • -	• - • -
Secondary Information that already exists as it has been collected by someone else.	• - • -	• - • - • -

What is quantitative data?

What is qualitative data?

Research Methods

Primary Research Methods:

1. What are observations?
2. What are discussions?
3. What are interviews?
4. What are surveys?
5. What are focus groups?

Secondary Research Methods:

1. How can television be used as a method?
2. How can magazines be used?:
3. How are films used?
4. How can the Internet be used as research?
5. How can books be used?

Year 11: BTEC Media

Decoding meaning in media products

Semiotics	The study of signs and symbols and what they mean.
Denotation	The basic or literal meaning of a sign or symbol, what it directly represents. The denotation of a rose is a type of flower with petals, thorns, and a pleasant fragrance.
Connotation	all the extra feelings and ideas (hidden meanings) we connect to a sign or symbol. **Example**: The connotation of a dove often represents peace and purity due to its association with those concepts in various cultures.
Signs	Used to communicate ideas, concepts, or messages.
Symbols	Special signs with extra meanings.
Signifiers	Things we see or hear that carry the meaning of signs or symbols.
Encoding	When someone creates meaning and attaches messages to signs, like a filmmaker making a movie with a message. **Example**: Imagine you and your friends are making a funny video together. Each of you decides on the jokes, actions, and expressions to use, which is like encoding your own unique funny message into the video.
Decoding	When people interpret or understand the messages and meanings in signs or media. **Example**: when you watch a film or TV show you may pick up on the characters emotions or actions which helps you understand what is happening in the story more easily.
Anchorage	Using words or other visuals to guide how we interpret an image or media, like a caption giving more information. **Example**: A caption accompanying a photograph clarifying the context or providing additional information about the image.
Polysemy	Signs or symbols can have many different meanings or interpretations. **Example**: The word "bank" can have multiple meanings, such as a financial institution or the edge of a river.
Intertextuality	When texts (like stories or movies) are connected to each other and have references or ideas from other texts, making the meaning more interesting and complex. **Example**: the movie "Shrek" containing references and parodies of classic fairy tales like Cinderella, Snow White, and Pinocchio to add depth and humour to the story.

Year 11: BTEC Media

Decoding meaning in media products

What is **semiotics**?	
Define **denotation**	
Define **connotation**	
What do **signs** do?	
What are **symbols**?	
What are **signifiers**?	
What is **encoding**?	
What is **decoding**?	
What does **anchorage** mean?	
What does **polysemy** mean?	
What is **intertextuality**?	

Year 11: BTEC Media

Purpose of Media Products

Media products, such as movies, TV shows, advertisements, and articles will have different purposes. The purpose is simply '**the point**' of the media product. The reason why it was created.

Call to Action	Encouraging the audience to take specific actions or make a change. **Examples**: Campaigns urging people to recycle, volunteer, or support a cause
To Shock	Provoking strong emotional reactions, often to draw attention or create a memorable impact. **Examples**: News stories highlighting shocking events or horror movies aiming to scare viewers.
To persuade	Convincing the audience to adopt a particular viewpoint or belief. **Examples**: Political speeches, advertisements promoting a product or service, or opinion articles.
To Argue	Presenting different perspectives on a topic and providing evidence to support a particular viewpoint. **Examples**: Debates, documentaries exploring controversial issues, or opinion pieces.
To Explain	Clarifying complex concepts or providing step-by-step instructions. **Examples**: Educational videos, science documentaries, or instructional articles.
To Advertise	Promoting a product, service, or event to encourage the audience to purchase or participate. **Examples**: TV commercials, online banners, or social media posts promoting a new movie release.
To Document	Capturing real events, people, or places for historical or informational purposes. **Examples**: News reports, historical documentaries, or photojournalism.

To Recount	Sharing personal experiences or stories. **Examples**: Autobiographies, personal blogs, or vlogs.
To Describe	Providing detailed information about a person, place, or object. **Examples**: Travel guides, product reviews, or descriptive articles.
To Inform	Presenting facts, news, or updates to keep the audience knowledgeable. **Examples**: News articles, weather reports, or educational websites.
To Encourage	Motivating the audience to pursue goals, self-improvement, or positive actions. **Examples**: Inspirational speeches, self-help books, or motivational videos.
To Raise Awareness	Drawing attention to social, environmental, or health issues. **Examples**: Public service announcements, documentaries on climate change, or charity campaigns.
To Intrigue	Engaging the audience's curiosity and keeping them interested. **Examples**: Mystery novels, movie trailers, or cliff-hanger TV series.
To Entertain	Providing enjoyment, relaxation, or amusement. **Examples**: Movies, TV shows, music, or online games.
To Instruct	Teaching or imparting knowledge and skills. **Examples**: How-to videos, DIY articles, or cooking recipes.

Year 11: BTEC Media

Purpose of Media Products- Complete below:

Media products, such as movies, TV shows, advertisements, and articles will have different purposes. The purpose is simply '**the point**' of the media product. The reason why it was created.

Call to Action	
To Shock	
To persuade	
To Argue	
To Explain	
To Advertise	
To Document	

To Recount	
To Describe	
To Inform	
To Encourage	
To Raise Awareness	
To Intrigue	
To Entertain	
To Instruct	

Year 11: BTEC Media

Codes and Conventions

- **Codes**: Systems of signs and symbols used in media to convey meaning.
- **Conventions**: Established practices or techniques that are commonly used and expected by the audience. Example: A horror film has spooky music and scary characters. A magazine always has a big cover image and a masthead at the top.

Understanding the codes and conventions in media helps us interpret and understand messages effectively. These can include visual cues, storytelling techniques, camera angles, sound effects, and more. Example: you can often tell you are watching a certain genre of film within the first few minutes simply by observing visual clues, music and the types of characters.

1. What is the purpose of media products that aim to "raise awareness"? Provide an example.

The purpose of media products that aim to raise awareness is to draw attention to social, environmental, or health issues. They seek to inform and educate the audience about important topics. An example could be a documentary on the impact of plastic pollution on marine life, urging viewers to take action to protect the oceans.

2. Explain the meaning of "codes and conventions" in the context of media.

Codes are systems of signs and symbols used in media to convey meaning, while conventions are established practices or techniques that are commonly used and expected by the audience. Codes and conventions help shape the way messages are communicated in media, including visual cues, storytelling techniques, camera angles, sound effects, and more.

Media Producers

Types of media producers:

- **Media conglomerates**: Large corporations that own multiple media outlets and have control over various aspects of the industry. Examples: Comcast Corporation, News Corp
- **Public service broadcasters**: Organisations funded by public resources, with a mandate to provide educational, informative, and culturally enriching content. Examples: BBC, Channel 4
- **Independent media producers**: Small-scale or individual creators who produce media outside of major corporate structures. Example: A24 is an American independent entertainment company that specialises in film and television production, as well as film distribution, based in Manhattan, New York City.
- **Community media organisations**: Non-profit or volunteer-based initiatives that focus on serving local communities and promoting community participation. Example: Radio Regan has been on the air in the Manchester area since 1999. The organisation operates 3 full time community radio stations and provides training opportunities for the areas young people and people from disadvantaged areas.

Year 11: BTEC Media

Codes and Conventions

- **Codes**: Systems of signs and symbols used in media to convey meaning.
- **Conventions**: Established practices or techniques that are commonly used and expected by the audience. Example: A horror film has spooky music and scary characters. A magazine always has a big cover image and a masthead at the top.

Understanding the codes and conventions in media helps us interpret and understand messages effectively. These can include visual cues, storytelling techniques, camera angles, sound effects, and more. Example: you can often tell you are watching a certain genre of film within the first few minutes simply by observing visual clues, music and the types of characters.

1. What is the purpose of media products that aim to "raise awareness"? Provide an example.

2. Explain the meaning of "codes and conventions" in the context of media.

Media Producers

Types of media producers (describe below):

- **Media conglomerates**:
- **Public service broadcasters**:
- **Independent media producers**:
- **Community media organisations**:

Year 11: BTEC Media

Ethos/aims of the media producer:

The ethos/aims of a media producer refers to their guiding principles and values that shape their approach to content creation.
This can include a commitment to:

Quality	Media producers who prioritise quality aim to create content that is well-made, engaging, and of high standards, like a filmmaker who focuses on making movies that look and sound amazing.
Diversity	Media producers committed to diversity make sure that their content represents different cultures, backgrounds, and perspectives, like a TV show that includes characters from various ethnicities and tells stories about people from different walks of life.
Inclusivity	Inclusive media producers strive to make their content accessible and relatable to a wide range of people, like a website that provides closed captions or subtitles for people who are deaf or hard of hearing.
Impartiality	Media producers aiming for impartiality present information or stories without taking sides or being biased, like a news outlet that provides different viewpoints on a topic and lets viewers form their own opinions.
Accessibility	Media producers focused on accessibility make sure their content can be easily accessed by everyone, including people with disabilities, like a website that is designed to be easy to navigate and provides options for larger text or audio descriptions.
Innovation	Innovative media producers come up with new and creative ideas to make their content exciting and fresh, like a video game that uses virtual reality technology or a movie with ground-breaking special effects.

How media products fulfil their purpose:

- **Production values**: The use of technologies, costs of production, and style/design contribute to the overall quality and visual/audio experience of a media product.
- **Participants**: Actors, presenters, hosts, directors, and contributors play vital roles in bringing the content to life.
- **Content**: Storylines, characters, featured people, articles, artwork, or gameplay are elements that engage the audience and convey the intended message or experience.
- **Synergy and marketing**: Cross-media links, connections with other media products, and promotional campaigns help reach a wider audience and create buzz.
- **Distribution**: Media products are delivered through various platforms, such as television, cinema, radio, streaming services, or websites.

Year 11: BTEC Media

Ethos/aims of the media producer:

The ethos/aims of a media producer refers to their guiding principles and values that shape their approach to content creation.

Define the principles/values below:

Quality	
Diversity	
Inclusivity	
Impartiality	
Accessibility	
Innovation	

Explain how these media products fulfil their purpose:

- Production values:
- Participants:
- Content:
- Synergy and marketing:
- Distribution:

Year 11: BTEC Media

Audience Participation

Audience interpretation refers to the process by which individuals understand and make sense of media messages or content. It involves how individuals perceive, analyse, and assign meaning to the information they receive from various media sources such as television, films, newspapers, social media, etc. Audience interpretation is influenced by several factors:

- **Demographics**: involve characteristics that define audience segments, including age, gender, family status, ethnicity, and socio-economic scale (A, B, C1, C2, D, E). These factors provide insights into the composition and diversity of audiences.
- **Psychometric Audience Profile**: considers how individuals think and examines their values, attitudes, and lifestyles (VALs). The Young and Rubicam 4Cs model categorises audiences into different segments:

The Aspirer	Are driven by the desire for success, status, and recognition. They strive to achieve their goals and often seek products and media that align with their aspirations.
The Explorer	Are curious, adventurous, and open to new experiences. They actively seek out unique and innovative content, enjoying variety and novelty in their media consumption
The Mainstreamer	Value tradition, conformity, and maintaining social norms. They are likely to engage with popular, widely accepted media products that align with mainstream cultural values.
The Reformer	Are socially and environmentally conscious. They prioritise social change, justice, and equality. They are drawn to media that reflects their values and supports causes they believe in.
The Resigned	Individuals often feel disempowered or marginalised. They may have a negative outlook and may engage with media products that reflect their frustrations or provide an escape from their realities.
The Struggler	Face financial and personal challenges, often living in economically deprived conditions. They may seek media products that offer practical solutions, inspiration, or a sense of hope.
The Succeeder	Have achieved success and are financially secure. They may engage with media that reinforces their achievements, offers luxury and high-quality experiences, or appeals to their refined tastes.

Year 11: BTEC Media

Audience Participation- Define the types below:

Audience interpretation refers to the process by which individuals understand and make sense of media messages or content. It involves how individuals perceive, analyse, and assign meaning to the information they receive from various media sources such as television, films, newspapers, social media, etc. Audience interpretation is influenced by several factors:

- **Demographics**: involve characteristics that define audience segments, including age, gender, family status, ethnicity, and socio-economic scale (A, B, C1, C2, D, E). These factors provide insights into the composition and diversity of audiences.
- **Psychometric Audience Profile**: considers how individuals think and examines their values, attitudes, and lifestyles (VALs). The Young and Rubicam 4Cs model categorises audiences into different segments:

The Aspirer	
The Explorer	
The Mainstreamer	
The Reformer	
The Resigned	
The Struggler	
The Succeeder	

Year 11: BTEC Media

Audience Types

Mass Audience	A large and diverse audience consuming media products without specific targeting.
Specialised Audience	A smaller, niche audience with specific interests or characteristics
Target/Main Audience	The primary intended audience for a media product.
Secondary Audience	Audiences beyond the primary target, who may also engage with the product.
Tertiary Audience	Audiences further removed from the primary target, but still potentially exposed to the product.

Audience Theories:

Passive Audience Theory: The hypodermic needle model and media effects theory suggest that audiences can be directly influenced by the media, absorbing messages without critical thought.

Stuart Hall's Reception Theory: Recognizes that media producers encode preferred readings into products, but audiences respond differently. Reception theory identifies three different modes of audience response:

- **Dominant/Preferred Reading**: Some audiences interpret media products in line with the intended message of the producer. They accept and reinforce the dominant or preferred meaning encoded in the media text.
- **Negotiated Reading**: Other audiences negotiate their interpretation of media products, combining elements of agreement and resistance. They acknowledge some aspects of the intended message but also bring their own perspectives and values into the interpretation.
- **Oppositional Reading**: Certain audiences interpret media products in direct opposition to the intended message of the producer. They reject or challenge the dominant meaning encoded in the media text, bringing their own alternative interpretations and viewpoints.

Audience Engagement Theory:

Recognizes that audiences can consume media products passively or actively, depending on factors such as the situation, social context, and level of audience involvement. This includes primary, secondary, and tertiary levels of engagement.

Year 11: BTEC Media

Audience Types- describe below:

Mass Audience	
Specialised Audience	
Target/Main Audience	
Secondary Audience	
Tertiary Audience	

Audience Theories:

What is **Passive Audience Theory**?

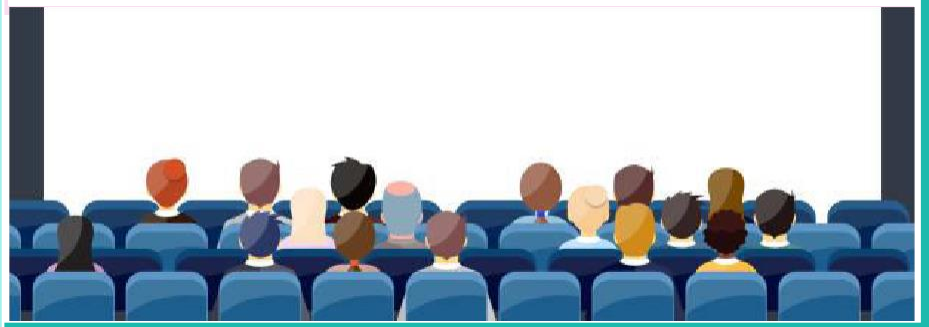
What is **Stuart Hall's Reception Theory**?

- **Define Dominant/Preferred Reading**:

- **Define Negotiated Reading**:

- **Define Oppositional Reading**:

What is the **Audience Engagement Theory:**



Year 11: BTEC Media

Blumler and Katz Uses and Gratification Theory

This theory suggests that audiences actively choose and engage with media products based on their personal needs and desires. This includes:

Information	People seek media to acquire knowledge, stay informed about current events, and satisfy their curiosity. They use media to gather information on various topics of interest, such as news, weather updates, educational content, or advice.
Personal Identity	Individuals use media to shape their self-perception and reinforce their personal values and beliefs. They seek content that reflects and reinforces their identities, such as television shows, movies, or social media platforms that align with their interests, cultural background, or personal ideologies.
Entertainment	Media serves as a source of relaxation, escapism, and amusement. People use media to entertain themselves, enjoy fictional narratives, engage in leisure activities, or simply have a good time. Examples include watching movies, playing video games, or listening to music.
Social interaction	Media enables social connection and facilitates communication between individuals. People use media to interact with others, maintain relationships, and engage in social communities. This includes social media platforms, online forums, video conferencing tools, or even traditional forms of media like newspapers or television programs that promote social discussion.

Genre

Genre is a way to categorise different types of stories or media based on similar themes, settings, or styles, like adventure, mystery, or fantasy. It is often easy to spot products from different genres because they generally have similar characteristics. Example: Some generic characteristics of fantasy stories include magical or imaginary elements, such as wizards, mythical creatures, and enchanted worlds. The top 5 movie genres are:

Drama: These are movies that tell serious and emotional stories about people's lives. They make you feel different emotions and show how characters deal with their problems. Some examples are "The Shawshank Redemption," "Schindler's List," and "The Godfather."

Action: These movies are all about excitement! They have lots of fast-paced scenes, cool stunts, and big fights. You'll see brave heroes doing daring things and going on adventures. Some examples are James Bond movies, "Mission: Impossible," and "Mad Max: Fury Road."

Comedy: These movies are meant to make you laugh and have a good time. They tell funny stories and have silly jokes and funny characters. You'll find yourself giggling and smiling while watching them. Some examples are "Anchorman: The Legend of Ron Burgundy," "Bridesmaids," and "Superbad."

Science Fiction: These movies take you to different worlds and show amazing futuristic things. They often have cool technology, space travel, or robots. They make you think about what could happen in the future and explore interesting ideas. Some examples are "Star Wars," "Blade Runner," and "The Matrix."

Thriller/Suspense: These movies keep you on the edge of your seat! They have thrilling and suspenseful stories with lots of twists and surprises. You'll feel excited and curious to know what happens next. Some examples are "Psycho," "The Silence of the Lambs," and "Inception."

Year 11: BTEC Media

Blumler and Katz Uses and Gratification Theory

This theory suggests that audiences actively choose and engage with media products based on their personal needs and desires. This includes:

Information	
Personal Identity	
Entertainment	
Social interaction	

Genre

Describe the characteristics of the top 5 movie genres below:

Drama:

Action:

Comedy:

Science Fiction:

Thriller/Suspense:

Year 11: BTEC Media

Understanding Narrative Elements in Media

Storytelling devices: Storytelling devices are tools that storytellers use to make their stories interesting and exciting. These tools help them tell the story in a way that captures the audience's attention and keeps them engaged.

Various techniques enhance storytelling, such as;

Foreshadowing	Hinting at future events
Red Herrings	Misleading clues
Subplots	Secondary story lines
Flashbacks/forwards	Narrative jumps in time
Parallel action	Intercutting between multiple storylines
Enigmas	Mysterious elements
Cliffhangers	Suspenseful endings

Storytelling in Non-Fiction:

- **Inverted pyramid structure**: Non-fiction storytelling often follows a structure where the most important information is presented first (who? what? where? when? why? how?) in the lead, followed by supporting details and quotations in the body, and additional related information in the tail.
- **Storytelling devices:** Non-fiction storytelling may involve interviews/quotations with people involved, experts, or members of the public, facts and figures to support the narrative, and the use of language to engage and inform the audience.

Narrative Structures

Narrative structures refer to the organisation and arrangement of elements within a story or narrative. It encompasses how the story is constructed, how events unfold, and how the plot is organised to create a coherent and engaging experience for the audience or readers.

Linear: A straightforward narrative progression from beginning to end, following a chronological order.

Non-linear: The narrative is presented out of chronological order, using techniques like flashbacks or parallel storylines.

Open/Closed: Open narratives leave room for interpretation or unresolved elements, while closed narratives provide a clear resolution.

Single/Multi-strand: Single-strand narratives focus on a single main storyline, while multi-strand narratives involve multiple interconnected storylines.

Todorov: Had a theory for structuring engaging narratives. He said that all stories go through this cycle: equilibrium, disruption, recognition, repair and new equilibrium.

Year 11: BTEC Media

Understanding Narrative Elements in Media

Storytelling devices: Storytelling devices are tools that storytellers use to make their stories interesting and exciting. These tools help them tell the story in a way that captures the audience's attention and keeps them engaged.

Various techniques enhance storytelling, such as;

Foreshadowing	
Red Herrings	
Subplots	
Flashbacks/forwards	
Parallel action	
Enigmas	
Cliffhangers	

Storytelling in Non-Fiction:

- **What is the inverted pyramid structure?**

- **What are storytelling devices?**

Narrative Structures- define below:

Narrative structures refer to the organisation and arrangement of elements within a story or narrative. It encompasses how the story is constructed, how events unfold, and how the plot is organised to create a coherent and engaging experience for the audience or readers.

Linear:

Non-linear:

Open/Closed:

Single/Multi-strand:

Todorov:

Year 11: BTEC Media

Point of View (POV)

POV refers to the perspective or vantage point from which the story is presented or narrated. It represents the lens through which the events, characters, and emotions of the story are conveyed to the audience or readers.

Subjective	The subjective camera angle renders the audience an active participant of the event. Either by seeing the event through the character's eyes. Or by trading places with another person in the picture (e.g., first-person) This reflects their thoughts, emotions, and biases.
Objective	Objective camera angle provides a side-line view of the action. Through the objective viewpoint, the audience looks on, perhaps from the eyes of an unseen observer. Example: In a film, positioned within a passing character e.g. a random person within a crowd looking at the action.
Privilege Spectator	An external perspective that provides insight into the thoughts and actions of multiple characters. Example: In a film you could be positioned high up (like a fly on the wall) and you get to witness something that none of the other characters can see.

Characterisation

Character development: Characters grow and change. Complex characters have strengths, weaknesses, and flaws. They face challenges, learn, and transform. Character arc shows the journey, growth, and evolving relationships.

Hero/Protagonist	The main character who sets out on a journey or quest.
Villain/Antagonist	The character who opposes or creates conflicts for the hero.
Donor/Provider	The character who gives the hero a magical object, information, or assistance to aid their quest.
Helper	A character who assists the hero throughout their journey.
Princess/Damsel	The character in need of rescue or with whom the hero seeks a relationship.
False Hero	A character initially believed to be the hero but later revealed as deceptive or unworthy

Year 11: BTEC Media

Point of View (POV)

POV refers to the perspective or vantage point from which the story is presented or narrated. It represents the lens through which the events, characters, and emotions of the story are conveyed to the audience or readers.

Subjective	
Objective	
Privilege Spectator	

Characterisation

Character development: Characters grow and change. Complex characters have strengths, weaknesses, and flaws. They face challenges, learn, and transform. Character arc shows the journey, growth, and evolving relationships.

Hero/Protagonist	
Villain/Antagonist	
Donor/Provider	
Helper	
Princess/Damsel	
False Hero	

Year 11: BTEC Media

Media Representation and Perspectives

Representation in the media is how people, places, issues, and events are shown. Here are some important points to remember:

1. Audience Positioning and Perspective:

- Media can shape how we see and think about things.
- Different perspectives can influence our understanding of a story.
- For example, a news report might focus on different angles depending on the intended audience.

2. Audience Identification:

- Media tries to make us relate to characters or situations.
- We may see ourselves in the heroes or villains of a story.
- For example, a movie might have a young hero we can look up to and connect with.

3. Use of Stereotyping:

- Stereotyping is when groups of people are shown in simplified or exaggerated ways.
- It can create biases and unfair judgments.
- For example, a TV show might show a certain group always behaving in a certain way, which isn't true for everyone.

4. Positive and Negative Representations:

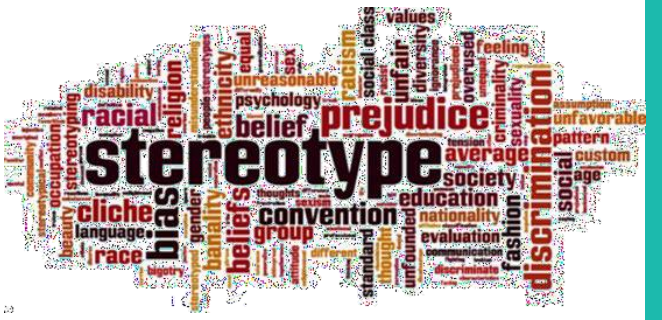
- Media can show people, places, and events in positive or negative ways.
- Positive representations can inspire and uplift us.
- Negative representations can reinforce stereotypes and hurtful ideas.
- For example, a magazine might portray a diverse group of friends having fun together, promoting inclusivity.

How can media products position the audience and influence their beliefs and attitudes?

Media products can position the audience through storytelling techniques, camera angles, music choices, and persuasive messaging. By appealing to emotions, presenting certain viewpoints, and shaping narratives, media can shape the audience's beliefs, values, and attitudes.

What are the consequences of stereotyping in media representations?

Stereotyping in media can lead to unfair judgments, perpetuate harmful biases, and create misunderstandings about certain groups of people. It can contribute to discrimination, marginalisation, and the reinforcement of negative stereotypes, affecting individuals and communities negatively.



Year 11: BTEC Media

Media Representation and Perspectives

Representation in the media is how people, places, issues, and events are shown.
What are the important tings to remember?

1. Audience Positioning and Perspective:

- -
- -
- -

2. Audience Identification:

- -
- -
- -

3. Use of Stereotyping:

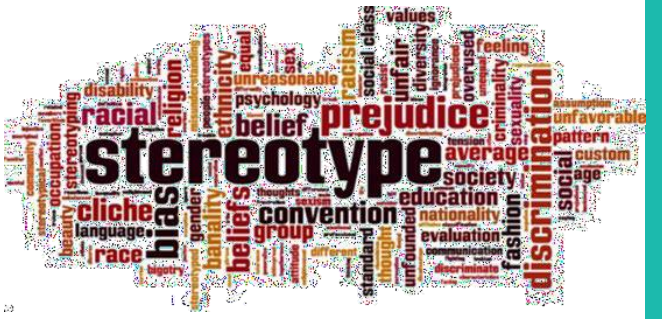
- -
- -
- -

4. Positive and Negative Representations:

- -
- -
- -
- -

How can media products position the audience and influence their beliefs and attitudes?

What are the consequences of stereotyping in media representations?



Year 11: BTEC Media

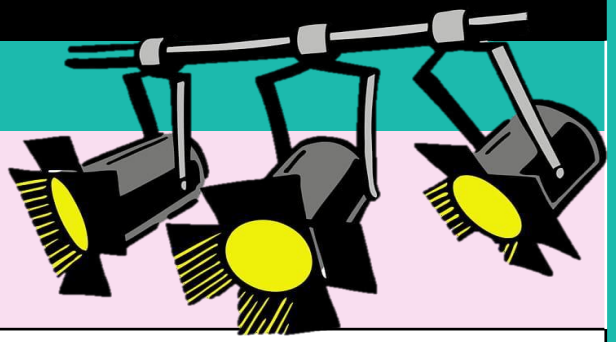
Media Production Techniques

Mise en Scène: refers to the arrangement of visual elements within a scene in media production. It includes various components that contribute to the overall look and feel of a scene.

Top 5 components of Mise en Scène:

Setting	This is where the scene happens, like a place or environment. It includes things like buildings, landscapes, or inside spaces. The setting helps create the look and feel of the scene.
Costume and Makeup	This is about the clothes, accessories, and makeup that the characters wear. It shows what they look like and helps us understand their personality and role in the story.
Lighting	This is how the scene is lit up. Different types of lighting can make things look different and create different moods. For example, bright lighting can make things feel happy, while dark lighting can make things feel mysterious or scary.
Props and Objects	These are the things that the characters use or have around them in the scene. Props can give us important clues, show what time period the story is in, or help tell the story in other ways.
Acting and Performance	This is about how the actors act out their characters. They use their faces, bodies, and emotions to bring the characters to life. The way they talk, move, and express themselves helps make the scene more interesting and believable.

Lighting



Low key	This kind of lighting makes the scene look dramatic and mysterious. It uses strong contrasts between light and dark.
High key	This lighting makes the scene bright and evenly lit. It's often used in happy or funny scenes.
Back	When the light comes from behind the subject, it creates a special effect. It makes the subject look like they have a glowing halo around them and emphasises their shape.
Side	This is when the light comes from the side. It adds depth to the scene and makes things look more textured.
Soft	Soft lighting makes the scene look gentle and diffused. It reduces harsh shadows and makes people look nicer.
Hard	Hard lighting makes the scene look strong and direct. It creates clear, sharp shadows and a more intense feeling.
Realistic	This lighting tries to look like natural light sources, making the scene feel real and authentic.
Ambient	This is the general light that fills up the whole scene. It helps set the mood or show where the scene is taking place.
Expressive	This lighting is used to create specific feelings or emotions in the scene. It adds to the story and makes it more exciting.

Year 11: BTEC Media

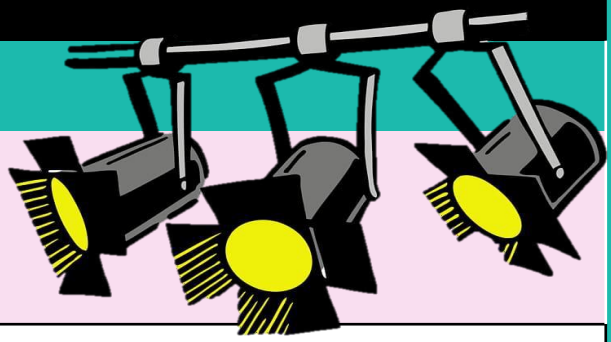
Media Production Techniques

Mise en Scène: refers to the arrangement of visual elements within a scene in media production. It includes various components that contribute to the overall look and feel of a scene.

Describe below the top 5 components of Mise en Scène?

Setting	
Costume and Makeup	
Lighting	
Props and Objects	
Acting and Performance	

Lighting



Low key	
High key	
Back	
Side	
Soft	
Hard	
Realistic	
Ambient	
Expressive	

Year 11: BTEC Media

Media Production Techniques

Camerawork

Low-angled shot	When the camera is below the subject, it makes them look really powerful, strong, or scary.
Extreme close up	This is when the camera zooms in really close to show a small detail of something. It makes that detail seem really important or intense.
Long shot	When the camera is far away, it captures the whole scene or subject. It helps us understand where everything is happening and how big things are.
Medium shot	This shot shows the subject from the waist up. It's a good balance between being close enough to see details and far enough to understand the surroundings.
Eye level shot	This is when the camera is at the same height as the subject's eyes. It helps us see things from a neutral and relatable perspective.
High angle shot	The camera is positioned above the subject, making them look small, weak, or in a vulnerable position.
Point of view shot	This shot shows the scene from the character's perspective. It makes us feel like we're seeing what the character sees and experiencing the scene through their eyes.

Use of Sound

Diegetic	This is the sound that comes from the world of the story. It includes things like the characters talking or making sounds in the movie or show.
Non-diegetic	This is sound that doesn't come from the story world. It includes background music or a voice that talks to us but the characters can't hear.
Sound effects	These are special sounds that are added to make the scene more exciting or to create certain feelings. They are not real sounds that were recorded during filming.
Sound mixing	This is when different sounds are combined and adjusted so that they sound good together. It's like making sure all the sounds are at the right volume and can be heard clearly.
Sound bridge	This is when the sound from one scene continues into the next scene. It helps the scenes flow smoothly together.
Ambient	These are the sounds that you would hear in the background of a scene. They help create the feeling of being in that place.
Synchronised	This is when the sound matches what you see on the screen. For example, if a character is walking, you will hear their footsteps. It makes everything feel more real.
Voice over	This is when a voice speaks over the movie or show but you don't see who is talking. It's like someone is telling you extra information or giving their thoughts.

Year 11: BTEC Media

Media Production Techniques

Camerawork

Low-angled shot	
Extreme close up	
Long shot	
Medium shot	
Eye level shot	
High angle shot	
Point of view shot	

Use of Sound

Diegetic	
Non-diegetic	
Sound effects	
Sound mixing	
Sound bridge	
Ambient	
Synchronised	
Voice over	

Year 11: BTEC Media

Editing Techniques

Cut: This is when one shot is quickly replaced by another shot. It's like changing from one picture to another really fast.

Fade In: This is when a scene gradually appears on the screen. It starts from a black screen and gets brighter until you can see the scene clearly.

Fade Out: This is the opposite of fade in. It's when a scene slowly disappears from the screen. It goes from bright to dark until it's all black.

Dissolve: This is when one shot fades away while another shot gradually appears. It's like the two shots blend together smoothly.

Wipe: In this editing technique, the next shot moves across the screen and "wipes away" the previous shot, revealing the new scene.

Flashback: This is when the story pauses and shows a scene from the past. It helps us understand something that happened before the current time in the story.

Shot-Reverse-Shot: This is when the camera goes back and forth between two characters who are talking to each other. It shows their reactions and interactions during the conversation.

Cross Cutting: This is when the movie or show cuts between two or more different scenes happening at the same time. It can create suspense or show how the scenes are connected to each other.

Eyeline Match: This editing technique connects what a character is looking at with the next shot showing what they are seeing. It helps us understand their point of view and what they are paying attention to.

Year 11: BTEC Media

Editing Techniques

Cut:

Fade In:

Fade Out:

Dissolve:

Wipe:

Flashback:

Shot-Reverse-Shot:

Cross Cutting:

Eyeline Match:

Year 11 GCSE Media: Ideas log

There are 4 parts to your component 3 examination:

1. Ideas log - Typed
2. Storyboard - Hand drawn
3. Product creation - using Photoshop
4. Creation log - Typed

You will find top tips on how to approach these sections in this knowledge organiser.

Initial ideas section needs to include:

- Aim/purpose of the product (your interpretation of the brief)
- Description of the target audience
- Ideas you thought about but rejected, with reasons why.
- Clear description of your chosen idea, with reasons how it would generate meaning and appeal to your target audience
- How does your chosen idea meet the brief?
- Describe how other media products have influenced your idea.
- What are the codes and conventions of your proposed media product. Explain how you will adhere to them.

Style section needs to include:

- Description of chosen fonts (for mastheads, straplines, pull quotes, body copy etc).
- Description of chosen colours.
- Identification of any shapes/icons/graphics you intend to use.

Content section needs to include:

- Written copy required
- Primary source images (photographs you will take, graphics (such as logos) you will create)
- Secondary source images (Internet)

For each decision, ensure you annotate:

- How they will generate meaning and appeal to your audience (think/feel)
- How they help to meet the brief (look back at the brief)
- How the existing media products influenced your ideas.
- Any editing that you think may be needed (e.g. background removed, drop shadow etc)

Year 11 GCSE Media: Ideas log

There are 4 parts to your component 3 examination:

Initial ideas section needs to include:

Style section needs to include:

Content section needs to include:

For each decision, ensure you annotate:

Year 11 GCSE Media: Sketch

A sketch is a large detailed drawing of the final idea. It is often accompanied with annotated notes regarding key design ideas such as colour and font choice, and how these meet the brief or engage the audience.

A detailed sketch will include:
- Exact colour choices
- Font choices (Masthead, body copy etc)
- Design features e.g. shapes, lines, icons
- Formatting required e.g. strokes, drop shadows etc
- Exact copy (unless it is an inside page article then neatly draw lines)
- Photograph information including props, camera angles, lighting, hair, makeup, clothing etc
- Location of other images e.g. web addresses
- Use the correct terminology (e.g. masthead, body copy..)

For each decision you should annotate:
- How they will generate meaning and appeal to your audience (think/feel)
- How they help to meet the brief (look back at the brief)
- Any editing that you think may be needed (e.g. background removed, drop shadow etc)
- Sources for the images (primary or secondary)

Colour	Connotations
Red	Passion, energy, warmth, danger, love
Blue	Trust, calmness, professionalism, serenity
Green	Nature, growth, health, freshness, tranquillity
Yellow	Optimism, happiness, energy, warmth
Purple	Royalty, luxury, creativity, mystery
Orange	Energy, enthusiasm, warmth, creativity
Black	Elegance, sophistication, power, mystery
White	Purity, simplicity, cleanliness, innocence

Year 11 GCSE Media: Sketch

A detailed sketch will include:

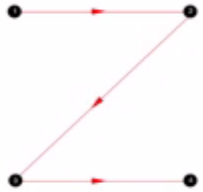
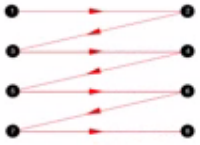
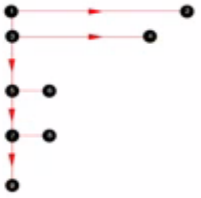
Colour	Connotations
Red Blue Green Yellow Purple Orange Black White	

For each decision you should annotate:

Year 11 GCSE Media: Product Creation

When creating media products, it is important that you adhere to the same codes and conventions for the product you are creating. That means it should look like the product. Here are some top tips for creating the most common types of publishing products:

Magazine front cover layouts
Several layout patterns are often recommended to take advantage of how people scan or read through a design:

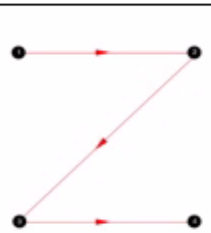
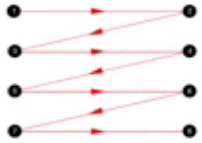
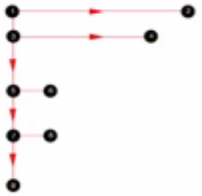
Z pattern	Zig Zag pattern	Golden triangle	F Pattern
			

Magazine Front Covers

Inside page layouts:
Use a grid
Use the rule of thirds
Repeat design elements
Use of white space
Use hierarchy

Year 11 GCSE Media: Product Creation

Magazine front cover layouts

Z pattern	Zig Zag pattern	Golden triangle	F Pattern
			

Magazine Front Covers

Inside page layouts:

Design and Technology

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 Hospitality and Catering- Understanding the importance of nutrition

Macro-nutrients

Carbohydrates - Carbohydrates are mainly used in the body for energy. There are two types of carbohydrates which are:

- **Starch - Examples include bread, pasta, rice, potatoes and cereals.**
- **Sugar - Examples include sweets, cakes, biscuits & fizzy drinks.**

Fat - This is needed to insulate the body, for energy, to protect bones and arteries from physical damage and provides fat soluble vitamins. There are two main types of fat which are:

- **Saturated fat - Examples include butter, lard, meat and cheese.**
- **Unsaturated fat - Examples include avocados, plant oils such as sunflower oil, seeds and oily fish.**

Protein - Protein is mainly used for growth and repair in the body and cell maintenance. There are two types of protein which are:

- **High biological value (HBV) protein - Includes meat, fish, poultry, eggs, milk, cheese, yogurt, soya and quinoa.**
- **Low biological value (LBV) protein - Includes cereals, nuts, seeds and pulses.**

Micro-nutrients

Vitamins

Fat soluble vitamin A - Main functions include keeping the skin healthy, helps vision in weak light and helps children grow. Examples include leafy vegetables, eggs, oily fish and orange/yellow fruits.

Fat soluble vitamin D - The main function of this micro-nutrient is to help the body absorb calcium during digestion. Examples include eggs, oily fish, fortified cereals and margarine.

Water soluble vitamin B group - Helps absorbs minerals in the body, release energy from nutrients and helps to create red blood cells. Examples include wholegrain foods, milk and eggs.

Water soluble vitamin C - Helps absorb iron in the body during digestion, supports the immune system and helps support connective tissue in the body which bind cells in the body together. Examples include citrus fruits, kiwi fruit, cabbage, broccoli, potatoes and liver.

Micro-nutrients

Minerals

Calcium - Needed for strengthening teeth and bones. Examples include dairy products, soya and green leafy vegetables.

Iron - To make haemoglobin in red blood cells to carry oxygen around the body. Examples include nuts, beans, red meat and green leafy vegetables.

Sodium - Controls how much water is in the body and helps with the function of nerves and muscles. Examples include salt, processed foods and cured meats.

Potassium - Helps the heart muscle to work correctly and regulates the balance of fluid in the body. Examples include bananas, broccoli, parsnips, beans, nuts and fish.

Magnesium - Helps convert food into energy. Examples include wholemeal bread, nuts and spinach.

Dietary fibre (NSP) - Helps digestion and prevents constipation. Examples include wholegrain foods (wholemeal pasta, bread and cereals), brown rice, lentils, beans and pulses.

Water - Helps control temperature of the body, helps get rid of waste products from the body and prevents dehydration. Foods that contain water naturally include fruits and vegetables, milk and eggs

Year 11 Hospitality and Catering- Understanding the importance of nutrition

Name the 3 macro-nutrients and provide examples:

Micro-nutrients

What do each of these vitamins do? (Provide examples)

Fat soluble vitamin A –

Fat soluble vitamin D –

Water soluble vitamin B group –

Water soluble vitamin C -

Micro-nutrients

Describe what each mineral below does. Provide examples:

Calcium -

Iron –

Sodium -

Potassium -

Magnesium -

Dietary fibre (NSP) -

Water -

Year 11 Hospitality and Catering- Understanding the importance of nutrition

Nutrition at different life-stages

Adults:

Early – Growth in regard to height of the body continues to develop until 21 years of age. Therefore, all micro-nutrients and macro-nutrients especially carbohydrates, protein, fats, vitamins, calcium and iron are needed for strength, to avoid diseases and to maintain being healthy.

Middle – The metabolic rate starts to slow down at this stage, and it is very easy to gain weight if the energy intake is unbalanced and there isn't enough physical activity.

Elderly – The body's systems start to slow down with age and a risk of blood pressure can increase as well as decrease in appetite, vision and long-term memory. Because of this, it is essential to keep the body strong and free from

Children:

Babies – All nutrients are essential and important in babies, especially protein as growth and development of the body is very quick at this stage. Vitamins and minerals are also important. You should try to limit the amount of salt and free sugars in the diet.

Toddlers – All nutrients remain very important in the diet at this stage as growth remains. A variety of foods are needed for toddlers to have all the micro-nutrients and macro-nutrients the body needs to develop.

Teenagers – The body grows at a fast pace at different times at this stage as the body develops from a child to an adult, therefore all nutrients are essential within proportions. Girls start their menstruation which can

Special Dietary Needs

Different energy requirements based on:

Lifestyles / Occupation / Age / Activity level

The amount of energy the body needs is determined with each of the above factors e.g. active lifestyle or physical activity level would need more energy compared to a person being sedentary.

Dietary requirements:

Religious beliefs – Different religions have different dietary requirements.

Vegetarian – Avoids eating meats and fish but does eat dairy products and protein alternatives such as Quorn and tofu.

Vegan – Avoids all animal foods and products but can eat all plant-based foods and protein alternatives such as tofu and tempeh.

Pescatarian – Follows a vegetarian diet but does eat fish products and seafood.

Medical conditions:

Allergens – Examples of food allergies include milk, eggs, nuts and seafood.

Lactose intolerance – Unable to digest lactose which is mainly found in milk and dairy products.

Gluten intolerance – Follows a gluten free diet and eats alternatives to food containing wheat, barley and rye.

Diabetes (Type 2) – High level of glucose in the blood, therefore changes include reducing the amount of fat, salt and sugar in the diet.

Cardiovascular disorder – Needing a balanced, healthy diet with low levels of salt, sugar and fat.

Iron deficiency – Needing to eat more dark green leafy vegetables, fortified cereals and dried fruit.

Year 11 Hospitality and Catering- Understanding the importance of nutrition

Describe nutrition at each different life-stage:

Adults:

Early –

Middle –

Elderly –

Children:

Babies –

Toddlers –

Teenagers –

Define the different special dietary needs below:

Different energy requirements based on:

Lifestyles / Occupation / Age / Activity level

The amount of energy the body needs is determined with each of the above factors e.g. active lifestyle or physical activity level would need more energy compared to a person being sedentary.

Dietary requirements:

Religious beliefs –

Vegetarian –

Vegan –

Pescatarian –

Medical conditions:

Allergens –

Lactose intolerance –

Gluten intolerance –

Diabetes (Type 2) –

Cardiovascular disorder –

Iron deficiency –

Year 11 Hospitality and Catering- How cooking methods can impact on nutritional value

Water Based Methods

Boiling

Up to 50% of vitamin C is lost when boiling green vegetables in water.
The vitamin B group is damaged and lost in heat.

Poaching

The vitamin B group are damaged in heat and dissolve in water.

Steaming

Steaming is the best cooking method for keeping vitamin C in foods.
Only up to 15% of vitamin C is lost as the foods do not come into contact with water.

Roasting

Roasting is a method of cooking in high temperatures and so this will destroy most of the group C vitamins and some of the group B vitamins.

Grilling

Using this cooking method can result in losing up to 40% of group B vitamins.
It is easy to overcook protein due to the high temperature used in grilling foods.

Baking

Due to high temperatures in the oven, it is easy to overcook protein and damage the vitamin C and B group vitamins.

Frying

Using fat whilst frying increases the amount of vitamin A the body can absorb from some vegetables

Cooking in fat will increase the calorie count of food e.g. deep fat frying foods.

Stir-frying

The small amount of fat used whilst stir-frying increases the amount of vitamin A the body can absorb from some vegetables.

Some vitamin C and B are lost due to cooking in heat for a short amount of time.

Year 11 Hospitality and Catering- How cooking methods can impact on nutritional value

Describe how the following water based methods can impact nutritional value:

- **Boiling**
- **Poaching**
- **Steaming**

Describe how the following cooking methods can impact nutritional value:

- **Roasting**
- **Grilling**
- **Baking**

Describe how the following cooking methods can impact nutritional value:

- **Frying**
- **Stir-frying**

Year 11 Hospitality and Catering- factors affecting menu planning

Factors affecting menu planning

You need to be aware of the following factors when planning menus:

- **cost (ingredients as well as business costs)**
- **portion control (value for money without waste)**
- **balanced diets/current national advice**
- **time of day (breakfast, lunch, and dinner menus as well as small plates and snacks)**
- **clients/customers (a menu with prices that will suit the people who visit your establishment).**

Equipment available

You need to know and understand the type of equipment needed to produce a menu. The choice of dishes will be influenced by the equipment available to the chef.

This includes kitchen equipment such as:

- hobs, ovens, and microwaves
- fridge, freezer and/or blast chiller
- specialist equipment, for example a sous vide or pizza oven
- hand-held equipment, for example electric whisks or hand-blenders
- other electric equipment, for example food processors.

Skills of the chef

The skills of the chef must be suited to the type of provision and the menu offered.

A Michelin starred restaurant will require a chef who has complex skills in preparation, cooking and presentation of dishes.

A café will require a chef who has a range of medium and complex skills to produce a suitable menu.

A large restaurant will normally have a full kitchen brigade while a smaller establishment may only have a single chef with one or two assistants.

Time available

The type of provision will influence the amount of time a customer may be willing to wait for their dish to be prepared. Can the chef prepare, cook, and present more than one dish at the same time? Can some items be made in advance?

Organoleptic properties

Organoleptic properties are the sensory features of a dish (appearance, aroma, flavour, and texture).
The chef will need to think about how the dish will look and taste. Is there a range of colours? Do the flavours go well together? Are there a variety of textures?

Time of year

The time of year can affect menu choices. Light and cold dishes such as salads are better suited to the summer months. Hearty dishes such as stews are more suited to the winter. Special dishes linked to holidays such as Christmas and Valentine's Day may also be included.

The availability of **seasonal produce** can also affect menu choices as certain commodities, for example strawberries, are less expensive when in season.

Environmental issues

The chef will need to think about environmental issues when planning a menu.

Can the chef **reduce** the amount of ingredients bought as well as reducing food waste?
Can the chef **reuse** ingredients to create new dishes for example stale bread made into bread-and-butter pudding?
Can the kitchen **recycle** waste wherever possible?

Running the kitchen sustainably will save money.

Year 11 Hospitality and Catering- factors affecting menu planning

Explain how costs affect menu planning:	**How does the available equipment impact menu planning?**	**Why are the skills of the chef important?**
How does time impact menu planning? **What are organoleptic properties and why are they important?**	**Explain seasonality and give 3 examples of season foods.**	**What environmental issues should a chef consider when planning and why?**

Year 11 Hospitality and Catering- how to plan production

Production Plans- these should ALWAYS include:

Commodity list with quantities

This means naming all the ingredients needed to make all dishes and how much of each one e.g. grams (g), ounces (oz), millilitres (ml), etc.

Equipment list

Naming all pieces of equipment you would need to cook the dishes, which also includes specialist equipment such as pasta machines and ice cream makers as well as saucepans, chopping boards, knives, etc.

Mise en place

This is all the preparation you undertake before cooking. Examples of this include weighing out ingredients, collecting equipment and washing hands.

Cooking

Throughout your plan, you will need to state how you ensure food is cooked correctly, e.g. chicken is white in the middle, using a temperature probe, etc.

Cooling and hot holding

Cooling dishes correctly within 1.5hrs to 8 degrees and keeping hot dishes for service at 63 degrees should be mentioned in your plan for relevant dishes, as well as how you would ensure these temperatures are met, e.g. by using temperature probes.

Serving

Once you have finished cooking your dish or dishes, you need to state how you would present your dish/dishes, e.g. on plate, bowl, etc., as well

Storage

In your plan, you should state where different kinds of ingredients need to be stored, e.g. raw chicken in the fridge or frozen fruit in the freezer and at what temperatures these pieces of equipment need to be (fridge needs to be 0–5 degrees and freezer needs to be -18 degrees).

Timing

You need to state realistic timings of how long each step is likely to take throughout your plan to give accurate information of how long your dishes take to complete.

Sequencing or dovetailing

This means you fit together the different steps in logical order when planning to cook more than one dish.

Contingencies

This means stating, in the plan, what you would do to deal with a problem if something were to go wrong.

Health, safety and hygiene

Stating in the plan, points regarding the health, safety and hygiene. The use of temperature probes to ensure foods are cooked, correctly using colour coded chopping boards or washing hands after handling raw meat are a few examples.

Quality points

These include naming any quality points to consider in the preparation, cooking and serving stage of the plan. Examples could include checking foods are in use by/best before dates, dishes are cooked to minimum temperatures, ingredients stored in correct places and correct temperature, etc.

Year 11 Hospitality and Catering- how to plan production

Production Plans- these should ALWAYS include:

What is a commodity list?

What does **Mise en place** mean?

List the correct temperatures for cooling and hot holding

What are the correct storage plans for food? Give examples:

What is timing an important part of production plans?

What is dovetailing?

What are contingencies?

What health, safety and hygiene requirements should you set out in your plans?

What are quality points? Provide examples:

Year 11 Hospitality and Catering- presentation techniques

Serving dishes: Start with the plate – varied sizes, shapes and colours can add immediate impact to your dish. Dishes served in bowls or dessert glasses should be placed on a plate to aid serving.

Elements: Each dish will consist of several elements – the main protein, accompaniments, garnish and decoration.

Volume: Do not overcrowd the plate – leave some space so that the diner can see each element of the dish. The rule of thumb is that only two-thirds of the plate should be full.

Height: Food can be stacked to add height to the overall dish, but each element should be visible.

Colour: Accompaniments, garnishes and decoration can add colour to dishes where the main elements are similar in colour. An example is fish and chips: bright green peas and a slice of yellow lemon will enhance the overall appearance of the meal.

Functionality: The dish should be beautiful to look at, but easy for the diner to eat.

Temperature: Hot food should be served on hot plates. Cold food should be served on chilled plates.

Accompaniments

Accompaniments should be chosen to complement the main part of the dish. Examples include:

Carbohydrate accompaniments:

Savoury: bread, dauphinoise potatoes, pilau rice.

Sweet: shortbread, brandy snaps, macaron.

Fruit and vegetable accompaniments:

Savoury: pea purée, roasted root vegetables, griddled asparagus.

Sweet: berry compote, fruit kebabs, grilled peaches.

Sauces:

Savoury: gravy, red wine jus, parsley sauce.

Sweet: custard, salted caramel sauce, chocolate sauce.

Portion control

It is important that the customer is satisfied with their portion without the plate being overcrowded. Keeping portion control accurate allows hospitality and catering provisions to order adequate supplies of ingredients. Accurate portion control will also help prevent food waste.

Garnish

Garnishes are additions to a dish which both add to the overall taste and enhance the overall appearance.

Savoury: parmesan crisps, crispy onions, caviar, watercress, lemon wedges, fresh herbs, salsa, edible flowers.

Sweet: chocolate dipped strawberries, tuile biscuits, chopped nuts, tempered chocolate work, spun sugar work, edible flowers.

Decoration

Decoration adds drama to the finished dish but it is not meant to be eaten or add to the overall flavour of the dish. Examples include: whole spices added to pilau rice

Year 11 Hospitality and Catering- presentation techniques

Explain each of the presentations considerations below:

Serving dishes:

Elements:

Volume:

Explain each of the presentations considerations below:

Height:

Colour:

Functionality:

Temperature:

What are accompaniments?

Carbohydrate accompaniments:

Savoury:

Sweet:

Fruit and vegetable accompaniments:

Savoury:

Sweet:

Sauces:

Savoury:

Sweet:

What is portion control?

What are garnishes?

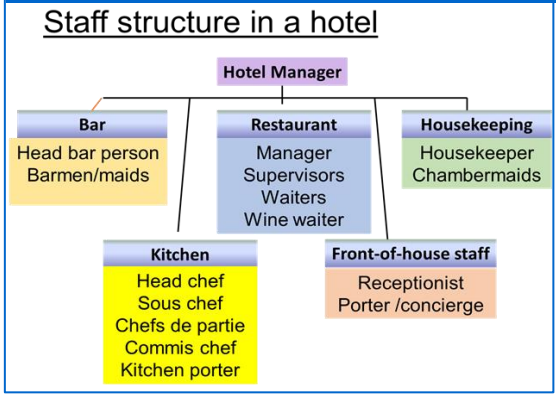
Savoury:

Sweet:

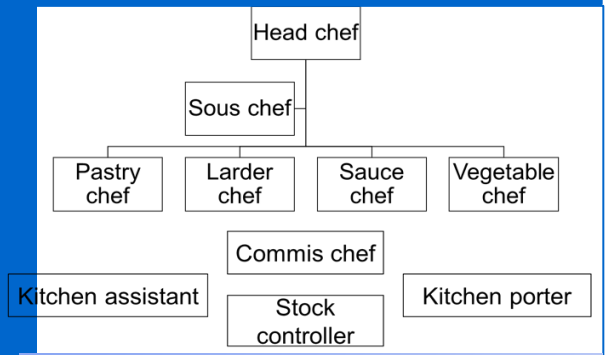
What are food decoration? Provide examples:

Year 11 Hospitality and catering:

Job roles in the industry



The Kitchen brigade- Back of House



Most large establishments could have **chefs de partie** in the following areas:

- **Sauce chef-** Le Saucier
- **Pastry chef-** Le Patissier- baked goods and dessert
- **Fish chef-** Le Poisonnier
- **Vegetable chef-** L'entremetier
- **Soup chef-** Le Potager
- **Larder chef-** Le garde manger- cold starters and salads
- The **commis chef** or assistant chef is a chef in training
- The **kitchen porter** washes up and may do basic vegetable preparation
- The **stock controller** is in charge of all aspects of store keeping and stock control.

Front of House roles

Reception
Receptionist: meet customers and direct them to the correct person or place; they manage visitor lists and booking systems
Porter/ Concierge; assist hotel guests by making reservations, booking taxis and booking tickets for local attractions and events.

Restaurant and bar
Restaurant manager (Maître d'Hote): The restaurant manager is in overall charge of the restaurant,; they take bookings, relay information to the head chef, complete staff rotas, ensure the smooth running of the restaurant
Head waiter (ess): Second in charge of the restaurant,. Greets and seats customers, relays information to the staff, Deals with complaints and issues referred by the waiting staff.

Waiting staff Serve customers, clear and lay tables, check the customers are satisfied with the food and service. May give advice on choices from the menu and special order foods

Wine waiter- Le sommelier: Specialises in all areas of wine and matching food, advises customers on their choices of wine, Wine waiters serve the wine to the customer and can advise customers on their choices as well

Bar staff serve drinks and take food orders , wash up, clear tables, change barrels and fill shelves.

Baristas make and serve hot and cold beverages, in particular different types of coffee such as espresso, cappuccino and latte.

Personal attributes

Working hours

- Hospitality and Catering jobs tend to be long hours, early starts for breakfast in a hotel to late nights for dinner in a restaurant.
- Staff will still get 2 days off a week but it will be quieter days instead of the weekend
- Shifts could be 6-3. 11-6. 3-11 or other hours.
- Monthly salaried staff may not have set hours eg Head Chef who might work from early morning to late night every day

Contracts of employment

1. a written statement of employment or **contract** setting out their duties, rights and responsibilities
2. the statutory minimum level of paid holiday 28 days for full time workers
3. a pay slip showing all deductions, eg National insurance, tax . Earning above £166 a week
4. the **statutory** minimum length of rest breaks- one 20 min break for 6 hrs worked
5. Statutory Sick Pay (SSP) £94.25 pw for 28 weeks (some may get full wages for a limited amount of time)
6. Maternity, paternity and adoption pay and leave-90% of earnings for 6 weeks then ££148.68 for next 33 weeks

Casual staff / Agency staff

- work for specific functions and can be employed through an agency.
- They do not have a contract or set hours of work.
- They are needed at busier times of the year e.g. at Christmas or for weddings, New years eve

Temporary staff

- Employed for a specific length of time such as the summer tourist season or the month of December.
- Temporary staff have the same rights as permanent staff for the duration of their contract.
- Temporary staff employed for longer than 2 years become permanent by law

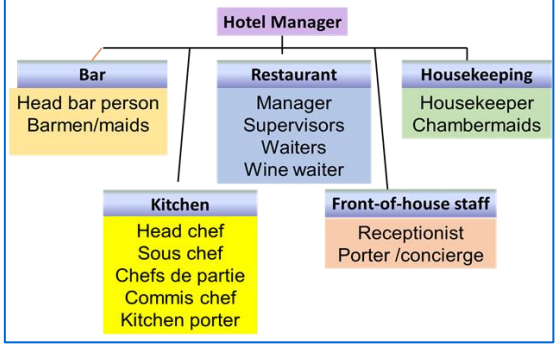
Zero Hours Contract

This type of contract is between the employer and a worker, where the worker may sign an agreement to be available to work when they are needed, but no specific number of hours or times to start or end work are given. The employer is not required to offer the person any work and the worker is not required to accept the work.

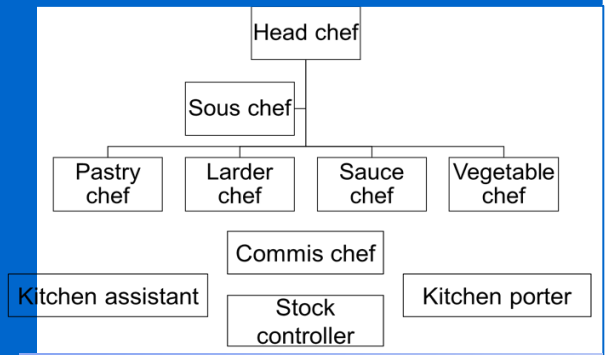
Year 11 Hospitality and catering:

Job roles in the industry

Staff structure in a hotel



The Kitchen brigade- Back of House



Most large establishments could have **chefs de partie** in the following areas:

- **Sauce chef**
- **Pastry chef**
- **Fish chef**
- **Vegetable chef**
- **Soup chef**
- **Larder chef**
- The **commis chef**
- The **kitchen porter**
- The **stock controller**

Front of House roles

Reception
Receptionist:

Restaurant and bar
Restaurant manager (Maître d'Hote):

Head waiter (ess):

Waiting staff

Wine waiter- Le sommelier

Bar staff

Baristas

Personal attributes

Working hours

Contracts of employment

1. a pay _____ showing all deductions, eg National insurance, tax . Earning above ____ a week
2. the _____ minimum length of rest breaks- one 20 min break for 6 hrs worked
3. Statutory Sick Pay (SSP) £94.25 pw for__ _____ (some may get full wages for a limited amount of time)
4. Maternity, _____ and adoption pay and leave-90% of earnings for __ weeks then ££148.68 for next __ weeks

Casual staff / Agency staff

- work for _____ functions and can be employed through an agency.
- They do not have a _____ or set hours of work.
- They are needed at_____ times of the year e.g. at Christmas or for weddings, New years eve

Temporary staff

- Employed for a _____ length of time such as the summer tourist season or the month of _____.
- Temporary staff have the same rights as permanent staff for the duration of their _____.
- Temporary staff employed for longer than 2 _____ become permanent by ___

Zero Hours Contract

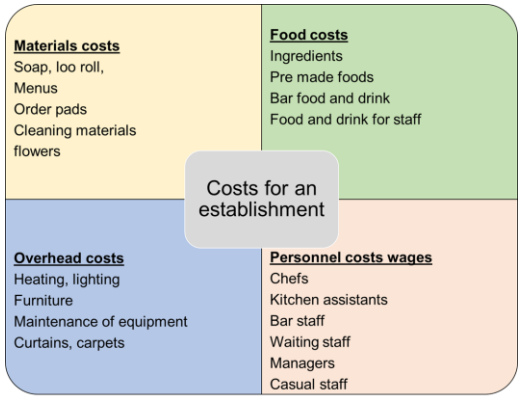
This type of contract is between the _____ and a _____, where the worker may sign an agreement to be available to work when they are _____, but no _____ number of hours or times to start or end work are given. The employer is not required to offer the person any ____ and the worker is not required to _____ the work.

Year 11 Hospitality and catering:

Remuneration

Remuneration is a term used for the reward that people receive from working somewhere. It includes their basic pay, plus extra money t top u their income from:
Tips and gratuities- money given to someone by a customer as a way of saying 'thank you' for good service
Service charge- a percentage added to the customers bill to reward the employees who have provided the customer with a service
Bonus payments and rewards- given by some employers as a way of rewarding hard work throughout the year and helping make the business successful.

It is quite common for all he tips, gratuities and service charges to be divided equally amongst all the workers in, e.g. restaurant. This is known as a tronc arrangement, and the person who works out and distributes the extra money is known as a 'troncmaster'.



What is portion control?

- Portion control is the amount of each menu item that is served to the customer.
- It depends on the type of customer, the type of food served,
- some foods are served in very small portions due to the high cost of the item eg caviar is served by the teaspoon

Paid annual leave

- All workers are entitled to 28 days paid leave annually
- **no** legal right for employees to be given Bank and Public Holidays. Most hospitality staff would work these days

To calculate holiday entitlement,
Multiply the full-time entitlement (28 days) by the number of days worked and divide by the number of days full-time staff work
Entitlement for 3 days a week: 28 x 3/5 = 16.8 days

Compulsory Rest Breaks

Adult workers are entitled to 24 hours off in each 7 day period and young workers (15-18) are entitled to 2 days in 7.
Adult workers are entitled to at least 20 minutes uninterrupted rest if their working day is longer than 6 hours.
Young workers are entitled to 30 minutes rest if their working day is over 4.5 hours long.

Factors affecting success

Costs - need to make a profit. Consider cost of everything you buy and selling price.
- Material - Anything involved in making product
- Labour - Costs of staff
- **Overheads** - Anything not connected with making products

Economy - when the economy slows down, business have lower sales as consumers eat out less because they have less disposable income
Environment – 3 R's, packaging, food waste, global warming, carbon footprint, clean eating
Technology - Using technology to improve service, delivery and stock control – touch screen customer ordering, EPOS systems, stock management, apps for delivery services
Emerging and innovative cooking techniques – sous vide, clean eating, steaming, new restaurants,
Customer demographics and lifestyle – delivery services Facebook Twitter
Customer service–customer satisfaction – free WiFi, order online
Competition - Low cost food (£1 menu, coffee McDs espresso v Starbucks)
Trends healthy food options, pop-up bars, cafes and restaurants, cronut, clean eating, low carb, good fats,
Political factors - Increasing regulations – from government due to health issues, Brexit, use of migrant labour, migrants – ethnic foods
Media - Strong global brand, Good community reputation – children's charities / Ronald McDonald House, celebrity chefs, celebrity endorsements, Masterchef,

Reasons for **failure**

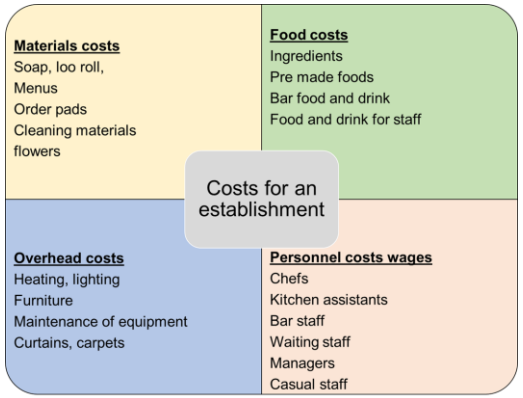
1. **A saturated market** – there is a fine line between competition & too many for the number of customers
2. **General business incompetence** – 46% of business fail due to lack of business knowledge
3. Lack of **capital** – not enough money to get through the first few months
4. **Location –** either not enough people walk past (foot-fall) live & work nearby
5. **Quality of life** - most restaurateurs work 60 hours a week – not the glamorous life they thought
6. **Lack of industry experience** – most successful restaurateurs tend to have previous industry experience
7. **Failure to create a good enough brand –** They did not incorporate the 12 Ps of restaurant branding,(Place, Product, Price, People, Promotion, Promise, Principles, Props, Production, Performance, Positioning and Press)
8. **Name of the restaurant is too long-** A restaurant with a name that is brief, descriptive and attractive is more likely to succeed.
9. **Lack of differentiation** -the brand is not different enough
10. **Poor financial controls** – Main costs – labour and food exceeded 60% of sales

Year 11 Hospitality and catering:

Remuneration

_____ is a term used for the reward that people receive from working somewhere. It includes their basic pay, plus extra money t top u their income from:
Tips and gratuities- money given to someone by a customer as a way of saying 'thank you' for ____ service
Service charge- a percentage added to the customers ____ to reward the employees who have provided the customer with a service
_____ payments and _____- given by some employers as a way of rewarding hard work throughout the _____ and helping make the business successful.

It is _____ common for all he tips, _____ and service charges to be divided equally amongst all the _____ in, e.g. restaurant. This is known as a _____ arrangement, and the person who _____ out and distributes the extra money is known as a 'troncmaster'.



What is portion control?

Paid annual leave

Compulsory Rest Breaks

Factors affecting success

Costs –

Material - Anything involved in making product
- Labour –
- **Overheads –**

Economy -

Environment –

Technology –

Emerging and innovative cooking techniques –

Customer demographics and lifestyle –

Customer service–

Competition –

Trends

Political factors –

Media –

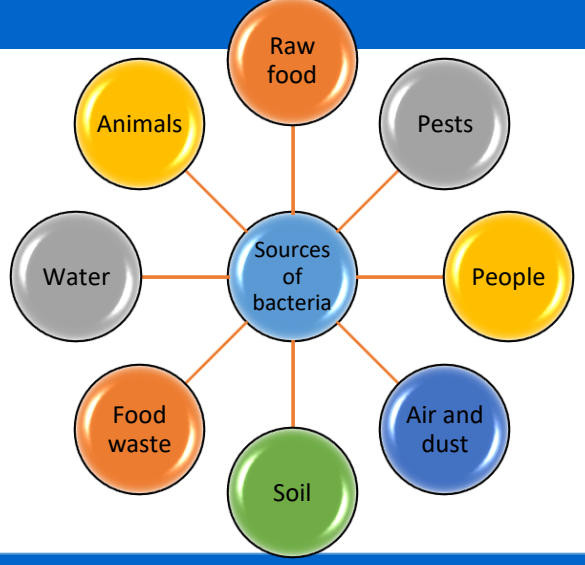
Reasons for **failure**

1. **A saturated market –**
2. **General business incompetence –**
3. Lack of **capital –**
4. **Location –**
5. **Quality of life** -
6. **Lack of industry experience –**
7. **Failure to create a good enough brand –**
8. **Name of the restaurant is too long-**
9. **Lack of differentiation –**
10. **Poor financial controls –**

Year 11 Hospitality and catering:

Food-related causes of ill health

Microbes- are tiny micro-organisms that can contaminate food and spoil it, casing ill health. The micro-organisms discussed on this page are bacteria, yeasts and moulds



Bacteria

- Bacteria are single-celled micro-organisms. Bacteria can be found everywhere around you; on your skin, in food, in soil, in water and in the air.
- Most bacteria are harmless, but some are **pathogenic** and can cause food poisoning. General food poisoning **symptoms** are vomiting (being sick) and diarrhoea.
- Other types of bacteria cause food to decay; these are called food spoilage bacteria, which cause food to smell and lose its texture and flavour.

What do bacteria need to multiply?

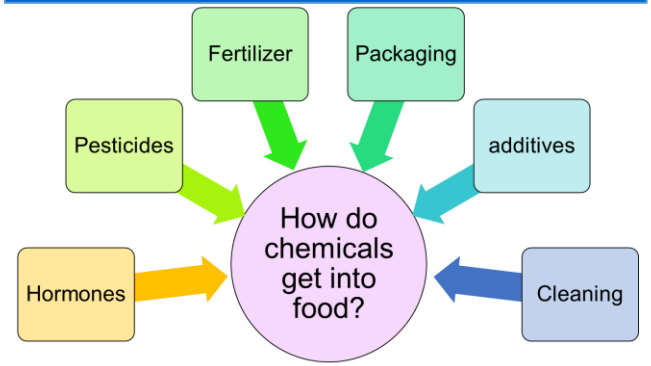
Yeasts

- Yeasts are a single celled fungi that reproduce by 'budding' – the yeast cell grows a bud, which becomes bigger until it eventually breaks off and becomes a new yeast cell.
- Yeast can grow in acidic, sweet foods; for example orange juice can ferment if it is not stored correctly, and honey can ferment if not pasteurised.
- Yeasts prefer moist, acidic foods.
- Yeasts can grow in high concentrations of sugar and salt.
- Yeasts grow best in warm conditions (around 25-29°C) but can also grow at fridge temperatures (0-5°C)
- Yeasts are destroyed at temperatures above 100°C.

Moulds

- Moulds are tiny fungi; they produce thread like filaments that help the mould to spread around the food.
- Moulds grow in warm and moist conditions.
- Moulds grow easily on bread, cheese and soft fruits, and can grow on foods with high sugar and salt concentrations.
- Moulds grow best between 20°C and 30°C, but can also grow in the fridge (0°C- 5°C)
- Mould growth may be speeded up by high humidity and fluctuating temperatures
- Moulds can grow on fairly dry food, such as hard cheese (for example Cheddar cheese)
- Moulds often spoil food such as bread and other bakery products.

Chemicals



Metals

Aluminium

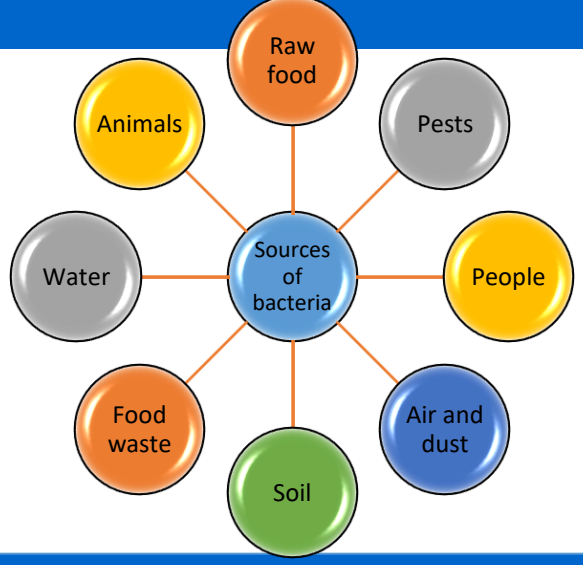
- Aluminium is one of the most common metals used in cookware as it is lightweight and conducts heat well.
- When aluminium surfaces are in contact with acidic foods, such as tomatoes and citrus fruits, the aluminium reacts and can leach (dissolve) into the food. This can give the food an unwanted metallic taste.
- When aluminium has been associated with Alzheimer's disease, there is no evidence that this causes the disease. The world health Organisation estimate that adults can consume more than 50 mg of aluminium daily without harm, so day to day exposure to aluminium from cooking is considered to be safe.
- Aluminium cookware can be anodised (hardened through a process that makes it unreactive) or coated with a less-reactive material, such as stainless steel, so that it does not react with food.

Copper

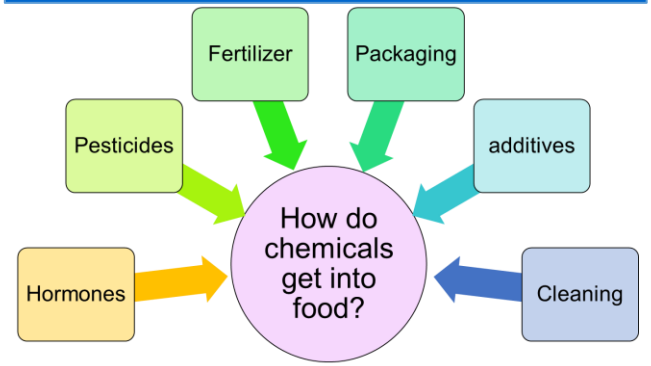
- Copper may be used in cups, pots and pans. It warms quickly and is he best conductor of heat.
- Copper and copper-alloy surfaces react with acidic foods, such as tomatoes and citrus fruits, and can leach (dissolve) into the food. High doses of copper can be toxic, so most copper pans are lined with stainless steel to avoid this happening.

Year 11 Hospitality and catering:

Food-related causes of ill health



Chemicals



Bacteria

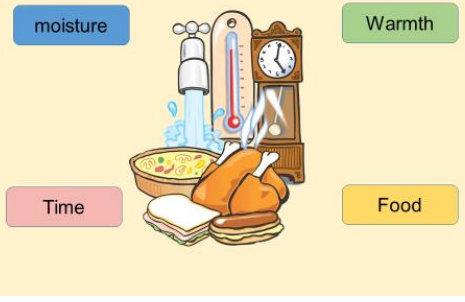
Yeasts

Metals

Aluminium

Copper

What do bacteria need to multiply?



Moulds

Year 11 Hospitality and catering:

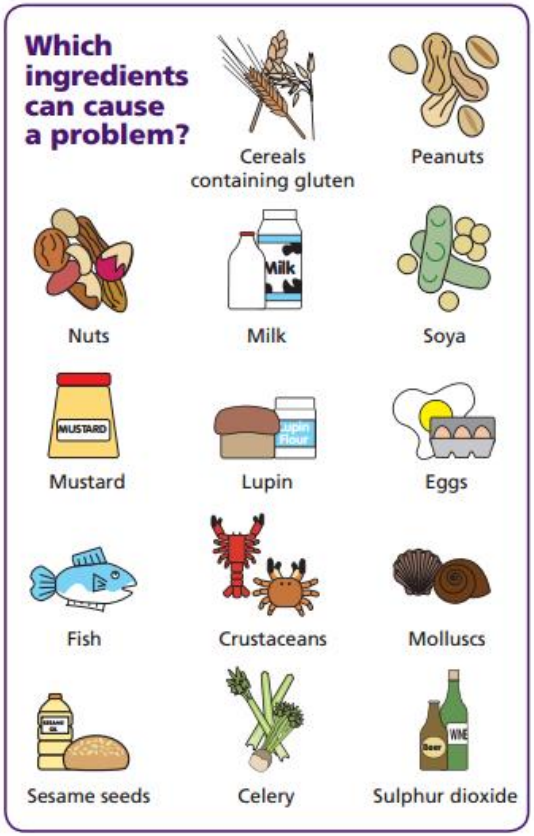
Food-related causes of ill health

Poisonous plants

- Some mushrooms are poisonous, so you should pick mushrooms to eat unless you are 100% sure of what they are. The death cap and autumn skullcap are two of the most poisonous. Consuming poisonous mushrooms can lead to pain in the area of the kidneys, thirst, vomiting, headache and fatigue.
- Many berries that grow wild are poisonous and should not be eaten. Yew berries, deadly nightshade and unripe elderberries re all poisonous. Consuming poisonous berries can lead to nausea, vomiting, stomach ache and diarrhoea, but can also be fatal.
- Rhubarb leaves contain oxalic acid, which shuts down the kidneys and can be fatal; the stalks are safe to eat how ever.
- Glycoalkaloids are found in leaves, stems and sprouts of potatoes. They can build up in potatoes if they are left too long in the light, causing them to turn green. Eating glycoalkaloids can lead to cramps, diarrhoea and coma, and can prove fatal.
- If nuts and cereals get damp when they are stored, they can develop a mould that produces a **toxin** that can damage the liver.
- Dried kidney beans contain a toxin called lectin that makes them unsuitable for eating. Eating raw or inadequately cooked beans can lead to symptoms that indicate food poisoning. Kidney beans should be soaked and boiled for a t least ten minutes to destroy the toxin.

Allergies

- A person with a food allergy experiences an allergic reaction when they eat or come into contact with specific foods.
- Allergic reactions are caused by the body's immune system reacting to the food and can be fatal.



Intolerances

Some people have sensitivity to certain foods. This is called a food intolerance. Eating these foods can cause symptoms such as nausea, abdominal pain, joint aches and pains, tiredness and weakness

Lactose intolerance

- A person with a **lactose** intolerance cannot digest the sugar in milk called lactose.
- People with a lactose intolerance need to avoid all dairy products and foods that contain dairy products in their ingredients.

Gluten intolerance

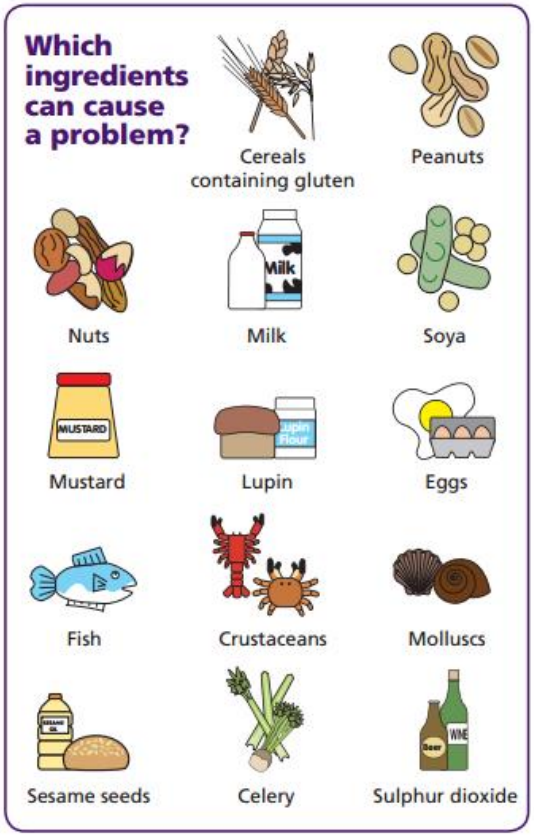
- Gluten is a protein present in a number of cereals including wheat, rye and barley.
- Wheat is a nutritious staple food in the UK diet an dis found in a number of foods including flor, baked products, bread, cakes, pasta and breakfast cereals.
- People with a gluten intolerance need to follow a gluten free diet.
- It is important not to confuse gluten intolerance with **coeliac disease** which is an autoimmune disease caused by a reaction of the immune system to gluten. A person with coeliac disease is called a **coeliac.**

Year 11 Hospitality and catering:

Food-related causes of ill health

Poisonous plants

Allergies



Intolerances

Lactose intolerance

Gluten intolerance

Year 11 Hospitality and catering:

The role and responsibility of the Environmental Health Officer

to provide support to minimise health and safety hazards. **Environmental Health Officers (EHOs)** are responsible for carrying out measures to protect public health and

Role of EHOs

- They look after the safety and hygiene of food through all stages of the manufacture or production from distribution to storage and service.
- They help develop, co-ordinate and enforce food safety policies.
- They have the right to enter and inspect food premises at all reasonable hours and can visit without advance notice.
- They carry out routine inspections of all food premises in their area; the frequency of routine inspections depends on the potential risk posed by the type of business and its previous record- some high-risk premises may be inspected at least every six months, others much less often.
- They visit premises as a result of a complaint.
- They have powers of enforcement and can close businesses in extreme cases.

Responsibilities of EHOs

- They check that food producers handle all food hygienically so as not to give customers food poisoning.
- They check that food is being kept at the specific temperatures at which it should be stored or held.
- They check that staff are properly dressed, with clean nails, no jewellery, hair covered or tied back, and showing good hygiene habits.
- Thy review processes in the workplace, such as the handling of food, use of equipment, use of colour coded chopping boards, washing-up and disposal of waste.
- They inspect food stores-fridges, freezers and dry stores.
- They check stock rotation and temperature logs
- They check that equipment is clean, well maintained and with safety notices if appropriate.
- The check the temperature of the food when it is cooked with probes to ensure that it is at the correct temperature.
- They ask questions to check compliance with the law or good practice
- They identify potential hazards
- They review safety management systems and plans
- At the end of an inspection they give verbal feedback, discuss any problems and advise on possible solutions. They complete a report of inspection findings, which tells the business what **enforcement action** is to be taken.

Enforcement action

Enforcement action is required by law following an inspection from an EHO.
Enforcement action can range from verbal advice, informal or formal letters, and notices through to prosecution.

- **Formal Inspection letters-** tells the food business which issues must be addressed to comply with the law. The EHO may revisit the business to check that the issues have been resolved.
- **Hygiene Improvement Notices-** An EHO can serve a Hygiene Improvement Notice when they believe that a food business is failing to comply with food hygiene regulations. This notice will specify what s going wrong and what needs to be done by which date. The EHO will visit again to see if the required work has been done. If it has not improved, it can lead to a fine or imprisonment.
- **Hygiene Emergency Prohibition Notices-** If an EHO believes that there is a significant risk to health and injury, a Hygiene Emergency Prohibition Notice may be served. The notice stops the use of the unsafe equipment, processes or premises immediately. It can only be removed by an EHO once the issues have been addressed.
- **Voluntary closure-** A food business may elect to close voluntarily to carry out improvements. However, should the business reopen before the improvements are completed, the EHO will serve a Hygiene Emergency Prohibition Notice.
- **Seizure and detention of food-** EHOs have the power to inspect and seize food suspected of not meeting food safety regulations. Food is taken if there is suspicion that it is contaminated and is likely to cause food poisoning or disease. Seized food may undergo microbiological examination and testing.
- **Condemnation of food-** In order to condemn or seize food, the EHO must present their findings to a court. They will consider the information and decide whether the food poses a risk to human health and whether or not to condemn it.
- **Voluntary surrender of food-** The owner of a business may surrender unfit food to the EHO voluntarily. This would avoid the involvement of the court.

Year 11 Hospitality and catering:

The role and responsibility of the Environmental Health Officer

Role of EHOs

Responsibilities of EHOs

Enforcement action

Enforcement action is required by law following an inspection from an EHO.
Enforcement action can range from verbal advice, informal or formal letters, and notices through to prosecution.

- **Formal Inspection letters-**
- **Hygiene Improvement Notices-**
- **Hygiene Emergency Prohibition Notices-**
- **Voluntary closure-**
- **Seizure and detention of food-**
- **Condemnation of food-**
- **Voluntary surrender of food-**

Year 11 Hospitality and catering:

Food safety legislation

Food Safety Act 1990

- This act is concerned with all aspects of food production and sale.
- If affects everyone involved in the production, processing, storage, distribution and sale of food.
- It ensures that all food produced is safe to eat.
- The act states that it is an offence to make food sold for human consumption unsafe to eat.
- A food producer or retailer may not add any substances to food, or subject food to any process or treatment, which will make it harmful to health.
- An EHO may inspect any food intended for human consumption at any reasonable times. If the food is regarded as unfit for human consumption, it may be seized.
- The legislation also provides a defence for foo producers, processors and retailers. They must prove that all reasonable precautions were taken to prevent a food safety incidence. This is called **due diligence**.
- Failure to take reasonable precautions can result in prosecution.
- Magistrates' courts may impose a fine, prison sentence or both for offences committed.

Record Keeping

Detailed records need to be kept of:

- Food safety management procedures
- Training records of staff and staff illness reporting procedures
- Cleaning schedules
- Pest control and waste disposal contracts
- Records of checks, problems found and actions taken, for example a food temperature log book
- List of suppliers

Basic hygiene rules

- Don't cough or sneeze near food.
- Don't touch your head, especially your mouth, nose or ears.
- Wear protective clothing and footwear provided by your employer.
- Don't brush your hair when wearing protective clothing or in any food areas.
- Long hair should be tied back and covered.
- Cuts and scratches should be covered with a coloured waterproof plaster.
- Don't prepare food if you are unwell with a stomach bug or cough and cold, as you could spread bacteria onto food.

Hazard analysis and critical control points (HACCP)

This is a process that is designed to help look at how you handle food and to put procedures in place to ensure that the food you produce is safe to eat.
Every business that produces, sells or serves food is required to have a HACCP plan in place with a written **food safety plan.** It is the responsibility of the owner of the business to develop an appropriate food safety management system based on HACCP.

HACCP systems should apply the following principles:

1. Create a flow chart or table showing each step in the preparation, making, serving and storing of each dish.
2. Each step should be analysed to identify the hazards. Hazards can be:
    - Physical- foreign materials can cause injury to the consumer; these might be metal or plastic, or natural hazards such as bones in fish.
    - Biological- food can become infected by bacteria, which might lead to food poisoning
    - Chemical- potentially dangerous chemicals such as cleaning fluids can contaminate food.
3. Identify what can be done to control (prevent) the hazard.
4. Set guidelines on how to ensure food is going to be safe to eat- these are known as critical limits- and keep a record of this.
5. When new dishes are made, there needs to be a HACCP review to ensure that they are safe to eat.
6. All the documentation relating to the HACCP needs to be kept safe.

Food Safety (General Food Hygiene) Regulations 1995

These regulations apply to food businesses and cover all activities involving food. The legislation clearly sets out the responsibility of food businesses to:

- Produce food safely and make sure it is consistently safe to eat; food is unsafe if it is harmful to health and unfit for human consumption
- Keep records of suppliers so that food can be traced; businesses must withdraw food that does not meet food safety requirements.

The whole food chain, from **farm to fork**, is covered by legislation. Farm to fork means that food can be traced through all the stages of production, processing and distribution back to the original source. The regulation require that food is stored, handled, cooked an served safely; that premises are clean and hygienic; and that people handling food follow basic hygiene rules.

Food safety plan

The following information should be included in a written safety plan:

- Purchase and delivery
- Stock control
- Storage and preparation
- Chilled foods
- Frozen foods
- Cooking
- Hot holding
- Cooling
- Reheating
- Personal hygiene
- Equipment and premises
- Cleaning and maintenance
- Pest control

Using this system can demonstrate the defence of 'due diligence' legally. To prove due diligence a business must be able to demonstrate that it took every possible reasonable step to achieve safe food. This may protect the owner of the business from prosecution.
It is likely that the court would demand written records to support the defence. These might include documents from the safety plans. Other relevant documentation may include staff training records, temperature logs, cleaning schedules, supplier specifications, traceability systems, remedial action where food safety problems have arisen, and pest control measures.

Year 11 Hospitality and catering:

Food safety legislation

Food Safety Act 1990

Record Keeping

Basic hygiene rules

Hazard analysis and critical control points (HACCP)

Food Safety (General Food Hygiene) Regulations 1995

Food safety plan

The following information should be included in a written safety plan:

- .
- .
- .
- .
- .
- .
- .
- .
- .
- .
- .
- .
- .

Year 11 Hospitality and catering:

Food safety legislation

Nutrition claims

There are strict rules about claims that can be made about food on its packaging so that consumers are not misled. For example, if the packaging says that the product is 'fat free', the product must not contain more than 0.5g of fat per 100g or 100ml. Any health claim the manufacturer makes has to be reviewed to ensure it is accurate before it appears on the label.

Dates of minimum durability

Different types of dates are used to tell customers when food should be consumed by:

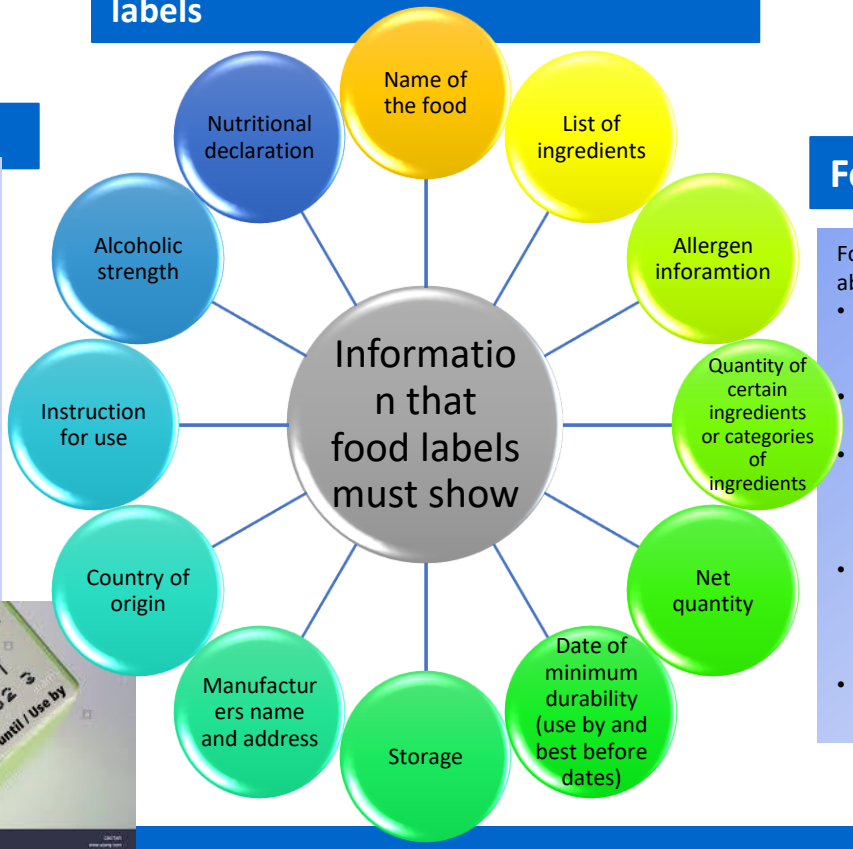
- **Use-by date-** usually on high risk foods such as soft cheeses, chilled meats, salads and sandwiches, which can go off quickly; it states the date that the food should be used by.
- **Sell-by or display-until date-** this date is aimed at shopkeepers rather than consumers; it is usually a few days before the use-by date to allow the consumer time to eat the food.
- **Best-before date-** these are given on foods that keep for longer, for example biscuits; the food should be eaten before this date for quality purposes, but it is not usually harmful to eat it after this date.

Nutritional labelling

Nutritional information must be expressed per 100g or per 100ml, and it must be listed in the following specific order:

- Energy-stated in kilojoules (kJ) and kilocalories (kcal) per 100g or 100ml
- Fat
- Saturated
- Carbohydrates
- Sugars
- Fibre (not required by law)
- Protein
- Salt
- Vitamins and minerals-these must also be expressed as a percentage of the **reference intake (RI)**

Mandatory information required on labels

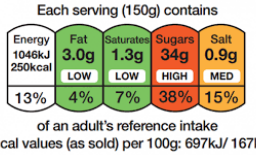


Traffic light labelling

Traffic light labelling is a voluntary system that uses traffic light colours to indicate how healthy a product is at a glance in terms of fat, saturated fat, sugar and salt.

- **Red-** the food is high in something that consumers should try to cut down on in their diet; such foods should be chosen less frequently and eaten in small amounts.
- **Amber**- the food isn't high or low in the nutrient, so this is an acceptable choice most of the time.
- **Green-** the food is low in teat nutrient; the more green, the healthier the choice.

Consumers should choose foods with more greens and ambers and fewer reds to ensure healthier choices.
Traffic light labels also give the amount of fat, saturated fats, sugars and salt in grams, the manufacturer or retailer's suggested 'serving' size, and information on the nutrient as a percentage of RI.



Food labelling regulations

Food labels are used by business to provide information about their products. They are needed to:

- Enable consumers to make informed decisions and choices, and to educate them about the food they choose to buy
- Help us to store, prepare and cook the food we buy correctly
- Identify the ingredients used in food-if a consumer has a severe allergy to certain ingredients (for example nuts), they need to check if the food contains those ingredients.
- Establish the nutrient content of the food- if a consumer has a health condition such as diabetes or high blood pressure, they may want to check the sugar, fat, carbohydrate or salt content of the food.
- Identify where the food comes from- some consumers may prefer to buy local ingredients.

Year 11 Hospitality and catering:

Food safety legislation

Nutrition claims

Nutritional labelling

Nutritional information must be expressed per 100g or per 100ml, and it must be listed in the following specific order:

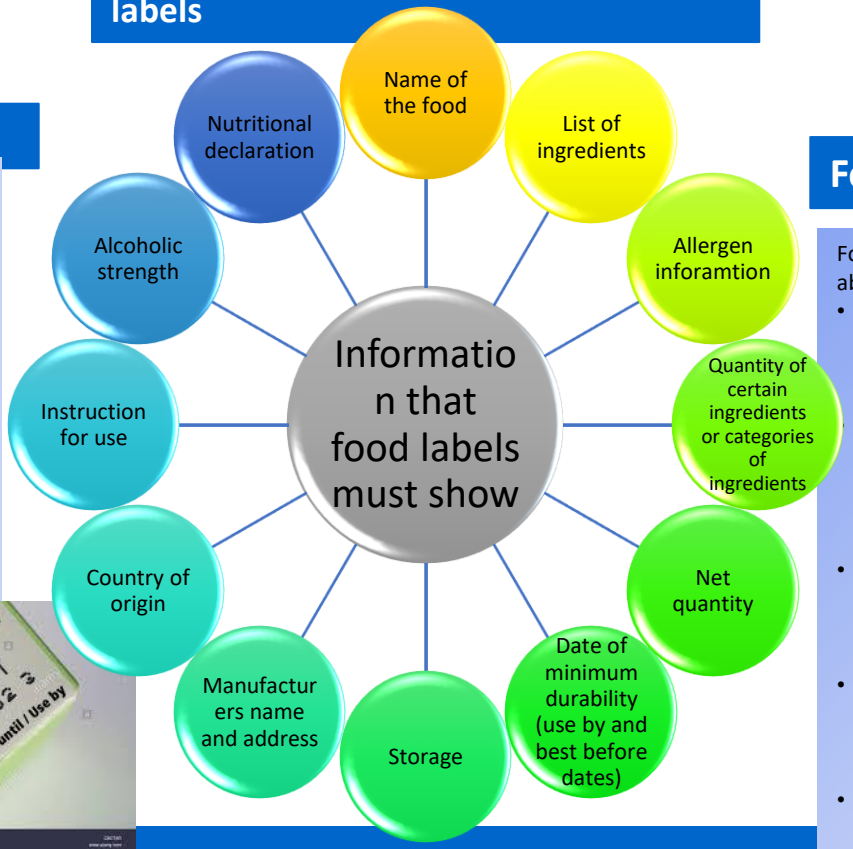
- .
- .
- .
- .
- .
- .
- .
- .
- .

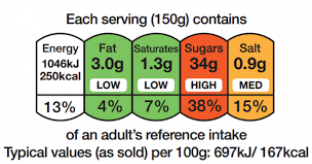
Traffic light labelling

Traffic light labelling is a voluntary system that uses traffic light colours to indicate how healthy a product is at a glance in terms of fat, saturated fat, sugar and salt.

- **Red-**
- **Amber-**
- **Green-**

Mandatory information required on labels





Dates of minimum durability

Different types of dates are used to tell customers when food should be consumed by:

- **Use-by date-**
- **Sell-by or display-until date-**
- **Best-before date-**

Food labelling regulations

Food labels are used by business to provide information about their products. They are needed to:

- .
- .
- .
- .
- .

Year 11 Design and Technology: our world

Technology Push is when research and development in new technology, drives the development of new products.

Technology push is when products are **re-designed because of changes in materials or manufacturing methods.**

This might mean that **new materials have become available**, with improved properties; or that improvements in manufacturing processes mean a manufacturer can **make the product cheaper or more efficiently**, which reduces manufacturing costs and carbon footprints

Market Pull

Market pull is when product ideas are produced in response to market forces.

Examples of market influences include:

- A demand from consumers for new or improved products.
- A competing product is launched by another manufacturer.
- A manufacturer wants to increase their of share the market.

Global Production

Products are sold and manufactured worldwide: we need to consider the positive and negative implications of this and how the products we design affect people, jobs & the environment.

- Developments in transport makes it easier for manufactures to ship materials, components and products worldwide.
- Allows for materials and components to be sourced in one country, manufactured into products or part-products in another and ship worldwide.
- Manufacturing costs can be reduced through automation or global production impacting jobs.
- Mobile technology & the internet make it easier to communicate with people all over the world.
- Greater competition among manufactures, reducing cost

CAD/CAM/CNC

CAD - Computer Aided Design

An effective method of drawing, editing and presenting design work digitally.

CAM - Computer Aided Manufacture

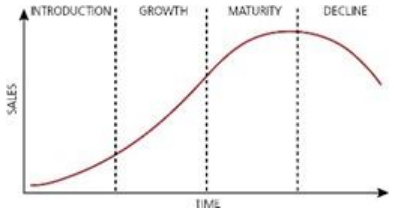
Using machinery to produce products. CAM machines run from instructions produced from CAD drawings.

CNC - Computer Numerically Controlled

Machine tools that are controlled by a computer.

Product Lifecycle

Product life cycle an important part of marketing. It covers the 4 stages a product goes through from its initial introduction to the market until it is replaced as it is not selling well or has been used.



The introduction stage is when the product is 1st developed, the 2nd is growth and manufacturing, maturity would be as the product is used by the customer and decline in and the end of its life when the product is disposed of.

Carbon Footprint

The impact human activities have on the environment in terms of the amount of green house gases produced, measured in units of carbon dioxide

Year 11 Design and Technology: our world

What is technology push?
(give examples)

What is market pull?
(Provide examples)

Global Production- what are he positive and negative implications?

Products are sold and manufactured worldwide: we need to consider the positive and negative implications of this and how the products we design affect people, jobs & the environment.

- -
- -
- -
- -
- -

CAD/CAM/CNC

What is CAD?

What is CAM?

What is CNC?

What is product lifecycle? Explain the stages below:

What is carbon footprint?

Year 11 Design and Technology: our world

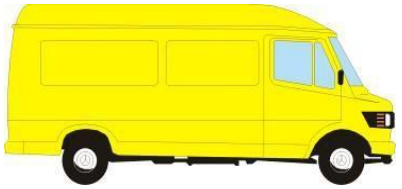
6 Rs - Sustainability

1. **Recycle** and reprocess the materials
2. **Re-use** materials/components/products for another purpose
3. **Reduce** the amount of energy and resources used throughout the whole product life cycle
4. **Repair** products/design them to be easily repaired
5. **Rethink** our current lifestyles and the way we design and make
6. **Refuse** products which are unnecessary or wastefully use resources

Product Miles

How many miles does the product travel?

- Source material to primary processor
- Material to factory
- Product to distributor
- Distributor to retail outlet
- Retail outlet to home



Scale of Productions

There are 4 scale of production:

- prototype or one-off production
- batch production
- mass production
- continuous production

Planned Obsolescence

When a manufacturer plans or designs a product to have a short, useful life. It could mean that after a period of time, the product:

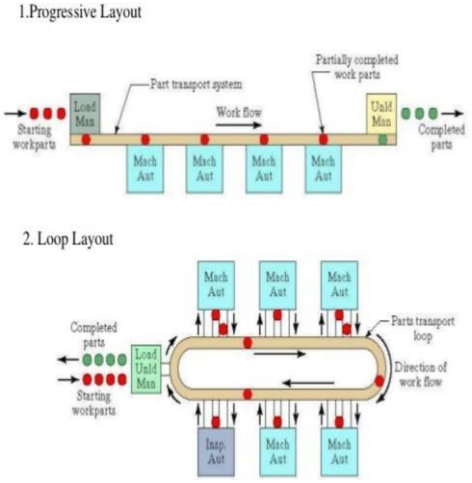
- becomes unfashionable
- will no longer function.

Just-in-Time (JIT)

Just-in-time (JIT) production is a method of organizing a factory so that materials and components are ordered to arrive at the product assembly plant just in time for production.

- triggered by a customer order.
- The correct amounts of materials are ordered in to cover the order, and these arrive just as they are needed by production.
- This saves money on storage, reduces waste and ensures there is no money wasted producing stock that will remain unsold.

Flexible Manufacturing Systems



Production is organized into cells of automated machines performing different tasks. Often along a conveyor line.

Lean Manufacture

Focuses on maximizing productivity while reducing waste when manufacturing.

- Reduced lead times and operating costs
- Improved product quality and customer satisfaction
- Resource savings and better sustainability
- Flexibility through small batch sizes and low inventories
- Better management of process complexity

Year 11 Design and Technology: our world

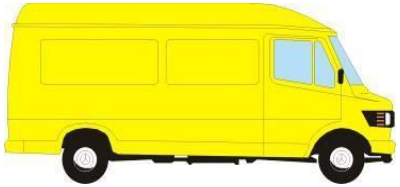
What are the 6 Rs of sustainability?

1. -
2. -
3. -
4. -
5. -
6. -

Product Miles

How many miles does the product travel?

- Source material to primary processor
- Material to factory
- Product to distributor
- Distributor to retail outlet
- Retail outlet to home



Scale of Productions

What are the 4 scales of production?

- -
- -
- -
- -

Planned Obsolescence

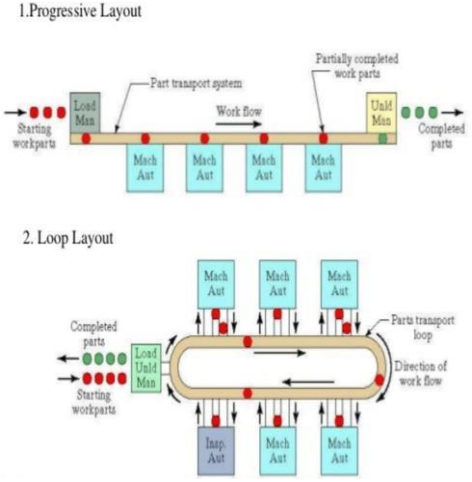
When a manufacturer plans or designs a product to have a short, useful life. It could mean that after a period of time, the product:

- -
- -

What is Just-in-Time (JIT) production? Give examples.

Just-in-time (JIT) production is:

Flexible Manufacturing Systems



Production is organized into cells of automated machines performing different tasks. Often along a conveyor line.

What is lean manufacture?

Year 11 Design and Technology: Timbers

Timber Classifications

Hardwood

- comes from deciduous trees
- trees lose their leaves in winter
- trees have broad leaves
- is slower growing than softwood
- has seeds that are housed in fruit
- is generally more expensive than softwood
- generally good resistance to decay.

Softwood

- comes from coniferous trees
- is evergreen
- trees have needles rather than leaves
- is quick growing
- has seeds that are housed in cones
- is extensively used in joinery
- is generally less expensive than hardwood
- has generally poor resistance to decay.

Manufactured boards are usually made from timber waste and adhesive. To make them more aesthetically pleasing they are often veneered. They are cheap to buy but will need protective coatings for longevity.

Chip board

Medium Density Fibreboard (MDF)

Plywood

Stock Forms

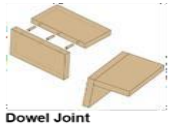
Timber and man-made boards are available in different standardised forms.

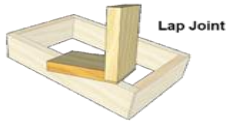
Timber cut at a sawmill, it is referred to as sawn finish and uses include garden fence posts and some building work. This type of finish is rough and has not been treated or machined further.

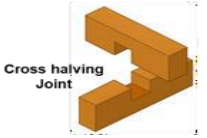
Timber that is sold at DIY shops or from a timber merchant can often be bought with planed edges that have been machined smooth.

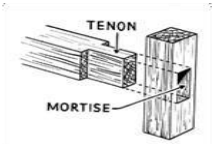
Manufactured boards are in sheet form and in standard sizes with various thicknesses depending on the material.

Traditional Joints



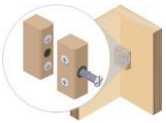






Fixings and Fastenings

Temporary fixings will often be done using fastening components, such as screws or knock-down fittings, which are most commonly used in joining flat-pack furniture.



Surface finishes.

Physical properties of timbers can be changed, such as colour and texture, by applying a surface finish to the wood.

- staining
- varnishing
- oiling
- waxing
- painting
- laminating

Year 11 Design and Technology: Timbers

Timber Classifications

Hardwood- list the characteristics:

- -
- -
- -
- -
- -
- -
- -

Softwood- list the characteristics

- -
- -
- -
- -
- -
- -
- -
- -

Manufactured boards are usually made from timber waste and adhesive. To make them more aesthetically pleasing they are often veneered. They are cheap to buy but will need protective coatings for longevity. **Give 3 examples below:**

-

-

-

Stock Forms

Timber and man-made boards are available in different standardised forms.

Timber cut at a sawmill, it is referred to as sawn finish and uses include garden fence posts and some building work. This type of finish is rough and has not been treated or machined further.

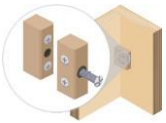
Timber that is sold at DIY shops or from a timber merchant can often be bought with planed edges that have been machined smooth.

Manufactured boards are in sheet form and in standard sizes with various thicknesses depending on the material.

Traditional Joints- draw 4 different joints below:

Fixings and Fastenings

Temporary fixings will often be done using fastening components, such as screws or knock-down fittings, which are most commonly used in joining flat-pack furniture.



Surface finishes- list below:

- -
- -
- -
- -
- -

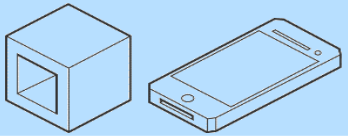
Year 11 Design and Technology: Design Skills

Isometric Drawings,

A good way of showing measurements and how components fit together. Unlike perspective drawings, they don't get smaller as the lines go into the distance.

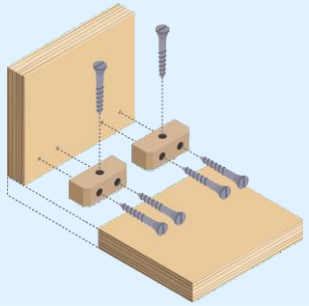
There are three main rules to isometric drawing:

- **horizontal edges are drawn at 30 degrees**
- **vertical edges are drawn as vertical lines**
- **parallel edges appear as parallel lines**



Exploded Diagrams.

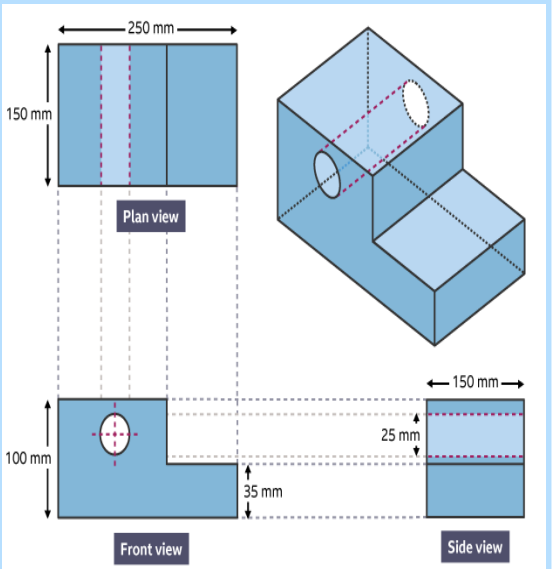
Exploded diagrams show how a product can be assembled and how the separate parts fit together, with dotted lines showing where the parts slide into place. The diagrams also show components that would usually be hidden in a solid drawing.



Orthographic Drawing.

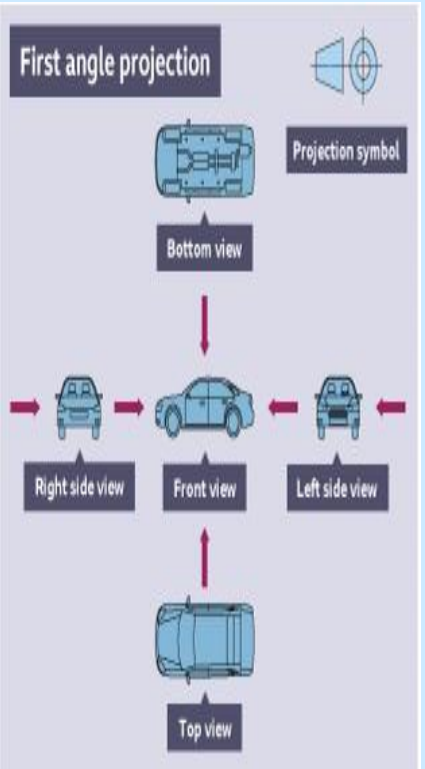
Orthographic projections are working drawings in either a **first or third angle projection** and show each side of a design without perspective, ie a 2D drawing of a 3D object.

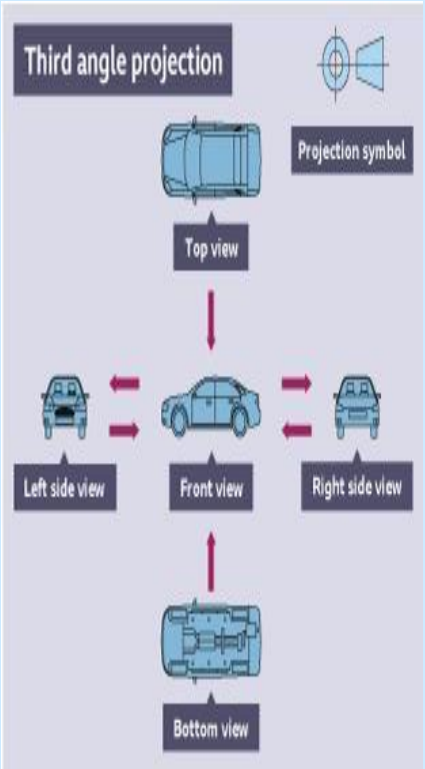
They are used to show an object from every angle to help manufacturers plan production. Starting with a front view of a product, construction lines show where areas join and are used to draw a side and plan (top) view, ensuring that the drawing is accurate from all angles. These drawings are to scale and must show dimensions.



Orthographic projections have a set of standard lines to show different aspects of the diagram. These lines allow complex shapes to be drawn simply in 2D.

Outlines	
Construction lines	
Hidden details	
Dimension arrow	3 cm
Centre line	



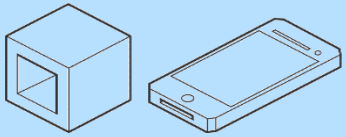


Year 11 Design and Technology: Design Skills

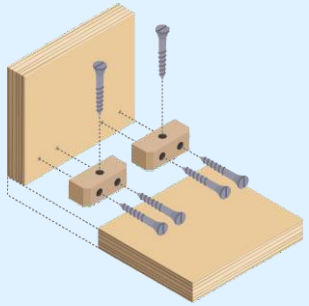
Isometric Drawings,

What are the 3 rules for isometric drawings?

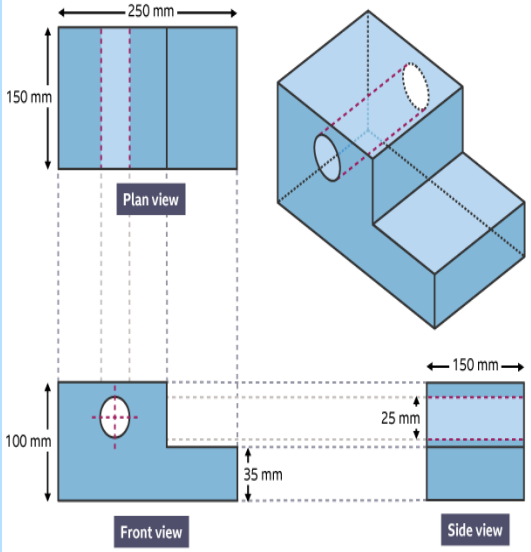
- -
- -
- -



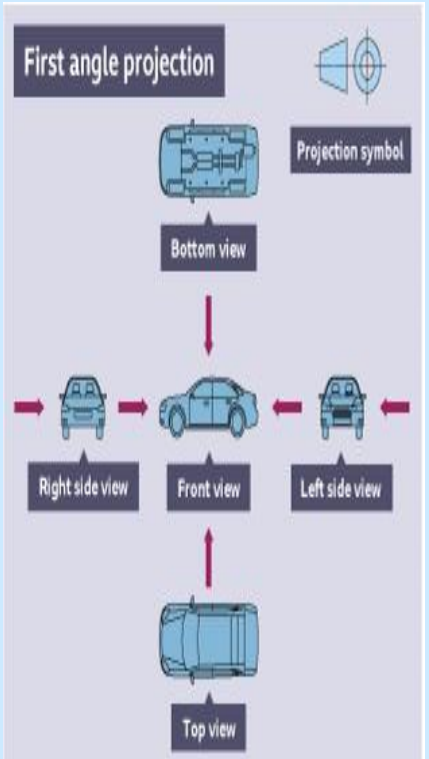
What is an exploded diagram?

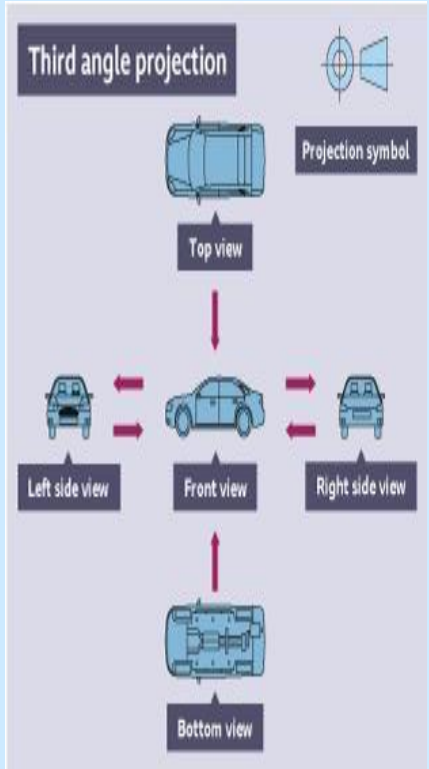


What are orthographic drawings?



Orthographic projections have a set of standard lines to show different aspects of the diagram. These lines allow complex shapes to be drawn simply in 2D. **What are the lines called?**

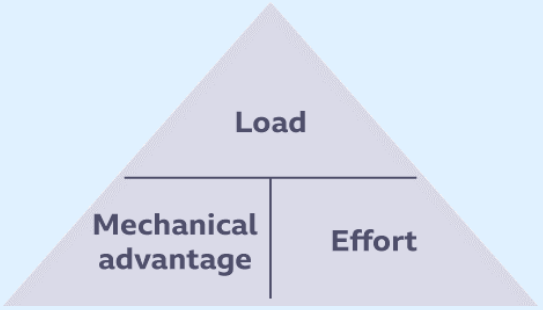




Year 11 Design and Technology: Mechanical Components

Different Types of Motion

- **Rotary** - moves in a complete circle, e.g. a wheel turning.
- **Linear** - moves in a straight line, e.g. a train moving down a track.
- **Oscillating** - moves backwards and forwards in part of a circle, e.g. a pendulum of a mechanical clock.
- **Reciprocating** - moves backwards and forwards in a straight line, e.g. a piston or pump.



1. mechanical advantage = load ÷ effort
2. load = mechanical advantage × effort
3. effort = load ÷ mechanical advantage

Levers

There are three different types of levers. They are based fulcrum and load in a different order:

First order levers (Class 1) place the fulcrum between the effort and the load. Examples would be a seesaw, which places the fulcrum in the centre and allows equally weighted children to lift each other up

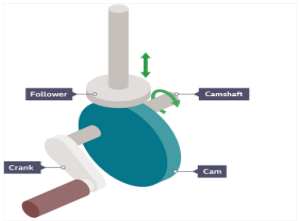
Second order levers (Class 2) place the fulcrum at one end of the lever and the effort at the other, with the load in the centre. The closer together the fulcrum and load are, the easier it is to lift the load. Examples include wheelbarrows, nutcrackers and some bottle openers.

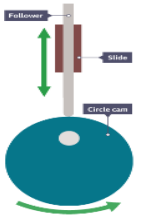
Third order levers (Class 3) place the effort between the fulcrum and the load. If the effort and the fulcrum are further apart, it becomes easier to lift. Examples include tweezers or fishing rods.

Cams Mechanism

A cam mechanism has two main parts:

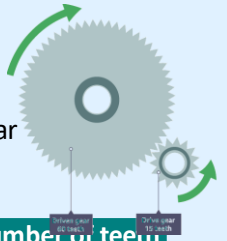
- **a cam** - attached to a crankshaft, which rotates
- **a follower** - touches the cam and follows the shape, moving up and down





Gear Trains

Gear trains are when two or more gears are joined together. In a simple gear train, the drive gear the driven gear to turn in the opposite direction.



Gear ratio = number of teeth on driven gear ÷ number of teeth on the drive gear

Pulleys

Pulleys use mechanical advantage, similar to levers, to lift up loads. Pulleys are wheel shaped with a groove that allows a cord to sit inside the groove.

Belts can be attached around different-sized pulleys to drive shafts to change speed. As with gears, the bigger the wheel, the slower the speed. The velocity ratio between two pulleys can be calculated.

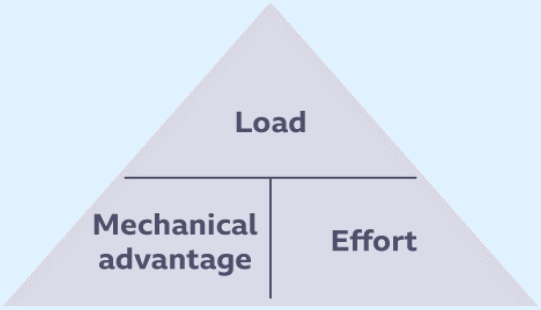
Velocity ratio = diameter of the driven pulley ÷ diameter of the driver pulley

Output speed = input speed ÷ velocity ratio

Year 11 Design and Technology: Mechanical Components

What are the different types of motion?

- -
- -
- -
- -



1. mechanical advantage = load ÷ effort
2. load = mechanical advantage × effort
3. effort = load ÷ mechanical advantage

Levers

There are three different types of levers.
They are based fulcrum and load in a different order**. Describe them below:**

First order levers (Class 1)

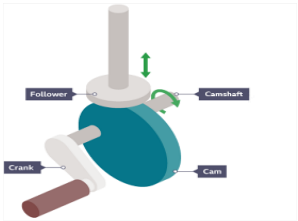
Second order levers (Class 2)

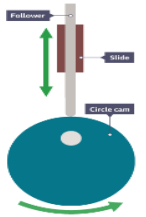
Third order levers (Class 3)

Cams Mechanism

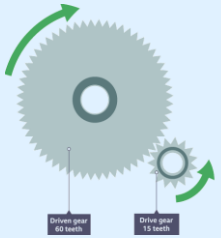
A cam mechanism has two main parts- what are they?

- -
- -





Gear Trains How do we work out the gear ratio of a gear train?



Pulleys How does a pulley work?

Belts How can we calculate the velocity ratio of a belt mechanism?

Year 11 Design Technology: Client & User needs

Client or Potential user profiling

Who is the target user for a product you are designing its important to consider what they will need, like or use.

- Who is your product aimed at?
- Who are your clients or potential clients?
- What do your clients want from your product?
- How old are they?
- Are they male or female?
- Where do they live?
- What are the styling features of the product they currently use?
- How will price change their feelings about the product?
- What kind of lifestyle do they have?
- What products do they use at the moment?

Aesthetics	What does it look like? Is it in particular style? Does it have a theme?
Cost	How much does it cost to buy? Is this good value for money?
Customer	Who is the product designed for? What age group?
Environment	Is the product environmentally friendly? Can it be recycled for example.
Size	How big is the product?
Safety	Is there any safety features? or safety warnings?
Function	*What does it do? What parts does it have?*
Materials	What materials is it made from?

Primary research

Primary data is information that you find yourselves. This information is 'new' and directly related to your project.

- *This information could be gathered using:*
- *interviews*
- *questionnaires*
- *analysis of products*
- *materials' tests*
- *observations.*

Secondary Research

Secondary data is 'second hand data which has already been collected by someone else.

Examples of secondary research include:

- information from books, magazine and newspaper articles.
- Test reports.
- internet research.

It is usually easy to find but may be out of date.
It can save time as its much quicker than carrying out test, interview etc.
Data is not always accurate as its not specific to the users needs.

Product Analysis

It is important to research similar products. To help you understand what is required from a product and even is some cases how it is made.

- It's a form of primary research.
- Involves looking existing products.
- Working out how they were made.
- Seeing what features might be useful to a new design.

When completing a product analysis it is best to use ACCESS FM. By using each of the keywords as a prompt

Year 11 Design Technology: Client & User needs

Client or Potential user profiling

Who is the target user for a product you are designing its important to consider what they will need, like or use.

Aesthetics	What does it look like? Is it in particular style? Does it have a theme?
Cost	How much does it cost to buy? Is this good value for money?
Customer	Who is the product designed for? What age group?
Environment	Is the product environmentally friendly? Can it be recycled for example.
Size	How big is the product?
Safety	Is there any safety features? or safety warnings?
Function	*What does it do? What parts does it have?*
Materials	What materials is it made from?

Product Analysis

Primary research	Secondary Research
Primary data is information that you find yourselves. This information is 'new' and directly related to your project.	Secondary data is 'second hand data which has already been collected by someone else.

Year 11 Design Technology: Social, Moral Economic, Environmental factors

Economic

This is about the effects a product has on the economy and is split into two types Liner economy and circular economy.

Linear economy – products are made as cheap as possible. Materials are processed into a product, the product is use, then in is simply disposed of.

Circular economy – Uses a few resources/materials and possible, using the products from as long as possible. They are designed in a way that the products can be easily repaired, reused or recycled after use.

Ergonomics

Ergonomics is the relationship between people and the products which they use.

Things to consider are:

- Comfort?
- Usability?
- Intuitive?
- Knowing how?

Social

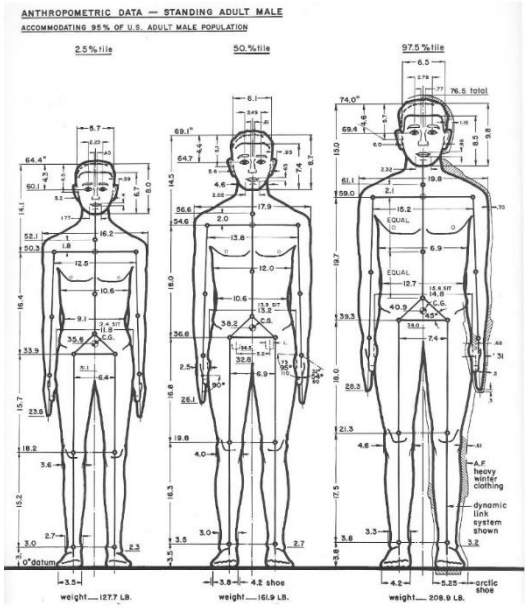
How the social factors of a group of people can influence the design of a product.

- ethnic groups
- political groups
- religious groups.
- Cultural factors.

Anthropometics

Is the study of Human Measurements, it is important to consider sizes of people in relation to products.

- 5th percentile are the 5 per cent of people who are smaller in size.
- 50th percentile are people of average size
- 95th percentile are 5 per cent of people who are larger in size



Year 11 Design Technology: Social, Moral Economic, Environmental factors

Economic

Ergonomics

Ergonomics is the relationship between people and the products which they use.

Things to consider are:

-
-
-
-

Social

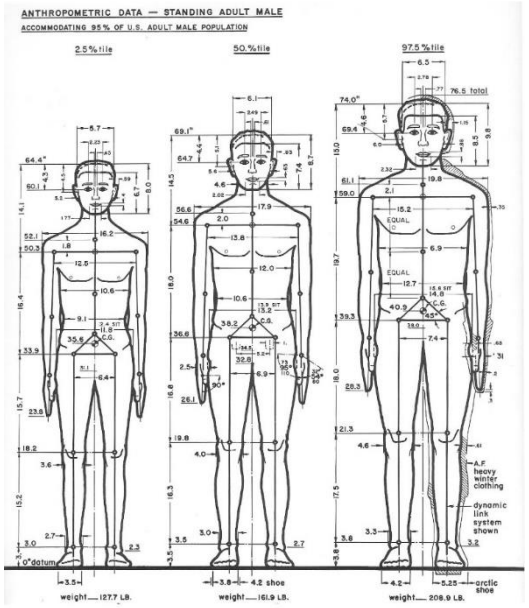
How the _____ factors of a group of people can influence the design of a product.

-
-
-
-

Anthropometics

Is the study of Human_____, it is important to consider _____ of people in relation to products.

-
-
-



Year 11 Design Technology: Paper & Boards

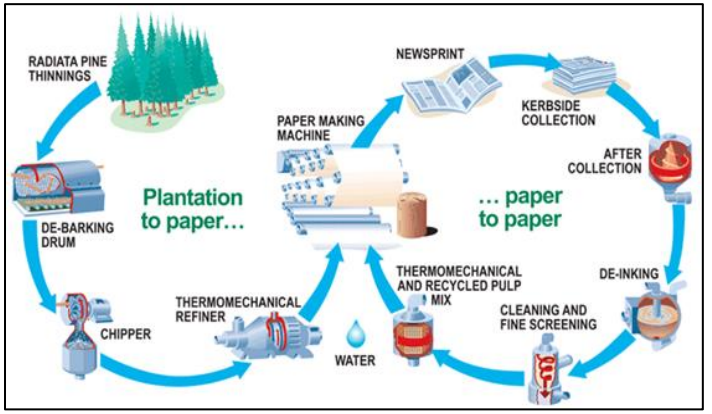
Type of paper	Properties	Uses
Layout paper	Lightweight, thin, cheap, smooth surface	Graphic drawings, animations
Bleedproof (marker) paper	Contains more chalk, smooth, hard, doesn't absorb ink, doesn't bleed	Creating special effects for designers or artists
Tracing paper	Good transparency, expensive	For seeing an image underneath
Grid paper	Covered with continuous square grid	Used in many maths contexts
Cartridge paper	Heavier weight, good quality, opaque	Writing and sketching

Weight and Thickness

Paper is selected by its thickness, measured in **grams per square metre (gsm)**. This is the weight of one square metre of the paper.

Board is selected by its thickness, measured in microns. One micron is 1/1,000th of 1 mm. Sometimes the thickness of board is given in sheets, referring to the number of pieces of paper that have been glued together to make a sheet of board

Manufacture and recycling

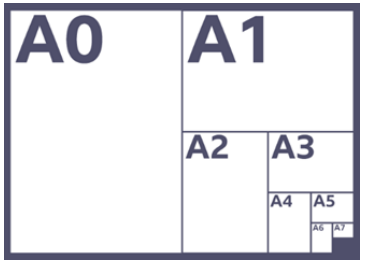


Lamination

Paper and board can be protected further by laminating, which gives a shiny, water-resistant surface. It creates a thick, durable surface, often making the paper or board last longer. The paper or board is placed in a plastic sleeve, which is then heated and pulled through rollers, bonding the two surfaces of the film together and sealing the product.

Standard ISO size

Paper is available in many sizes, with A0 being the largest and the most common size being A4. Each is half the area of the one before, ie A4 paper (297 mm × 210 mm) is half the size of A3 paper (297 mm × 420 mm).



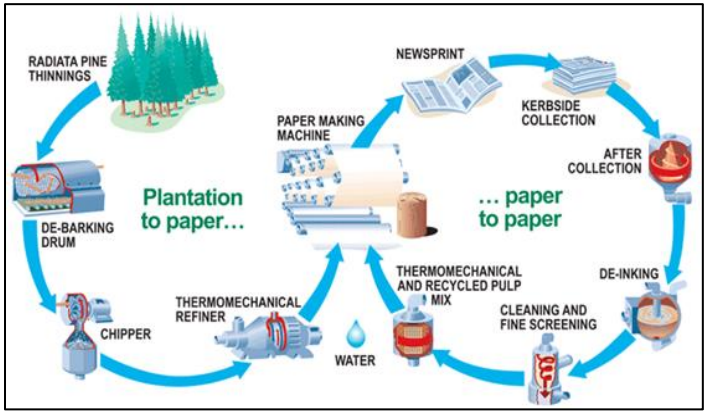
Type of board	Properties	Uses
Corrugated cardboard	Strong, lightweight	Packaging protection in transportation of products and used to package some hot food such as a pizza due to its insulating properties
Duplex board	Cheaper than white board, available with different finishes (metallic, holographic etc.)	Food packaging, eg biscuit boxes or containers
Solid white board	Top quality, range of thicknesses, excellent to print on	Hardback books
Foil-lined board	Expensive, good quality, aluminium foil lining, excellent barrier against moisture	Pre-packed food packages, cosmetic cartons
Inkjet board	Expensive, printable, photo quality	Posters, photography, art reproductions
Foam-core board (foam board)	Strong, lightweight, paper face, foam core	Model making, mounting photograph

Year 11 Design Technology: Paper & Boards

Type of paper	Properties	Uses
Layout paper		
Bleedproof (marker) paper		
Tracing paper		
Grid paper		
Cartridge paper		

Weight and Thickness

Manufacture and recycling

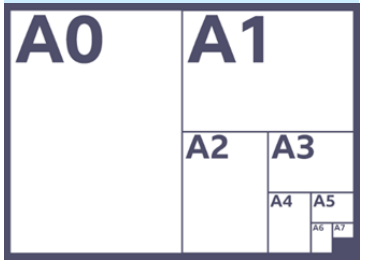


Lamination

Paper and _____ can be protected further by laminating, which gives a _____, water-resistant surface. It creates a _____, durable surface, often making the paper or board last _____. The paper or board is placed in a _____ sleeve, which is then heated and pulled through _____, bonding the ___ surfaces of the ____ together and sealing ___ product.

Standard ISO size

Paper is available in many sizes, with __ being the largest and the most common size being A4. Each is ____ the area of the one before, ie A_ paper (297 mm × 210 mm) is ____ the size of A3 paper (297 mm × 420 mm).



Type of board	Properties	Uses
Corrugated cardboard		
Duplex board		
Solid white board		
Foil-lined board		
Inkjet board		
Foam-core board (foam board)		

Year 11 Design Technology: Polymers

Natural & Synthetic Polymers Polymers can be made from natural and synthetic resources.

- ***Synthetic polymers*** are made from crude oil by scientists and engineers.
- ***Natural polymers*** are made using a variety of materials like silk, wool, cellulose and proteins.

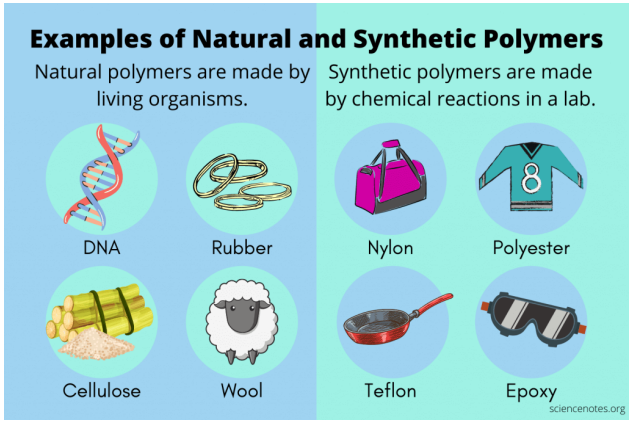
Type	Property	USE
Acrylic (PMMA)	has a hard, shiny and flat surface, but will scratch easily. It can be transparent, translucent or opaque.	It is used for illuminated shop signs, bath tubs and shower trays.
High-impact polystyrene (HIPS)	is tough, easily moulded and durable.	It is used for yoghurt pots, children's toys and fridge liners.
High-density polythene (HDPE)	is hard, stiff and resistant to chemicals.	It is used for washing up bowls, buckets and crates
Polypropylene (PP)	is tough, durable, and has good heat and chemical resistance.	It is used for children's toys, DVD/CD cases and medical equipment.
Polyvinyl chloride (PVC)	is hard, tough, and has good chemical and weather resistance. It has a low cost due to high-volume production	It is used for pipes, gutters and window frames.
Polyethylene terephthate (PET)	is tough, durable, food-safe and easily moulded.	It is used for drinks bottles and food packaging.

Type	Property	USE
Epoxy resin	is easily moulded because it is in a two-part liquid form. When mixed, the resin sets hard and has good insulating properties.	It is used as an adhesive and for casing electrical components.
Melamine formaldehyde	is stiff and hardwearing with good resistance to heat and staining.	It is used for kitchen work surfaces and picnic crockery.
Phenol formaldehyde	is hard and is a good electrical and heat insulator.	It is used for electrical fittings and pan handles.
Polyester resin	is easily moulded because it is in a two-part liquid form. When mixed, the resin sets hard but is brittle.	It is used to bind together the glass fibres when producing glass reinforced plastic (GRP) boat hulls and car body panels.
Urea formaldehyde (UF)	is stiff, hard and an excellent electrical insulator.	It is used extensively for electrical fittings.

Categorisation of Polymers
Polymers are classified into two groups: thermoforming and thermosetting

Thermoforming polymers can be softened with the use of heat and moulded into shapes.

Thermosetting polymers once moulded into shape, cannot be remoulded with the use of heat.



Year 11 Design Technology: Polymers

Natural & Synthetic Polymers Polymers can be made from natural and synthetic resources.

- ***Synthetic polymers*** are
- ***Natural polymers*** are

Type	Property	USE
Acrylic (PMMA)		
High-impact polystyrene (HIPS)		
High-density polythene (HDPE)		
Polypropylene (PP)		
Polyvinyl chloride (PVC)		
Polyethylene terephthate (PET)		

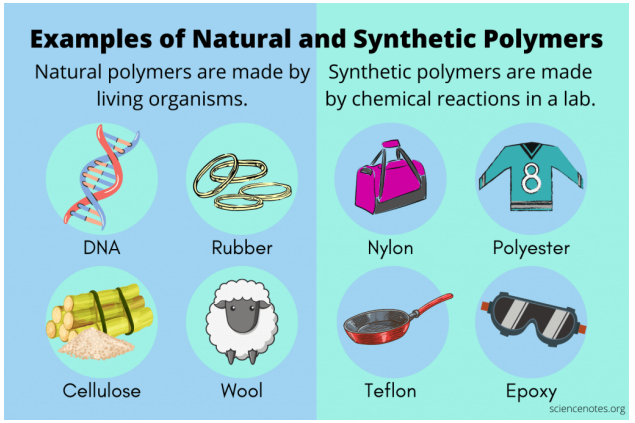
Type	Property	USE
Epoxy resin		
Melamine formaldehyde		
Phenol formaldehyde		
Polyester resin		
Urea formaldehyde (UF)		

Categorisation of Polymers

Polymers are classified into ___ groups: _____ and thermosetting

Thermo_____ polymers…

Thermosetting polymers…



Year 11 Design Technology: Metals

Categorisation

Non-ferrous

- does not contain iron
- is found in the Earth's crust in rock known as ore
- is not magnetic
- will not rust
- is malleable
- needs a protective finish which is also used to improve its aesthetic appeal.

Ferrous

- contains iron
- is found in the Earth's crust in rock known as haematite (iron ore)
- is usually magnetic
- will rust
- needs a protective coating to prevent rusting and improve its aesthetic appeal.

Types of Non Ferrous metals

Aluminium – is lightweight, soft, ductile and malleable. It is used extensively in the manufacture of aircraft, canned drinks and bike frames.

Copper – is ductile, malleable and an excellent thermal and electrical conductor. It is easily soldered and is resistant to corrosion. It is used extensively in the plumbing industry for pipes and fittings. It is also used in the manufacture of wire.

Brass – technically an alloy as it is a mixture of copper and zinc. It is an excellent conductor of electricity and is used in electrical fittings.

Bronze – an alloy of copper and tin. It has excellent resistance to wear and corrosion and is used in machinery where hard wearing parts are needed

Types of Ferrous metal

Cast iron – has a hard surface but a brittle core. It is strong and can be cast into intricate shapes, such as vices, roadside grids and manhole covers.

Low-carbon steel – has good tensile strength, is malleable but has poor resistance to corrosion. It is used extensively in the automotive industry and in steel structures (RSJ).

High-carbon steel – is harder than low-carbon steel, but brittle. It is used in the manufacture of tools.

Mild steel – is malleable and ductile, has low tensile strength but is relatively cheap.

Alloys

An alloy is a mixture of two or more metals that are combined to improve the mechanical or physical property of the original metal.

Alloys are divided into two categories: ferrous and non-ferrous alloys.

Ferrous alloy

- **Stainless steel –** a mixture of steel, chromium, nickel and magnesium. It is very hard, very resistant to corrosion and can keep a high-quality shiny finish.

Non-ferrous alloy

- **Brass** – a mixture of copper and zinc. It is very resistant to corrosion, strong, ductile, malleable and is a very good thermal and electrical conductor. Used to make taps and plumbing fittings.
- **Duralumin** – a mixture of aluminium, copper, magnesium and manganese. It is lightweight, soft, ductile and malleable. It is used extensively in the manufacture of aircraft structures and fuel tanks.

Year 11 Design Technology: Metals

Categorisation

Non-ferrous

-
-
-
-
-
-

Ferrous

-
-
-
-
-

Types of Non Ferrous metals	Types of Ferrous metal
Aluminium –	**Cast iron –**
Copper –	**Low-carbon steel –**
Brass –	**High-carbon steel –**
Bronze –	**Mild steel –**

Alloys

An alloy is a _____ of two or more metals that are combined to improve the mechanical or _____ property of the _____ metal.

Alloys are divided into ___ categories: ferrous and non-ferrous alloys.

Ferrous alloy

- **Stainless steel –**

- **Non-ferrous alloy**
- **Brass –**

- **Duralumin –**

Year 11 Design Technology: Work of past and present professionals and companies

20th Century design movements

Memphis

- A group of Italian designers, led by Ettore Sottsass exhibited an alternative viewpoint to minimalism.
- As a reaction to the clinical lines and lack of decoration which was typical of the Modernist movement
- They introduced highly decorative laminates and produced products which were amusing.
- Whilst the movement was restricted to the early 1980s their post-modernism influence can be seen in many of today's products.

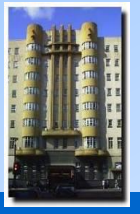
Bauhaus

- Between 1919 and 1933 the German school of art and design called the Bauhaus.
- Producing designs which were truly made for mass production.
- 30yrs later until industry caught up with this thinking and was able to manufacture the designs for products such as furniture and lighting cheaply enough and in large quantities.

Many of the designs we now regard as **design classics** originate from the Bauhaus

Art Deco

- Began in Paris in 1925
- Typically involved the use of geometric shapes and the influences from the Egyptian tomb of Tutankhamen.
- Often regarded as a very glamorous period of design.
- Ceramicist Claris Cliff is a famous designer from that period



Year 11 Design Technology: Work of past and present professionals and companies

20th Century design movements

Memphis

-
-
-
-

Bauhaus

Art Deco

-
-
-
-

Year 11 Design Technology: Work of past and present professionals and companies

Air Bus

- Design and manufacture commercial aircraft across Europe.
- Division developing helicopters, military and space travel
- Flagship model aircraft is the A380 and is the worlds largest passenger aircraft.
- Focus on the use of composite materials to reduce weight.
- Use biometric to inspire designs (ie structure of a eagles wing)
- Constantly developing technology to reduce fuel emissions.

Phillpe Stark

- Phillpe tark has been design products since 1980s
- Aims to improve life for people creating affordable & desirable products for the masses.
- His most well known product is ‘juciy salif’ a lemon squeezer inspired by a squid.
- He often uses pioneering manufacturing techniques and materails for example the injection moulded chair called ‘lous Ghost’ that has no visable fixings.

Apple

Sir Jonathan Ive

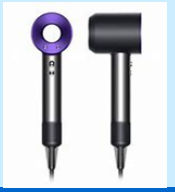
- An English designer he was the lead designer for Apple from 1992 to 2019.
- Created simple, sleek designs that give Apple products their iconic aesthetic appearance.
- Design have smooth round edges, simple interfaces and user friendly appeal.
- Apple are often criticized for the development of products with planned obsolesce, for example update not working on older models.

Matthew Williamson

- Matthew Williamson is a British fashion and interior designer
- Recognised by his bold and colourful designs. He mixes prints and contrasting colour
- Uses patterns, inspired by travel and nature.
- Design include have embellishment such as beading and embroidery

James Dyson

- An inventor and the founder of the Dyson Company employing 7000 people worldwide.
- Best know for the cyclonic bagless vacuum cleaner.
- Dyson company values innovation, efficiency and original design.



Year 11 Design Technology: Work of past and present professionals and companies

Air Bus

-
-
-
-
-
-

Apple

-
-
-
-

Matthew Williamson

-
-
-
-

Phillpe Stark

-
-
-
-

James Dyson

-
-
-

Drama

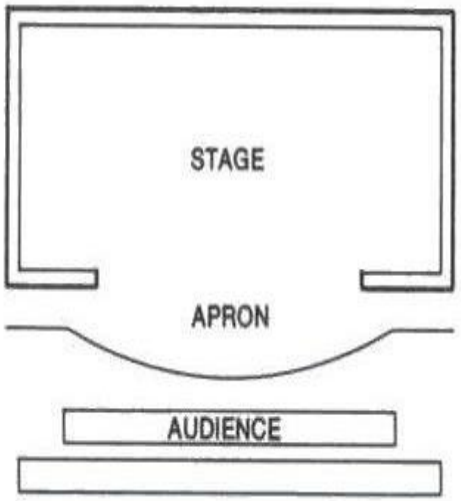
Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 Drama: Staging Types

Proscenium Arch

Common in large theatres and opera houses.
The proscenium refers to the frame around the stage; the area in front of the arch is called the apron. The audience faces one side of the stage directly and may sit at a lower height or on tiered seating.



Advantages:

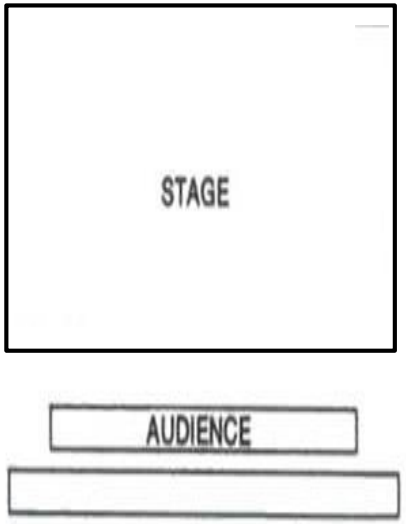
- Stage pictures are easy to create, as the audience look roughly at the same angle.
- Backdrops and large scenery can be used without blocking sightlines.
- There is usually fly space and wings for storing scenery.
- The frame around the stage adds to the effect of a fourth wall; creating a self-contained world.

Disadvantages:

- Some audience members may feel distant from the stage.
- The auditorium could feel formal and rigid.
- Audience interaction may be more difficult.

End On

This is similar to proscenium arch, as the audience faces one side of the stage directly and may sit at a lower height or on tiered seating. However, **it doesn't have the large proscenium or apron**.
Our studio is set up as end on.



Advantages:

- The audience all have a similar view.
- Stage pictures are easy to create.
- Large backdrops or projections may be used.

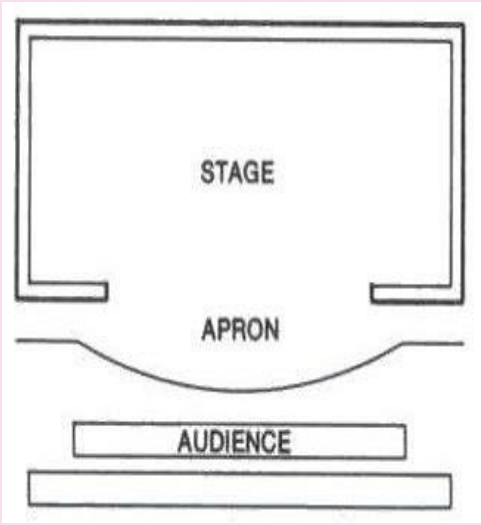
Disadvantages:

- Audience members in the back rows may feel distant from the stage.
- It doesn't have the proscenium frame, which can enhance some types of staging.
- It may not have wings or a fly area.

Year 11 Drama: Staging Types

Proscenium Arch

Common in large theatres and opera houses.
The proscenium refers to the frame around the stage; the area in front of the arch is called the apron. The audience faces one side of the stage directly and may sit at a lower height or on tiered seating.



What are the advantages?

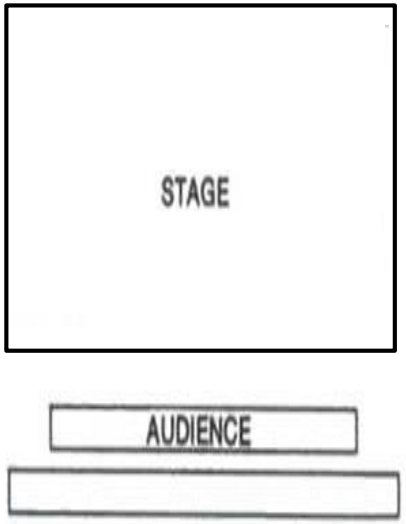
- -
- -
- -
- -

What are the disadvantages?

- -
- -
- -

End On

This is similar to proscenium arch, as the audience faces one side of the stage directly and may sit at a lower height or on tiered seating. However, **it doesn't have the large proscenium or apron**.
Our studio is set up as end on.



What are the advantages?

- -
- -
- -

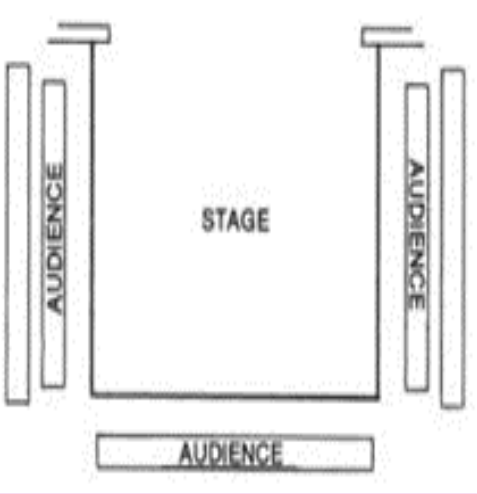
What are the disadvantages?

- -
- -
- -

Year 11 Drama: Staging Types

Thrust

When the stage in front of the proscenium protrudes into the auditorium, so that the audience are sitting on three sides. **This is one of the oldest types of staging**; Greek amphitheatres and Elizabethan theatres like Shakespeare's Globe are both types of thrust stages



Advantages:

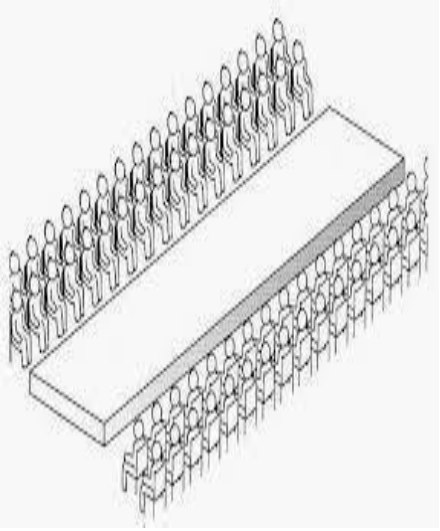
- As there is no audience on one side of the stage, backdrops, flats and large scenery can be used.
- The audience might feel closer to the stage – there are 3 front rows.
- Fourth wall can be achieved while having the audience close to the action.

Disadvantages:

- Audience members in the back rows may feel distant from the stage.
- It doesn't have the proscenium frame, which can enhance some types of staging.
- It may not have wings or a fly area.

Traverse

The acting area is a long central space and the audience sits on two sides facing each other.
This type of staging can feel like a catwalk show.



Advantages:

- The audience feel very close to the stage as there are two long front rows.
- Audience members can see the reactions of the other side of the audience.
- The extreme ends of the stage can be used to create extra acting areas.

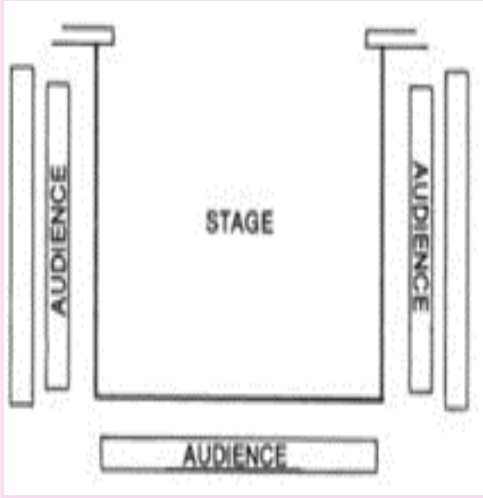
Disadvantages:

- Big pieces of scenery, backdrops or set can block sightlines
- The acting area is long and thin, which can make some blocking challenging.
- Actors must be aware of making themselves visible to both sides of the audience.

Year 11 Drama: Staging Types

Thrust

When the stage in front of the proscenium protrudes into the auditorium, so that the audience are sitting on three sides. **This is one of the oldest types of staging**; Greek amphitheatres and Elizabethan theatres like Shakespeare's Globe are both types of thrust stages



What are the advantages?

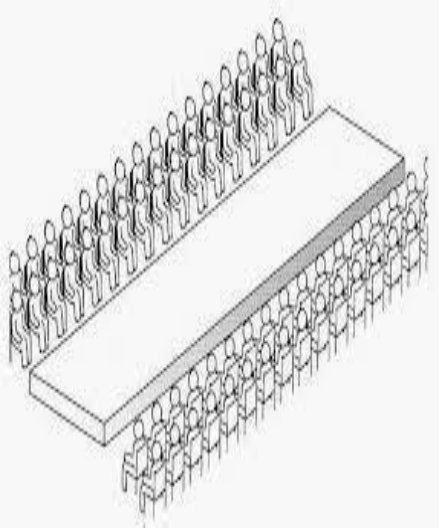
- -
- -
- -

What are the disadvantages?

- -
- -
- -

Traverse

The acting area is a long central space and the audience sits on two sides facing each other.
This type of staging can feel like a catwalk show.



What are the advantages?

- -
- -
- -

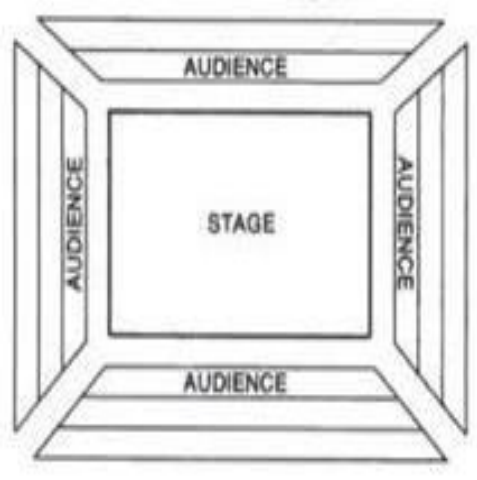
What are the disadvantages?

- -
- -
- -

Year 11 Drama: Staging Types

In the Round

The stage is positioned in the centre of the audience and the audience are seated around all areas of the stage. The stage/audience can either be curved (creating a circle), or more like a square or rectangle. There are usually several 'tunnel-like' entrances, these are called **vomitories**.



Advantages:

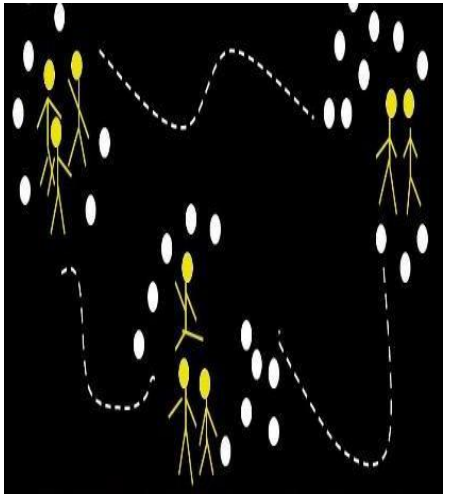
- The audience is close to the stage as there is an extended first row.
- The actors enter and exit through the audience which can make them feel more engaged.
- There is no easily achieved fourth wall separating the audience from the actors – it is easy to interact with them.

Disadvantages:

- Designers cannot use backdrops or flats as they would obscure the view of the audience.
- Stage furniture has to be chosen carefully so that audience sightlines aren't blocked.
- Actors must continually move around so that the audience can see them and critical interactions.

Promenade

The performance areas are set in various locations in a venue. Promenade means 'to walk' and the audience follows the action on foot, moving from one performance area to another. Promenade staging is often used in site specific performances (a performance in a location that is not a conventional theatre, e.g. a street, a warehouse)



Advantages:

- Interactive style of theatre where the audience feels involved.
- No set changes or need for movement of big bulky items.
- Enables audience to be more engaged as they move from one piece of action to the next.

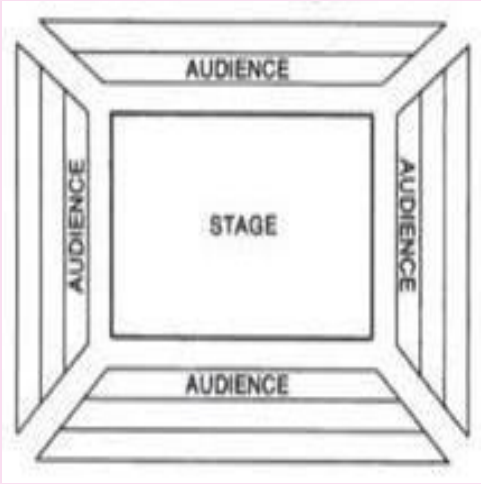
Disadvantages:

- The audience may find moving around the space difficult or might get tired.
- Actors and or crew need to be skilled at moving the audience around and controlling their focus.
- There can be health and safety risks

Year 11 Drama: Staging Types

In the Round

The stage is positioned in the centre of the audience and the audience are seated around all areas of the stage. The stage/audience can either be curved (creating a circle), or more like a square or rectangle. There are usually several 'tunnel-like' entrances, these are called **vomitories**.



What are the advantages?

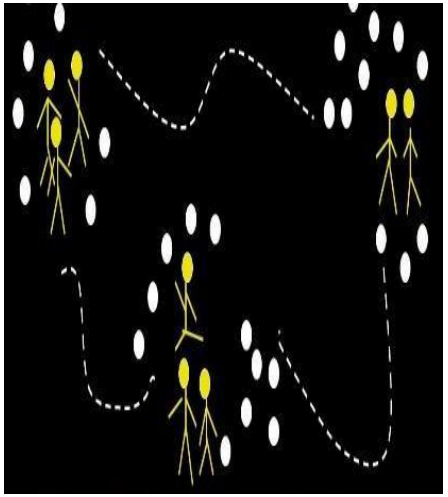
- -
- -
- -

What are the disadvantages?

- -
- -
- -

Promenade

The performance areas are set in various locations in a venue. Promenade means 'to walk' and the audience follows the action on foot, moving from one performance area to another. Promenade staging is often used in site specific performances (a performance in a location that is not a conventional theatre, e.g. a street, a warehouse)



What are the advantages?

- -
- -
- -

What are the disadvantages?

- -
- -
- -

Year 11 Drama: Blood Brothers

Context Information Author: Willy Russell

Brief Biography: Willy Russell was born in 1947 into a working-class family near Liverpool. He left school at the age of 15 without academic qualifications and became a hairdresser. By the age of 20, he felt the need to return to education and after leaving university, he became a teacher in his home city.

Social: There was a large gap between working and middle class in Britain during this time. The Johnstones and Lyons families are class stereotypes. Many working class families struggled financially and to find work. There was also a class divide in education; this is shown when Mickey goes to secondary school and Edward attends a private boarding school.

Margaret Thatcher: The first female Prime Minister in power during that time. She ward responsible for lots of working-class people losing their jobs. During her time in power, unemployment rates were raised higher than ever before. She believed everyone can be successful if they work hard.

Marilyn Monroe: A famous Hollywood movie star from the 1950s who Mrs J is compared to. She is known for being glamorous, but also struggled with depression which led her to commit suicide (by painkillers).

Mickey Johnstone	The lower-class twin. He is honest, sincere and goodhearted. He impregnates Linda, gets laid off, is arrested for Sammy's crime and ends up in prison and addicted to anti-depressants. His rage at Linda & Edward for having an affair drives the play's finale.
Edward Lyons	Is also good-natured but the higher-class twin. His sheltered upbringing makes him innocent but because of class he gets good opportunities e.g. university and a good job. His good-natured manner leads to the play's final scene.
Mrs Johnstone	Biological mother of the twins and a horde of other children. Left by her husband she gets a job as a cleaner. She is the moral centre of the play; is tortured by guilt and regret.
Mrs Lyons	Opposite of Mrs J whom she employs as a cleaner. She adopts Edward as her own child. Is haunted by the original act of a mother giving up her child. The guilt turns into suspicion and paranoia. She announces the affair and contributes to the murder of her adopted son.
Linda	Begins as a tomboyish young girl but both twins fancy her from an early stage. She only has eyes for Mickey as a teenager but later turns to Edward for comfort and support, which turns into an affair. Despite this, she loves both twins and is a sympathetic character.
Narrator	All-knowing and always slightly menacing- takes many roles throughout the play. Narrator constantly reminds the audience of the terrible choice that began this chain of events. Frequent mentions of fate and superstition but the Narrator claims it was class, not fate.
Sammy	When they are younger, Mickey just wants to be like Sammy. Quickly becomes a juvenile delinquent; even attempting to rob a bus as a teenager- he ends up in prison with Mickey.
Mr Lyons	Married to Mrs Lyons- away so Mrs L can adopt Edward. Grows increasingly concerned about his wife's mental health and wellbeing.

Key Quotations:

- ✓ Don't you know what a dictionary is?
- ✓ Y'know the devil's got y' number.
- ✓ A debt is a debt and must be paid.
- ✓ How come you got everything and I got nothin'?
- ✓ A mother, so cruel,/ There's a stone in place of her heart.
- ✓ If either twin learns that he was once a pair, they shall both immediately die.
- ✓ You've got to have an ending, if a start's been made./ No-one gets off without the price being paid.
- ✓ I could have been him.
- ✓ Do we blame superstition for what came to pass/ Or could it be what we, the English, have come to know as class?
- ✓ She's cooing and cuddling as if she were his mother. It's a, it's a thingy, innit?
- ✓ That's what's going to happen if I have anymore trouble from one of yours. I warned you last time.
- ✓ It was more of a prank, really, Mr Lyons. I'd just dock his pocket money if I was you.

Themes:

Superstition: The audience is constantly reminded of this. The narrator asks us if superstition is to blame for boys' fate.
Class: Russell shows us the injustice of the class divide with the Johnstones and Lyons, as well as M and E. Related to education, opportunity and power.
Nature vs. Nurture: Splitting up the twins shows us how the environment can have a huge impact on life chances.
Relationship: The development and change in friendship between M, E, and Linda. The interaction between Mr and Mrs L, mother and son, and Mrs J and society.

Keywords:

Protagonist, Theme, Injustice, Stigmatized, Simile, Metaphor, Juxtaposition, Dramatic, irony, Tension, Foreshadowing, Repetition, Dole, Manipulates, Prejudice, Dialogue, Ominous Vulnerable Working class, Middle class, Upper class, Act, Playwright, Stage directions Contrast, Tragedy, Superstition, Social divide recession

Year 11 Drama: Blood Brothers

Context Information Author: Willy Russell

Brief Biography:

_____: There was a large gap between working and middle class in Britain during this time. The Johnstones and Lyons families are class stereotypes. Many working class families struggled financially and to find work. There was also a class divide in education; this is shown when Mickey goes to secondary school and Edward attends a private boarding school.

_____ _____: The first female Prime Minister in power during that time. She ward responsible for lots of working-class people losing their jobs. During her time in power, unemployment rates were raised higher than ever before. She believed everyone can be successful if they work hard.

Marilyn Monroe:

Key Quotations:

- ✓ Don't you know what a dictionary is?
- ✓ A….
- ✓ How come you got everything and I got nothin'?
- ✓ A mother, …..
- ✓ If either twin learns that he was once a pair, they shall both immediately die.
- ✓ You've …..
- ✓ I …..
- ✓ Do we blame superstition for what came to pass/ Or could it be what we, the English, have come to know as class?
- ✓ She's ….
- ✓ That's ….
- ✓ It…..

	The lower-class twin. He is honest, sincere and goodhearted. He impregnates Linda, gets laid off, is arrested for Sammy's crime and ends up in prison and addicted to anti-depressants. His rage at Linda & Edward for having an affair drives the play's finale.
	Is also good-natured but the higher-class twin. His sheltered upbringing makes him innocent but because of class he gets good opportunities e.g. university and a good job. His good-natured manner leads to the play's final scene.
Mrs Johnstone	
	Opposite of Mrs J whom she employs as a cleaner. She adopts Edward as her own child. Is haunted by the original act of a mother giving up her child. The guilt turns into suspicion and paranoia. She announces the affair and contributes to the murder of her adopted son.
	Begins as a tomboyish young girl but both twins fancy her from an early stage. She only has eyes for Mickey as a teenager but later turns to Edward for comfort and support, which turns into an affair. Despite this, she loves both twins and is a sympathetic character.
	All-knowing and always slightly menacing- takes many roles throughout the play. Narrator constantly reminds the audience of the terrible choice that began this chain of events. Frequent mentions of fate and superstition but the Narrator claims it was class, not fate.
Sammy	
Mr Lyons	

Themes:

Superstition:

Class:

Nature vs. Nurture:

Relationship:

Keywords:

Year 11 Drama: Blood Brothers

Plot

Act 1: before birth	Act 1- 7 years old	Act 2- 14 years old
The play starts with the narrator talking about a 'story about the Johnstone twins' and two men laid dead on the stage. We go back in time where we learn Mrs Johnstone's husband has just left her; she is very poor and already has 7 children. She starts a new job cleaning Mrs Lyons' house and finds out she's expecting twins. She strikes up a deal with Mrs L as she can't afford to keep both so Mrs L convinces Mrs J to give her one of the babies as her husband is currently away on business and she can't have a child of her own. The babies are born and Mrs J begrudgingly hands one of the babies over for Mrs L to later fire her. The narrator states that one day the devil will punish the two women.	Mickey and Eddie meet for the first time by chance at the park and become 'blood brothers' when they find out they share the same birthday. When Mrs J realise the two have met, she is horrified and sends Edward home. Mrs L reacts more violently and slaps Edward when he swears at her. She even contemplates uprooting her entire family in order to escape. Despite their mothers' disapproval, the boys continue to see each other and play lots of children's games with their friend, Linda. They play various pranks and end up getting caught by the police who threatens Mrs J but flatters Mr L. Mrs L decides they should move, before Edward leaves Mrs J gives him a locket with a picture of herself and Mickey. The Johnstones also find out they are being relocated.	Both boys have become interested in girls but feel awkward. Edward attends boarding school. Mickey and Linda have romantic feelings for each other but Mickey's lack of confidence is getting in the way. Sammy attempts to rob a bus by holding the driver at knife point. Mickey and Eddie both struggle at school- Mickey insults a teacher and Edward refuses to take off the locket. When Mrs L finds out, she's appalled but is more upset when she sees the content of the locket. The narrator returns to remind the audience that the devil will come. Mickey and Edward meet, by circumstance again- Mickey takes Edward back to his but they are not aware that Mrs L is following them. Once the boys leave the house, Mrs L attacks Mrs J with a knife and curses her, calling her a witch. The boys meet with Linda and spend the summer together- an idyllic sequence follows as the trio age from 14 to 18.

Act 2- 18 years old	Act 2- the end
At 18 in the sequence, the narrator warns that soon, both their joy and childhood will end. Edward has developed feelings for Linda and is at university whilst Mickey works in a factory. Edward self-sacrifices his feelings and encourages Mickey to ask Linda to be his girlfriend and she accepts. In October, Mickey tells his mum that Linda is pregnant and the two will be getting married. Their wedding coincides with a huge economic downturn resulting in Mickey getting paid off. When Edward returns from Christmas, Mickey is downtrodden and claims 'blood brothers' is childish. Edward confesses his love to Linda but she tells him she is married and pregnant. A desperate Mickey participates in a burglary with Sammy that goes wrong resulting in Sammy killing a man. They are both sentenced to prison and Mickey becomes depressed and is prescribed antidepressants which he becomes addicted to, even after he's been released.	Mickey continues to take the pills despite Mrs J & Linda's pleas. Linda, desperate, asks Edward, now a city councilman, to find them an apartment and getting Mickey a job. Mickey is angry about this and a devastated Linda seeks comfort with Edward and begins an affair with him. The affair continues and Mickey stops taking his pills for Linda's sake. Mrs Lyons reveals Linda and Edward's affair to Mickey. Enraged, he takes Sammy's gun out of the floorboards and confronts Edward, with a distraught Mrs J and Linda trying to get him to stop. The narrator warns the devil has arrived. Mickey finds and confronts Edward at the town hall about the affair, as well as whether Mickey's daughter is actually his. Edward denies fathering Mickey's child. The police surround the area and Mrs J bursts in and tells the boys they are twins separated at birth. Mickey asks why he couldn't have been Edward and then accidentally pulls the trigger of the gun, shooting and immediately killing Edward, the police then shoot Mickey. The play ends with the boys led on the stage and the narrator wonders what really killed the twins: superstition or the class system?

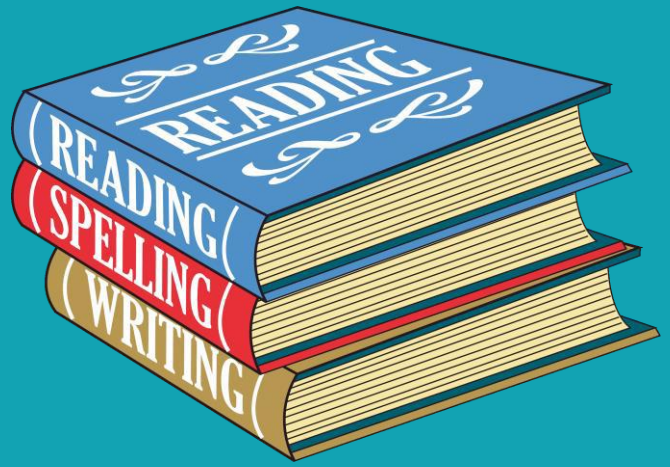
Year 11 Drama: Blood Brothers

Plot

Act 1: before birth	Act 1- 7 years old	Act 2- 14 years old
The play starts with the narrator talking about a 'story about the Johnstone _____' and ___ men laid ____ on the stage. We go back in time where we learn Mrs Johnstone's _____ has just ____ her; she is very poor and already has 7 children. She starts a new ___ cleaning Mrs Lyons' house and finds out she's expecting twins. She _____ up a deal with Mrs L as she can't afford to keep ____ so Mrs L _____ Mrs J to give her one of the babies as her husband is currently away on business and she can't have a _____ of her own. The babies are born and Mrs J begrudgingly hands one of the babies over for Mrs _ to later fire her. The _____ states that one day the _____ will punish the two women.	Mickey and Eddie meet for the first time by chance at the ____ and become '_____ brothers' when they find out they share the same birthday. When Mrs J realise the ___ have met, she is horrified and sends _____ home. Mrs L reacts more _____ and slaps Edward when he swears at her. She even _____ uprooting her entire family in order to escape. Despite their mothers' disapproval, the _____ continue to see each other and play lots of children's games with their friend, _____. They play various _____ and end up getting caught by the police who threatens Mrs J but flatters Mr L. Mrs L decides they should move, before _____ leaves Mrs J gives ___ a locket with a picture of herself and _____. The Johnstones also ____ out they are being relocated.	Both boys have become _____ in girls but feel awkward. Edward attends boarding _____ Mickey and Linda have romantic feelings for each other but Mickey's _____ of confidence is getting in the ___. Sammy attempts to rob a ___ by holding the driver at _____ point. Mickey and Eddie both struggle at school- Mickey insults a _____and Edward refuses to take off the locket. When Mrs L finds out, she's appalled but is more upset when she sees the content of the _____. The narrator returns to remind the audience that the devil will come. Mickey and _____ meet, by circumstance again- Mickey takes Edward back to his but they are not _____ that Mrs L is following them. Once the ____ leave the house, Mrs L attacks Mrs J with a knife and curses her, calling her a _____. The boys meet with Linda and spend the summer together- an idyllic _____ follows as the trio age from 14 to __.

Act 2- 18 years old	Act 2- the end
At 18 in the sequence, the narrator warns that soon, both their joy and _____ will end. Edward has developed feelings for Linda and is at university whilst Mickey works in a factory. Edward self-sacrifices his _____ and encourages Mickey to ask Linda to be his girlfriend and she accepts. In _____, Mickey tells his mum that Linda is pregnant and the two will be getting married. Their wedding coincides with a _____ economic _____ resulting in Mickey getting paid off. When Edward returns from _____, Mickey is downtrodden and claims 'blood brothers' is _____. Edward confesses his love to Linda but she tells him she is _____ and pregnant. A desperate Mickey participates in a burglary with Sammy that goes wrong resulting in Sammy _____ a man. They are both sentenced to prison and Mickey becomes _____ and is prescribed antidepressants which he becomes addicted to, even after he's been _____.	Mickey continues to take the pills despite Mrs J & Linda's pleas. Linda, desperate, asks _____, now a city councilman, to find them an apartment and getting Mickey a job. Mickey is angry about this and a devastated Linda seeks comfort with Edward and begins an affair with ___. The affair continues and Mickey stops taking his _____ for Linda's sake. Mrs Lyons reveals Linda and Edward's affair to Mickey. Enraged, he takes Sammy's ___ out of the floorboards and confronts Edward, with a _____ Mrs J and Linda trying to get him to stop. The narrator warns the devil has arrived. Mickey finds and confronts Edward at the town hall about the affair, as well as whether Mickey's _____ is actually his. Edward _____ fathering Mickey's child. The police surround the area and Mrs J _____ in and tells the boys they are twins separated at _____. Mickey asks why he couldn't have been Edward and then accidentally pulls the _____ of the gun, _____ and immediately killing Edward, the _____ then shoot Mickey. The ___ ends with the boys ___ on the stage and the narrator wonders what really killed the twins: superstition or the ____ system?

English



Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 English: 'A Christmas Carol' by Charles Dickens

Knowledge of Context

1. Charles Dickens wrote the novella in the **Victorian era**, where society believed that if you were poor it was because you were idle (lazy). This was a misconception.

2. Working class people actually worked very hard, for **long hours**, **little pay** and in **unsafe conditions**. They were exploited by Capitalist factory owners, who prioritised profit over their welfare. Children were also **exploited** as **child labourers.** As most middle and upper class business owners had the same attitudes, working class people were **trapped in poverty** with no opportunities to escape, through training or education.

3. The government has **Laissez Faire** attitudes towards poverty, meaning they knew it was a problem, but did not see it as their responsibility to fix it. It suited them to believe the poor did not deserve help, as **it justified their decision** to ignore them. **The Poor Law** (1834) introduced workhouses as a way to help poor people, but they were designed to humiliate and punish the poor.

4. Dickens alludes to the words of the economist **Thomas Malthus**, who claimed that war, famine and disease has positive impacts on the country's wealth, as it '**decreased the surplus population**'. By this he meant there would be fewer working class people requiring resources. He claimed that with a growing population, **poverty was inevitable** as there would never be enough resources to support everyone. Dickens disagreed. He argued there are enough resources – they just need to be **shared more fairly.**

5. Victorian Britain was a **God fearing society**. Dickens believed that many middle/upper class people were **hypocritical** as they ignored the **Christian values of generosity and charity**. He also used Scrooge's transformation to highlight that we are all capable of **redemption** if we accept our sins and vow to change.

Writing about Literature

P **Point**

Answer the question

E **Evidence**

Embed a quote, or pattern of quotes that juxtapose or reinforce each other

A **Analyse**

Explain the inferences behind the quote in detail using as/so/because/which

Z **Zoom**

Explain the connotations of a powerful word or technique has and the effect of this

E **Effect**

Explain what the writer's intention is/ what they are trying to teach the reader

L **Link to Context**

Explain how these ideas link to the real world

Characters

Ebenezer Scrooge
Miserly money lender

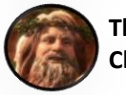
Bob Cratchit
Scrooge's poor clerk

Jacob Marley
Scrooge's deceased business partner

Fred Scrooge
Scrooge's nephew

Tiny Tim
Bob's disabled son

The Ghost of Christmas Past



The Ghost of Christmas Present

The Ghost of Christmas Yet to Come

Belle
Scrooge's ex fiancé

Fan
Scrooge's sister

Portly Gentlemen
Charity Collectors

Ignorance and Want
Symbolic children

Fezziwig
Scrooge's old boss

Year 11 English: 'A Christmas Carol' by Charles Dickens

Knowledge of Context

1. In what **era** was the novella written?

2. What **misconception** did people commonly believe about the poor?

3. What was life like for **working class** people in the Victorian era?

4. How did factory owners **exploit** their workers?

5. How were **children** exploited?

6. Why were working class people **trapped** in poverty?

7. What was the Victorian **government's attitude** to poverty?

8. Why did it suit the Victorian government to have this view?

9. What was the **Poor Law of 1834**?

10. Who was **Thomas Malthus**?

11. What were Malthus' views on poverty and **population growth**?

12. What did Malthus believe would have a positive effect on the economy (Britain's wealth)?

13. What were Dickens' views on Malthus?

14. Why did Dickens believe that the upper and middle class Christians were **hypocrites**?

15. What is **redemption**?

Writing about Literature

What does each part of PEAZEL ask you to do?

P **Point**

E **Evidence**

A **Analyse**

Z **Zoom**

E **Effect**

L **Link to Context**

Characters

Ebenezer Scrooge
Miserly money lender

Bob Cratchit
Scrooge's poor clerk

Jacob Marley
Scrooge's deceased business partner

Fred Scrooge
Scrooge's nephew

Tiny Tim
Bob's disabled son

The Ghost of Christmas Past

The Ghost of Christmas Present

The Ghost of Christmas Yet to Come

Belle
Scrooge's ex fiancé

Fan
Scrooge's sister

Portly Gentlemen
Charity Collectors

Ignorance and Want
Symbolic children

Fezziwig
Scrooge's old boss

Year 11 English: 'A Christmas Carol' by Charles Dickens

Key Quotations

"Secret and self contained and solitary as an oyster" Description of Scrooge Stave 1	*"If they had rather die they had better do it, and decrease the surplus population"* Scrooge, Stave 1	*"Are there no prisons? Are the (…) workhouses still in operation?"* Scrooge, Stave 1	*"Dismal little cell"* Description of Bob Cratchit's working conditions	*"The fog came pouring in through every chink and every keyhole"* Description of the weather, Stave 1
"I wear the chains I forged in life. I made them link by link and yard by yard" Marley, Stave 1	*"Mankind was my business!"* Marley, Stave 1	*"Would you so soon put out the light I give?"* Ghost of Christmas Past, Stave 2	*"A solitary child, neglected by his friends"* Description of Scrooge as a child, Stave 2	*"Yo ho my boys!"* Fezziwig, Stave 2
"Gain engrosses you" "Another idol has displaced me…a golden one" Belle, Stave 2	*"Bore a little crutch and his limbs were supported by an iron frame"* Description of Tiny Tim Stave 3	*"To Mr Scrooge! The founder of the feast!"* Bob Cratchit, Stave 3	*"Yellow, meagre, ragged, scowling, wolfish"* Description of Ignorance and Want, Stave 3	*"Reeked of crime and filth and misery"* Description of London slums
"Overrun by grass and weeds" Description of Scrooge's grave, Stave 4	*"Oh, tell me I may sponge away the writing on this stone!"* Scrooge Stave 4	*"No fog. No Mist. Clear, bright, jovial light. Sweet, fresh air"* Description of the weather, Stave 5	*"I'm as light as a feather, as happy and an angel, as merry as a schoolboy"* Scrooge, Stave 5	"God bless us. Everyone!" Tiny Tim, Stave 5

Year 11 English: `A Christmas Carol' by Charles Dickens

Complete the key quotations below:

"Secret and… Description of Scrooge Stave 1	*"If they had rather…* Scrooge, Stave 1	*"Are there no…* Scrooge, Stave 1	*"Dismal…* Description of Bob Cratchit's working conditions	*"The fog …* Description of the weather, Stave 1
"I wear the… Marley, Stave 1	*"Mankind…* Marley, Stave 1	*"Would you so…* Ghost of Christmas Past, Stave 2	*"A solitary…* Description of Scrooge as a child, Stave 2	*"Yo ho…* Fezziwig, Stave 2
"Gain… Belle, Stave 2	*"Bore a little…* Description of Tiny Tim Stave 3	*"To Mr…* Bob Cratchit, Stave 3	*"Yellow…* Description of Ignorance and Want, Stave 3	*"Reeked of…* Description of London slums
"Overrun… Description of Scrooge's grave, Stave 4	*"Oh, tell me…* Scrooge Stave 4	*"No fog…* Description of the weather, Stave 5	*"I'm as light…* Scrooge, Stave 5	"God bless… Tiny Tim, Stave 5

Year 11 English: 'Macbeth' by William Shakespeare

Knowledge of Context

1. Macbeth was written in 1606 the **Jacobean era**, under the reign of **James 1**. Shakespeare deigned the play to please the king, setting it in **Medieval Scotland** (as James 1 was Scottish) in the 1000s and explored the theme of the **supernatural**, as this was a fascination of the king.

2. A common belief in the Jacobean era was that everything had its place in the universe, which had been set out by God. This order was called **The Great Chain of Being** that included everything from God and the monarch at the top to plants and rocks at the bottom. If the order was disrupted, the universe would **descend into chaos** to correct the chain.

3. Alongside this was the belief in **The Divine Right of Kings**. This was the belief that the monarch was **chosen by God** to be their representative on Earth. Therefore, their word was God's word. If you displeased the monarch, you would displease God and be punished. James 1 often spoke about this belief, to **keep his God-fearing people under control.**

4. James 1 spent much of his reign feeling insecure as a protestant king. In 1605, a group of Catholic rebels attempted to assassinate the king by exploding the Houses of Parliament, as they wished England to be ruled by a protestant monarch. This was know as **The Gunpowder Plot**. Even though the plot failed, James was left feeling vulnerable. A year later, Shakespeare wrote Macbeth to warn his audience that anyone who commits **regicide** will be punished in life and after death.

5. Many critics argue that the play is very closely linked to **The Original Sin** – this is one of the first stories of The Bible. In the Garden of Eden, the devil (in the form of a serpent) tempts Eve to persuade Adam to eat the forbidden fruit. Christians believe that as we all descend from Adam and Eve, we **have all inherited the capacity to sin**. No person is fully good or fully evil and we should all use our free will to choose righteousness.

Characters

Macbeth
Thane and later king

Lady Macbeth
Macbeth's Wife

Duncan
King at the start of the play

Malcolm
Duncan's son and heir

Donalbain
Duncan's youngest son

Banquo
Macbeth's friend

Fleance
Banquo's son

The Weird Sisters
Three Witches

Macduff
Thane of Fife

Lady Macduff
Macduff's wife

Ross
A Scottish Thane

Hecate
Queen of the witches

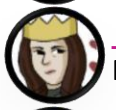
Macdonwald
Traitor

Year 11 English: 'Macbeth' by William Shakespeare

Questions	Answers
1. When was the play written?	
2. Who was King at the time?	
3. When was the play set?	
4. How did Shakespeare design the play to interest the King?	
5. What was The Great Chain of Being?	
6. What was at the top of the chain?	
7. What was at the bottom of the chain?	
8. What would happen in the chain was disrupted?	
9. What was The Divine Right of Kings?	
10. Why did James 1 talk about this belief a lot?	
11. What happened in The Gunpowder Plot?	
12. How did this leave James 1 feeling?	
13. How does the play reflect this?	
14. What is the story of The Original Sin?	
15. What do Christians believe about Good and Evil?	

Who are they?

_____ Thane and later king


_____ Macbeth's Wife

_____ King at the start of the play

_____ Duncan's son and heir

_____ Duncan's youngest son

_____ Macbeth's friend

_____ Banquo's son

_____ Three Witches

_____ Thane of Fife

_____ Macduff's wife

_____ A Scottish Thane

_____ Queen of the witches

_____ Traitor

Year 11 English: 'Macbeth' by William Shakespeare

Key Quotations

"Fair is foul and foul is fair, hover through fog and filthy air" The witches	*"So foul and fair a day I have not seen"* Macbeth's first line	*"O valiant cousin! Worthy gentlemen"* Duncan, about Macbeth	*"Unseamed him from knave to chaps and placed his head upon our battlements"* Soldier about Macbeth killing Macdonaldwald	*"Whose horrid image doth unfix my hair and make my seated heart knock against my ribs"* Macbeth when he heard the witches' prophecies
"I do fear thy nature is too full of the milk of human kindness" Lady Macbeth, about Macbeth	*"Come you spirits (...) unsex me here (...) fill me with direst cruelty"* Lady Macbeth before Macbeth returns home	*"Take my milk for gall" "Make thick my blood"* Lady Macbeth to the spirits before Macbeth returns home	*"I would have plucked my nipple from its boneless gums and dashed it's brains out, had I so have sworn to you"* Lady Macbeth manipulating Macbeth	*"I have no spur to prick the sides of my intent, only vaulting ambition"* Macbeth to himself
"Look like the innocent flower but be the serpent under it" Lady Macbeth to the Macbeth	*"Will all Great Neptune's Oceans wash this blood clean from my hands"* Macbeth after regicide	*"I fear thou has played most foully for it"* Banquo, after Macbeth is King	*"False face must hide what the false heart doth know"* Macbeth to himself	*"Fly good Fleance! Fly!"* Banquo when murderers attack him
"Never shake thy gory locks at me" Macbeth to Banquo's ghost	*"All the perfumes of Arabia will not sweeten this little hand"* Lady Macbeth sleepwalking	*"Til Birnham Wood move to Dunsinane I shall not taint with fear"* Macbeth before his death	*"Turn hellhound. Turn"* Macduff to Macbeth before he kills him	*"The dead butcher and his fiendlike queen"* Malcolm as King, about Macbeth

Year 11 English: 'Macbeth' by William Shakespeare

Key Quotations

"Fair is… The witches	*"So foul…* Macbeth's first line	*"O valiant…* Duncan, about Macbeth	*"Unseamed him…* Soldier about Macbeth killing Macdonaldwald	*"Whose horrid image..* Macbeth when he heard the witches' prophecies
"I do fear thy nature… Lady Macbeth, about Macbeth	*"Come you spirits (…)* Lady Macbeth before Macbeth returns home	*"Take my…* *"Make thick..* Lady Macbeth to the spirits before Macbeth returns home	*"I would have plucked..* Lady Macbeth manipulating Macbeth	*"I have no spur…* Macbeth to himself
"Look like the.. Lady Macbeth to the Macbeth	*"Will all Great …* Macbeth after regicide	*"I fear thou..* Banquo, after Macbeth is King	*"False face…* Macbeth to himself	*"Fly good…* Banquo when murderers attack him
"Never shake… Macbeth to Banquo's ghost	*"All the perfumes…* Lady Macbeth sleepwalking	*"Til Birnham Wood…* Macbeth before his death	*"Turn..* Macduff to Macbeth before he kills him	"The dead… Malcolm as King, about Macbeth

Year 11 English: 'An Inspector Calls' by JB Priestley

Knowledge of Context

1. JB Priestley wrote the play in **1945** after World War II. He set in in 1912 (**Edwardian era**) to teach the post war audience that Britain needed change and **cannot go back to the inequality of 1912.**

2. WWI and WWII changed British society dramatically. For the first time, the social classes were mixed: in the army, in the workplace; due to evacuation. It was clear that the war could not have been won without the sacrifices made by the working class. Therefore, in the post war era, many people recognised that all people had a responsibility over each other, regardless of their social class.

3. Priestley wrote the play to e **criticise Capitalism** (prioritising profit and business over the welfare of people). He was a Socialist (who prioritised people over profit**). He promoted his socialist views** on his BBC radio programme and used 'An Inspector Calls' to discredit Capitalism and promote Socialism.

4. In the **General Election of 1945**, **Winston Churchill** (Conservative Party) was confident he would be voted into power, after leading Britain to victory. However, The Labour Party, who represent the rights of the working class, won for the first time in history. **The Labour Party** (led by Clement Atlee) continued to expand **The Welfare State** (free education and healthcare for all) as a way to protect all people from the horrors of poverty.

5. Edwardian Britain was a **patriarchal society**. Men had the power, made the decisions and had their views heard. Women were seen to be owned by their fathers or husbands. Whilst women were under pressure to secure a good husband, men were under pressure to provide for (and maintain control over) their family. **By 1945, women were becoming more self sufficient** and independent, due to their service to Britain in war time and **the Suffragette movement** (where women campaigned for the vote).

Characters

Arthur Birling
Factory Owner

Sybil Birling
Arthur's Wife

Sheila Birling
Daughter

Eric Birling
Son

Gerald Croft
Sheila's fiancé

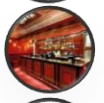
Inspector Goole
Police Inspector

Eva Smith/Daisy Renton

Edna
Maid

Places

Milwards
Department Store


The Palace Bar
Theatre Bar

Brumley
Town where they live

Year 11 English: 'An Inspector Calls' by JB Priestley

Questions	Answers
1. When was the play written?	
2. When was the play set?	
3. Why did Priestley set it then?	
4. How did the social classes mix during war time?	
5. How did Britain change between 1912 and 1945?	
6. Why did Britain become fairer after WWII?	
7. What is Capitalism?	
8. What is Socialism?	
9. What Were Priestley's views on these?	
10. Who won the General Election in 1945?	
11. Who thought they would win, why?	
12. What is a Welfare State?	
13. What is a patriarchal society?	
14. What was a man's role in Edwardian Britain?	
15. What 2 events gave women more respect and independence?	

Who are they?

_____
Factory Owner

_____
Arthur's Wife

_____
Daughter

_____
Son

_____
Sheila's fiancé

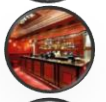
_____
Police Inspector

_____

_____
Maid

Where is it?

_____
Department Store


_____
Theatre Bar

_____
Town where they live

Year 11 English: 'An Inspector Calls' by JB Priestley

Key Quotations

Rather portentous man, provincial in his speech Stage direction describing Arthur	*Half shy, half assertive* Stage direction describing Eric	*Rather cold woman and her husband's social superior* Stage direction describing Sybil	*Very pleased with life and rather excited* Stage direction describing Sheila	*Well bred man about town* Stage direction describing Gerald
Creates an impression of massiveness, solidity and purposefulness Stage direction describing Goole	*"It's my duty to keep labour costs down"* Arthur- Act 1	*"Community and all that nonsense"* Arthur- Act 1	*"Unsinkable! Absolutely unsinkable!"* Arthur- Act1	*"We are responsible citizens not criminals"* Gerald- Act 1
"But these girls aren't cheap labour; they're people" Sheila- Act 1	*"He could have kept her on instead of throwing her out"* Eric- Act 1	*"I hate all those hard eyed, dough faced women"* Gerald- Act 2	*"Girls of that class -"* Sybil- Act 2	*"We have done a great deal of useful work in helping deserving cases."* Sybil- Act 2
"I was in that state where a chap can easily turn nasty." Eric- Act 3	*"She was pretty and a good sport"* Eric- Act 3	*"Look Inspector – I'd give thousands, yes thousands"* Arthur- Act 3	*"There are millions and millions and millions of Eva Smiths and John Smiths"* Goole- Act 3	*"We are all members of one body (…) responsible for each other"* Goole- Act 3

Year 11 English: 'An Inspector Calls' by JB Priestley

Key Quotations

Rather portentous.. Stage direction describing Arthur	*Half shy…* Stage direction describing Eric	*Rather cold…* Stage direction describing Sybil	*Very pleased…* Stage direction describing Sheila	*Well bred…* Stage direction describing Gerald
Creates an… Stage direction describing Goole	*"It's my duty…* Arthur- Act 1	*"Community…* Arthur- Act 1	*"Unsinkable! …* Arthur- Act1	*"We are responsible..* Gerald- Act 1
"But these girls… Sheila- Act 1	*"He could have…* Eric- Act 1	*"I hate all those…* Gerald- Act 2	*"Girls of…* Sybil- Act 2	*"We have done…* Sybil- Act 2
"I was in that state… Eric- Act 3	*"She was pretty…* Eric- Act 3	*"Look Inspector –* Arthur- Act 3	*"There are millions…* Goole- Act 3	*"We are all members* Goole- Act 3

Year 11 English: Power and Conflict Poetry

Comparing Poetry

P **Point**

Answer the question

E **Evidence**

Embed a quote, or pattern of quotes that juxtapose or reinforce each other

A **Analyse**

Explain the inferences behind the quote in detail using as/so/ because/which

Z **Zoom**

Explain the connotations of a powerful word or technique has and the effect of this

E **Effect**

Explain what the writer's intention is/ what they are trying to teach the reader

L **Link to Context**

C **Compare to second poem in detail**

Poetic Devices

Metaphor: comparing two things without using "like" or "as," creating vivid and imaginative descriptions.

Imagery: using descriptive language to create sensory experiences, painting a vivid picture in the reader's mind.

Enjambment: when a sentence or phrase continues onto the next line without a pause or punctuation, creating a flow and adding emphasis.

Semantic Field: a group of words related to a specific theme or topic, creating a focused and consistent image.

Caesura: a pause or break in the middle of a line of poetry, often marked by punctuation.

Ambiguity: using language or descriptions that can be interpreted in more than one way, allowing for different meaning.

Symbolism: using objects, images, or actions to represent deeper meanings or ideas.

Allusion: making references to well-known people, events, or stories from literature, history, or mythology.

Repetition: repeating words, phrases, or lines for emphasis.

Onomatopoeia: using words that imitate or mimic sounds, adding a sense of realism or creating a particular mood.

Year 11 English: Power and Conflict Poetry

Comparing Poetry

What does each part of PEAZELC need you to do?

- **P** Point
- **E** Evidence
- **A** Analyse
- **Z** Zoom
- **E** Effect
- **L** Link to Context
- **C** Compare to second poem in detail

Poetic Devices

Define each device below:

A metaphor is:

Imagery is:

Enjambment is:

A semantic field is:

Caesura is:

Ambiguity is:

Symbolism is:

An allusion is:

Repetition is:

Onomatopoeia is:

Year 11 English: Power and Conflict Poetry

Kamikaze by Beatrice Garland

"Kamikaze" by Beatrice Garland tells the story of a Japanese pilot who contemplates a suicide mission during World War II. It explores the conflict between personal identity and societal pressures. The poem raises questions about the value of individuality and the consequences of blindly following orders, as the pilot is ostracised by his family and community for deciding to return from the mission.

Garland uses lots of natural imagery to explore the impact of war on nature but also to question whether war and conflict is a natural way to behave.

Key Quotes			
	"Shaven head full of powerful incantations"	**"one-way journey into history"**	**"He must have wondered which had been the better way to die"**

In WWII, Japanese people were socially conditioned to glorify Kamikaze pilots. If they returned from the suicide mission they would bring shame upon themselves and their families.

Poetic Form	Explanation	Examples
Sonnet	A poem of 14 lines, traditionally a love poem	Ozymandias
Narrative Poem	Tell a story to present an individual's experience	The Prelude, Kamikaze, Poppies
Dramatic Monologue	A single character speaks directly to an audience.	My Last Duchess
Free Verse Poem	Poems that do not follow any specific rhyme or rhythm patterns	Tissue, War Photographer

Ozymandias by Percy Shelley

"Ozymandias" tells the story of a broken statue that once represented a powerful king. Time and nature have destroyed the statue, showing the fleeting nature of human accomplishments. The poem teaches us that even the mightiest rulers and empires will eventually fade away, reminding us of the importance of humility. The poem is written in the form of a sonnet (traditional love poem) to symbolise the self love of the pharaoh and the ego of mankind.

Key Quotes			
	"My name is Ozymandias, King of Kings, Look upon my works you mighty and despair"	**"the hand that mocked them and the heart that fed"**	**"the decay of that colossal wreck"**

Shelley was a Romantic poet who had a deep appreciation for nature and criticised the government, monarchy and absolute power.

London by William Blake

"London" by William Blake is a poem that explores the negative aspects of city life during the Industrial Revolution. It describes the author's observations of poverty, despair, and the loss of innocence among the people he encounters. The poem criticises the government and the monarchy's Laissez Faire attitudes that contribute to their suffering and emphasises the need for compassion and social change. Blake includes an allusion to the French Revolution, where the people of France revolted and beheaded the monarchy, to glamourise the idea of a revolution in Britain.

Key Quotes			
	"Mind-forged manacles I hear"	**"Soldiers sigh runs in blood down palace walls"**	**"Where the chartered Thames does flow"**

Blake was a Romantic poet who did not trust the government or the monarchy and wished to draw attention to the suffering of the poor (particularly children) in his work.

Year 11 English: Power and Conflict Poetry

Kamikaze by Beatrice Garland

1. What story is told in the poem?
2. What conflict is explored?
3. What questions does the poem raise?
4. Why does the poet use lots of natural imagery in the poem?

Key Quotes	"Shaven head…	"one-way…	"He must have wondered…

In WWII, how did Japanese people view Kamikaze pilots?

Poetic Form	Explanation	Examples
Sonnet		Ozymandias
	Tell a story to present an individual's experience	
Dramatic Monologue		My Last Duchess
	Poems that do not follow any specific rhyme or rhythm patterns	

Ozymandias by Percy Shelley

1. What is the focus of the poem?
2. What destroys the statue?
3. What does the poem teach us?
4. What form is the poem written in?

Key Quotes	"My name is…	"the hand that..	"the decay…

What did Romantic poets write about?

London by William Blake

1. What does the poem focus on?
2. What does the poet see as he walks around the city?
3. What does the poem criticise?
4. What allusion does Blake include?

Key Quotes	"Mind-forged…	"Soldiers sigh…	"Where the…

What did Blake want to change about society?

Year 11 English: Power and Conflict Poetry

The Prelude by William Wordsworth

In "The Prelude" by William Wordsworth, the speaker reflects on a childhood experience of being overwhelmed by the power of nature. He remembers a moment when he rows a boat on a lake, and suddenly a majestic mountain emerges from behind a curtain of mist, leaving him in awe. The moment frightens and humbles him and he dreams about it for a long time after.
The poem is written in one long stanza with enjambment throughout, to emphasise the lack of control the speaker feels when faced with nature.

Key Quotes			
	"went heaving through the water like a swan"	**"huge peak. Black and huge as if with voluntary power instinct."**	**"huge and mighty forms (...) were a trouble to my dreams"**

Wordsworth was a Romantic poet who had a deep appreciation for nature's everlasting power and often used nature to escape from conflict in his family

My Last Duchess by Robert Browning

"My Last Duchess" by Robert Browning is a poem in which a wealthy Duke speaks about his former wife, who he had killed because of her alleged flirtatiousness. The Duke reveals his jealousy and possessiveness, as well as his desire for control and power. It offers a chilling insight into the mind of a man who sees women as objects to be possessed and controlled.
Browning writes the poem as a dramatic monologue to represent the Duke's ego, status and control, as he is the only character talking without interruption. We only hear his perspective on his relationship.

Key Quotes			
	"None puts back the curtains I have drawn for you but I"	**"White mule she rode around the terrace"**	**"Notice Neptune taming a sea horse which Claus of Innsbruck cast in bronze for me!"**

Browning was a Romantic poet of the Victorian era, which was a patriarchal time period that placed a high importance on the social status of the bourgeoisie.

The Charge of the Light Brigade by Lord Tennyson

"The Charge of the Light Brigade" recounts a heroic but tragic event of The Battle of Balaclava in the Crimean War. It describes the courage and loyalty of a brigade of British cavalry soldiers as they obey a misunderstood order to charge into enemy lines, despite being outnumbered and facing certain death. The poem honours their bravery and self-sacrifice, but raises questions about how far army leaders can be trusted.
Tennyson uses biblical allusions to 'the valley of death' to imply that God was with these heroic men.

Key Quotes			
	"Into the valley of death, into the mouth of hell"	**"There's not to reason why. There's but to do and die"**	**"The noble 600"**

At this time, most poetry presented war as heroic, glorious and an exciting adventure; writing such a critical poem was unusual for this time period.

Exposure by Wilfred Owen

"Exposure" by Wilfred Owen is a powerful war poem that captures the harsh reality of soldiers in World War I, that was a contrast to the glory of war promised by Government propaganda. It vividly describes the freezing conditions, fear, and despair they face. Through haunting imagery and vivid descriptions, Owen exposes the brutality and futility of war, urging us to remember its devastating consequences.
Owen personifies the wind to emphasise its power and how the soldiers were just as vulnerable to the destructive forces of nature as the German army.

Key Quotes			
	"Our brains ache in the merciless iced winds that knive us"	**"But nothing happens"**	**"war lasts, rain soaks clouds sag stormy"**

Owen was a WW1 soldier who died in action. He wrote about the horrors of war criticising the way war was glorified in propaganda.

Year 11 English: Power and Conflict Poetry

The Prelude by William Wordsworth

1. What does the speaker reflect on in the poem?
2. What happens on the speakers' journey across the lake?
3. How does the experience affect the speaker?
4. How is the poem structured?

Key Quotes	"went heaving…	"huge peak…	"huge and mighty…

What was Wordsworth inspired by?

My Last Duchess by Robert Browning

1. What is the poem about?
2. What does the poem reveal about the Duke?
3. How does the Duke view women?

Key Quotes	"None puts back…	"White mule…	"Notice Neptune…

Who had power in Victorian society?

The Charge of the Light Brigade by Lord Tennyson

1. What battle is the poem about?
2. Why were the soldiers in this battle so heroic?
3. What questions does the poem raise?
4. Why does Tennyson use Biblical Allusions?

Key Quotes	"Into the valley…	"There's not to…	"The noble…

Why was this poem unusual for the time period?

Exposure by Wilfred Owen

1. What does the po em focus un?
2. What is described in the poem?
3. What does Owen want the reader to r emember fro the poem?
4. Why does Owen pe rsonify the wind?

Key Quotes	"Our brains ache…	"But nothing..	"war lasts…

What did Owen frequently criticise in his poetry?

Year 11 English: Power and Conflict Poetry

Storm on the Island by Seamus Heaney

This is a poem that explores the power of nature and its impact on human beings. Set on a remote island, the poem describes the fear and vulnerability experienced during a storm. Heaney emphasises the resilience of people and the need to unite in the face of adversity.
The poem is an extended metaphor, that symbolises 'The Troubles' in Northern Ireland. This is created by the semantic field of war, that is used throughout the poem.

Key Quotes			
	"spits like a tamed cat turned savage"	"We are bombarded by empty air"	"sea is company, exploding comfortably down the cliffs"

The Irish Troubles was a conflict in Northern Ireland (1960s-1990s) between Irish Nationalists (who wanted an independent Ireland) and Unionists (who wanted to remain part of the United Kingdom). The conflict involved bombings, shootings, riots and officially ended with the signing of the Good Friday Agreement in 1998.

Bayonet Charge by Ted Hughes

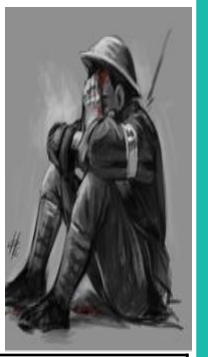
"Bayonet Charge" by Ted Hughes portrays the chaos and horror of war. It follows a soldier who impulsively charges into battle, driven by fear and survival instincts. Through vivid descriptions and intense imagery, Hughes exposes the brutality and dehumanising nature of war, questioning its purpose and consequences.
Hughes uses the symbol of a distressed "yellow hare" to symbolise how the solider himself is in turmoil. This could also be a symbol for how war destroys nature as well as mankind.

Key Quotes			
	"suddenly he awoke and was running"	"Yellow hare that rolled like a flame and crawled in a threshing circle"	"Terror's touchy dynamite"

Many soldiers in WW1 were shocked at the horrific and traumatic conditions of war when they reached the trenches; propaganda had promised them glory and adventure but the reality of conflict juxtaposed this.

Remains by Simon Armitage

"Remains" by Simon Armitage is a poem that explores the psychological impact of war on an individual. It follows a soldier haunted by guilt after shooting a looter in a conflict, as the forced used to 'tackle' him could be seen as unreasonable. The poem raises questions about the morality of war and the lasting trauma it inflicts on those involved.
Armitage repeats the phrase 'probably armed, possibly not' to emphasise the uncertainty the soldier feels as he considers how he took a human life.



Key Quotes			
	"probably armed, possibly not"	"tosses his guts back into his body"	"The drink and the drugs won't flush him out"

Many soldiers face Post Traumatic Stress Disorder (PTSD) after they have returned from war.

Poppies by Jane Weir

"Poppies" by Jane Weir explores the emotions of a mother whose son has gone off to war. It delves into her memories of him, the anxiety and fear she experiences, and her longing for his safe return. The poem reflects on the sacrifices and heartache associated with conflict. At the end of the poem it is suggested that he has died, yet we are left uncertain, representing the constant uncertainty felt by families of soldiers in war time.
When the mother removes the 'white cat hairs' from her son's uniform, it symbolises her removing his childhood innocence and the comfort of home.

Key Quotes			
	"I resisted the impulse to run my fingers through the gelled blackthorns of your hair"	"The world overflowing like a treasure chest"	"I traced the inscriptions on the war memorial and leant against it like a wishbone"

Weir is a mother to two sons so empathises with the grief felt by mothers of fallen soldiers. The poppy is a symbol of remembrance in all wars.

Year 11 English: Power and Conflict Poetry

Storm on the Island by Seamus Heaney

1. What is the poem about?
2. What happens in the poem?
3. What does the poet emphasise?
4. What is the poet an extended metaphor for?

Key Quotes	"spits like…	"We are…	"sea is company…

What were the Irish Troubles?

Bayonet Charge by Ted Hughes

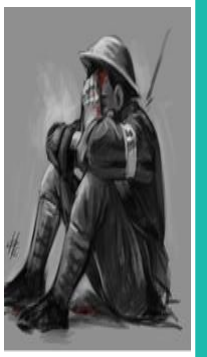
1. What is the poem about?
2. What does the poem make us realise and question?
3. List 2 things the 'yellow' hare' could symbolise.

Key Quotes	"suddenly he…	"Yellow hare…	"Terror's…

Why were the soldiers of WWI shocked when they reached the trenches?

Remains by Simon Armitage

1. What is the message of the poem?
2. What/who is the poem about?
3. What does the poem question?



Key Quotes	"probably armed…	"tosses his guts…	"The drink and…

What is PTSD?

Poppies by Jane Weir

1. Who is the focus of the poem?
2. What does the speaker think about in the poem?
3. What happens at the end of the poem?

Key Quotes	"I resisted the…	"The world overflowing…	"I traced the inscriptions…

What is the poppy used to symbolise?

Year 11 English: Power and Conflict Poetry

War Photographer by Carol Ann Duffy

This poem explores the experiences of a photographer capturing the horrors of war. It highlights the contrast between the photographer's detached professional life and the emotional impact of witnessing suffering. It raises questions about the morality of taking these images, the impact they have in the media and the responsibility of bearing witness.
Duffy lists countries where war occurs from across the world, to symbolise widespread and inescapable conflict.

Key Quotes			
	"Fields which don't explode beneath the feet of children running in nightmare heat"	"Blood stained into foreign dust"	"their eyeballs prick with tears"

The media buy the most shocking war photographs to share. This can be seen a spreading awareness but also making money from people's suffering

The Emigree by Carol Rumens

"The Emigree" by Carol Rumens is about a refugee who has left their home country and reflects on their memories of it. The speaker describes their city with vivid imagery and fondness, while also acknowledging the hardships and changes that forced them to leave. The poem explores themes of identity, nostalgia, and the impact of political events on individuals.
The speaker personifies her home country to emphasise her unbreakable loyalty and connection to it.

Key Quote			
	"It may be at war, it may be sick with tyrants"	"I am branded by an impression of sunlight"	"I have no passport. There is no way back at all"

Refugees are often villainised as being invaders. Rumens emphasises that they are victims of war who have not chosen to seek refuge but have become desperate.

Tissue by Imtiaz Dharker

"Tissue" by Imtiaz Dharker reflects on the significance of paper in our lives. It explores how paper, like human connections, can be fragile yet powerful. The poem encourages us to value the small moments and relationships that shape our lives, reminding us of their value.
Dharker uses an ambiguous title that could refer to fragile paper or human flesh. This is to highlight that human life is as delicate as tissue paper.

Key Quotes			
	"Paper that lets the light shine through, this is what could alter things"	"Maps too. The sun shines through their borderlines"	"Fine slips from grocery shops (…) might fly our lives like paper kites"

Dharker explores how paper overpowers humans and causes conflict across the world (maps, religious documents, money).

Checking Out Me History by John Agard

This explores the importance of learning about neglected or overlooked figures from history, particularly those of non-Western backgrounds. The speaker challenges the traditional curriculum and calls for a more inclusive representation of diverse cultures and achievements. The poem celebrates the strength and resilience of individuals who have been marginalised, encouraging readers to question and reclaim their own histories.
Agard juxtaposes the 'nonsense' of nursery rhymes with the inspirational stories of non-western figures to question the National Curriculum.

Key Quotes			
	"Dem tell me what dem want to tell me"	"Blind me to my own identity"	"Florence Nightingale" "Mary Seacole"

Agard criticises the 'Eurocentric' view of history and white supremacy in the education he received as a child in Britain.

Year 11 English: Power and Conflict Poetry

War Photographer by Carol Ann Duffy

1. What is the poem about?
2. What does the poem raise questions about?
3. Why does Duffy list countries affected by war?

Key Quotes	"Fields which…	"Blood stained…	"their eyeballs…

How can publicising images of war be seen as positive as well as negative?

The Emigree by Carol Rumens

1. What is the poem about?
2. What does the speaker discuss in the poem?
3. What themes are explored in the poem?
4. Why does the speaker personify their home country?

Key Quote	"It may be at war…	"I am branded…	"I have no passport…

How are refugees often judged?

Tissue by Imtiaz Dharker

1. What does the poem reflect on?
2. How does the poem present paper?
3. What does the poem teach us?
4. Why does the poet use an ambiguous title?

Key Quotes	"Paper that lets…	"Maps too…	"Fine slips from…

How does the poem 'Tissue' relate to the theme of conflict?

Checking Out Me History by John Agard

1. What is the poem about?
2. What does the speaker want to change about what is taught at school?
3. What does the poem celebrate?
4. How does the poet use juxtaposition?

Key Quotes	"Dem tell me…	"Blind me…	"Florence…

What did Agard intend to teach his audience with this allegorical poem?

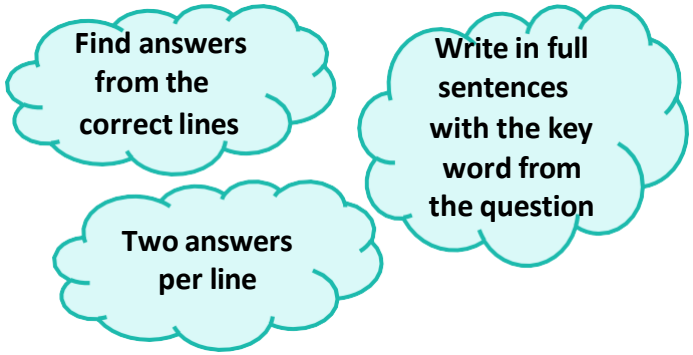
Year 11 English: English Language Paper 1

Reading Section

Question 1

List four things you learn about…

- 4 marks
- 5 mins (as part of your reading time)



Question 2

How does the writer use language to…?

- 8 marks
- 10-12 mins
- 3 x ZE paragraphs

Zoom	Effect
Pick a powerful word or language technique + Identify the connotations created	Explain in detail the meanings created the reader's response (as/so/because/which)

Question 3

How does the writer structure the text to interest the reader?

- 8 marks
- 10-12 mins
- 2 PEA paragraphs
  - 1 PEA about the opening
  - 1 PEA about the ending

Point	What does the writer do/use to interest the reader? (choose from WATCH)
Evidence	Quote
Analyse	Explain how this makes the reader intrigued and curious

W – **Withholding Information** – What does the writer not tell us to make us curious?

A – **Atmosphere** – What atmosphere is created and why is this intriguing?

T – **Topics/Themes**– Which topics and themes do we focus on? Why does this hold our attention?

C – **Characters**– Why are we engaged by the character?

H – **Hints**– What do we expect to happen next? What is foreshadowed?

Question 4

How far do you agree of disagree (with the statement)?

- 20 marks
- 20 mins
- Split the statement

Complete 1 STEP METHOD paragraph on each part of the statement (2 in total).

Step A	Step B	Step C	Step D	Step E
State the part of the statement you are focusing on, whether you **agree or disagree** and why.	Embed a **quote** (or pattern of quotes) to prove that your judgement is accurate.	Analyse the **inferences** behind the quotes. Explain what they prove about the statement. As/so/because/which	**Zoom** in on 2+ methods or powerful words. Identify connotations and explain the effects. As/so/because/which	**Summarise** which you agree or disagree. Start with the word, *Overall…*

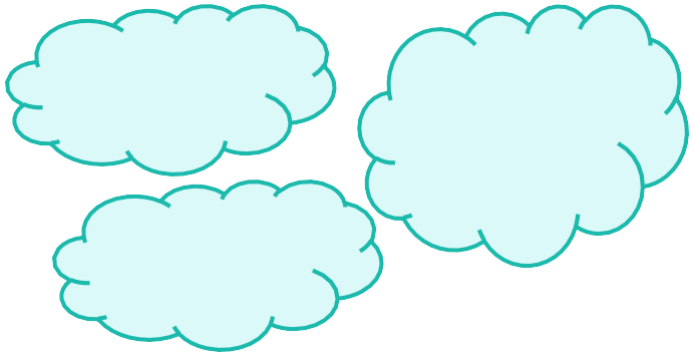
Year 11 English: English Language Paper 1

ding Section

Question 1

List four _____

- 4 marks
- 5 mins (as part of your reading time)



Question 2

How does the writer use _____

- 8 marks
- 10-12 mins
- 3 x ZE paragraphs

Zoom	Effect

Question 3

How does the writer _____ _____.

- 8 marks
- 10-12 mins
- 2 PEA paragraphs
  - 1 PEA about the opening
  - 1 PEA about the ending

Point	
Evidence	
Analyse	

W _____ – What does the writer not tell us to make us curious?

A _____ – What atmosphere is created and why is this intriguing?

T _____ – Which topics and themes do we focus on? Why does this hold our attention?

C _____ – Why are we engaged by the character?

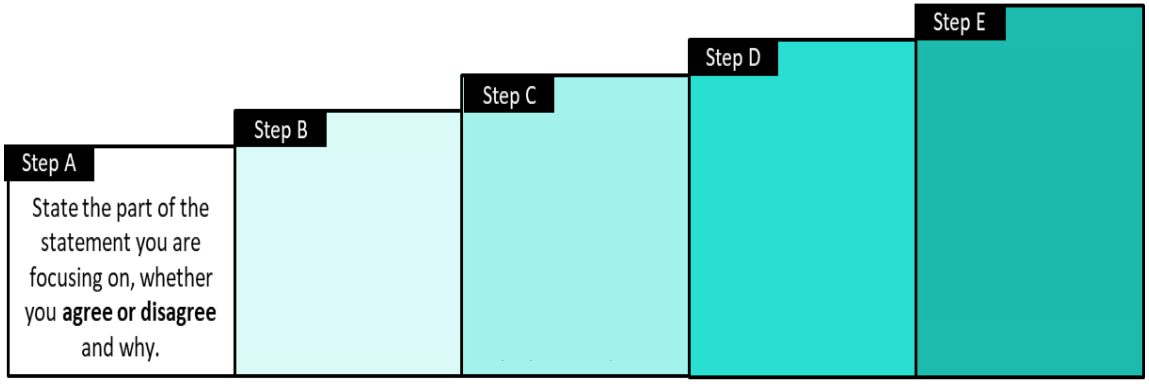
H _____ – What do we expect to happen next? What is foreshadowed?

Question 4

How far do you _____

- 20 marks
- 20 mins
- Split the statement

Complete 1 STEP METHOD paragraph on each part of the statement (2 in total).



Year 11 English: English Language Paper 1

Section B: Writing Section

Question 5

Write a descriptive story.

Choose from…

- **A picture stimulus**
- **A written stimulus**
- **45 minutes**
- **40 marks**
  - **24 marks – Content and Organisation**
  - **16 marks – Technical Accuracy**

Technical Accuracy = Spelling, punctuation and grammar

Proof Read!

Content and Organisation = The way you craft and structure your piece

Paragraph structure:

1	Hook	A dramatic opening that withholds information
2	Description	Detailed description of setting and character
3	Flashback	Descriptions of past event and how it impacts the present
4	One Liner	Dramatic sentence
5	Climax	Detailed description of one major event
6	Cliff Hanger	Unanswered questions at the end. Link to the hook

Quality over Quantity

Varying sentence length
Use your sentence lengths to reflect the pace of the action in the **narrative**. Short sentences can show a faster pace and create drama and tension whereas longer sentences tend to slow it down.

… ( ) : ; ? ! -

Punctuation Marks

Capital Letters Start of every sentence. Proper nouns (names). Abbreviations.

Full Stops At the end of a statement or piece of information.

Question Marks At the end of a question

Brackets and Dashes Add extra information (subordinate clauses) much like commas.

Colon Before a colon is a full sentence. After colon is a list or explanation.

Semi Colon Links to full sentences that are linked by topic or idea

Exclamation Marks At the end of an emotional or exaggerated sentence

Apostrophes To show possession or missing letters in a contraction *(e.g. can't)*

Commas Separate items in a list or used to add extra information

Ellipsis Creates a dramatic pause

ow n't Tell

Vary the way that you start sentences to keep your writing interesting and lively.

Start your sentence with a…	Example
Verb – an action word	**Running for her life,** Sarah shouted at the bus to stop.
Simile - comparing something to something else	**As quiet as a whisper,** he turned to me.
Preposition – indicates the position of someone or something	**Beyond** the gate, the road stretched far away.
Adverb – modifies or describes a verb, adjective or another adverb	**Cautiously,** he moved away from the lion.
Connective – joining word	**Despite** the sunshine, Mr Tucker was wearing a heavy coat.

Year 11 English: English Language Paper 1

Section B: Writing Section

Question 5

Write a _____.

Choose from…

- **A picture stimulus**
- **A written stimulus**
- **45 minutes**
- **40 marks**
  - **24 marks – Content and Organisation**
  - **16 marks – Technical Accuracy**

Technical Accuracy = Spelling, punctuation and grammar

Proof Read!

Content and Organisation = The way you craft and structure your piece

Paragraph structure:

1	Hook	
2	Description	
3	Flashback	
4	One Liner	
5	Climax	
6	Cliff Hanger	

Quality over Quantity

Why/when should we vary sentence length?

… ( ) : : ? ! -

Punctuation Marks

Capital Letters	Full Stops	Question Marks
Brackets and Dashes	Colon	Semi Colon
Exclamation Marks	Apostrophes	Commas
Ellipsis		

ow n't Tell

Vary the way that you start sentences to keep your writing interesting and lively.

Start your sentence with a…	Example
_____– an action word	**Running for her life,** Sarah shouted at the bus to stop.
_____- comparing something to something else	**As quiet as a whisper,** he turned to me.
_____– indicates the position of someone or something	**Beyond** the gate, the road stretched far away.
_____– modifies or describes a verb, adjective or another adverb	**Cautiously,** he moved away from the lion.
_____– joining word	**Despite** the sunshine, Mr Tucker was wearing a heavy coat.

Year 11 English: 'A Christmas Carol' by Charles Dickens

Knowledge of Context

1. Charles Dickens wrote the novella in the **Victorian era**, where society believed that if you were poor it was because you were idle (lazy). This was a misconception.

2. Working class people actually worked very hard, for **long hours, little pay and in unsafe conditions**. They were **exploited** by **Capitalist factory owners**, who prioritised profit over their welfare. Children were also exploited as **child labourers**, As most middle and upper class business owners had the same attitudes, working class people were **trapped in poverty** with no opportunities to escape, through training or education.

3. The government has **Laissez Faire attitudes** towards poverty, meaning they knew it was a problem, but did not see it as their responsibility to fix it. It suited them to believe the poor did not deserve help, as it **justified their decision to ignore them**. **The Poor Law** (1834) introduced **workhouses** as a way to help poor people, but they were designed to humiliate and punish the poor.

4. Dickens alludes to the words of the economist **Thomas Malthus**, who claimed that war, famine and disease has positive impacts on the country's wealth, as **it 'decreased the surplus population'**. By this he meant there would be fewer working class people requiring resources., He claimed that with a growing population, **poverty was inevitable** as there would never be enough resources to support everyone. Dickens disagreed. He argued **there are enough resources – they just need to be shared more fairly**.

5. Victorian Britain was **a God fearing society**. Dickens believed that many middle/upper class people were **hypocritical** as they ignored the **Christian values of generosity and charity**. He also used Scrooge's transformation to highlight that we are all capable of **redemption** if we accept our sins and vow to change.

Writing about Literature

P **Point**

Answer the question

E **Evidence**

Embed a quote, or pattern of quotes that juxtapose or reinforce each other

A **Analyse**

Explain the inferences behind the quote in detail using as/so/because/which

Z **Zoom**

Explain the connotations of a powerful word or technique has and the effect of this

E **Effect**

Explain what the writer's intention is/ what they are trying to teach the reader

L **Link to Context**

Explain how these ideas link to the real world

Characters

Ebenezer Scrooge
Miserly money lender

Bob Cratchit
Scrooge's poor clerk

Jacob Marley
Scrooge's deceased business partner

Fred Scrooge
Scrooge's nephew

Tiny Tim
Bob's disabled son

The Ghost of Christmas Past

The Ghost of Christmas Present

The Ghost of Christmas Yet to Come

Belle
Scrooge's ex fiancé

Fan
Scrooge's sister

Portly Gentlemen
Charity Collectors

Ignorance and Want
Symbolic children

Fezziwig
Scrooge's old boss

Year 11 English: 'A Christmas Carol' by Charles Dickens

Knowledge of Context

In What era was the novella written?

What misconception did people commonly believe about the poor?

What was life like for working class people in the Victorian era?

How did factory owners exploit their workers?

How were children exploited?

Why were working class people trapped in poverty?

What was the Victorian government's attitude to poverty?

Why did it suit the Victorian government to have this view?

What was the Poor Law of 1834?

Who was Thomas Malthus?

What were Malthus' views on poverty and population growth?

What did Malthus believe would have a positive effect on the economy (Britain's wealth)?

What were Dickens' views on Malthus?

Why did Dickens believe that the upper and middle class Christians were hypocrites?

What is redemption?

Writing about Literature

P Point

E Evidence

A Analyse

Z Zoom

E Effect

L Link to Context

Characters

Ebenezer Scrooge

Bob Cratchit

Jacob Marley

Fred Scrooge

Tiny Tim

The Ghost of Christmas

The Ghost of Christmas

The Ghost of Christmas

Belle

Fan

Portly Gentlemen

Ignorance and Want

Fezziwig

Year 11 English: 'A Christmas Carol' by Charles Dickens

Knowledge of Essential Quotes

"Secret and self contained and solitary as an oyster" *Description of Scrooge Stave 1*	**"If they had rather die they had better do it, and decrease the surplus population"** *Scrooge, Stave 1*	**"Are there no prisons? Are the (…) workhouses still in operation?"** *Scrooge, Stave 1*	**"Dismal little cell"** *Description of Bob Cratchit's working conditions*	**"The fog came pouring in through every chink and every keyhole"** *Description of the weather, Stave 1*
"I wear the chains I forged in life. I made them link by link and yard by yard" *Marley, Stave 1*	**"Mankind was my business!"** *Marley, Stave 1*	**"Would you so soon put out the light I give?"** *Ghost of Christmas Past, Stave 2*	**"A solitary child, neglected by his friends"** *Description of Scrooge as a child, Stave 2*	**"Yo ho my boys!"** *Fezziwig, Stave 2*
"Gain engrosses you" "Another idol has displaced me…a golden one" *Belle, Stave 2*	**"Bore a little crutch and his limbs were supported by an iron frame"** *Description of Tiny Tim Stave 3*	**"To Mr Scrooge! The founder of the feast!"** *Bob Cratchit, Stave 3*	**"Yellow, meagre, ragged, scowling, wolfish"** *Description of Ignorance and Want, Stave 3*	**"Reeked of crime and filth and misery"** *Description of London slums*
"Overrun by grass and weeds" *Description of Scrooge's grave, Stave 4*	**"Oh, tell me I may sponge away the writing on this stone!"** *Scrooge Stave 4*	**"No fog. No Mist. Clear, bright, jovial light. Sweet, fresh air"** *Description of the weather, Stave 5*	**"I'm as light as a feather, as happy and an angel, as merry as a schoolboy"** *Scrooge, Stave 5*	**"God bless us. Everyone!"** *Tiny Tim, Stave 5*

Year 11 English: 'A Christmas Carol' by Charles Dickens

Knowledge of Essential Quotes

"Secret and … *Description of Scrooge Stave 1*	**"If they had rather …** *Scrooge, Stave 1*	**"Are there no …** *Scrooge, Stave 1*	**"Dismal…** *Description of Bob Cratchit's working conditions*	**"The fog …** *Description of the weather, Stave 1*
"I wear … *Marley, Stave 1*	**"Mankind …** *Marley, Stave 1*	**"Would …** *Ghost of Christmas Past, Stave 2*	**"A solitary child, …** *Description of Scrooge as a child, Stave 2*	**"Yo ho …** *Fezziwig, Stave 2*
"Gain … *Belle, Stave 2*	**"Bore a little crutch …** *Description of Tiny Tim Stave 3*	**"To Mr Scrooge! …** *Bob Cratchit, Stave 3*	**"Yellow, meagre, …** *Description of Ignorance and Want, Stave 3*	**"Reeked of crime …** *Description of London slums*
"Overrun by … *Description of Scrooge's grave, Stave 4*	**"Oh, tell …** *Scrooge Stave 4*	**"No fog. No Mist. …** *Description of the weather, Stave 5*	**"I'm as light as …** *Scrooge, Stave 5*	**"God bless …** *Tiny Tim, Stave 5*

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Knowledge of Context

1. Macbeth was written in 1606 the **Jacobean era**, under the reign of **James 1**. Shakespeare deigned the play to please the king, setting it in **Medieval Scotland** (as James 1 was Scottish) in the 1000s and explored the theme of the **supernatural**, as this was a fascination of the king.

2. A common belief in the Jacobean era was that everything had its place in the universe, which had been set out by God. This order was called **The Great Chain of Being** that included everything from God and the monarch at the top to plants and rocks at the bottom. If the order was disrupted, the universe **would descend into chaos** to correct the

3. Alongside this was the belief in **The Divine Right of Kings**. This was the belief that the monarch was chosen by God to be their representative on Earth. Therefore, their word was God's word. If you displeased the monarch, you would displease God and be punished. James 1 often spoke about this belief, to keep his God-fearing people under control.

4. James 1 spent much of his reign feeling insecure as a protestant king. In 1605, a group of Catholic rebels attempted to assassinate the king by exploding the Houses of Parliament, as they wished England to be ruled by a protestant monarch. This was know as **The Gunpowder Plot**. Even though the plot failed, James was left feeling vulnerable. A year later, Shakespeare wrote Macbeth to warn his audience that anyone who commits **regicide** will be punished in life and after death.

5. Many critics argue that the play is very closely linked to **The Original Sin** – this is one of the first stories of The Bible. In the Garden of Eden, the devil (in the form of a serpent) tempts Eve to persuade Adam to eat the forbidden fruit – the first sin of mankind. Christians believe that as we all descend from Adam and Eve, we have all **inherited the capacity to sin**. No person is fully good or fully evil and we should all use our free will to choose righteousness. This message occurs throughout the play.

Writing about Literature

P **Point**

Answer the question

E **Evidence**

Embed a quote, or pattern of quotes that juxtapose or reinforce each other

A **Analyse**

Explain the inferences behind the quote in detail using as/so/because/which

Z **Zoom**

Explain the connotations of a powerful word or technique has and the effect of this

E **Effect**

Explain what the writer's intention is/ what they are trying to teach the reader

L **Link to Context**

Explain how these ideas link to the real world

Characters

Macbeth
Thane and later king

Lady Macbeth
Macbeth's Wife

Duncan
King at the start of the play

Malcolm
Duncan's son and heir

Donalbain
Duncan's youngest son

Banquo
Macbeth's friend

Fleance
Banquo's son

The Weird Sisters
Three Witches

Macduff
Thane of Fife

Lady Macduff
Macduff's wife

Ross
A Scottish Thane

Hecate
Queen of the witches

Macdonald
Traitor

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Knowledge of Context

When was the play written?

Who was King at the time?

When was the play set?

How did Shakespeare design the play to interest the King?

What was The Great Chain of Being?

What was at the top of the chain?

What was at the bottom of the chain?

What would happen in the chain was disrupted?

What was The Divine Right of Kings?

Why did James 1 talk about this belief a lot?

What happened in The Gunpowder Plot?

How did this leave James 1 feeling?

How does the play reflect this?

What is the story of The Original Sin?

What do Christians believe about Good and Evil?

How is this reflected in the play Macbeth?

Writing about Literature

P Point

E Evidence

A Analyse

Z Zoom

E Effect

L Link to Context

Characters

Macbeth

Lady Macbeth

Duncan

Malcolm

Donalbain

Banquo

Fleance

The Weird Sisters

Macduff

Lady Macduff

Ross

Hecate

Macdonald

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Knowledge of Essential Quotes

"Fair is foul and foul is fair, hover through fog and filthy air" *The Witches*	**"So foul and fair a day I have not seen"** *Macbeth's first line*	**"O valiant cousin! Worthy gentlemen"** *Duncan about Macbeth*	**"Unseamed him from knave to chaps and placed his head upon our battlements"** *Soldier about Macbeth killing Macdonald*	**"Whose horrid image doth unfix my hair and make my seated heart knock against my ribs"** *Macbeth when he heard the witches' prophecies*
"I do fear thy nature is too full of the milk of human kindness" *Lady Macbeth about Macbeth*	**"Come you spirits (…) unsex me here (…) fill me with direst cruelty"** *Lady Macbeth before Macbeth returns home*	**"Take my milk for gall" "Make thick my blood"** *Lady Macbeth to the spirits before Macbeth returns home*	**"I would have plucked my nipple from its boneless gums and dashed it's brains out, had I so have sworn to you"** *Lady Macbeth manipulating Macbeth*	**"I have no spur to prick the sides of my intent, only vaulting ambition"** *Macbeth to himself*
"Look like the innocent flower but be the serpent under it" *Lady Macbeth to the Macbeth*	**"Will all Great Neptune's Oceans wash this blood clean from my hands"** *Macbeth after regicide*	**"I fear thou has played most foully for it"** *Banquo, after Macbeth is King*	**"False face must hide what the false heart doth know"** *Macbeth to himself*	**"Fly good Fleance! Fly!"** *Banquo when murderers attack him*
"Never shake thy gory locks at me" *Macbeth to Banquo's ghost*	**"All the perfumes of Arabia will not sweeten this little hand"** *Lady Macbeth sleepwalking*	**"Til Birnham Wood move to Dunsinane I shall not taint with fear"** *Macbeth before his death*	**"Turn hellhound. Turn"** *Macduff to Macbeth before he kills him*	**"The dead butcher and his fiendlike queen"** *Malcom as king, about Macbeth*

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Knowledge of Essential Quotes

"Fair is … *The Witches*	**"So foul …** *Macbeth's first line*	**"O valiant …** *Duncan about Macbeth*	**"Unseamed him …** *Soldier about Macbeth killing Macdonald*	**"Whose horrid image …** *Macbeth when he heard the witches' prophecies*
"I do fear thy nature … *Lady Macbeth about Macbeth*	**"Come you …** *Lady Macbeth before Macbeth returns home*	**"Take my …** **"Make thick …** *Lady Macbeth to the spirits before Macbeth returns home*	**"I would have plucked…** *Lady Macbeth manipulating Macbeth*	**"I have no spur …** *Macbeth to himself*
"Look like the … *Lady Macbeth to the Macbeth*	**"Will all Great …** *Macbeth after regicide*	**"I fear thou …** *Banquo, after Macbeth is King*	**"False face must hide …** *Macbeth to himself*	**"Fly good …** *Banquo when murderers attack him*
"Never shake … *Macbeth to Banquo's ghost*	**"All the perfumes …** *Lady Macbeth sleepwalking*	**"Til Birnham Wood …** *Macbeth before his death*	**"Turn …** *Macduff to Macbeth before he kills him*	**"The dead butcher …** *Malcom as king, about Macbeth*

Year 11 English: 'An Inspector Calls' by J B Priestley

Knowledge of Context

1. JB Priestley wrote the play in **1945** after World War II. He set in in **1912 (Edwardian era)** to teach the post war audience that Britain needed change and cannot go back to the inequality of 1912.

2. **WWI and WWII changed British society** dramatically. For the first time, the social classes were mixed: in the army, in the workplace; due to evacuation. It was clear that the war could not have been won without the sacrifices made by the working class. Therefore, in the post war era, many people recognised that all people had a responsibility over each other, regardless of their social class.

3. Priestley wrote the play to criticise **Capitalism** (prioritising profit and business over the welfare of people). He was a **Socialist** (who prioritised people over profit). He promoted his socialist views on his BBC radio programme and used 'An Inspector Calls' to discredit **Capitalism** and promote **Socialism**.

4. In **the General Election of 1945**, Winston Churchill (Conservative Party) was confident he would be voted into power, after leading Britain to victory. However, **The Labour Party**, who represent the rights of the working class, won for the first time in history. The Labour Party (led by **Clement Atlee**) continued to expand **The Welfare State** (free education and healthcare for all) as a way to protect all people from the horrors of poverty.

5. Edwardian Britain was a **patriarchal society**. Men had the power, made the decisions and had their views heard. Women were seen to be owned by their fathers or husbands. Whilst women were under pressure to secure a good husband, men were under pressure to provide for (and maintain control over) their family.
By 1945, women were becoming more self sufficient and independent, due to their **service to Britain in war time** and the **Suffragette movement** (where women campaigned for the vote).

Writing about Literature

P **Point**

Answer the question

E **Evidence**

Embed a quote, or pattern of quotes that juxtapose or reinforce each other

A **Analyse**

Explain the inferences behind the quote in detail using as/so/because/which

Z **Zoom**

Explain the connotations of a powerful word or technique has and the effect of this

E **Effect**

Explain what the writer's intention is/ what they are trying to teach the reader

L **Link to Context**

Explain how these ideas link to the real world

Characters

Arthur Birling
Factory Owner

Sybil Birling
Arthur's Wife

Sheila Birling
Daughter

Eric Birling
Son

Gerald Croft
Sheila's fiancé

Inspector Goole
Police Inspector

Eva Smith/Daisy Renton

Edna
Maid

Places

Milwards
Department Store

The Palace Bar
Theatre Bar

Brumley
Town where they live

Year 11 English: 'An Inspector Calls' by J B Priestley

Knowledge of Context

When was the play written?
When was the play set?
Why did Priestley set it then?

How did the social classes mix during war time?

How did Britain change between 1912 and 1945?

Why did Britain become fairer after WWII?

What us Capitalism?
What is Socialism?
What were Priestley's views on these?

Who won the General Election in 1945?

Who thought they would win?

What is a Welfare State?

What is a patriarchal society?

What was a man's role in Edwardian Britain?

What was a woman under pressure to do?

What 2 events gave women more respect and independence?

Writing about Literature

P Point

E Evidence

A Analyse

Z Zoom

E Effect

L Link to Context

Characters

Arthur Birling

Sybil Birling

Sheila Birling

Eric Birling

Gerald Croft

Inspector Goole

Eva Smith/

Edna

Places

Milwards

The Palace Bar

Brumley

Year 11 English: 'An Inspector Calls' by J B Priestley

Knowledge of Essential Quotes

Rather portentous man, provincial in his speech *Stage direction describing Arthur*	**Half shy, half assertive** *Stage direction describing Eric*	**Rather cold woman and her husband's social superior** *Stage direction describing Sybil*	**Very pleased with life and rather excited** *Stage direction describing Sheila*	**Well bred man about town** *Stage direction describing Gerald*
Creates an impression of massiveness, solidity and purposefulness *Stage direction describing Goole*	**"It's my duty to keep labour costs down"** *Arthur - Act 1*	**"Community and all that nonsense"** *Arthur - Act 1*	**"Unsinkable! Absolutely unsinkable!"** *Arthur - Act 1*	**"We are responsible citizens not criminals"** *Gerald - Act 1*
"But these girls aren't cheap labour; they're people" *Sheila - Act 1*	**"He could have kept her on instead of throwing her out"** *Eric – Act 1*	**"I hate all those hard eyed, dough faced women"** *Gerald – Act 2*	**"Girls of that class -"** *Sybil – Act 2*	**"We have done a great deal of useful work in helping deserving cases."** *Sybil – Act 2*
"I was in that state where a chap can easily turn nasty." *Eric – Act 3*	**"She was pretty and a good sport"** *Eric – Act 3*	**"Look Inspector – I'd give thousands, yes thousands"** *Arthur – Act 3*	**"There are millions and millions and millions of Eva Smiths and John Smiths"** *Goole – Act 3*	**"We are all members of one body (…) responsible for each other"** *Goole - Act 3*

Year 11 English: 'An Inspector Calls' by J B Priestley

Knowledge of Essential Quotes

Rather portentous … *Stage direction describing Arthur*	**Half shy, …** *Stage direction describing Eric*	**Rather cold …** *Stage direction describing Sybil*	**Very pleased …** *Stage direction describing Sheila*	**Well bred …** *Stage direction describing Gerald*
Creates an impression … *Stage direction describing Goole*	**"It's my duty …** *Arthur - Act 1*	**"Community …** *Arthur - Act 1*	**"Unsinkable! …** *Arthur - Act 1*	**"We are responsible …** *Gerald - Act 1*
"But these girls aren't … *Sheila - Act 1*	**"He could have kept …** *Eric – Act 1*	**"I hate all those …** *Gerald – Act 2*	**"Girls of …** *Sybil – Act 2*	**"We have done a …** *Sybil – Act 2*
"I was in that state … *Eric – Act 3*	**"She was pretty …** *Eric – Act 3*	**"Look Inspector – I'd give …** *Arthur – Act 3*	**"There are millions …** *Goole – Act 3*	**"We are all members …** *Goole - Act 3*

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Ozymandias by Percy Shelley

"Ozymandias" tells the story of a broken statue that once represented a powerful king. Time and nature have destroyed the statue, showing the fleeting nature of human accomplishments. The poem teaches us that even the mightiest rulers and empires will eventually fade away, reminding us of the importance of humility.
The poem is written in the form of a sonnet (traditional love poem) to symbolise the self love of the pharaoh and the ego of mankind.

Key Quotes			
	"My name is Ozymandias, King of Kings, Look upon my works you mighty and	"the hand that mocked them and the heart that fed"	"the decay of that colossal wreck"

Shelley was a Romantic poet who had a deep appreciation for nature and criticised the government, monarchy and absolute power.

London by William Blake

"London" by William Blake is a poem that explores the negative aspects of city life during the Industrial Revolution. It describes the author's observations of poverty, despair, and the loss of innocence among the people he encounters. The poem criticises the government and the monarchy's Laissez Faire attitudes that contribute to their suffering and emphasises the need for compassion and social change.
Blake includes an allusion to the French Revolution, where the people of France revolted and beheaded the monarchy, to glamourise the idea of a revolution in Britain.

Key Quotes			
	"Mind-forged manacles I hear"	"Soldiers sigh runs in blood down palace walls"	"Where the chartered Thames does flow"

Blake was a Romantic poet who did not trust the government or the monarchy and wished to draw attention to the suffering of the poor (particularly children) in his work.

Comparing Poetry

P — Point
Answer the question

E — Evidence
Embed a quote, or pattern of quotes that juxtapose or reinforce each other

A — Analyse
Explain the inferences behind the quote in detail using as/so/ because/which

Z — Zoom
Explain the connotations of a powerful word or technique has and the effect of this

E — Effect
Explain what the writer's intention is/ what they are trying to teach the reader

L — Link to Context
Explain how these ideas link to the real world

C — Compare to second poem in detail
Explain similar or different meanings, messages and methods

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Ozymandias by Percy Shelley

1. What is the focus of the poem?
2. What destroys the statue?
3. What does the poem teach us?
4. What form is the poem written in?
5. What does this form symbolise?

Key Quotes			
	"My name is _____ _____ _____"	"the hand that _____ _____"	"the decay _____ _____"

What did Romantic Poets write about?

London by William Blake

1. What does the poem focus on?
2. What does the poet see as he walks around the city?
3. What does the poem criticise?
4. What allusion does Blake include?
5. What does he include this allusion?

Key Quotes			
	"Mind-forged _____ _____"	"Soldiers sigh _____ _____"	"Where the _____ _____"

What did Blake want to change about society?

Comparing Poetry

P **Point**

_____

E **Evidence**

_____

_____

A **Analyse**

_____

_____

Z **Zoom**

_____

_____

E **Effect**

_____

_____

L **Link to Context**

_____

_____

C **Compare to second poem in detail**

_____

_____

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Extract from The Prelude by William Wordsworth

In "The Prelude" by William Wordsworth, the speaker reflects on a childhood experience of being overwhelmed by the power of nature. He remembers a moment when he rows a boat on a lake, and suddenly a majestic mountain emerges from behind a curtain of mist, leaving him in awe. The moment frightens and humbles him and he dreams about it for a long time after.

The poem is written in one long stanza with enjambment throughout, to emphasise the lack of control the speaker

Key Quotes			
	"went heaving through the water like a swan"	"huge peak. Black and huge as if with voluntary power instinct."	"huge and mighty forms (…) were a trouble to my dreams"

Wordsworth was a Romantic poet who had a deep appreciation for nature's everlasting power and often used nature to escape from conflict in his family

My Last Duchess by Robert Browning

"My Last Duchess" by Robert Browning is a poem in which a wealthy Duke speaks about his former wife, who he had killed because of her alleged flirtatiousness. The Duke reveals his jealousy and possessiveness, as well as his desire for control and power. It offers a chilling insight into the mind of a man who sees women as objects to be possessed and controlled.

Browning writes the poem as a dramatic monologue to represent the Duke's ego, status and control, as he is the only character talking without interruption. We only hear his perspective on his relationship.

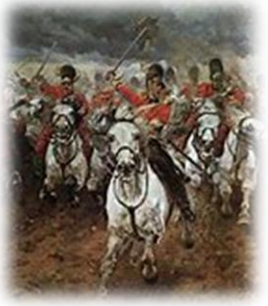
Key Quotes			
	"(None puts back the curtains I have drawn for you but I)"	"White mule she rode around the terrace"	"Notice Neptune taming a sea horse which Claus of Innsbruck cast in bronze for me!"

Browning was a Romantic poet of the Victorian era, which was a patriarchal time period that placed a high importance on the social status of the bourgeoisie.

The Charge of the Light Brigade by Alfred Lord Tennyson

"The Charge of the Light Brigade" recounts a heroic but tragic event of The Battle of Balaclava in the Crimean War. It describes the courage and loyalty of a brigade of British cavalry soldiers as they obey a misunderstood order to charge into enemy lines, despite being outnumbered and facing certain death. The poem honours their bravery and self-sacrifice, but raises questions about how far army leaders can be trusted.

Tennyson uses biblical allusions to 'the valley of death' to imply that God was with these heroic men.



Key Quotes			
	"Into the valley of death, into the mouth of hell"	"There's not to reason why. There's but to do and die"	"The noble 600"

At this time, most poetry presented war as heroic, glorious and an exciting adventure; writing such a critical poem was unusual for this time period.

Exposure by Wilfred Owen

"Exposure" by Wilfred Owen is a powerful war poem that captures the harsh reality of soldiers in World War I, that was a contrast to the glory of war promised by Government propaganda. It vividly describes the freezing conditions, fear, and despair they face. Through haunting imagery and vivid descriptions, Owen exposes the brutality and futility of war, urging us to remember its devastating consequences.

Owen personifies the wind to emphasise its power and how the soldiers were just as vulnerable to the destructive forces of nature as the German army.

Key Quotes			
	"Our brains ache in the merciless iced winds that knive us"	"But nothing happens"	"war lasts, rain soaks clouds sag stormy"

Owen was a WW1 soldier who died in action. He wrote about the horrors of war criticising the way war was glorified in propaganda.

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Extract from The Prelude by William Wordsworth

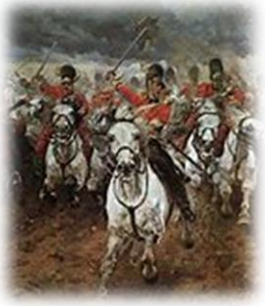
1. What does the speaker reflect on in the poem?
2. What happens on the speakers' journey across the lake?
3. How does the experience affect the speaker?
4. How is the poem structured?

Key Quotes			
	"went heaving _____ _____"	"huge peak_____ _____ _____."	"huge and mighty _____ _____"

What was Wordsworth inspired by?

The Charge of the Light Brigade by Alfred Lord Tennyson

1. What battle is the poem about?
2. Why were the soldiers in this battle so heroic?
3. What questions does the poem raise?



Key Quotes			
	"Into the valley _____ _____"	"There's not to reason _____ _____"	"noble _____"

Why was this poem unusual for the time period?

My Last Duchess by Robert Browning

1. What is the poem about?
2. What does the poem reveal about the Duke?
3. How does the Duke view women?
4. Give 2 reasons why Browning wrote the poem as a dramatic monologue.

Key Quotes			
	"(None puts back the _____ _____)"	"White mule _____ _____"	"Notice _____ _____ _____!"

Who had power in Victorian society?

Exposure by Wilfred Owen

1. What does the poem focus un?
2. What is described in the poem?
3. What does Owen want the reader to remember from the poem?
4. Why does Owen personify the wind?

Key Quotes			
	"Our brains ache _____ _____"	"But nothing _____"	"war lasts, _____ _____"

What did Owen frequently criticise in his poetry?

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Storm on the Island by Seamus Heaney

"Storm on the Island" by Seamus Heaney is a poem that explores the power of nature and its impact on human beings. Set on a remote island, the poem describes the fear and vulnerability experienced during a storm. Heaney emphasises the resilience of people and the need to unite in the face of adversity.
The poem is an extended metaphor, that symbolises 'The Troubles' in Northern Ireland. This is created by the semantic field of war, that is used throughout the poem.

Key Quotes			
	"spits like a tamed cat turned savage"	"We are bombarded by empty air"	"sea is company, exploding comfortably down the cliffs"

The Irish Troubles was a conflict in Northern Ireland (1960s-1990s) between Irish Nationalists (who wanted an independent Ireland) and Unionists (who wanted to remain part of the United Kingdom). The conflict involved bombings, shootings, riots and officially ended with the signing of the Good Friday Agreement in 1998.

Bayonet Charge by Ted Hughes

"Bayonet Charge" by Ted Hughes portrays the chaos and horror of war. It follows a soldier who impulsively charges into battle, driven by fear and survival instincts. Through vivid descriptions and intense imagery, Hughes exposes the brutality and dehumanising nature of war, questioning its purpose and consequences.
Hughes uses the symbol of a distressed "yellow hare" to symbolise how the solider himself is in turmoil. This could also be a symbol for how war destroys nature as well as mankind.

Key Quotes			
	"suddenly he awoke and was running"	"Yellow hare that rolled like a flame and crawled in a threshing circle"	"Terror's touchy dynamite"

Many soldiers in WW1 were shocked at the horrific and traumatic conditions of war when they reached the trenches; propaganda had promised them glory and adventure, but the reality of conflict juxtaposed this.

Remains by Simon Armitage

"Remains" by Simon Armitage is a poem that explores the psychological impact of war on an individual. It follows a soldier haunted by guilt after shooting a looter in a conflict, as the forced used to 'tackle' him could be seen as unreasonable. The poem raises questions about the morality of war and the lasting trauma it inflicts on those involved.
Armitage repeats the phrase 'probably armed, possibly not' to emphasise the uncertainty the soldier feels as he considers how he took a human life.

Key Quotes			
	"probably armed, possibly not"	"tosses his guts back into his body"	"The drink and the drugs won't flush him out"

Many soldiers face Post Traumatic Stress Disorder (PTSD) after they have returned from war.

Poppies by Jane Weir

"Poppies" by Jane Weir explores the emotions of a mother whose son has gone off to war. It delves into her memories of him, the anxiety and fear she experiences, and her longing for his safe return. The poem reflects on the sacrifices and heartache associated with conflict. At the end of the poem it is suggested that he has died, yet we are left uncertain, representing the constant uncertainty felt by families of soldiers in war time.
When the mother removes the 'white cat hairs' from her son's uniform, it symbolises her removing his childhood innocence and the comfort of home.

Key Quotes			
	"I resisted the impulse to run my fingers through the gelled blackthorns of your hair"	"The world overflowing like a treasure chest"	"I traced the inscriptions on the war memorial and leant against it like a wishbone"

Weir is a mother to two sons so empathises with the grief felt by mothers of fallen soldiers. The poppy is a symbol of remembrance in all wars.

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Storm on the Island by Seamus Heaney

1. What is the poem about?
2. What happens in the poem?
3. What does the poet emphasise?
4. What is the poet an extended metaphor for?

Key Quotes			
	"spits _____ _____ _____"	"We are bombarded _____"	"sea is company, _____ _____"

What were the Irish Troubles?

Bayonet Charge by Ted Hughes

1. What is the poem about?
2. What does the poem make us realise and question?
3. List 2 things the 'yellow' hare' could symbolise.

Key Quotes			
	"suddenly _____ _____"	"Yellow _____ _____"	"Terror's _____ _____"

Why were the soldiers of WWI shocked when they reached the trenches?

Remains by Simon Armitage

1. What is the message of the poem?
2. What/who is the poem about?
3. What does the poem question?
4. What phrase does Armitage repeat?
5. Why does Armitage use repetition?

Key Quotes			
	"probably armed,_____ _____"	"tosses his guts ____ _____"	"The drink and the drugs _____"

What is PTSD?

Poppies by Jane Weir

1. Who is the focus of the poem?
2. What does the speaker think about in the poem?
3. What happens at the end of the poem?
4. Why might the poet have chosen this ending?
5. What could the 'white cat hairs' symbolise?

Key Quotes			
	"I resisted the impulse to _____ _____ _____"	"The world overflowing _____"	"I traced the inscriptions on _____"

What is the poppy used to symbolise?

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

War Photographer by Carol Ann Duffy

"War Photographer" by Carol Ann Duffy explores the experiences of a photographer capturing the horrors of war. It highlights the contrast between the photographer's detached professional life and the emotional impact of witnessing suffering. It raises questions about the morality of taking these images, the impact they have in the media and the **responsibility of bearing witness.**

Duffy lists countries where war occurs from across the world, to symbolise widespread and inescapable conflict.

Key Quotes			
	"Fields which don't explode beneath the feet of children running in nightmare heat"	"Blood stained into foreign dust"	"their eyeballs prick with tears"

The media buy the most shocking war photographs to share. This can be seen a spreading awareness but also making money from people's suffering

The Emigree by Carol Rumens

"The Emigree" by Carol Rumens is about a refugee who has left their home country and reflects on their memories of it. The speaker describes their city with vivid imagery and fondness, while also acknowledging the hardships and changes that forced them to leave. The poem explores themes of identity, nostalgia, and the impact of political events on individuals.

The speaker personifies her home country to emphasise her unbreakable loyalty and connection to it.

Key Quotes			
	"It may be at war, it may be sick with tyrants"	"I am branded by an impression of sunlight"	"I have no passport. There is no way back at all"

Refugees are often villainised as being invaders. Rumens emphasises that they are victims of war who have not chosen to seek refuge but have found themselves desperate.

Tissue by Imtiaz Dharker

"Tissue" by Imtiaz Dharker reflects on the significance of paper in our lives. It explores how paper, like human connections, can be fragile yet powerful. The poem encourages us to value the small moments and relationships that shape our lives, reminding us of their value.

Dharker uses an ambiguous title that could refer to fragile paper or human flesh. This is to highlight that human life is as delicate as tissue paper.

Key Quotes			
	"Paper that lets the light shine through, this is what could alter	"Maps too. The sun shines through their borderlines"	"Fine slips from grocery shops (…) might fly our lives like paper kites"

Dharker explores how paper overpowers humans and causes conflict across the world (maps, religious documents, money).

Checking Out Me History by John Agard

"Checking Out Me History" by John Agard explores the importance of learning about neglected or overlooked figures from history, particularly those of non-Western backgrounds. The speaker challenges the traditional curriculum and calls for a more inclusive representation of diverse cultures and achievements. The poem celebrates the strength and resilience of individuals who have been marginalised, encouraging readers to question and reclaim their own histories.

Agard juxtaposes the 'nonsense' of nursery rhymes with the inspirational stories of non-western figures to question the National Curriculum.

Key Quotes			
	"Dem tell me what dem want to tell me"	"Blind me to my own identity"	"Florence Nightingale" "Mary Seacole"

Agard criticises the 'Eurocentric' view of history and white supremacy in the education he received as a child in Britain.

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

War Photographer by Carol Ann Duffy

1. What is the poem about?
1. What does the poem raise questions about?
3. Why does Duffy list countries affected by war?

Key Quotes

"Fields which don't explode _____ _____"

"Blood _____ _____ _____"

"their eyeballs _____ _____"

How can publicising images of war be seen as positive as well as negative?

Tissue by Imtiaz Dharker

1. What does the poem reflect on?
2. How does the poem present paper?
3. What does the poem teach us?
4. Why does the poet use an ambiguous title?

Key Quotes

"Paper that lets the light shine through, _____"

"Maps too. _____ _____ _____"

"Fine slips from grocery shops _____ _____"

How does the poem 'Tissue' relate to the theme of conflict?

The Emigree by Carol Rumens

1. What is the poem about?
2. What does the speaker discuss in the poem?
3. What themes are explored in the poem?
4. Why does the speaker personify their home

Key Quotes

"It may be at war, _____ _____"

"I am branded by __ _____ _____"

"I have no passport. _____ _____"

How are refugees often judged?

Checking Out Me History by John Agard

1. What is the poem about?
2. What does the speaker want to change about what is taught at school?
3. What does the poem celebrate?
4. How does the poet use juxtaposition?

Key Quotes

"Dem tell me what dem want to tell me"

"Blind me to my own identity"

"Florence Nightingale" "Mary Seacole"

What did Agard intend to teach his audience with this allegorical poem?

Year 11 English: 'Macbeth' by William Shakespeare and Power and Conflict Poetry

Kamikaze by Beatrice Garland

"Kamikaze" by Beatrice Garland tells the story of a Japanese pilot who contemplates a suicide mission during World War II. It explores the conflict between personal identity and societal pressures. The poem raises questions about the value of individuality and the consequences of blindly following orders, as the pilot is ostracised by his family and community for deciding to return from the mission.
Garland uses lots of natural imagery to explore the impact of war on nature but also to question whether war and conflict is a natural way to behave.

Key Quotes			
	"Shaven head full of powerful incantations"	"one-way journey into history"	"He must have wondered which had been the better way to die"

In WWII, Japanese people were socially conditioned to glorify Kamikaze pilots. If they returned from the suicide mission they would bring shame upon themselves and their families.

Poetic Form	Explanation	Examples
Sonnet	A poem of 14 lines, traditionally a love poem	Ozymandias
Narrative Poem	Tell a story to present an individual's experience	The Prelude, Kamikaze, Poppies
Dramatic Monologue	A single character speaks directly to an audience.	My Last Duchess
Free Verse Poem	Poems that do not follow any specific rhyme or rhythm patterns	Tissue, War Photographer

Poetic Methods

Metaphor: comparing two things without using "like" or "as," creating vivid and imaginative descriptions.
Imagery: using descriptive language to create sensory experiences, painting a vivid picture in the reader's mind.
Enjambment: when a sentence or phrase continues onto the next line without a pause or punctuation, creating a flow and adding emphasis.
Semantic Field: a group of words related to a specific theme or topic, creating a focused and consistent image.
Caesura: a pause or break in the middle of a line of poetry, often marked by punctuation.
Ambiguity: using language or descriptions that can be interpreted in more than one way, allowing for different meaning.
Symbolism: using objects, images, or actions to represent deeper meanings or ideas.
Allusion: making references to well-known people, events, or stories from literature, history, or mythology.
Repetition: repeating words, phrases, or lines for emphasis.
Onomatopoeia: using words that imitate or mimic sounds, adding a sense of realism or creating a particular mood.

Kamikaze by Beatrice Garland

1. **What story is told in the poem?**
2. **What conflict is explored?**
3. **What questions does the poem raise?**
4. **Why does the poet use lots of natural imagery in the poem?**

Key Quotes	"Shaven head __ _____, _____"	"one-way _____ _____"	"He must have _____ _____"

In WW2, how did Japanese people view Kamikaze pilots?

Poetic Form	Explanation	Examples
Sonnet		
Narrative Poem		
Dramatic Monologue		
Free Verse Poem		

Poetic Methods

Complete the definitions of each method

A metaphor is… _____

Imagery is… _____

Enjambment is… _____

A semantic field is… _____

Ambiguity is…_____

Symbolism is… _____

An allusion is…_____

Repetition is… _____

Onomatopoeia is…_____

Year 11 English: English language paper 1

Section A: Reading Section

Question 1

List for things you learn about…

- **4 marks**
- **5 mins (as part of your reading time)**

Find answers from the correct lines

Write in full sentences with the key word from the question

Two answers per line

Question 2

How does the writer use language to…?

- **8 marks**
- **10-12 mins**
- **3 x ZE paragraphs**

Zoom	**Effect**
Pick a powerful word or language technique + Identify the connotations created	Explain in detail the meanings created the reader's response (as/so/because/which)

Question 3

How does the writer structure the text to interest the reader?

- **8 marks**
- **10-12 mins**
- **2 PEA paragraphs**
  - **1 PEA about the opening**
  - **1 PEA about the ending**

Point	What does the writer do/use to interest the reader? **(choose from WATCH)**
Evidence	Quote
Analyse	Explain how this makes the reader intrigued and curious

W – **Withholding Information** – What does the writer not tell us to make us curious?

A – **Atmosphere** – What atmosphere is created and why is this intriguing?

T – **Topics/Themes**– Which topics and themes do we focus on? Why does this hold our attention?

C – **Characters**– Why are we engaged by the character?

H – **Hints**– What do we expect to happen next? What is foreshadowed?

Question 4

How far do you agree or disagree (with the statement)?

- **20 marks**
- **20 mins**
- **Split the statement**

Complete 1 STEP METHOD paragraph on each part of the statement (2 in total).

Step A
State the part of the statement you are focusing on, whether you **agree or disagree** and why.

Step B
Embed a **quote** (or pattern of quotes) to prove that your judgement is accurate.

Step C
Analyse the **inferences** behind the quotes. Explain what they prove about the statement. As/so/because/which

Step D
Zoom in on 2+ methods or powerful words. Identify connotations and explain the effects. As/so/because/which

Step E
Summarise which you agree or disagree.

Start with the word, *Overall…*

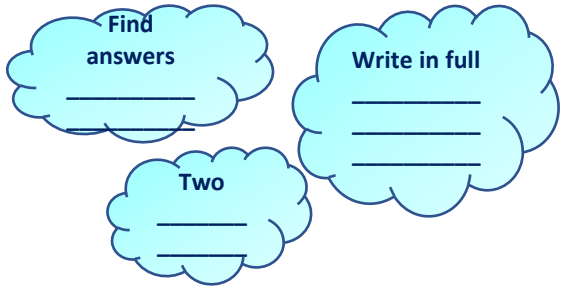
Year 11 English: English language paper 1

Section A: Reading Section

Question 1

List _____…

- 4 marks
- 5 mins (as part of your reading time)



Question 2

How does the writer use _____ to…?

- 8 marks
- 10-12 mins
- 3 x ZE paragraphs

Zoom	Effect
_____ _____ + _____ _____	_____ _____ _____ – (__/___/_____/___)

Question 3

How does the writer _____ _____?

- 8 marks
- 10-12 mins
- 2 PEA paragraphs
  - 1 _____ about the opening
  - 1 _____ about the ending

Point	
Evidence	
Analyse	

W – _____ – What does the writer not tell us to make us curious?

A – _____ – What atmosphere is created and why is this intriguing?

T – _____ – Which topics and themes do we focus on? Why does this hold our attention?

C – _____ – Why are we engaged by the character?

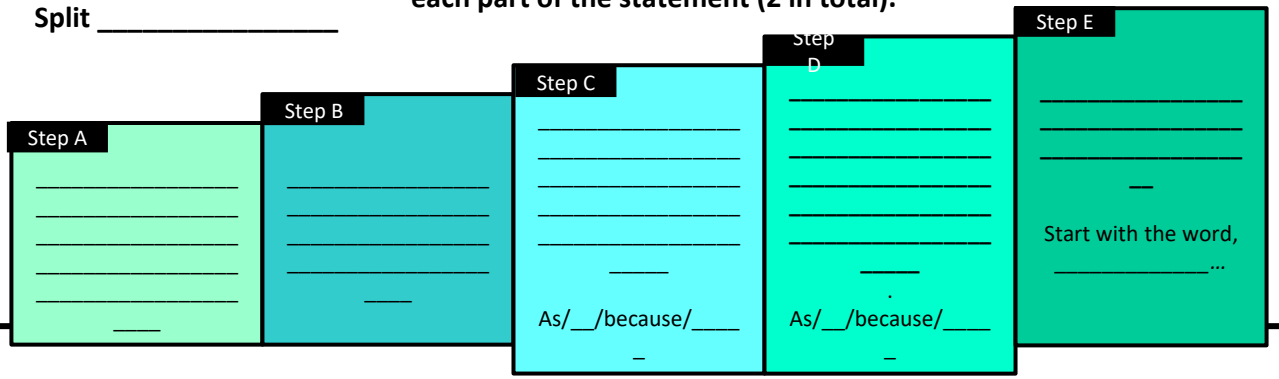
H – _____ – What do we expect to happen next? What is foreshadowed?

Question 4

How far do you _____ (_____)?

- 20 marks
- 20 mins
- Split _____

Complete 1 STEP METHOD paragraph on each part of the statement (2 in total).



Year 11 English: English language paper 1

Section B: Writing Section

Question 5

Write a descriptive story.

Choose from…

- **A picture stimulus**
- **A written stimulus**
- **45 minutes**
- **40 marks**
  - **24 marks – Content and Organisation**
  - **16 marks – Technical Accuracy**

Technical Accuracy = Spelling, punctuation and grammar

Vocabulary more important than spelling

Content and Organisation = The way you craft and structure your piece

Show Don't Tell

Paragraph structure:

1	**Hook**	A dramatic opening that withholds information
2	**Description**	Detailed description of setting and character
3	**Flashback**	Descriptions of past event and how it impacts the present
4	**One Liner**	Dramatic sentence
5	**Climax**	Detailed description of one major event
6	**Cliff Hanger**	Unanswered questions at the end. Link to the hook

… ( ) : : ? ! -

Punctuation Marks

Capital Letters Start of every sentence. Proper nouns (names). Abbreviations.

Full Stops At the end of a statement or piece of information.

Question Marks At the end of a question

Brackets and Dashes Add extra information (subordinate clauses) much like commas.

Colon Before a colon is a full sentence. After colon is a list or explanation.

Semi Colon Links to full sentences that are linked by topic or idea

Exclamation Marks At the end of an emotional or exaggerated sentence

Apostrophes To show possession or missing letters in a contraction *(e.g. can't)*

Commas Separate items in a list or used to add extra information

Ellipsis Creates a dramatic pause

Proof Read!

Varying sentence openings

Vary the way that you start sentences to keep your writing interesting and lively.

Start your sentence with a…	Example
verb – an action word	**Running for her life,** Sarah shouted at the bus to stop.
simile - comparing something to something else	**As quiet as a whisper,** he turned to me.
preposition – indicates the position of someone or something	**Beyond** the gate, the road stretched far away.
adverb – modifies or describes a verb, adjective or another adverb	**Cautiously,** he moved away from the lion.
connective – joining word	**Despite** the sunshine, Mr Tucker was wearing a heavy coat.

Quality over Quantity

Varying sentence length

Use your sentence lengths to reflect the pace of the action in the **narrative**. Short sentences can show a faster pace and create drama and tension whereas longer sentences tend to slow it down.

Year 11 English: English language paper 1

Section B: Writing Section

Question 5

Write a _____.

Choose from…

- **A _____ stimulus**
- **A _____ stimulus**
- **45 minutes**
- **40 marks**
  - **24 marks – _____**
  - **16 marks – _____**

Technical Accuracy = _____ _____

_____ more important than _____

Content and Organisation = _____ _____

_____ _ Don't Tell

Paragraph structure:

1	**Hook**
2	**Description**
3	**Flashback**
4	**One Liner**
5	**Climax**
6	**Cliff Hanger**

… ( ) : : ? ! -

Punctuation Marks

Capital Letters	Full Stops	Question Marks
_____ _____ _____	_____ _____ _____	_____ _____ _____

Brackets and Dashes	Colon	Semi Colon
_____ _____ _____	_____ _____ _____	_____ _____ _____

Exclamation Marks	Apostrophes	Commas
_____ _____ _____	_____ _____ _____	_____ _____ _____

Ellipsis _____

Proof Read!

Varying sentence openings

Vary the way that you start sentences to keep your writing interesting and lively.

Start your sentence with a…	Example
_____ – an action word	**Running for her life,** Sarah shouted at the bus to stop.
_____ - comparing something to something else	**As quiet as a whisper,** he turned to me.
_____ – indicates the position of someone or something	**Beyond** the gate, the road stretched far away.
_____ – modifies or describes a verb, adjective or another adverb	**Cautiously,** he moved away from the lion.
_____ – joining word	**Despite** the sunshine, Mr Tucker was wearing a heavy coat.

_____ _ over _____ _

Varying sentence length

Use your sentence lengths to reflect the _____ of the action in the **narrative**. Short sentences can show a _____ pace and _____ _____ and tension whereas longer sentences tend to slow it down and develop _____ _____and explanations.

Year 11 English: English language paper 1

Section A: Reading Section

Question 1

Find 4 true statements…

- 4 marks
- 5 mins (as part of your reading time)

Find answers from the correct lines

The statements are designed to trick you

Use ✓ X ? method

Question 2

~~Summarise~~ Infer the differences or differences.

- 8 marks
- 10 mins

Paragraph 1
Source A: Quotes + Inferences

Paragraph 2
Source B: Quotes + Inferences

Paragraph 3
Differences/Similarities

Question 3

How does the writer use language to…?

- 12 marks
- 12 mins
- 3 x ZE paragraphs

Zoom
Pick a powerful word or language technique
+
Identify the connotations created

Effect
Explain in detail the meanings created the reader's response (as/so/because/which)

Question 4

Compare how the writers convey their views and perspectives on _____.

- 16 marks
- 16 mins

You are comparing the writer's opinions and views… NOT what the text are about.

Paragraph 1 – Compare the writer's opinions

- PEA on Source A (Writer's opinion)
- PEA on Source B (Writer's opinion)
- Similarities/Differences

Paragraph 2 – Compare the writer's methods

- ZE on Source A (What this method shows about the wirer's view)
- ZE on Source A (What this method shows about the wirer's view

Paragraph 3 – Compare anything else (optional)

- Compare any other attitude or method that you have not had chance to explore yet *e.g. tone, structure, format.*

Year 11 English: English language paper 1

Section A: Reading Section

Question 1

Find _____ _____…

- 4 marks
- 5 mins (_____)

Find answers from the _____

The statements are designed _____

Use _____ method

Question 2

~~Summarise~~ _____ the differences or differences.

- 8 marks
- 10 mins

Paragraph 1
_____

Paragraph 2
_____

Paragraph 3
_____

Question 3

How does the writer use _____ to…?

- 12 marks
- 12 mins
- 3 x ZE paragraphs

Zoom	Effect
_____ _____ + _____ _____	_____ _____ _____ (__/__/_____/_____)

Question 4

Compare how the writers convey their _____ and _____ on _____.

- 16 marks
- 16 mins

You are comparing the _____ _____… NOT what the text are about.

Paragraph 1 – Compare the writer's opinions

- _____
- _____
- _____

Paragraph 2 – Compare the writer's methods

- _____
- _____
- _____

Paragraph 3 – Compare anything else (optional)

- _____
  _____

Year 11 English: English language paper 1

Section B: Writing Section

Question 5

Write a persuasive text, arguing your views

You may be asked to write…

Article Letter Speech Blog

- **45 minutes**
- **40 marks**
  - **24 marks – Content and Organisation**
  - **16 marks – Technical Accuracy**

Content and Organisation = The way you craft and structure your piece

Technical Accuracy = Spelling, punctuation and grammar

… ( ) : : ? ! -

Vocabulary more important than spelling

Paragraph structure:

1	**Introduction**	What is the topic? What is your view?
2	**Background**	Researched information on the topic
3	**Counterargument**	The opposing argument (and why it is wrong)
4	**One Liner**	Dramatic sentence
5	**Mian Event**	Your strongest argument, forcefully reasoned
6	**Solution**	What can be changed to improve the situation?

Quality over Quantity

Don't sit on the fence!
No person ever wrote a speech, article, letter or blog on a topic they didn't have strong feelings about! To make your piece convincing, pick a viewpoint… and stick to it!

Persuasive Devices

Direct address Speaking to the reader directly.

Anecdotes True stories about real people and events

Exaggeration Making something sound better/worse than it is

Rhetorical Questions Questions that provoke the reader to consider an idea

Emotive Language Vocabulary chosen to evoke a particular emotional response

Statistic Researched facts with ratios, high numbers and percentages.

Tripartite Structure At the end of an A list of 3 ideas, adjectives, reasons etc.

Expert Witness A quote from someone with first-hand knowledge or experience

Repetition Using the same word or phrase more than once to draw attention to it

Varying sentence openings

Never start your piece with 'I agree with the statement'.
The statement is there to give you ideas - No realistic text would begin this way

Proof Read!

Start your sentence with a…	Example
Imperative verb – a command word	**Imagine** walking seven miles to school in these conditions.
Second person pronouns - *you* and *your*	**You** must see that time is running out to save our seas and oceans.
Question word – a word that comes at the beginning of a question.	**Why** is society so insistent on ignoring these cried for help?
Adverb – modifies or describes a verb, adjective or another adverb	**Interestingly,** most people have never heard of the disease.
Connective – joining word	**Despite** the overwhelming evidence, many are still ignorant to the impacts of pollution

Year 11 English: English language paper 1

Section B: Writing Section

Question 5

Write a _____ text, arguing your views.

You may be asked to write…

_____ _____ _____ _____

- **45 minutes**
- **40 marks**
  - **24 marks – _____**
  - **16 marks – _____**

Content and Organisation = _____ _____

Technical Accuracy = Spelling, _____ _____

… ( ) : : ? ! -

Paragraph structure:

1	**Introduction**	
2	**Background**	
3	**Counterargument**	
4	**One Liner**	
5	**Mian Event**	
6	**Solution**	

_____ over Quantity

Don't sit on the fence!

No person ever wrote a speech, article, letter or blog on a topic they didn't have strong feelings about! To make your piece convincing, _____ _____!

Vocabulary more important than spelling

Persuasive Devices

Direct address _____ _____	**Anecdotes** _____ _____	**Exaggeration** _____ _____
Rhetorical Questions _____ _____ _____	**Emotive Language** _____ _____ _____	**Statistic** _____ _____ _____
Tripartite Structure _____ _____ _____	**Expert Witness** _____ _____ _____	**Repetition** _____ _____ _____

Varying sentence openings

Never start your piece with '_____'.

The statement is there to give you ideas - No realistic text would begin this way

Proof Read!

Start your sentence with a…	Example
_____ _____ – a command word	**Imagine** walking seven miles to school in these conditions.
_____ _____ _____- *you* and *your*	**You** must see that time is running out to save our seas and oceans.
_____ _____ – a word that comes at the beginning of a question.	**Why** is society so insistent on ignoring these cried for help?
_____ – modifies or describes a verb, adjective or another adverb	**Interestingly,** most people have never heard of the disease.
_____ – joining word	**Despite** the overwhelming evidence, many are still ignorant to the impacts of pollution

Year 11 English: English language paper 1

Section B: Writing Section

Question 5

Describe a scene, person or event.

Choose from…

- **A picture stimulus or a written stimulus**
- **45 minutes**
- **40 marks** **24 marks – Content and Organisation**
  16 marks – Technical Accuracy

The image is a springboard – add ideas as you wish

Show don't tell

Give objects emotions *e.g. the sky's anger*	**Give emotions colours** *e.g. a black depression hung in the air*	**Extend a metaphor over a number of sentences**
Describe using an unlikely verb *e.g. the wind howled*	**How to make a metaphor** *(Personification is a type of metaphor)*	**Make nature sound alive** *e.g. the waves continued to roll, intent on destruction*
Give an animal/object human qualities *e.g. the wind's icy breath*	**Give a human/object animal qualities** *e.g. the shadows stalked the clouds*	**Describe something as something it isn't** *e.g. his eyes were ice; they melted at the sight of her*

Paragraph structure:

1	**Top of the scene**	• Describe the sky, horizon, atmosphere, weather • Something falls from the sky to the scene below.
2	**Drop into the scene**	• Describe the scene below: zoom in on 3 details. • A sound draws your attention to a character in the scene.
3	**Character zoom**	• Zoom in on the character (human or animal): describe their eyes, face, mouth, movements, breath, behaviour, hair etc. • The character is holding an object, describe it.
4	**Flashback**	• The object provokes the character to remember something from the past. • Describe how the character got the object.
5	**Back to the present moment**	• The character picks up the object and watches something travel back up to the sky.

Colour synonyms

Year 11 English: English language paper 1

Section B: Writing Section

Question 5

Describe a scene, person or event.

Choose from…

- **A picture stimulus or a written stimulus**
- **45 minutes**
- **40 marks 24 marks –**
- **16 marks –**

The image is a springboard – add ideas as you wish

Paragraph structure:

1	**Top of the scene**	
2	**Drop into the scene**	
3	**Character zoom**	
4	**Flashback**	
5	**Back to the present moment**	

Show don't tell

e.g. the sky's anger	*e.g. a black depression hung in the air*	
e.g. the wind howled	**How to make a metaphor** *(Personification is a type of metaphor)*	*e.g. the waves continued to roll, intent on destruction*
e.g. the wind's icy breath	*e.g. the shadows stalked the clouds*	*e.g. his eyes were ice; they melted at the sight of her*

Colour synonyms

Geography

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 Geography: The Changing Economic World

Key Vocabulary

1	**Colony**	Political control over another country
2	**Communicable disease**	Disease spread from one person to another
3	**Demographic transition model**	Model showing population change over time
4	**Development gap**	Difference in standard of living and wellbeing between HICs and LICs.
5	**GDP per capita**	Gross Domestic Product per person, wealth of a nation divided by population
6	**GNI per capita**	Gross National Income is wealth made by a nation and its businesses divided by the population
7	**Infant mortality**	Number of babies that die per 1000 births under the age of one.
8	**Literacy rate**	Percentage of people who can read and write
9	**Natural increase**	The birth rate is higher than the death rate
10	**Quality of life**	Level of health and comfort experienced.
11	**Transnational corporation**	Company operating in more than one country.

Measuring Development

12	**Classifying countries**	HIC's → GNI per capita higher than $12,536
		LIC's → GNI per capita lower than, $1035
		NEE's→ rapid industrialisation
13	**Measuring**	A development indicator → numerical data (Birth rate)
		Economic indicators → GNI and GDP per capita
		Human Development Index → life expectancy, literacy and GNI → value of 0-1

Year 11 Geography: The Changing Economic World

Key Vocabulary

1	What is a **colony?**	
2	What is **communicable disease?**	
3	What is the **demographic transition model?**	
4	**What is the development gap?**	
5	What is **GDP per capita?**	
6	What is **GNI per capita?**	
7	Define **infant mortality**	
8	Define **literacy rate**	
9	What is **natural increase?**	
10	What is meant by **quality of life?**	
11	What is **transnational corporation?**	

Measuring Development

12	**What is a HIC?**
13	**What is a LIC?**
14	**What is a NEE?**
15	**What is a development indicator?**
16	**What are the two main economic indicators of development?**
17	**What is HDI?**

Year 11 Geography: The Changing Economic World

Global Development is Uneven

18	Causes	Arid climate
19		Former colonies
20		Sell primary products
21	Consequences	LIC's invest low in healthcare
22		HIC's have higher disposable income
23		Disparities in global wealth North America 35% of global wealth Africa 1% of global wealth
24		International migration

Strategies to reduce the development gap:

25	Investment- HIC Businesses spend money in other countries
26	Intermediate technology- Local people in LICs use simple and cheap technology
27	Fairtrade- Farmers get a fair price for their produce
28	Aid- Government of one country give money, goods and services to another country
29	Tourism- In Kenya: → 226,000 jobs were created in tourism in 2013 → 12% of the GDP from tourism → Ecotourism ensures local people gain employment

Demographic Transition Model

30	Stage 1	Birth rate and death rate are both high
31	Stage 2	Death rate decreases Birth rate is still high
32	Stage 3/4	Birth rate decreases Death rate stays low
33	Stage 5	Low birth rate and Low death rate

Year 11 Geography: The Changing Economic World

Global Development is Uneven

18	Name a physical cause of uneven development	
19	Name a historical cause of uneven development	
20	Name an economic cause of uneven development	
21	What are the main health issues in LICs? Why?	
22	What do HIC's have more of economically?	
23	Give a piece of evidence to support disparities in global wealth	
24	How can people lead to uneven development?	

Strategies to reduce the development gap:

25	How can investment help a country to develop?
26	What is intermediate technology?
27	What is fair trade?
28	What is aid?
29	Give three piece of evidence that tourism is helping Kenya's economy to grow

Demographic Transition Model

30	What happens in stage 1 of the DTM?
31	What happens in stage 2 of the DTM?
32	What happens in stage 3 and 4 of the DTM?
33	What happens in stage 5 of the DTM?

Year 11 Geography: The Changing Economic World

Key Vocabulary

1	**Employment structure**	Proportion of the workforce employed in each economic sector
2	**Globalisation**	The world becoming more interconnected by trade and culture
3	**Industrialisation**	Development of industries in a country or region
4	**Manufacturing**	To make something in a factory using machinery
5	**National**	Relating to one nation/country
6	**Quaternary sector**	Industry based on knowledge and skills e.g. Scientific research
7	**Tertiary (service) industry**	Economic activities that provide services e.g. teacher or nurse

Is Nigeria Developed?

8	GNI per capita US $2970	10	Life expectancy 54 years
9	Birth rate 38 per 1000	11	Percentage in poverty 40%

Nigeria- Characteristics

12	**Location**	• West Africa Atlantic coast • Bordered by Cameroon
13	**Climate**	• North Nigeria hot and dry • South warm and wet
14	**Nigeria's regional importance**	Over 70% work in agriculture
15		Fastest growing African economy
16	**Nigeria's global importance**	2.7% of global oil from Nigeria
17		USA was greatest consumer; → USA discovered their oil → India now biggest oil importer
18		Agricultural produce has declined → oil is in higher demand → Australia still buys 30% of Nigeria's cotton
19		Part of the commonwealth

Year 11 Geography: The Changing Economic World

Key Vocabulary

1	Define **employment structure**	
2	What is **globalisation?**	
3	What is **industrialisation?**	
4	**What is manufacturing?**	
5	Define **national**	
6	What is the **quaternary sector?**	
7	What is the **tertiary (service) industry?**	

Is Nigeria Developed?

8	What is Nigeria's GNI per capita?	10	What is the life expectancy in Nigeria?
9	What is the birth rate in Nigeria?	11	What percentage of people live in poverty in Nigeria?

Nigeria- Characteristics

12	Describe the location of Nigeria	
13	Describe the climate of North and South Nigeria	
14	What percentage of people in Nigeria work in agriculture?	
15	What is the economy in Nigeria like compared to the rest of Africa?	
16	What % of oil worldwide comes from Nigeria?	
17	Which country is Nigeria's biggest buyer of oil? Why did this change recently?	
18	Why has the demand for agricultural produce declined in Nigeria?	
19	What is Nigeria a part of?	

Year 11 Geography: The Changing Economic World

Nigeria's changing industrial structure:

20	Since the 1990s Nigeria has experienced a decline in primary industry
21	Secondary industry has grown with more TNC's and industrialisation
22	Increase in tertiary sector retail and finance
23	28% of GDP is from manufactured goods

Shell in Nigeria:

24	**Positives** • Companies provide employment • Local businesses benefit as factories buy their resources
25	**Negatives** • Local workers often low paid • Working condition are often poor • Much of profit goes back to HICs
26	Health clinics for pregnant women
27	Provide scholarships to young people

Does Nigeria still need aid?

28	40% of people still live in poverty
29	Net for Life is a charity which provides → education on how to prevent malaria → gives out anti-mosquito nets
30	2014 the World Bank gave US $500million → fund development projects → give grants to businesses

Evaluating development in Nigeria:

31	2008/2009 large oil spills devastated town of Bodo
32	Growth of industry resulted in harmful pollutants going directly into drains
33	Since 1990, life expectancy increased from 46 to 54 years in 2018
34	Access to safe water increased from: 46% in 1990 to 67% in 2013

Year 11 Geography: The Changing Economic World

Nigeria's changing industrial structure:

20	How has Nigeria's primary industry changed since 1990s?
21	How has the secondary industry changed in Nigeria?
22	How has the tertiary industry changed in Nigeria? Give two examples.
23	What % of Nigeria's GDP comes from manufactured goods?

Shell in Nigeria:

24	Give three advantages of TNCs
25	Give three disadvantages of TNCs
26	How do Shell help young women?
27	How do Shell help young people?

Does Nigeria still need aid?

28	Why does Nigeria still require aid?
29	How do Nets For Life help Nigeria to develop?
30	How much money did the World Bank give to Nigeria in 2014 and for what purpose?

Evaluating development in Nigeria:

31	What happened in Bodo in 2008/09?
32	How does industrialisation in Nigeria cause water pollution?
33	How has life expectancy changed in Nigeria?
34	How has percentage of people with access to safe water changed?

Year 11 Geography: Natural Hazards - Tectonic hazards

Key Vocabulary

1	**What is an earthquake?**	A sudden or violent movement within the Earth's crust followed by a series of shocks
2	**Define 'Immediate responses'**	The reaction of people as the disaster happens and in the immediate aftermath
3	**Define 'Long-term responses'**	Later reactions that occur in the weeks, months and years after the event
4	**Define 'Monitoring'**	Recording physical changes to help forecast when and where a natural hazard might strike
5	**Define 'Planning'**	Actions taken to respond to, and recover from, natural disasters
6	**Define 'Prediction'**	Attempts to forecast when and where a natural hazard will strike
7	**What is a 'Primary effects'?**	The initial impact of a natural event on people and property
8	**Define 'Protection'**	Actions taken before a hazard strikes to reduce its impact
9	**What is a 'Secondary effect'?**	The after-effects that occur as indirect impacts of a natural event
10	**hat is 'Subduction'?**	A process occurring at destructive plate margins where a heavier oceanic plate is forced under a continental plate
11	**What is a 'Tectonic hazard'?**	A natural hazard caused by movement of tectonic plates

Plate Margins:

12	Describe the plate movement at the following plate margins: ● Conservative ● Destructive: ● Constructive:	● Conservative: plates move past each other ● Destructive: plates move towards each other and one is subducted ● Constructive: plates move away from each other

13	Name the four layers of the earth	Inner core, outer core, mantle and crust
14	What are the pieces of crust called?	Crust pieces are called tectonic plates
15	Where do convection currents happen?	Convection currents cause magma to move in circular movements
16	What do convection currents cause?	Convection currents cause tectonic plates to move

Contrasting earthquake case studies:

	Primary effects		Secondary effects		Immediate response		Long term response	
Nepal 2015 (LIC)	**17**	9000 deaths 7,000 schools destroyed Water supplies cut off	**18**	3 million homeless International airport congested	**19**	UK and India sent search and Rescue Half a million tents given	**20**	Over 7000 schools re-built Stricter controls on building quality
New Zealand 2016 (HIC)	**21**	5 deaths 60 people needed emergency housing	**22**	The earthquake triggered a tsunami 5m in height. 100,000 landslides were triggered.	23	A tsunami warning was issued 100s of people were housed in emergency shelters	**24**	Roads and railways were repaired and reopened within 2 years Earthquake proof water pipes were installed.

Management of Tectonic Hazards:

25	How do people plan for tectonic hazards?	Hazard maps showing areas at risk
26	How do people predict tectonic hazards?	Measuring sulfur from volcano Seismometers measure vibrations
27	How can buildings be protected from tectonic hazards?	Earth embankments divert lava Earthquake resistant buildings

Living with risk:

28	What kind of energy can be generated by volcanoes?	Geothermal energy to power homes and industry
29	What might attract tourists to risky areas?	Dramatic scenery attracts tourists
30	How is volcanic ash useful?	Lava and ash deposits provide valuable nutrients for soil

Year 11 Geography: Natural Hazards - Tectonic hazards

Key Vocabulary

1	What is an earthquake?	
2	Define 'Immediate responses'	
3	Define 'Long-term responses'	
4	Define 'Monitoring'	
5	Define 'Planning'	
6	Define 'Prediction'	
7	What is a 'Primary effects'?	
8	Define 'Protection'	
9	What is a 'Secondary effect'?	
10	hat is 'Subduction'?	
11	What is a 'Tectonic hazard'?	

Plate Margins:

12	Describe the plate movement at the following plate margins:	

13	Name the four layers of the earth	
14	What are the pieces of crust called?	
15	Where do convection currents happen?	
16	What do convection currents cause?	

Contrasting earthquake case studies:

	Primary effects		Secondary effects		Immediate response		Long term response	
Nepal 2015 (LIC)	17		18		19		20	
New Zealand 2016 (HIC)	21		22		23		24	

Management of Tectonic Hazards:

25	How do people plan for tectonic hazards?	
26	How do people predict tectonic hazards?	
27	How can buildings be protected from tectonic hazards?	

Living with risk:

28	What kind of energy can be generated by volcanoes?	
29	What might attract tourists to risky areas?	
30	How is volcanic ash useful?	

Year 11 Geography: Natural Hazards –Weather hazards

Key Vocabulary

1	What is meant by the term **'Economic impact'**?	The effect of an event on the wealth of an area
2	What is meant by the term **'Environmental impact'**?	The effect of an event on the landscape
3	Define **'Extreme weather'**	Unusual weather that can cause risk to life – weather that does not occur regularly
4	Define the term **'Immediate responses'**	The reaction of people as the disaster happens and in the immediate aftermath
5	What is meant by the term **'Long-term responses'**	Reactions in the months and years after the event
6	What is meant by the term **'Social impacts'**	The effect of an event on the lives of people or community
7	Define **'Monitoring'**	Recording physical changes, to forecast when and where a natural hazard might strike
8	Define **'Planning'**	Actions taken to enable communities to respond to, and recover from, natural disasters
9	Define **'Prediction'**	Attempts to forecast when and where a natural hazard will hit
10	Define **'Protection'**	Action taken before a hazard strikes to reduce its impact,
11	What are **'primary effects'?**	The initial impact of a natural event on people and property, caused directly by it
12	What are **'Secondary effects'**?	Indirect after-effects of an event

Global Atmospheric Circulation:

13	What one fact causes global atmospheric circulation at different latitudes?	The sun's rays are more concentrated at the equator
14	What causes low pressure?	As the air heats it rises = low pressure
15	What happens when air cools?	As air cools it sinks = high pressure
16	Why do the winds curve?	They curve because of the Coriolis effect

Tropical storms:

17	Which latitudes do tropical storms occur in?	In low latitudes between 5° and 30°
18	What is the recipe for a tropical storm?	26.5° ocean + Coriolis effect + low pressure
19	How will climate change effect tropical storms?	• Higher frequency of more intense storms • Occur in new locations

Typhoon Haiyan:

Primary effects		Secondary effects	
20	6190 deaths	23	1.9 million homeless
21	Tacloban city destroyed	24	6 million lost their source of income
22	Crops destroyed	25	Ferry and airline services disrupted

Immediate response		Long-term response	
26	US aircraft sent search and rescue	29	Gave financial aid to rebuild
27	1200 evacuation centres	30	'cash for work' paid people to rebuild Tacloban
28	$1 million basic food aid	31	Fishing industry re-established quicker than the coconut industry

Management strategies:

32	Prediction	Monitoring wind patterns using satellites allows the path to be predicted and evacuation
33	Planning	• Avoid building in high risk areas • Emergency drills • Evacuation routes
34	Protection	• Reinforced buildings and stilts • Flood defences • Replanting mangroves

UK Weather Hazards:

35	Name 3 weather hazards we get in the UK	Rain, snow, ice, drought, wind, heatwave

Beast from the east:

36	Describe the characteristics of Storm Desmond	February 2018, 61mph winds, -12°C	
37	What caused the beast from the east?	Change in polar jet stream brought polar air to the UK	
38	**social effects** 10 deaths 200,000 without water	39	**economic effects** £1 billion per day Supermarkets lost £22 million
40	**environmental effects** Red weather warning and floods		

Immediate response		Long-term response	
41	**What were the immediate responses?** 450 schools closed The army rescued vehicles from the M62	42	**What were the long-term responses?** NHS winter plans for future extreme weather

Year 11 Geography: Natural Hazards –Weather hazards

Key Vocabulary

1	What is meant by the term **'Economic impact'**?	
2	What is meant by the term **'Environmental impact'**?	
3	Define **'Extreme weather'**	
4	Define the term **'Immediate responses'**	
5	What is meant by the term **'Long-term responses'**	
6	What is meant by the term **'Social impacts'**	
7	Define **'Monitoring'**	
8	Define **'Planning'**	
9	Define **'Prediction'**	
10	Define **'Protection'**	
11	What are **'primary effects'?**	
12	What are **'Secondary effects'**?	

Global Atmospheric Circulation:

13	What one fact causes global atmospheric circulation at different latitudes?	
14	What causes low pressure?	
15	What happens when air cools?	
16	Why do the winds curve?	

Tropical storms:

17	Which latitudes do tropical storms occur in?	
18	What is the recipe for a tropical storm?	
19	How will climate change effect tropical storms?	

Typhoon Haiyan:

Primary effects		Secondary effects	
20		23	
21		24	
22		25	

Immediate response		Long-term response	
26		29	
27		30	
28		31	

Management strategies:

32	Prediction	
33	Planning	
34	Protection	

UK Weather Hazards:

35	Name 3 weather hazards we get in the UK	

Beast from the east:

36	Describe the characteristics of Storm Desmond		
37	What caused the beast from the east?		
38	**social effects**	39	**economic effects**
40	**environmental effects**		

Immediate response		Long-term response	
41	**What were the immediate responses?**	42	**What were the long-term responses?**

Year 11 Geography: Natural Hazards –Climate change

Key Vocabulary

1	**Adaptation**	Actions taken to adjust to natural events
2	**Climate change**	A change in global or regional climate patterns thought to be caused by increased levels of atmospheric carbon dioxide
3	**Greenhouse effect**	Process that occurs when gases in Earth's atmosphere trap the Sun's heat
4	**Mitigation**	Action to reduce the risk to human life and property
5	**Orbital changes**	Changes in the pathway of the Earth around the Sun
6	**Quaternary period**	The period of geological time from about 2.6 million years ago to the present
7	**Sunspot**	A hotter area on the Sun's surface
8	**Renewable**	A resource which does not run out as it is naturally replaced
9	**Fossil Fuels**	Non renewable energy sources formed from living organisms buried millions of years ago
10	**Carbon Sink**	Any process or mechanism that removed Carbon Dioxide from the atmosphere (these can be natural such as rainforests)

Evidence for Climate Change:

11	**Ice and sediment cores**	Gas trapped in ice layers are analysed → ice cores from Antarctica show changes over the last **400,000** years
12	**Pollen analysis**	Pollen is preserved in sediment → different species need different climatic conditions
13	**Tree rings**	A tree grows one new ring each year → rings are thicker in warm, wet conditions → evidence for the last 10,000 years
14	**Temperature records**	Historical records date back to 1850s → tell us about harvests and weather

Causes of Climate Change:

Natural		
15	**Orbital changes**	Earth's **orbit** is elliptical → energy received from the Sun changes
16	**Solar Output**	**Output** at a maximum every 11 years → energy received from the Sun changes
17	**Volcanic activity**	Volcanic gases reflect sunlight away → reducing global temp. temporarily
Human		
18	**Burning fossil fuels**	Carbon dioxide -**50%** of greenhouse gases released → enhanced **greenhouse effect**
19	**Agriculture**	Methane production from cows & rice **20%** of greenhouse gases released → enhanced **greenhouse effect**
20	**Deforestation**	Logging and clearing land for agriculture → trees no longer remove CO2 → enhanced **greenhouse effect**

Effects of Climate Change:

Social	
21	Increased **disease** e.g. skin cancer Winter deaths decrease with milder winters.
22	Increased crop yields in Northern Europe
23	**Droughts** reduce food and water supply in sub-Saharan Africa **Water scarcity** in South East UK – water metering to be introduced
24	Increased **flood risk**; 70% of Asia is at risk of increased flooding
Environmental	
25	Lower rainfall causes **food shortages** for orangutans in Borneo
26	Sea level rise (80cm by 2100) leads to **flooding** and **coastal erosion**
27	Ice melts **threaten habitats** of polar bears
28	**Coral bleaching** and decline in marine biodiversity due to ocean acidification

Managing Climate Change:

Mitigation	
29	• Alternative energy production • Planting Trees • Carbon Capture • International Agreements
Adaptation	
30	• Changes in agricultural systems • Managing water supplies • Constructing defenses such as the Thames Flood Barrier or restoring mangrove forests, or raising buildings on stilts – these methods need to be appropriate to the economic status of the country

Year 11 Geography: Natural Hazards –Climate change

Key Vocabulary

1	Adaptation	
2	Climate change	
3	Greenhouse effect	
4	Mitigation	
5	Orbital changes	
6	Quaternary period	
7	Sunspot	
8	Renewable	
9	Fossil Fuels	
10	Carbon Sink	

Evidence for Climate Change:

11	Ice and sediment cores	
12	Pollen analysis	
13	Tree rings	
14	Temperature records	

Causes of Climate Change:

Natural		
15	Orbital changes	
16	Solar Output	
17	Volcanic activity	
Human		
18	Burning fossil fuels	
19	Agriculture	
20	Deforestation	

Effects of Climate Change:

Social	
21	
22	
23	
24	
Environmental	
25	
26	
27	
28	

Managing Climate Change:

Mitigation	
29	
Adaptation	
30	

Year 11 Geography: Living world- Ecosystems

Key Vocabulary

1	**Abiotic**	Non living components within an ecosystem e.g. soil and climate
2	**Albedo**	The ability of a surface to reflect incoming radiation
3	**Biome**	An ecosystem on a large scale e.g. tropical rainforest or tundra
4	**Biotic**	Living components within an ecosystem e.g. plants and animals
5	**Consumer**	Eats herbivores and/or plants
6	**Decomposer**	Breaks down dead organic matter and returns nutrients to the soil
7	**Ecosystem**	A biological community of living and non living organisms
8	**Food chain**	Connections between different organisms that rely on one another for food
9	**Food web**	A complex hierarchy of plants and animals relying on each other for food
10	**Nutrient cycle**	The ongoing recycling of nutrients between living organisms and their environment
11	**Organism**	An individual plant or animal
12	**Producer**	Produces its own energy by absorbing carbon dioxide and solar radiation in the process of photosynthesis

Ecosystem Components:

13	14	15	16	17	18	19
Chaparral	**Coniferous**	**Deciduous**	**Hot desert**	**Savanna**	**Tropical**	**Tundra**
Hot and dry	**forest**	**forest**	Hot and dry	Hot and seasonal	**rainforest**	Cold and dry
Mediterranean	Cold	Mild	North Africa	Sub- Saharan	Hot and wet	Greenland
	Canada	Western Europe		Africa	South America	

A Woodland Ecosystem:

Fungi and earthworms are **decomposers** in a woodland ecosystem

20	Some energy is lost through **respiration and movement**
21	Changing one element can affect the whole **food web**
22	**Human changes** • Deforestation • Farming **Physical Changes** • Drought • Floods

Decomposers and the Nutrient Cycle:

28	Nutrients are added to soil through **decomposition** (by decomposers) and **weathering** of **parent rock**
29	Some nutrients are washed away by **leaching**
30	Some nutrients are used by **plants** to grow

Reasons for the Location of

31	**Curvature of the earth**	Solar radiation is concentrated over a **smaller surface area** in low latitude regions
32		Solar radiation is scattered over a **larger surface area** in high latitude regions
33	**Albedo effect**	• Lighter surfaces **reflect** sunlight • Darker surfaces **absorb** sunlight
34	**Hours of daylight**	**High latitude** regions have less hours of

Year 11 Geography: Living world- Ecosystems

Key Vocabulary

1	Abiotic	
2	Albedo	
3	Biome	
4	Biotic	
5	Consumer	
6	Decomposer	
7	Ecosystem	
8	Food chain	
9	Food web	
10	Nutrient cycle	
11	Organism	
12	Producer	

Ecosystem Components:

13	14	15	16	17	18	19
Chaparral	Coniferous	Deciduous	Hot desert	Savanna	Tropical	Tundra

A Woodland Ecosystem:

Fungi and earthworms are **decomposers** in a woodland ecosystem

20	Some energy is lost through **respiration and movement**
21	Changing one element can affect the whole **food web**
22	**Human changes** • Deforestation • Farming **Physical Changes** • Drought • Floods

Decomposers and the Nutrient Cycle:

28	
29	
30	

Reasons for the Location of

31	Curvature of the earth	
32		
33	Albedo effect	
34	Hours of daylight	

Year 11 Geography: Living world- Tropical rainforests

Key Vocabulary

1	**Adaptation**	Actions taken to adjust to natural events or natural surroundings
2	**Biodiversity**	Variety of plant and animal life in an ecosystem
3	**Commercial farming**	Growing crops or raising livestock for profit
4	**Conservation**	Preventing the wasteful use of a resource
5	**Deforestation**	Cutting down and removal of forest
6	**Interdependence**	When two or more components rely on each other for survival
7	**Logging**	The business of cutting down trees to sell the timber
8	**Predator**	An animal that naturally preys on other animals for food
9	**Prey**	An animal that is hunted or killed by another for food
10	**Subsistence farming**	Growing enough crops and grazing enough animals to feed yourself and your family, not for profit
11	**Sustainable management**	Actions to meet the needs of current generations without compromising the needs of future generations
12	**Symbiotic**	A mutually beneficial relationship between two living organisms

13	**Location**	On and around the _____ **equator 0°**
14	**Climate**	**High temperatures**
15		High levels of **precipitation**
16	**Soil**	**Thin** soil with very **few nutrients**
17	**Biodiversity**	High **biodiversity**

Interdependence:

18	Plants need **sunlight** and **rainfall**
19	Animal need plants to eat or hide from **predators**
20	Plants need soil for **nutrients** and water
21	**Azteca Ants** and the **Cecropia** Tree rely on one another to survive

Adaptations in the Rainforest:

22	**Plant adaptations** in a tropical rainforest: Waxy coating, Flexible base, **Emergent** trees grow tall, Drip tip
23	**Animals adaptations** in a tropical rainforest: Patterned fur, Strong, hooked claws **Jaguar** Long, strong tail

Deforestation in the Amazon Rainforest:

Causes of deforestation		
24	25	26
Hydroelectric power Balbina Dam	**Mineral extraction** e.g. Carajas Mine	**Commercial cattle farming** in Mato Grasso
27	28	29
Rosewood is being **logged**	**Roads** are being built BR-163	**Population** growth e.g. Manaus
Impacts of deforestation		
30	31	32
Soil is **eroded** by wind or wa…	More CO2 = higher **temperatures**	**Economic** gain

Rainforest Sustainable Management

33	**Rates** of deforestation have been decreasing since the **1980s**
34	**Selective logging** is only cutting certain trees
35	Yachana lodge is an **ecotourism** resort • Runs on renewable energy • Employs and educates local people
36	LICs have their **debts reduced** if they pledge to protect their forests
37	**International agreements** between countries who agree to save the world's forests

Year 11 Geography: Living world- Tropical rainforests

Key Vocabulary

1	Adaptation	
2	Biodiversity	
3	Commercial farming	
4	Conservation	
5	Deforestation	
6	Interdependence	
7	Logging	
8	Predator	
9	Prey	
10	Subsistence farming	
11	Sustainable management	
12	Symbiotic	

13	Location	
14	Climate	
15		
16	Soil	
17	Biodiversity	

Interdependence:

18	
19	
20	
21	

Adaptations in the Rainforest:

22	**Plant adaptations** in a tropical rainforest:
23	**Animals adaptations** in a tropical rainforest:

Deforestation in the Amazon Rainforest:

Causes of deforestation		
24	25	26
27	28	29
Impacts of deforestation		
30	31	32

Rainforest Sustainable Management

33	
34	
35	
36	
37	

History

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 History: America- opportunity for all

Topic		Question	Answer
Why was there an economic boom in the 1920s	1	**What are the signs of an economic boom?**	Successful businesses, rising wages, and low unemployment
	2	**How did WWI contribute to the economic boom?**	Other countries damaged, increased demand for US goods, Money loaned to allies with interest
	3	**How did Republican Policies contribute to the boom in the 1920s?**	Laissez-Faire/Low taxes on business so they re-invest, low taxes on people so they spend. Tariffs on imports so people buy American goods.
	4	**What was hire purchase? How did it contribute to the boom?**	Buy now, pay later. Meant more people could afford to buy consumer goods, which increased demand.
	5	**What is the cycle of prosperity?**	A successful economy. More demand leading to increased production, higher employment, more disposable income, more spending.
	6	**Why was mass production so important to the economy in the 1920s?**	Helped to produce consumer goods quickly and cheaply so more people could buy them
	7	**How did the stock market contribute to the USA's economic boom?**	Normal people could buy shares in businesses and made money as their value increased.
1920s Society and Entertainment	8	**What type of dance was danced to Jazz?**	The Charleston
	9	**What year was the first 'talkie' film, called the 'Jazz Singer'?**	1927
	10	**Name one famous actress made a celebrity by the 'star system'**	Clara Bow
	11	**Why were more people able to watch spectator sports such as baseball in the 1920s?**	More disposable income, more car ownership

Year 11 History: America- opportunity for all

Topic		Question	Answer
Why was there an economic boom in the 1920s	1	What are the signs of an economic boom?	
	2	How did WWI contribute to the economic boom?	
	3	How did Republican Policies contribute to the boom in the 1920s?	
	4	What was hire purchase? How did it contribute to the boom?	
	5	What is the cycle of prosperity?	
	6	Why was mass production so important to the economy in the 1920s?	
	7	How did the stock market contribute to the USA's economic boom?	
1920s Society and Entertainment	8	What type of dance was danced to Jazz?	
	9	What year was the first 'talkie' film, called the 'Jazz Singer'?	
	10	Name one famous actress made a celebrity by the 'star system'	
	11	Why were more people able to watch spectator sports such as baseball in the 1920s?	

Year 11 History: America- opportunity for all

Topic		Question	Answer
Racial tension in 1920s	12	What were the Jim Crow Laws?	Laws which enforced segregation of whites and blacks in public places in the South
	13	Members of the KKK were white supremacists. What does this mean?	They believed that the white race was superior/better and wanted to stop African Americans from getting the rights they deserved.
	14	How many members of the KKK were there at its peak in 1925?	6 million
	15	African Americans had the right to vote in the 1920s , but there were three things which discriminated against them from using it. What were they?	Intimidation.. Literacy (reading and writing test, which many AAs couldn't). Poll tax (had to pay money to vote, which many AAs couldn't afford).
Red Scare	16	Russia became communist in 1917. Describe three aspects of what communism is	One party runs the whole country, business owned and run by the state (government), the lives of individuals tightly controlled
	17	Why were so many Americans scared of communism?	The were worried it would ruin their way of life.
	18	Describe America's capitalist society	Governments are elected in free and fair elections, businesses are owned by individuals who enjoy the profit, individual freedom in very important
	19	What were the Palmer Raids in 1919?	A series of raids led by the Mitchell Palmer to capture, arrest and 'send home' suspected communists from the United States. 6000 suspects were arrested

Year 11 History: America- opportunity for all

Topic		Question	Answer
Racial tension in 1920s	12	What were the Jim Crow Laws?	
	13	Members of the KKK were white supremacists. What does this mean?	
	14	How many members of the KKK were there at its peak in 1925?	
	15	African Americans had the right to vote in the 1920s , but there were three things which discriminated against them from using it. What were they?	
Red Scare	16	Russia became communist in 1917. Describe three aspects of what communism is	
	17	Why were so many Americans scared of communism?	
	18	Describe America's capitalist society	
	19	What were the Palmer Raids in 1919?	

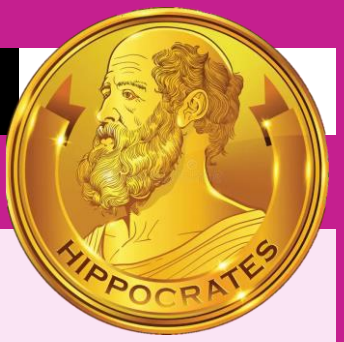
Year 11 History: America- opportunity for all

Topic		Question	Answer
Roosevelt's election	20	What did Franklyn D Roosevelt offer the American people?	A new deal
	21	How did Roosevelt campaign for the presidency?	He toured the country, sometimes making 15 speeches a day
	22	How had Roosevelt helped the depression before becoming president?	He spent $20 million as Governor of New York to help unemployment.
New deal	23	What were the 'three Rs' of the New Deal?	Relief, recovery, reform.
	24	How did the New Deal try to kickstart the American economy	Spending would lead to a cycle of recovery.
	25	How did the New Deal discriminate against women?	The average wage for a women in 1937 was $525 compared to $1000 for men
	26	Why is the TVA an example of permanent change for the better?	Thousands of jobs were created, the land became fertile and quality of life greatly improved.
1950s prosperity	27	What did American Express create in 1958?	A worldwide credit card network that allowed people to purchase items and pay off instalments every month.
	28	How did America's fear of communism help the economy in the 1950s?	The government massively increased military spending
	29	How did the 4 million babies born each year during the 1950s help the economy?	Each infant was thought to be worth $800 to the producers of baby and child products.

Year 11 History: America- opportunity for all

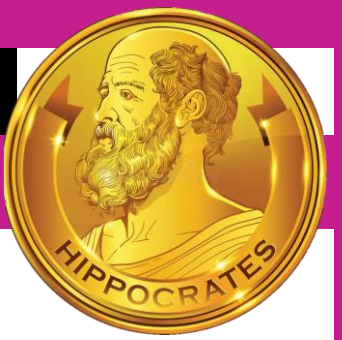
Topic		Question	Answer
Roosevelt's election	20	What did Franklyn D Roosevelt offer the American people?	
	21	How did Roosevelt campaign for the presidency?	
	22	How had Roosevelt helped the depression before becoming president?	
New deal	23	What were the 'three Rs' of the New Deal?	
	24	How did the New Deal try to kickstart the American economy	
	25	How did the New Deal discriminate against women?	
	26	Why is the TVA an example of permanent change for the better?	
1950s prosperity	27	What did American Express create in 1958?	
	28	How did America's fear of communism help the economy in the 1950s?	
	29	How did the 4 million babies born each year during the 1950s help the economy?	

Year 11 History: Britain- health and the people



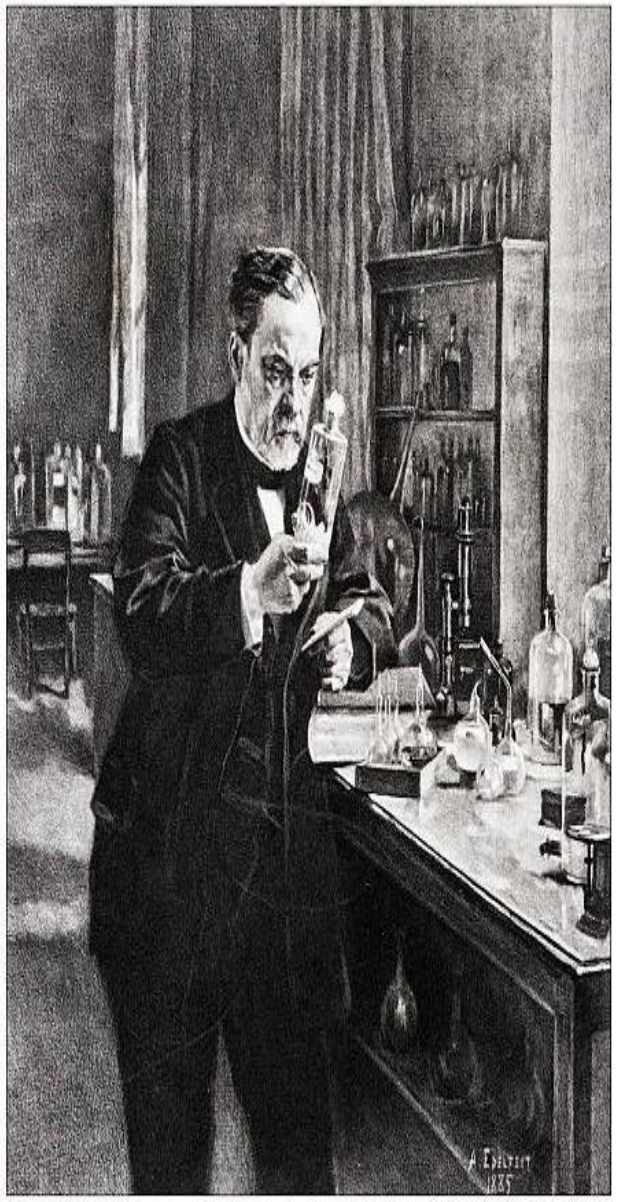
Topic		Question	Answer
Medieval causes, treatments hospitals and the church	1	Which two Ancient physicians still dominated medicine in Medieval times?	Hippocrates and Galen
	2	Who controlled the training of physicians in medieval times?	The church
	3	Who was locked up by the church for urging doctors to question Galen's work?	Roger Bacon
	4	Why did church hospitals believe in care, not cure.	It wasn't a human's place to mess with God's plans
Medieval Public Health	5	List three problems all surgeons have to deal with	Blood loss, infection, pain
	6	Name a new type of technology developed in medieval surgery	The arrow cup was invented to remove arrowheads without causing more damage to the body
	7	Name the attitude taken by government to cleaning up towns and improving public health	Laissez-faire (leave alone)
	8	Describe living conditions in medieval towns	Dirty, cramped, no clean piped water, few sewage systems, cesspits
	9	Why was Coventry advanced in its attitude to public health?	Local council fined people for not keeping the area in front of their house clean.
	10	Why did monasteries have better public health?	Clean piped water, sewage ad drainage systems, good diet and natural remedies from gardens, access to ancient texts which taught about exercise, good diet and fresh air.

Year 11 History: Britain- health and the people



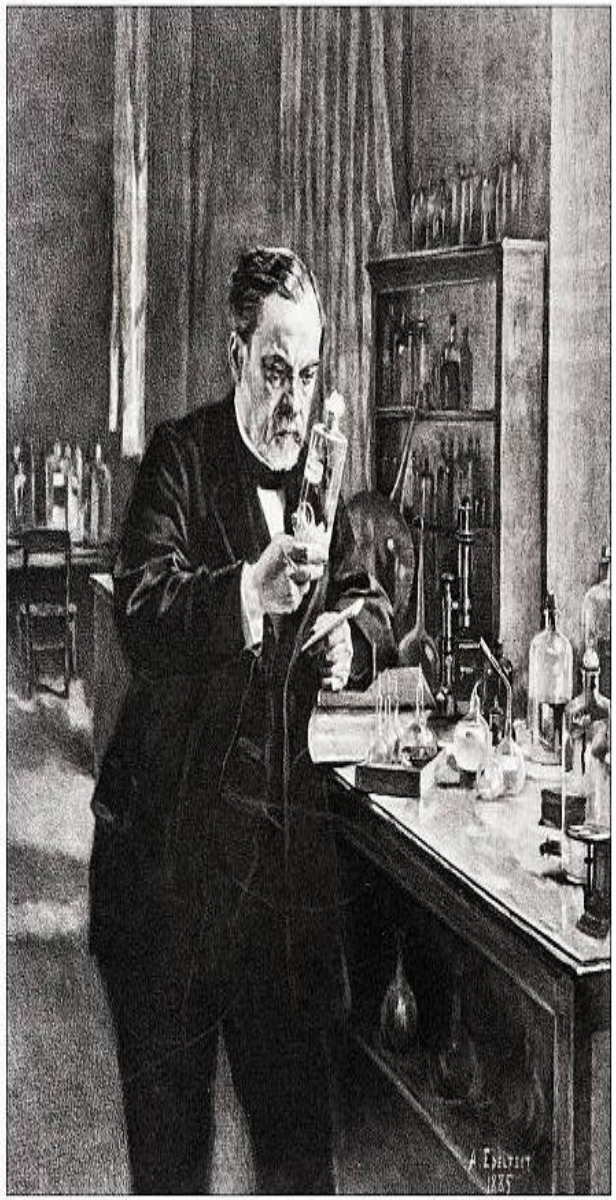
Topic		Question	Answer
Medieval causes, treatments hospitals and the church	1	Which two Ancient physicians still dominated medicine in Medieval times?	
	2	Who controlled the training of physicians in medieval times?	
	3	Who was locked up by the church for urging doctors to question Galen's work?	
	4	Why did church hospitals believe in care, not cure.	
Medieval Public Health	5	List three problems all surgeons have to deal with	
	6	Name a new type of technology developed in medieval surgery	
	7	Name the attitude taken by government to cleaning up towns and improving public health	
	8	Describe living conditions in medieval towns	
	9	Why was Coventry advanced in its attitude to public health?	
	10	Why did monasteries have better public health?	

Year 11 History: Britain- health and the people



Topic		Question	Answer
Renaissance ideas, technology and its contribution to medicine- vaccines and theories	11	What does 'renaissance' mean?	Rebirth
	12	How was an increase in wealth a factor?	More people could afford to use doctors
	13	Why was the invention of the printing press important?	Multiple copies of books could be published which helped spread medical knowledge
	14	Why was the discovery of the New World important?	New foods and new plants for medicines were discovered
	15	What orders from the Mayor of London proved to be quite useful?	Plague victims had to stay in their house, pubs and entertainments closed, fires lit on streets
	16	What orders from the Mayor of London did not help?	All dogs and cats caught and killed.
	17	How did John Hunter help spread medical knowledge?	He taught trainee surgeons and wrote books
	18	How did the Royal Society and many other doctors react to vaccination?	They rejected Jenner's findings
	19	Who discovered chloroform as an anaesthetic?	James Simpson (1847)
	20	What was the name given to Pasteur's discovery?	Germ theory
	21	How did Robert Kock develop the germ theory further?	He discovered that different diseases were caused by specific germs

Year 11 History: Britain- health and the people



Topic		Question	Answer
Renaissance ideas, technology and its contribution to medicine- vaccines and theories	11	What does 'renaissance' mean?	
	12	How was an increase in wealth a factor?	
	13	Why was the invention of the printing press important?	
	14	Why was the discovery of the New World important?	
	15	What orders from the Mayor of London proved to be quite useful?	
	16	What orders from the Mayor of London did not help?	
	17	How did John Hunter help spread medical knowledge?	
	18	How did the Royal Society and many other doctors react to vaccination?	
	19	Who discovered chloroform as an anaesthetic?	
	20	What was the name given to Pasteur's discovery?	
	21	How did Robert Kock develop the germ theory further?	

Year 11 History: Conflict and tension in Asia

Topic		Question	Answer
Tension builds in Asia	1	Describe Russia's Communist beliefs.	Individual people do not own land, factories, or machinery. Instead, the government or the whole community owns these things. Everyone is supposed to share the wealth that they create
	2	Describe America's capitalist beliefs	Citizens, not governments, own and run companies. These companies compete with other companies for business and profits
	3	What is the Truman Doctrine?	A speech given by President Truman which promised to help any country at risk of being taken over by Communism.
	4	Kim Il Sung was the dictator of North Korea. What is a dictator?	A form of government in which a person or a small group rules with almost unlimited power.
US, UN and China Respond	5	Why did Kim il Sung start a conflict by invading South Korea?	He believed the whole of Korea would be better as a unified communist state.
	6	What is the United Nations?	International organisation, aiming to keep peace, security & friendly relations
	7	Why did Mao send 200,000 Chinese troops into Korea to fight UN troops?	He had warned UN troops not to move further North, which they ignored. China saw this as an act of aggression.
Winners and Losers in Korea	8	How did the USA win and lose as a result of the war?	**WIN** – Stopped the spread of Communism into South Korea. **LOSE** – the cost -30,000 troops died. Defence spending increased to $60 billion
	9	How did China win and lose as a result of the war?	**WIN** - Closer relations with the USSR. -Gained respect of other Communist countries. -Korea was now a 'buffer state' for China. **LOSE** – Around half a million casualties. -Worsened relationship with USA and loss of trade
	10	How did Korea lose as a result of the war?	1.3 million casualties, including civilians. Industry and agriculture were destroyed.

Year 11 History: Conflict and tension in Asia

Topic		Question	Answer
Tension builds in Asia	1	Describe Russia's Communist beliefs.	
	2	Describe America's capitalist beliefs	
	3	What is the Truman Doctrine?	
	4	Kim Il Sung was the dictator of North Korea. What is a dictator?	
US, UN and China Respond	5	Why did Kim il Sung start a conflict by invading South Korea?	
	6	What is the United Nations?	
	7	Why did Mao send 200,000 Chinese troops into Korea to fight UN troops?	
Winners and Losers in Korea	8	How did the USA win and lose as a result of the war?	
	9	How did China win and lose as a result of the war?	
	10	How did Korea lose as a result of the war?	

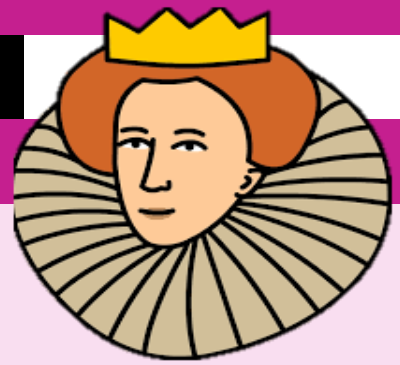
Year 11 History: Conflict and tension in Asia

Topic		Question	Answer
Civil War in South Vietnam	11	After World War II there was an eight year war between which sides in Vietnam? Which international countries financially supported each side?	The French (supported by the USA) and the Vietminh (supported by China)
	12	Discrimination is when a group of people are treated differently because of something they are. Name two groups which were discriminated against in South Vietnam by Diem.	Peasants. Buddhists.
	13	How did Thich Quang Duc protest against Diem's treatment of Buddhists?	Set himself alight in front of the media, whilst others handed out information leaflets describing how they were being treated.
	14	How many tonnes of food, weapons and supplies did the Vietminh send to the Vietcong in South Vietnam via the Ho Chi Minh trail?	60 tonnes a day
US involvement begins	15	What was Eisenhower's Domino Theory?	If one country fell under the control of Communists, it would have a knock on effect, and soon other countries would fall .
	16	Kennedy increased American Involvement by creating a programme which moved peasants off of their land and into fenced camps to protect them from being influenced by the Vietcong. What was this programme called?	The Strategic Hamlets Programme.
	17	The Gulf of Tonkin resolution allowed the US to 'take all necessary measures to keep peace and security' in the area. In reality, what did this mean?	US forces had government permission to invade Vietnam and fight the communists.
	18	How did Johnson invade in 1965?	"Operation Rolling Thunder (US bombing campaign against North Vietnam). Also sent 3,500 US troops into Vietnam. "

Year 11 History: Conflict and tension in Asia

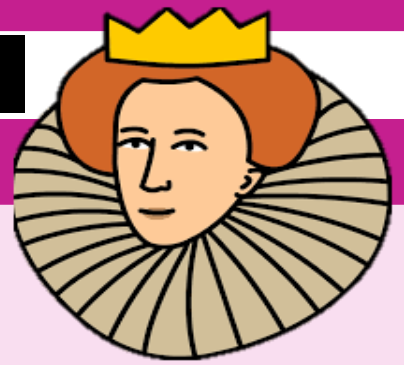
Topic		Question	Answer
Civil War in South Vietnam	11	After World War II there was an eight year war between which sides in Vietnam? Which international countries financially supported each side?	
	12	Discrimination is when a group of people are treated differently because of something they are. Name two groups which were discriminated against in South Vietnam by Diem.	
	13	How did Thich Quang Duc protest against Diem's treatment of Buddhists?	
	14	How many tonnes of food, weapons and supplies did the Vietminh send to the Vietcong in South Vietnam via the Ho Chi Minh trail?	
US involvement begins	15	What was Eisenhower's Domino Theory?	
	16	Kennedy increased American Involvement by creating a programme which moved peasants off of their land and into fenced camps to protect them from being influenced by the Vietcong. What was this programme called?	
	17	The Gulf of Tonkin resolution allowed the US to 'take all necessary measures to keep peace and security' in the area. In reality, what did this mean?	
	18	How did Johnson invade in 1965?	

Year 11 History Elizabethan England



Topic		Question	Answer
Elizabeth and her Government	1	Which Dynasty ruled in this period?	Tudor
	2	Who were seen to be England's main rivals?	Spain, France (the papacy?)
	3	How had Henry VIII caused a rivalry with the Papacy?	Broken with the Catholic Church/Papacy to divorce first wife. Set up Protestant Church of England.
	4	Which of Elizabeth's siblings had reigned before her?	Edward. Mary.
	5	Why was Elizabeth seen by some as an 'unrightful heir?'	She was born to Henry's second wife Anne Boleyn whilst he was still married.
	6	Who was Elizabeth's Catholic cousin who some claimed had a stronger claim to the throne?	Mary Queen of Scots.
	7	Why did Elizabeth grow up as an independent, strong character?	Her mother was executed by her father. She was sent away from Court. Well educated.
	8	Why did Elizabeth grow up to be cautious and brave?	She was accused of treason by her brother and sister.
	9	Why does Elizabeth keep Mary Queen of Scots under house arrest when she arrives in England?	Because she is a potential catholic threat to Elizabeth's crown
	10	What was the royal court?	Made up of 500 nobles advisors and servants who revolve around the Queen. Wherever she went, the court followed. It was the centre of political power.
	11	Who were the most influential part of Elizabeth's court?	The Privy Council
	12	Name three members of Elizabeth's Privy Council	Francis Walsingham, William Cecil, Robert Dudley

Year 11 History: Elizabethan England



Topic		Question	Answer
Elizabeth and her Government	1	Which Dynasty ruled in this period?	
	2	Who were seen to be England's main rivals?	
	3	How had Henry VIII caused a rivalry with the Papacy?	
	4	Which of Elizabeth's siblings had reigned before her?	
	5	Why was Elizabeth seen by some as an 'unrightful heir?'	
	6	Who was Elizabeth's Catholic cousin who some claimed had a stronger claim to the throne?	
	7	Why did Elizabeth grow up as an independent, strong character?	
	8	Why did Elizabeth grow up to be cautious and brave?	
	9	Why does Elizabeth keep Mary Queen of Scots under house arrest when she arrives in England?	
	10	What was the royal court?	
	11	Who were the most influential part of Elizabeth's court?	
	12	Name three members of Elizabeth's Privy Council	

Year 11 History: Elizabethan England

Topic		Question	Answer
Elizabeth and her Government	13	How did Elizabeth use patronage?	She would hand out jobs and titles to encourage loyalty
	14	What was a royal progress?	Elizabeth would tour the country, visiting loyal subjects and keeping an eye on others.
	15	What was Elizabeth's thinking behind divide and rule?	She would put rivals on the privy council to encourage them to compete & work harder. At least one would support her.
	16	Why was Elizabeth put under pressure to marry?	Produce an heir, stop Mary QoS becoming Queen, form a powerful alliance
	17	Name 2 of Elizabeth's suitors	King Phillip of Spain, Robert Dudley, Francis, Duke of Anjou
	18	Why did Elizabeth refuse to marry?	Loss of authority to a man, giving birth was risky, past experiences of family and marriage had been bad, being single could be used to her advantage.
	19	What did Elizabeth use parliament for?	Raising taxes, making laws.
	20	How did Elizabeth manage parliament?	She issued statements about authority, arrested MPs who went too far, dismissed parliament when she wished.
	21	What issues did Elizabeth and parliament conflict over	Religion, freedom of speech, marriage & succession, monopolies.
	22	How did the Earl of Essex initially upset Elizabeth?	They argued during a meeting, she hit him & he nearly drew his sword.

Year 11 History: Elizabethan England

Topic		Question	Answer
Elizabeth and her Government	13	How did Elizabeth use patronage?	
	14	What was a royal progress?	
	15	What was Elizabeth's thinking behind divide and rule?	
	16	Why was Elizabeth put under pressure to marry?	
	17	Name 2 of Elizabeth's suitors	
	18	Why did Elizabeth refuse to marry?	
	19	What did Elizabeth use parliament for?	
	20	How did Elizabeth manage parliament?	
	21	What issues did Elizabeth and parliament conflict over	
	22	How did the Earl of Essex initially upset Elizabeth?	

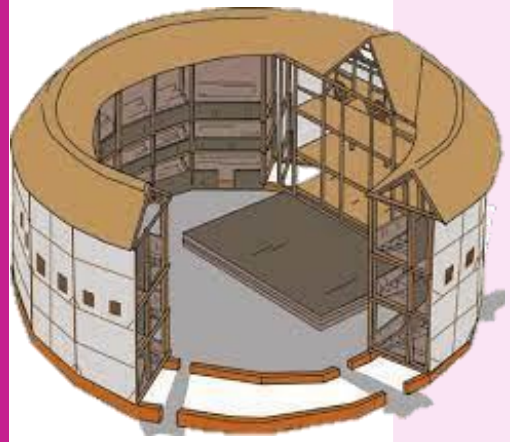
Year 11 History: Elizabethan England

Topic		Question	Answer
Elizabeth and her Government	23	How did Essex make things worse regarding Ireland?	He made peace without permission, returned home without permission & entered Elizabeth's chambers & caught her undressed.
	24	How did Essex rebel?	Took 4 privy councillors hostage, marched to London with 200 supporters
	25	How was the Essex rebellion stopped?	Essex was labelled a traitor and most of his followers fled.
	26	What were the consequences of the Essex rebellion?	Essex was executed, most of his supporters were fined, Elizabeth showed she wouldn't tolerate challenges to her authority.
Life in Elizabethan Times	27	Name two Elizabethan sailors	Walter Raleigh, Francis Drake, John Hawkins
	28	What made exploration possible?	Better defences to explore hostile territory, better navigation e.g. the astrolabe, better ships that were faster
	29	What was the impact of Elizabethan voyages?	England became involved in the slave trade, England became wealthier after raiding Spanish ships & ports as well as trade in the East, England's naval power grew, England's colonies began to grow e.g. North America.
	30	Who were the gentry?	A new social class, often wealthy landowners with important positions. Richer than peasants, but not born with titles.
	31	How did homes change in the Great rebuilding?	They showed off wealth & taste rather than defence. They used lots of expensive glass. They used symmetry and replaced halls with a great chamber. They would be built with the intention of attracting the queen to visit.

Year 11 History: Elizabethan England

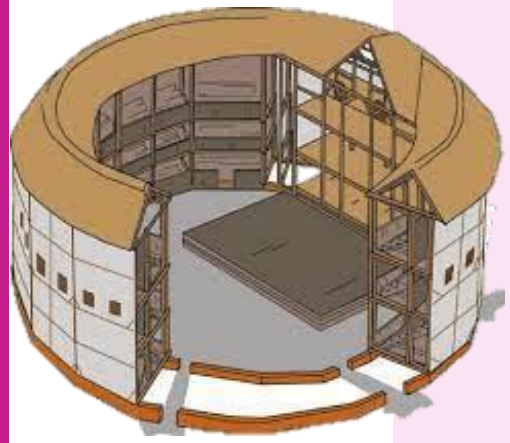
Topic		Question	Answer
Elizabeth and her Government	23	How did Essex make things worse regarding Ireland?	
	24	How did Essex rebel?	
	25	How was the Essex rebellion stopped?	
	26	What were the consequences of the Essex rebellion?	
Life in Elizabethan Times	27	Name two Elizabethan sailors	
	28	What made exploration possible?	
	29	What was the impact of Elizabethan voyages?	
	30	Who were the gentry?	
	31	How did homes change in the Great rebuilding?	

Year 11 History: Elizabethan England



Topic		Question	Answer
Life in Elizabethan Times	32	**Who were the Lord Chamberlain's men?**	A theatre troupe or company who were funded by a patron.
	33	**Why would people fund a theatre troupe?**	To impress the Queen, who loved theatre.
	34	**Describe an Elizabethan theatre such as the Globe**	The pit is where ordinary people stood in the open weather, the galleries had covered seats for the rich, the Lord's rooms were most expensive and sat behind the stage for all to see. Ticket price depended on where you were and an opportunity to show how rich you were
	35	**Why was theatre so popular?**	It was affordable, new & exciting, carried political messages, entertaining.
	36	**Why did some oppose theatre?**	Large gatherings could spread disease, Puritans saw it as sinful and a distraction from prayer, theatres were dangerous with drunkenness and crime.
	37	**Why was poverty an problem in Elizabethan England?**	Henry VIII had closed monasteries responsible for helping the poor. Bad harvests led to increases in food prices. Population increases led to rent increases. A flu outbreak killed 200,000 people.
	38	**Who were the undeserving poor?**	Untrustworthy beggars who weren't interested in working e.g. Counterfeit cranks, clapper dudgeons, Tom O' Bedlams.
	39	**How did people try to deal with poverty initially?**	Stocks, whippings, holes burnt in ears, hangings.
	40	**What did the poor Law do?**	Taxed the wealthy to pay for the care of the poor. Fit & healthy paupers given work. Those who refused whipped or sent to house of correction.

Year 11 History:
Elizabethan England



Topic		Question	Answer
Life in Elizabethan Times	32	Who were the Lord Chamberlain's men?	
	33	Why would people fund a theatre troupe?	
	34	Describe an Elizabethan theatre such as the Globe	
	35	Why was theatre so popular?	
	36	Why did some oppose theatre?	
	37	Why was poverty an problem in Elizabethan England?	
	38	Who were the undeserving poor?	
	39	How did people try to deal with poverty initially?	
	40	What did the poor Law do?	

Year 11 History: Elizabethan England

Topic	Question		Answer
Trouble at Home and Abroad	41	Who were the Puritans?	Extreme protestants, unwilling to compromise their faith.
	42	Who were the Jesuits?	Missionaries sent to England to help restore Catholicism.
	43	How did Elizabeth demonstrate her 'Middle way'?	The Act of supremacy, which made her Governor, rather than head of the church. The Act of uniformity, which created an English prayer book, allowed Catholics to worship in private, allowed candles and colourful robes, made attendance at Anglican churches compulsory.
	44	What was the Northern rebellion?	Plan to kill Elizabeth & marry Duke of Norfolk to Mary QoS. Earls of Westmoreland & Northumberland took control of Durham Cathedral & had a catholic mass. Marched south with 4600 men, but fled. Northumberland executed.
	45	What was the Papal bull?	Message from the Pope excommunicating the Queen, encouraging rebellion.
	46	Describe two catholic plots to kill Elizabeth and replace her with Mary QoS	Ridolfi plot (Marry Mary QoS to Norfolk, Catholics to invade). Throckmorton plot (Kill Elizabeth, replace with Mary QoS. French invade). Babington plot (Kill Elizabeth, replace with Mary QoS. Mary agrees)
	47	What was the impact of Mary QoS's execution?	Catholics lose their alternative monarch. Mary became a martyr. Outrage was caused in France and Spain.
	48	What led to conflict with Spain?	Elizabeth turned Phillip down, Spain saw it as their duty to return Catholicism to England. Spain was keen to follow the Papal Bull. English sailors had raided Spanish ships & ports with license from Elizabeth.
	49	How did the Spanish plan to invade England?	Sail 151 ships, 7000 sailors and 34,000 soldiers to the Netherlands & collect more men. Sail in a crescent formation. Invade England with support from English Catholics.

Year 11 History: Elizabethan England

Topic	Question		Answer
Trouble at Home and Abroad	41	Who were the Puritans?	
	42	Who were the Jesuits?	
	43	How did Elizabeth demonstrate her 'Middle way'?	
	44	What was the Northern rebellion?	
	45	What was the Papal bull?	
	46	Describe two catholic plots to kill Elizabeth and replace her with Mary QoS	
	47	What was the impact of Mary QoS's execution?	
	48	What led to conflict with Spain?	
	49	How did the Spanish plan to invade England?	

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer	Question	Answer
When did England become a Protestant country?	1534	In 1568, what was the name of the ship Drake captained?	*Judith*
What is a merchant?	A person who trades goods produced by others.	Where did Drake and Hawkins anchor to make repairs to their ships?	The Spanish port of San Juan de Ulua
Who did English merchants work with to challenge Spain?	France	What happened when Drake was anchored at a Spanish port?	They were attacked and only 2 out of 5 ships escaped
What did Portugal become involved in before 1558?	Slave trade	What was Drake's relationship with the Spanish like?	He had a fierce hatred and a desire for revenge
Who did Francis Drake live with growing up?	Relatives the Hawkins family.	In 1572 where did Drake plan to attack?	Panama
What were the Hawkins family?	Merchants, seafarers and occasional pirates.	What is a Cimarrons?	Former enslaved African people who escaped Spanish captors
What is John Hawkins nickname?	Father of the English slave trade.	What does circumnavigation mean?	Travel around the globe.

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer	Question	Answer
When did England become a Protestant country?		In 1568, what was the name of the ship Drake captained?	
What is a merchant?		Where did Drake and Hawkins anchor to make repairs to their ships?	
Who did English merchants work with to challenge Spain?		What happened when Drake was anchored at a Spanish port?	
What did Portugal become involved in before 1558?		What was Drake's relationship with the Spanish like?	
Who did Francis Drake live with growing up?		In 1572 where did Drake plan to attack?	
What were the Hawkins family?		What is a Cimarrons?	
What is John Hawkins nickname?		What does circumnavigation mean?	

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer
What is the Strait of Anian?	Northwest sea passage that linked the Atlantic and Pacific Oceans
What does voyage mean?	A long journey involving travel by sea or in space
What members of the Privy Council supported Drakes voyages?	Earl of Leicester, Sir Francis Walsingham & Sir Christopher Hatton
Elizabeth supported Drake but why could she not give public support?	Did not want to cause further tension with Philip II of Spain
Cecil was keen to not upset Spain, where did Drake say his voyage was going?	Egypt to collect a cargo of dried fruit.
What was Drakes Pelican ship renamed to?	Golden Hind
Name the other ships Drake set off with on his voyage?	*Elizabeth, Marigold, Benedict and the Swan*
Off the coast of Morocco Drake captured a ship from the Spanish, what did he call it?	Christopher

When did Drake's fleet set off from Plymouth?	15th November 1577
What caused them to turn back?	A storm
When did they set off again?	13th December 1577
What is a rutter?	Sailors book with written directions
What is an astrolabe?	Uses the stars and planets to find the latitude of a ship

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer
What is the Strait of Anian?	
What does voyage mean?	
What members of the Privy Council supported Drakes voyages?	
Elizabeth supported Drake but why could she not give public support?	
Cecil was keen to not upset Spain, where did Drake say his voyage was going?	
What was Drakes Pelican ship renamed to?	
Name the other ships Drake set off with on his voyage?	
Off the coast of Morocco Drake captured a ship from the Spanish, what did he call it?	

When did Drake's fleet set off from Plymouth?	
What caused them to turn back?	
When did they set off again?	
What is a rutter?	
What is an astrolabe?	

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer
Drake captured a Portuguese merchant ship what did he rename it?	From Santa Maria to Mary
In May 1578 after bad storms what did Drake do?	Sank the Swan and abandoned the Christopher
Where did Drake spend the winter months?	Bay of San Julian
Who was Drake's co-commander?	Thomas Doughty
What happened to Doughty?	Sentenced to death and executed

In August 1578, which ships did Drake set off with?	Marigold, Elizabeth and the Golden Hind
It took 16 days to pass through where?	The Strait of Magellan
The Hind was blown off course and discovered a Channel named?	Drake's Passage
Which ship was lost in the storm?	Marigold
What happened to the Elizabeth?	The crew turned and went home!
What was the name of the Spanish treasure ship?	Nuestra Senora de la Concepcion
What did Drake discover on the ship?	Gold and silver treasure chests, it took 6 days to transfer it all onto the Hind
What was the value of the good?	£480 million

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer
Drake captured a Portuguese merchant ship what did he rename it?	
In May 1578 after bad storms what did Drake do?	
Where did Drake spend the winter months?	
Who was Drake's co-commander?	
What happened to Doughty?	

In August 1578, which ships did Drake set off with?	
It took 16 days to pass through where?	
The Hind was blown off course and discovered a Channel named?	
Which ship was lost in the storm?	
What happened to the Elizabeth?	
What was the name of the Spanish treasure ship?	
What did Drake discover on the ship?	
What was the value of the good?	

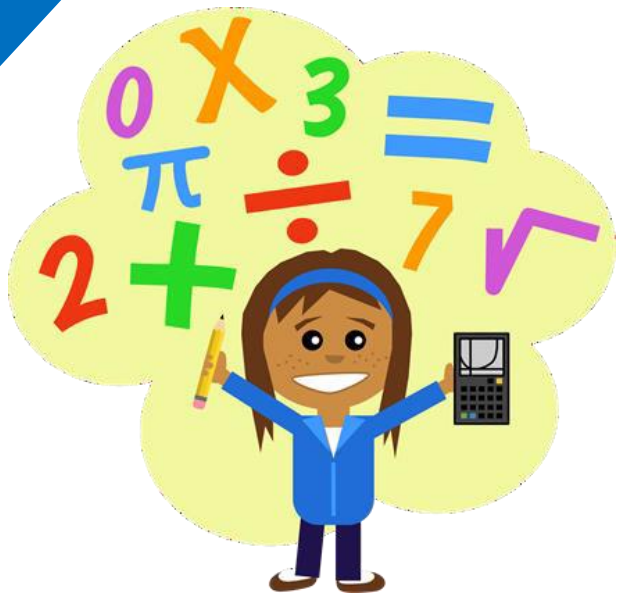
Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer
In June 1579 where did Drake discover?	Now northern California
What did Drake name it?	'Nova Albion' or New Albion
When did Drake set off for home?	23rd July 1579
When did Drake arrive back at Plymouth?	26th September 1580
How did Elizabeth reward Drake?	He was knighted
What does Drakes motto 'Sic parva magna' mean?	Great things from small beginnings

Year 11 History: Historic environment: The Americas and Drake's circumnavigation 1577-1580

Question	Answer
In June 1579 where did Drake discover?	
What did Drake name it?	
When did Drake set off for home?	
When did Drake arrive back at Plymouth?	
How did Elizabeth reward Drake?	
What does Drakes motto 'Sic parva magna' mean?	

Maths



Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

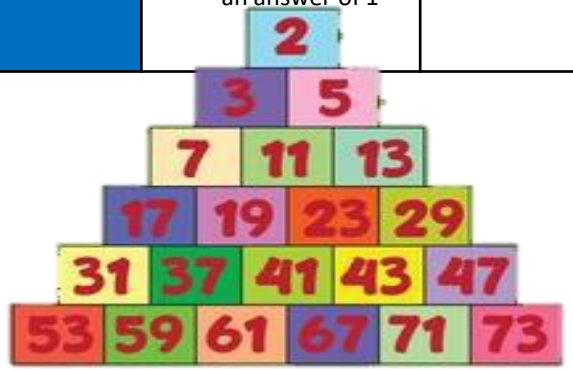
Year 11 Maths:

Key Vocabulary

1	**Integer**	• A whole number • Can be positive, negative or 0	e.g. 2, 4, 23, -1, -1000,
2	**Multiple**	• In a number's times table • The product of that number with an integer	First 3 multiples of 3: 3, 6, 9 Not multiples of 20: 1, 2, 4, 5, 2.5, ….
3	**Lowest Common Multiple**	• The first number that appears in both times tables	12: 12, 24, 36, 48, 60, 72, …. 20: 20, 40, 60, 80, … The LCM of 12 and 20 is 60
4	**Factor**	• Whole numbers that divide into another number exactly	Factors of 12: 1, 2, 3, 4, 6, 12 Not factors of 12: 0, -6, 24
5	**Highest Common Factor**	• The biggest number that will divide into the given numbers	12: 1, 2, 3, 4, 6, 12 20: 1, 2, 4, 5, 10, 20 The HCF of 12 and 20 is 4
6	**Prime Number**	• Only has 2 factors, 1 and itself • Both factors are different numbers	The first 8 prime numbers are: 2, 3, 5, 7, 11, 13, 17, 19
7	**Product of Prime Factors**	• Finding the prime factors that will multiply together to give that number	$20 = 2 \times 2 \times 5$ $20 = 2^2 \times 5$
8	**Base**	• Whatever the power is applied to • It can be a number, a variable (letter) or both.	In 3^2 the base is 3 In x^5 the base is x

Key Vocabulary

9	**Index/ Indices**	• The power • Written as a small number to the right and above the base number • Says how many times to use the number in a multiplication	The part in red in each example is an index 3^{2} 5^{x} $5y^{3}$ $8^{\frac{1}{3}}$
10	**Simplify**	• Using the index laws to rewrite the question in a simpler way	$(3x^2)^3 = 27x^6$ $3x^6 \times 2x^4 = 6x^{10}$ $4x^3 \div 2x^{-1} = 2x^4$
11	**Evaluate**	• Calculating the actual value	Evaluate 3^2=9
12	**Reciprocal**	• A number multiplied by its reciprocal has an answer of 1	$3 \times \frac{1}{3} = 1$



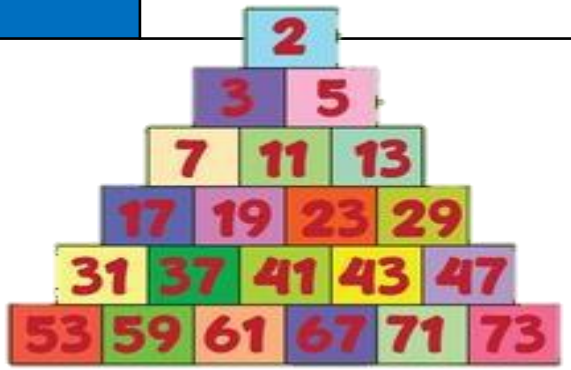
Year 11 Maths:

Key Vocabulary

1	Define an **integer**	
2	What are **multiples?**	
3	What is the **lowest common multiple** of two numbers?	
4	What are **factors?**	
5	What is the **highest common factor** of two numbers?	
6	What are **prime numbers?**	
7	How do you represent a number as **the product of its prime factors?**	
8	What is a **base?**	

Key Vocabulary

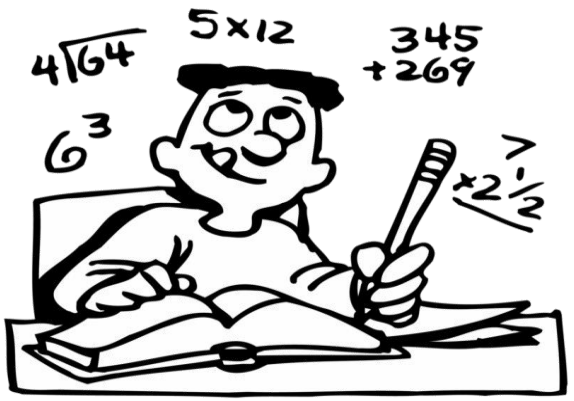
9	What are **indices?**	
10	What does **simplify** mean**?**	
11	What does the word **evaluate** mean**?**	
12	Define a **reciprocal**	



Year 11 Maths:

Key Facts

13	**Index Law of multiplication** $x^a \times x^b = x^{a+b}$ When the bases are the same and are being multiplied together; we add the indices.
14	**Index Law of division** $x^a \div x^b = x^{a-b}$ When the bases are the same and are being divided; we subtract the indices.
15	**Index Law of the zero index** $x^0 = 1$ Anything raised to the power of 0 is 1.

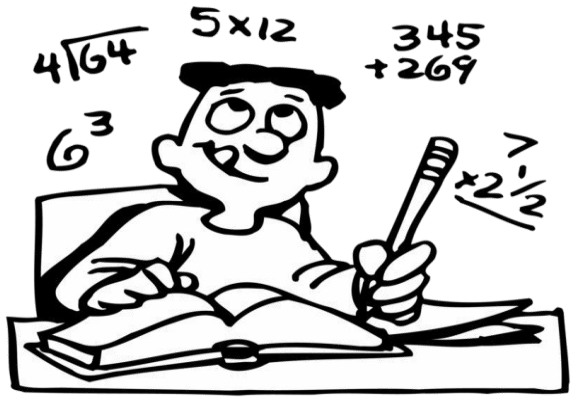


16	**Index Law of "powers of powers"** $(x^a)^b = x^{ab}$ When a base with an index is raised to another index, the indices are multiplied.
17	**Index Law of negative indices** $x^{-a} = \frac{1}{x^a}$ A base with a negative index is the same as the reciprocal of the base with a positive index.

Year 11 Maths:

Key Facts

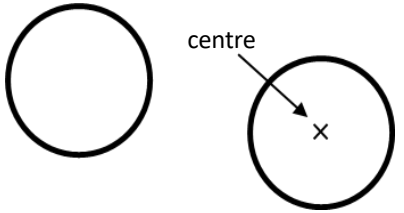
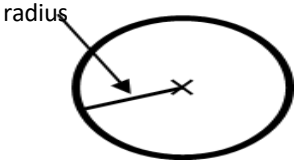
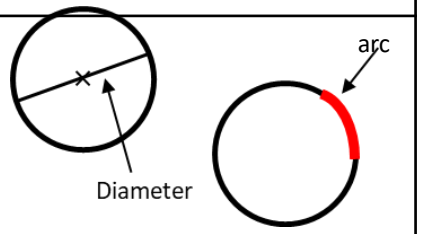
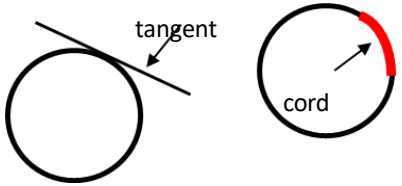
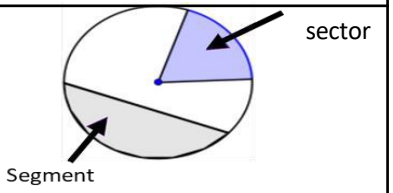
13	What is the index law of multiplication?
14	What is the index law of division?
15	What does the law of the zero index tell us?



16	What is the index law of "powers of powers"
17	How do you evaluate negative indices?

Year 11 Maths:

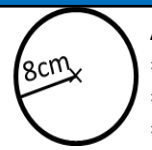
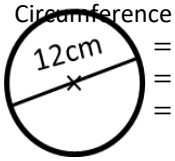
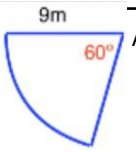
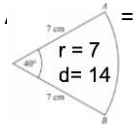
Key Vocabulary

1	**Circle**	• A round shape • Every point on its edge is at a fixed distance from the centre	
2	**Centre**	• A fixed point in the middle • Spheres also have centres	
3	**Circumference**	• The perimeter of a circle • Around the outside	
4	**Radius**	• Line joining the centre to circumference	
5	**Diameter**	• Line through the centre • Touches two points on the circumference	
6	**Arc**	• Curved line which can be part of a circumference	
7	**Tangent**	• A line on the outside of a circle that touches the circle at only one point	
8	**Chord**	• Line joining the end of an arc	
9	**Sector**	• A shape formed by an arc and two radii	
10	**Segment**	• Section between a chord and an arc	

Key Facts

11	• Pi or π = 3.141592653…. • π is an irrational number
12	• The radius is half the diameter
13	• The diameter is double the radius
14	• The length of an arc is a fraction of the circumference
15	• The area of a sector is a fraction of the circle's area

Key Formulae

16	Area of a circle $= \pi r^2$ r = radius	 Area $= \pi \times 8^2$ $= 64\pi$ $= 201.0619\ldots$ $= 201.1\ (1dp)$
17	Circumference of a circle $= \pi d$ d = diameter (or Circumference $= 2\pi r$)	 Circumference $= \pi \times 12$ $= 12\pi$ $= 37.69911\ldots$ $= 37.7\ (1dp)$
18	Area of a sector $= \frac{\theta}{360} \times \pi r^2$ θ = angle	 Area $= \frac{60}{360} \times \pi \times 9^2$ $= \frac{1}{6} \times \pi \times 81$ $= 42.4115\ldots$ $= 42.4\ (1dp)$
19	Arc length $= \frac{\theta}{360} \times \pi d$ θ = angle	 $= \frac{40}{360} \times \pi \times 14$ $= \frac{1}{9} \times \pi \times 14$ $= 4.88692\ldots$ $= 4.9\ (1dp)$

Year 11 Maths:

Key Vocabulary

1	What is a circle?	
2	Where is the centre?	
3	Describe the circumference	
4	Draw a circle and label its radius	
5	Draw a circle and label its diameter	
6	What is an arc?	
7	Describe a tangent to a circle	
8	What is a chord?	
9	Describe the sector of a circle	
10	What is a segment?	

Key Facts

11	What is π to 2 decimal places?
12	If you know the diameter, how would you work out the radius?
13	If you know the radius, how would you work out the diameter?
14	What is the relationship between length of an arc and the circumference of a circle?
15	What is the relationship between the area of a sector and the area of a circle?

Key Formulae

16	What is the formula for area of a circle?
17	What is the formula for circumference? What is the other formula for circumference?
18	What is the formula for area of a sector?
19	What is the formula for arc length?

Year 11 Maths: HIGHER TIER ONLY

Quadratic Formula:

1	• To solve quadratic equations of the form $ax^2 + bx + c = 0$ where $a \neq 0$	$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Sine Rule:

2	• To calculate missing sides	$\dfrac{a}{sinA} = \dfrac{b}{sinB} = \dfrac{c}{sinC}$
3	• To calculate missing angles	$\dfrac{sinA}{a} = \dfrac{sinB}{b} = \dfrac{sinC}{c}$

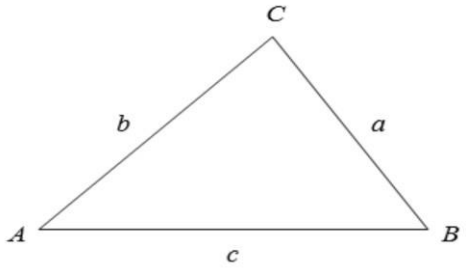
Cosine Rule:

4	• To calculate missing sides	$a^2 = b^2 + c^2 - 2bc\ cosA$
5	• To calculate missing angles	$cosA = \dfrac{b^2 + c^2 - a^2}{2bc}$

Area of any Triangle:

6	• Formula to calculate the ear of any triangle	$Area = \dfrac{1}{2}absinC$

The **sine rule**, **cosine rule** and **area of any triangle** formula can be used in any triangle *ABC* where *a*, *b* and *c* are lengths of sides:



Using the formulae

7	Use the quadratic formula to solve: $3x^2 + 7x - 5 = 0$ $a = 3, b = 7, c = -5$	$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ $x = \dfrac{-7 \pm \sqrt{(7)^2 - 4 \times 3 \times -5}}{2 \times 3}$ $x = 0.573$ or $x = -2.907$
8	Use the sine rule to calculate the length BC.	$\dfrac{a}{sinA} = \dfrac{c}{sinC}$ $\dfrac{a}{\sin(40)} = \dfrac{13.2}{\sin(114)}$ $a = \dfrac{13.2}{\sin(114)} \times \sin(40) = 9.3m$
9	Used the sine rule to calculate the angle ABC.	$\dfrac{sinA}{a} = \dfrac{sinB}{b}$ $\dfrac{\sin(60)}{17} = \dfrac{sinB}{19}$ $sinB = \dfrac{\sin(60)}{17} \times 19$ $B = sin^{-1}\left(\dfrac{\sin(60)}{17} \times 19\right) = 75.4°$
10	Use the cosine rule to calculate the length CB.	$a^2 = b^2 + c^2 - 2bc\ cosA$ $a^2 = 8^2 + 15^2 - 2 \times 8 \times 15 \times \cos(70)$ $a^2 = 206.915\ldots.$ $a = \sqrt{Ans} = 14.4cm$
11	Use the cosine rule to calculate the angle BAC.	$cosA = \dfrac{b^2 + c^2 - a^2}{2bc}$ $cosA = \dfrac{10^2 + 8^2 - 14^2}{2 \times 10 \times 8}$ $cosA = -0.2$ $A = \cos^{-1}(-0.2) = 101.5°$
12	Calculate the area of this triangle.	$Area = \dfrac{1}{2}absinC$ $Area = \dfrac{1}{2} \times 15 \times 8 \times \sin(70)$ $Area = 56.4cm^2$

Year 11 Maths: HIGHER TIER ONLY

Quadratic Formula:

1	What is the quadratic formula?	

Sine Rule:

	What is the sine rule to calculate missing sides?	
	What is the sine rule to calculate missing angles?	

Cosine Rule:

	What is the cosine rule to calculate missing sides?	
	What is the cosine rule to calculate missing angles?	

Area of any Triangle:

6	What is the formula that ben be used to calculate the area of any triangle?	

Using the formulae

7	How would you use the quadratic formula to solve: $3x^2 + 7x - 5 = 0$	
8	How would you use the sine rule to calculate a length?	
9	How would you use the sine rule to calculate an angle?	
10	How would you use the cosine rule to calculate a length?	
11	How would you use the cosine rule to calculate an angle?	
12	How would you use the area sine rule to calculate the area of a non-right angled triangle?	

Year 11 Maths: Standard Form

	Key Skill	Thinking Point	WAGOLL
1	Converting from standard form to an ordinary number positive powers	• When a positive power multiply by 10 that many times	**Write 2.4×10^3 as an ordinary number** 2.4×10^3 Means multiply by 10 three times $2.4 \times 10 \times 10 \times 10 = 2400$
2	Converting from standard form to an ordinary number negative powers	• When a negative power divide by 10 that many times	**Write $2.4 \div 10^3$ as an ordinary number** 2.4×10^{-3} Means divide by 10 three times $2.4 \div 10 \div 10 \div 10 = 0.0024$
3	Converting from an ordinary number to standard form: large numbers	• When a large number, divide by 10 until the number is less than 10 but larger than 1. • The number of divisions is the power of 10.	**Write 67300 in standard form** $67300 \div 10 \div 10 \div 10 \div 10 = 6.73$ We have divided by 10 four times so the power will be 4. $= 6.73 \times 10^4$
4	Converting from an ordinary number to standard form: small numbers	• When a small number, multiply by 10 until the number is less than 10 but larger than 1. • The number of multiplications is the negative power of 10.	**Write 0.0673 in standard form** $0.0673 \times 10 \times 10 = 6.73$ We have multiplied by 10 twice so the power will be -2. $= 6.73 \times 10^{-2}$

Key Vocabulary	Definition
Standard From	• Why do we write numbers in standard form? • What do numbers in **standard form** look like?

Year 11 Maths: Standard Form

	Key Skill	Thinking Point	Practice
1	Converting from standard form to an ordinary number positive powers	• When a positive power _____ by 10 that many times	**Write 3.2×10^4 as an ordinary number**
2	Converting from standard form to an ordinary number negative powers	• When a negative power _____ by 10 that many times	**Write $3.2 \div 10^4$ as an ordinary number**
3	Converting from an ordinary number to standard form: large numbers	• When a large number, _____ by _____until the number is less than ___ but larger than ___. • The number of _____ is the power of 10.	**Write 73600 in standard form**
4	Converting from an ordinary number to standard form: small numbers	• When a small number, _____ by ___ until the number is less than ___ but larger than ___. • The number of _____ is the negative power of 10.	**Write 0.0703 in standard form**

Key Vocabulary	Definition
Standard From	• Why do we write numbers in standard form? • What do numbers in **standard form** look like?

Year 11 Maths: Standard Form

	Key Skill	Thinking Point	WAGOLL
1	Multiplying Standard form	• Multiply ordinary numbers together • Add powers together • Check answer is written in standard form	**Calculate** $(\mathbf{4 \times 10^2}) \times (\mathbf{3 \times 10^5})$ $(4 \times 3) \times (10^2 \times 10^5)$ $12 \times 10^{2+5}$ 12×10^7 Not in standard form as 12 is larger than 10. 1.2×10^6
2	Dividing Standard Form	• Divide ordinary numbers together • Subtract second power from first power • Check answer is written in standard for	**Calculate** $(\mathbf{4 \times 10^2}) \div (\mathbf{8 \times 10^5})$ $(4 \div 8) \times (10^2 \div 10^5)$ $0.5 \times 10^{2-5}$ 0.5×10^{-3} Not in standard form as 0.5 is smaller than 1. 5×10^{-4}
Below is Higher Tier ONLY			
3	Adding and Subtracting Standard Form	• Both numbers need to be written to the same power of 10. • Either can be chosen but choosing the larger of the two will mean it is less likely you will need to rewrite in standard form. • Once both written as the same of 10 add/subtract the numbers.	**Calculate** $\mathbf{3 \times 10^5 + 4 \times 10^7}$ $0.03 \times 10^7 + 4 \times 10^7$ 4.03×10^7 **Calculate** $\mathbf{5 \times 10^5 - 2 \times 10^2}$ $5 \times 10^5 - 0.002 \times 10^5$ 4.998×10^5

Year 11 Maths: Standard Form

	Key Skill	Thinking Point	WAGOLL
1	Multiplying Standard form	• What do we do with the powers when multiplying in standard form? • At the end we must check the number is written in _____	• **Calculate** $(5 \times 10^2) \times (7 \times 10^6)$
2	Dividing Standard Form	• What do we do with the powers when dividing in standard form? • At the end we must check the number is written in _____	• **Calculate** $(2 \times 10^3) \div (4 \times 10^8)$
Below is Higher Tier ONLY			
3	Adding and Subtracting Standard Form	• What is the first step? • Why do we use the larger power of 10?	**Calculate** $5 \times 10^5 + 2 \times 10^3$ **Calculate** $7 \times 10^8 - 3 \times 10^5$

Year 11 Maths: Expanding Brackets

	Key Skill	Thinking Point	WAGOLL
1	Expanding Single Brackets	Multiply everything inside the bracket by outside the bracket	Expand $3x(2x-4)$ $\times$ | $\mathbf{2x}$ | $\mathbf{-4}$ $\mathbf{3x}$ | $6x^2$ | $-12x$ $= 6x^2 - 12x$
2	Expanding Multiple single Brackets	• Expand each bracket separately by multiplying everything inside the bracket by outside the bracket • Note: Be careful to notice the signs in front of the numbers • Simplify by collecting like terms	Expand and simplify $3x(2x+4) - 2x(x-2)$ $\times$ | $\mathbf{2x}$ | $\mathbf{+4}$ $\mathbf{3x}$ | $6x^2$ | $+12x$ $\times$ | $\mathbf{x}$ | $\mathbf{-2}$ $\mathbf{-2x}$ | $-2x^2$ | $+4x$ $= 6x^2 + 12x - 2x^2 + 4x$ $= 4x^2 + 6x$
3	Expand Double Brackets	• Create a 3 by 3 grid • The first bracket should be written on top • The second bracket should be written on the side • Then multiply all terms • Simplify by collecting like terms	Expand and simplify $(3x-1)(2x+4)$ $\times$ | $\mathbf{3x}$ | $\mathbf{-1}$ $\mathbf{2x}$ | $6x^2$ | $-2x$ $\mathbf{+4}$ | $+12x$ | -4 $= 6x^2 - 2x + 12x - 4$ $= 6x^2 + 10x - 4$
	Below is Higher Tier ONLY		
4	Expand Triple Brackets	• Expand the first two brackets, using the method above • Then create a 4 by 3 grid • Multiply all terms • Simplify by collecting like terms • The final answer should be written in the form $ax^3 + bx^2 + cx + d$	Expand & simplify $(3x-1)(2x+4)(x-3)$ $\times$ | $\mathbf{3x}$ | $\mathbf{-1}$ $\mathbf{2x}$ | $6x^2$ | $-2x$ $\mathbf{+4}$ | $+12x$ | -4 $= 6x^2 - 2x + 12x - 4$ $= 6x^2 + 10x - 4$ $\times$ | $\mathbf{6x^2}$ | $\mathbf{+10x}$ | $\mathbf{-4}$ $\mathbf{x}$ | $6x^3$ | $+10x^2$ | $-4x$ $\mathbf{-3}$ | $-18x^2$ | $-30x$ | $+12$ $= 6x^3 + 10x^2 - 18x^2 - 4x - 30x + 12$ $= 6x^3 - 8x^2 - 34x + 12$

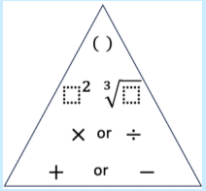
Year 11 Maths: Expanding Brackets

	Key Skill	Thinking Point	WAGOLL
1	Expanding Single Brackets	What mathematical operation are we using when expanding brackets?	Expand $2x(4x-3)$
2	Expanding Multiple single Brackets	• Expand each bracket _____ by _____ everything inside the bracket by outside the bracket. • What do we do after expanding the brackets separately?	Expand and simplify $2x(x+3)-3x(2x-1)$
3	Expand Double Brackets	• What size grid should we draw? • Where should the second bracket we written? • What is the final step?	Expand and simplify $(2x-3)(x-4)$
	Below is Higher Tier ONLY		
4	Expand Triple Brackets	• What is the first step? • What size should the second grid be? • What is the final step? • What form should the final answer be written in?	• Expand & simplify $(2x-3)(x-4)(2x-1)$

Year 11 Maths: Substitution

	Key Skill	Thinking Point	WAGOLL	
1	Order of Operations	• Using the triangle above complete mathematical operations working from the top down.	Calculate $3 + 5 \times 7$ $3 + 5 \times 7$ $= 3 + 35$ $= 38$	Calculate $3 - 2^3 \times 5$ $3 - 2^3 \times 5$ $= 3 - 8 \times 5$ $= 3 - 40$ $= -37$
2	Substitution	• Replace the letter with the given number • Remember to follow the order of operations	Work out the value of p when $u = 4$. $p = 5u + 7$ $p = 5 \times (4) + 7$ $p = 20 + 7$ $p = 27$	Work out the value of p when $u = 4$ and $w = -2$. $p = 3w^2 - 5u$ $p = 3 \times (-2)^2 - 5 \times 4$ $p = 3 \times 4 - 5 \times 4$ $p = 12 - 20$ $p = -8$

Key Vocabulary	Definition
Substitution	• Replacing a letter with a number in a formula
Order of Operations	• The order mathematical operations are performed in



Year 11 Maths: Substitution

	Key Skill	Thinking Point	WAGOLL	
1	Order of Operations	• What operation do we perform first?	Calculate $5 + 3 \times 4$	Calculate $4 - 3^2 \times 2$
2	Substitution	• Replace the _____ with the given _____	Work out the value of p when $u = 3$. $p = 2u + 5$	Work out the value of p when $u = 2$ and $w = -3$.

Key Vocabulary	Definition
Substitution	• What is substitution
Order of Operations	• What order we complete mathematical operations in?

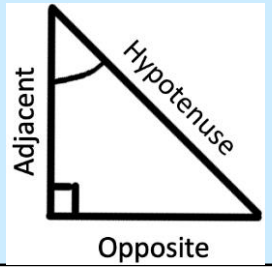
Year 11 Maths: Formula

Percentages:

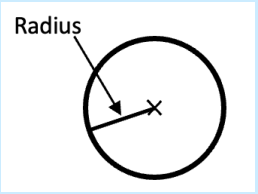
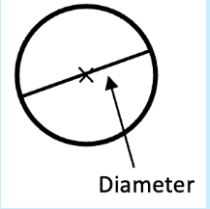
1	• Percentage Change	$\frac{Difference}{Orginal} \times 100$

Trigonometry – SOHCAHTOA:

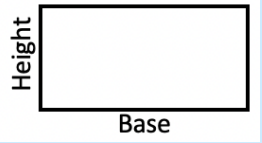
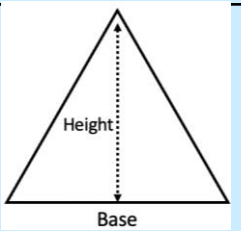
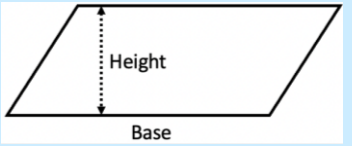
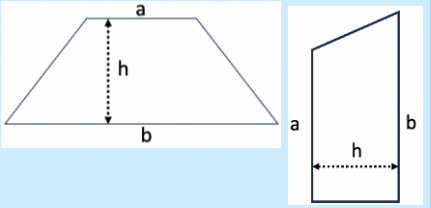
		$\frac{o}{h}$
3	• Cos	$cos(\theta) = \frac{a}{h}$
4	• Tan	$\tan(\theta) = \frac{o}{a}$



Circles:

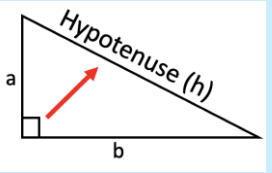
5	• Area of a Circle $\pi \times r^2$	
6	• Circumference of a Circle $\pi \times d$	

Area of Shapes:

	gle $Base \times Height$	
8	• Triangle $\frac{Base \times Height}{2}$	
9	• Parallelogram $Base \times Height$	
10	• Trapezium $\frac{(a+b) \times h}{2}$	

Pythagoras:

	$+ b^2 = h^2$



Year 11 Maths: Formula

Percentages:

1	• What is the formula for percentage change?

Trigonometry – SOHCAHTOA:

3	• What is the formula for cos?
4	• What is the formula for tan?

Circles:

5	• What is the formula for the area of a circle?
6	• What is the formula for the circumference of a circle?

Area of Shapes:

	s the formula for the area of a rectangle?
8	• What is the formula for the area of a triangle
9	• What is the formula for the area of a parallelogram
10	• What is the formula for the area of a trapezium

Pythagoras :

	hat is Pythagoras' Theorem?

Year 11 Maths Higher: Formula

These formulae will only be assessed on the Higher tier Mathematics GCSE.

Quadratic Formula:

1	• To solve quadratic equations of the form $ax^2 + bx + c = 0$ where $a \neq 0$	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Sine Rule:

2	• To calculate missing sides	$\frac{a}{sinA} = \frac{b}{sinB} = \frac{c}{sinC}$
3	• To calculate missing angles	$\frac{sinA}{a} = \frac{sinB}{b} = \frac{sinC}{c}$

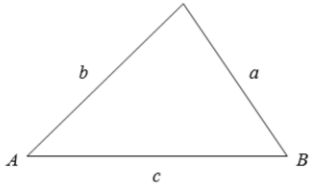
Cosine Rule:

4	• To calculate missing sides	$a^2 = b^2 + c^2 - 2bc\,cosA$
5	• To calculate missing angles	$cosA = \frac{b^2 + c^2 - a^2}{2bc}$

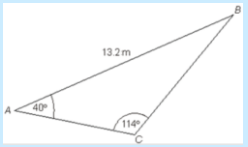
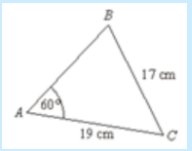
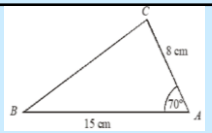
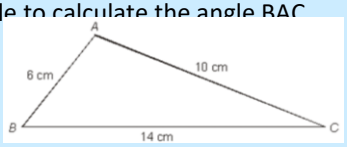
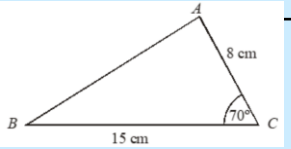
Area of any Triangle:

	culate the ear of any triangle	$Area = \frac{1}{2}absinC$

The **sine rule**, **cosine rule** and **area of any triangle** formula can be used in any triangle *ABC* where *a*, *b* and *c* are lengths of sides:



Using the Formulae:

7	Use the quadratic formula to solve: $3x^2 + 7x - 5 = 0$ $a = 3, b = 7, c = -5$	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ $x = \frac{-7 \pm \sqrt{(7)^2 - 4 \times 3 \times -5}}{2 \times 3}$ $x = 0.573$ or $x = -2.907$
8	Use the sine rule to calculate the length BC. 	$\frac{a}{sinA} = \frac{c}{sinC}$ $\frac{a}{\sin(40)} = \frac{13.2}{\sin(114)}$ $a = \frac{13.2}{\sin(114)} \times \sin(40) = 9.3m$
9	Used the sine rule to calculate the angle ABC. 	$\frac{sinA}{a} = \frac{sinB}{b}$ $\frac{\sin(60)}{17} = \frac{sinB}{19}$ $sinB = \frac{\sin(60)}{17} \times 19$ $B = sin^{-1}\left(\frac{\sin(60)}{17} \times 19\right) = 75.4°$
10	Use the cosine rule to calculate the length CB. 	$a^2 = b^2 + c^2 - 2bc\,cosA$ $a^2 = 8^2 + 15^2 - 2 \times 8 \times 15 \times \cos(70)$ $a^2 = 206.915\ldots.$ $a = \sqrt{Ans} = 14.4cm$
11	Use the cosine rule to calculate the angle BAC 	$cosA = \frac{b^2 + c^2 - a^2}{2bc}$ $cosA = \frac{10^2 + 8^2 - 14^2}{2 \times 10 \times 8}$ $cosA = -0.2$ $A = \cos^{-1}(-0.2) = 101.5°$
12	Calculate the area of this triangle. 	$Area = \frac{1}{2}absinC$ $Area = \frac{1}{2} \times 15 \times 8 \times \sin(70)$ $Area = 56.4cm^2$

Year 11 Maths Higher: Formula

These formulae will only be assessed on the Higher tier Mathematics GCSE.

Quadratic Formula:

1	What is the quadratic formula?

Sine Rule:

2	What is the sine rule to calculate missing sides?
3	What is the sine rule to calculate missing angles?

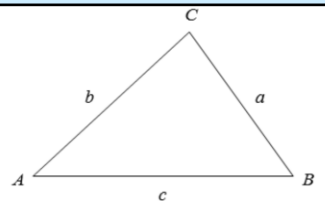
Cosine Rule:

4	What is the cosine rule to calculate missing sides?
5	What is the cosine rule to calculate missing angles?

Area of any

6	What is the formula that ben be used to calculate the area of any triangle?

The **sine rule**, **cosine rule** and **area of any triangle** formula can be used in any triangle *ABC* where *a*, *b* and *c* are lengths of sides:



Using the Formulae:

7	How would you use the quadratic formula to solve: $3x^2 + 7x - 5 = 0$
8	How would you use the sine rule to calculate a length?
9	How would you use the sine rule to calculate an angle?
10	How would you use the cosine rule to calculate a length?
11	How would you use the cosine rule to calculate an angle?
12	How would you use the area sine rule to calculate the area of a non-right angled triangle?

Modern Foreign Languages

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 French: Recap

To have… (Verb)	
Avoir	To have
J'ai	I have…
Tu as	You have…
Il a	He has…
Elle a	She has…
On a	One has (We have)
Nous avons	We have…
Vous avez	You have (formal/plural)
Ils ont	They have… (Masculine/mixed)
Elles ont	They have… (feminine)

To live… (Verb)	
Habiter	To live
J'habite	I live…
Tu habites	You live…
Il habite	He lives…
Elle habite	She lives…
On habite	One lives (We live)
Nous habitons	We live…

To be… (Verb)	
Être	To be
Je suis	I am…
Tu es	You are…
Il est	He is…
Elle est	She is…
On est	One is (We are)
Nous sommes	We are…
Vous êtes	You are… (formal/plural)
Ils sont	They are… (Masculine/mixed)
Elles sont	They are… (feminine)

Year 11 French: Recap

To have... (Verb) Complete below:
To have
I have...
You have...
He has...
She has...
One has (We have)
We have...
You have (formal/plural)
They have... (Masculine/mixed)
They have... (feminine)

To live... (Verb) Complete below:
To live
I live...
You live...
He lives...
She lives...
One lives (We live)
We live...

To be... (Verb) Complete below:
To be
I am...
You are...
He is...
She is...
One is (We are)
We are...
You are... (formal/plural)
They are... (Masculine/mixed)
They are... (feminine)

Year 11 French: Recap

Grammar Explanation

Immediate Future Tense

To use the immediate future tense, take the appropriate form of the verb **aller** (to go) and add the infinitive verb.

For example:

Je vais + manger = **je vais manger**
= I am going to eat.
Nous allons + **voyager** = **nous allons voyager**
= we are going to travel.

Below are some high frequency infinitives for you to practise with:

Aller = to go

Jouer = to play

Regarder = to watch

Visiter = to visit

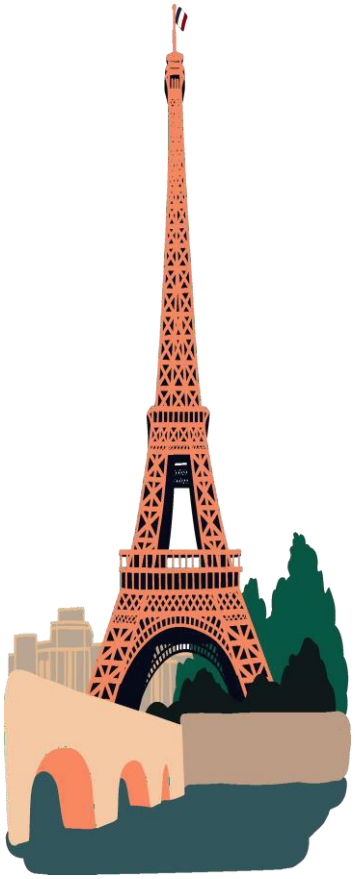
Faire = to do

Manger = to eat

Avoir = to have

Être = to be

Prendre = to take



Grammar Explanation

Perfect (past) Tense

When forming the perfect tense, you take the correct form of **avoir** and add the past participle. For most **-er** verbs, you form the past participle by taking the ER off the infinitive verb and adding an **é**. For example, **manger = mangé**. You then use the appropriate form of **avoir**, such as **j'ai mangé** = I have eaten, **il a mangé** = he has eaten

Voyager (to travel) = **voyagé** (travelled)

Manger (to eat) = **mangé** (eaten)

Loger (to stay - somewhere you have paid for) = **logé**

Forming the past participle is different for -re verbs and -ir verbs but we will learn these at a later stage.

Some verbs have irregular stems, such as:

Faire (to do) = fait (did). For example, j'ai fait = I did

However, some verbs use **être** instead of **avoir** when forming the perfect tense. One of these verbs is **aller**. For **aller**, you form the stem by taking the **er** off and adding **é**. You then use **être** to form the past tense, for example, **je suis allé** (masculine) or **je suis allée** (feminine).

The verb rester (to stay) also takes être.

Year 11 French: Recap

Grammar Explanation

How do we use the Immediate Future Tense? For example:

Je vais + manger = _____

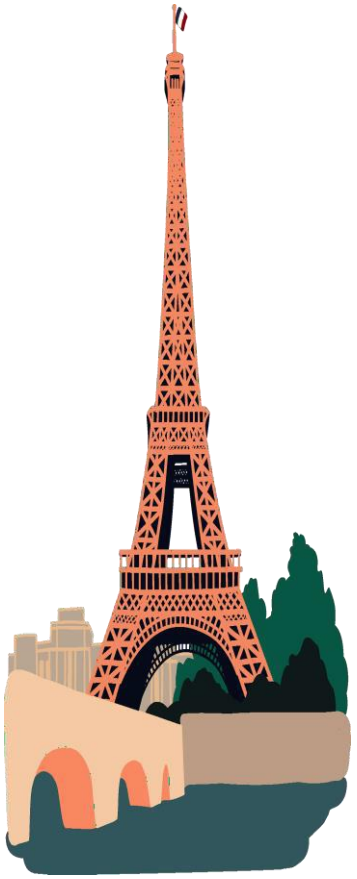
= I am going to eat.

Nous allons + **voyager** = _____

= we are going to travel.

Below are some high frequency infinitives for you to practise with:

- _____= to go
- _____= to play
- _____= to watch
- _____= to visit
- _____= to do
- _____= to eat
- _____= to have
- _____= to be
- _____= to take



Grammar Explanation

How do we form the **Perfect (past) Tense?**

Voyager (to travel) = _____(travelled)

Manger (to eat) = _____(eaten)

Loger (to stay - somewhere you have paid for) = _____

Forming the past participle is different for -re verbs and -ir verbs but we will learn these at a later stage.

Some verbs have irregular stems, such as:

Faire (to do) = _____(did). For example, _____= I did

However, some verbs use **être** instead of **avoir** when forming the perfect tense. One of these verbs is..

Year 11 French:

High level vocabulary

When you are talking or writing in French, you don't just want to repeat the same phrases over and over again.

Don’t just say “à mon avis” you can also use…

D’après moi	as for me
Pour ma part	as for me
Selon moi	in my opinion
Il me semble que	it seems to me that

High level structures

Use these in your writing and speaking to vary your use of language and increase your marks:
Use with the **present tense**

Quoi qu’on fasse	Whatever we do
Bien que ce soit	Although it is
J'aime qu'il y ait /Je m'inquiète qu'il y ait	I love that there is / I worry that there is
Comparatives: plus/moins que… aussi.. que..	Comparatives: more/less… than… as… as…

Use with the **conditional tense**:

Quand je serai grand(e)*	When I’m older
Si c'était possible	If it were possible
Si je gagnais à la loterie	If I won the lottery
Si j'avais du temps/de l'argent	If I had time / money
Si j'avais l'option / l’opportunité	If I had the option / opportunity

Useful phrases for giving opinions

This table has examples for how you can express opinions and ideas in different ways, to keep your French varied and more interesting.

D’une part, je pense que	on the one hand, I think that…
mais d’autre part, je dirais que	but on the other hand, I would say that…
Par example	for example…
Je crois que	I believe that…
Il m’est pénible de [+ verb]	I find it difficult to
En revanche	as a result
Donc / par conséquent	therefore
D’ailleurs	moreover
Ayant dit ça	having said that

Use with the **past tense**:

Après avoir + past participle	After having + past participle
Avant d’aller	Before going
J'étais sur le point de + infinitive	I was just about to
J'aurais préféré	I would have preferred

* Can also be used with the future tense

Year 11 French:

High level vocabulary

Don't just say ____ _____ __you can also use…

	as for me
	as for me
	in my opinion
	it seems to me that

High level structures

Use these in your writing and speaking to vary your use of language and increase your marks:
Use with the _____ _____

	Whatever we do
	Although it is
	I love that there is / I worry that there is
	Comparatives: more/less… than… as… as…

Use with the **conditional tense**:

	When I'm older
	If it were possible
	If I won the lottery
	If I had time / money
	If I had the option / opportunity

Useful phrases for giving opinions

	on the one hand, I think that…
	but on the other hand, I would say that…
	for example…
	I believe that…
	I find it difficult to
	as a result
	therefore
	moreover
	having said that

Use with the **past tense**:

	After having + past participle
	Before going
	I was just about to
	I would have preferred

* Can also be used with the future tense

Year 11 French:

The present tense

How to conjugate regular verbs in the present tense.

Reminder: conjugating a verb means that you are taking its infinitive form (verbs that end in AR, ER, IR) and changing it to a particular tense (present, past, future) or person.

1. Take the ER, RE or IR ending off to form the **stem**.

For example, change **jouer** to **jou**

2. Add the correct ending to the stem according to the person you are talking about.

	ER verbs (jouer - to play)	IR verbs (finir - to finish)	RE verbs (vendre - to sell)
Je (I)	jou**e**	fin**is**	vend**s**
Tu (you)	jou**es**	fin**is**	vend**s**
Il / elle / on (he/she/one)	jou**e**	fin**it**	vend
Nous (we)	jou**ons**	fin**issons**	vend**ons**
Vous (you plural/formal)	jou**ez**	fin**issez**	vend**ez**
Ils/Elles (they masculine / they feminine)	jou**ent**	fin**issent**	vend**ent**

Revision - Grammar

Infinitive verbs

Remember that an infinitive verb is the verb in the 'to' form before it has been changed.

Infinitive verbs end in ER, IR or RE

Examples are mang**er** = to study, fai**re** = to do, sort**ir** = to live.

Some key verbs are irregular. Important ones for you to know in the **present tense I form** are:

Je fais - I do
Je sors - I go out
Je veux - I want
Je sais - I know (answer, fact)
Je suis - I am
Je peux - I can
J'ai - have
Je vois- I see
Je vais - I go
Je crois - I believe
Je dois - I have to
Je bois - I drink
Je mets - I put
Je dis - I say
J'écris - I write

Year 11 French:

The present tense

How to conjugate regular verbs in the present tense.

Reminder: conjugating a verb means that you are taking its infinitive form (verbs that end in AR, ER, IR) and changing it to a particular tense (present, past, future) or person.

	ER verbs (jouer - to play)	IR verbs (finir - to finish)	RE verbs (vendre - to sell)
Je (I)			
Tu (you)			
Il / elle / on (he/she/one)			
Nous (we)			
Vous (you plural/formal)			
Ils/Elles (they masculine / they feminine)			

Revision - Grammar

Infinitive verbs

Remember that an infinitive verb is the verb in the 'to' form before it has been changed.

Some key verbs are irregular. Important ones for you to know in the **present tense I form** are:

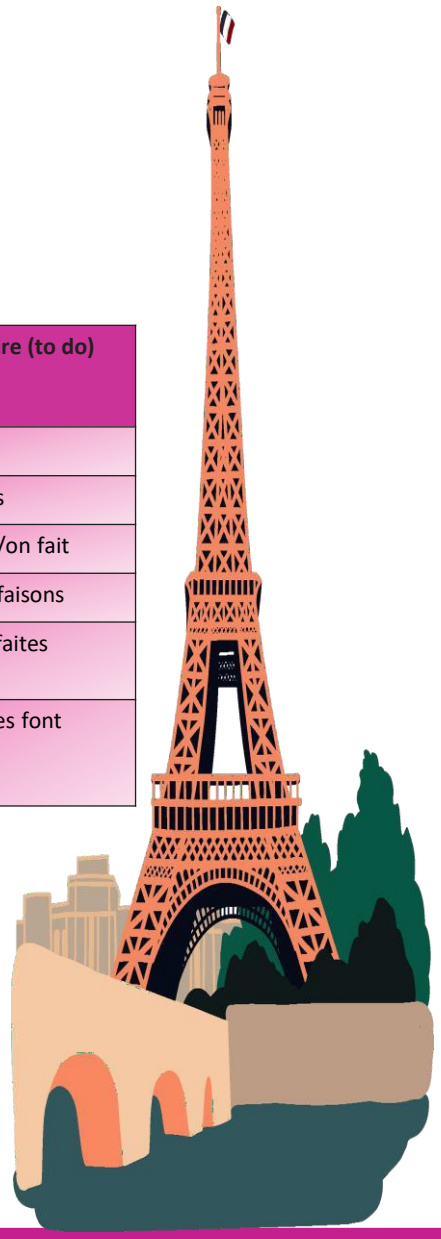
Year 11 French:

Important present tense irregular verbs

Some of the most common verbs in French are irregular verbs. This means that they don't follow the usual pattern in the present tense. You have to learn each one separately.

The four most common irregular verbs are:

	être (to be)	avoir (to have)	aller(to go)	faire (to do)
I	Je suis	J'ai	Je vais*	Je fais
You	Tu es	Tu as	Tu vas	Tu fais
He/she/one	Il/elle/on est	Il/elle/on a*	Il/elle/on va	Il/elle/on fait
We	Nous sommes	Nous avons	Nous allons	Nous faisons
You plural/formal	Vous êtes	Vous avez	Vous allez	Vous faites
They masculine/they feminine	Ils/elles sont	Ils/elles ont	Ils/elles vont	Ils/elles font



***Remember if you want to talk about another person you use the he/she form.

My Mum **has**

M mère **a**

****When you say you **go somewhere** you have to use the preposition "à".

Je vais à la piscine

I go **to** the swimming pool

However when you say you are going to a place (noun) that is masculine you ignore the article (the/le) and instead use "au".

Je vais **au** parc

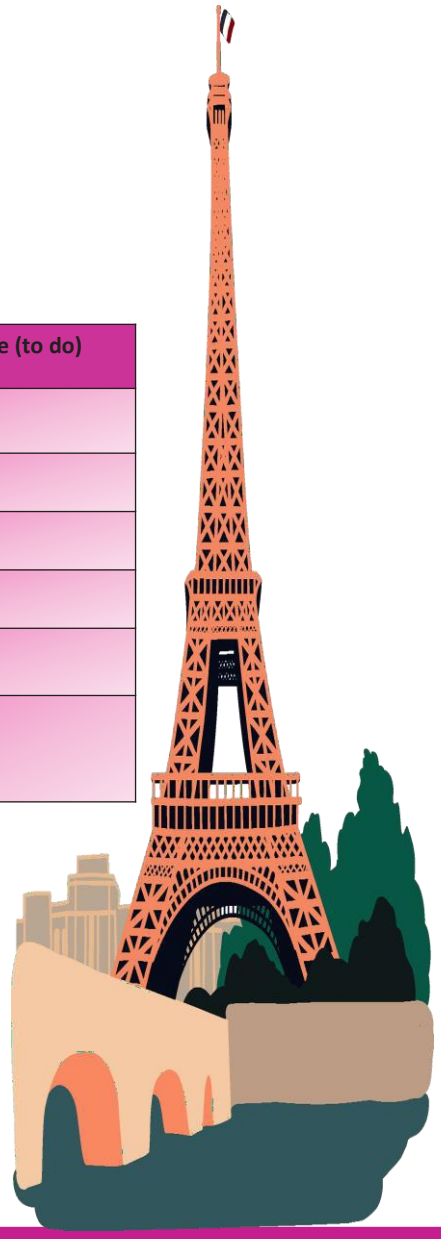
I go **to the** park

Year 11 French:

Important present tense irregular verbs

	être (to be)	avoir (to have)	aller(to go)	faire (to do)
I				
You				
He/she/one				
We				
You plural/formal				
They masculine/they feminine				

*Remember if you want to talk about another person you use the he/she form.



Year 11 French:

The perfect tense (passé composé)

Forming the perfect tense (passé composé)

The perfect tense is how you say that you have done something in **the past.** For example, 'I have eaten' or 'I have played'.

To form the perfect tense, usually you use an **auxiliary verb**. To do this, take the correct form of the verb **avoir (to have)** and add a past participle (reference to the past).

For example, to say 'I have eaten' you use **j'ai** for 'I have' and add **mangé** for eaten. So it is **j'ai mangé.**

Mangé (ate/eaten) is the past participle of manger (to eat).

Let's recap the auxiliary verb AVOIR (to have) to help you to form the perfect tense.

J'ai	I have
Tu as	You have (singular/informal)
Il a	He has
Elle a	She has
On a	One has (we have)
Nous avons	We have
Vous avez	You have (formal/plural)
Ils ont	They have (masculine/mixed)
Elles ont	They have (feminine)

Forming the past participle

Regular ER verbs	Take the ER ending off, and add é. For example MANGER changes to mang**é**.	J'ai **mangé** = I have **eaten**
Regular IR verbs	Take the IR ending off and add i. For example, FINIR (to finish) changes to fin**i**.	J'ai **fini** = I have **finished**
Regular RE verbs	Take the RE ending off and add u. For example RÉPONDRE (to respond) changes to répond**u**	J'ai **répondu** = I have **responded**
Note: there are some verbs that do not follow the above rule. These are called 'irregular verbs'.		

Year 11 French:

The perfect tense (passé composé)

Forming the perfect tense (passé composé)

	I have
	You have (singular/informal)
	He has
	She has
	One has (we have)
	We have
	You have (formal/plural)
	They have (masculine/mixed)
	They have (feminine)

Forming the past participle

Regular ER verbs		
Regular IR verbs		
Regular RE verbs		

Year 11 French:

Some important IRREGULAR past participles

Irregular verb	Past participle	English translation
avoir	eu	had
boire	bu	drank
lire	lu	read
recevoir	reçu	received
voir	vu	seen / saw
prendre	pris	took
dire	dit	said/told
écrire	écrit	written / wrote
faire	fait	did
ouvrir	ouvert	opened

When forming the perfect tense for some verbs, you need to use **ÊTRE as the auxiliary verb instead of AVOIR**

Examples of verbs that take être are aller (to go), sortir (to go out), rester (to stay).

RECAP of the auxiliary verb Être = to be

Je suis	I am
Tu es	You are(singular/informal)
Il est	He is
Elle est	She is
On est	One is (we are)
Nous sommes	We are
Vous êtes	You are (formal/plural)
Ils sont	They are (masculine/mixed)
Elles sont	They are (feminine)

In French you do not say "I went" instead you say "I am gone".
Je suis allé
I am gone

Il est allé
He is gone
To make it even trickier, the past participle agrees with the person using it.

Verb	Masculine	Feminine
ALLER (to go)	Je suis allé (I am gone) Ils sont allé**s** (they are gone)	Je suis allé**e** (I am gone) Elles sont allé**es** (they are gone)
SORTIR (to go out)	Je suis sorti (I am went out) Ils sont sorti**s** (they are went out)	Je suis sorti**e** (I am went out) Elles sont allé**es** (they are went out)

Year 11 French:

Some important IRREGULAR past participles

Irregular verb	Past participle	English translation

Je suis	
Tu es	
Il est	
Elle est	
On est	
Nous sommes	
Vous êtes	
Ils sont	
Elles sont	

Verb	Masculine	Feminine

Year 11 French:

The imperfect tense

In French there are multiple past tenses. The main ones we have learnt are:

The perfect (passe compose)
The imperfect

What is the difference between the perfect and imperfect tense?

The **perfect** and the **imperfect** tenses are often used in the same sentence. The imperfect tense is used for an ongoing action that was interrupted by a sudden action – in the perfect tense. For example:
Je regardais la télé quand tu as téléphoné. – I was watching TV (imperfect) when you phoned (perfect.)

Il jouait au foot quand il est tombé. – He was playing football (imperfect) when he fell over (perfect).

The most commonly used expressions in the imperfect tense are: il y avait (there was/were) and c'était (it was).
For example:
Quand j'étais petit, **il y avait** des arbres dans notre jardin. – When I was little, **there were** trees in our garden.

Nous ne sommes pas allés au parc d'attractions parce que **c'était** fermé. - We didn't go to the theme park because **it was** closed.

How to conjugate verbs in the the imperfect tense

The easiest way to form the imperfect tense is to use the imperfect form of aimer (to like) plus an infinitive.
For example:
J'aimais aller au parc
I **used to like** to go to the park
However, you will need to recognise the imperfect tense in your exam so it is good to learn the endings.

The majority of verbs are regular in the imperfect tense.

Take the **nous (we)** form of the present tense.
Remove the **-ons** to form the stem
So jou**ons** would become **jou**
Add correct ending to the stem. The endins are the same for ER, IR and RE verbs

	Imperfect endings	**Example: jouer (to play)**
Je (I)	ais	Je jouais
Tu (you)	ais	Tu jouais
Il / elle / on (he/she/one)	ait	Il / Elle / On jouait
Nous (we)	ions	Nous jouions
Vous (you plural/formal)	iez	Vouz jouiez
Ils/Elles (they masculine / they feminine)	aient	Ils / Elles jouaient

Year 11 French:

The imperfect tense

How to conjugate verbs in the the imperfect tense

The majority of verbs are regular in the imperfect tense.

	Imperfect endings	Example: jouer (to play)
Je (I)		
Tu (you)		
Il / elle / on (he/she/one)		
Nous (we)		
Vous (you plural/formal)		
Ils/Elles (they masculine / they feminine)		

Year 11 French:

Irregular verbs

Être is the only **irregular** verb in the imperfect tense. The stem is irregular but the endings are the same as for regular verbs in the imperfect tense.

J'étais	I was
Tu étais	You were (singular/informal)
Il / elle / on était	He/she was / we were
Nous étions	We were
Vous étiez	You were (formal/plural)
Ils / elles étaient	They were (masculine/mixed)

	ER and IR verbs	Example **manger (to eat)**
Je (I)	ai	Je manger**ai** (I will eat)
Tu (you)	as	Tu manger**as** (you will eat)
Il / elle / on (he/she/one)	a	Il/elle/on manger**a** (he/she will eat)
Nous (we)	ons	Nous manger**ons** (we will eat)
Vous (you plural/formal)	ez	Vous manger**ez** (you plural will eat)
Ils/Elles (they masculine / they feminine)	ont	Ils/elles manger**ont** (they will eat)

The future tense

How to conjugate verbs in the the immediate future tense

This is the easiest way to form the future tense. Take the present tense of **aller (to go)** and an infinitive.

For example:

Je vais jouer au foot

I am going to play football

On va danser

We are going to dance

Alternatively you can conjugate the future tense. The future tense is used to say what **will** happen and is less common than the immediate future.

For ER and IR verbs add the correct ending to the **infinitive** of the **verb**.

The simple future of regular **-re** verbs is formed by removing the final **-e** from the infinitive and adding the endings above. For example:

vendre - je vendrai – I will sell / I'll sell

boire - nous boirons – we will drink / we'll drink

Year 11 French:

Irregular verbs

	I was
	You were (singular/informal)
	He/she was / we were
	We were
	You were (formal/plural)
	They were (masculine/mixed)

	ER and IR verbs	Example **manger (to eat)**

The future tense

How to conjugate verbs in the the immediate future tense

Year 11 French:

Irregular stems in the simple future tense

Some common verbs are irregular in the simple future. This means that the stems are irregular but the endings are the same as for regular verbs.

Useful irregular verbs in the simple future:

Infinitive	Future stem	Example	English
avoir (to have)	aur-	j'aurai	I'll have
être (to be)	ser-	tu seras	you'll be
faire (to do)	fer-	il fera	he'll do
aller (to go)	ir-	elle ira	she'll go
devoir (to have to)	devr-	nous devrons	we'll have to
pouvoir (to be able to)	pourr-	vous pourrez	you'll be able to
vouloir (to want to)	voudr-	ils voudront	they'll want to
voir (to see)	verr-	elles verront	they'll see
envoyer (to send)	enverr-	j'enverrai	I'll send
venir (to come)	viendr-	tu viendras	you'll come

The conditional tense

The conditional tense is used to describe what someone would do or what would happen in the future. It can also be used to express ambitions and intentions. For example:
Si c'était possible je voudrais habiter dans une grande maison et il y aurait une piscine.
If it were possible I would live in a big house and there would be a swimming pool.

How to form the conditional tense.
The easiest way to form the conditional tense is to take the conditional of vouloir (to want) plus an infinitive.
For example:
Je voudrais jouer au foot
I would like to play football
On voudrait danser
We would like to dance
However, you will need to recognise the conditional tense in your exam so it is good to learn the endings. To **conjugate** verbs in the conditional tense follow these simple steps.
Take an infinitive. Your infinitive is the stem.
(Remember infinitives end in er, ir or re.)
Add the conditional tense endings. Note: these are the same endings as the imperfect tense

Year 11 French:

Irregular stems in the simple future tense

Infinitive	Future stem	Example	English
avoir (to have)			
être (to be)			
faire (to do)			
aller (to go)			
devoir (to have to)			
pouvoir (to be able to)			
vouloir (to want to)			
voir (to see)			
envoyer (to send)			
venir (to come)			

The conditional tense

Year 11 French:

The conditional tense

	Stem	Conditional endings	Example	English
je	regarder	-ais	je regarderais	I would watch
tu	manger	-ais	tu mangerais	you would eat
il/elle/ on	jouer	-ait	il/elle/on jouerait	he/she/it would play
nous	finir	-ions	nous finirions	we would finish
vous	partir	-iez	vous partiriez	you would leave
ils/elles	vendr	-aient	ils/elles vendraient	they would sell

The same verbs that have **irregular** stems in the simple future have irregular stems in the conditional:

Infinitive	Future stem	Example	English
avoir (to have)	aur-	j'aurais	I would have
être (to be)	ser-	tu serais	you would be
faire (to do)	fer-	il ferait	he would do
aller (to go)	ir-	elle irait	she would go
devoir (to have to)	devr-	nous devrions	we would have to/we should
pouvoir (to be able to)	pour-	vous pourriez	you would be able to/you could
vouloir (to want to)	voudr-	ils voudraient	they would want to
voir (to see)	verr-	elles verraient	they would see

Year 11 French:

The conditional tense

	Stem	Conditional endings	Example	English

The same verbs that have **irregular** stems in the simple future have irregular stems in the conditional:

Infinitive	Future stem	Example	English

Year 11 Spanish: Recap

Tener (To have)

Tengo	I have
Tienes	You have
Tiene	He/She/It has
Tenemos	We have
Tenéis	You (plural) have
Tienen	They have

Ser (To be)

Soy	I am
Eres	You are
Es	He/She/It is
Somos	We are
Sois	You (plural) are
Son	They are

Grammar Explanation

There is a three-step method that will make conjugating regular Spanish verbs very easy for you.
In order to conjugate verbs that end with **-ar** in the preterite tense you:

- Find the infinitive (full verb)
- Cut off the **-ar**
- Add the new ending (**é, aste, ó, amos, asteis, aron**)

Ir (To go) Present tense

Fui	I went
Fuiste	You went
Fue	He/She/It wet
Fuimos	We went
Fuisteis	You (plural) went
Fueron	They went

English subject pronoun	Spanish subject pronoun	ar ending	Viajar (to travel)
I	yo	é	viaj**é**
you	tú	aste	viaj**aste**
he/she	él/ella	ó	viaj**ó**
we	nosotros/nosotras	amos	viaj**amos**
you (plural)	vosotros/vosotras	Asteis	viaj**asteis**
they	ellos/ellas	aron	viaj**aron**

Year 11 Spanish: Recap

Tener (To have)

	I have
	You have
	He/She/It has
	We have
	You (plural) have
	They have

Ser (To be)

	I am
	You are
	He/She/It is
	We are
	You (plural) are
	They are

Grammar Explanation

There is a three-step method that will make conjugating regular Spanish verbs very easy for you.
In order to conjugate verbs that end with **-ar** in the preterite tense you:

- Find the infinitive (full verb)
- Cut off the **-ar**
- Add the new ending (**é, aste, ó, amos, asteis, aron**)

Ir (To go) Present tense

	I went
	You went
	He/She/It wet
	We went
	You (plural) went
	They went

English subject pronoun	Spanish subject pronoun Complete below:	ar ending	Viajar (to travel)
I	-	-	-
you	-	-	-
he/she	-	-	-
we	-	-	-
you (plural)	-	-	-
they	-	-	-

Year 11 Spanish: Recap

How to form the immediate future tense:

To say what you are going to do, you can use the near immediate future tense.

This is formed by using the correct part of the verb **ir** (to go), plus the infinitive of another verb.

Voy a ir al cine
I am going to go to the cinema

Va a jugar al fútbol
He is going to play football

Ir (to go)	Preposition	Infinitive
Voy *(I am going)* **Vas** *(you are going)* **Va** *(he/she is going)* **Vamos a** *(we are going)* **Van a** *(we are going)*	a	**Jugar** - *to play* **Ver** - *to see* **Hacer** - *to do* **Montar** - *to ride* **Ser** - *to be* **Tener** - *to have*

Grammar Explanation

There is a three-step method that will make conjugating regular Spanish verbs very easy for you.

For **ER** and **IR** verbs you:

- Find the infinitive (full verb)
- Cut off the -**er** or -**ir**
- Add the new ending (**í, iste, ió, imos, isteis, ieron**)

English subject pronoun	Spanish subject pronoun	ar ending	Comer (to eat)
I	yo	í	**comí**
you	tú	iste	**comiste**
he/she	él/ella	ió	**comió**
we	nosotros/nosotras	imos	**comimos**
you (plural)	vosotros/vosotras	isteis	**comisteis**
they	ellos/ellas	ieron	**comieron**

Year 11 Spanish: Recap

How do we form the immediate future tense?

_____
I am going to go to the cinema

_____
He is going to play football

Ir (to go)	Preposition	Infinitive
_____ *(I am going)* _____ *(you are going)* _____ *(he/she is going)* _____ *(we are going)* _____ *(we are going)*	a	_____ - *to play* _____ - *to see* _____ - *to do* _____ - *to ride* _____ - *to be* _____ - *to have*

Grammar Explanation

There is a three-step method that will make conjugating regular Spanish verbs very easy for you.

For **ER** and **IR** verbs you:

- -
- -
- -

English subject pronoun	Spanish subject pronoun	ar ending	Comer (to eat)
I	-	-	-
you	-	-	-
he/she	-	-	-
we	-	-	-
you (plural)	-	-	-
they	-	-	-

Year 11 Spanish:

High level vocabulary

When you are talking or writing in Spanish, you don't just want to repeat the same phrases over and over again.

Don’t just say “en mi opinión” you can also use…

Por mi parte	as for me
A mi juicio	in my opinion
A mi modo de ver	in my opinion
Me parece que	it seems to me that

Useful phrases for giving opinions

This table has examples for how you can express opinions and ideas in different ways, to keep your Spanish varied and more interesting.

Por un lado pienso que	on the one hand, I think that...
Pero por otro lado, diría que	but on the other hand, I would say that...
Por ejemplo	for example...
Creo que	I believe that...
Lo encuentro difícil de [+ verb]	I find it difficult to
Como resultado	as a result
No solo... sino también...	not only... but also...
Por eso / por lo tanto	therefore
Además	moreover
Dicho esto	having said that

High level structures

Use these in your writing and speaking to vary your use of language and increase your marks:

Use with the **present tense**:

Hagamos lo que hagamos	Whatever we do
Aunque sea	Although it is
Me encanta que / me preocupa que haya	I love that / I worry that there is
Comparatives: más/menos… que… tan.. como..	Comparatives: more/less… than… as… as…

Use with the **conditional tense**

Cuando sea mayor*	When I’m older
Si fuera posible	If it were possible
Si ganara la lotería	If I won the lottery
Si tuviera tiempo / dinero	If I had time / money
Si tuviera la opción / oportunidad	If I had the option / opportunity

Can also be used with the future tense

Use with the **preterite tense**:

Después de haber hecho	After having done
Estaba a punto de	I was just about to
Hubiera preferido + infinitive	I would have preferred

Year 11 Spanish:

High level vocabulary

When you are talking or writing in Spanish, you don't just want to repeat the same phrases over and over again.

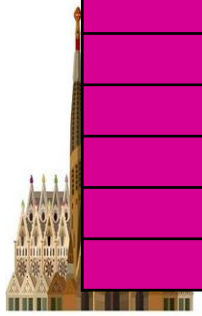
Don’t just say “en mi opinión” you can also use…

Por mi parte	
A mi juicio	
A mi modo de ver	
Me parece que	

Useful phrases for giving opinions

This table has examples for how you can express opinions and ideas in different ways, to keep your Spanish varied and more interesting.

	on the one hand, I think that...
	but on the other hand, I would say that...
	for example...
	I believe that...
	I find it difficult to
	as a result
	not only... but also...
	therefore
	moreover
	having said that



High level structures

Use these in your writing and speaking to vary your use of language and increase your marks:

Use with the **present tense**:

Hagamos lo que hagamos	
Aunque sea	
Me encanta que / me preocupa que haya	
Comparatives: más/menos… que… tan.. como..	

Use with the **conditional tense**

	When I’m older
	If it were possible
	If I won the lottery
	If I had time / money
	If I had the option / opportunity

Can also be used with the future tense

Use with the **preterite tense**:

Después de haber hecho	
Estaba a punto de	
Hubiera preferido + infinitive	

Year 11 Spanish:

Revision - Grammar
<u>Infinitive verbs</u>

Remember that an infinitive verb is the verb in the 'to' form before it has been changed.

Infinitive verbs end in AR, ER or IR

Examples are estudi**ar** = to study, hac**er** = to do, viv**ir** = to live.

Important verbs - these are on the AQA specification and will appear in your exam:

Spanish	English
acabar de + infinitive	to have just (done something)
comenzar	to begin
continuar	to continue
dar	to give
darse cuenta (de)	to realise
deber	must, have to
decidir	to decide
dejar de	to stop (doing something)
echar	to throw
empezar	to begin
estar	to be
hace(n) falta	to need, to be necessary
hacer	to do, to make
hacerse	to become
hay	there is, there are
hay que	one must, one has to
ir	to go
ir a + infinitive	(to be) going to (do something)
irse	to go away, to leave
necesitar	to need
ocurrir	to happen
pasar	to happen, to go through, to spend (time)
poder	to be able, can
poner	to put
ponerse a	to start doing something
querer	to want; to love
quisiera	I'd like
saber	to know (a fact, how to do something)
seguir	to continue, to follow
ser	to be
soler	to regularly do something
tener	to have, to own
tener lugar	to take place
tener que	to have to do something
volver a	to do (something) again
volverse	to become

Year 11 Spanish:

Revision - Grammar
<u>Infinitive verbs</u>

Remember that an infinitive verb is the verb in the 'to' form before it has been changed.

Infinitive verbs end in AR, ER or IR

Examples are estudi**ar** = to study, hac**er** = to do, viv**ir** = to live.

Important verbs - these are on the AQA specification and will appear in your exam:

Spanish	English
	to have just (done something)
	to begin
	to continue
	to give
	to realise
	must, have to
	to decide
	to stop (doing something)
	to throw
	to begin
	to be
	to need, to be necessary
	to do, to make
	to become
	there is, there are
	one must, one has to
	to go
	(to be) going to (do something)
	to go away, to leave
	to need
	to happen
	to happen, to go through, to spend (time)
	to be able, can
	to put
	to start doing something
	to want; to love
	I'd like
	to know (a fact, how to do something)
	to continue, to follow
	to be
	to regularly do something
	to have, to own
	to take place
	to have to do something
	to do (something) again
	to become

Year 11 Spanish:

The present tense

How to conjugate regular verbs in the present tense.

Reminder: conjugating a verb means that you are taking its infinitive form (verbs that end in AR, ER, IR) and changing it to a particular tense (present, past, future) or person.

Take the AR, ER or IR ending off to form the **stem**.

For example, change **estudiar** to **estudi**

Add the correct ending to the stem according to the person you are talking about.

	AR verbs	ER verbs	IR verbs
yo (I)	o	o	o
tú (you)	as	es	es
él/ella/usted (he/she/you formal)	a	e	e
nosotros (we)	amos	emos	imos
vosotros (you plural)	áis	éis	ís
ellos/ellas/ustedes (they masculine / they feminine / you formal plural)	an	en	en

Some key verbs are irregular. Important ones for you to know in the **present tense**

I form are:

juego - I play
hago - I do
salgo - I go out
quiero - I want
doy - I give
conozco - I know (person, place)
sé - I know (answer, fact)
soy - I am
suelo - I usually
puedo - I can
pongo - I put
tengo - have
veo - I watch / see
voy - I go
vuelvo - I return

Year 11 Spanish:

The present tense

How to conjugate regular verbs in the present tense.

Reminder: conjugating a verb means that you are taking its infinitive form (verbs that end in AR, ER, IR) and changing it to a particular tense (present, past, future) or person.

Take the AR, ER or IR ending off to form the **stem**.

For example, change **estudiar** to _____

Add the correct ending to the stem according to the person you are talking about.

	AR verbs	ER verbs	IR verbs
yo (I)			
tú (you)			
él/ella/usted (he/she/you formal)			
nosotros (we)			
vosotros (you plural)			
ellos/ellas/ustedes (they masculine / they feminine / you formal plural)			

Some key verbs are irregular. Important ones for you to know in the **present tense I form** are:

Year 11 Spanish:

Important present tense irregular verbs

Some of the most common verbs in Spanish are irregular verbs. This means that they don't follow the usual pattern in the present tense. You have to learn each one separately.
The four most common irregular verbs are:

	ser (to be)	estar (to be)	tener (to have)	ir (to go)
yo (I)	soy	estoy	tengo	voy**
tú (you)	eres	estás	tienes	vas
él/ella/usted (he/she/you formal)	es	está	tiene*	va
nosotros (we)	somos	estamos	tenemos	vamos
vosotros (you plural)	sois	estáis	tenéis	vais
ellos/ellas/ustedes (they masculine / they feminine / you formal plural)	son	están	tienen	van

*Remember if you want to talk about another person you use the he/she form.
My Mum **has**
Mi madre **tiene**

When you say you **go somewhere you have to use the preposition "a".
Voy **a** la piscina
I go **to** the swimming pool

However when you say you are going to a place (noun) that is masculine you merge the preposition "a" and the article "el".
Voy **al** parque
I go **to the** park

When to use SER or ESTAR

There are two verbs for **'to be'** in Spanish, **ser** and **estar** that you can use to talk about where you live.
Ser is used for **permanent qualities**, like your **name**, your **place of origin**, and your **physical appearance**.
Estar is used to talk about **temporary situations**, such as **how you're feeling** right now or **location**.
For example:
Ser
Mi pueblo *es* grande - My town *is* big. This is a **description**.
Estar
Mi pueblo *está* cerca de Mánchester - My town *is* close to Manchester. This is a **location**.

Year 11 Spanish:

Important present tense irregular verbs

Some of the most common _____ in Spanish are irregular verbs. This means that they don't follow the usual pattern in the _____. You have to learn each one separately.

The four most common irregular verbs are:

yo (I)				
tú (you)				
él/ella/usted (he/she/you formal)				
nosotros (we)				
vosotros (you plural)				
ellos/ellas/ustedes (they masculine / they feminine / you formal plural)				

*Remember if you want to talk about another person you use the he/she form.
My Mum **has**

__ _____ _____

When you say you **go somewhere you have to use the preposition "a".
Voy **a** la piscina

_ __ _____ _____ _____

However when you say you are going to a place (noun) that is masculine you merge the preposition "a" and the article "el".
Voy **al** parquet

_ __ __ ____ _____

<u>When to use SER or ESTAR</u>

There are two verbs for **<u>'to be'</u>** in Spanish, **ser** and **estar** that you can use to talk about where you live.
Ser is used for **permanent qualities**, like your **name**, your **place of origin**, and your **physical appearance**.
Estar is used to talk about **temporary situations**, such as **how you're feeling** right now or **location**.
For example:
Ser
Mi pueblo *<u>es</u>* grande - My town *<u>is</u>* big. This is a **description**.
Estar
_____ _____ _____ _____ _____ _____ __ - My town *<u>is</u>* close to Manchester. This is a **location**.

Year 11 Spanish:

Giving opinions

When giving opinions the rules are different. When you give an opinion you use the pronoun instead of conjugating the verb.

Spanish	English
Me gusta	I like
Te gusta	You like
Le gusta	He/she/it likes
Nos gusta	We like
Vos gusta	You plural like
Les gusta	They like

The present continuous tense

To say what you are doing at the moment, you use the present continuous tense. You can use the present continuous to when describing what people are doing in the **photocard**.

To form the present continuous, you use:

- the correct form of the verb estar in the present tense and
- the present participle (sometimes called the gerund)

The present participle is the equivalent of the English verb form which ends in '-ing'. To form the present participle, remove the -ar, -er or -ir from the infinitive and add these endings:
-ar verbs → -ando
-er verbs → -iendo
-ir verbs → -iendo
For example:

Estoy escuch**ando** música. - **I am** listen**ing** to music.
Mi hermano **está** v**iendo** la tele. - My brother **is** watch**ing** TV.

Year 11 Spanish:

Giving opinions

When giving opinions the rules are different. When you give an opinion you use the pronoun instead of conjugating the verb.

Spanish	English

The present continuous tense

To say what you are doing at the moment, you use the present continuous tense. You can use the present continuous to when describing what people are doing in the **photocard**.

To form the present continuous, you use:

- the correct form of the verb estar in the present tense and
- the present participle (sometimes called the gerund)

The present participle is the equivalent of the English verb form which ends in '-ing'. To form the present participle, remove the -ar, -er or -ir from the infinitive and add these endings:

-ar verbs → -____

-er verbs → -_____

-ir verbs → -_____

For example:

Estoy escuch**ando** música. - **I am** listen**ing** to music.

___ _____ _____ _____ _____ _____. - My brother **is** watch**ing** TV.

Year 11 Spanish:

The preterite tense

How to conjugate verbs in the the preterite tense

The Spanish **preterite tense** is used to describe **completed actions in the past**. For example:
Fui al cine ayer (I went to the cinema yesterday).
Viajamos en tren (We travelled by train).
In order to conjugate verbs in the preterite tense you:
Take an infinitive.
(Remember infinitives end in ar, er or ir.)

Remove the ar, er or ir to form the stem

For example the stem of habl**ar** would be habl
Add correct ending to the stem

	AR verbs	ER / IR verbs
yo (I)	é	í
tú (you)	aste	iste
él/ella (he/she)	ó	ió
nosotros (we)	amos	imos
vosotros (you plural)	astais	isteis
ellos/ellas (they masculine / they feminine)	aron	ieron

Remember in Spanish it is the **end of the verb** that tells you the tense and who you are talking about.
For example:
We know that 'bail**é**' is in the preterite past tense and it is the "I" form as it ends in '**é**'.
Some key verbs are irregular. Important ones for you to know in the preterite tense are:
jugué - I played
estuve - I was (emotion, location)
hice- I did
quise - I wanted
di - I gave
fui - I went
tuve - I had
pude - I could
puse - I put
saqué - I took (photos)
vi- I watched / saw
RECAP: Ir (to go) in the preterite tense

Spanish	**English**
Fui	I went
Fuiste	You went
Fue	He/she/it went
Fuimos	We went
Fuisteis	You (plural) went
Fueron	They went

Year 11 Spanish:

The preterite tense

How to conjugate verbs in the the preterite tense

The Spanish **preterite tense** is used to describe **completed actions in the past**. For example:
Fui al cine ayer (I went to the cinema yesterday).
Viajamos en tren (We travelled by train).
In order to conjugate verbs in the preterite tense you:
Take an infinitive.
(Remember infinitives end in ar, er or ir.)

Remove the ar, er or ir to form the stem

For example the stem of habl**ar** would be habl
Add correct ending to the stem

yo (I)		
tú (you)		
él/ella (he/she)		
nosotros (we)		
vosotros (you plural)		
ellos/ellas (they masculine / they feminine)		

Remember in Spanish it is the **end of the verb** that tells you the tense and who you are talking about.
For example:
We know that 'bail**é**' is in the preterite past tense and it is the "I" form as it ends in '**é**'.
Some key verbs are irregular. Important ones for you to know in the preterite tense are:

Spanish	English
	I went You went He/she/it went We went You (plural) went They went

RECAP: Ir (to go) in the preterite tense

Year 11 Spanish:

The imperfect tense

In Spanish there are multiple past tenses. The main ones we have learnt are:
The preterite
The imperfect
What is the difference between the preterite and imperfect tense? The **imperfect tense** is used **when there isn't a definite beginning or end** to an action in the past, and this action is repeated or continuous, e.g. siempre jugaba en el parque (I always played in the park).
The **preterite tense** tells us that the action took place at a **specific point in time** and is completed, e.g. **ayer** jugué en el parque (**yesterday** I played in the park).

How to conjugate verbs in the the imperfect tense

The easiest way to form the imperfect tense is to use the imperfect form of gustarse (to like) plus an infinitive.
For example:
Me gustaba ir al parque
I **used to like** to go to the park
However, you may need to recognize the imperfect tense in reading activities or use it in your translation into Spanish.
The majority of verbs are regular in the imperfect tense.
Take an infinitive.

(Remember infinitives end in ar, er or ir.)
Remove the ar, er or ir to form the stem
For example the stem of habl**ar** would be habl
Add correct ending to the stem

	AR verbs	ER and IR verbs
yo (I)	aba	ía
tú (you)	abas	ías
él/ella (he/she)	aba	ía
nosotros (we)	ábamos	íamos
vosotros (you plural)	abais	íais
ellos/ellas (they masculine / they feminine)	aban	ían

Here are some examples of the imperfect tense:
Mi padre trabajaba en una oficina. (My father used to work in an office.)
De niño, siempre comía caramelos. (As a child, I always used to eat sweets.)
Irregular verbs- There are only three irregular verbs in the imperfect tense in Spanish:

	ir (to go)	ser (to be)	ver (to see)
yo (I)	iba	era	veía
tú (you)	ibas	eras	veías
él/ella (he/she/it)	iba	era	veía
nosotros (we)	íbamos	éramos	veíamos
vosotros (you plural)	ibais	erais	veíais
ellos/ellas (they masculine / they feminine)	iban	eran	veían

Year 11 Spanish:

The imperfect tense

What is the difference between the preterite and imperfect tense? The **imperfect tense** is used **when there isn't a definite beginning or end** to an action in the past, and this action is repeated or continuous, e.g. siempre jugaba en el parque (I always played in the park).

The tells us that the action took place at a **specific point in time** and is completed, e.g. **ayer** jugué en el parque (**yesterday** I played in the park).

How to conjugate verbs in the the imperfect tense

The easiest way to form the imperfect tense is to use the imperfect form of gustarse (to like) plus an infinitive.

For example:

_____ _____ _____

I **used to like** to go to the park

However, you may need to recognize the imperfect tense in reading activities or use it in your translation into Spanish.

The majority of verbs are regular in the imperfect tense.

Take an infinitive.

(

	AR verbs	ER and IR verbs
yo (I)		
tú (you)		
él/ella (he/she)		
nosotros (we)		
vosotros (you plural)		
ellos/ellas (they masculine / they feminine)		

Here are some examples of the imperfect tense:

	ir (to go)	ser (to be)	ver (to see)
yo (I)			
tú (you)			
él/ella (he/she/it)			
nosotros (we)			
vosotros (you plural)			
ellos/ellas (they masculine / they feminine)			

Year 11 Spanish:

The future tense

How to conjugate verbs in the the immediate future tense

This is the easiest way to form the future tense.

Take the present tense of **ir (to go)** and add 'a' and an infinitive.

For example:

Voy a jugar al fútbol
I am going to play football

Vamos a bailar
We are going to dance

Alternatively you can conjugate the future tense. The future tense is used to say what **will** happen and is less common than the immediate future. To form the future tense, add the correct ending to the **infinitive** of the **verb**. The endings are the same for **-ar**, **-er** and **-ir** verbs:

	AR, ER, IR verbs	Example **ir (to go)**
yo (I)	é	iré (I will go)
tú (you)	ás	irás (you will go)
él/ella (he/she)	á	irá (he/she will go)
nosotros (we)	emos	iremos (we will go)
vosotros (you plural)	éis	iréis (you plural will go)
ellos/ellas (they masculine / they feminine)	án	irán (they will go)

Year 11 Spanish:

The future tense

How to conjugate verbs in the the immediate future tense

	AR, ER, IR verbs	Example **ir (to go)**
yo (I)		
tú (you)		
él/ella (he/she)		
nosotros (we)		
vosotros (you plural)		
ellos/ellas (they masculine / they feminine)		

Year 11 Spanish:

The conditional tense

The conditional tense is used to describe **what someone would do** or **what would happen** in the future. It can also be used to express ambitions and intentions. For example:
Si fuera posible **viviría** en una casa grande.
*If it were possible I **would live** in a big house.*

The easiest way to form the conditional tense is to take the verb gustarse (to like) in the conditional tense plus an infinitive: For example:

Me gustaría jugar al fútbol
I would like to play football

Le gustaría jugar al fútbol
She would like to play football
To conjugate verbs in the conditional tense follow these simple steps.
Take an infinitive.
(Remember infinitives end in ar, er or ir.)

Add the conditional tense endings. The endings are the same for -ar, -er and -ir verbs.

	ending	vivir (to live)	meaning
yo (I)	ía	viviría	I would live
tú (you)	ías	vivirías	You would live
él/ella (he/she)	ía	viviría	He/she would live
nosotros (we)	íamos	viviríamos	We would live
vosotros (you plural)	íais	viviríais	You (plural) would live
ellos/ellas (they masculine / they feminine)	ían	vivirían	They would live

Some verbs like tener (to have) are irregular verbs. This means they don't always follow the same pattern as other verbs. To change tener (to have) to the conditional tense you use the irregular stem **tendr** plus the endings above.

For example -
I would have = **tendr**ía
There would be = **habr**ía

Year 11 Spanish:

The conditional tense

The conditional tense is used to describe **what someone would do** or **what would happen** in the future. It can also be used to express ambitions and intentions. For example:

Si fuera posible **viviría** en una casa grande.

*If it were possible I **would live** in a big house.*

	ending	vivir (to live)	meaning
yo (I)			
tú (you)			
él/ella (he/she)			
nosotros (we)			
vosotros (you plural)			
ellos/ellas (they masculine / they feminine)			

Some verbs like tener (to have) are irregular verbs. This means they don't always follow the same pattern as other verbs. To change tener (to have) to the conditional tense you use the irregular stem **tendr** plus the endings above.

For example -

Music and Performing Arts

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 Music: Areas of Study

AoS1

Musical Forms & Devices

Ternary

Section A	Section B	Section A
The initial ideas are introduced. This section usually ends with a perfect cadence in the tonic key.	A contrasting section that is sometimes known as an episode.	Either an exact repeat or slightly altered version of the first section.

Variation

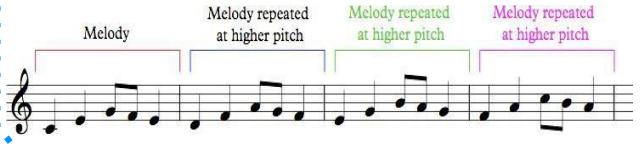
Theme	Variation 1	Variation 2	Variation 3
This could be in a certain structure- perhaps binary or ternary.	**Some ways in which the theme could be transformed are:** • Decoration and embellishment • A change of instrumentation, temp, key, harmony, metre or rhythm • Developing the theme using a variety of devices such as imitation, inversion, sequence, diminution or augmentation • Presentation the theme at a different pitch • Developing harmonies and rhythms with a tune • Introducing additional or new melodies • Varying the style		

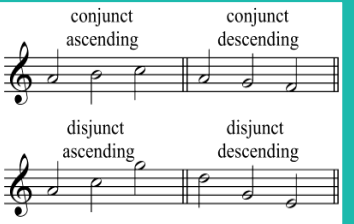
Binary

Section A	Section B
Starts in the tonic key but modulates to a related key at the end of the section. This section is usually unfinished when played on its own.	Starts in the same key as the end of section A but the music works it way back to the tonic. It is usually longer than the A section but balances the piece.

Sequence

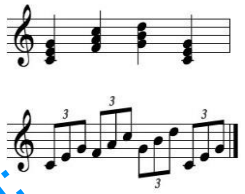
Repetition of a melodic or harmonic phrase in the same part, but at a higher or lower pitch





Arpeggio/Broken Chord

When the notes of a chord are played separately in succession

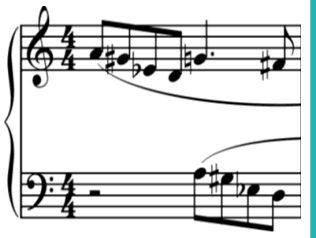


Imitation

A contrapuntal device, when a melodic idea is copied in another part

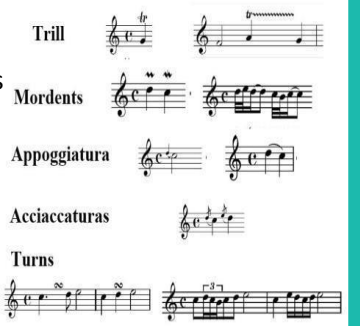
Motif

A short, musical idea, melodic or rhythmic



Repetition

When sounds, sequences, melodies or rhythms are repeated



Ornamentation

Decorate or embellish the music. Popular examples of ornaments are trill, mordents and turns.

Baroque

Simple melodies, ornaments, terraced dynamics, energetic and relentless rhythmic movement, major/ minor, keys mainly string instruments with some woodwind, use of the harpsichord, basso continuo.

Bach, Handel, Vivaldi, Corelli, Lully,

Classical

Balanced, regular phrases, functional harmony, wider range of dynamics, focus on piano, elegant and graceful 'symmetrical' style, frequent changes of mood and timbre, alberti bass.

Haydn, Mozart, Beethoven

Romantic

Melodies were lyrical, distinct thematic ideas, leitmotifs, expressive, richer harmonies with chromaticism, more variation in dynamics, rhythms and creative freedom, programmatic music, larger brass section.

Schubert, Mendelssohn, Chopin, Schumann, Wagner

Year 11 Music: Areas of Study

AoS1

Musical Forms & Devices

Ternary

Section A	Section B	Section A
The initial ideas are introduced. This section usually ends with a perfect cadence in the tonic key.	A contrasting section that is sometimes known as an episode.	Either an exact repeat or slightly altered version of the first section.

Variation

Theme	Variation 1	Variation 2	Variation 3
This could be in a certain structure- perhaps binary or ternary.	**Some ways in which the theme could be transformed are:**		

Binary

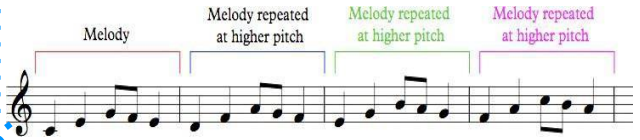
Section A	Section B
Starts in the tonic key but modulates to a related key at the end of the section. This section is usually unfinished when played on its own.	Starts in the same key as the end of section A but the music works it way back to the tonic. It is usually longer than the A section but balances the piece.

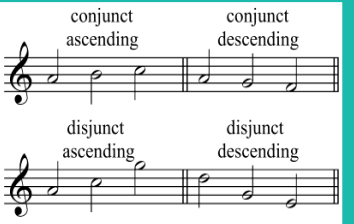
Forms

Devices

Sequence

Repetition of a melodic or harmonic phrase in the same part, but at a _____ or _____ pitch



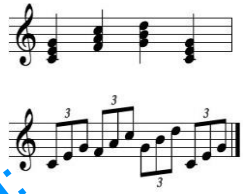


Imitation

A contrapuntal device, when a melodic idea is _____ in another part

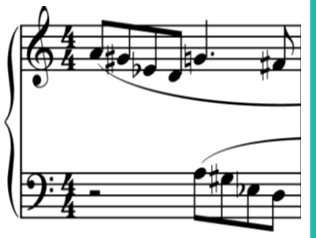
Arpeggio/Broken Chord

When the notes of a chord are played _____ in succession



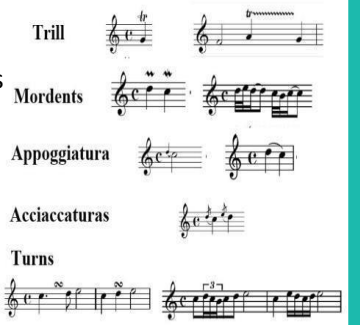
Motif

A _____, musical idea, melodic or rhythmic



Repetition

When sounds, sequences, melodies or _____ are repeated



Ornamentation

Decorate or embellish the music. Popular examples of ornaments are trill, mordents and turns.

Baroque

Simple _____, ornaments, terraced dynamics, energetic and, relentless rhythmic movement, major/ minor, keys mainly string instruments with some woodwind, use of the _____, basso continuo.

Bach, Handel, Vivaldi, Corelli, Lully,

Classical

Balanced, _____ phrases, functional harmony, wider range of dynamics, focus on piano, elegant and graceful 'symmetrical' style, frequent changes of mood and timbre, alberti bass.

Haydn, _____, Beethoven

Romantic

Melodies were _____, distinct thematic ideas, leitmotifs, expressive, richer harmonies with chromaticism, more variation in dynamics, rhythms and creative freedom, programmatic music, larger brass section.

Schubert, _____, Chopin, Schumann, Wagner

Year 11 Music: Areas of Study

AoS2

Music for Ensemble

Baroque

Basso Continuo

Double bass and harpsichord providing harmony

Classical

String Quartet

2 Violina, a viola & cello. 4 movements.

Romantic

String Quartets with a piano. Experimentation with different combinations of instruments to improve tone quality and overall sound.

A small group of classical musicians.

Jazz & Blues

12-bar blues

Head arrangement

In Jazz & Blues, the drummer keeps a steady beat. The bass player lays down a 'groove' and supports the improvisation sections. The keyboard player comps and improvises the chords whilst the other instruments Improvise virtuosic solos.

Classic Blues band

Key features in most jazz bands are: the instruments, use of improvisation, the pentatonic scale, head arrangement, melodic riffs, blues notes, use of the blues scale, call and response and jazz virtuoso with solo sections.

Modern Jazz band

Chamber Ensemble

There are various instrumental ensembles that accompany the singers onstage.

Musical Theatre

Musicals use **various vocal ensembles** which are known as the chorus. This features multiple vocal parts like **Soprano, Alto, Tenor and Bass.**

Large-scale musicals can use a full orchestra of musicians, but smaller shows may only use a small rock band.

Sonority

Individual tone colour or tone quality. The tone colour of different combinations of instruments can result in very different effects. It is its relative loudness and 'feel' compared with other sounds.

Texture

Monophonic	Single melodic line or parts together in unison
Homophonic	One melody heard with an accompaniment of chords
Polyphonic	A number of melodies heard at one, like imitation and counterpoint

Ensemble

A group of performers, usually between 2 and 8. Examples include: basso continuo, string quartet, jazz and blues trios, a rhythm section and vocal ensembles (duets, trios, backing vocals).

Year 11 Music: Areas of Study complete the missing knowledge

AoS2

Music for Ensemble

Jazz & Blues

12-bar blues

Head arrangement

In Jazz & Blues, the drummer keeps a steady _____. The bass player lays down a '_____' and supports the improvisation sections. The keyboard player comps and improvises the chords whilst the other instruments Improvise virtuosic solos.

Key features in most jazz bands are: the instruments, use of improvisation, the _____scale, head arrangement, melodic riffs, blues notes, use of the blues scale, call and response and jazz virtuoso with solo sections.

Baroque

Basso Continuo

Double bass and _____providing harmony

Classical

String Quartet

2 Violina, a viola & cello. 4 movements.

Romantic

String Quartets with a piano. Experimentation with different combinations of _____to improve tone quality and overall sound.

A small group of classical musicians.

Classic Blues band

Modern Jazz band

Musicals use **various vocal ensembles** which are known as the chorus. This features multiple vocal parts like **Soprano, Alto, Tenor and Bass.**

There are various instrumental ensembles that accompany the singers onstage.

Large-scale musicals can use a full orchestra of musicians, but smaller shows may only use a small rock band.

Chamber Ensemble

Musical Theatre

Sonority

Individual tone colour or tone quality. The tone colour of different combinations of instruments can result in very different effects. It is its relative loudness and 'feel' compared with other sounds.

Texture	
Monophonic	
Homophonic	
Polyphonic	

Ensemble

A group of performers, usually between 2 and 8. Examples include: basso continuo, string quartet, jazz and blues trios, a rhythm section and vocal ensembles (duets, trios, backing vocals).

Year 11 Music: Areas of Study

AoS3 Film Music

Rhythmic Devices

- Diminution
  - Dotted rhythms
- Syncopation
  - Constant Beats
  - Polyrhythms
- Hemiola
  - Long-held notes
  - Augmentation

Tempo

Allegro – fast/lively
Andante – walking pace
Adagio – slowly
Accelerando – gradually getting faster
Ritardando – gradually getting slower
Rubato – not sticking to time, free

Elements

Use of dynamics
Different timbres
Vary textures
Tonality

Devices

Harmony

Diatonic – chords that relate to specific keys.
Chromatic – chords that are not in the key.
Dissonant – chords that clash causing tension and conflict.

Melody

- Balanced phrases
- Climactic Point
- A strong sense of key
- Use of repetition
- A strong 'shape'
- Balance between steps and leaps

Duple Time: Two beats in each bar	Triple Time: Three beats in each bar	Quadruple Time: Four beats in each bar
2/4 ♩ ♩	3/4 ♩ ♩ ♩	4/4 ♩ ♩ ♩ ♩

Simple Time

The main beat is a crochet beat

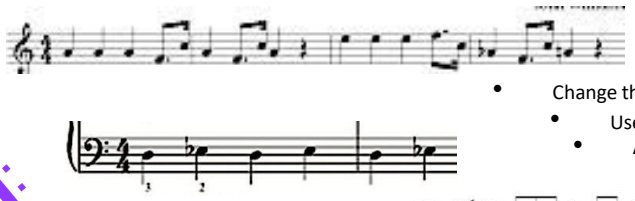
Duple Time: Two beats in each bar	Triple Time: Three beats in each bar	Quadruple Time: Four beats in each bar
6/8 ♩. ♩.	9/8 ♩. ♩. ♩.	12/8 ♩. ♩. ♩. ♩.

Compound Time

The main beat is a dotted crotchet beat

Leitmotif

A short musical theme or idea linked with a character, object, place or idea.

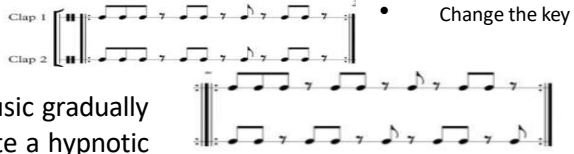


Thematic Transformation

- Add or subtract from the idea
- Change the instrumentation
- Change the pitch, dynamics, tempo or note-values
- Use inversion, augmentation or diminution
- Alter some of the musical characteristics
- Vary the texture
- Change the key

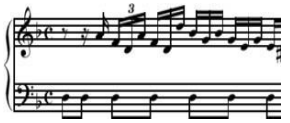
Minimalism

Small cells of music gradually evolving to create a hypnotic effect.



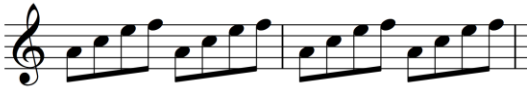
Pedal notes

A harmonic device where the same note is sustained or repeated.



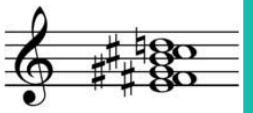
Ostinato

Melodic, rhythmic or harmonic patterns



Cluster chords

Clashing notes together to build suspense.



Origins

Silent movies were accompanied by pianists or small orchestras in the theatres. This was normally music written specifically for the film, existing classical music or popular music of the time. Sound with pictures was developed in 1927 with the film *'The Jazz Singer'*.

Function

To create atmosphere; to underscore the dialogue; for scene changes or montages; to set the era, time or period; to correspond with the visuals (mickey-mousing); to arouse a collective emotion from the audience; to build tension and suspense.

Music for Film

Diegetic: music contained within the action e.g. a club singer performing on stage

Non-Diegetic: the background music supporting the on-screen action. This is not heard by the on-screen actors but the audience.

Layering

Building up musical ideas to fill out the texture

Year 11 Music: Areas of Study

AoS3 Film Music

Elements

- Rhythmic Devices
- Syncopation
- Hemiola
- Diminution
- Constant Beats
- Long-held notes
- Dotted rhythms
- Polyrhythms
- Augmentation

Tempo

Allegro – _____
Andante – _____
Adagio – _____
Accelerando – _____
Ritardando – _____
Rubato – _____

Use of dynamics
Different timbres
Vary textures
Tonality

Harmony

_____ – chords that relate to specific keys.

_____ – chords that are not in the key.

_____ – chords that clash causing tension and conflict.

Melody

- Balanced phrases
- Climactic Point
- A strong sense of key
- Use of repetition
- A strong 'shape'
- Balance between steps and leaps

Duple Time: Two beats in each bar	Triple Time: Three beats in each bar	Quadruple Time: Four beats in each bar
2 4 ♩ ♩	3 4 ♩ ♩ ♩	4 4 ♩ ♩ ♩ ♩

Simple Time

The main beat is a _____

Duple Time: Two beats in each bar	Triple Time: Three beats in each bar	Quadruple Time: Four beats in each bar
6 8 ♩. ♩.	9 8 ♩. ♩. ♩.	12 8 ♩. ♩. ♩. ♩.

Compound Time

The main beat is a dotted crotchet beat

Origins

Silent movies were accompanied by pianists or small orchestras in the theatres. This was normally music written specifically for the film, existing _____ or popular music of the time. Sound with pictures was developed in 1927 with the film *'The Jazz Singer'*.

Function

To create _____; to underscore the dialogue; for scene changes or montages; to set the era, time or period; to correspond with the visuals (mickey-mousing); to arouse a collective emotion from the audience; to build _____ and _____.

Music for Film

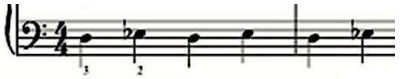
_____: music contained within the action e.g. a club singer performing on stage

_____: the background music supporting the on-screen action. This is not heard by the on-screen actors but the audience.

Devices

Leitmotif

A short musical theme or idea linked with a _____, _____, place or idea.

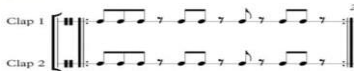


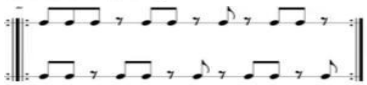
Thematic Transformation

- Add or subtract from the idea
- Change the instrumentation
- Change the pitch, dynamics, tempo or note-values
- Use inversion, augmentation or diminution
- Alter some of the musical characteristics
- Vary the texture
- Change the key

Minimalism

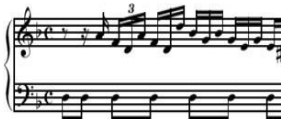
Small cells of music gradually evolving to create a hypnotic effect.





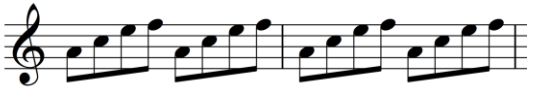
Pedal notes

A harmonic device where the same note is _____ or _____.



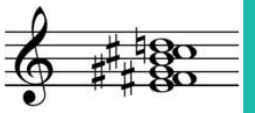
_____

Melodic, rhythmic or harmonic patterns



Cluster chords

Clashing notes together to build suspense.



Layering

Building up musical ideas to fill out the texture

Year 11 Music: Areas of Study

AoS4 Popular Music

Rock & Pop

Pop
Commercial genre which has mass audience appeal.

Rock
Harsher and more serious form of popular music.

Electric Guitar
Supports the rhythm by strumming the chords

Drum kit
A collection of different sized drums and cymbals. Drummers keep the beat and add fills to add interest.

Bass Guitar
Strings are plucked or 'slapped'. Bass holds the low notes in a bass line.

Structure
Most rock & pop structures are in verse- chorus form or 32-bar song form.

Melody
Hooks – catchy & memorable
Repetition and symmetry

Harmony
Most chords are in **root position.** There is **parallel movement** towards the tonic. The chords stick to the key using mainly (I, ii, IV, V, vi and sometimes viiº).

Digital Electronic Rock
A genre of rock music that relies on electronic and digital instruments: synths, moogs and drum machines. These genres are: House, Techno, Trance, Dubstep, Indietronica. The reproduction of acoustic sounds can also be edited: remixing, panning, delay, reverb, phasing and looping.

Fusion
Fusion is what happens when two or more different musical styles or genres are blended. Ray Charles combined musical elements of gospel and jazz-influenced blues. The Pogues combines Celtic music with punk by playing with traditional Irish instruments. Afro Celt Sound System combine African, Celtic and Dance Music through instrumentation and elements.

Bhangra

Bhangra emerged in the UK as a type of fusion which features music from the Punjab region of India combined with other popular styles.

Traditional Punjab music used the folk instruments of the country, with the main emphasis on percussion and string instruments.

Tempo
Fast/moderate, lively, upbeat.

Chaal
The chaal rhythm is played by the dhol in a kind of swing rhythm.

Melody
Quite repetitive, simple, limited in range, uses embellishments to decorate, often dips at the end of phrases, uses microtonal intervals. Ideas are sung or played. Shouted phrases of 'Hoi!'

Structure
Traditional verse-chorus

Rhythm
Chaal rhythm, syncopation, 4 beats in a bar.

Technology
Uses drum machines, synths, samples, mixing and scratching.

Lyrics
Punjabi language, often mixed with English covering social subjects.

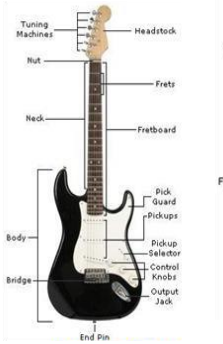
Year 11 Music: Areas of Study complete the missing words below

AoS4 Popular Music

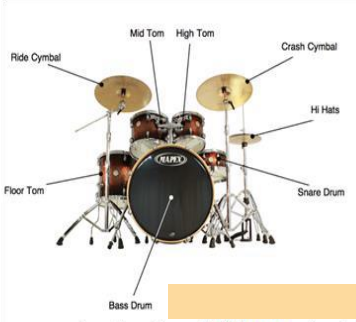
Rock & Pop

Pop
Commercial genre which has mass audience appeal.

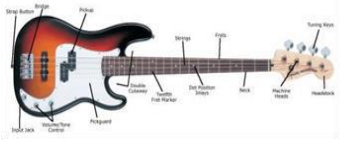
Rock
Harsher and more serious form of popular music.



Supports the rhythm by strumming the chords



A collection of different sized drums and cymbals. Drummers keep the beat and add fills to add interest.



Strings are plucked or 'slapped'. Bass holds the low notes in a bass line.

Structure

Most rock & pop structures are in verse- chorus form or 32-bar song form.

Melody

Hooks – catchy & memorable
Repetition and symmetry

Harmony

Most chords are in **root position.** There is **parallel movement** towards the tonic. The chords stick to the key using mainly (I, ii, IV, V, vi and sometimes vii°).

Digital Electronic Rock

A genre of rock music that relies on electronic and digital instruments: synths, moogs and drum machines. These genres are: House, Techno, Trance, Dubstep, Indietronica. The reproduction of acoustic sounds can also be edited: remixing, panning, delay, reverb, phasing and looping.

Fusion

Fusion is what happens when two or more different musical styles or genres are blended. Ray Charles combined musical elements of gospel and jazz-influenced blues. The Pogues combines Celtic music with punk by playing with traditional Irish instruments. Afro Celt Sound System combine African, Celtic and Dance Music through instrumentation and elements.

Bhangra

Bhangra emerged in the UK as a type of fusion which features music from the Punjab region of India combined with other popular styles.

Traditional Punjab music used the folk instruments of the country, with the main emphasis on percussion and string instruments.

The chaal rhythm is played by the dhol in a kind of swing rhythm.

Fast/moderate, lively, upbeat.

Traditional verse-chorus

Quite repetitive, simple, limited in range, uses embellishments to decorate, often dips at the end of phrases, uses microtonal intervals. Ideas are sung or played. Shouted phrases of 'Hoi!'

Chaal rhythm, syncopation, 4 beats in a bar.

Uses drum machines, synths, samples, mixing and scratching.

Punjabi language, often mixed with English covering social subjects.

Year 11 Music: Areas of Study

Badinerie

BACH

1738-39

The Baroque period

- Complex melodic lines with ornamentation
- Terraced dynamics
- Polyphonic texture
- Harpsichord and strings
- Basso Continuo

Tempo

Allegro

Texture

Homophonic (***melody and accompaniment***).
Flute and the cello provide the main musical material
1st violin participates occasionally
2nd violin and viola provide harmony with less busy musical lines.

Tonality

Section A begins in ***B minor*** and ends in ***F# minor***
Section B: the opposite, beginning in ***F# minor*** and ending in ***B minor***.

Rhythm

Simple ostinato rhythms, forming the basis of the two short musical ideas (X and Y)
Consist almost totally of ***quavers*** and ***semi- quavers***.
The time signature is 2/4 throughout

Instrumentation

Instrumentation: (Transverse) Flute String Orchestra
Harpsichord (Basso Continuo).

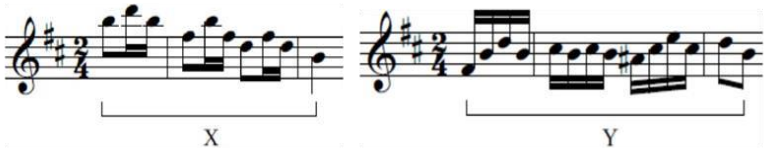
Dynamics

Mostly ***forte***
Use of ***terraced dynamics***

Structure

Binary form (AB),
with each section repeated once (AABB)

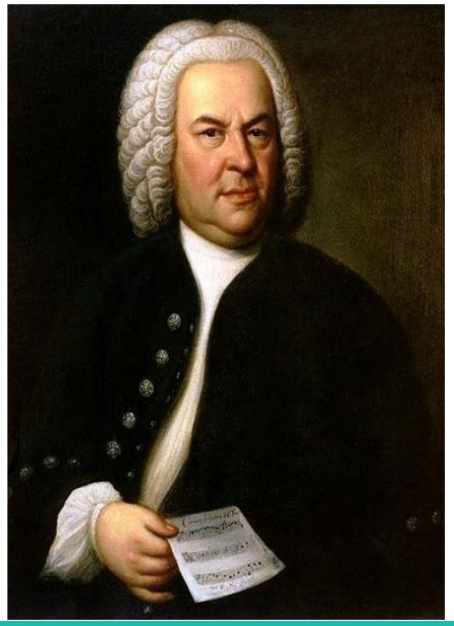
Section A	Bars $0^2 – 16^1$	16 bars
Section B	Bars $16^2 – 40^1$	24 bars



Melody

The movement is based on two short musical ***ideas*** (X and Y).
The flute part has a two-octave pitch ***range***.
The movement includes ***ornaments*** and ***compositional devices*** typical of the Baroque era:

Trills: Bars 8^1, 10^1, 15^2, 27^2, 30^1 and 32^1
Appoggiaturas: Bars 33^1 and 40^1
Sequences: $6^2 – 10^1$ and bars $28^2 – 32^1$.



Harmony

Diatonic throughout.
Section A ***modulates*** from the ***tonic*** to the ***dominant*** **minor** and Section B does the opposite.
Imperfect and ***perfect cadences*** are clearly presented throughout.
Chords frequently occur in ***inversion*** with occasional use of ***V7*** in third inversion.
A ***Neapolitan sixth chord*** is used in bar 35.
Suspensions also occur in bars 8^1, 10^1 and 32^1.

Year 11 Music: Areas of Study complete the missing words below

Badinerie

BACH

1738-39

The Baroque period

- Complex melodic lines with ornamentation
- Terraced dynamics
- Polyphonic texture
- Harpsichord and strings
- Basso Continuo

Tonality

Section A begins in ***B minor*** and ends in _____

Section B: the opposite, beginning in ***F# minor*** and ending in ***B minor***.

Tempo

Allegro

Texture

Homophonic (***melody and accompaniment***).

Flute and the cello provide the main musical material

1st violin participates occasionally

2nd violin and viola provide harmony with less busy musical lines.

Instrumentation

Instrumentation: (Transverse) Flute String Orchestra Harpsichord (Basso Continuo).

Dynamics

Mostly _____

Use of ***terraced dynamics***

Rhythm

Simple ostinato rhythms, forming the basis of the two short musical ideas (X and Y)

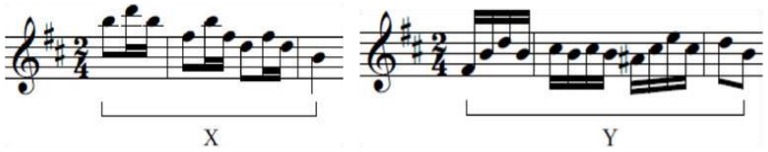
Consist almost totally of ***quavers*** and ***semi- quavers***.

The time signature is _____

Structure

_____ form (AB),

with each section repeated once (AABB)



Melody

The movement is based on two short musical ***ideas*** (X and Y).

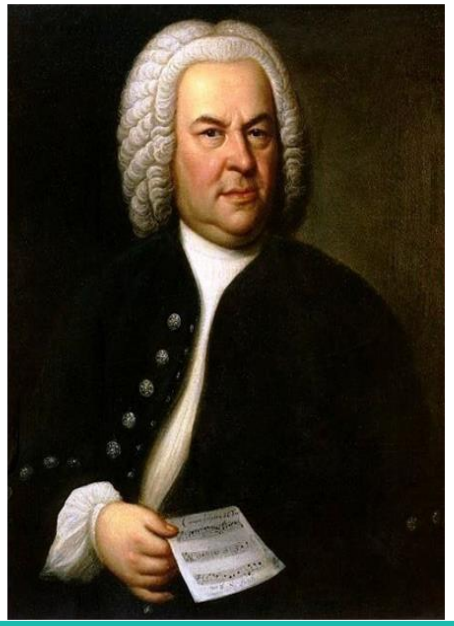
The flute part has a two-octave pitch ***range***.

The movement includes _____ and ***compositional devices*** typical of the Baroque era:

Trills: Bars 8^1, 10^1, 15^2, 27^2, 30^1 and 32^1

Appoggiaturas: Bars 33^1 and 40^1

Sequences: $6^2 – 10^1$ and bars $28^2 – 32^1$.



Section A	Bars $0^2 – 16^1$	16 bars
Section B	Bars $16^2 – 40^1$	24 bars

Harmony

_____ throughout.

Section A ***modulates*** from the ***tonic*** to the ***dominant minor*** and Section B does the opposite.

Imperfect and ***perfect cadences*** are clearly presented throughout.

Chords frequently occur in ***inversion*** with occasional use of ***V7*** in third inversion.

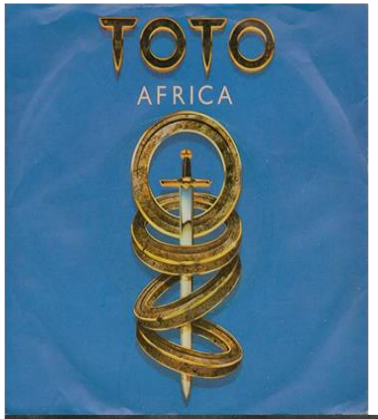
A _____ ***sixth chord*** is used in bar 35.

Suspensions also occur in bars 8^1, 10^1 and 32^1.

Year 11 Music: Areas of Study

1981
Toto IV
David Paich & Jess Porcaro

Africa
TOTO



Instrumentation
Rock Band: drum kit (keeps the groove) with additional percussion, lead guitar (plays solos and chords), bass guitar (holds the bassline), synthesizers (emphasizes the chords and leads the solo instrumental section), lead singer (sings the lyrics and melody). And male backing vocals (harmonies).

Texture
Homophonic: melody and accompaniment

Melody
Mostly conjunct (moving in step) and includes occasional use of the pentatonic scale. The pitch range of the vocal line is just less than two octaves on the printed score, but it is wider on the recording with the vocal improvisations towards the end of the song.

Harmony
The harmony is **diatonic,** the chords used are based on the key of the piece. Power chords and inversions.

Rhythm
Ostinato rhythms, consisting almost totally of quavers, with constant use of syncopation. The time signature is 2/2 (split common time) throughout.

Tempo
Moderately fast

Dynamics
Mainly mezzo forte, choruses are forte

Intro	Verse 1/2	Chorus 1/2	Link	Instrumental	Chorus 3	Outro
Bars 1-4	Bars 5-39 Bars 14-39	Bars 40-57	58-65	66-82	Bars 40-92	Bars 93-96
B major	B major	A major	B major	B major	A major	B major
Syncopated chordal riff A running into ostinato riff B based on E pentatonic scale.	Mostly syllabic, syncopated rhythms that are conjunct. Final chord is sustained for drum fill.	Vocal texture builds on each line, mostly syllabic with melisma on the final melody.	Same as intro but only repeated once instead of three times.	Chords based on the verse but with instrumental melody based on riff B.	New e. guitar riff, lyrics are repeated with solo vocal improvisation	Same as intro, texture gradually decreases as the music repeats to fade out.

Year 11 Music: Areas of Study complete the missing words below

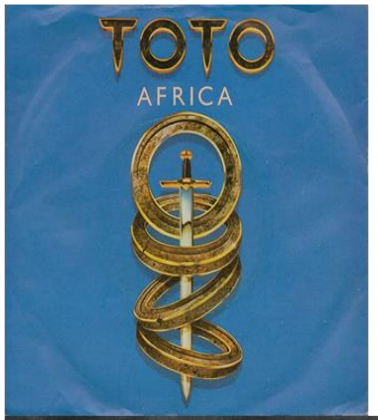
1981

Toto IV

& Jess Porcaro

Africa

TOTO



Instrumentation

Rock Band: drum kit (keeps the groove) with additional percussion, lead guitar (plays solos and chords), bass guitar (holds the bassline), synthesizers (emphasizes the chords and leads the solo instrumental section), lead singer (sings the lyrics and melody). And male backing vocals (harmonies).

Texture

: melody and accompaniment

Melody

Mostly (moving in step) and includes occasional use of the pentatonic scale. The pitch range of the vocal line is just less than two octaves on the printed score, but it is wider on the recording with the vocal improvisations towards the end of the song.

Harmony

The harmony is the chords used are based on the key of the piece. Power chords and inversions.

Rhythm

rhythms, consisting almost totally of quavers, with constant use of syncopation. The time signature is 2/2 (split common time) throughout.

Tempo

Moderately fast

Dynamics

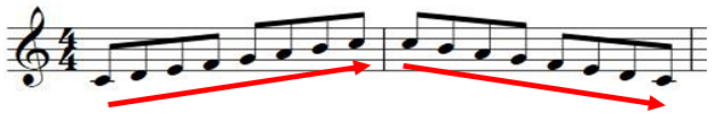
Mainly forte, choruses are forte

Intro	Verse 1/2	Chorus 1/2	Link	Instrumental	Chorus 3	Outro
Bars 1-4	Bars 5-39 Bars 14-39	Bars 40-57	58-65	66-82	Bars 40-92	Bars 93-96
Syncopated chordal riff A running into ostinato riff B based on E pentatonic scale.	Mostly syllabic, syncopated rhythms that are conjunct. Final chord is sustained for drum fill.	Vocal texture builds on each line, mostly syllabic with melisma on the final melody.	Same as intro but only repeated once instead of three times.	Chords based on the verse but with instrumental melody based on riff B.	New e. guitar riff, lyrics are repeated with solo vocal improvisation	Same as intro, texture gradually decreases as the music repeats to fade out.

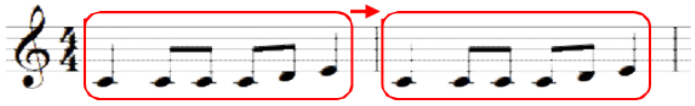
Year 11 Music: Areas of Study

MELODY

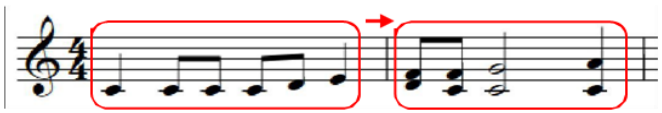
Direction Rising Falling



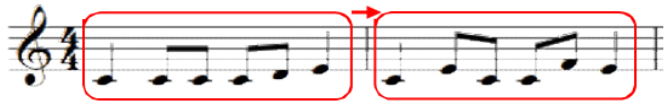
Repetition Doing the same thing again, without any changes.



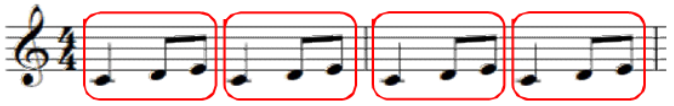
Contrast Doing something completely different.



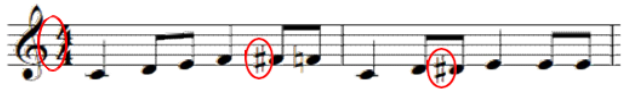
Imitation Doing the same thing again, with some changes (similar).



Ostinato A short repeated idea.

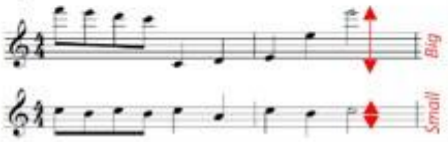


Chromatic The melody uses notes that aren't in the scale / key of the piece.

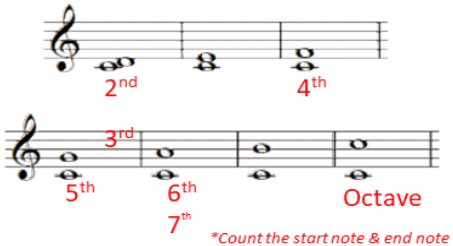


High or low. **Range**

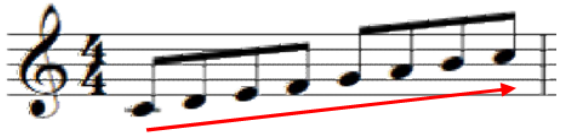
Big or Small.



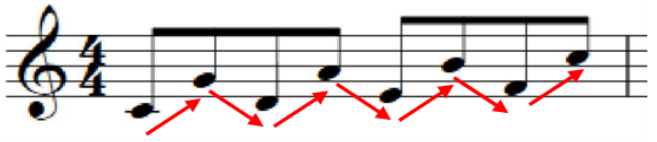
Interval The distance between two notes



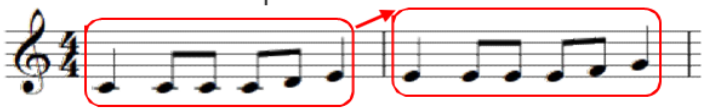
Conjunct (Moving In Step) **Type of movement**



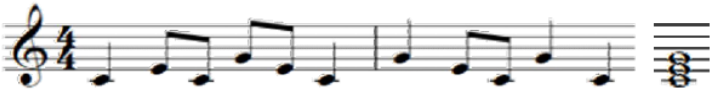
Disjunct (Moving In Leaps)



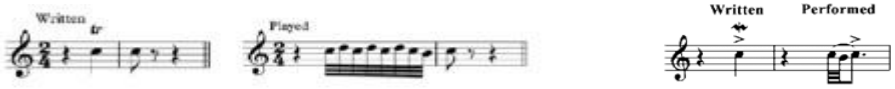
Sequence Doing the same shape idea but at a different pitch.



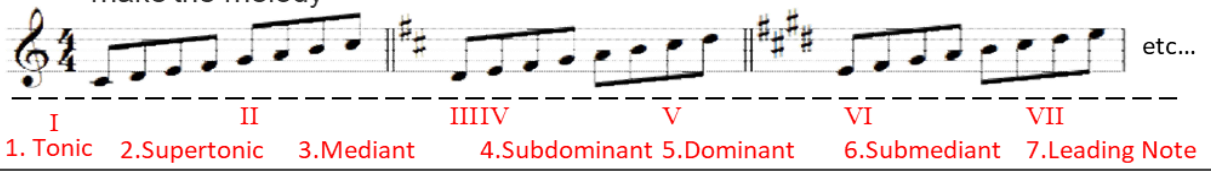
Triadic The tune is based on notes from the chords / triads.



Ornaments Trills Mordents



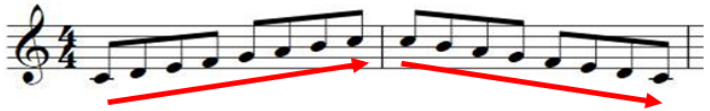
Scale The series of notes in a key that are used to make the melody



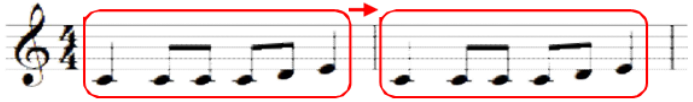
Year 11 Music: Areas of Study complete the missing words

MELODY

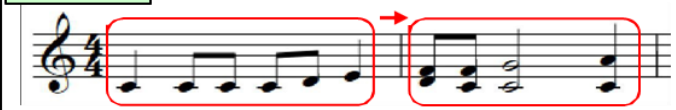
Rising Falling



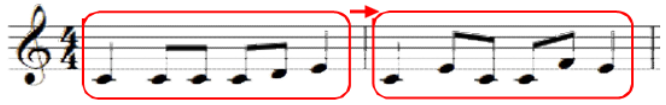
Doing the same thing again, without any changes.



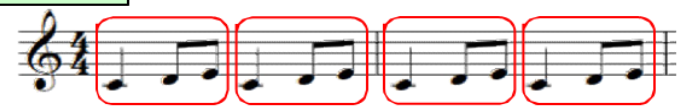
Doing something completely different.



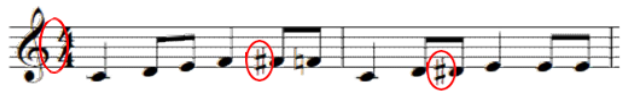
Doing the same thing again, with some changes (similar).



A short repeated idea.

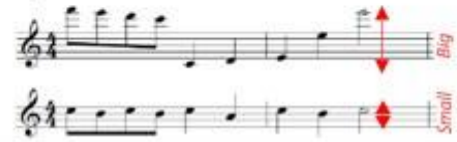


The melody uses notes that aren't in the scale / key of the piece.

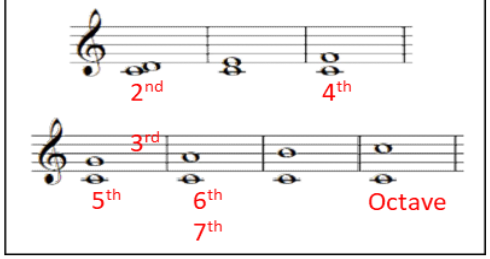


High or low. Range

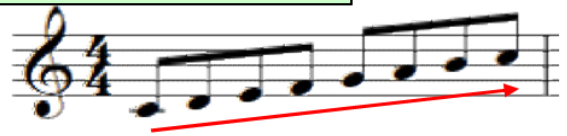
Big or Small.

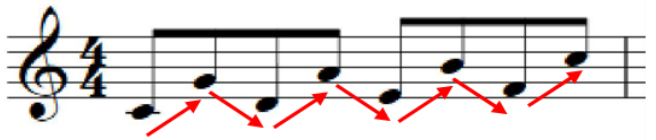


The distance between two notes

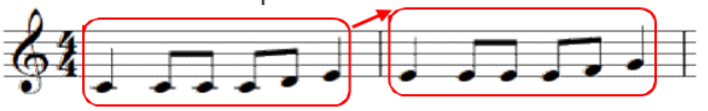


Type of movement

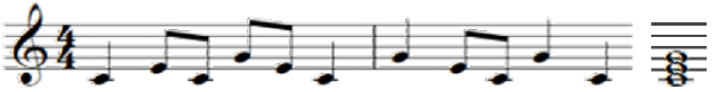




Doing the same shape idea but at a different pitch.

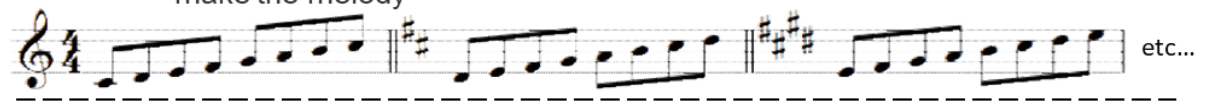


The tune is based on notes from the chords / triads.



Trills Mordents

The series of notes in a key that are used to make the melody



I 1.Tonic
II 2.Supertonic
III 3.Mediant
IV 4.Subdominant
V 5.Dominant
VI 6.Submediant
VII 7.Leading Note

Year 11 Music: MAD T-SHIRTS

ARTICULATION

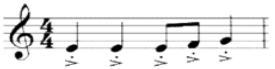
(How the notes are played)

Not Dynamics...

Articulation is the way the performer plays / sings the note, not how loud they do it. That would be Dynamics instead.

More Than One...

You can write more than one type of articulation for the same note. For example:



*Staccato & Accented

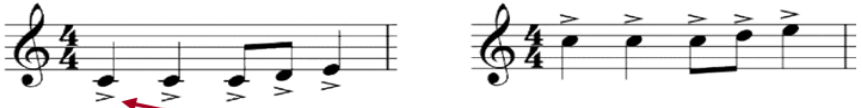
Staccato

Staccato means short and detached /seperated. **You will likely hear a gap between each note.*

Shown by writing a **dot** just above/below the head of the note.

Accented

Give extra emphasis or force to the marked notes.



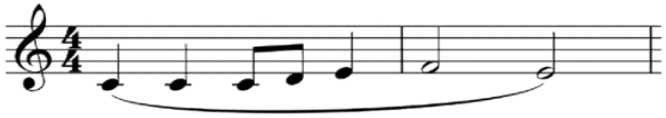
Shown by writing an **accent** above/below the head of the note.

Legato

To play the music smoothly, without breaks between notes.

Slurred

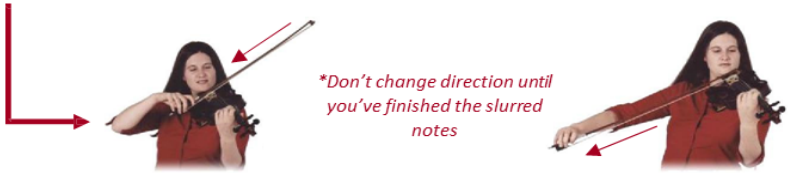
Playing the notes in a legato style, without breaks between notes.



Shown with a **slur** on the score.

How? Some examples:

String Instruments - Play the notes without changing the direction of the bow.



*Don't change direction until you've finished the slurred notes

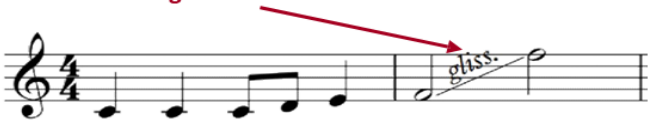
Brass & Wind Instruments - Only tongue the first note, not the others.

Glissando

*You can glissando upwards or downwards

A slide between two notes.

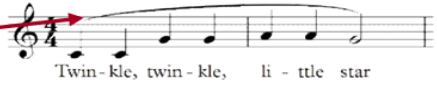
Marked with a **glissando** on the score.



Some Associated Markings On Vocal Music...

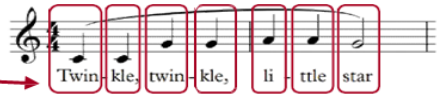
Phrase markings

Slurs drawn onto the score to show singers what to sing in one breath.



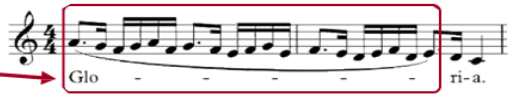
Syllabic

Where the music is written with one note per syllable.



Melismatic

Where the music is written with more than one note per syllable.



*A slur is used to show the notes on one syllable

Year 11 Music: MAD T-SHIRTS complete the missing words

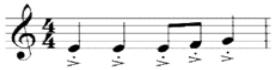
ARTICULATION

(How the notes are played)

Articulation is the way the performer plays / sings the note, not how loud they do it. That would be Dynamics instead.

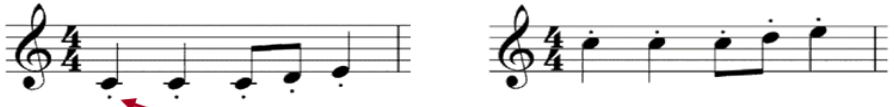
More Than One...

You can write more than one type of articulation for the same note. For example:



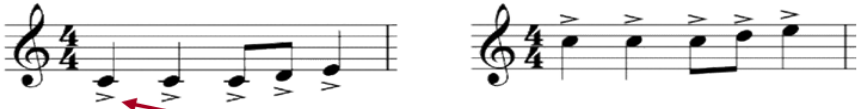
*Staccato & Accented

Staccato means short and detached /seperated. **You will likely hear a gap between each note.*



Shown by writing a **dot** just above/below the head of the note.

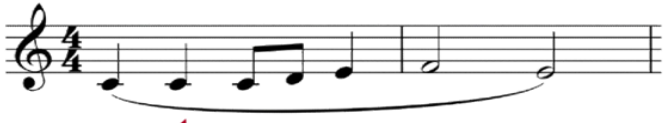
Give extra emphasis or force to the marked notes.



Shown by writing an **accent** above/below the head of the note.

To play the music smoothly, without breaks between notes.

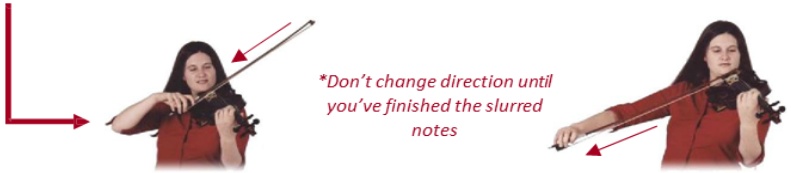
Playing the notes in a legato style, without breaks between notes.



Shown with a **slur** on the score.

How? Some examples:

String Instruments - Play the notes without changing the direction of the bow.



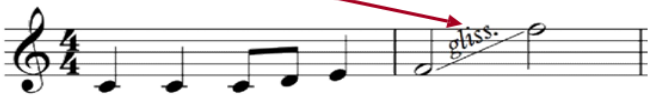
*Don't change direction until you've finished the slurred notes

Brass & Wind Instruments - Only tongue the first note, not the others.

*You can glissando upwards or downwards

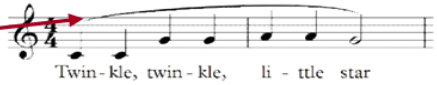
A slide between two notes.

Marked with a **glissando** on the score.

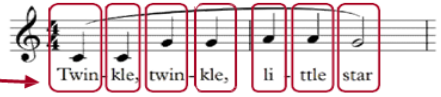


Some Associated Markings On Vocal Music...

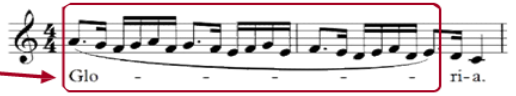
Slurs drawn onto the score to show singers what to sing in one breath.



Where the music is written with one note per syllable.



Where the music is written with more than one note per syllable.



*A slur is used to show the notes on one syllable

Year 11 Music: MAD T-SHIRTS

Describing What You Hear

Comment on any changes - don't sum up the whole example with one word (unless it doesn't change!)

The music starts… then… the music ends…

DYNAMICS

(The volume of the music)

Writing Dynamics

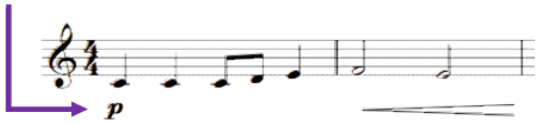
Dynamics can create contrast in music.

Dynamics can add expression to the music.

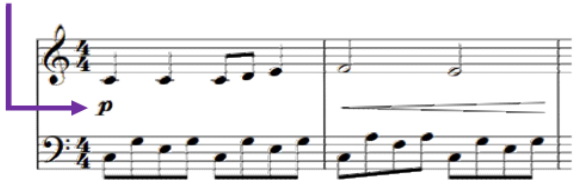
Dynamics can allow the listener to hear the most important lines in the music.

On The Score

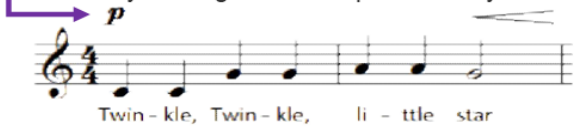
Dynamics are marked underneath the music, to show the instrument how loudly it should play:



If it is a piano, the dynamics usually go in-between the two staves:



For singers, dynamics usually go above the stave, so that they don't get mixed up with the lyrics:



Marking	Italian Term	Meaning
pp	Pianissimo	Very Quiet
P	Piano	Quiet
mp	Mezzo Piano	Moderately Quiet
mf	Mezzo Forte	Moderately Loud
f	Forte	Loud
ff	Fortissimo	Very Loud
	Crescendo	Getting Louder
	Diminuendo	Getting Quieter
sfz	Szorzando	Sudden Accent

Shh … *!!!*

Change gradually

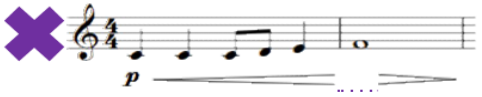
Baroque Period: Dynamics were rarely used (no crescendos and diminuendos). Use of Terraced Dynamics.

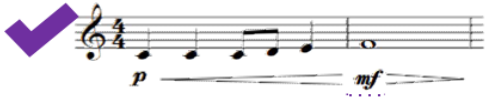
Classical Period: Some dynamics, to add contrast.

Romantic Period: Lots of crescendos & diminuendos and a large range of dynamics to add expression.

Writing Your Own Dynamics

If using crescendos and diminuendos, make sure you say how loud/quiet you want the music to get. This will clearly show what you want.





Year 11 Music: MAD T-SHIRTS complete the missing words

Describing What You Hear

Comment on any changes - don't sum up the whole example with one word (unless it doesn't change!)

The music starts… then… the music ends…

DYNAMICS

(The volume of the music)

Writing Dynamics

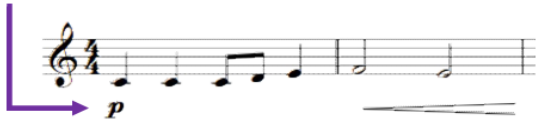
Dynamics can create contrast in music.

Dynamics can add expression to the music.

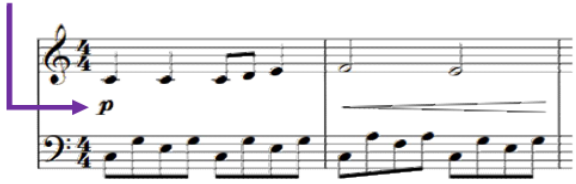
Dynamics can allow the listener to hear the most important lines in the music.

On The Score

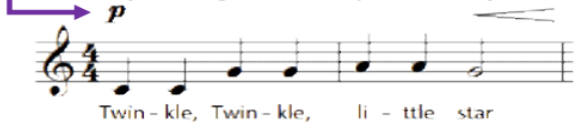
Dynamics are marked underneath the music, to show the instrument how loudly it should play:



If it is a piano, the dynamics usually go in-between the two staves:



For singers, dynamics usually go above the stave, so that they don't get mixed up with the lyrics:



Marking	Italian Term	Meaning
pp		
P		
mp		
mf		
f		
ff		

Shh … *!!!*

	Crescendo	Getting Louder
	Diminuendo	Getting Quieter
	Szorzando	Sudden Accent

Change gradually

Period: Dynamics were rarely used (no crescendos and diminuendos). Use of Terraced Dynamics.

Period: Some dynamics, to add contrast.

Period: Lots of crescendos & diminuendos and a large range of dynamics to add expression.

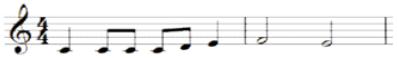
Writing Your Own Dynamics

If using crescendos and diminuendos, make sure you say how loud/quiet you want the music to get. This will clearly show what you want.

Year 11 Music: MAD T-SHIRTS

TEXTURE

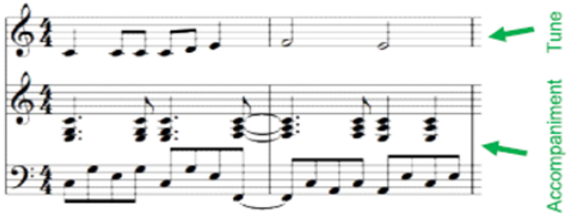
Monophonic
Music with only one part (one note at a time).



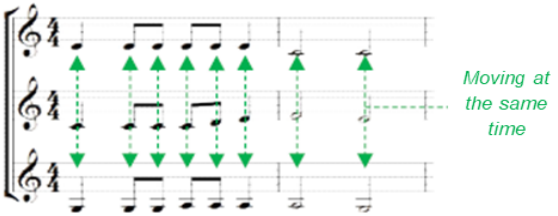
*You can have as many players or singers as you want on the same part so long as it is the only part. No chords!

Antiphonal
Two groups of musicians play/respond to each other from two different performing positions.

Melody & Accompaniment
A melody (tune) plus some accompanying chords or ideas.

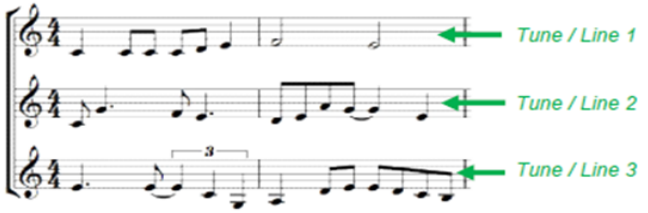


Homophonic
All parts move in chords at the same time.



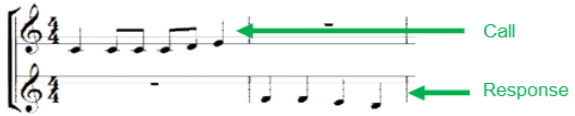
*Homo-phonic = same-sound… they have the same rhythm

Polyphonic
Several (2 or more) independent lines of music.

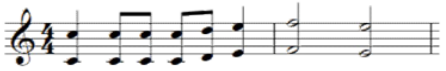


*Poly-phonic = many-sounds… several (two or more) different tunes.

Call And Response
One idea played/sung and then another performer(s) responding.



Octaves
When parts move together, an octave apart.



*Same note name but different pitch.

What Is The Instrument's Role

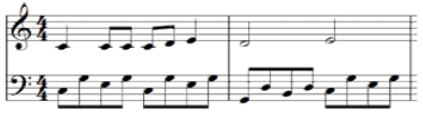
Melody – The tune.

Accompaniment – The parts supporting the tune.

Countermelody – A second melody that fits with the main tune.

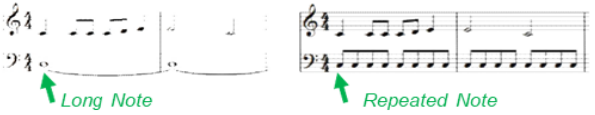
Bass Line – The lowest sounding part.

Alberti Bass
Accompaniment found mainly in the left hand part of piano music.
Don't play all three notes of the triad together; break them up into four equal notes. Usually lowest, highest, middle, highest.

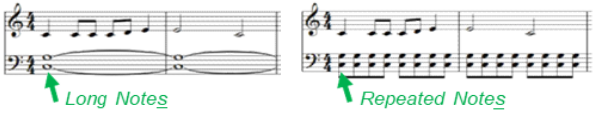


Why doesn't Mr Edwards like playing an Alberti Bass? It gives him the EBGBs.

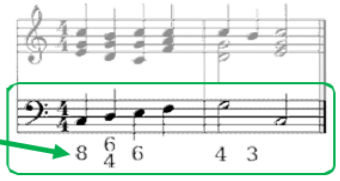
Pedal
A long or repeated note – *usually in the bass.*



Drone
Long or repeated notes – *usually a 5th apart.*



Basso Continuo
The part given to instruments in The Baroque Period that played the bass line and chords, accompanying the melody, using figured bass.

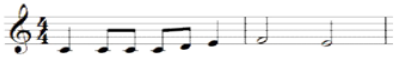


*Harpsichord, bass viol, organ, lute…

Year 11 Music: MAD T-SHIRTS complete the missing words

TEXTURE

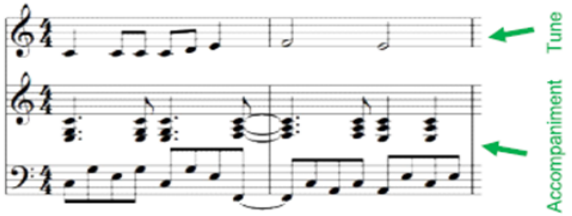
Music with only one part (one note at a time).



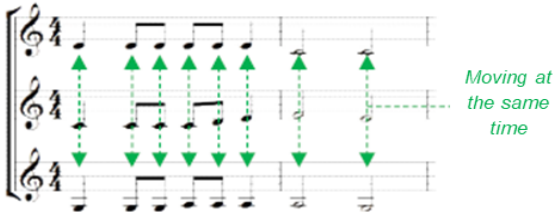
*You can have as many players or singers as you want on the same part so long as it is the only part. No chords!

Two groups of musicians play/respond to each other from two different performing positions.

A melody (tune) plus some accompanying chords or ideas.

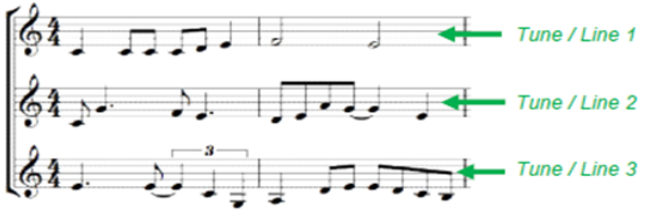


All parts move in chords at the same time.



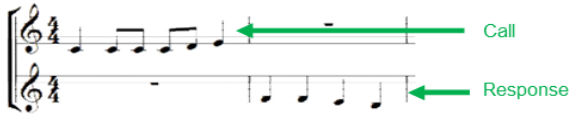
*Homo-phonic = same-sound… they have the same rhythm

Several (2 or more) independent lines of music.

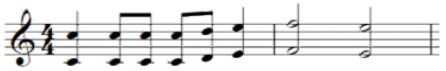


*Poly-phonic = many-sounds… several (two or more) different tunes.

One idea played/sung and then another performer(s) responding.



When parts move together, an octave apart.



*Same note name but different pitch.

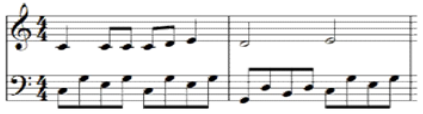
[ ] – The tune.

[ ] – The parts supporting the tune.

[ ] – A second melody that fits with the main tune.

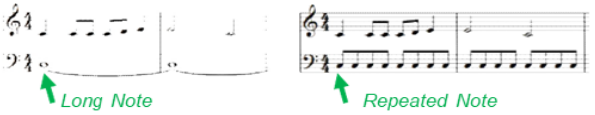
[ ] – The lowest sounding part.

Accompaniment found mainly in the left hand part of piano music.
Don't play all three notes of the triad together; break them up into four equal notes. Usually lowest, highest, middle, highest.

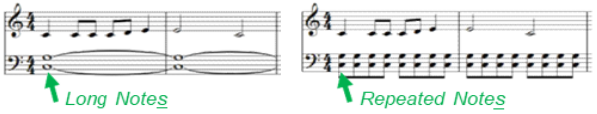


Why doesn't Mr Edwards like playing an Alberti Bass? It gives him the EBGBs.

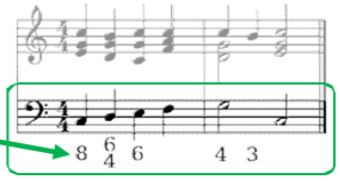
A long or repeated note – *usually in the bass.*



Long or repeated notes – *usually a 5th apart.*



The part given to instruments in The Baroque Period that played the bass line and chords, accompanying the melody, using figured bass.



*Harpsichord, bass viol, organ, lute…

Year 11 Music: MAD T-SHIRTS

Structure – The order that things happen in.

First… then… this is followed by… at the end.

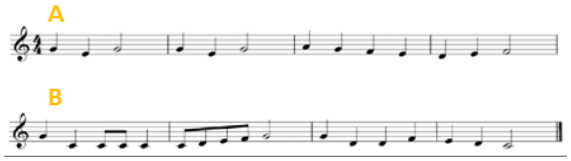
STRUCTURE

Song Form

Intro Verse Chorus Middle 8 Bridge Outro

Binary Form - Music in two parts

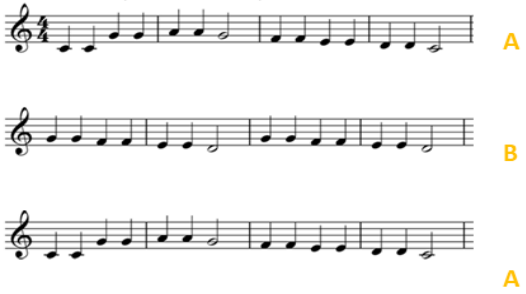
Section A and Section B.



Section B contrasts Section A in some way. Usually both sections are repeated.

Ternary Form - Music in three parts

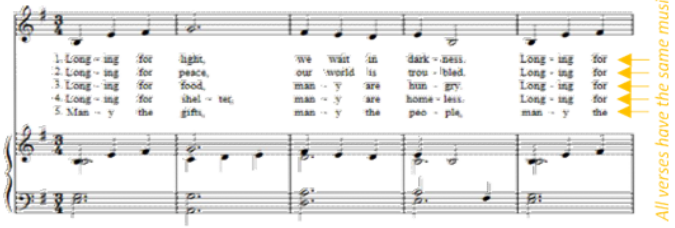
Section A, Section B, Section A.



The 2nd Section A can be an exact repeat of the 1st Section A, or a slightly altered version.

Strophic Form - Same music repeated each section.

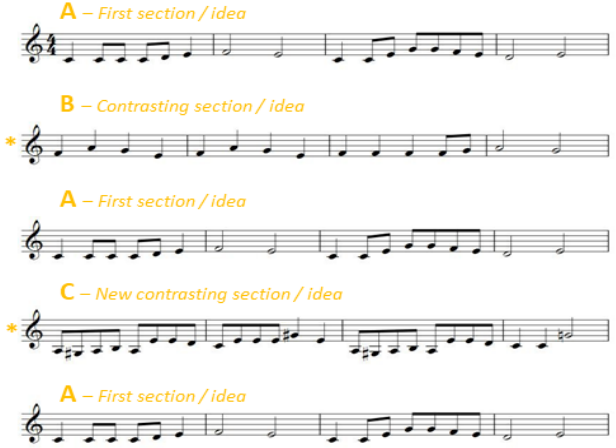
Section A, Section A, Section A.



e.g. Hymns, Folk Songs…

Rondo Form – The opening section keeps returning, with contrasting sections in between.

Section A, Section B, Section A, Section C, Section A.



* The contrasting sections are called 'episodes'.

Minuet & Trio – Dance founded in 17th-18th Century Europe. In Triple time and moderato. Both are in binary form. Trio is like a second Minuet but contrasting in some way.

Minuet		Trio		Minuet	
Section A (Repeated)	Section B (Repeated)	Section A (Repeated)	Section B (Repeated)	Section A (No Repeat)	Section B (No Repeat)
In tonic key. Ends with key change.	*In related key. Ends with change back to tonic key.*	*More contrast – new key or change of instruments. Ends with key change.*	*In related key. Ends with key change back to starting key of trio.*	*Keys are same as first time playing Minuet.*	

Variation Form – A theme / section is then followed by other sections (variations), changing and developing the first theme / section in different and imaginative ways.

Theme	Variation 1	Variation 2	Variation 3
The original idea / section	*There are many ways you can transform the theme:* *Change the instrumentation, tempo, key, harmony, metre, rhythm…* *Use imitation, inversion, sequence, diminution, augmentation…* *Developing harmonies without the tune… Introducing new tunes… Varying the style…*		

Year 11 Music: MAD T-SHIRTS complete the missing words

STRUCTURE

[ ] – The order that things happen in.

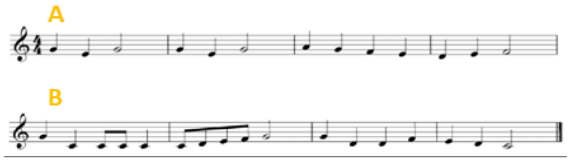
First… then… this is followed by… at the end.

[ ] Form

Intro Verse Chorus Middle 8 Bridge Outro

[ ] - Music in two parts

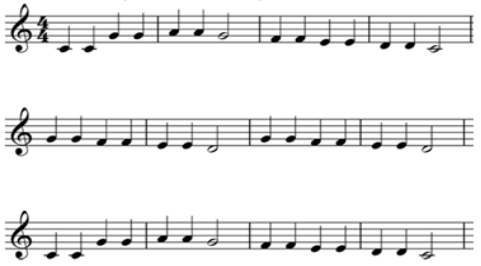
Section A and Section B.



Section B contrasts Section A in some way. Usually both sections are repeated.

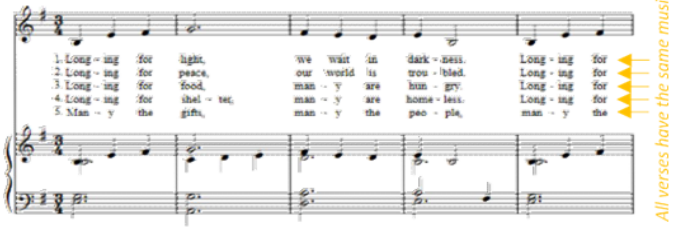
[ ] Form - Music in three parts

Section A, Section B, Section A.



[ ] Form - Same music repeated each section.

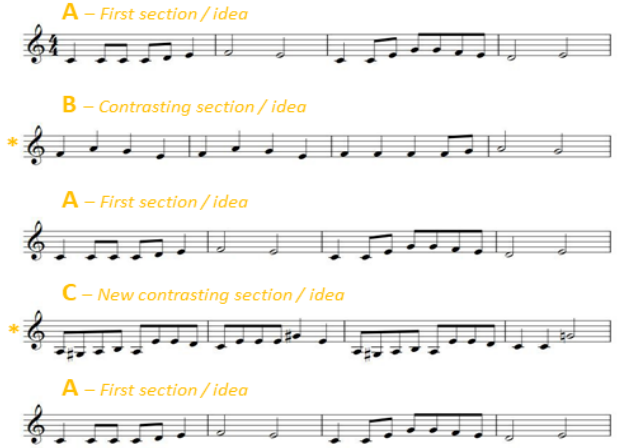
Section A, Section A, Section A.



e.g. Hymns, Folk Songs…

[ ] Form – The opening section keeps returning, with contrasting sections in between.

Section A, Section B, Section A, Section C, Section A.



* The contrasting sections are called 'episodes'.

[ ] – Dance founded in 17th-18th Century Europe. In Triple time and moderato. Both are in binary form. Trio is like a second Minuet but contrasting in some way.

Minuet		Trio		Minuet	
Section A (Repeated)	Section B (Repeated)	Section A (Repeated)	Section B (Repeated)	Section A (No Repeat)	Section B (No Repeat)
In tonic key. Ends with key change.	*In related key. Ends with change back to tonic key.*	*More contrast – new key or change of instruments. Ends with key change.*	*In related key. Ends with key change back to starting key of trio.*	*Keys are same as first time playing Minuet.*	

[ ] Form – A theme / section is then followed by other sections (variations), changing and developing the first theme / section in different and imaginative ways.

Theme	Variation 1	Variation 2	Variation 3
The original idea / section	*There are many ways you can transform the theme:* *Change the instrumentation, tempo, key, harmony, metre, rhythm…* *Use imitation, inversion, sequence, diminution, augmentation…* *Developing harmonies without the tune… Introducing new tunes… Varying the style…*		

Year 11 Music: MAD T-SHIRTS

HARMONY & TONALITY

(The chords and keys used in the music)

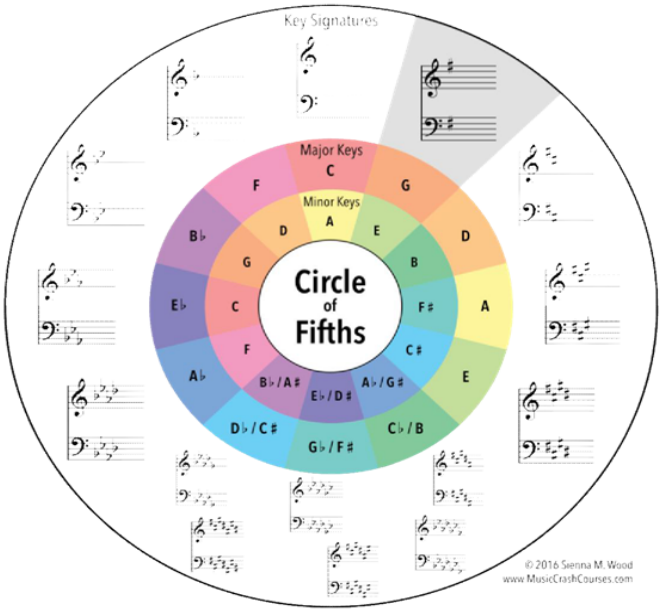
Key Signature

The sharps or flats at the start of a piece of music, showing what key the music is in.

Modulation

Musical word for key change. Most common changes: to **Dominant** or **relative Major/Minor**.

Major and Minor Key Signatures



*When you write music in a minor key you also need to raise the 7th note (leading note) up one small step - e.g. A minor uses G#s, not Gs.

Identifying The Tonality...

Tonal - In a major or Minor Key
Atonal - There is no sense of key
Modal - Uses 'old-fashioned' scales called modes
Pentatonic - The music only uses 5 notes

Chords

Triad - A chord with three notes (See below)

Power Chord – Only playing the Root and Fifth of a triad (used in Rock music)

Dissonance - Clashing notes played together

Consonance - Notes that fit / sound nice together

Primary Chords - The three most commonly used chords used in music: I, IV, V

Secondary Chords - The other chords: II, III, VI, VII

Chord Sequence - The order the chords in a piece of music follow (containing cadences at the ends of phrases)

Cadences

The last two chords in a phrase.
Only sounds 'complete' if ends on chord I.

Sounds Complete		
Perfect Cadence	V *Dominant*	I *Tonic*
Plagal Cadence	IV *Subdominant*	I *Tonic*
Sounds Incomplete		
Imperfect Cadence	*Can be other I *Tonic*	V *Dominant*
Interrupted Cadence	V *Dominant*	*Not chord I *Minor Chord*

*Sometimes the final cadence of a piece in a minor key ends with a major chord instead of the expected minor chord. This effect is known as a **Tierce de Picardie**.

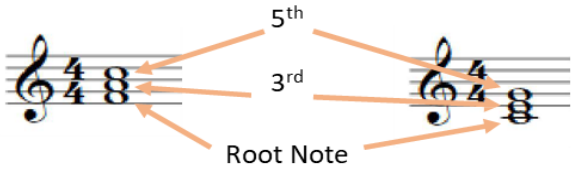
Diatonic

Music only uses notes that are found in the key signature of the piece

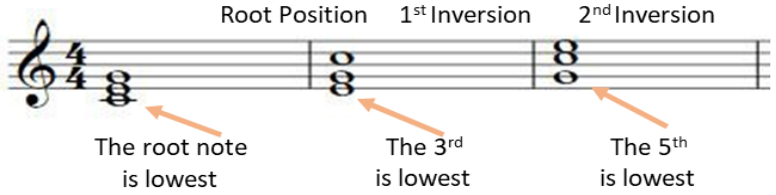
Chromatic

Music uses the notes found in the key of the piece but also adds in extra accidentals (# / b)

Triad A Chord with three notes:



Inversions Changing which note of a chord is the lowest sounding:



Year 11 Music: MAD T-SHIRTS complete the missing words

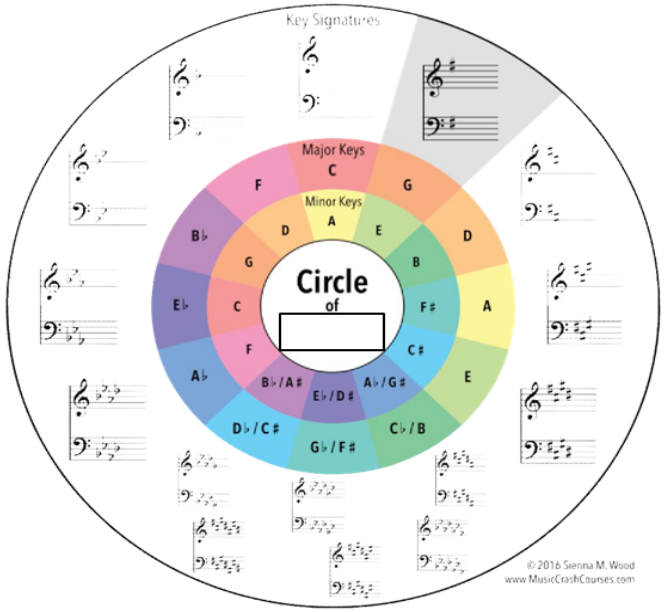
HARMONY & TONALITY

(The chords and keys used in the music)

The sharps or flats at the start of a piece of music, showing what key the music is in.

Musical word for key change. Most common changes: to **Dominant** or **relative Major/Minor**.

Major and Minor Key Signatures



*When you write music in a minor key you also need to raise the 7th note (leading note) up one small step - e.g. A minor uses G#s, not Gs.

In a major or Minor Key
There is no sense of key
Uses 'old-fashioned' scales called modes
The music only uses 5 notes

- A chord with three notes (See below)

– Only playing the Root and Fifth of a triad (used in Rock music)

- Clashing notes played together

Notes that fit / sound nice together

- The three most commonly used chords used in music: I, IV, V

- The other chords: II, III, VI, VII

The order the chords in a piece of music follow (containing cadences at the ends of phrases)

The last two chords in a phrase.
Only sounds 'complete' if ends on chord I.

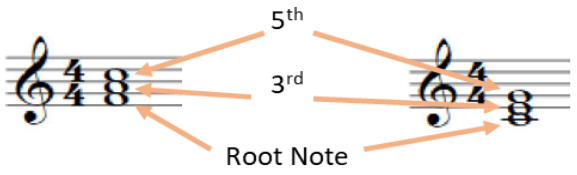
Sounds Complete		
Cadence	V *Dominant*	I *Tonic*
Cadence	IV *Subdominant*	I *Tonic*
Sounds Incomplete		
Cadence	*Can be other I *Tonic*	V *Dominant*
Cadence	V *Dominant*	*Not chord I *Minor Chord*

*Sometimes the final cadence of a piece in a minor key ends with a major chord instead of the expected minor chord. This effect is known as a **Tierce de Picardie**.

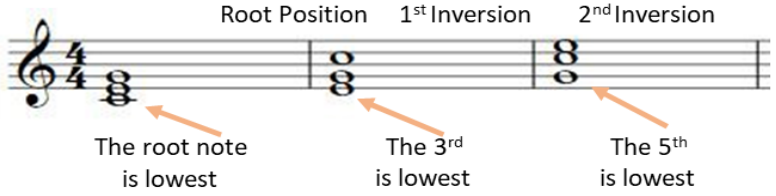
Diatonic
Music only uses notes that are found in the key signature of the piece

Chromatic
Music uses the notes found in the key of the piece but also adds in extra accidentals (# / b)

Triad A Chord with three notes:



Inversions Changing which note of a chord is the lowest sounding:



Year 11 Music: MAD T-SHIRTS

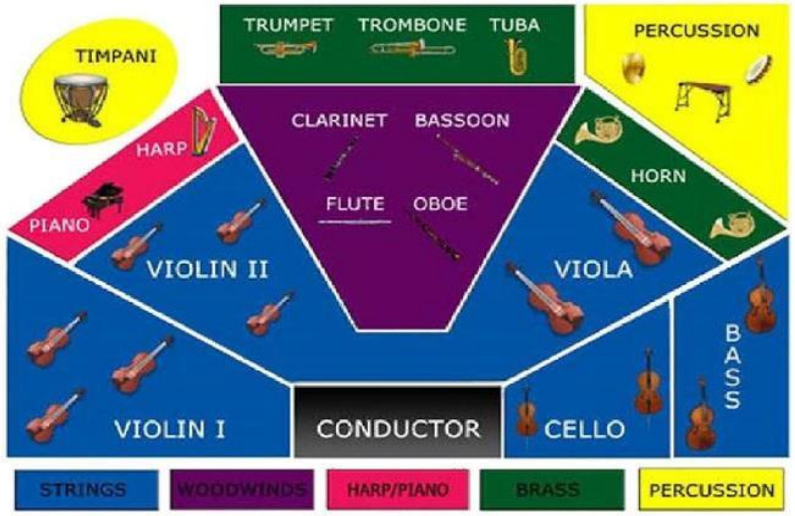
INSTRUMENTATION

(The instruments you can hear and what they are doing – sometimes called 'orchestration')

Instrumental Ensembles

Solo - 1 performer
Duet - 2 performers
Trio - 3 performers
Quartet - 4 performers

Instruments Of The Orchestra



Rock & Pop Instruments

Electric Guitar
Singers
Acoustic Guitar

Bass Guitar
Keyboard / Synthesizer

Drum Kit
Saxophone
Trumpet

*Lead instrument = Often an electric guitar ('lead guitar'). Plays melody or harmonises with the singer & often has a solo.

Types Of Voices

Soprano	(Female)	HIGH
Treble	(Boy)	⋮
Alto	(Female)	⋮
Countertenor	(Male Alto)	⋮
Tenor	(Male)	⋮
Bass	(Male)	LOW

*SATB Choir: Soprano, Alto, Tenor & Bass

Jazz Instruments

Rhythm Section

Backup / Accompaniment for the melody. Sometimes still improvise and get solos.

*The Groove: Double Bass
*The Beat: Drum Kit
*The Chords: Piano
(Sometimes Guitar)

Front Line Instruments

Instruments that play melodies / improvise. Stand in front of the rhythm section.

*Trombone
*Saxophone

Musical Periods

Baroque Period (1600-1750)

*Small orchestra - Mostly Strings + Basso Continuo
*Basso Continuo - The part given to instruments playing the bass line & chords accompanying the melody. *(Harpsichord, bass viol, organ, lute…)*

Classical Period (1750-1810)

*Basso Continuo gradually stopped being used
*Pianoforte introduced & Clarinet invented
*String Quartet very popular *(Violin x2, Viola, Cello)*

Romantic Period (1810-1910)

*Piano music very popular *(Instrument further improved)*
*Large Orchestra
*Tone / construction of instruments improved

Instrumental Techniques - The way you play / use an instrument.

Some Examples

String Instruments

*Pizzicato *(Pizz.)* - Plucking the strings
*Arco / Bowed - Using a bow on the strings
*Double Stopping - Playing two strings at the same time

String & Brass Instruments

*Con Sordino *(Con Sord.)* - Playing with a mute *(changes the sound produced)*
*Tremolo - Quickly repeating the same note *('trembling')*

Voices

*Falsetto - A technique used by men to sing at a much higher pitch

Voices, Brass, Woodwind and String Instruments

*Vibrato – Make the note waver up and down to add expression

Other Vocal Terms

Acapella

Singing without any accompanying instruments.

Chorus

Music written for a choir.

Backing Vocals

Sing harmonies / support the lead singer.

Year 11 Music: MAD T-SHIRTS complete the missing words

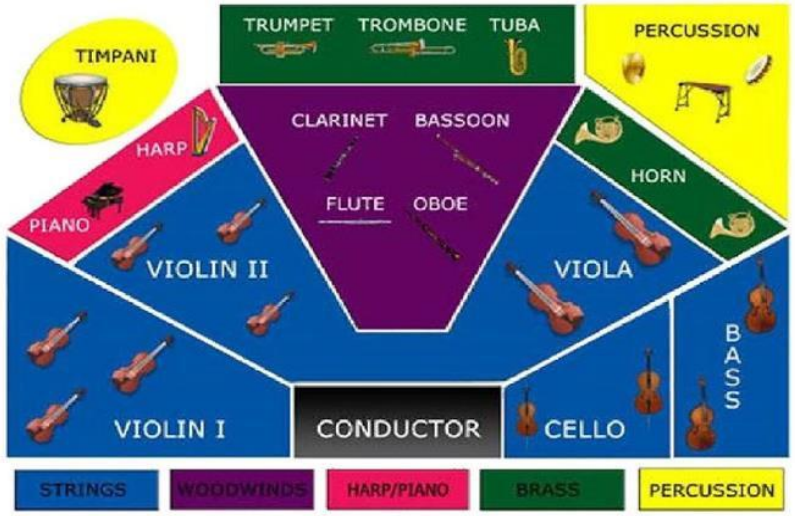
INSTRUMENTATION

(The instruments you can hear and what they are doing – sometimes called 'orchestration')

Instrumental Ensembles

1 performer
2 performers
3 performers
- 4 performers

Instruments Of The Orchestra



Rock & Pop Instruments

Electric Guitar

Singers

Bass Guitar

Keyboard / Synthesizer

Drum Kit

*Lead instrument = Often an electric guitar ('lead guitar'). Plays melody or harmonises with the singer & often has a solo.

Types Of Voices

(Female) HIGH
(Boy)
(Female)
(Male Alto)
(Male)
(Male) LOW

*SATB Choir: Soprano, Alto, Tenor & Bass

Jazz Instruments

Rhythm Section

Backup / Accompaniment for the melody. Sometimes still improvise and get solos.

*The Groove: Double Bass
*The Beat: Drum Kit
*The Chords: Piano
(Sometimes Guitar)

Front Line Instruments

Instruments that play melodies / improvise. Stand in front of the rhythm section.

*Trombone
*Saxophone

Musical Periods

Baroque Period (1600-1750)

*Small orchestra - Mostly Strings + Basso Continuo
*Basso Continuo - The part given to instruments playing the bass line & chords accompanying the melody. *(Harpsichord, bass viol, organ, lute…)*

Classical Period (1750-1810)

*Basso Continuo gradually stopped being used
*Pianoforte introduced & Clarinet invented
*String Quartet very popular *(Violin x2, Viola, Cello)*

Romantic Period (1810-1910)

*Piano music very popular *(Instrument further improved)*
*Large Orchestra
*Tone / construction of instruments improved

Instrumental Techniques - The way you play / use an instrument.

Some Examples

String Instruments

- Plucking the strings
- Using a bow on the strings
*Double Stopping - Playing two strings at the same time

String & Brass Instruments

*Con Sordino *(Con Sord.)* - Playing with a mute *(changes the sound produced)*
*Tremolo - Quickly repeating the same note *('trembling')*

Voices

*Falsetto -

Voices, Brass, Woodwind and String Instruments

*Vibrato – Make the note waver up and down to add expression

Other Vocal Terms

Acapella

Chorus

Music written for a choir.

Backing Vocals

Year 11 Music: MAD T-SHIRTS

RHYTHM & TEMPO

(The Patterns Of Note Lengths & Silences) (The Speed Of The Music)

Reading Rhythms

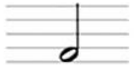
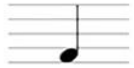
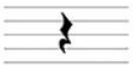
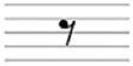
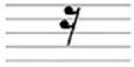
You need to be able to read all the different note lengths if you want to pass GCSE music. If you keep forgetting, look over them again!

Working Out The Tempo

Tap your toe to the pulse of the music and think, 'how fast am I tapping'.

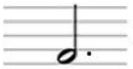
**If you tap your whole foot you might put off other pupils.*

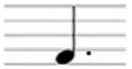
Durations

Beats	Note	Rest	Name
4			Semibreve
2			Minim
1			Crotchet
1/2			Quaver
1/4			Semiquaver

Dotted Notes

If a dot is added to a note (or rest), add on half of what the note is already worth:

 3 beats **2 (+1)*

 1 ½ beats **1 (+ 1/2)*

¾ beat **1/2 (+ 1/4)*

Pause

If this symbol is written, stop the pulse of the music & pause on the note.

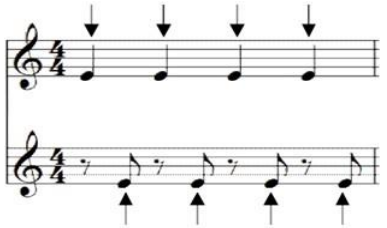
Tempo Markings

Marking	Meaning
Allegro / Vivace	Fast or Lively
Allegretto	Quite Fast (Not as fast as Allegro)
Moderato / Andante	Moderate / A Walking Pace
Adagio / Lento	Slowly
Accelerando	Gradually Speed Up
Ritardando / Rallentando rit. rall.	Gradually Slow Down
= 60 **60bmp*	60 beats per minute *(One every second)*
= 120 **120bmp*	120 beats per minute *(Two every second)*

Syncopation Playing off (or in-between) the beat / pulse

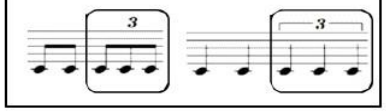
On The Beat →
Playing on one of the beats that you would 'tap your toe' to

Off-beat →
Playing in-between the beats you would 'tap your toe' to



Triplet

Three notes played evenly in the space of two notes:



Swung Rhythms **A main feature of Jazz*

Written rhythms are played differently to give a swing feeling.

e.g

Rubato **Translates as 'to steal time'*

Not sticking strictly to the tempo - to add feeling *(Romanitc Period!)*

Year 11 Music: MAD T-SHIRTS complete the missing knowledge

RHYTHM & TEMPO

(The Patterns Of Note Lengths & Silences) (The Speed Of The Music)

Reading Rhythms

You need to be able to read all the different note lengths if you want to pass GCSE music. If you keep forgetting, look over them again!

Working Out The Tempo

Tap your toe to the pulse of the music and think, 'how fast am I tapping'.

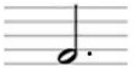
**If you tap your whole foot you might put off other pupils.*

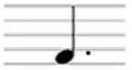
Durations

Beats	Note	Rest	Name
4			
2			
1			
1/2			
1/4			

Dotted Notes

If a dot is added to a note (or rest), add on half of what the note is already worth:


3 beats *2 (+1)


1 ½ beats *1 (+ 1/2)

¾ beat *1/2 (+ 1/4)

Pause

If this symbol is written, stop the pulse of the music & pause on the note.

Tempo Markings

Marking	Meaning
Allegro / Vivace	
Allegretto	
Moderato / Andante	
Adagio / Lento	

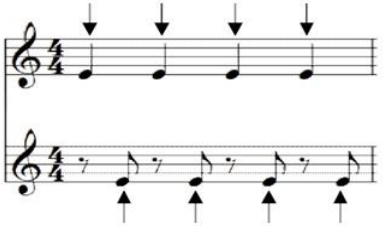
	Gradually Speed Up
	Gradually Slow Down

= 60 *60bmp	60 beats per minute *(One every second)*
= 120 *120bmp	120 beats per minute *(Two every second)*

Syncopation Playing off (or in-between) the beat / pulse

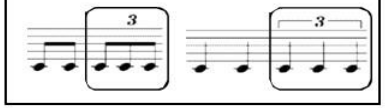
On The Beat →
Playing on one of the beats that you would 'tap your toe' to

Off-beat →
Playing in-between the beats you would 'tap your toe' to



Triplet

Three notes played evenly in the space of two notes:



Swung Rhythms *A main feature of Jazz

Written rhythms are played differently to give a swing feeling.

e.g

Rubato *Translates as 'to steal time'

Not sticking strictly to the tempo - to add feeling *(Romanitc Period!)*

Year 11 Music: MAD T-SHIRTS

Common Time
4/4 is also known as common time. Instead of 4/4 you can write: 𝄴

TIME SIGNATURE / METRE

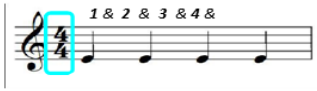
(How the pulse is grouped into bars)

Cut Common Time
2/4 is also known as cut-common time. Instead of 2/4 You can write: 𝄵

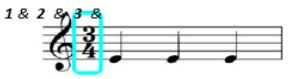
Time Signatures

Written at the start of the music (and anywhere it changes) to show how many beats there are per bar, plus what type of beat

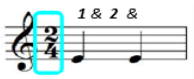
Simple Time Signatures **Each beat can be divided into two equal halves*



4 crotchet beats per bar

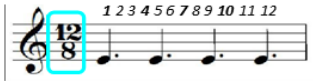


3 crotchet beats per bar

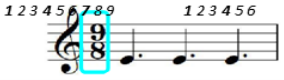


2 crotchet beats per bar

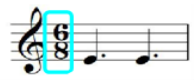
Compound Time Signatures **Each beat is dotted and can't be divided into two equal halves*



4 dotted crotchet beats per bar (12 quavers)



3 dotted crotchet beats per bar (9 quavers)



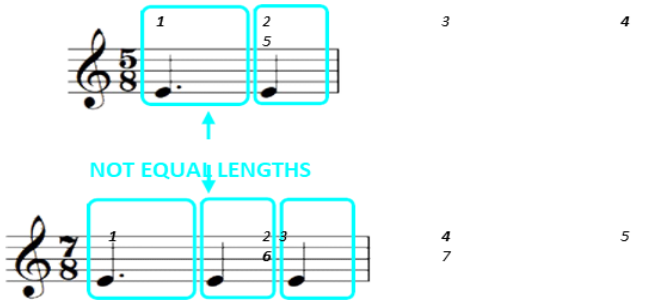
2 dotted crotchet beats per bar (6 quavers)

Listening Examples Go to Youtube to hear some examples of different metres:

2/4	Slaidburn March	**A march is usually in 2/4 (Left, Right, Left, Right… = 1, 2, 1, 2…)*
3/4	Shostakovich's Waltz No.2	**A waltz is a dance, usually in 3/4*
4/4	All That Jazz (from Chicago)	**Chicago is a Musical*
5/4	Take Five (By Dave Brubeck)	**Listen out for the jazz style*
7/4	The start of Money (By Pink Floyd)	*Listen out for the opening bass riff
6/8	We Are The Champions (By Queen)	**Queen are a famous British Rock Band*
12/8	The Way You Make Me Feel (By Michael Jackson)	**Count 1&a 2&a 3&a 4&a*

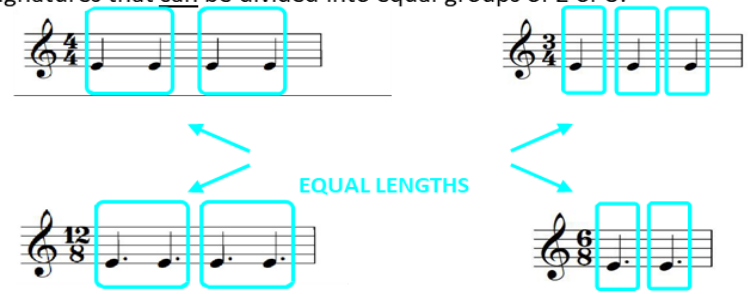
Irregular Time Signatures

Time signatures that <u>can't</u> be divided into equal groups of 2 or 3.



Regular Time Signatures

Time signatures that <u>can</u> be divided into equal groups of 2 or 3.



Writing Your Own Music

You must make sure every bar adds up to the correct number of beats.
Changing metre is a good way to create contrast in your work.

Year 11 Music: MAD T-SHIRTS complete the missing words

TIME SIGNATURE / METRE

(How the pulse is grouped into bars)

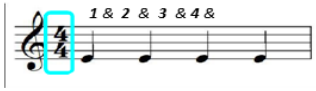
[ ] Time
4/4 is also known as common time. Instead of 4/4 you can write: 𝐜

Cut Common Time
2/4 is also known as cut-common time. Instead of 2/4 You can write: 𝐜

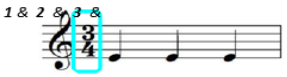
Time Signatures

Written at the start of the music (and anywhere it changes) to show how many beats there are per bar, plus what type of beat

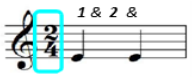
[ ] Time Signatures *Each beat can be divided into two equal halves



4 crotchet beats per bar

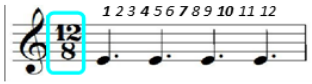


3 crotchet beats per bar

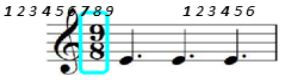


2 crotchet beats per bar

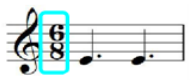
[ ] Time Signatures *Each beat is dotted and can't be divided into two equal halves



4 dotted crotchet beats per bar (12 quavers)



3 dotted crotchet beats per bar (9 quavers)



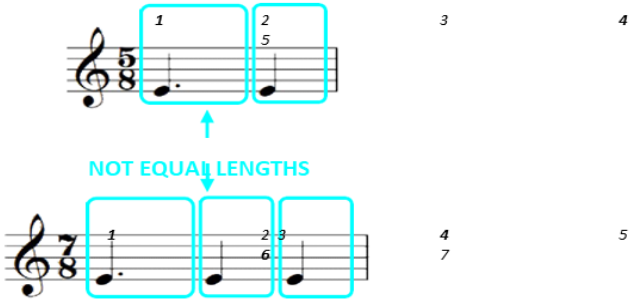
2 dotted crotchet beats per bar (6 quavers)

Listening Examples Go to Youtube to hear some examples of different metres:

2/4	Slaidburn March	*A march is usually in 2/4 (Left, Right, Left, Right… = 1, 2, 1, 2…)
3/4	Shostakovich's Waltz No.2	*A waltz is a dance, usually in 3/4
4/4	All That Jazz (from Chicago)	*Chicago is a Musical
5/4	Take Five (By Dave Brubeck)	*Listen out for the jazz style
7/4	The start of Money (By Pink Floyd)	*Listen out for the opening bass riff
6/8	We Are The Champions (By Queen)	*Queen are a famous British Rock Band
12/8	The Way You Make Me Feel (By Michael Jackson)	*Count 1&a 2&a 3&a 4&a

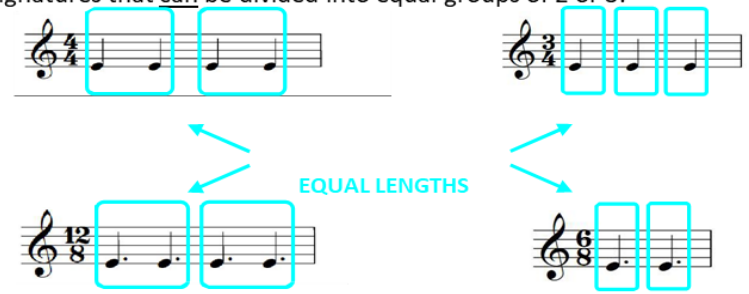
[ ] Time Signatures

Time signatures that <u>can't</u> be divided into equal groups of 2 or 3.



[ ] Regular Time Signatures

Time signatures that <u>can</u> be divided into equal groups of 2 or 3.



Writing Your Own Music

You must make sure every bar adds up to the correct number of beats.
Changing metre is a good way to create contrast in your work.

Year 11 Music: MAD T-SHIRTS

Western Classical Music

Baroque Period 1600-1750	Classical Period 1750-1810	Romantic Period 1810-1910
Bach, Vivaldi, Handel	Mozart, Haydn, Beethoven	Chopin, Schubert, Wagner
Ornaments	Balanced, **regular phrases**	Use of the **leitmotif**
Terraced Dynamics	**Alberti Bass**	Music **more expressive**
Major & **Minor** Keys	Wider range of **dynamics**	Huge range of **dynamics**
Harpsichord	**Pianoforte** introduced	Use of **chromatic** chords
Small Orchestra (Mostly Strings)	**Wider range of mood**	Unusual **Key Changes**
	Orchestra got bigger	**Large Orchestra**
Basso Continuo	**Elegant**/Graceful style	Use of **Rubato**

STYLE

Minimalism

*Started in 20th Century

*Composers - Philip Glass...

*Based upon **Repetition**

*Uses small motifs that **gradually change**

***Slow changing harmony**

Jazz & Blues

***The 12 Bar Blues**

I	I	I	I
IV	IV	I	I
V	IV	I	I / V

***Swung rhythms**

***Extended chords**: 7th, 9th...

***Blue notes** – 'bending' some notes by a semitone

***Improvisation** - Performers make up music in the performance

***Rhythm Section** - Drums, Double Bass, Piano/Guitar

***Front Line Instruments** - Saxophones, Trumpets, Trombones

***Walking Bass** - The bass plays a steady rhythm & walks up/down the notes of the chord or scale.

Fusion -Mixing more than one style of music together

For example...

Bhangra - Came to UK in 1980s. Mixing traditional Indian music & pop music.

Tempo	Structure	Melody
Lively and Upbeat	Verse / Chorus structure	Quite repetitive. Simple. Decorated.
Rhythm	**Instruments**	**Technology**
Syncopation. 4 beats per bar.	Indian instruments (e.g. Dhol, Tabla, Sitar) & Pop Instruments	Drum machines. Synths. Scratching.

Pop & Rock Music

***Pop** - Commercial music which appeals to lots of people

***Rock** - Generally 'more aggressive' but also includes rock-ballads.

***Instruments** - (See instruments sheet!)

Intro	The beginning. Sets the mood & style. Usually just instruments.
Verse	Tells the story. Lyrics change each time but tune stays the same.
Chorus	The main message of the song. Same words and tune each time.
Bridge	A section that links two other sections.
Middle 8	A contrasting section of new ideas – usually 8 bars long.
Outro	Extra bit of music to finish off the song.

***Riff** - A repeated pattern. Can help make the song memorable.

*Examples:

The Who | Jimmy Hendrix | The Beatles

Pink Floyd | The Sex Pistols | The Clash

AC/DC | David Bowie | Queen

Film Music

***Genre** - Action, Adventure, Horror, Romance, War, Sci-fi, Western...

*Composers - John Williams, James Horner, Jerry Goldsmith

*Think, how do the **musical features represent what is happening on-screen**?
e.g.
Car Chase: Fast tempo, loud dynamics, sudden changes in melody direction...
WWII Film: Military instruments, fanfare, monophonic to represent isolation...
Large Theme Park Scene: Big Orchestra, Loud Dynamics, Fast/exciting rhythms...
Horror Scene: Dissonant chords and use of repeated pattern to build tension...

***Leitmotif** - A short musical idea linked to a specific character / thing

Musical Theatre

*A theatrical story told through music, singing, acting and dance

*Types: Jukebox, Film-to-stage, Sung-through (no speaking), Disney...

*Composers - Andrew Lloyd Webber, Leonard Bernstein, Stephen Sondheim...

***Overture** - The music played before the musical begins, usually featuring the musical's main themes.

***Solo** - Song for one character ***Duet** - Song for two characters

***Chorus** - Song for usually the whole 'company' to sing

***Recitative** - A song which does not have a memorable tune (more speech-like), often used to fill in the story if the show is all sung.

Year 11 Music: MAD T-SHIRTS complete the missing knowledge

Western Classical Music

[ ]	[ ]	[ ]
1600-1750	1750-1810	1810-1910
Bach, Vivaldi, Handel	Mozart, Haydn, Beethoven	Chopin, Schubert, Wagner
Ornaments	Balanced, **regular phrases**	Use of the **leitmotif**
Terraced Dynamics	**Alberti Bass**	Music **more expressive**
Major & **Minor** Keys	Wider range of **dynamics**	Huge range of **dynamics**
Harpsichord	**Pianoforte** introduced	Use of **chromatic** chords
Small Orchestra (Mostly Strings)	**Wider range of mood**	Unusual **Key Changes**
	Orchestra got bigger	**Large Orchestra**
Basso Continuo	**Elegant**/Graceful style	Use of **Rubato**

STYLE

Minimalism

*Started in 20th Century

*Composers - Philip Glass...

*Based upon [ ]

*Uses small motifs that **gradually change**

*Slow [ ]

Jazz & Blues

*[ ]

*The 12 Bar Blues

I	I	I	I
IV	IV	I	I
V	IV	I	I / V

*Extended chords: 7th, 9th...

*Blue notes – 'bending' some notes by a semitone

*[ ] - Performers make up music in the performance

*Rhythm Section - Drums, Double Bass, Piano/Guitar

*Front Line Instruments - Saxophones, Trumpets, Trombones

*[ ] - The bass plays a steady rhythm & walks up/down the notes of the chord or scale.

Fusion -Mixing more than one style of music together

For example...

[ ] - Came to UK in 1980s. Mixing traditional Indian music & pop music.

Tempo	Structure	Melody
Lively and Upbeat	Verse / Chorus structure	Quite repetitive. Simple. Decorated.
Rhythm	**Instruments**	**Technology**
Syncopation. 4 beats per bar.	Indian instruments (e.g. Dhol, Tabla, Sitar) & Pop Instruments	Drum machines. Synths. Scratching.

Pop & Rock Music

*Pop - Commercial music which appeals to lots of people

*Rock - Generally 'more aggressive' but also includes rock-ballads.

*Instruments - (See instruments sheet!)

Intro	The beginning. Sets the mood & style. Usually just instruments.
Verse	Tells the story. Lyrics change each time but tune stays the same.
Chorus	The main message of the song. Same words and tune each time.
Bridge	A section that links two other sections.
Middle 8	A contrasting section of new ideas – usually 8 bars long.
Outro	Extra bit of music to finish off the song.

*Riff - [ ]

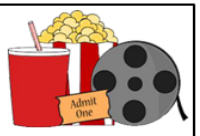
*Examples:

The Who | Jimmy Hendrix | The Beatles

Pink Floyd | The Sex Pistols | The Clash

AC/DC | David Bowie | Queen

Film Music



*Genre - Action, Adventure, Horror, Romance, War, Sci-fi, Western...

*Composers - John Williams, James Horner, Jerry Goldsmith

*Think, how do the **musical features represent what is happening on-screen**?
e.g.
Car Chase: Fast tempo, loud dynamics, sudden changes in melody direction...
WWII Film: Military instruments, fanfare, monophonic to represent isolation...
Large Theme Park Scene: Big Orchestra, Loud Dynamics, Fast/exciting rhythms...
Horror Scene: Dissonant chords and use of repeated pattern to build tension...

*Leitmotif - [ ]

Musical Theatre

*A theatrical story told through music, singing, acting and dance

*Types: Jukebox, Film-to-stage, Sung-through (no speaking), Disney...

*Composers - Andrew Lloyd Webber, Leonard Bernstein, Stephen Sondheim...

*Overture - [ ]

*Solo - Song for one character *Duet - Song for two characters

*Chorus - Song for usually the whole 'company' to sing

*Recitative - A song which does not have a memorable tune (more speech-like), often used to fill in the story if the show is all sung.

Year 11 Performing Arts: Eduqas Tech Award

Term	Definition
Audio Interface	• A device capable of converting audio signal from a microphone or guitar/ synth into a digital signal so it can enter a computer. Audio interfaces usually connect to a computer via a USB cable
Bouncing	• Exporting a track to a format like an mp3 or wav file
Channel	• Refers to one track of audio on a computer, part of the mixer or mixing desk
Chorus	• The chorus effect is an audio modulation effect that splits the original signal in the audio circuit into multiple signals, resulting in a chorus delayed signal that comes right after and alters the dry signal's pitch. It thickens the tone and creates an epic feeling. • Although it is best-used washing sounds and making supporting layers of your mix ambient, the chorus effect can have many purposes. One of the most obvious examples is how it can make your guitar feel like a "chorus" of guitars.
Clipping	• Another word for 'distorting' or 'peaking'
Compression	• Compression, along with reverb, is probably one of the most used effects in a DAW. Simply put, compression makes the loudest bits quieter, and the quietest bits louder (it 'compresses' the extremes). • When done correctly, this usually produces a more pleasant listening experience
DAW	• DAW is an acronym that means 'digital audio workstation'. It is sometimes spelt out when spoken (dee, ay, double you), or pronounced like 'door' (which sounds silly and can be confusing, especially if you are explaining something and you are standing by an actual door). • It can refer to any software used for sequencing and creating music; whether recorded or synthesised. GarageBand, Logic, Soundtrap and Cubase are examples of popular DAWs
Delay	• The delay audio effect is a made-by-man audio processing technique that stores a copy of the original signal in a storage medium and plays it back when defined by the producer. The most commonly used one is slapback delay, a type of delay which plays back the reflection right after the original input. The delay audio effect can be used to push an element back in the mix or to give it a wider stereo image. • This time-based audio effect makes productions more interesting by adding rhythmic variety and adding more depth to the mix.
Distortion	• In theory, the distortion effect is any type of alteration in the audio waveform. In music, the most common type of distortion is produced by adding a lot of gain to your audio . By doing so you create a fuzzy or gritty feeling to your electrical instrument.
Effects	• Many DAW packages have a number of built-in effects, including reverb, echo, delay. These and others can be used creatively in composition. • For learners composing using electronic or traditional instruments, these effects could be created with devices such as loop stations.

Year 11 Performing Arts: Eduqas Tech Award

Term	Definition
What is **audio interface?**	
Define **bouncing**	
What is a **channel?**	
Define **chorus**	
What is **clipping?**	
What is **compression?**	
What is **DAW?**	
Define **delay**	
Explain **distortion**	
What are **effects?**	

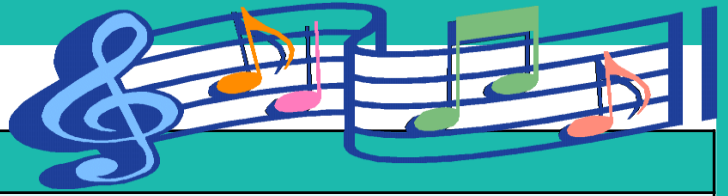
Year 11 Performing Arts: Eduqas Tech Award

Term	Definition
Envelope (ADSR)	• In music technology, envelope describes the 'shape' of a sound. For example, hitting a piano key will create an immediate, loud 'start' of the sound (**a**ttack), followed by a reduction in volume (**d**ecay). • This quieter sound will continue for a time (**s**ustain), before fading to nothing (**r**elease). The acronym ADSR is used to describe these four stages in a sound's envelope. As well as describing sounds, playing with envelope parameters is a vital part of synthesised sound
EQ	• EQ, or equalisation, is a versatile tool that is used to make your music sound better (in a nutshell). With EQ, you can boost (turn up) or cut (turn down) various frequencies in a track or project.
Equalization	• Equalization is a producing technique that controls volume in the audio frequency spectrum. We can equalize or completely filter (volume 0) by dropping/raising the volume of certain frequencies or even a frequency range. • Equalization is key to having a good mix, it creates space for instruments to breathe and be heard without interference from other instruments. It enhances the stereo experience because each sound is in its place, if well equalized of course.
FX	• Short for 'effects'. Common effects include reverb, chorus, distortion, and flange - processes or devices applied to a signal to alter its sound
Gain	• How loud a signal is before it goes through an amplifier. Can be another word for volume, and another word for guitar distortion
Latency	• Latency is the delay between inputting a signal (such as playing a key on a controller), the processing of the signal in the DAW, and the playback of that signal. • Poor latency can cause problems, like out of time recordings, or audio effects that don't work as intended. The most common solution is to buy more expensive equipment
Live and recorded sound	• Live sound is being performed in the moment, whereas recorded sound has already been performed and stored for playback at a later point. A music technology composition could include a combination of live and recorded sound, with or without effects being added to either or both.
Loop	• A repeated section of a song, often using imported samples
Mastering	• The final stages after mixing has been complete, the icing on the cake which makes tracks on a wider body of work sound uniform, and often also makes them louder
MIDI	• Another acronym (**m**usical **i**nstrument **d**igital **i**nterface), this is pronounced as a word (like the French for 'midday'). MIDI is complicated, so just remember a 'MIDI track' is one that can be easily edited in a DAW.

Year 11 Performing Arts: Eduqas Tech Award

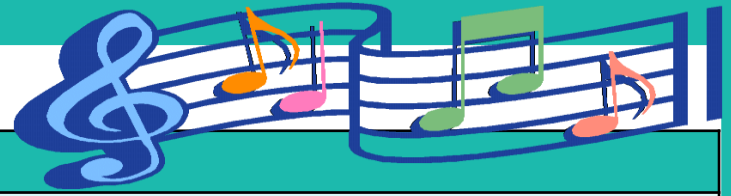
Term	Definition
Envelope (ADSR)	• In music technology, envelope describes the '_____' of a sound. For example, hitting a piano key will create an immediate, loud 'start' of the sound (**a**ttack), followed by a reduction in volume (**d**ecay). • This quieter sound will continue for a time (**s**ustain), before fading to nothing (**r**elease). The acronym ADSR is used to describe these four stages in a sound's envelope. As well as describing sounds, playing with envelope parameters is a vital part of _____sound
EQ	• EQ, or _____, is a versatile tool that is used to make your music sound better (in a nutshell). With EQ, you can _____(turn up) or cut (turn down) various frequencies in a track or project.
Equalization	• Equalization is a producing technique that controls volume in the audio frequency spectrum. We can equalize or completely _____(volume 0) by dropping/raising the volume of certain frequencies or even a frequency range. • Equalization is key to having a good mix, it creates space for instruments to breathe and be heard without interference from other instruments. It enhances the stereo experience because each sound is in its place, if well equalized of course.
FX	• Short for '_____'. Common effects include reverb, chorus, distortion, and flange - processes or devices applied to a signal to alter its sound
Gain	• How _____a signal is before it goes through an amplifier. Can be another word for volume, and another word for guitar distortion
Latency	• Latency is the _____between _____a signal (such as playing a key on a controller), the processing of the signal in the DAW, and the playback of that signal. • Poor latency can cause problems, like out of time recordings, or audio effects that don't work as intended. The most common solution is to buy more expensive equipment
Live and recorded sound	• Live sound is being performed in the _____, whereas recorded sound has already been performed and stored for playback at a later point. A music technology composition could include a combination of live and recorded sound, with or without effects being added to either or both.
Loop	• A _____section of a song, often using imported _____
Mastering	• The final stages after mixing has been complete, the icing on the cake which makes tracks on a wider body of work sound uniform, and often also makes them louder
MIDI	• Another acronym (_____ _____ _____ _____), this is pronounced as a word (like the French for 'midday'). MIDI is complicated, so just remember a 'MIDI track' is one that can be easily edited in a DAW.

Year 11 Performing Arts: Eduqas Tech Award



Term	Definition
MIDI Controller	• A controller is a device which sends 'musical' information to the computer, often using MIDI. MIDI controllers often look like a (musical) keyboard, and send information such as frequency (pitch), duration, or velocity (dynamics), to a DAW. • They can be used to 'trigger' (start) certain events in live performance, such as beginning/ending a loop, or adding/changing an effect. They don't always look like keyboards; you may see drum pads, a guitar controller, or even a wind controller (that you blow into) used to send data to your computer
Mixing	• Applying processing and levelling audio recordings with the goal of making a balanced and listenable end product
Mixing Desk	• A unit which can control the routing and processing of audio signals. Some may have the functionality to connect to a computer, but not always. They are used commonly for live music or larger recording studio set ups. This is represented in GarageBand by each track's controls (Volume, Pan etc)
Panning	• Panning is the act of distributing the audio signal in a stereo field with panning controls. It can make sounds appear to come from different places in the left-right audio spectrum, therefore creating more space and width in the mix.
Plug-In	• A piece of software either included in a DAW or that can be loaded within a DAW and used for audio/MIDI processing. These can be used for effects such as EQ, Compression & Reverb
Quantising/ Quantisation	• When working with MIDI tracks, quantising can be used to 'make music sound in time'. It does this by 'snapping' each note to a predetermined point in the bar, depending on the settings. For example, 1/4 quantising will snap each note to the nearest quarter note, or crotchet, or 4th of a bar (it makes sense, trust me). • A general rule of thumb is to quantise to the shortest note value in a phrase (so if semi-quavers are used, try 1/16 quantisation). Be aware that this doesn't fix really out of time music, and it can remove some of the organic, musical qualities of a track
Recordings	• During the process of composing and producing a music technology composition a number of recordings will probably be made. These may be "dry" so that effects can be added later or may incorporate effects from the point of recording. At the end of the process, they should be mixed down into a final stereo recording.
Reverb	• Reverb is a complex echo resulting from multiple echoes reflecting on a hard surface many times, and with different amplitudes. These reverberations happen around us daily, but we're too busy to pay attention. If you take time to notice next time you're in an indoor pool or a church, that feeling of multiple echoes vibrating back to you when you speak is reverb. The sound waves bounce so fast that they lay on top of each other, creating what we call reverberations. • This audio effect is a great way to create a feeling of spaciousness in your mix and can help unify all the elements of your song. It generally works great on vocals and guitars.

Year 11 Performing Arts: Eduqas Tech Award



Term	Definition
What is a **MIDI controller?**	
Define **mixing**	
What is a **mixing desk?**	
Define **panning**	
What is a **plug-in?**	
Define **quantising/ quantisation**	
Define **Recordings**	
What is a **reverb?**	

Year 11 Performing Arts: Eduqas Tech Award

Term	Definition
Sample	• A sample is any pre-existing piece of audio that can be imported into a project and used as part of a track. The recorded 'loops' that come with GarageBand are samples, as is the hook from *Bootylicious* by Destiny's Child (it originally comes from the track *Edge of Seventeen* by Stevie Nicks). • Finding, editing, and reusing samples is a key part of much electronically produced music
Sampling	• Taking a short audio recording and manipulating this to include it in a new composition. • For example, the tempo and/or pitch of the sample could be changed, it could be reversed, it could be cut into smaller samples and rearranged, or short sections could be repeated to give a stuttering effect.
Scores and lead sheets	• The way in which music is written down, either as a traditional score (such as may be produced in software like Sibelius) or in a lead sheet which communicates the information in a different way, possibly graphically, using chord symbols, software screenshots with annotation, or in tab notation used by guitarists and drummers
Software instrument	• A virtual instrument (usually opened within a DAW), which interprets MIDI data and outputs it as the sound of an instrument
Tempo	• The speed of music. In BPM (beats per minute), 60 BPM for example is one beat a second
Velocity	• The force at which a note is played

Year 11 Performing Arts: Eduqas Tech Award

Term	Definition
What is a **sample?**	
Define **sampling**	
What are **scores and lead sheets?**	
Define **software instrument**	
Define **tempo**	
Define **velocity**	

PE

Helping every person achieve things they never thought they could.

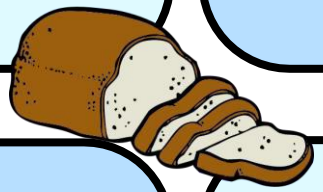
Little Lever School
be kind | work hard | take responsibility

Year 11 Core PE: Diet and nutrition

Carbohydrates

Carbohydrates are a source of energy. Athletes needs to consume large quantities of carbohydrates to fuel their training and performance.

Examples: Bread, pasta, rice and potatoes.



Fats

Fats are a source of energy. Fats are essential for health however too much can limit an athletes performance due to increased weight.

Examples: Olive oil, nuts, soya beans, full fat dairy.

Minerals

Essential for many processes, e.g. bone growth/strength, nervous system, red blood cells, immune system. Need small amounts only.

Examples: milk, canned fish, broccoli, brown rice.

Protein

Tissue growth – known as the body's building blocks. Athletes frequently use protein supplements in their diet and will consume protein immediately after training, sometimes as a 'shake'.

Examples: meat, fish, dairy.

Vitamins

Essential for many processes, e.g. bone growth, metabolic rate, immune system, nervous system. Need small amounts only.

Examples:
A – dairy, oily fish;
B – vegetables, wholegrain cereals;
C – citrus fruit, broccoli, sprouts;
D – oily fish, eggs, fortified cereals.

Fibre

Fibre is a type of carbohydrate that the body can't digest. Though most carbohydrates are broken down into sugar molecules (glucose), fibre cannot be broken down into sugar molecules, and instead it passes through the body undigested.

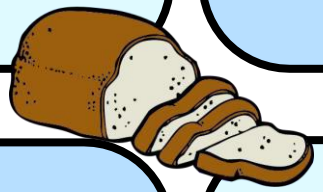
Water

The body needs to be hydrated to stay healthy. Failing to replace lost fluids can result in dehydration. This is a more serious condition than lack of food. Women should drink around 1.6 litres (approx. 8 glasses) of fluid and men should drink around 2 litres (approx. 10 glasses) of fluid per day.

Year 11 Core PE: Diet and nutrition- summarise each food group below:

Carbohydrates

Examples:



Fats

Examples:

Mineral

Examples:

Water

Protein

Examples:

Vitamins

Examples:

Fibre

Year 11 Core PE: Components of fitness

Components of fitness

Cardiovascular Endurance

Cardiovascular endurance is the ability to continuously exercise without tiring. The more oxygen that can be transported around the body the longer muscles can utilise or use this oxygen.

Example: triathlon

Speed

The ability to move quickly across the ground or move limbs rapidly through movements.

Example: 100m sprinting

Power

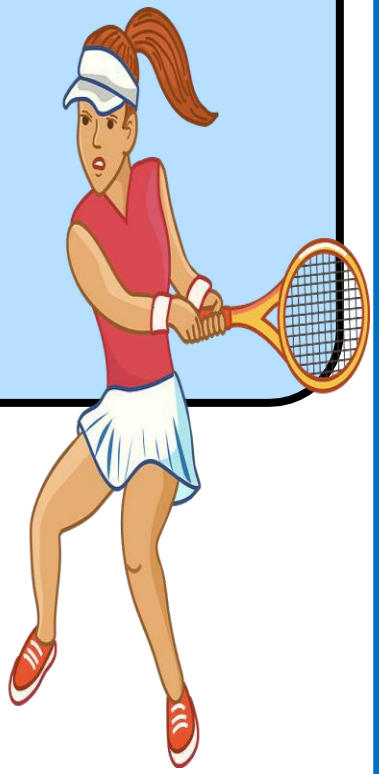
Power is a combination of strength and speed

Example: weight lifting

Coordination

The ability to use different (two or more) parts of the body together smoothly and efficiently.

Example: Tennis



Muscular Endurance

Muscular endurance is the ability to continue contracting a muscle, or group of muscles, against resistance, such as weights or bodyweight, over a period of time.

Example: cycling

Strength

The maximum force a muscle or group of muscles can apply against a resistance in a single maximum effort.

Example: rugby player

Flexibility

The amount or range of movement that you have around a joint.

Example: gymnastics

Year 11 Core PE: Components of fitness

Cardiovascular Endurance

Example:

Speed

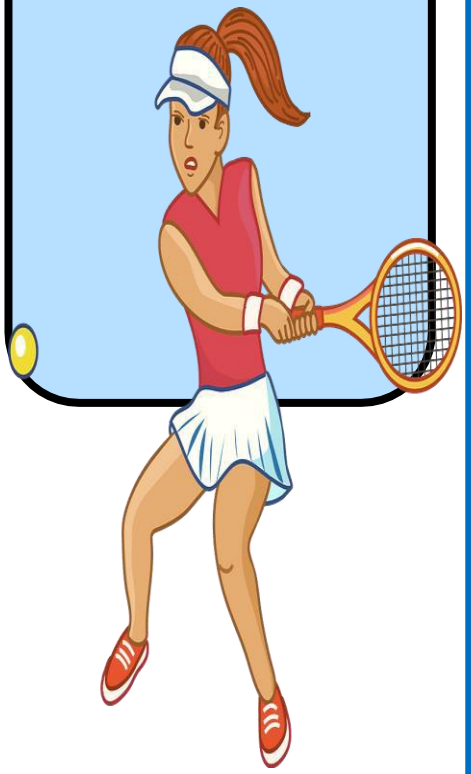
Example:

Power

Example:

Coordination

Example:



Explain the different components of fitness- give examples

Muscular Endurance

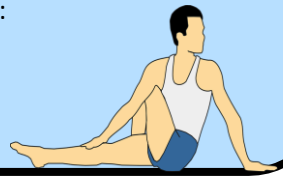
Example:

Strength

Example:

Flexibility

Example:



Year 11 Core PE:

Hydration

Our body is made up of more than 60% water. That is more that half of our body weight. Our body constantly loses water through sweating, going to the toilet and breathing.

To remain healthy and avoid dehydration it is important to replace this water throughout the day.

NHS guidelines advise drinking around six to eight glasses a day.

Our bodies lose more water than usual if we are very active or when the weather is particularly warm, due to sweating more.

Before, during and after exercise we benefit from drinking water and eating foods with a high water content.

Athletes need to stay hydrated to get the most out of their bodies.

Sleep

Sleep is very important in keeping physically and mentally healthy.

When we sleep, our bodies and minds have the time to rest, recover and process all the things that have happened throughout the day.

When we are young, our bodies are growing and changing quickly, so we need more sleep than adults to be able to cope with everything that is happening.

It is generally recommended that children and young people get between 9 and 11 hours sleep every night.

Below are some key points as to how lack of sleep can affect athletes performance: brain function, illness, physical capabilities and tactical performance.

Types of Training

Continuous Training: any form of training that maintains the heart rate at a desired level over a sustained period of time. An example would be cycling for 30 minutes at an intensity that raises the heart rate.

Fartlek Training: method of training that uses periods of exercise and rest. An example would be running at full sprint for 10 seconds, walking for 1 minute followed by a medium intensity jog for 4 minutes.

Plyometrics Training: exercises with short bursts of high intensity. An example of this is reverse lunge with knee ups.

Circuit Training: involves exercising at a variety of different stations with different activities. An example of this would be having six stations where an athlete completes 30 seconds of activity at each station.

Interval Training: exercising with periods of rest planned into the session. An example is completing 10 x 30m sprints with 20 seconds rest in between each effort.

Flexibility Training: a certain exercise that will improve a person's range of motion around a joint. An example is active static stretching.

Weight Training: method of training using weights. This can be free standing weights, body weight exercises, resistance bands or weight machines.

Year 11 Core PE: describe each component below

Hydration

Our body is made up of more than…

To remain healthy and avoid dehydration it is important…

NHS guidelines advise drinking around…

Our bodies lose more water than usual if we are very…

Before, during and after exercise we benefit from…

Athletes need to stay hydrated to…

Sleep

Sleep is very important in…

When we sleep…

When we are young…

It is generally recommended that children and young people get between…

Below are some key points as to how lack of sleep can affect athletes performance:

Types of Training

Continuous Training:

Fartlek Training:

Plyometrics Training:

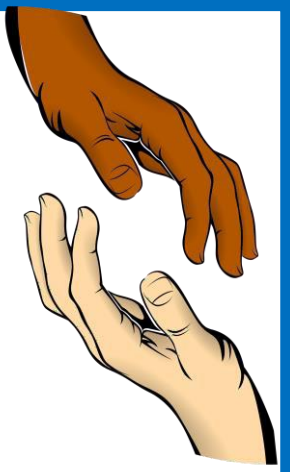
Circuit Training:

Interval Training:

Flexibility Training:

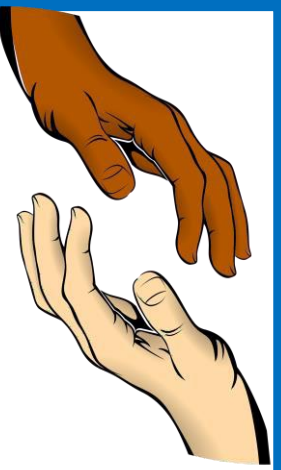
Weight Training:

Year 11 Option PE: User Groups



- Gender
- Children
- Ethnic groups
- Retired people/ people over 60
- Families with children
- Carers
- People with family commitments
- Young children
- Teenagers
- People with disabilities
- Parents (Single or couples)
- Unemployed/economically disadvantaged people

Year 11 Option PE: What are the different user groups?



- -
- -
- -
- -
- -
- -
- -
- -
- -
- -
- -
- -

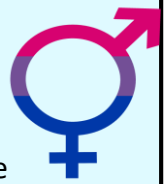
Year 11 Option PE: Barriers

People from different ethnic backgrounds

- Lack of awareness or information
- Cultural norms and lack of provision
- Lack of role models
- Lack of coaches from ethnic groups
- Fear of discrimination/racism

Gender

- Stereotyping
- Gender imbalance (within pundits on television)
- Lack of role models
- Imbalance in funding
- Sexist attitudes against a particular gender can make performers feel uncomfortable about taking part.



Carers

- Commitments
- Lack of time
- Lack of disposable income
- Lack of appropriate activity

Retired people/ people over 60

- Lack of confidence
- Lack of fitness
- Increased likelihood of illness
- Limited access to transport
- Cannot afford the cost of participation
- Discrimination from others
- Family commitments
- Lack of self-esteem/low confidence

Families with children

- **Family commitments** - looking after children can be time consuming.
- **Childcare cost** - priorities to childcare over leisure.
- **Limited childcare** - can be difficult to find childcare in order to take part in leisure.
- **Transport issues** - partner may need car, public transport may be difficult with children.
- **Lack of time** - work and family commitments prioritised.
- **Appeal of alternative leisure activities -** may be more appealing to attend a parent and child group to meet other families.
- **Partner may wish to exercise -** difficult to find time for both parents to exercise.

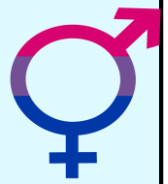
Year 11 Option PE: Barriers

People from different ethnic backgrounds

- -
- -
- -
- -
- -

Gender

- -
- -
- -
- -
- -



Carers

- -
- -
- -
- -

Retired people/ people over 60

- -
- -
- -
- -
- -
- -
- -
- -

Families with children

- -
- -
- -
- -
- -
- -
- -

Year 11 Option PE: Barriers

People with family commitments

- Commitments
- Lack of time
- Lack of disposable income
- Lack of appropriate activity

People with disabilities

- Lack of access to specialist facilities.
- Lack of access to specialist equipment.
- Lack of transport.
- Few role models.
- Expense of equipment and participation.
- No suitable programmed sessions
- Lack of mobility to be able to do the sport
- Discrimination of others
- Lack of specialist staff
- Lack of confidence, lack of self esteem.

Teenagers

- Lack of role models to inspire this user group.
- Lack of awareness that suitable activities for teenagers exist.
- Lack of money / disposable income.
- Lack of access to facilities and transport.
- Lack of appropriate activity options.
- Negative attitude towards participation.

Young Children

- Lack of role models
- Lack of awareness
- Lack of money / disposable income
- Lack of transport / facilities
- Lack of appropriate activity options
- Negative attitude towards participation
- Distractions
- School / homework commitments

Year 11 Option PE: Barriers

People with family commitments

- -
- -
- -
- -

People with disabilities

- -
- -
- -
- -
- -
- -
- -
- -
- -
- -

Teenagers

- -
- -
- -
- -
- -
- -

Young Children

- -
- -
- -
- -
- -
- -
- -
- -

Year 11 Option PE: Olympic and Paralympic DICEREF

Values

I	Inclusion
N	National pride
F	Fair play
E	Excellence
C	Citizenship
T	Tolerance and Respect
T	Team Spirit

D	Determination
I	Inclusion
C	Courage
E	Equality
R	Respect
E	Excellence
F	Friendship

WADA

W	World
A	Anti-
D	Doping
A	Agency

- Serves as the independent international body responsible for coordinating and monitoring the global fight against doping and sport.
- Founded on the principles that athletes have a fundamental right to participate in ‘doping free’ sport and that doping endangers athlete health and the integrity of sport.

Year 11 Option PE: Olympic and Paralympic DICEREF

Values

I

N

F

E

C

T

T

D

I

C

E

R

E

F

WADA

W

A

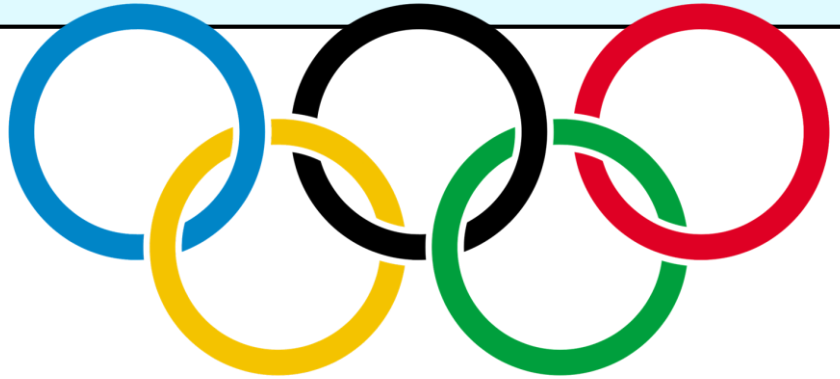
D

A

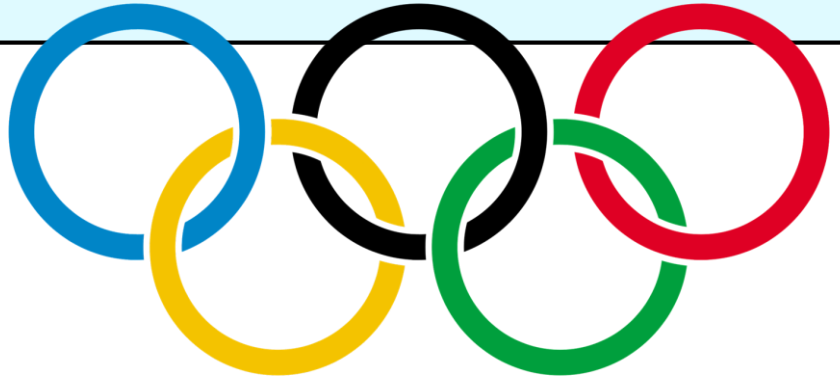
- Serves as the...
- Founded on the principles that...

Year 11 Option PE: Regular and recurring sporting events

- **Regular sporting events** - happen often at set intervals. For example the Champions League Final is held annually in a different city each year.
- **Regular and recurring events** - set time periods and happen in the same place. For example the Masters Golf Tournament (every year at the same venue).
- **One off** - some sporting events can be deemed 'one-off' even though they may reoccur. For example Helsinki, Stockholm and Amsterdam have all hosted the Olympic Games but is has never returned.



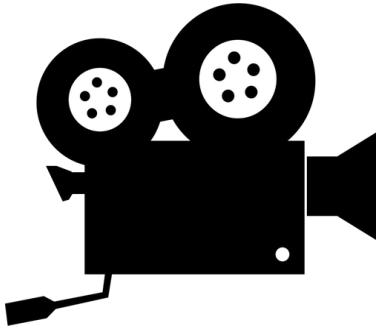
Year 11 Option PE: Regular and recurring sporting events



Year 11 Option PE:

Technology in sport

- Technology can be used to enhance performance.
- Equipment such as graphite tennis rackets, graphite golf clubs and carbon-fibre road bikes can all be used to enhance performance.
- Clothing can be protective or made with breathable fabric to prevent overheating.
- Footwear can be made to improve grip, movement and overall performance



Analysis

- Technology is used in sport to analyse performance.
- Equipment such as heart rate monitors heart rate and allows athletes to analyse their performance.
- Video and Tracking analysis to record performance allowing coach and athlete to watch back on technique.

Recovery and rehabilitation

- Technology can be used to recover and rehabilitate quicker.

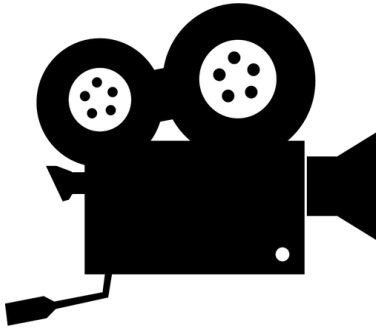
By using:

- Ice baths to reduce swelling.
- Using foam rollers to disperse waste products.
- Using hypoxic chambers to recover from injury quicker.

Year 11 Option PE:

Technology in sport

- -
- -
- -
- -



Analysis

- -
- -
- -

Recovery and rehabilitation

Technology can be used to recover and rehabilitate quicker.

By using:

- -
- -
- -

Year 11 Option PE:

Safety

Technology is used in different ways to provide safely:

- Gloves are worn
- Helmets are worn
- Mouth guards are worn
- Cars are designed for speed but also to withstand impact in motor racing events..

Fair play

- Technology is used to ensure fairer results.
- VAR to decide if goals should be awarded, red cards should be given, penalties should be red-carded.
- Television match official used to make crucial decisions.

Examples:

- Hawkeye is used in tennis.
- Hotspot is used in cricket.

Improved spectatorship

- T Technology can enhance experience for the spectator.
- Replays can be seen on large screens.
- Information and scores are available 24/7 online.
- Some in stadium decisions can add excitement and atmosphere

Year 11 Option PE:

Safety

Fair play

Improved spectatorship

Religious Education

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 RE: Islam

- Islam was founded in the 7th Century.
- It shares some ideas with Judaism and Christianity.
- Follows of Islam are called Muslims.
- Muslims believe in one God, Allah.
- The main holy book for Muslims is the Qur'an.
- Muslims also follow the sunnah (the way) and the teachings of the Prophet Muhammad.

The two main branches of Islam are Sunni and Shi'a .

Main Differences	Sunni	Shi'a
Leadership	Believe the Prophet's best friend, Abu Bakr, should be the caliph (successor) after the Prophet's death.	Believe the caliph should be related to the Prophet Muhammad and that Muhammad named his cousin, Ali, to be the next caliph following his death.
Beliefs	Their main beliefs are known as the Six Beliefs or Six Articles of Faith	Their main beliefs are known as the Five Articles of Faith or Five Roots.

Six Beliefs of Sunni Islam	Five Roots of Shi'a Islam
1. **Tawhid** – One God	1. **Tawhid** – One God
2. **Malakian** - Angels	2. **Adl** – divine justice
3. **Kutubullah** – Holy Books	3. **Nubuwwah** - prophets
4. **Risalah** - Prophets	4. Imamah – authority of the imam.
5. **Akhirah** – life after death	5. **Mi'ad** – The Day of Judgement.
6. **Al Qadr** - predestination	

How do Muslims express their belief in Tawhid?
1. Through reciting the Shahadah and other prayers.
2. Through everything that Muslims do as one, united group, for example, praying, fasting, giving to charity or going on hajj (pilgrimage).

How do Muslims express their belief in Malaikah?
When Muslims end their prayers they turn their head to the right and left and say 'peace be upon you' to the angels.

How do Muslims express their belief in prophets?
1. They learn about different prophets and try to follow their example.
2. Many Muslims are named after prophets

How do Muslims express their belief in the Qur'an?
1. They read it in private and public.
2. They may try to learn the Qur'an off by heart.
3. They keep it wrapped up and in a high place when it is not being used.
4. They perform wudu (a ritual was) before touching it.
5. They place it on a special stand, called a kursi.

How do Muslims express their belief in an afterlife?
They attend Muslim funerals.

How do Muslims express their belief in Al Qadr?
1. They teach about the need to accept God's will.
2. Many seek blessings on Laylat al-Qadr (The Night of Power)

Year 11 RE: Islam

- Islam was founded in the _____Century.
- It shares some ideas with _____and _____.
- Follows of Islam are called _____.
- Muslims believe in one God, _____.
- The main holy book for Muslims is the _____.
- Muslims also follow the sunnah (the way) and the teachings of the _____.

The two main branches of Islam are Sunni and Shi'a .

Main Differences	Sunni	Shi'a
Leadership		
Beliefs		

Six Beliefs of Sunni Islam	Five Roots of Shi'a Islam

How do Muslims express their belief in Tawhid?

1.

2.

How do Muslims express their belief in Malaikah?

How do Muslims express their belief in prophets?

1.

2.

How do Muslims express their belief in the Qur'an?

1.
2.
3.
4.
5.

How do Muslims express their belief in an afterlife?

How do Muslims express their belief in Al Qadr?

1.

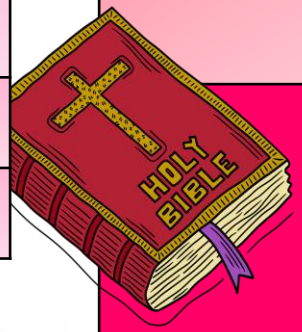
2.

Year 11 RE:

Key Words	
Liturgical worship	Formal worship, which follows a set pattern/routine. There are formal prayers, hymns and Bible readings
Non-liturgical worship	Worship with no set pattern, it is more spontaneous. This type of worship can include modern music, sermons, prayers of any length, consisting of any words.
Prayer	Communicating with God, either privately or during worship with others.
Sacrament	The external and visible sign of an inward and spiritual grace.

Liturgical Worship

This form of worship has a set pattern.
Formal, set prayers, for example, the Lord's Prayer are said.
It is a more tradition and formal type of worship



Non-Liturgical Worship

This is less formal and more spontaneous.
There are no set prayers, instead people take it in turns to preach and read from the Bible.
This can be modern and appealing to young people.

Prayer

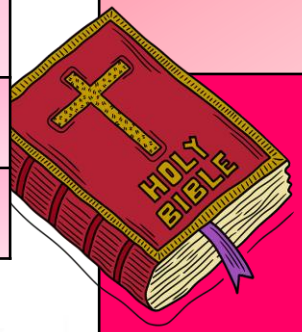
Prayer means communicating with God, either silently or out loud, sometimes through song.
It is one of the most important parts of the spiritual life of a Christian and enables them to have a personal relationship with God.
Intercessions are prayers made on behalf of others.
Thanksgiving is when people pray to say thank you to God.
Set prayers are written down and used in liturgical worship.
Informal prayer is often used in non-liturgical worship and is more spontaneous, saying what you feel appropriate in that moment.

Private Worship

Worshipping on your own, using Set prayers or your own words.

Year 11 RE:

Key Words	
Liturgical worship	
Non-liturgical worship	
Prayer	
Sacrament	



Liturgical Worship

Non-Liturgical Worship

Prayer

Private Worship

Year 11 RE: Christian practices

Roman Catholics, Orthodox and some Anglicans recognise seven sacraments.

Other Christians believe that Baptism and the Eucharist are the only two sacraments, as these were carried out by Jesus.

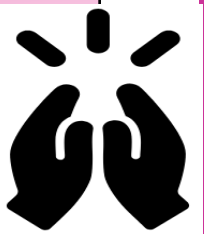
Some Christian denominations do not take part in any sacraments.

Infant Baptism
This is a formal service welcoming a new child into the Christian church. Holy wateris sprinkled over the baby's head three times. The water represents the washing away of sin, after Adam and Eve committed the original sin. The number of times it is poured represents the Trinity. As they pour the water the words, 'In the name of the Father and of the Son and of the Holy Spirit' are said.

Believer's Baptism
This type of baptism officially welcomes someone into the church who is old enough to decide for themselves if they want to commit to Christianity. They are submerged in a pool of holy water and they make promises to stay away from sin.

Baptist and other more charismatic denominations focus on this type of baptism.

Key Words	
Eucharist	Services where bread and wine is received by Christians to remember Jesus' sacrifice.
Infant baptism	Service where babies are welcomed into the church with holy water.
Adult baptism	Service where those old enough to decide for themselves are welcomed into the church.
Christmas	Christian festival which celebrates the birth of Jesus.
Consecration	When a priest blesses bread and wine in order to use it for Eucharist.
Pilgrimage	A religious/holy journey.
Evangelism	Spreading the word of God through actions or speech.
Easter	Christian festival which celebrates the resurrection of Jesus.



Year 11 RE: Christian practices

_____ Catholics, Orthodox and some _____ recognise seven sacraments.

Other Christians believe that _____ and the Eucharist are the only two sacraments, as these were carried out by Jesus.

Some _____ denominations do not take part in any _____.

Infant Baptism

Believer's Baptism

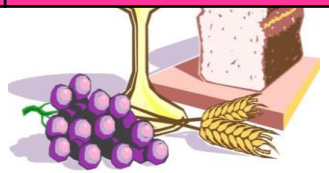
Key Words	
Eucharist	
Infant baptism	
Adult baptism	
Evangelism	
Easter	

Year 11 RE: Christian practices

Eucharist
During a church service there will be a reminder of the Last Supper, when Jesus gave the bread and wine to his disciples and asked them to **'Do this in remembrance of me'(Luke)**
Before receiving the Eucharist, a priest consecrates (blesses) the bread and the wine and then the congregation receives them.

Roman Catholics believe the bread and the wine transforms into Jesus' body and blood. This idea is called **transubstantiation**.
Anglicans believe the bread and wine are symbolic. They symbolise the body and blood of Jesus.
Christians are reminded of the sacrifice that Jesus made by being crucified to save us from sin– **'Salvation is found through no one else' (Acts)**

Sacrament	Outward and visible sign	Inward and spiritual grace
Baptism	Water and Trinitarian formula	Receiving the Holy Spirit The removal of original sin Entry into the Kingdom of God/the Church.
Confirmation	The laying on of hands by the bishop	Strengthening/sealing the gifts of the Holy Spirit in the person becoming an 'adult' member of the Church.
Eucharist	Bread and wine	Spiritual 'feeding' with the body and blood of Christ.
Reconciliation	Words of absolution (forgiveness)	The forgiveness of sins.
Anointing of the sick	Anointing and the laying on of hands	Spiritual and sometimes physical healing. Preparing for death.
Marriage	Ring(s)	The endless love between the couple.
Ordination	The laying on of hands by the bishop	The special gifts of the Holy Spirit needed by a deacon or priest.



Year 11 RE: Christian practices

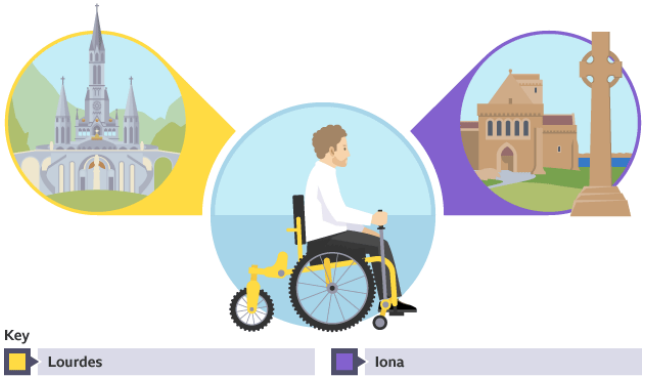
Eucharist

Roman Catholics believe the bread and the wine transforms into Jesus' body and blood. This idea is called _____.
_____ believe the bread and wine are symbolic. They _____ the body and blood of Jesus.
Christians are _____ of the _____ that Jesus made by being crucified to save us from sin– **'_____ is found through no one else' (Acts)**

Sacrament	Outward and visible sign	Inward and spiritual grace

Year 11 RE: Christian practices

Pilgrimage
A pilgrimage is a holy journey made by Christians to a holy site.
Roman Catholics go on pilgrimage to Lourdes where a vision of the Virgin Mary was once seen. They believe the water there has healing powers.
Iona, which is off the west coast of Scotland, is another place of pilgrimage. It is **ecumenical** – which means it is for Christians.



Activities on Pilgrimage
Praying
Attend services
Take part in processions
Light candles
Read the Bible
Touch the walls of the grotto
Drink and/or bathe in the spring's water

Different views on pilgrimage
Some people hold very different views on the importance and value of pilgrimage.
Reasons why it may be important to some Christians:

- It helps them to focus completely on God, to forget about their everyday lives, to have the time to pray and meditate, allowing them to feel close to God.
- It gives them an opportunity to visit places associated with Jesus or other inspirational Christians. This provides them with the encouragement and inspiration to reflect the values of the Gospel.
- They may have a particular purpose for ging to a holy place. For example, a sick person going to Lourdes for healing.
- They meet Christians from very different backgrounds and cultures. This deepens their faith as they gain new insights and feel a deeper sense of identity and belonging.

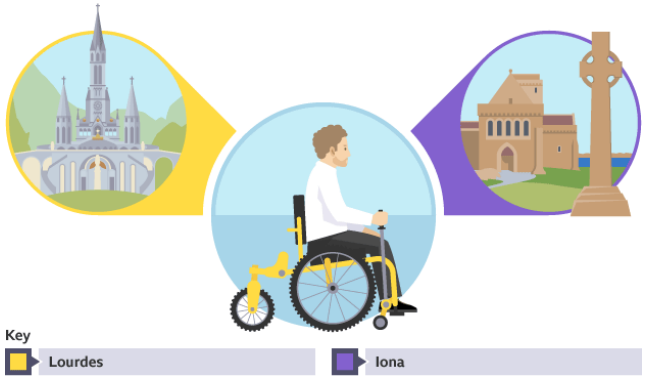
Some Christians do not see the value of going on pilgrimage because:

- God is omnipresent (everywhere). You do not need to go to a particular place to feel close to God.
- It is often very costly to take part in a pilgrimage. This money could go to charity.
- You can develop spiritually through regular attendance at church, reading the Bible and praying.
- A spiritual 'high' may be temporary and the effects may soon wear off when everyday life kicks in again.

Year 11 RE: Christian practices

Pilgrimage
A pilgrimage is …..

Roman Catholics go on pilgrimage to _____where a vision of the Virgin Mary was once seen. They believe the water there has _____.
_____, which is off the west coast of Scotland, is another place of pilgrimage. It is _____ – which means it is for Christians.



Activities on Pilgrimage

_____
Attend services
Take part in processions
_____
Read the Bible
_____
Drink and/or bathe in the spring's water

Different views on pilgrimage
Some people hold very different views on the importance and value of pilgrimage.
Reasons why it may be important to some Christians:

- It….
- It gives them an opportunity to visit places associated with Jesus or other inspirational Christians. This provides them with the encouragement and inspiration to reflect the values of the Gospel.
- They….
- They meet Christians from very different backgrounds and cultures. This deepens their faith as they gain new insights and feel a deeper sense of identity and belonging.

Some Christians do not see the value of going on pilgrimage because:

*

*

*

*

Year 11 RE: Christian practices

Christian Festivals
Christmas –
This is when Christians celebrate the birth of Jesus.

How do Christians celebrate it?
Many churches have a Christingle service.
Midnight Mass on Christmas Eve
Christmas carols
Nativity plays
Readings and prayers.
Religious themed Christmas cards
Exchanging gifts

Before Easter is Holy Week. Christians need to understand Holy Week to realise why Easter is the most important Christian festival

Holy Week	What happened	Brief explanation or significance
Palm Sunday	Jesus rides into Jerusalem on a donkey.	He arrives in Jerusalem to celebrate the Jewish Passover. Many think he is the Messiah, the one they have been waiting for to drive the Romans out. He came in on a donkey, to show he was humble, as prophesised in the Old Testament.
Monday	Jesus turns the traders' tables over in the Temple.	He was angry because the traders and money exchangers were cheating people in the Temple itself. He tipped the tables over saying his Father's house had been turned into a den of thieves.
Wednesday	Judas agreed to betray Jesus in exchange for money.	Many thought Judas was a revolutionary. He may have thought that Jesus was going to organise an uprising against the Romans and was disappointed that Jesus was not the man to lead this.

The importance of Christmas to Christians in Britain today
Christmas is important for many reasons:

- Christians thank God for, and celebrate with joy, the incarnation.
- It is a time for both giving to and receiving from loved ones, so is a symbol of love shared.
- It is a time to remember those who, like Jesus and his family, live through difficult circumstances.
  Christians should give generously to charities that support those in need.
- It highlights Christmas and its meaning to non-Christians.
- It reminds Christians that Jesus will come again, to judge us.

Year 11 RE: Christian practices

Christian Festivals
Christmas –

How do Christians celebrate it?

Before Easter is ____ Week. Christians need to understand Holy Week to realise why _____ is the most important Christian festival

Holy Week	What happened	Brief explanation or significance
Palm Sunday	.	
Wednesday		

The importance of Christmas to Christians in Britain today
Christmas is important for many reasons:

Year 11 RE: Christian practices

Holy Week	What happened	Brief explanation or significance
Maundy Thursday	Last Supper, arrest and trials begin.	Jesus washed his disciples' feet and told them to 'serve one another, as I have served you.' (Romans) He shared a meal with his disciples, including the bread and wine. He told them to 'do this in remembrance of me' (Luke). He prophesised about being denied by Peter and betrayed by Judas, showing his divine side. He spoke about the afterlife – 'My Father's house has many rooms' (John) Jesus is later arrested at the Garden of Gethsemane after being betrayed by Judas. He is put on trial with the Sanhedrin (the ruling council of the Jews).
Good Friday	Trial with Pontius Pilate who sentences Jesus to death. Jesus is whipped, they place a crown of thorns on his head, his is nailed to the cross and left to die.	Jesus had to die to as atonement for the sins of human beings. At his death he commended his soul to God. He said to the thief beside him, 'Today, you will be with me in Paradise'
Saturday	Shabbat – Jesus' body lay in the tomb.	The disciples hid, fearing they would be arrested. Losing Jesus had challenged their faith.
Easter Sunday	In the morning, the women went to the tomb to anoint Jesus' body. It was gone. A young man told them Christ was risen	The tomb was empty because Jesus had resurrected form the dead. Christians see this as a victory over death.

Year 11 RE: Christian practices

Holy Week	What happened	Brief explanation or significance
Maundy Thursday		
Good Friday		
Saturday		
Easter Sunday		

Science

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 11 Science: Ecology

Farmers optimise conditions for making compost for use as a natural fertiliser.

Ecosystem

Environment	The conditions surrounding an organism; abiotic and biotic.
Habitat	Place where organisms live e.g. woodland, lake.
Population	Individuals of a species living in a habitat at the same time.
Community	Populations of different species living in a habitat at the same time.

Organisms require a supply of materials from their surroundings and from the other living organisms.

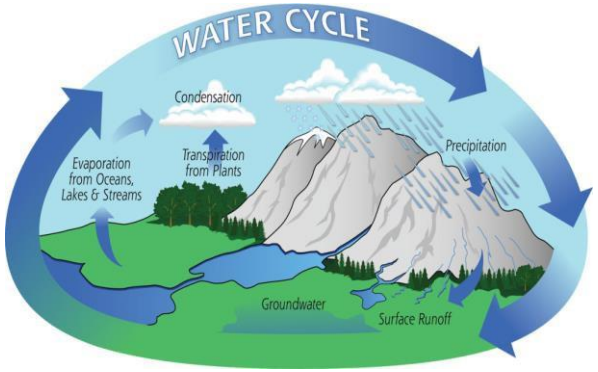
Surviving and reproducing

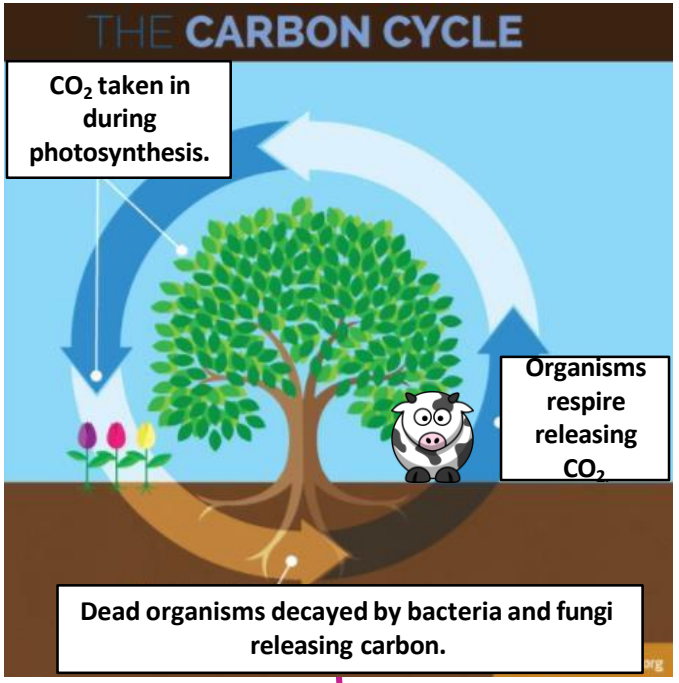
Competition	Plants in a community or habitat compete with each other for light, space, water and mineral ions.
	Animals compete with each other for food, mates and territory.
Interdependence	Species depend on each other for food, shelter, pollination, seed dispersal etc. Removing a species can affect the whole community

Bacteria respire when breaking down dead organisms releasing CO_2.

Decomposition and material cycling

Anaerobic decay in biogas generators produces methane gas, used as a fuel.





Factors affecting rate of decay

Temperature, water, oxygen

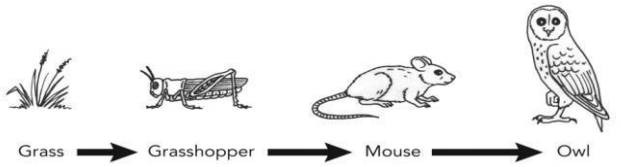
Increase the rate of decay. In enzyme controlled reactions raising the temperature too high will denature the enzymes.

Materials are recycled to provide the building blocks for future organisms

Food chains

Feeding relationships in a community

Producer	Primary consumer	Secondary consumer	Tertiary consumer



All food chains begin with a producer e.g. grass that is usually a green plant or photosynthetic algae.

Consumers that kill and eat other animals are predators and those eaten are prey.

Photosynthetic organisms are the producers of biomass for life on Earth

Breakdown of dead organisms releases mineral ions can into the soil.

Year 11 Science: Ecology

Farmers optimise conditions for making compost for use as a natural fertiliser.

Ecosystem

Environment	
Habitat	
Population	
Community	

Organisms require a supply of materials from their surroundings and from the other living organisms.

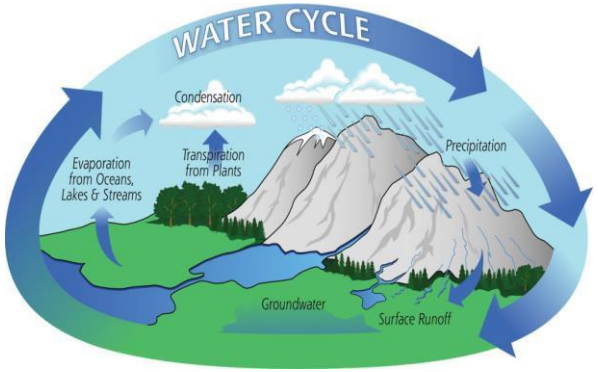
Surviving and reproducing

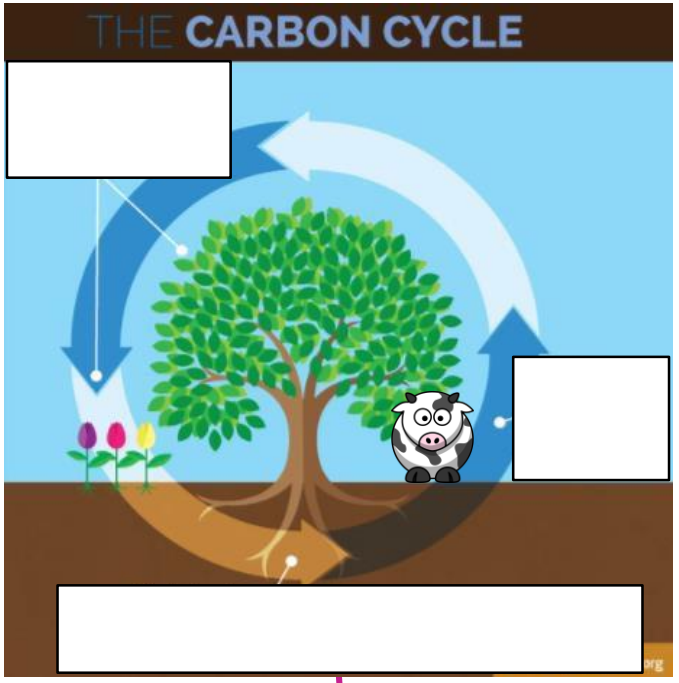
Competition	
Interdependence	

Bacteria respire when breaking down dead organisms releasing CO_2.

Decomposition and material cycling

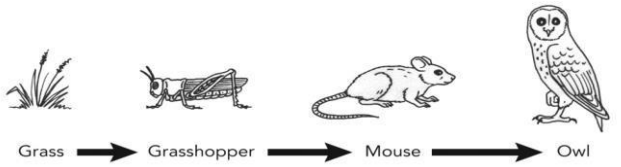
Anaerobic decay in biogas generators produces methane gas, used as a fuel.





Food chains

Feeding relationships in a community



All food chains begin with a producer e.g. grass that is usually a green plant or photosynthetic algae.

Consumers that kill and eat other animals are predators and those eaten are prey.

Factors affecting rate of decay

Materials are recycled to provide the building blocks for future organisms

Photosynthetic organisms are the producers of biomass for life on Earth

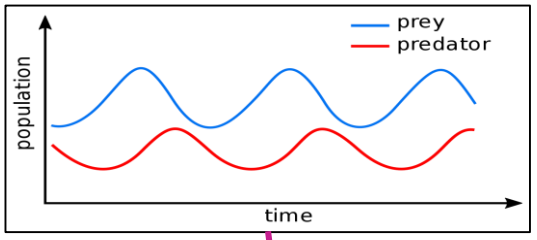
Breakdown of dead organisms releases mineral ions can into the soil.

Year 11 Science: Ecology

Abiotic	Biotic
Non-living factors that affect a community	**Living factors that affect a community**
Living intensity.	Availability of food.
Temperature.	
Moisture levels.	New predators arriving.
Soil pH, mineral content.	
Wind intensity and direction.	New pathogens.
Carbon dioxide levels for a plant.	
Oxygen levels for aquatic organisms.	One species outcompeting so numbers are no longer sufficient to breed

EXAMPLE*:* climate change is leading to more dissolved CO_2 in oceans lowering the pH of the water affecting organisms living there.

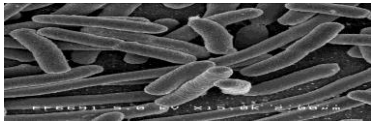
EXAMPLE*:* Introduction of grey squirrels to UK increased competition for food for red squirrels. The greys also carry a pathogen that kills reds.



In a stable community the numbers of predators and prey rise and fall in cycles.

Organisms adaptations enable them to survive in conditions where they normally live.

Adaptations may be structural, behavio ural or functional.

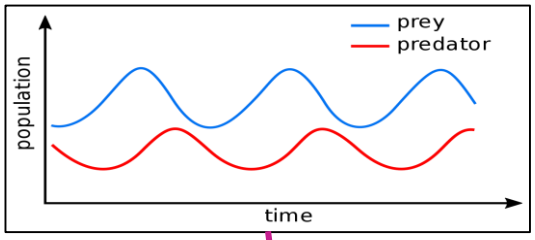
Plants	Animals	Extremophiles
Cactus in dry, hot desert	Polar bear in extreme cold artic	Deep sea vent bacteria
		
No leaves to reduce water loss, wide deep roots for absorbing water.	Hollow hairs to trap layer of heat. Thick layer of fat for insulation.	Populations form in thick layers to protect outer layers from extreme heat of vent.

Year 11 Science: Ecology

Abiotic	Biotic
Non-living factors that affect a community	Living factors that affect a community

EXAMPLE*:* climate change is leading to more dissolved CO_2 in oceans lowering the pH of the water affecting organisms living there.

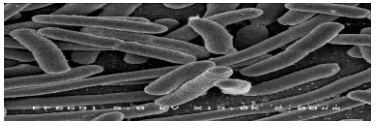
EXAMPLE*:* Introduction of grey squirrels to UK increased competition for food for red squirrels. The greys also carry a pathogen that kills reds.



In a stable community the numbers of predators and prey rise and fall in _____.

Organisms adaptations enable them to survive in conditions where they normally live.

Adaptations may be _____, _____ or _____.

Adaptations		
Plants	**Animals**	**Extremophiles**
Cactus in dry, hot desert	Polar bear in extreme cold artic	Deep sea vent bacteria
		

Year 11 Science: Ecology

Maintain a great biodiversity		
	Ensures the stability of ecosystems	By reducing the dependence on one species to another for food, shelter, maintenance of the physical environment.
	Future of human species	Many human activities are reduction biodiversity and only recently measures have been taken to stop it.

Human activity can have a negative impact on biodiversity

Biodiversity and the effect of human interaction on the ecosystem

Waste management		
	Rapid growth in human population and higher standard of living	More resources used and more waste produced.
		Pollution in water; sewage, fertiliser or toxic chemicals.
		Pollution in air; smoke or acidic gases.
		Pollution on land; landfill and toxic chemicals.

Biodiversity is the variety of all different species of organisms on Earth, or within an ecosystem

Experimental methods are used to determine the distribution and abundance of a species.

Sampling techniques		
	Quadrats	Organisms are counted within a randomly placed square
	Transects	Organisms are counted along a line (transect) of the ecosystem.

Processing data	
Median	Middle value in a sample.
Mode	Most occurring value in a sample.
Mean	The sum of all the value in a sample divided by the sample number.

Waste, land use and deforestation

Large scale deforestation

In tropical areas (e.g. rain forest) has occurred to:

Provide land for cattle and rice fields, grow crops for biofuels.

Deforestation reduces biodiversity and removes a sink for increasing the amount CO_2 in the atmosphere.

This conflicts with conserving peat bogs and peatlands as habitats for biodiversity and reduce CO_2 emissions.

The decay or burning of peat release CO_2 into the atmosphere.

Land use

Humans reduce the amount of land and habitats available for other plants, animals and microorganisms.

- Building and quarrying.
- Farming for animals and food crops.
- Dumping waste.
- Destruction of peat bogs to produce cheap compost for gardeners/farmers to increase food production.

Environmental changes affect the distribution of species		
	Temperature	These changes might be seasonal, geographic or caused by human interaction.
	Availability of water	
	Composition of atmospheric gases	

Example: Several species of bird migrate from cold winter conditions to warmer conditions closer to the equator.

Year 11 Science: Ecology

Maintain a great biodiversity

- **Ensures the stability of ecosystems**
- **Future of human species**

Human activity can have a negative impact on biodiversity

Biodiversity and the effect of human interaction on the ecosystem

Waste management

Rapid growth in human population and higher standard of living

Biodiversity is the variety of all different species of organisms on Earth, or within an ecosystem

Experimental methods are used to determine the distribution and abundance of a species.

Sampling techniques

- **Quadrats**
- **Transects**

Processing data

Median	
Mode	
Mean	

Waste, land use and deforestation

Large scale deforestation

In tropical areas (e.g. rain forest) has occurred to:

Deforestation reduces biodiversity and removes a sink for increasing the amount CO_2 in the atmosphere.

This conflicts with conserving peat bogs and peatlands as habitats for biodiversity and reduce CO_2 emissions.

The decay or burning of peat release CO_2 into the atmosphere.

Land use

Environmental changes affect the distribution of species

Example: Several species of bird migrate from cold winter conditions to warmer conditions closer to the equator.

Year 11 Science: Ecology

Factors affecting food security

Enough food is needed to feed a changing population

- Increasing birth rate.
- Changing diets in developing countries.
- New pests and pathogens affecting farming.
- Environmental changes e.g. famine when rains fail.
- Cost of agriculture input.
- Conflicts (war) affecting water of food availability

Farming techniques

Increasing efficiency of food production

Reduce energy waste, limiting movement, control temperature, high protein diet to increase growth.

Biotechnology

Meeting the demands of a growing population

Fungus Fusarium to produce mycoprotein. Requires glucose syrup, aerobic conditions. Biomass is harvested and purified.

GM bacterium produces insulin to treat diabetes.

GM crops to provide more/nutritional food (golden rice).

Sustainable fisheries

Fish stocks in oceans are declining

Maintain/grow fish stocks to a sustainable level where breeding continues or certain species may disappear. By controlling net size, fishing quotas.

Some people have concerns about the treatment of animals.

Some of the programmes potentially conflict with human needs for land use, food production and high living standards.

Human activity can have a positive impact on biodiversity

Scientists and concerned citizens

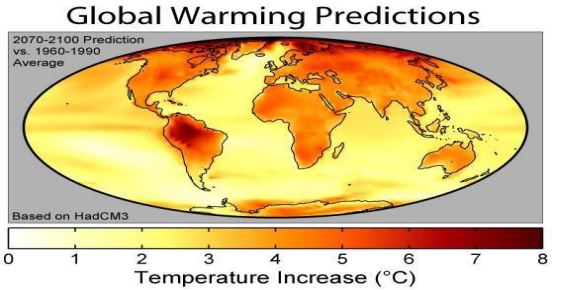
Put in place programmes to reduce the negative impacts of humans on ecosystems and biodiversity

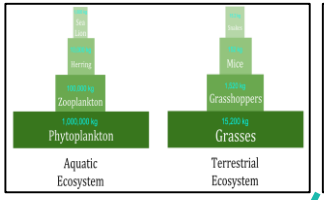
- Breeding programmes for endangered species.
- Protection and regeneration of rare habitats.
- Reintroduction of field margins and hedgerows in agricultural areas where farmers grow only one type of crop.
- Reduction of deforestation and CO_2 emissions by some governments.
- Recycling resources rather than dumping waste in landfill.

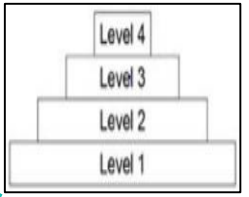
Global warming

Levels of CO_2 and methane in the atmosphere are increasing.

Decreased land availability from sea level rise, temperature rise damages delicate habitats, extreme weather events harm populations of plants and animals.







Transfer of biomass

Biomass is lost between the different trophic levels

Producers transfer about 1% of the incident energy from light for photosynthesis.

Approximately 10% of the biomass from each trophic level is transferred to the level above.

Large amounts of glucose is used in respiration, some material egested as faeces or lost as waste e.g. CO_2, water and urea in urine.

Decomposers break down dead plants and animal matter by secreting enzymes. Small soluble food molecules then diffuse into the microorganism.

Year 11 Science: Ecology

Factors affecting food security

Enough food is needed to feed a changing population

Human activity can have a positive impact on biodiversity

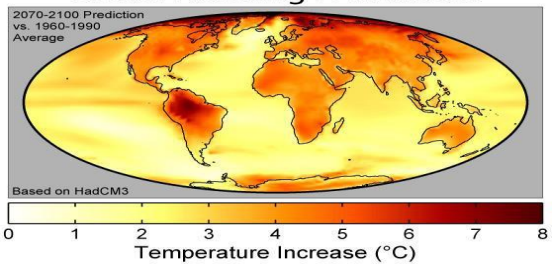
Scientists and concerned citizens

Put in place programmes to reduce the negative impacts of humans on ecosystems and biodiversity

Global warming

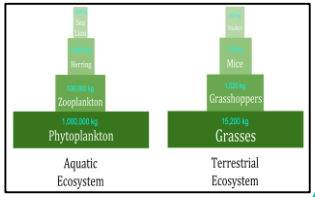
Levels of CO_2 and methane in the atmosphere are increasing.

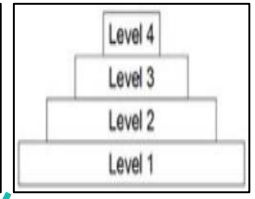
Global Warming Predictions



Farming techniques

Increasing efficiency of food production





Biotechnology

Meeting the demands of a growing population

Sustainable fisheries

Fish stocks in oceans are declining

Some of the programmes potentially conflict with human needs for land use, food production and high living standards.

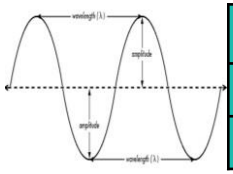
Transfer of biomass

Biomass is lost between the different trophic levels

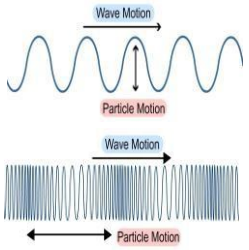
Some people have concerns about the treatment of animals.

Decomposers break down dead plants and animal matter by secreting enzymes. Small soluble food molecules then diffuse into the microorganism.

Year 11 Science: Waves



Wave speed	Wave speed = frequency X wavelength	V = f X λ
Wave period	Wave period = 1 ÷ frequency	T = 1 ÷ f
Speed	Speed = distance ÷ time	v = d ÷ t



Transverse wave	**Vibration causing the wave is at right angles to the direction of energy transfer**	Energy is carried outwards by the wave.	Water waves, all electromagnetic waves
Longitudinal wave	**Vibration causing the wave is parallel to the direction of energy transfer**	Energy is carried along the wave.	Sound waves, waves in springs

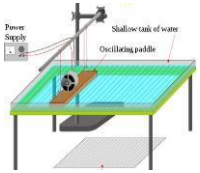
Transverse and Longitudinal waves

Wavelength	Distance from one point on a wave to the same point of the next wave
Amplitude	The maximum disturbance from its rest position
Frequency	Number of waves per second
Period	Time taken to produce 1 complete wave

Waves in air, fluids and solids

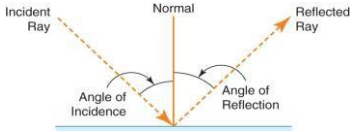
Properties

Measuring speed



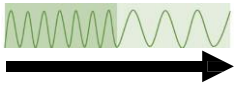
In water, use a ripple tank.

In air, use echoes.



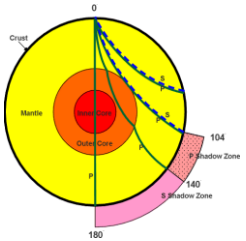
Sound waves travelling through different mediums, the frequency stay constant.

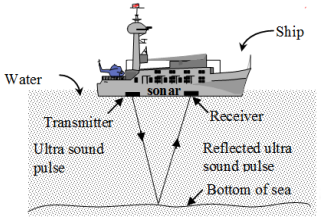
Air Water

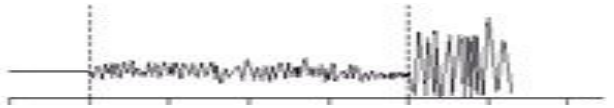


Ultra sound	**Partially reflected off boundary**	Used for medical and foetal scans.
Sonar	**Reflected off objects**	Used to determine depth of objects under the sea.

Angle of incidence = angle of reflection (i) = (r)





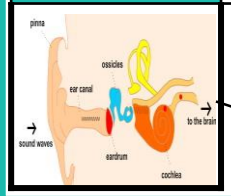


Reflection	Wave bounces off the surface.
Refraction	Waves changes direction at boundary.
Transmitted	Passes through the object.
Absorbed	Passes into but not out of a substance, transfers energy and heats up the object.

Light refracts as it slows down in a denser substance

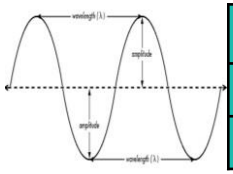
Seismic waves

P wave	S wave	Seismograph
Longitudinal	Transverse	Shows P and S waves arriving at different times.
Fast	Slow	
Travel through solids and liquids	Travels through solids	By using the time the waves arrive at the monitoring centres, the epicentre of earthquake can be found. (v = x ÷ t).
Produced by earthquakes.		

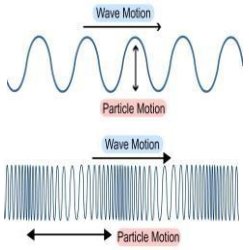


Hearing	**Frequencies between 20 – 20,000 Hz**	Longitudinal waves cause ear drum to vibrate, amplified by three ossicles which creates pressure in the cochlea.

Year 11 Science: Waves



Wave speed		V = f X λ
Wave period		T = 1 ÷ f
Speed		v = d ÷ t



Transverse wave			
Longitudinal wave			

Wavelength	
Amplitude	
Frequency	
Period	

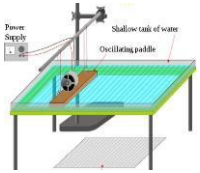
Transverse and Longitudinal waves

Waves in air, fluids and solids

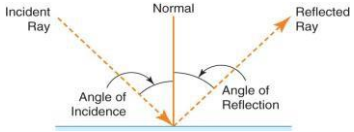
Properties

Measuring speed

In water, use a ripple tank.

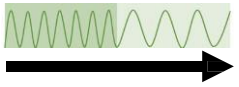


In air, use echoes.



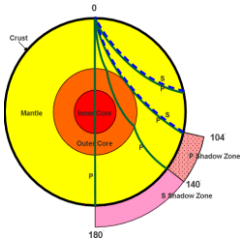
Sound waves travelling through different mediums, the frequency stay constant.

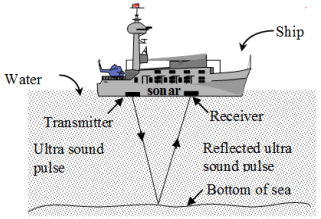
Air Water

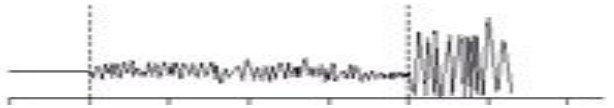


Ultra sound		
Sonar		

Angle of incidence = angle of reflection (i) = (r)





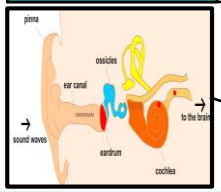


Reflection	
Refraction	
Transmitted	
Absorbed	

Light refracts as it slows down in a denser substance

Seismic waves

P wave	S wave	Seismograph
		Shows P and S waves arriving at different times.
		By using the time the waves arrive at the monitoring centres, the epicentre of earthquake can be found. (v = x ÷ t).



Hearing	**Frequencies between 20 – 20,000 Hz**	

Year 11 Science: Wa ves

Black body radiation

e.g. Gamma

Short wavelengths have high frequency and high energy.

PHYSICS ONLY

Earth and Global warming

Ultraviolet, visible light, infra-red radiation penetrate atmosphere and heat up Earth's surface.

Longer wavdengths are radiated back,trapped by atmosphere.

Energy lost is not at the same rate as energy being absorbed so Earth heats up.

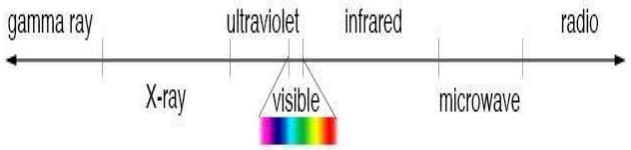
Electromagnetic waves

	All objects absorb or reflect infrared radiation	A perfect black body object absorbs all infrared radiation
Constant temperature	**Rate of absorption = rate of radiation**	Intensity and wavelength of energy affects temperature.

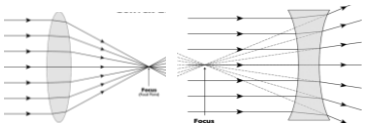
Electromagnetic wave	**Continuous spectrum of transverse waves**

	Units
Distance	**Metres (m)**
Wave speed	**Metres per second (m/s)**
Wavelength	**Metres (m)**
Frequency	**Hertz (Hz)**
Period	**Seconds (s)**

Magnification = image size ÷ object size



Convex	Real or virtual images.
Concave	Only virtual images.



2F	Image same size, upside down, real.
2F - F	Image larger, upside down, real.
< F	Image bigger, right way, virtual.

Specular	Flat surface reflection.
Diffuse	Rough surface reflection.

EM wave	Danger	Use
	None known	Communications, TV, radio.
	Burning if concentrated.	Mobile phones, cooking, satellites.
		Heating, remote controls, cooking.
	Damage to eyes.	Illumination, photography, fibre optics.
	Sunburn, skin cancer.	Security marking, disinfecting water.
	Cell destruction/ mutation, cancer.	Broken bones, airport security.
Gamma		Sterilising, detecting and killing cancer.

Low frequency, long wavelength.

White	Wave lengths reflected
Black	Wave lengths absorbed

High frequency, short wavelength

Year 11 Science: Waves

Black body radiation

e.g. Gamma

Short wavelengths have high frequency and high energy.

PHYSICS ONLY

Earth and Global warming

Ultraviolet, visible light, infra-red radiation penetrate atmosphere and heat up Earth's surface.

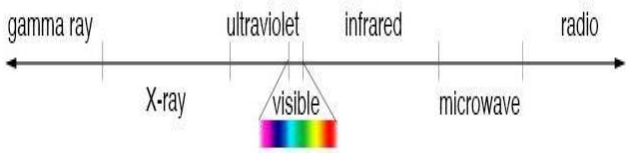
Longer wavelengths are radiated back, trapped by atmosphere.

Energy lost is not at the same rate as energy being absorbed so Earth heats up.

Electromagnetic waves

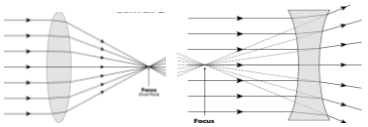
Electromagnetic wave	

Magnification = image size ÷ object size



Black body radiation		
Constant temperature		

Convex	
Concave	



2F	
2F - F	
< F	

	Units
Distance	
Wave speed	
Wavelength	
Frequency	
Period	

Specular	
Diffuse	

EM wave	Danger	Use
Radio		
Microwave		
Infrared		
Visible		
Ultra violet		
X-ray		
Gamma		

Low frequency, long wavelength.

High frequency, short wavelength

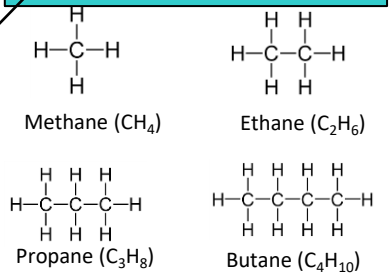
Year 11 Science: Organic Chemistry

Carbon compounds as fuels and feedstock

Crude oil, hydrocarbons and alkanes

Crude oil	***A finite resource***	Consisting mainly of plankton that was buried in the mud, crude oil is the remains of ancient biomass.
Hydrocarbons	***These make up the majority of the compounds in crude oil***	Most of these hydrocarbons are called alkanes.
General formula for alkanes	C_nH_{2n+2}	For example: C_2H_6 C_6H_{14}

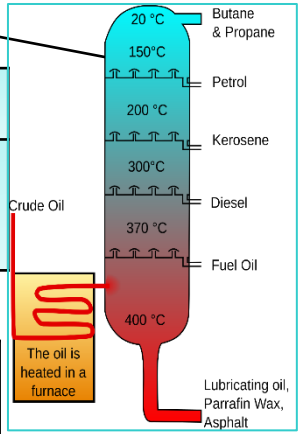
Display formula for first four alkanes



Fractional distillation and petrochemicals

Fractions	***The hydrocarbons in crude oil can be split into fractions***	Each fraction contains molecules with a similar number of carbon atoms in them. The process used to do this is called fractional distillation.
Using fractions	***Fractions can be processed to produce fuels and feedstock for petrochemical industry***	We depend on many of these fuels; petrol, diesel and kerosene. Many useful materials are made by the petrochemical industry; solvents, lubricants and polymers.

Hydrocarbon chains	***In oil***	Hydrocarbon chains in crude oil come in lots of different lengths.
	Boiling points	The boiling point of the chain depends on its length. During fractional distillation, they boil and separate at different temperatures due to this.



Carbon compounds as fuels and feedstock

Cracking and alkenes

Alkanes to alkenes	***Long chain alkanes are cracked into short chain alkenes.***
Alkenes	***Alkenes are hydrocarbons with a double bond (some are formed during the cracking process).***
Properties of alkenes	***Alkenes are more reactive that alkanes and react with bromine water. Bromine water changes from orange to colourless in the presence of alkenes.***

Cracking	***The breaking down of long chain hydrocarbons into smaller chains***	The smaller chains are more useful. Cracking can be done by various methods including catalytic cracking and steam cracking.
Catalytic cracking	***The heavy fraction is heated until vaporised***	After vaporisation, the vapour is passed over a hot catalyst forming smaller, more useful hydrocarbons.
Steam cracking	***The heavy fraction is heated until vaporised***	After vaporisation, the vapour is mixed with steam and heated to a very high temperature forming smaller, more useful hydrocarbons.

Decane → pentane + propene + ethane

$C_{10}H_{22} \rightarrow C_5H_{12} + C_3H_6 + C_2H_4$

Alkenes and uses as polymers	***Used to produce polymers. They are also used as the starting materials of many other chemicals, such as alcohol, plastics and detergents.***
Why do we crack long chains?	***Without cracking, many of the long hydrocarbons would be wasted as there is not much demand for these as for the shorter chains.***

Properties of hydrocarbons

Combustion	During the complete combustion of hydrocarbons, the carbon and hydrogen in the fuels are oxidised, releasing carbon dioxide, water and energy.

Complete combustion of methane:

Methane + oxygen → carbon dioxide + water + energy

CH_4 (g) + $2O_2$ (g) → CO_2 (g) + 2 H_2O (l)

Boiling point (temperature at which liquid boils)	***As the hydrocarbon chain length increases, boiling point increases.***
Viscosity (how easily it flows)	***As the hydrocarbon chain length increases, viscosity increases.***
Flammability (how easily it burns)	***As the hydrocarbon chain length increases, flammability decreases.***

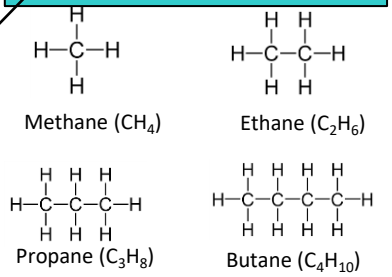
Year 11 Science: Organic Chemistry

Carbon compounds as fuels and feedstock

Crude oil, hydrocarbons and alkanes

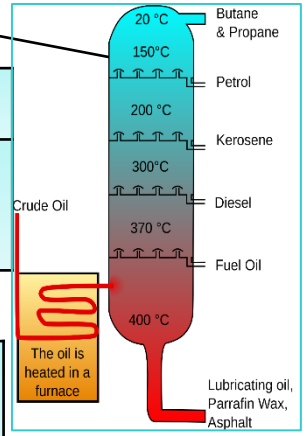
Crude oil	***A finite resource***	.
Hydrocarbons	***These make up the majority of the compounds in crude oil***	
General formula for alkanes		

Display formula for first four alkanes



Fractions	***The hydrocarbons in crude oil can be split into fractions***	
Using fractions	***Fractions can be processed to produce fuels and feedstock for petrochemical industry***	.

Fractional distillation and petrochemicals



Hydrocarbon chains	***In oil***	
	Boiling points	

Carbon compounds as fuels and feedstock

Cracking and alkenes

Alkanes to alkenes	
Alkenes	
Properties of alkenes	

Cracking	***The breaking down of long chain hydrocarbons into smaller chains***	
Catalytic cracking	***The heavy fraction is heated until vaporised***	
Steam cracking	***The heavy fraction is heated until vaporised***	

→ + propene + ethane

$C_{10}H_{22} \rightarrow C_5H_{12} + C_3H_6 + C_2H_4$

Alkenes and uses as polymers	
Why do we crack long chains?	

Properties of hydrocarbons

Combustion	.

Complete combustion of methane:

$CH_4\ (g) + 2O_2\ (g) \rightarrow CO_2\ (g) + 2\ H_2O\ (l)$

Boiling point (temperature at which liquid boils)	
Viscosity (how easily it flows)	
Flammability (how easily it burns)	

Year 11 Science: Organic Chemistry SEPS ONLY

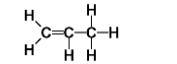
Reactions of alkenes and alcohols

Reactions of alkenes

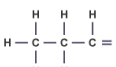
Structure and formula of alkenes

Alkenes	***Hydrocarbons with a double carbon-carbon bond.***
Unsaturated	***Alkenes are unsaturated because they contain two fewer hydrogen atoms than their alkane counterparts.***
General formula for alkenes	C_nH_{2n}

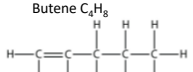
Ethene C_2H_4



Propene C_3H_6



Butene C_4H_8



Pentene C_5H_{10}

Addition polymerisation

Polymers	***Alkenes are used to make polymers by addition polymerisation.***	Many small molecules join together to form polymers (very large molecules).
Displaying polymers	***In addition polymers, the repeating unit has the same atoms as the monomer.***	It can be displayed like this:

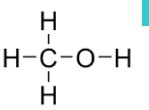
Functional group

Functional group	***Alkenes are hydrocarbons in the functional group C=C.***	The functional group of an organic compound determined their reactions.
Alkene reactions	***Alkenes react with oxygen in the same way as other hydrocarbons, just with a smoky flame due to incomplete combustion.***	Alkenes also react with hydrogen, water and the halogens. The C=C bond allows for the addition of other atoms.

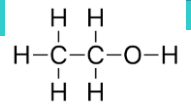
Alcohols

Functional group	***-OH*** ***For example: CH_3CH_2OH***	Methanol, ethanol, propanol and butanol are the first four of the homologous series.
Alcohol reactions	***Alcohols react with sodium, air and water.***	Alcohols and sodium: bubbling, hydrogen gas given off and salt formed. Alcohols and air: alcohols burn in air releasing carbon dioxide and water. Alcohols and water: alcohols dissolve in water to form a neutral solution.
Fermentation	***Ethanol is produced from fermentation***	When sugar solutions are fermented using yeast, aqueous solutions of ethanol are produced. The conditions needed for this process include a moderate temperature (25 – 50°C), water (from sugar solution) and an absence of

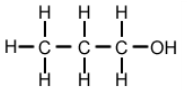
Methanol



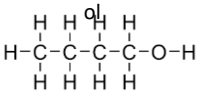
Ethanol



Propanol



Butanol



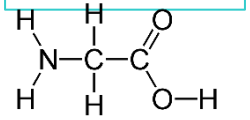
Carboxylic acids

Functional group	***-COOH*** ***For example: CH_3COOH***	Methanoic acid, ethanoic acid, propanoic acid and butanoic acid are the first four of the homologous series.
Carboxylic acid reactions	***Carboxylic acids react with carbonates, water and alcohols.***	Carboxylic acids and carbonates: These acids are neutralised by carbonates
		Carboxylic acids and water: These acids dissolve in water.
		Carboxylic acids and alcohols: The acids react with alcohols to form esters.
Strength (HT only)	***Carboxylic acids are weak acids***	Carboxylic acids only partially ionise in water. An aqueous solution of a weak acid with have a high pH (but still below 7).

Synthetic and naturally occurring polymers

Amino acids

Amino acids have two functional groups in a molecule. They react by condensation polymerisation to produce peptides.



Glycine

Condensation polymerisation (HT only)

Condensation polymerisation	***Condensation polymerisation involves monomers with two functional groups***	When these types of monomers react they join together and usually lose small molecules, such as water. This is why they are called condensation reactions.

DNA and naturally occurring polymers

DNA	***Deoxyribonucleic acid is a large molecule essential for life. DNA gives the genetic instructions to ensure development and functioning of living organisms and viruses.***
DNA structure	***Most DNA molecules are two polymer chains made from four different monomers, called nucleotides. They are in the double helix formation.***
Natural polymers	***Other naturally occurring polymers include proteins, starch and cellulose and are all important for life.***

Year 11 Science: Organic Chemistry SEPS ONLY

Reactions of alkenes and alcohols

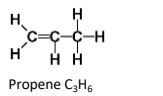
Reactions of alkenes

Functional group	
Alkene reactions	

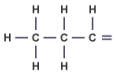
Structure and formula of alkenes

Alkenes	
Unsaturated	.
General formula for alkenes	

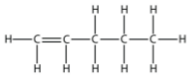
Ethene C_2H_4



Propene C_3H_6



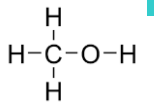
Butene C_4H_8



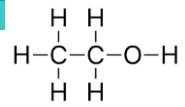
Pentene C_5H_{10}

Alcohols

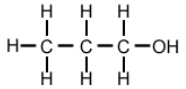
Functional group	*-OH* *For example: CH_3CH_2OH*	
Alcohol reactions	*Alcohols react with sodium, air and water.*	
Fermentation	*Ethanol is produced from fermentation.*	



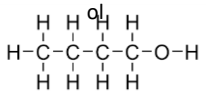
Methanol



Ethanol



Propanol



Butanol

Carboxylic acids

Functional group	*-COOH* *For example: CH_3COOH*	
Carboxylic acid reactions	*Carboxylic acids react with carbonates, water and alcohols.*	
Strength (HT only)	*Carboxylic acids are weak acids*	

Synthetic and naturally occurring polymers

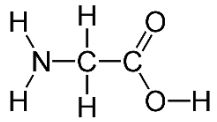
Addition polymerisation

Polymers		
Displaying polymers		It can be displayed like this:

Condensation polymerisation (HT only)

Condensation polymerisation		

Amino acids



Glycine

DNA and naturally occurring polymers

DNA	
DNA structure	
Natural polymers	

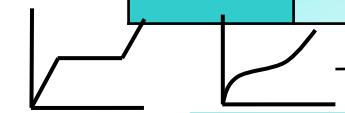
Year 11 Science: Chemical analysis

Purity, formulations and chromatography

Pure substances

Pure substances	***A pure substances is a single element or compound, not mixed with any other substance.***

Pure substances melt and boil at specific temperatures. Heating graphs can be used to distinguish pure substances from impure.

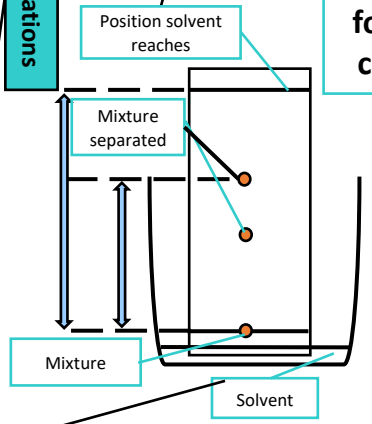


Melting point of a pure substance | ***Melting point of an impure substance***

Formulations

Formulation	***A formulation is a mixture that has been designed as a useful product.***
How are formulations made?	***By mixing chemicals that have a particular purpose in careful quantities.***
Examples of formulations .	***Fuels, cleaning agents, paints, medicines and fertilisers.***

Chromatography



Chromatography	***Can be used to separate mixtures and help identify substances.***	Involves a mobile phase (e.g. water or ethanol) and a stationary phase (e.g. chromatography paper).
R_f Values	***The ratio of the distance moved by a compound to the distance moved by solvent.***	R_f = distance moved by substance / distance moved by solvent
Pure substances	***The compounds in a mixture separate into different spots.***	This depends on the solvent used. A pure substance will produce a single spot in all solvents whereas an impure substance will produce multiple spots.

Identification of ions (SEPS ONLY)

Flame tests (SEPS only)

Element	Colour flames
Lithium	*Crimson*
Sodium	*Yellow*
Potassium	*Lilac*
Calcium	*Orange-red*
Copper	*Green*

Metal hydroxides (SEPS only)

Sodium hydroxide	***Is added to solutions to identify metal ions.***
White precipitates	***Aluminium, calcium and magnesium ions form this with sodium hydroxide solution.***
Coloured precipitates	***Copper (II) = blue Iron (II) = green Iron (III) = brown***

Carbonates, halides and sulfates (SEPS only)

Carbonates	***React with dilute acids to form carbon dioxide.***
Halide ions	***When in a solution, they produce precipitates with silver nitrate solution in the presence of nitric acid.***
Sulfate ions	***When in a solutions they produce a white precipitate with barium chloride solutions in the presence of hydrochloric acid.***

Instrumental methods

Instrumental methods	***Methods that rely on machines***	Can be used to identify elements and compounds. These methods are accurate, sensitive and rapid.
Flame emission spectroscopy	***An instrumental method used to analyse metal ions.***	The sample solution is put into a flame and the light that is given out is put through a spectroscope. The output line spectrum, can be analysed to identify the metal ions in the solution. It can also be used to measure concentrations.

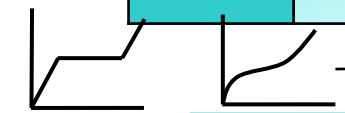
Flame emission spectroscopy

Identification of common gases

Gas	Test	Positive result
Hydrogen	***Burning splint***	'Pop' sound.
Oxygen	***Glowing splint***	Re-lights the splint.
Chlorine	***Litmus paper (damp)***	Bleaches the paper white.
Carbon dioxide	***Limewater***	Goes cloudy (as a solid calcium carbonate forms).

Year 11 Science: Chemical analysis

Pure substances	*A pure substances is a single element or compound, not mixed with any other substance.*	



Melting point of a pure substance	

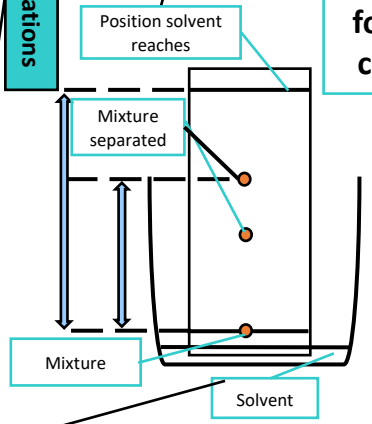
Pure substances

Chromatography

Purity, formulations and chromatography

Formulations

Formulation	.
How are formulations made?	.
Examples of formulations .	



Chromatography		
R_f Values		
Pure substances		

Element	Colour flames
Lithium	
Sodium	
Potassium	
Calcium	
Copper	

Flame tests (SEPS only)

Identification of ions (SEPS ONLY)

Metal hydroxides (SEPS only)

Sodium hydroxide	
White precipitates	
Coloured precipitates	

Carbonates, halides and sulfates (SEPS only)

Carbonates	
Halide ions	
Sulfate ions	

Identification of common gases

Gas	Test	Positive result
Hydrogen		
Oxygen		
Chlorine		
Carbon dioxide		

Flame emission spectroscopy

Instrumental methods

Instrumental methods	*Methods that rely on machines*	

Flame emission spectroscopy	*An instrumental method used to analyse metal ions.*	

Year 11 Science: Forces

Unit	***Newton (N)***	1N
Kilo	***Kilonewton (KN) = 1000***	1X 10^3
Mega	***Meganewton (MN) = 1000,000***	1 X 10^6

W = m X g

Force	***Push or pull***	Stretch, squash, turn.
Contact force	***Exerted between two objects when they touch***	Friction, air resistance, tension.
Non-contact force	***Exerted between two objects without touching***	Gravity, electrostatic forces, magnetic forces.

Resolving forces	***An object pulled with a force at an angle***	A single force can be split into two components acting at right angles to each other.

The component forces combined have the same effect.

Centre of mass	***The weight of an object acts through a single point***

Each Kg has a gravitational pull of 9.8N.

Gravitational field strength	***Gravity exerted around an object.***	Earth's gfs = 9.8N/kg

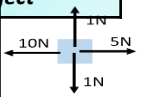
Resultant force	***The overall effect of all of the forces acting upon an object***	Two forces acting in the same direction are added.
		Two forces acting in the opposite direction are taken away.

HIGHER ONLY

Work done against frictional forces, temperature of object rises.

Free body diagram	***Show magnitude and direction of all forces upon an object***

Object moves left with a force of 5N



Contact and Resultant forces

If force is at right angles to direction of movement, NO work is done.

Weight	***Force acting upon an object due to gravity***	Newton (N)
Mass	***How much matter***	Kilograms (Kg)

Gravity

Work done and energy transfer

Work done	***When work is done, energy is transferred***	Work done = force X distance moved W = F X s
	1J of work is done when 1N of force moves an object through a distance of 1m, in the direction of the force.	

Forces and elasticity

One force	***The object changes speed or direction***
More than one force	***The object changes shape***

Two balanced forces can stretch a object.

Two balanced forces can compress an object.

Three balanced forces

Limit of proportionality

Beyond this point the spring is permanently deformed

Elastic deformation	***The object has been stretched but returns to its original length***
Inelastic deformation	***The object has been stretched but does not return to its original length***
Extension	***The***

Scalar	***A quantity that only has magnitude (size)***	e.g. mass, time, speed, temperature, energy,
Vector	***A quantity that only has magnitude and direction***	e.g. force, velocity, momentum

Scalar and vector quantities

An arrow can be used to show vectors	***Length of arrow = magnitude of vector***
	Direction of arrow = direction of vector

Velocity	***Speed + direction***	The speed of a car is 30m/s. A car moves forward with a velocity of 30m/s
Distance	***How far***	The table is 1m long
Displacement	***Distance + direction***	The beach is 1km due east of the town

Area	***Metres squares (m^2)***
Weight	***Newton (N)***
Mass	***Kilograms (kg)***
Gravitational field strength	***Newton per kilogram (N/Kg)***
Force	***Newton (N)***
Work done	***Joules (J)***
Distance	***Metres (m)***
Moment	***Newton-metres (Nm)***

Stretching a spring	Force = spring constant X extension, F = k X e
	EPE = ½ X spring constant X (extension)^2, EPE = ½ ke^2
Elastic Potential energy (EPE)	***Energy stored in a stretched spring***

Force	***Newton (N)***
Spring constant	***Newton per metre (N/m)***
Extension	***Metres (m)***
EPE	***Joules (J)***

Year 11 Science: Forces

Unit	*Newton (N)*	1N
Kilo	*Kilonewton (KN) = _____*	1X 10^3
Mega	*Meganewton (MN) = _____*	1 X 10^6

W = m X g

Force	*Push or pull*	
Contact force	*Exerted between two objects when they touch*	.
Non-contact force	*Exerted between two objects without touching*	

Resolving forces	*An object pulled with a force at an angle*	

.

Centre of mass	

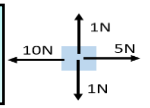
.

Gravitational field strength	*Gravity exerted around an object.*	Earth's gfs = ____N/kg

Resultant force	*The overall effect of all of the forces acting upon an object*	

HIGHER ONLY

Free body diagram	



Contact and Resultant forces

Weight		Newton (N)
Mass		Kilograms (___)

Gravity

Work done	*When work is done, energy is transferred*	

Work done and energy transfer

Forces and elasticity

One force	
More than one force	

Scalar		
Vector		

Scalar and vector quantities

Elastic deformation	
Inelastic deformation	
Extension	

Limit of proportionality

An arrow can be used to show vectors	

10N

Area	
Weight	
Mass	
Gravitational field strength	
Force	
Work done	
Distance	
Moment	*Newton-metres (Nm)*

Stretching a spring	EPE = ½ X spring constant X (extension)^2, EPE = ½ ke^2

Elastic Potential energy (EPE)	

Velocity		
Distance	*How far*	
Displacement		

Force	
Spring constant	
Extension	
EPE	

Year 11 Science: Forces SEPS ONLY

Forces and their interactions

Moments, levers and gears

Principle of moments

In a balanced system, the sum of the clockwise moments = the sum of the anti-clockwise moments

Gears — ***Increase or decrease the rotational effect of a force***

Lever — ***A small force exerted with a long lever applies a large force***

M = F X d

Moment = force X distance

Moment — ***Turning effect of a force about a pivot***

HIGHER ONLY

Momentum

Is a vector

p = m X v

Momentum = mass X velocity

Crumple zones

Conservation of momentum

When two objects collide, the momentum they have before the collision = the momentum they have after the collision

Closed system = no external forces acting on it.

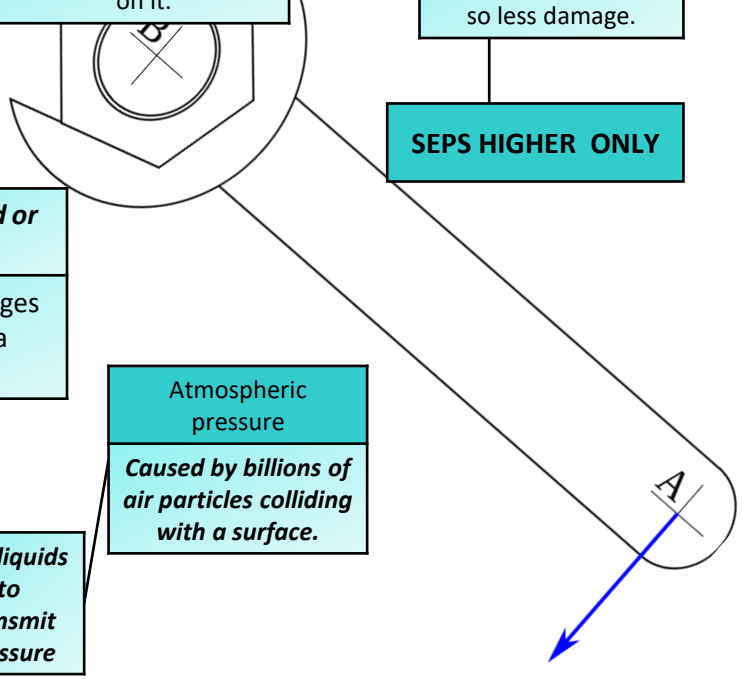
HIGHER ONLY

Changes in momentum

Force is applied to stop momentum

If momentum changes slowly, the force applied is small so less damage.

SEPS HIGHER ONLY



Pressure

Fluid — ***A liquid or gas***

Flows and changes shape to fill a container.

Pressure = height X density X gfs

~~HIGHER ONLY~~

Pressure = Force ÷ Area

P = F ÷ A

Pressure and depth

Pressure on divers depends on weight of water above

Upthrust

Resultant force exerted by a fluid

Hydraulic machine — ***Use liquids to transmit pressure***

Atmospheric pressure

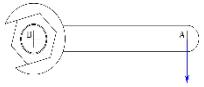
Caused by billions of air particles colliding with a surface.

Year 11 Science: Forces SEPS ONLY

Forces and their interactions

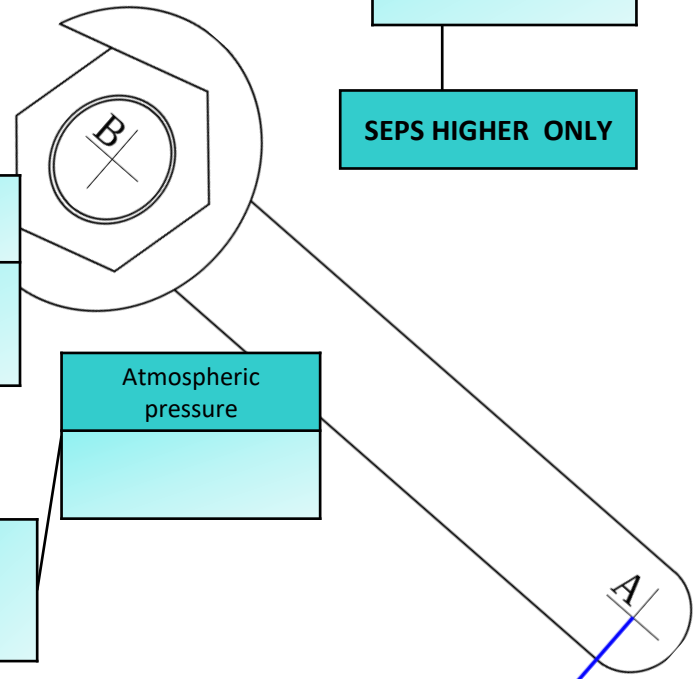
Moments, levers and gears

- Principle of moments
- Gears
- M = F X d
- Lever
- Moment



HIGHER ONLY

- Momentum
- p = m X v
- Crumple zones
- Momentum =_____ x_____
- Conservation of momentum
- HIGHER ONLY
- Changes in momentum
- SEPS HIGHER ONLY



- Fluid
- Pressure
- HIGHER ONLY
- Pressure =_____ ____
- Atmospheric pressure
- Hydraulic machine
- Pressure and depth
- Upthrust

Year 11 Science: Forces

Describing motion

Aeroplane banks to change direction	Velocity changes.
Car travelling around a bend	Constant speed, direction changes.
Satellite orbiting the Earth	Constant speed, direction changes.

Gradient = vertical ÷ horizontal

Changing velocity	***Objects in a circular motion, change direction but keep a constant speed***

Velocity	***The speed of an object with direction***	Vector

HIGHER ONLY

Speed of sound 330m/s.

Speed = distance ÷ time

v = s ÷ t

Speed	***How fast an object moves***	Scalar
Displacement	***Includes the distance and direction an object moves***	vector

Car on motorway	***30m/s***
Train	***60m/s***
Jet plane	

Walking	***1.5m/s***
Running	***3m/s***

Speed is rarely constant.

Distance-time graph	***Shows how far an object moves along a straight line***
Speed of object	***Use the gradient of graph***

Accelerating objects	***It takes time for objects to reach top speed***	Draw a tangent to the curve, work out gradient.

Distance travelled	***Area under the graph shape***

HIGHER ONLY

Velocity-time graph	***Shows speed of an object***

Accelerating	***Object getting faster***
Decelerating	***Object slowing down***

Acceleration	***Change in velocity***	Vector

Forces, acceleration and Newton's Laws of motion

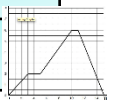
Constant acceleration

(final velocity)^2 – (initial velocity)^2 = 2 X acceleration X distance

$V^2 - u^2 = 2 \times a \times s$

Falling objects	Falling objects accelerate due to gravity.	In no air resistance, objects accelerate at 9.8m/s^2
		Air resistance slows falling objects down.
Terminal velocity	***Weight of an object is balanced by resistive forces***	Object moves at a constant velocity. Resultant force = 0.

Parachuting	***Size of air resistance depends on area of object and speed***
	Larger the area, the larger the air resistance.
	Larger the speed, the larger the air resistance.



Speed / velocity	***Metres per second (m/s)***
Distance	***Metres (m)***
Time	***Seconds (s)***
Acceleration	***Metres per second squared (m/s^2)***
Force	***Newton (N)***
Mass	***Kilogram (Kg)***
Momentum	***Kilograms metres per second (Kgm/s)***

Inertia	***When objects continue in the same state of motion***

HIGHER ONLY

Speed or direction only changes if a resultant force acts on the object

Observing and recording motion

Force = mass X acceleration

F = m X a

Forces and braking

Frictional forces decelerate a moving object and bring it to rest.

Speed affects both thinking and braking distances

Typical reaction time = 0.7s

Thinking distance	***Distance travelled whilst the driver reacts***
Braking distance	***Distance travelled whilst the car is stopped by the brakes***
Stopping	***Total thinking and braking***

Factors affecting stopping distances	***Drivers reaction times***	Drinking alcohol, taking drugs, tired.
	Braking distances	Weather conditions, worn brakes or tyres, road surface, size of braking force.

Braking and kinetic energy	***Work done by braking force, reduces kinetic energy***	Kinetic energy decreases, temperature of brakes increases due to frictional forces.

HIGHER ONLY

Inertial mass	***How difficult it is to change the velocity of an object***

Inertial mass = force ÷ acceleration

If the mass is large, to change velocity a big force is needed.

Acceleration is proportional to resultant force.

Acceleration is inversely proportional to mass.

Newton's first Law	***Balanced forces***	When the resultant force on an still object = 0, the object is stationary.
		When the resultant force on a moving object = 0, the object is at a constant speed.
Newton's second Law	***Unbalanced forces***	When the resultant force is greater than 0, the object accelerates. It could speed up, slow down or change direction.
Newton's third Law	***Equal and opposite forces***	When two objects interact the forces exerted are equal and in an opposite direction.

Year 11 Science: Forces

Describing motion

- Aeroplane banks to change direction
- Car travelling around a bend
- Satellite orbiting the Earth

Gradient = vertical ÷ horizontal

- Changing velocity
- Velocity — Vector
- HIGHER ONLY: Speed of sound
- v = s ÷ t
- Speed
- Displacement
- Distance

- Distance travelled
- Velocity-time graph
- Accelerating
- Decelerating
- Acceleration — Vector
- Distance-time graph
- Speed of object

Accelerating objects — *It takes time for objects to reach top speed*

Speed is rarely constant.

- Car on motorway
- Train
- Jet plane
- Walking
- Running

Observing and recording motion

Forces and braking

- Thinking distance
- Braking distance
- Stopping distance

Typical reaction time = ___s

Factors affecting stopping distances:
- *Drivers reaction times*
- *Braking distances*

Braking and kinetic energy

Forces, acceleration and Newton's Laws of motion

- Constant acceleration
- Falling objects
- Falling objects accelerate due to gravity.
- Terminal velocity
- Parachuting

- Speed / velocity
- Distance
- Time
- Acceleration
- Force
- Mass
- Momentum

F = m X a

HIGHER ONLY

- Inertial mass

Acceleration is inversely proportional to mass.

- Inertia

HIGHER ONLY

Newton's first Law	*Balanced forces*
Newton's second Law	*Unbalanced forces*
Newton's third Law	*Equal and opposite forces*

Year 11 science: Chemistry of the atmosphere

The Earth's early atmosphere

Volcano activity 1st Billion years	***Billions of years ago there was intense volcanic activity***	This released gases (mainly CO_2) that formed to early atmosphere and water vapour that condensed to form the oceans.
Other gases	***Released from volcanic eruptions***	Nitrogen was also released, gradually building up in the atmosphere. Small proportions of ammonia and methane also produced.
Reducing carbon dioxide in the atmosphere	***When the oceans formed, carbon dioxide dissolved into it***	This formed carbonate precipitates, forming sediments. This reduced the levels of carbon dioxide in the atmosphere.

Proportions of gases in the atmosphere

Gas	*Percentage*
Nitrogen	*~80%*
Oxygen	*~20%*
Argon	*0.93%*
Carbon dioxide	*0.04%*

How oxygen increased

Algae and plants	***These produced the oxygen that is now in the atmosphere, through photosynthesis.***	carbon dioxide + water → glucose + oxygen $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$
Oxygen in the atmosphere	***First produced by algae 2.7 billion years ago.***	Over the next billion years plants evolved to gradually produce more oxygen. This gradually increased to a level that enabled animals to evolve.

How carbon dioxide decreased

Reducing carbon dioxide in the atmosphere	***Algae and plants***	These gradually reduced the carbon dioxide levels in the atmosphere by absorbing it for photosynthesis.
Formation of sedimentary rocks and fossil fuels	***These are made out of the remains of biological matter, formed over millions of years***	Remains of biological matter falls to the bottom of oceans. Over millions of years layers of sediment settled on top of them and the huge pressures turned them into coal, oil, natural gas and sedimentary rocks. The sedimentary rocks contain carbon dioxide from the biological matter.

Carbon footprints

The total amount of greenhouse gases emitted over the full life cycle of a product/event. This can be reduced by reducing emissions of carbon dioxide and methane.

The greenhouse effect

Carbon dioxide, water vapour and methane	***Examples of greenhouse gases that maintain temperatures on Earth in order to support life***
The greenhouse effect	***Radiation from the Sun enters the Earth's atmosphere and reflects off of the Earth. Some of this radiation is re-radiated back by the atmosphere to the Earth, warming up the global temperature.***

Atmospheric pollutants from fuels

Combustion of fuels	***Source of atmospheric pollutants. Most fuels may also contain some sulfur.***
Gases from burning fuels	***Carbon dioxide, water vapour, carbon monoxide, sulfur dioxide and oxides of nitrogen.***
Particulates	***Solid particles and unburned hydrocarbons released when burning fuels.***

Properties and effects of atmospheric pollutants

Carbon monoxide	***Toxic, colourless and odourless gas. Not easily detected, can kill.***
Sulfur dioxide and oxides of nitrogen	***Cause respiratory problems in humans and acid rain which affects the environment.***
Particulates	***Cause global dimming and health problems in humans.***

Effects of climate change

- Rising sea levels
- Extreme weather events such as severe storms
- Change in amount and distribution of rainfall
- Changes to distribution of wildlife species with some becoming extinct

Carbon dioxide

Carbon dioxide	***Human activities that increase carbon dioxide levels include burning fossil fuels and deforestation.***
Methane	***Human activities that increase methane levels include raising livestock (for food) and using landfills (the decay of organic matter released methane).***
Climate change	***There is evidence to suggest that human activities will cause the Earth's atmospheric temperature to increase and cause climate change.***

Year 11 science: Chemistry of the atmosphere

The Earth's early atmosphere

Volcano activity 1st Billion years		
Other gases		
Reducing carbon dioxide in the atmosphere		

Proportions of gases in the atmosphere

Gas	*Percentage*
Nitrogen	
Oxygen	
Argon	
Carbon dioxide	

How oxygen increased

Algae and plants		
Oxygen in the atmosphere		

Carbon footprints

How carbon dioxide decreased

Reducing carbon dioxide in the atmosphere		
Formation of sedimentary rocks and fossil fuels		

Properties and effects of atmospheric pollutants

Carbon monoxide	
Sulfur dioxide and oxides of nitrogen	
Particulates	

Atmospheric pollutants from fuels

Combustion of fuels	
Gases from burning fuels	
Particulates	

Effects of climate change

The greenhouse effect

Carbon dioxide, water vapour and methane		
Carbon dioxide		
Methane		
Climate change		

Year 11 science: Using resources

Using the Earth's resources and sustainable development

Earth's resources	***Used to provide warmth, shelter, food and transport for humans***	Natural resources and resources from agriculture provide: timber, food, clothing and fuels.
		Finite resources from the Earth, oceans and atmosphere are processed to provide energy and materials.
Chemistry and resources	***Research and techniques improve agricultural and industrial processes***	These improvements provide new products and improve sustainability.
Plastics	***Normally made using ethene from crude oil***	However, the raw material ethene can also be obtained from ethanol, which can be produced during fermentation. Industries are now starting to use a renewable crop for this process.

Life cycle assessment

LCAS	***Life cycle assessments are carried out to assess the environmental impact of products***	They are assessed at these stages: - Extraction and processing raw materials - Manufacturing and packaging - Use and operation during lifetime - Disposal
Values	***Allocating numerical values to pollutant effects is difficult***	Value judgments are allocated to the effects of pollutants so LCA is not a purely objective process.

Ways of reducing the use of resources

Reduce, reuse and recycle	***This strategy reduces the use of limited resources***	This, therefore, reduces energy sources being used, reduces waste (landfill) and reduces environmental impacts.
Limited raw materials	***Used for metals, glass, building materials, plastics and clay ceramics***	Most of the energy required for these processes comes from limited resources. Obtaining raw materials from the Earth by quarrying and mining causes environmental impacts.
Reusing and recycling	***Metals can be recycled by melting and recasting/reforming***	Glass bottles can be reused. They are crushed and melted to make different glass products. Products that cannot be reused are recycled.

Potable water

Potable water	***Water of an appropriate quality is essential for life***	Human drinking water should have low levels of dissolved salts and microbes. This is called potable water.
UK water	***Rain provides water with low levels of dissolved substances***	This water collects in the ground/lakes/rivers. To make potable water an appropriate source is chosen, which is then passed through filter beds and then sterilised.
Desalination	***Needs to occur is fresh water is limited and salty/sea water is needed for drinking***	This can be achieved by distillation or by using large membranes e.g. reverse osmosis. These processes require large amounts of energy.

Sterilising agents include chlorine, ozone and UV light.

Waste water treatment

Waste water	***Produced from urban lifestyles and industrial processes***	These require treatment before used in the environment. Sewage needs the organic matter and harmful microbes removed.
Sewage treatment	***Includes many stages***	- Screening and grit removal - Sedimentation to produce sludge and effluent (liquid waste or sewage). - Anaerobic digestion of sludge - Aerobic biological treatment of effluent.

Alternative methods of extracting metals (HT)

Metals ores	***These resources are limited***	Copper ores especially are becoming sparse. New ways of extracting copper from low-grade ores are being developed.
Phytomining	***Plants absorb metal compounds***	These plants are then harvested and burned; their ash contains the metal compounds.
Bioleaching	***Bacteria is used to produce leachate solutions that contain metal compounds***	The metal compounds can be processed to obtain the metal from it e.g. copper can be obtained from its compounds by displacement or electrolysis.

Year 11 science: Using resources

Using the Earth's resources and sustainable development

Earth's resources		
Chemistry and resources		
Plastics		

LCAS		
Values		

Reduce, reuse and recycle		
Limited raw materials		
Reusing and recycling		

Potable water

Potable water		
UK water		
Desalination		

Life cycle assessment

Waste water treatment

Waste water		
Sewage treatment		

Alternative methods of extracting metals (HT)

Metals ores		
Phytomining		
Bioleaching		

Ways of reducing the use of resources

Year 11 science: Using resources SEPS ONLY

Corrosion and its prevention

Corrosion	***The destruction of materials by chemical reactions with substances in the environment***	An example of this is iron rusting; iron reacts with oxygen from the air to form iron oxide (rust) water needs to be present for iron to rust.
Preventing corrosion	***Coatings can be added to metals to act as a barrier***	Examples of this are greasing, painting and electroplating. Aluminium has an oxide coating that protects the metal from further corrosion.
Sacrificial corrosion	***When a more reactive metal is used to coat a less reactive metal***	This means that the coating will react with the air and not the underlying metal. An example of this is zinc used to galvanise iron.

Alloys are useful materials

Alloys	***A mixture of two elements, one of which must be a metal e.g. Bronze is an alloy of copper and tin and Brass is an alloy of copper and zinc.***
Gold carats	***Gold jewellery is usually an alloy with silver, copper and zinc. The carat of the jewellery is a measure of the amount of gold in it e.g. 18 carat is 75% gold, 24 carat is 100% gold.***
Steels	***Alloys of iron, carbon and other metals.***
	High carbon steel is strong but brittle.
	Low carbon steel is softer and easily shaped.
	Steel containing chromium and nickel (stainless) are hard and corrosion resistant.
	Aluminium alloys are low density.

Ceramics, polymers and composites

Polymers	***Thermosetting***	polymers that do not melt when they are heated.
	Thermosoftening	polymers that melt when they are heated.

Composite materials	***A mixture of materials put together for a specific purpose e.g. strength***	Soda-lime glass, made by heating sand, sodium carbonate and limestone.
		Borosilicate glass, made from sand and boron trioxide, melts at higher temperatures than soda-lime glass.
		MDF wood (woodchips, shavings, sawdust and resin)
		Concrete (cement, sand and gravel)
Ceramic materials	***Made from clay***	Made by shaping wet clay and then heating in a furnace, common examples include pottery and bricks.
Polymers	***Many monomers can make polymers***	These factors affect the properties of the polymer. Low density (LD) polymers and high density (HD) polymers are produced from ethene. These are formed under different conditions.

The Haber process and the use of NPK fertilisers

NPK fertilisers	***These contain nitrogen, phosphorous and potassium***	Formulations of various salts containing appropriate percentages of the elements.
Fertiliser examples	***Potassium chloride, potassium sulfate and phosphate rock are obtained by mining***	Phosphate rock needs to be treated with an acid to produce a soluble salt which is then used as a fertiliser. Ammonia can be used to manufacture ammonium salts and nitric acid.

The Haber process	***Used to manufacture ammonia***	***Ammonia is used to produce fertilisers*** Nitrogen + hydrogen ⇌ ammonia
Raw materials	***Nitrogen from the air while hydrogen from natural gas***	Both of these gases are purified before being passed over an iron catalyst. This is completed under high temperature (about 450°C) and pressure (about 200 atmospheres).
Catalyst	***Iron***	The catalyst speeds up **both** directions of the reaction, therefore not actually increasing the amount of valuable product.

Phosphate rock

Treatment	*Products*
Nitric acid	***The acid is neutralised with ammonia to produce ammonium phosphate, a NPK fertiliser.***
Sulfuric acid	***Calcium phosphate and calcium sulfate (a single superphosphate).***
Phosphoric acid	***Calcium phosphate (a triple superphosphate).***

The Haber process – conditions and equilibrium

Pressure	***The reactants side of the equation has more molecules of gas. This means that if pressure is increased, equilibrium shifts towards the production of ammonia (Le Chatelier's principle). The pressure needs to be as high as possible.***
Temp	***The forward reaction is exothermic. Decreasing temperature increases ammonia production at equilibrium. The exothermic reaction that occurs releases energy to surrounding, opposing the temperature decreases. Too low though and collisions would be too infrequent to be financially viable.***

Year 11 science: Using resources SEPS ONLY

Corrosion and its prevention

Corrosion		
Preventing corrosion		
Sacrificial corrosion		

Alloys are useful materials

Alloys	
Gold carats	
Steels	

Ceramics, polymers and composites

Polymers		

The Haber process and the use of NPK fertilisers

NPK fertilisers		
Fertiliser examples		

The Haber process		
Raw materials		
Catalyst		

Phosphate rock

Treatment	*Products*
Nitric acid	
Sulfuric acid	
Phosphoric acid	

The Haber process – conditions and equilibrium

Pressure	
Temp	

Composite materials	*A mixture of materials put together for a specific purpose e.g. strength*	
Ceramic materials	*Made from clay*	
Polymers	*Many monomers can make polymers*	

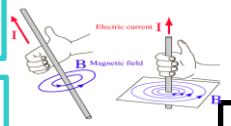
Year 11 science: Magnetism and Electromagnetism

Permanent and Induced Magnetism

Magnetic	***Materials attracted by magnets***	Uses non-contact force to attract magnetic materials.
North seeking pole	***End of magnet pointing north***	Compass needle is a bar magnet and points north.
South seeking pole	***End of magnet pointing south***	Like poles (N – N) repel, unlike poles (N – S) attract.
Magnetic field	***Region of force around magnet***	Strong field, force big. Weak field, force small. Field is strongest at the poles.
Permanent	***A magnet that produces its own magnetic field***	Will repel or attract other magnets and magnetic materials.
Induced	***A temporary magnet***	Becomes magnet when placed in a magnetic field.

Magnetic field around a wire

Electric current flowing in a wire produces a magnetic field around it.



Reverse current, magnetic field direction reverses.

Further away from the wire, magnetic field is weaker.

Current large enough, iron filings show circular magnetic field.

If current is small, magnetic field is very weak.

Right hand rule

Thumb	Direction of current.
Fingers	Direction of magnetic field.

Motor effect

HIGHER only

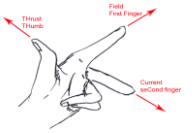
Magnetic fields from the permanent magnet and current in the foil interact. This is called the motor effect.

Reverse the current , foil moves upwards.

Aluminium foil placed between two poles of a strong magnet, will move downwards when current flows through the foil.

Size of force acting on foil depends on magnetic flux density between poles, size of current, length of foil between poles.

To predict the direction a straight conductor moves in a magnetic field.



Fleming's left-hand rule

Thumb	Direction of movement.
First finger	Direction of magnetic field.
Second finger	Direction of current.

F = B X I X l

Force = magnetic flux density X current X length

If current and magnetic field are parallel to each other , no force on wire.

Magnetic flux	***Lines drawn to show magnetic field***	Lots of lines = stronger magnets.
Magnetic flux density	***Number of lines of magnetic flux in a given area***	Measures the strength of magnetic force.

Electric motor	***Coil of wire rotates about an axle***	Current flows through the wire causing a downward movement on one side and an upward movement on the other side.

Generators	***Coil of wire rotating inside a magnetic field. The end of the coil is connected to slip rings.***	Produces altering current.

Microphones	***Converts pressure variations in sound waves into variations in current in electrical circuits.***

Loud speakers	***Converts variations in electrical current into sound waves .***

Varying current flows through a coil that is in a magnetic field. A force on the wire moves backwards and forwards as current varies. Coil connected to a diaphragm. Diaphragm movements produce sound waves.

Split-ring commutator	***Split ring touching two carbon brush contacts***

Relay	***A device using a small current to control a larger current in another circuit***	Solenoid is wound around an iron core. Small current magnetises the solenoid. This attracts to electrical contacts, making a complete circuit. Current flows from battery to starter motor.

Increase strength of magnetic field	***Use larger current***
	Use more turns of wire
	Put turns of wire closer together
	Use iron core in middle

Electromagnet	***Lots of turns of wire increase the magnetising effect when current flows***	
	Turn current off, magnetism lost.	

Solenoid	***A long coil of wire***	Magnetic field from each loop adds to the next.

Year 11 science: Magnetism and Electromagnetism

Relay

Split-ring commutator

Loud speakers

Electromagnet

Increase strength of magnetic field

Microphones

Generators

Fleming's left-hand rule

Thumb

First finger

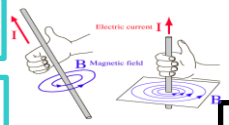
Second finger

Solenoid

Thumb

Fingers

Right hand rule



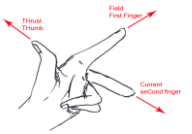
Magnetic field around a wire

Electric motor

Coil of wire rotates about an axle

Motor effect

HIGHER only



Permanent and Induced Magnetism

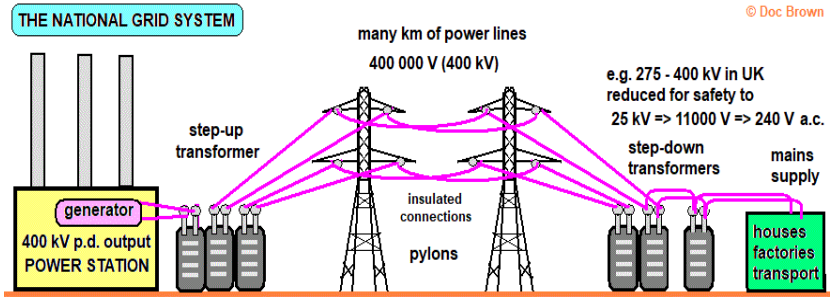
Magnetic		
North seeking pole		
South seeking pole		
Magnetic field		
Permanent		
Induced		

Magnetic flux		
Magnetic flux density		

Year 11 science: Magnetism and Electromagnetism SEPS ONLY

Induced potential, transformers and National Grid

National Grid	*Distributes electricity generated in power stations around UK*



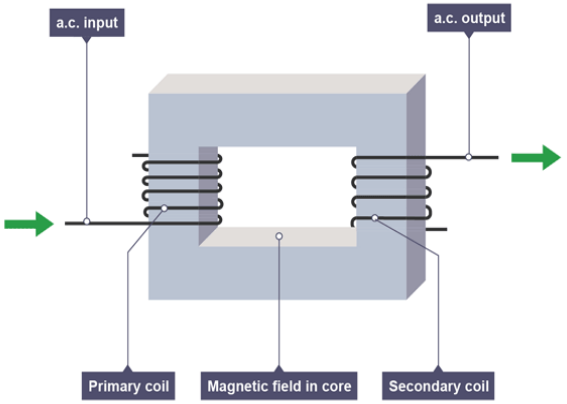
Transformer	*Two coils of wire onto an iron core*	Alternating current supplied to primary coil, making magnetic field change. Iron core becomes magnetised, carries changing magnetic field to secondary coil. This induces p.d.

Step-up transformers	Step-down transformers
Increase voltage, decrease current	***Decrease voltage, increase current***
Increases efficiency by reducing amount of heat lost from wires.	Makes safer value of voltage for houses and factories.

Induced potential	*When a conducting wire moves through a magnetic field, p.d. is produced*

Generator effect	*Generates electricity by inducing current or p.d.*

Uses of the generator effect	*Dynamo, Microphones*



Force	***Newton (N)***
Magnetic flux density	***Tesla (T)***
Current	***Amperes (A)***
Length	***Metres (m)***
Power	***Watts (W)***
p.d.	***Voltage (V)***

Power lost = Potential difference X Current

Power supplied to primary coil = power supplied to secondary coil

$V_p \times I_p = V_s \times I_s$

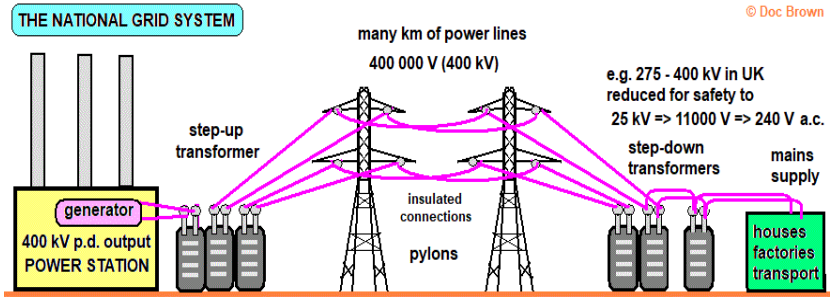
Voltage across the coil X number of coils (primary) = Voltage across the coil X number of coils (secondary)

$V_p \div V_s = n_p \div n_s$

Year 11 science: Magnetism and Electromagnetism SEPS ONLY

Induced potential, transformers and National Grid

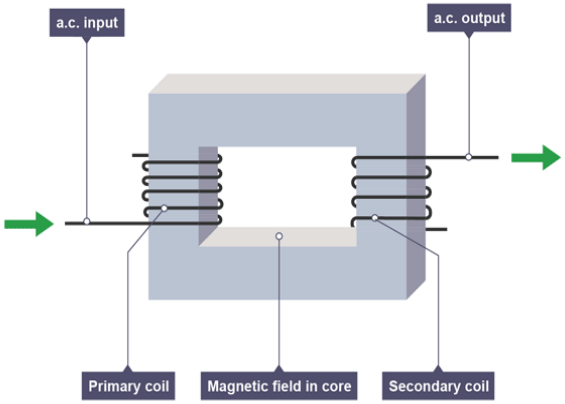
National Grid



Induced potential

Generator effect

Uses of the generator effect



Transformer

Step-up transformers	Step-down transformers

Year 11 science: Space SEPS ONLY

Moon	***A natural satellite orbiting a planet***
Dwarf planet	***A body large enough to have its own gravity which caused a spherical shape***
Solar system	***Any object orbiting the Sun due to gravity***
Galaxy	***Collection of billions of stars***
Universe	***Collection of galaxies***

Comets, asteroids, satellites.

Other objects.

Solar system

Milky Way our galaxy.

Orbital motions

Effect of gravity.

Gravity causes moons to orbit planets, planets to orbit the Sun, stars to orbit galaxy centres.

Force of gravity changes the moon's direction not its speed.

Gravity pulls objects towards the ground.

Speed of Orbit.

HIGHER: Circular orbits.

To calculate speed of Orbit: distance object moves in 1 orbit, Distance = 2∏r, then average speed = distance ÷ time.

Velocity = a vector.

HIGHER:

A planet's velocity changes but speed remains constant.

Planets close to the Sun, gravity pull is strong. Planets move quickly.

Due to the Sun's gravity, planets accelerate towards the Sun and so changes direction.

When ambulances go past the sound changes from a high pitch to a low pitch.

Planets further away from the Sun, gravity pull is weaker. So speed of planet is slower.

Frequency of sound wave decreases, wavelength increases.

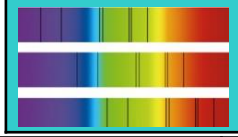
The life cycle of a star.

Nebula	***A cloud of cold hydrogen gas and dust***	Cloud collapses due to gravity, particles move very fast colliding with each other, kinetic energy transfers into internal energy and the temperature increases.
Protostar	***The large ball of gas contracts to form a star***	High temperature causes Hydrogen nuclei to collide and nuclear fusion begins. A star is 'born'.
Main sequence	***Stable period of star***	Gravity tries to collapse the star but enormous pressure of fusion energy expands and balances the inward force.
Red giant	***A large star that fuses Helium into heavier elements***	Hydrogen runs out, star becomes unstable, pressure inside drops causing star to collapse. Atoms now closer together results in atoms fusing and temperature increases. This increase in temperature causes the core to swell.
White dwarf	***Star collapses***	Nuclear fuel runs out, fusion stops, dense very hot core.
Black dwarf	***Cold dark star***	White dwarf cools down.
Red super giant	***Star swells greatly***	Nuclear fuel begins to run out and star swells (more matter = bigger size).
Supernova	***Gigantic explosion due to run away fusion reactions***	Rapid collapse, heats to very high temperatures causing run away nuclear reactions, star explodes, flinging remnants out into space. Large gravitational forces collapse the core into a tiny space. Remains of supernova form heavier elements (Iron and above)
Neutron star	***Very dense star***	Made out of neutrons.

Red shift

The Big Bang	***Universe began 13.8 billion years ago***
All matter and space expanded violently from a single point.	Red—shift provides evidence for expansion.

Red-shift	***The observed increase in wavelength of light from most distance galaxies. Light moves towards the red end of the spectrum.***
Hubble (1929)	***He studied light from distant galaxies; found as frequency decreases, wavelength increases.***



Light from star in our galaxy.

Light from star in nearby galaxy.

Light from star in distant galaxy.

Galaxies are moving away from us in all directions.

Light from distant galaxies is red-shifted, so galaxy is moving away from us.

Galaxies further away have bigger red-shift so are moving faster away.

Understanding models.

Aristotle (ancient Greek)	***Earth at the centre, other heavenly bodies move around the Earth.***
Copernicus (1473 - 1543)	***Sun at the centre, other heavenly bodies move around the Sun.***
Galileo (1610)	***Made a telescope, looked at Jupiter, found four moons rotating around planet.***

Planets and moons moved at different speeds to stars = reason for different positions.

OR if collapse is into a really tiny space.

Black hole	***No light escapes***	Gravitational forces so strong everything is pulled in.

Year 11 science: Space SEPS ONLY

Planet	
Moon	
Dwarf planet	
Solar system	
Galaxy	
Universe	

Other objects.

Solar system

Orbital motions

Effect of gravity.

Speed of Orbit.

HIGHER:

HIGHER: Circular orbits.

The life cycle of a star.

Nebula		
Protostar		
Main sequence		

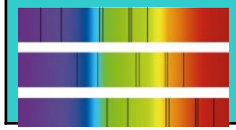
Red giant		
White dwarf		
Black dwarf		

Red super giant		
Supernova		
Neutron star		

Red shift

Understanding models.

The Big Bang	
Red-shift	
Hubble (1929)	



Aristotle (ancient Greek)	
Copernicus (1473 - 1543)	
Galileo (1610)	

Black hole		