

Need To Know Book

Year 11

Spring 2024

Name: _____

Form Group: _____

Be Kind.

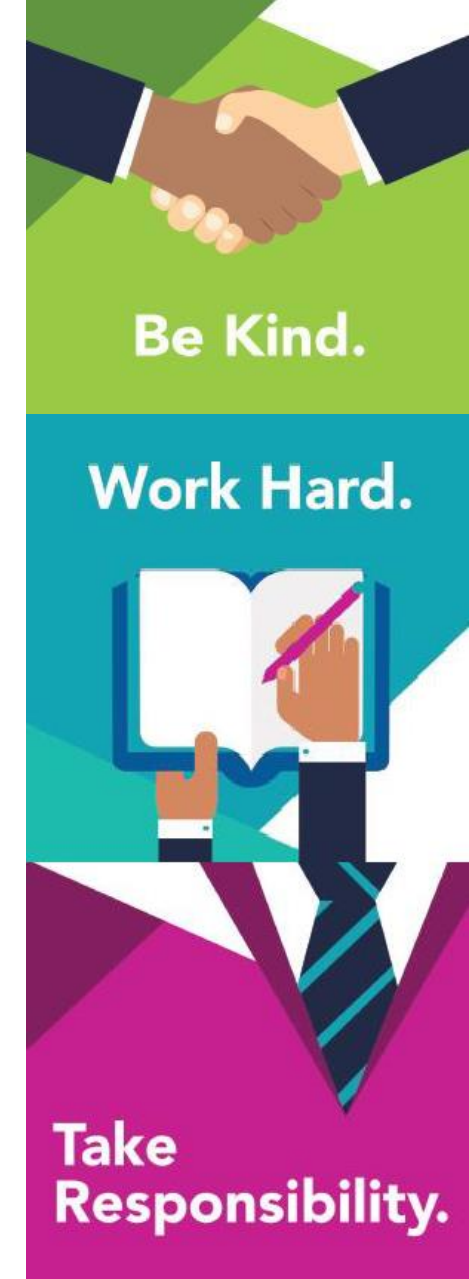
Work Hard.



Take
Responsibility.

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Helping every person achieve things they never thought they could.



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.

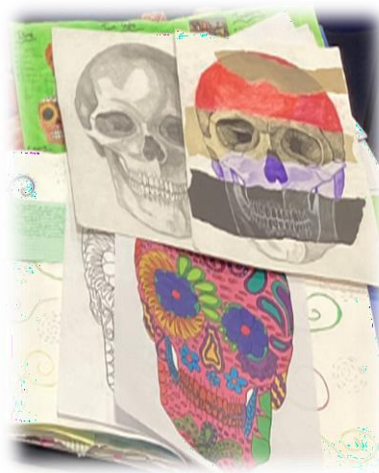
Year 11 Art: Assessment Objectives (AO1 + AO2)

A01 **EXPLORE**
DEVELOP
DEVELOP IDEAS
INVESTIGATE & RESEARCH
OTHER ARTISTS WORK
ANALYSE
ANNOTATE

AO1

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

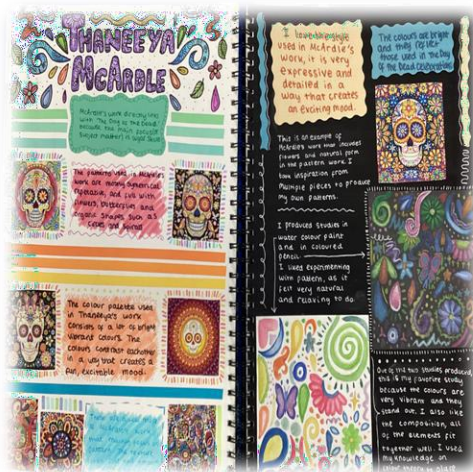
- Artist research pages.
- Visits to exhibitions and galleries.
- Your own responses in the style of the artist.
- Interviews with artists/photographers.
- Annotate and analyse what you have found out.



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



A02 **REVIEW**
REFINE
EXPERIMENT
EXPLORE DIFFERENT IDEAS
AND MEDIA
A RANGE OF TECHNIQUES
& PROCESSES
SELECT
IMPROVE

Year 11 Art: Assessment Objectives (AO1 + AO2)

A01

EXPLORE

DEVELOP

DEVELOP IDEAS

INVESTIGATE & RESEARCH

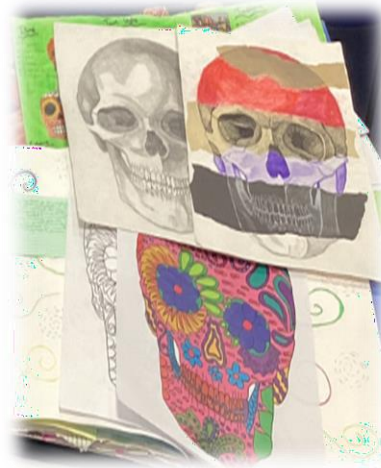
OTHER ARTISTS WORK

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.

A02

REVIEW

REFINE

EXPERIMENT

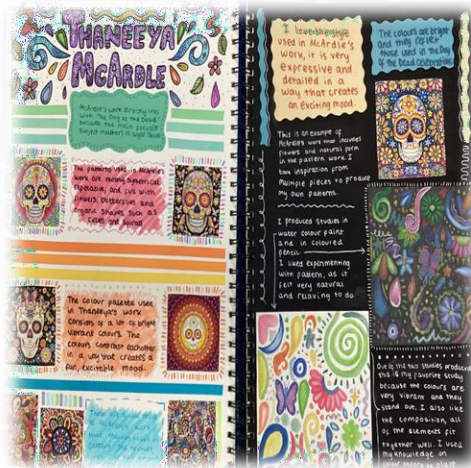
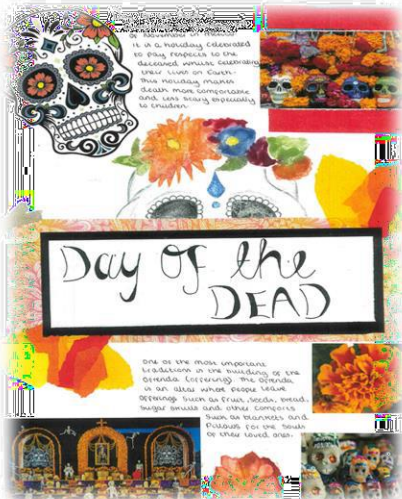
EXPLORE DIFFERENT IDEAS

AND MEDIA

A RANGE OF TECHNIQUES
& PROCESSES

SELECT

IMPROVE



Year 11 Art: Assessment Objectives (AO3 + AO4)

A03

EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

DRAWING, PAINTING,
PRINTING, PHOTOGRAPHY,
WRITING, PHOTOGRAPHY...

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

SKULL
STUDIES



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?)

A04

OUTCOME

PRESENT
FINAL IDEAS

DEVELOPED AS PLANNED

CLEARLY RESPONDS TO
ARTISTS EXPLORED

CONNECTION

CONCLUSION

Year 11 Art: Assessment Objectives (AO3 + AO4)

A03

EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

DRAWING, PAINTING,
PRINTING, PHOTOGRAPHY,
WRITING, PHOTOGRAPHY...

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.

A04

OUTCOME

PRESENT FINAL IDEAS

DEVELOPED AS PLANNED

CLEARLY RESPONDS TO
ARTISTS EXPLORED

CONNECTION

CONCLUSION

Year 11 Fashion: (A01 + A02)

A01

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?



A02

REVIEW

REFINE

EXPERIMENT

EXPLORE DIFFERENT IDEAS

AND MEDIA

A RANGE OF TECHNIQUES & PROCESSES

SELECT

IMPROVE

Year 11 Fashion: (A01 + A02)

A01

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?



A02

REVIEW

REFINE

EXPERIMENT

EXPLORE DIFFERENT IDEAS

AND MEDIA

A RANGE OF TECHNIQUES & PROCESSES

SELECT

IMPROVE

Year 11 Fashion: (A03 + A04)

A03

EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

**DRAWING, PAINTING,
PRINTING, PHOTOGRAPHY,
WRITING, PHOTOGRAPHY...**

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



A03

EVIDENCE

RECORD

PRESENT IDEAS

PRIMARY OBSERVATION

DRAWING, PAINTING,
PRINTING, PHOTOGRAPHY,
WRITING, PHOTOGRAPHY...

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	<p>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.</p> <p>Shorter shutter speeds let less light in and can capture moving subjects as still or 'frozen'.</p>
2. Exposure	<p>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.</p> <p>Exposure is determined by a combination of shutter speed, aperture, and ISO.</p>
3. Aperture	<p>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.</p> <p>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.</p>
4. F-Stop	<p>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.</p> <p>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.</p>
5. Bokeh	<p>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.</p> <p>Using this technique, light sources can appear as smooth blobs of colour.</p>



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

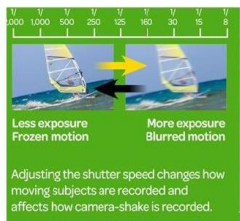
10.

Raw

Year 11 Photography:

Shutter Speed

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



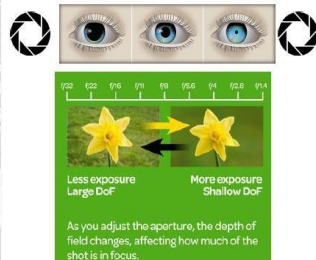
Adjusting the shutter speed changes how moving subjects are recorded and affects how camera-shake is recorded.

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.



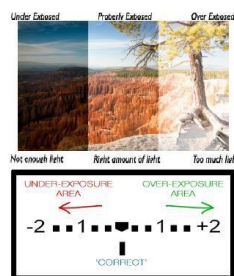
As you adjust the aperture, the depth of field changes, affecting how much of the shot is in focus.

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

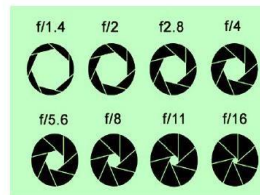
Is the amount of light entering the camera's sensor. Too much light and the image is overexposed and not enough light and it's underexposed.



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

F-Stop

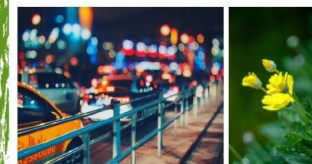
Or f-number is the aperture size or aperture stop in a number that controls the size of the lens opening. Therefore controlling the amount of light entering the camera.



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

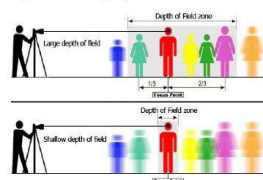
Focal Point



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.

Less exposure Frozen motion More exposure Blurred motion

Adjusting the shutter speed changes how moving subjects are recorded and affects how camera-shake is recorded.

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.

Less exposure Large DoF More exposure Shallow DoF

As you adjust the aperture, the depth of field changes, affecting how much of the shot is in focus.

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.

Under Exposed Properly Exposed Over Exposed

Not enough light Right amount of light Too much light

UNDER-EXPOSURE AREA OVER-EXPOSURE AREA

-2 -1 0 1 2

'CORRECT'

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.

f/1.4 f/2 f/2.8 f/4

f/5.6 f/8 f/11 f/16

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).

Large depth of field Shallow depth of field

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.

JPEG Recovery RAW Recovery

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.

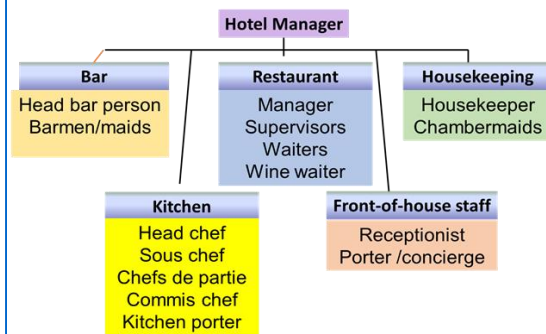
Catering



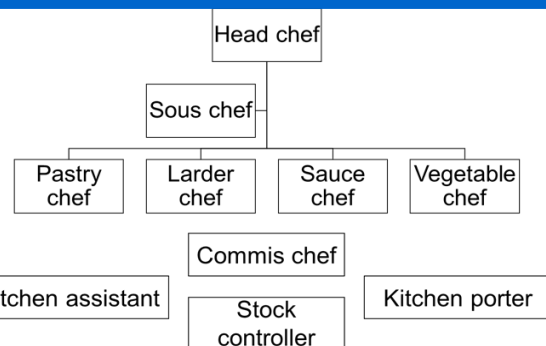
Helping every person achieve things they never thought they could.

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**- Le Saucier
- **Pastry chef**- Le Pâtissier- baked goods and dessert
- **Fish chef**- Le Poissonnier
- **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 (Maitre 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

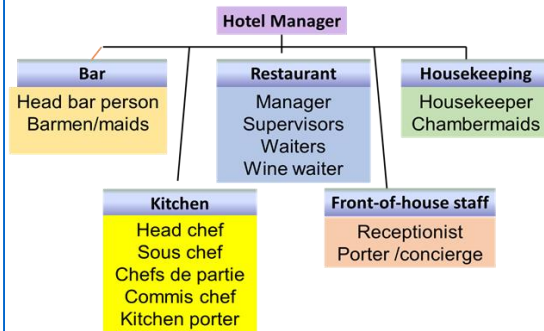
- Employed for a specific length of time such as the summer tourist season or the month of December.
- Temporary staff have the same rights as permanent staff for the duration of their contract.
- Temporary staff employed for longer than 2 years become permanent by law

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.

Job roles in the industry

Staff structure in a hotel



Front of House roles

Reception
Receptionist:

Restaurant and bar
Restaurant manager (Maître d'Hôte):

Head waiter (ess):

Waiting staff

Wine waiter- Le sommelier

Bar staff

Baristas

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)
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Casual staff / Agency staff

- work for _____ functions and can be employed through an agency.
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- They are needed at _____ times of the year e.g. at Christmas or for weddings, New years eve

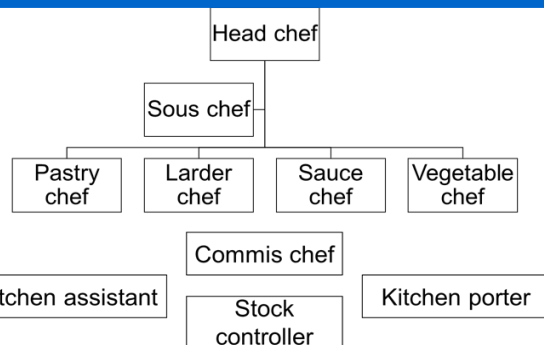
Temporary staff

- 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.

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**

Personal attributes



Remuneration

Remuneration is a term used for the reward that people receive from working somewhere. It includes their basic pay, plus extra money to top up 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 the 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 'tronicmaster'.

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: $28 \times 3/5 = 16.8$ 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

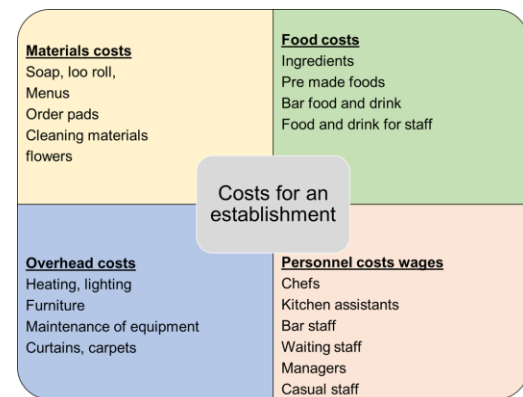
Customer service-customer satisfaction - free WiFi, order online

Competition - Low cost food (£1 menu, coffee McDonalds 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,



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

Reasons for failure

- A saturated market** - there is a fine line between competition & too many for the number of customers
- General business incompetence** - 46% of business fail due to lack of business knowledge
- Lack of capital** - not enough money to get through the first few months
- Location** - either not enough people walk past (foot-fall) live & work nearby
- Quality of life** - most restaurateurs work 60 hours a week - not the glamorous life they thought
- Lack of industry experience** - most successful restaurateurs tend to have previous industry experience
- 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)
- Name of the restaurant is too long-** A restaurant with a name that is brief, descriptive and attractive is more likely to succeed.
- Lack of differentiation** -the brand is not different enough
- Poor financial controls** - Main costs - labour and food exceeded 60% of sales

Remuneration

_____ is a term used for the reward that people receive from working somewhere. It includes their basic pay, plus extra money to top up 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 the 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'.

Paid annual leave

Compulsory Rest Breaks

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 –

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 –

Materials costs

Soap, loo roll,
Menus
Order pads
Cleaning materials
flowers

Food costs

Ingredients
Pre made foods
Bar food and drink
Food and drink for staff

Costs for an establishment

Overhead costs

Heating, lighting
Furniture
Maintenance of equipment
Curtains, carpets

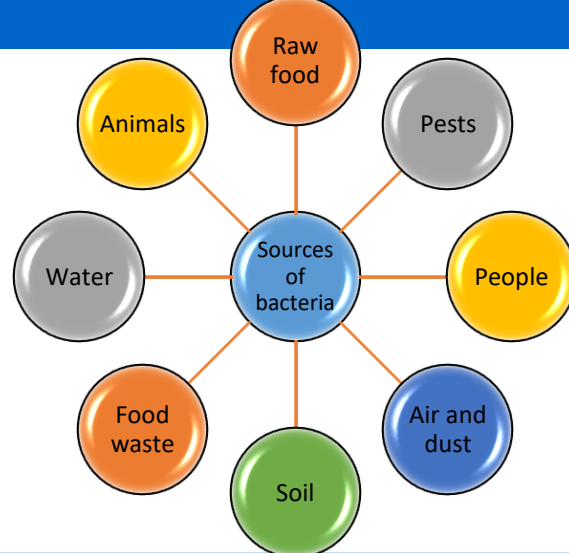
Personnel costs wages

Chefs
Kitchen assistants
Bar staff
Waiting staff
Managers
Casual staff

What is portion control?

Food-related causes of ill health

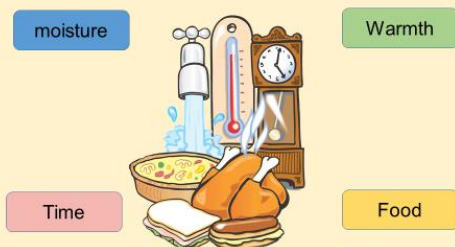
Microbes- are tiny micro-organisms that can contaminate food and spoil it, causing ill health. The micro-organisms discussed on this page are bacteria, yeasts and moulds



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?



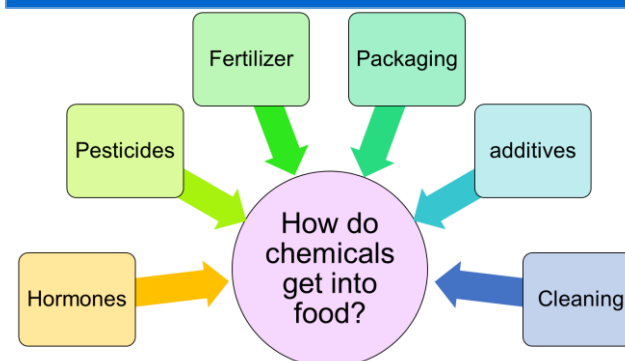
Yeasts

- 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

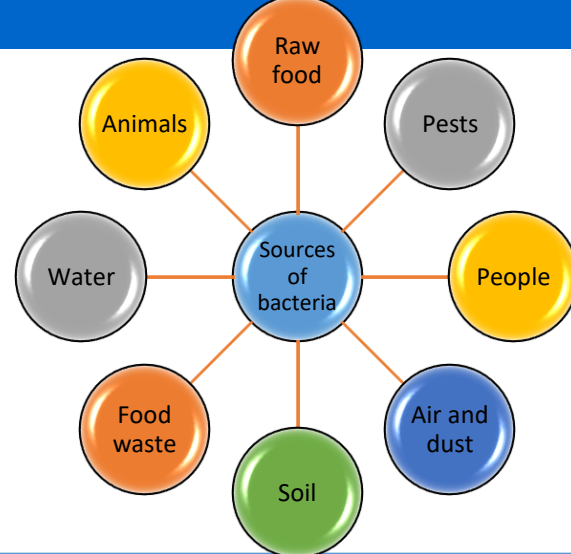
Aluminium

- 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.

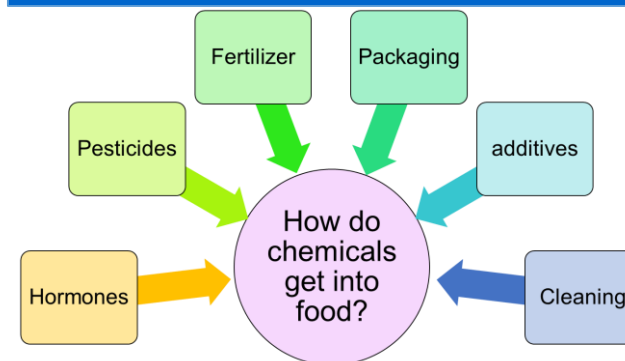
Copper

- Copper may be used in cups, pots and pans. It warms quickly and is the 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.

Food-related causes of ill health



Chemicals



Bacteria

Yeasts

Moulds

What do bacteria need to multiply?

moisture

Warmth

Time

Food



Metals

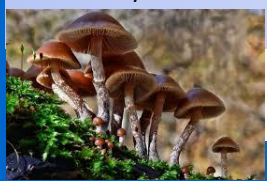
Aluminium

Copper

Food-related causes of ill health

Poisonous plants

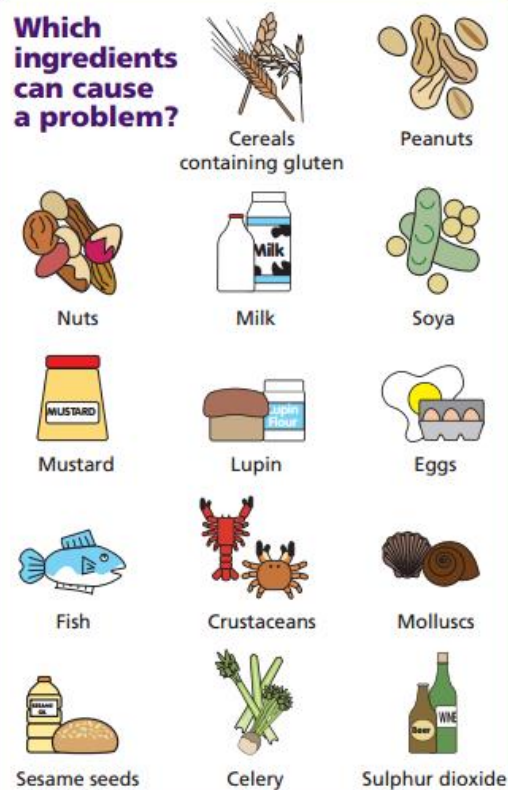
- Some mushrooms are poisonous, so you should pick mushrooms to eat unless you are 100% sure of what they are. The death cap and autumn skullcap are two of the most poisonous. Consuming poisonous mushrooms can lead to pain in the area of the kidneys, thirst, vomiting, headache and fatigue.
- Many berries that grow wild are poisonous and should not be eaten. Yew berries, deadly nightshade and unripe elderberries are 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 however.
- 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 at 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.

Which ingredients can cause a problem?



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 and is found in a number of foods including flour, 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**.

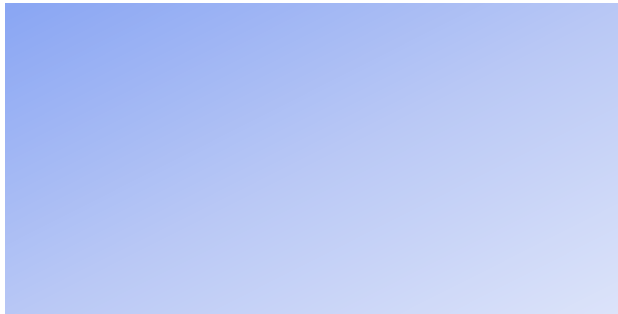


Food-related causes of ill health















Poisonous plants



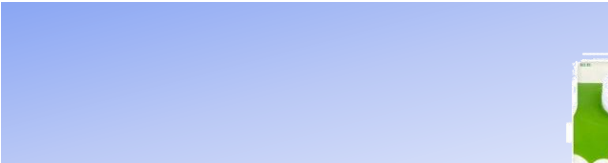
Allergies



Which ingredients can cause a problem?

 Cereals containing gluten	 Peanuts	
 Nuts	 Milk	 Soya
 Mustard	 Lupin	 Eggs
 Fish	 Crustaceans	 Molluscs
 Sesame seeds	 Celery	 Sulphur dioxide

Intolerances



Lactose intolerance



Gluten intolerance



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.
- They 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.
- They 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.



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-**

Food safety legislation

Food Safety Act 1990

- This act is concerned with all aspects of food production and sale.
- It 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 food 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.

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.

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 and 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.

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

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:

- .
- .
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- .
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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.

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)**

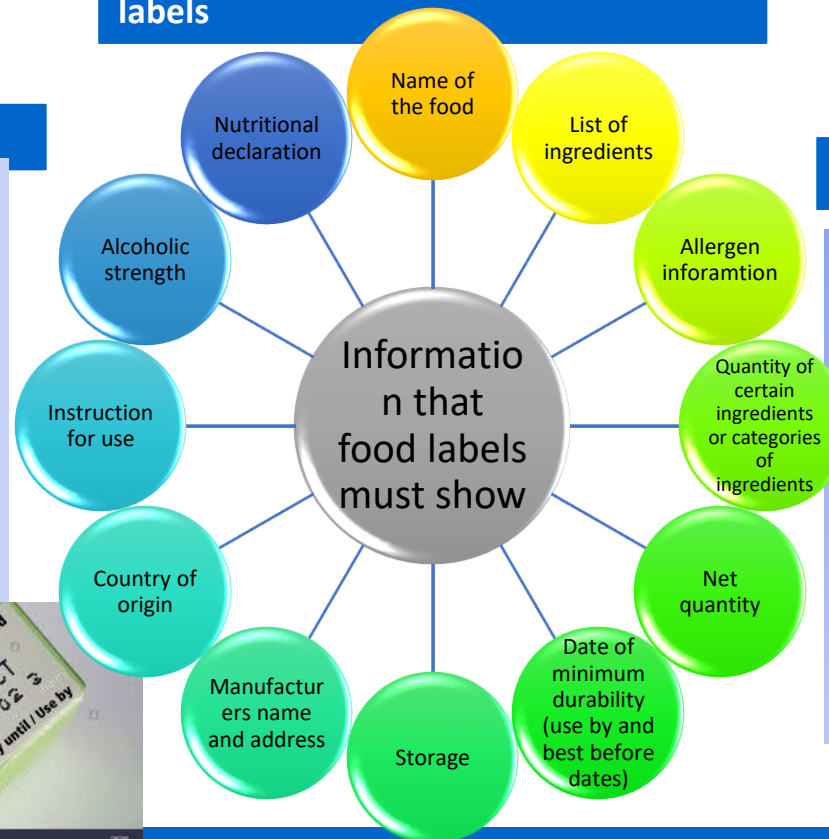
Traffic light labelling is a voluntary system that uses traffic light colours to indicate how healthy a product is at a glance in terms of fat, saturated fat, sugar and salt.

- **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 that 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.

Mandatory information required on labels



Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturated 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake
Typical values (as sold) per 100g: 697kJ/ 167kcal

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.



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.

Food safety legislation

Nutrition claims

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-

Nutritional labelling

Nutritional information must be expressed per 100g or per 100ml, and it must be listed in the following specific order:

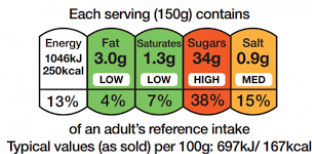
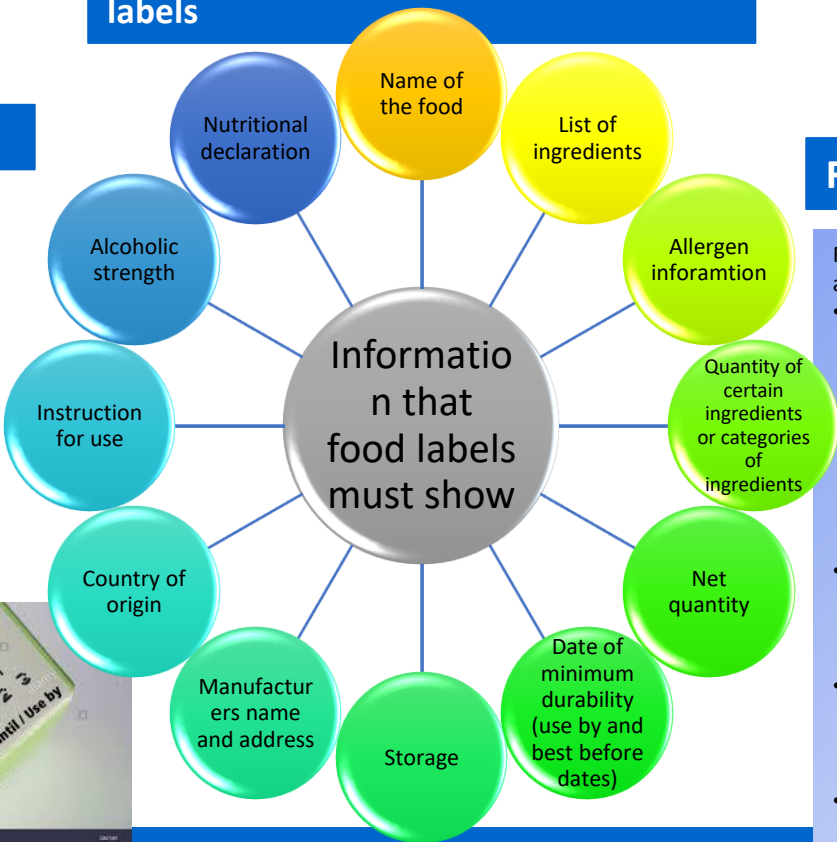
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Traffic light labelling

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



Food labelling regulations

Food labels are used by business to provide information about their products. They are needed to:

- .
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Business, Computer science, DIT and Media

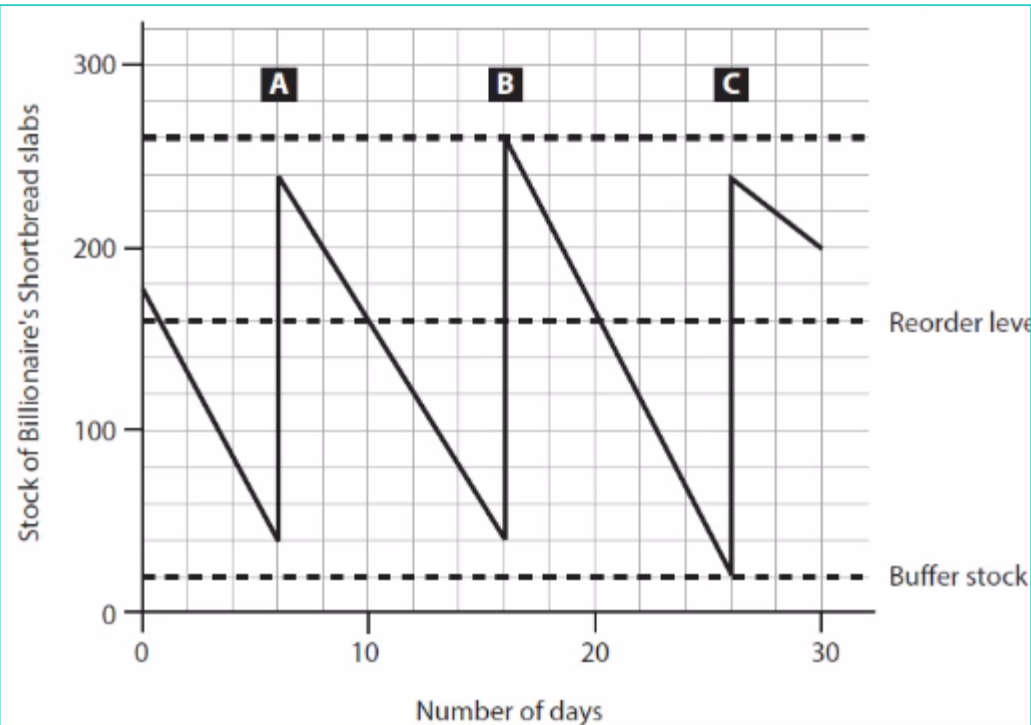


Helping every person achieve things they never thought they could.

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

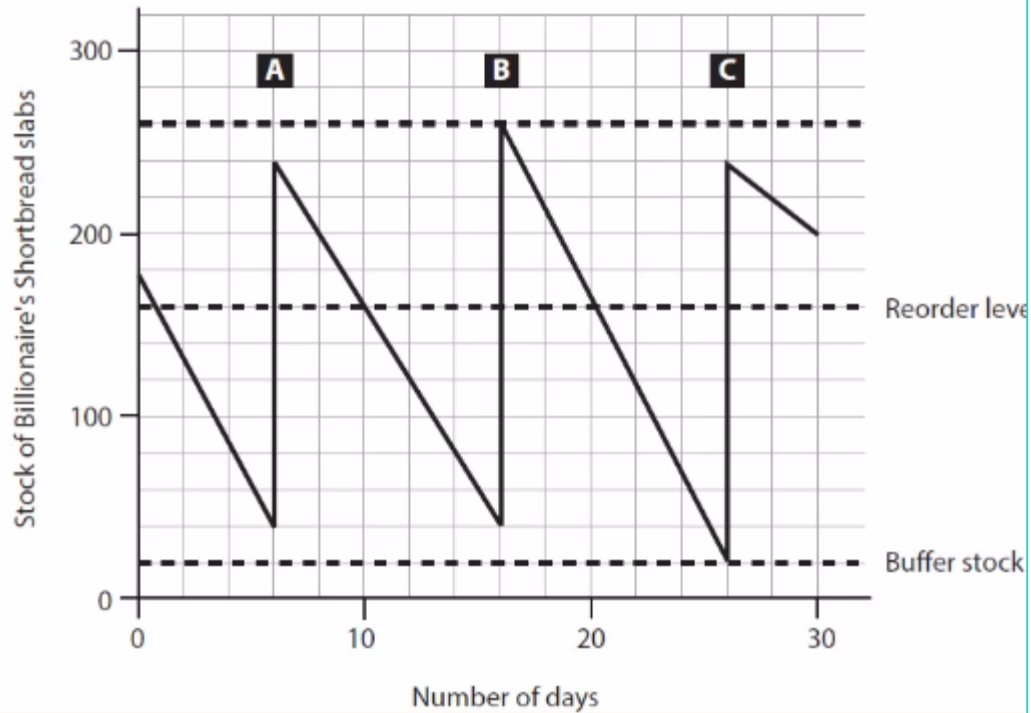


When a business holds stock, they can use a bar gate stock graph. This will help them manage when they need to reorder the stock.

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.



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

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

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


Average rate of return

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.

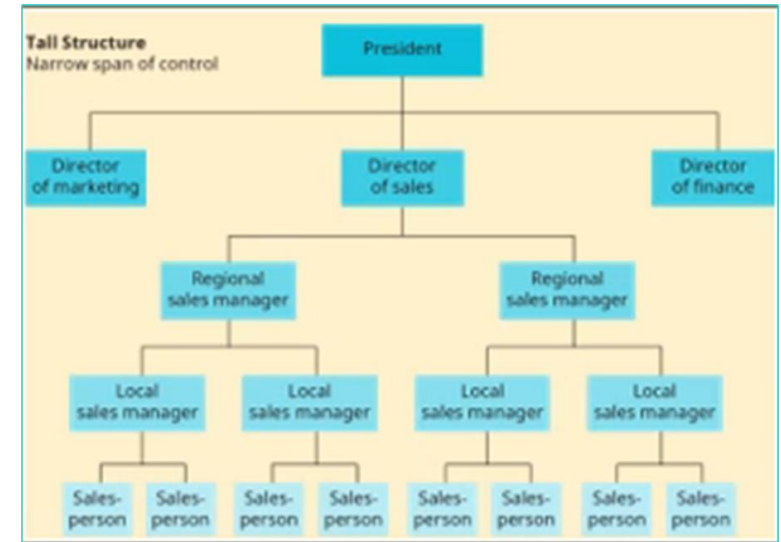
Calculations you need to learn:



Year 11 GCSE Business: Organisational structures

Tall Structure (Hierarchy)

Benefits	Drawbacks
<ul style="list-style-type: none">●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.	<ul style="list-style-type: none">●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
<ul style="list-style-type: none">●Staff are empowered to work independently and take on more responsibility.●Reduces costs as fewer layers of management.	<ul style="list-style-type: none">●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

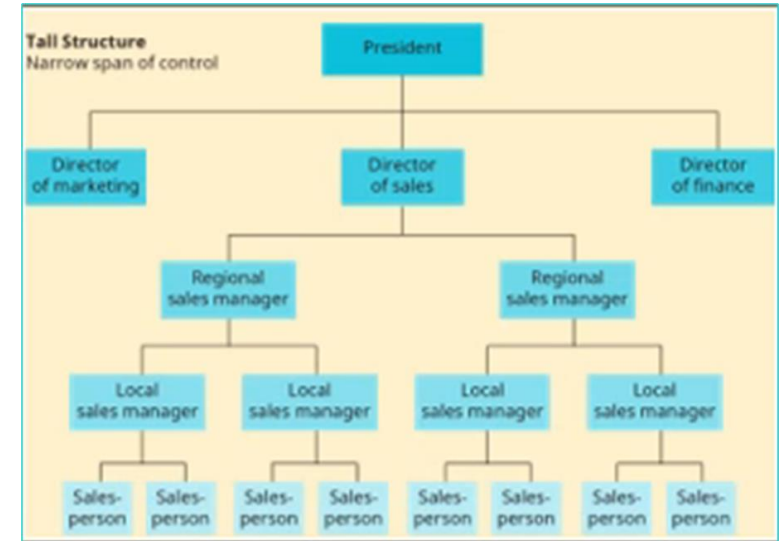


Year 11 GCSE Business: Organisational structures

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

- Control / decision making made by highest level of management
- Consistency between different branches.
- Economies of scale (bulk buying) - all branches using the same supplier.

Drawbacks

- 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

- 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.

Drawbacks

- 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 -

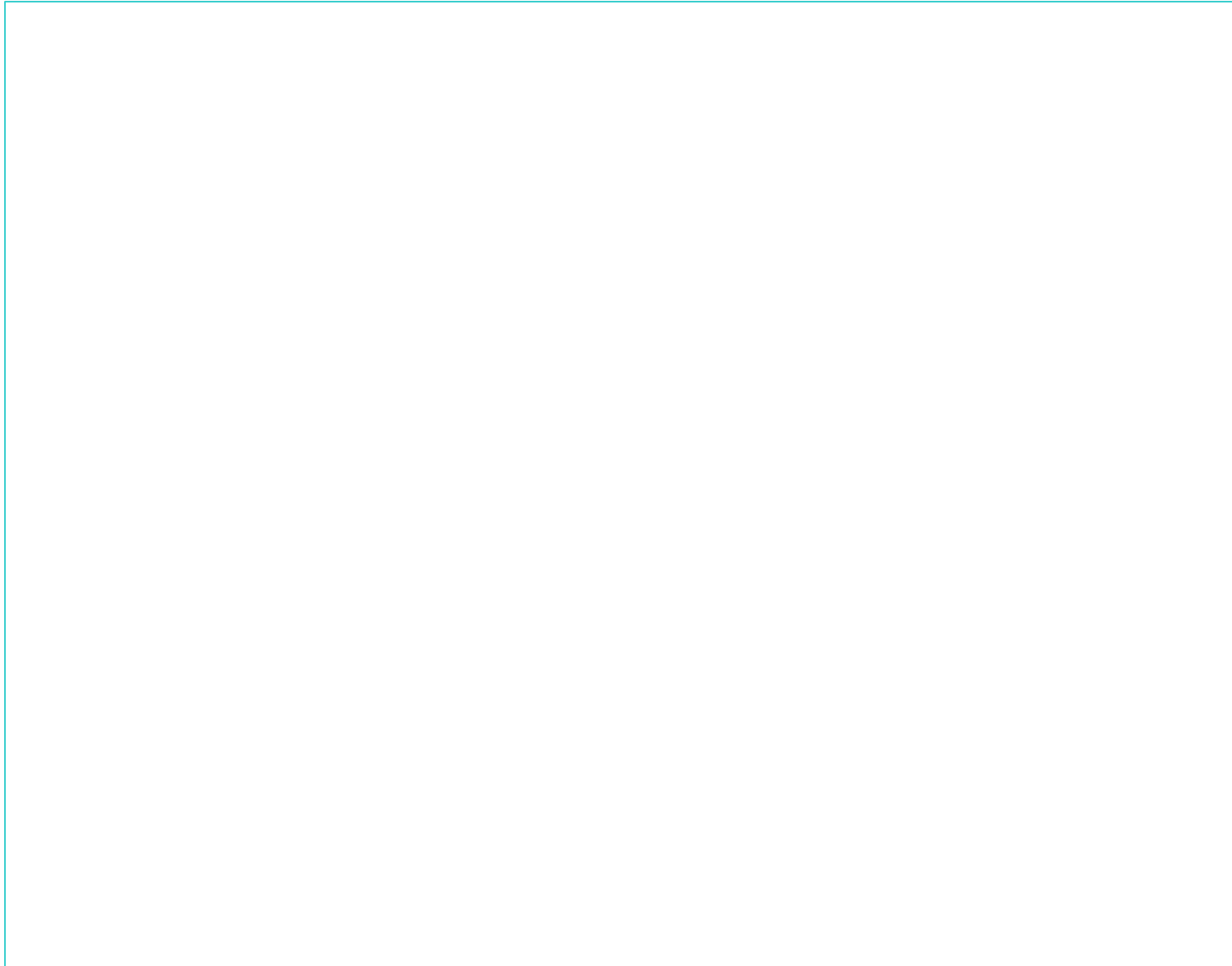
Benefits	Drawbacks

Benefits	Drawbacks

Year 11 GCSE Business: Different ways of working

Different ways of working	Description	Benefit	Drawback
Part-time	<u>Typically</u> 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	<ul style="list-style-type: none">● Decision-making at the highest level.● Ensuring the company meets its objectives.
Senior Managers	<ul style="list-style-type: none">● Implementing the strategies set by directors.
Supervisors/Team Leaders	<ul style="list-style-type: none">● Managing and leading a team of employees.
Operational Staff	<ul style="list-style-type: none">● Carrying out day-to-day tasks related to the core operations.
Support Staff	<ul style="list-style-type: none">● 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:

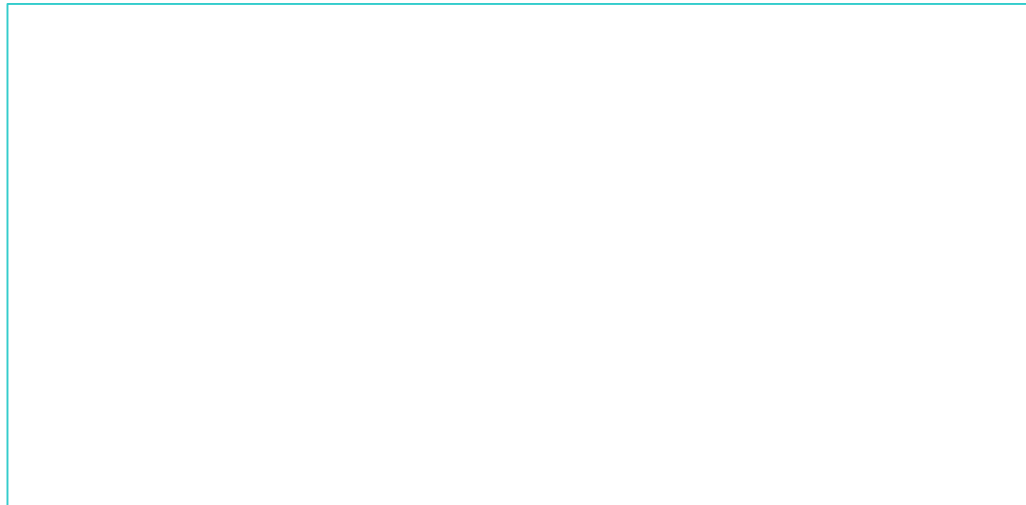
Method	Definition	Benefits	How it meets business needs:
Internal recruitment	Filling job vacancies with existing employees.	Promotes employee loyalty, understanding of company culture, and minimizes recruitment costs.	Suitable for promoting employee development and filling positions quickly.
External 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

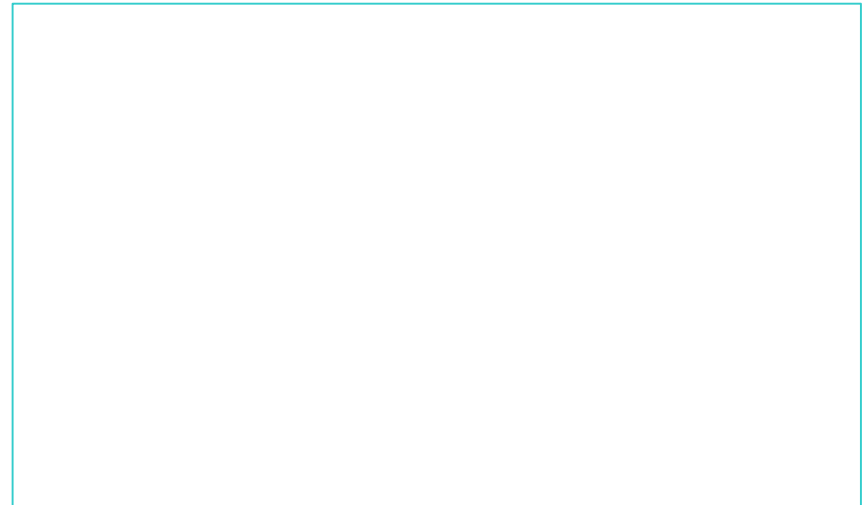
Key roles within a business:

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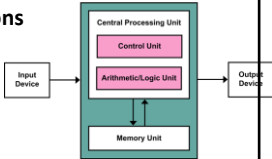
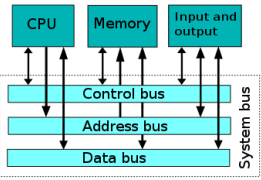




Recruitment documents:

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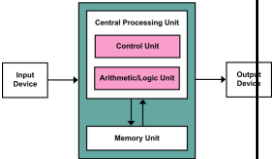
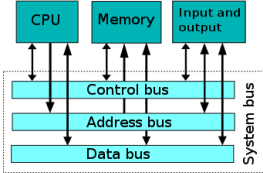




Recruitment Methods:

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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
<p>Main components of the CPU. .</p> <p>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.</p> <p>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.</p> <p>Arithmetic Logic Unit (ALU) – Carries out mathematical and logic operations on data.</p> <p>Registers – Small and fast memory locations within the CPU.</p> <p>State the two items stored in main memory (RAM), as binary, in the fetch-decode-execute cycle:</p> <ol style="list-style-type: none"> 1. Data 2. Instructions 	<p>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.</p> <p>What are the 3 types of bus in the system bus, and what is their role in the fetch decode-execute cycle?</p> <ol style="list-style-type: none"> 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 	<p>Physical secondary storage</p> <ol style="list-style-type: none"> 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)  	<p>Embedded systems</p> <p>An embedded system is a small computer with a microcontroller, that performs a specific task within a bigger system.</p> <p>What are some of the features of an embedded system?</p> <ul style="list-style-type: none"> > They are small, > Low energy consumption > Low cost > They are usually robust > Only have a limited user interface, or no interface at all. <p>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.</p> 	<p>Operating system's</p> <ul style="list-style-type: none"> • 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
<p>Main components of the CPU. .</p> <p>State the two items stored in main memory (RAM), as binary, in the fetch-decode-execute cycle:</p> <ol style="list-style-type: none"> 	<p>Fetch-Decode-Execute Cycle</p> <p>What are the 3 types of bus in the system bus, and what is their role in the fetch decode-execute cycle?</p> <ol style="list-style-type: none"> 	<p>Physical secondary storage</p> <ol style="list-style-type: none">    	<p>Embedded systems</p> <p>What are some of the features of an embedded system?</p> <p>Give an example of an embedded system and explain how it works.</p> 	<p>Operating system's</p> <ul style="list-style-type: none"> File Management: Peripheral Management: User management: Process Management: Round Robin Scheduling:






Year 11 GCSE Computer science: Computers

Utility Software	Robust Software	High and Low Level Programming Languages	Translators
<p>Describe the role of each type of utility software:</p> <ul style="list-style-type: none"> 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).  	<p>What does the term robust mean, in terms of software?</p> <p>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.</p> <p>What are the common vulnerabilities that software code can have?</p> <ul style="list-style-type: none"> > 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 <p>What is a code review and what is its purpose?</p> <p>Code Review – a check to see that software meets standards, is efficient, and looks for potential vulnerabilities</p>  <p>If software code is not up to standard, inefficient, or vulnerable to attack, it can be identified and fixed.</p> <p>What is an audit trail and what is its purpose?</p> <p>An audit trail keeps track of who made what changes and when during an audit.</p> <p>Advantages:</p> <ul style="list-style-type: none"> > Problems can be tracked back to source if discovered. > Code can be rolled back to a previous version before a problem / weakness occurred. 	<p>What is a low level language?</p> <p>Machine code, or assembly language, that interacts directly with the computer hardware.</p> <p>Name an advantage of a low level language:</p> <p>Memory is used efficiently as it interacts directly with hardware.</p> <p>Name two disadvantages of low level languages:</p> <ul style="list-style-type: none"> Difficult and time consuming to use Machine specific, won't run on other devices. <p>What is a high level language?</p> <p>More human like programming language (e.g. Python) .</p> <p>Name two advantages of high level languages:</p> <ul style="list-style-type: none"> Programmer friendly (easier to use) Maintenance and debugging tools <p>Name one disadvantage of high level languages:</p> <p>Less memory efficient (uses more memory and system resources).</p>	<p>What is the role of translator software?</p> <p>To translate from a higher level language into binary machine code.</p> <p>What are the two types of translators used of high level languages and how do they work?</p> <ol style="list-style-type: none"> Interpreter  <p>Translates line-by-line.</p> <p>When errors are found they can be debugged immediately</p> <p>Not Platform specific and can be run on different OSs</p> <p>Easily edited as it is always source code</p> <p>Slow to run as it is line-by-line</p>  Compiler <p>Translation is done in one go.</p> <p>Once translated the program will run more quickly</p> <p>Errors are only reported at the end.</p> <p>Cannot change the program without editing source code.</p>











Year 11 GCSE Computer science: Computers

Utility Software	Robust Software	High and Low Level Programming Languages	Translators
<p>Describe the role of each type of utility software:</p> <ul style="list-style-type: none"> File repair:  Backup:  Data Compression:  Disk Defragmentation:  Anti-Malware:  	<p>What does the term robust mean, in terms of software?</p> <p>What are the common vulnerabilities that software code can have?</p> <ul style="list-style-type: none"> <p>What is a code review and what is its purpose? </p> <p>What is an audit trail and what is its purpose?</p>	<p>What is a low level language?</p> <p>Name an advantage of a low level language:</p> <p>Name two disadvantages of low level languages:</p> <p>What is a high level language?</p> <p>Name two advantages of high level languages:</p> <p>Name one disadvantage of high level languages:</p>	<p>What is the role of translator software?</p> <p>What are the two types of translators used of high level languages and how do they work?</p> <p>1. </p> <p>2. </p>



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
<p>List reasons why computers are connected together in a network.</p> <ul style="list-style-type: none"> • 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. <p>Data  Sharing</p>	<p>Describe what a Local Area Network (LAN) is?</p> <p>A LAN is a network, which connects together computers at a single building, or site</p>  <p>Describe what a Wide Area Network (WAN) is?</p> <p>A WAN is a network, which connects together LANs across a large geographical area (i.e. town, country, the world).</p> 	<p>Describe what an IP Address is?</p> <p>A unique numerical address, providing the location of a device connected to the Internet. To allow devices to send and receive data packets.</p> <p>What is a Domain Name?</p> <p>A human friendly identification for locations on the WWW.</p> <p>What is the role of the Domain Name Server (DNS)?</p> <p>Holds a list of domain names and their corresponding IP addresses, required when clients request a web-page, or data from a web-server.</p> <p>What happens when a web-page is requested by a web-browser?</p> <p>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.</p>	<p>Describe what a data packet is.</p> <p>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.</p> <p>What is the contents of a Data Packet?</p> <ul style="list-style-type: none"> • Recipient IP Address • Sender's IP Address • Sequence number • Total Number of Packets • Checksum <p>Header:</p> <p>The part of data being sent web-page, email, or other type of file (e.g. an image)</p> <p>Payload:</p> <p>End of packet flag</p> <p>Footer:</p> <p>Routers form a physical connection between networks and forward data packets from one network to another.</p> <p>What is the role of a Router in a network?</p> <p>The routing table is used to find the most efficient route for a data packet on the next leg of its journey.</p> 	<p>Name the two types of wired network connectivity types and describe how each transmits data:</p> <p>Copper cable – electricity / electrons passed down the cable representing 0 and 1.</p> <p>Fibre-optic cable – light / photons passed down the cable representing 0 and 1.</p> <p>Which type of wired connectivity will transmit data at the highest speed (largest bandwidth):</p> <p>Fibre-optic cable – light photons travel faster than electrons</p> <p>Wi-Fi and Bluetooth are Wireless connectivity types, how do they transmit data:</p> <p>Radio waves</p> <p>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:</p> <p>RFID and NFC require much less power compared to Wi-Fi. 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.</p> 


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
<p>List reasons why computers are connected together in a network.</p> <ul style="list-style-type: none"> •  •  •  •  •  	<p>Describe what a Local Area Network (LAN) is?</p>  <p>Describe what a Wide Area Network (WAN) is?</p> 	<p>Describe what an IP Address is?</p> <p>What is a Domain Name?</p> <p>What is the role of the Domain Name Server (DNS)?</p> <p>What happens when a web-page is requested by a web-browser?</p>	<p>Describe what a data packet is.</p> <p>What is the contents of a Data Packet?</p> <p>Header:</p> <p>Payload:</p> <p>Footer:</p> <p>What is the role of a Router in a network?</p> 	<p>Name the two types of wired network connectivity types and describe how each transmits data:</p>  <ul style="list-style-type: none"> • • <p>Which type of wired connectivity will transmit data at the highest speed (largest bandwidth):</p> <p>Wi-Fi and Bluetooth are Wireless connectivity types, how do they transmit data:</p> <p>What are the benefits of using the RFID (<i>used in security tags</i>) and NFC (<i>used for smartphone contactless payments</i>) wireless transmission methods compared to Wi-Fi:</p> 

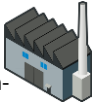





Year 11 GCSE Computer science: Networks

Data Transmission Speed and Latency	Protocols	TCP / IP Model	Network Topologies	Network Security
<p>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)?</p> <p>File size in bits</p> <p>Speed in bps</p> <p>e.g. A 10MiB file, transferred at 50Mbps:</p> <p>MiB> KiB> Bytes> Bits</p> <p><u>10 x 1024 x 1024 x 8</u></p> <p>50 x 1,000,000</p>	<p>What are the 3 email protocols and describe how they work.</p> <p>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).</p> <p>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.</p> <p>SMTP – Provides the rules for sending emails from client to server and from server to server until it reaches its destination.</p> <p>Describe the purpose of the following communication protocols:</p> <p>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</p> <p>FTP: File Transfer Protocol – rules for file transfer between computers. Used to transfer files that are too large to transfer by email.</p>	<p>Describe the purpose of each layer of the TCP/IP protocol stack:</p> <p>Application Layer Sending:</p> <p>Displays received information to the user (e.g. a web-page, or social media app newsfeed).</p> <p>Receiving:</p> <p>Interface and protocols needed by the user (e.g. HTTP when using a web-browser)</p> <p>Transport Layer Sending:</p> <p>Splits files into data packets, and assigns a sequence number and checksum to the packets.</p> <p>Receiving:</p> <p>Checks incoming packets for missing/damaged ones and reassembles the packets in order.</p> <p>Internet Layer Sending:</p> <p>Adds destination IP address to packets, to be read by routers, so they can be forwarded to the receiver.</p> <p>Receiving:</p> <p>Strips address information from incoming packet headers.</p> <p>Link/Network Layer Sending:</p> <p>Converts data into either electrical (copper cable), light (fibre-optic), or radio wave (Wi-Fi), depending on network media used for transmission.</p> <p>Receiving:</p> <p>Converts incoming signals into binary data.</p>	<p>Give 2 advantages and 2 disadvantages for each network topology:</p> <p>Advantages of a Star Topology:</p> <p>Efficiency – Network traffic kept to</p> <ul style="list-style-type: none"> • minimum with connection to each device. • Easy to add new devices without disruption <p>Disadvantages of a Star Topology:</p> <p>If the central point fails the entire</p> <ul style="list-style-type: none"> • network fails. Requires a lot of cabling to connect • each device to a central hub/switch. <p>Advantages of a Mesh Topology:</p> <p>If one component fails the there is</p> <ul style="list-style-type: none"> • always and alternate route for data. Can handle high volumes of data • efficiently. <p>Disadvantages of a Mesh Topology:</p> <p>Overall cost is high due to caballing,</p> <ul style="list-style-type: none"> • unless wireless is used. Difficult to manage and required • expert supervision. <p>Advantages of a Bus Topology:</p> <ul style="list-style-type: none"> • Easy to setup. Cheap to install. • Easy to add additional devices. <p>Disadvantages of a Bus Topology:</p> <p>Lots of data collisions when multiple</p> <ul style="list-style-type: none"> • devices transmit data at the same time. • If the main cable is damaged the network fails. 	<p>What is the purpose of network security?</p> <p>Ensures only authorized users can access a system, that users can only access data relevant to them and prevents misuse of data and hardware.</p> <p>Why is network security important for a business?</p> <p>Network data is vital for running a business. Sensitive data must be kept private. The data might be financially valuable.</p> <p>Describe the purpose of penetration testing:</p> <p>Used to test a computer system, or network to find vulnerabilities that attackers can exploit, so they can be fixed/patched.</p> <p>What is white-box penetration testing?</p> <p>The tester is given access to the network/system, they use this to identify vulnerabilities.</p> <p>What is black-box penetration testing?</p> <p>The tester is given no information about the network/system and must try to breach security using techniques used by real hackers.</p> <p>What is an ethical hacker?</p> <p>White-hat hacker – looks for vulnerabilities in systems to warn organisations about their security weaknesses.</p>
<p>Describe what latency is.</p> <p>The delay between a data signal being sent and it being received on a computer network.</p>  				







Year 11 GCSE Computer science: Networks

Data Transmission Speed and Latency	Protocols	TCP / IP Model	Network Topologies	Network Security
<p>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)?</p>	<p>What are the 3 email protocols and describe how they work.</p> <ul style="list-style-type: none"> • • • <p>Describe the purpose of the following communication protocols:</p> <p>HTTP / HTTPS:</p> <p>FTP:</p>	<p>Describe the purpose of each layer of the TCP/IP protocol stack:</p> <p>Application Layer Sending:</p> <p>Receiving:</p> <p>Transport Layer Sending:</p> <p>Receiving:</p> <p>Internet Layer Sending:</p> <p>Receiving:</p> <p>Link/Network Layer Sending:</p> <p>Receiving:</p>	<p>Give 2 advantages and 2 disadvantages for each network topology:</p> <p>Advantages of a Star Topology:</p> <ul style="list-style-type: none"> • • <p>Disadvantages of a Star Topology:</p> <ul style="list-style-type: none"> • • <p>Advantages of a Mesh Topology:</p> <ul style="list-style-type: none"> • • <p>Disadvantages of a Mesh Topology:</p> <ul style="list-style-type: none"> • • <p>Advantages of a Bus Topology:</p> <ul style="list-style-type: none"> • • <p>Disadvantages of a Bus Topology:</p> <ul style="list-style-type: none"> • • 	<p>What is the purpose of network security?</p> <p>Why is network security important for a business?</p> <p>Describe the purpose of penetration testing:</p> <p>What is white-box penetration testing?</p> <p>What is black-box penetration testing?</p> <p>What is an ethical hacker?</p>
<p>Describe what latency is.</p> 				











Year 11 GCSE Computer science: Issues and Impacts

Environmental Issues	Environmental Issues	Personal Data	Legislation	Artificial Intelligence
<p>Give two examples of the environmental issues related to the following areas of computing:</p> <p>Manufacturing:</p>  <ul style="list-style-type: none"> Some raw materials are non-renewable, and some highly toxic. Mining for raw materials damages the environment. Pollution is a by-product of manufacturing. <p>Disposal of computer hardware:</p>  <ul style="list-style-type: none"> 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. <p>Energy Consumption:</p>  <ul style="list-style-type: none"> 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. 	<p>What is a 'Short Replacement Cycle'?</p> <p>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.</p> <p>Describe three ways that computing energy consumption can be reduced:</p> <ul style="list-style-type: none"> Adjusting energy settings on devices, e.g. screen brightness. Turn off wireless connectivity to save power. Choose low energy devices when replacing computing equipment. <p>Describe 3 ways responsible recycling of computing equipment can address some of the problems associated e-waste:</p>  <ul style="list-style-type: none"> 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. <p>Describe a positive impact that digital technology can have on the environment:</p> <p>Smart lighting can turn off lights when not in use, reducing energy consumption.</p>	<p>Describe what a digital footprint is:</p>  <p>The trail of personal data left behind each time someone uses the Internet e.g. website visits, online posts; and emails.</p> <p>Describe 2 benefits to 'Data Subjects' of organisations collecting their personal data:</p> <ul style="list-style-type: none"> Personalisation - Advertisements can be personalised, by analysing our preferences. Convenience - It can be more convenient for our payment information to be stored for future purchases. <p>Describe 2 drawbacks / concerns to 'Data Subjects' of organisations collecting their personal data:</p> <p>Our privacy is invaded by organisations analysing our personal data.</p> <p>People could be discriminated against because of their personal data.</p> <p>If a data breach happens personal data can end up in the hands of criminals.</p> <p>Describe 2 ethical issues linked to the ownership of data and who can use it:</p> <ol style="list-style-type: none"> Some data is not owned by the data subject e.g. NHS patient data. Online retailers sell customer data to 3rd parties. Google sells people's search history 	<p>Give examples of rules / principles that organisations must follow, in relation to the Data Protection Act and GDPR, when collecting personal data from customers.</p> <ul style="list-style-type: none"> 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 	<p>Describe what Artificial Intelligence (A.I.) is:</p> <p>Computer systems capable of performing tasks that would typically require human intelligence, such as pattern recognition, decision making, and problem solving.</p> <p>Describe the process of 'Machine Learning':</p> <p>Learning algorithms, that can learn by looking for rules and patterns in data. They get progressively better at this and can learn from their mistakes.</p> <p>Describe what is meant by the term 'Narrow A.I.':</p> <p>Machine learning systems designed to perform a single task, or limited range of tasks. They cannot perform tasks outside of their intended use.</p> <p>Describe 2 causes of 'Algorithmic Bias':</p> <p>The dataset used to train the AI is biased.</p> <p>There is a flaw in the design of the algorithm.</p> <p>Developers introduce their own biases.</p> <p>Describe 2 ways Algorithmic Bias can be prevented:</p> <ol style="list-style-type: none"> Using a diverse and representative data set to train algorithms, can reduce biases. 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
<p>Give two examples of the environmental issues related to the following areas of computing:</p> <p>Manufacturing:</p>  <ul style="list-style-type: none"> • • <p>Disposal of computer hardware:</p>  <ul style="list-style-type: none"> • • <p>Energy Consumption:</p>  <ul style="list-style-type: none"> • • 	<p>What is a 'Short Replacement Cycle?'</p> <p>Describe three ways that computing energy consumption can be reduced:</p> <p>Describe 3 ways responsible recycling of computing equipment can address some of the problems associated with e-waste:</p>  <p>Describe a positive impact that digital technology can have on the environment:</p>	<p>Describe what a digital footprint is:</p>  <p>Describe 2 benefits to 'Data Subjects' of organisations collecting their personal data:</p> <ol style="list-style-type: none"> 1. 2. <p>Describe 2 drawbacks / concerns to 'Data Subjects' of organisations collecting their personal data:</p> <p>Describe 2 ethical issues linked to the ownership of data and who can use it:</p> <ol style="list-style-type: none"> 1. 2. 	<p>Give examples of rules / principles that organisations must follow, in relation to the Data Protection Act and GDPR, when collecting personal data from customers.</p>	<p>Describe what Artificial Intelligence (A.I.) is:</p> <p>Describe the process of 'Machine Learning':</p> <p>Describe what is meant by the term 'Narrow A.I.':</p> <p>Describe 2 causes of 'Algorithmic Bias':</p> <p>Describe 2 ways Algorithmic Bias can be prevented:</p> <ol style="list-style-type: none"> 1. 2.











Year 11 GCSE Computer science: Issues and Impacts

Protecting Intellectual Property	Open Source Vs Proprietary Software	Malware Threats to Systems	Technical Vulnerabilities and Social Engineering	Protecting Digital Systems
<p>What is intellectual property?</p> <p>Intellectual property is creations of the mind (original ideas), such as inventions; literary and artistic works; software; and symbols etc...</p> <p>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?</p> <ol style="list-style-type: none"> Copyright describes the rights creators automatically gain to their original creations. This can cover books, music, films, computer programs, databases.  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.  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.  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.  	<p>Describe what Open Source Software is:</p> <p>Software that is distributed with a licence that allows anyone to use, view, modify and share the source code</p> <p>Give 3 benefits of Open Source software:</p> <ol style="list-style-type: none"> Users have access to the source code and can modify it and then redistribute it. It can be installed on any number of machines at the same time. It is usually free to use. <p>Give a drawback of Open Source software:</p> <ul style="list-style-type: none"> It may have bugs, or not be fully tested. Users might need special knowledge to install/use it. <p>Describe what Proprietary Software is:</p> <p>Software that is owned by an individual, or an organisation. The source code is protected and it is illegal to modify it.</p> <p>Give 3 benefits of Proprietary software:</p> <ul style="list-style-type: none"> Thoroughly tested by developer. Supported by a dedicated team of developers. Extensive support. <p>Give 2 drawbacks of Proprietary software:</p> <ol style="list-style-type: none"> Users do not have permission to modify the software, it's protected by copyright. Usually paid for, on a user, or per-machine basis. 	<p>Describe how following Malware threats work:</p> <p>Virus:</p> <p>Viruses – insert themselves into another program, waiting for the host program to run.</p> <p>Worm:</p> <p>Worms - move from one network device to the next independently, by making copies of themselves </p> <p>Trojan </p> <p>Trojan – pretends to be a legitimate piece of software that tricks users into downloading and running it </p> <p>Ransomware:</p> <p>Ransomware – encrypts a victim's data and demands that a ransom is paid to recover the data. </p> <p>Spyware - Keyloggers:</p> <p>Keylogger – secretly records keystrokes by the user and allows a hacker get valuable information, such as passwords. </p> <p>Botnet:</p> <p>Botnet – allows a hacker to control a large number of infected computers and other networked devices. These can be used to commit DDoS attacks </p>	<p>Describe the following Technical Vulnerabilities:</p> <p>Unpatched software:</p> <p>Security flaws in software can be exploited by hackers in zero-day attacks. Unpatched software is vulnerable</p> <p>Out-of-Date anti-malware:</p> <p>Anti-malware only works if it is kept up-to-date with the latest definitions for new malware types.</p> <p>Open ports:</p> <p>Hackers can scan for open internet ports on systems using software services that access the Internet and target these ports for attack.</p> <p>Default Admin Passwords:</p> <p>Some hardware devices e.g. routers, modems, servers, might have factory set passwords, if unchanged hackers can exploit this weakness</p> <p>Describe the following Social Engineering methods used by cyber-criminals:</p> <p>Phishing:</p> <p>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.</p> <p>Pretexting (blagging):</p> <p>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.</p> <p>Shoulder Surfing:</p> <p>Looking over a victim's shoulder, or videoing them, while they type in PIN, or passwords.</p> <p>Baiting:</p> <p>Free giveaways, leaving infected USB sticks on the floor, tricking a victim into installing malware on their device.</p>	<p>Describe how the following protection methods protect data and systems:</p> <p>Firewall:</p> <p>A firewall prevents unwanted internet traffic from accessing a system. It filters data, blocking illegitimate access, or cyber threats</p> <p>Anti-Malware:</p> <p>Anti-malware scans files for malware signature patterns, if found files can be cleaned, viruses can be quarantined, or removed.</p> <p>Encryption of data:</p> <p>Scammers will communicate with victims, using a pre-text of an emergency situation, or issue to trick them out of financial information, or passwords.</p> <p>Backups:</p> <p>Encryption scrambles data using a key, if the data is intercepted by unauthorised users they cannot read it.</p> <p>Describe what an 'Acceptable Use Policy' is:</p> <p>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...).</p>










Year 11 GCSE Computer science: Issues and Impacts

Protecting Intellectual Property	Open Source Vs Proprietary Software	Malware Threats to Systems	Technical Vulnerabilities and Social Engineering	Protecting Digital Systems
<p>What is intellectual property?</p> <p>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?</p> <p>1. </p> <p>2. </p> <p>3. </p> <p>4. </p>	<p>Describe what Open Source Software is:</p> <p>Give 3 benefits of Open Source software:</p> <ol style="list-style-type: none"> 1. 2. 3. <p>Give a drawback of Open Source software:</p> <ul style="list-style-type: none"> • <p>Describe what Proprietary Software is:</p> <p>Give 3 benefits of Proprietary software:</p> <ol style="list-style-type: none"> 1. 2. <p>Give 2 drawbacks of Proprietary software:</p> <ol style="list-style-type: none"> 1. 2. 	<p>Describe how following Malware threats work:</p> <p>Virus:</p> <p>Worm: </p> <p>Trojan </p> <p>Ransomware: </p> <p>Spyware - Keyloggers: </p> <p>Botnet: </p>	<p>Describe the following Technical Vulnerabilities:</p> <p>Unpatched software:</p> <p>Out-of-Date anti-malware:</p> <p>Open ports:</p> <p>Default Admin Passwords:</p> <p>Describe the following Social Engineering methods used by cyber-criminals:</p> <p>Phishing:</p> <p>Pretexting (blagging):</p> <p>Shoulder Surfing:</p> <p>Baiting:</p>	<p>Describe how the following protection methods protect data and systems:</p> <p>Firewall:</p> <p>Anti-Malware:</p> <p>Encryption of data:</p> <p>Backups:</p> <p>Describe what an 'Acceptable Use Policy' is:</p>

Year 11 BTECDIT: Modern technology

Communication Technologies	Issues with Ad-Hoc Networks	Cloud Storage	Cloud Computing	Collaboration Tools
<p>Ad hoc networks –</p>  <p>What is 'Open Wi-Fi'? Usually free, public access wireless network, offering internet access, provided in cafes, hotels, airports etc...</p> <p>What is 'tethering'? Connecting an internet enabled device (e.g. Smartphone), to another device (e.g. laptop) to share an internet connection.</p> <p>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:</p> <ul style="list-style-type: none"> 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 <p>Internet can be accessed in most locations</p>	<p>What are the security issues (dangers) when using open Wi-Fi networks? Open Wi-Fi is usually unencrypted, which means data is not secure, it can be easily intercepted, by an eavesdropper. If the data is not encrypted it can then be read.</p> <p>What are the issues that affect performance with ad hoc networks?</p> <ul style="list-style-type: none"> 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. <p>Ad hoc networks have a limited range, so any device using the network needs to be fairly close.</p> <p>Mobile internet signal may be weak if you are not close to a transmitter.</p> <p>What issues can affect network availability?</p>    <ul style="list-style-type: none"> 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. 	<p>What is cloud storage? Storing files and data online, on remote servers. This data can be accessed via an internet connection.</p> <p>List 5 benefits of cloud storage:</p> <ol style="list-style-type: none"> Files and data can be accessed on multiple devices with an internet connection. Cloud storage offers 24/7/365 access to data. Files are automatically synchronised and changes are updated across all devices instantly. It can be used to store backups of files and automatically backed up by the cloud provider. Scalability – Storage space can be easily increased / decreased depending on need. <p>List 5 drawbacks of cloud storage:</p> <ol style="list-style-type: none"> Internet access is required to access cloud storage. Slow internet connections will affect upload and download speed of files. Once free storage limits are reached, additional cloud storage will need to be paid for. There may be delays in synchronisation if the service also stores data locally Users have to trust that the cloud provider will secure and protect their data 	<p>What is cloud computing? Applications software that is accessed online (WWW) through a web-browser e.g. Google Docs.</p> <p>What are the benefits of using cloud computing instead of locally installed software applications?</p>       <ol style="list-style-type: none"> Consistent versions of files across each device / user. Can work collaboratively. Access applications 24/7 with internet connection. Can use different devices to access applications. Access applications remotely (at home) Maintenance is done by cloud service provider e.g. automatic updates, patches/fixes etc... Automatic Backups. 	<p>Describe what the benefits are of the following collaboration tools:</p> <p>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.</p> <p>Comments feature: Users can leave comments in a document which allows them to ask questions and make suggestions, which can be relied to.</p> <p>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.</p> <p>Chat (Instant message and Video Calls): Allows people to chat in real time to discuss a document and work collaboratively.</p> <p>Suggested edits: Users edits show up as suggested changes before agreeing to them.</p>



Year 11 BTECDIT: Modern technology

Communication Technologies	Issues with Ad-Hoc Networks	Cloud Storage	Cloud Computing	Collaboration Tools
<p>Ad hoc networks –</p> <p>What is 'Open Wi-Fi'?</p>  <p>What is 'tethering'?</p> <p>What is a 'personal hotspot'?</p> <p>List some advantages of using ad hoc networks like open Wi-Fi, tethering and hotspots:</p> <ul style="list-style-type: none"> • • • • • 	<p>What are the security issues (dangers) when using open Wi-Fi networks?</p> <p>What are the issues that affect performance with ad hoc networks?</p> <ul style="list-style-type: none"> • • • • <p>What issues can affect network availability?</p>   	<p>What is cloud storage?</p> <p>List 5 benefits of cloud storage:</p> <ol style="list-style-type: none"> 1. 2. 3. 4. 5. <p>List 5 drawbacks of cloud storage:</p> <ol style="list-style-type: none"> 1. 2. 3. 4. 5. 	<p>What is cloud computing?</p> <p>What are the benefits of using cloud computing instead of locally installed software applications?</p>  <ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6. 7. 	<p>Describe what the benefits are of the following collaboration tools:</p> <p>Sharing a single instance of a file (<i>the same file at the same time</i>):</p> <p>Comments feature:</p>  <p>Version history (track-changes):</p>  <p>Chat (Instant message and Video Calls):</p>  <p>Suggested edits:</p> 















Year 11 BTECDIT: Modern technology

Selection of Platform when Choosing Cloud Services	Features of Cloud Services	Modern Teams	Collaboration and Communication Tools	Impact on Infrastructure
<p>Describe the following considerations that organisations might consider when choosing a platform (device e.g. smartphone, laptop, desktop etc...), or cloud service:</p> <p>Screen size and portability: Desktop and laptop screens are larger and easier to use, but they are not as portable as a smartphone.</p> <p>Interface Design: Some functionality might not be available on small screens, or on different versions of an app.</p> <p>Suitability for the intended purpose: The application might not be suitable for the task it is required for.</p> <p>Compatibility with existing systems: Mobile and desktop versions of apps/applications might be different and incompatible with each other.</p> <p>Speed of connectivity: If an application is dependant on internet connectivity then a user experience will be poor if the signal strength is weak.</p> <p>Hardware: Cloud services do not require lots of local storage and high speed processors as applications are accessed through a web-browser online.</p>	<p>Describe the following features of cloud services:</p> <p>Frequency of updates: Cloud service providers will update software automatically, which is cheaper and gives access to new functions immediately.</p> <p>Accessibility across devices: Organisations need to be sure they can reach cloud services across a range of devices.</p> <p>Methods of working: Cloud services might be less feature rich, but support file sharing and collaborative working.</p> <p>Ease of use: Cloud services need to be easy to use, to avoid additional support needs and costs.</p> <p>Storage: Once free storage limits are reached, additional cloud storage will need to be paid for, which can be scaled up or down. .</p> <p>Free or paid for: Most cloud services are free, with limitations, which might require additional spending.</p> <p>Security: Advanced data security on cloud services may cost more.</p> <p>Synchronisation: Offline documents can be synchronised with online versions, when internet access becomes available, sharing latest versions.</p>	<p>Describe the following benefits of using technology to work collaboratively in a modern team:</p> <p>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.</p> <p>Working Flexibly: People can work in places and at times that suit them an their needs.</p> <p>Working Globally: Organisations can employ workers with the right skillsets from around the world using collaborative technologies.</p> <p>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.</p>	<p>Describe how an organisation might use the following communication and collaboration tools:</p> <p>Email:  Messages sent between the team or a group email to everyone in the team</p> <p>Social Media: Social media – it can be used to communicate with public, or private groups with an organisation. </p> <p>Online Meetings and chat apps: Video chat (VoIP) – to hold face-to-face meetings between staff.</p> <p>To-do lists: Used to identify tasks the team needs to complete and allocate a team member to them.</p> <p>Shared message boards: Allow users to ask, or answer questions.</p> <p>Shared online calendar: Enables teams to schedule meeting and send email invites to meetings.</p> <p>Online scheduling and planning tools Enable teams to plan how a project is completed and when goals and objectives should be met.</p>	<p>Give one advantage and one disadvantage of using a locally installed platform:</p> <p>Advantage: It may run faster than a web-based app.</p> <p>Disadvantage: Only accessible on the users computer, which limits collaborative working.</p> <p>Give one advantage and one disadvantage of using a web-based platform:</p> <p>Advantage: Accessible anywhere via an internet connection.</p> <p>Disadvantage: Requires an internet connection to function, which might be slow if the connection is poor.</p>






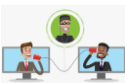

Year 11 BTECDIT: Modern technology

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



Year 11 BTECDIT: Cyber security

Why are systems attacked?	External Threats	Internal Threats	Impact of a Security Breach	User Access Restrictions
<p>List the reasons why systems are attacked:</p> <ul style="list-style-type: none"> 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. 	<p>Describe as many external threats to data and computer systems as you can think of:</p> <p>Social Engineering – Shoulder surfing and phishing. </p> <p>Malware:</p> <ul style="list-style-type: none"> Viruses Worms Trojans Spyware Botnets Rootkits Ransomware <p>Hackers </p> <p>Denial of Service (DDoS) </p> <p>Man in the middle attacks </p>	<p>Describe the following internal threats:</p> <p>Visiting untrustworthy websites:</p> <p>Employees might visit untrustworthy sites, or follow links in emails, which could install malware on the system.</p> <p>Accidental / unintended disclosure of data:</p> <p>Unwittingly giving out personal, or confidential data with good intention.</p> <p>Stealing /leaking information:</p> <p>Employees might be approached by rival organisations to supply them with data, plans, or trade secrets.</p> <p>Overriding security controls:</p> <p>Employees might override security controls to allow them to install unauthorised software, gain confidential information, or to allow unauthorised users to use the system.</p> <p>Use of portable storage devices (USB sticks)</p> <p>Employees might inset USB memory sticks that might contain viruses into a work computer, which then could infect the system.</p> <p>Downloading from the internet:</p> <p>Employees could download music, games, or other files from the internet, which could contain malware. Many organisations have policies and firewalls to prevent this.</p>	<p>Describe the following impacts of a security breach:</p> <p>Data Loss:</p> <p>If data is deleted, lost, or encrypted by ransomware is could be difficult, impossible, or costly to retrieve. </p> <p>Damage to public image: </p> <p>If a security breach is reported in the media, customers might lose trust in an organisation and choose not to buy from them again.</p> <p>Financial Loss:</p> <p>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. </p> <p>Reduced productivity:</p> <p>Time take to deal with a security breach and resolve problems might mean staff are not working normally, time is wasted and productivity lost. </p> <p>Downtime:</p> <p>When a security breach is discovered, systems my need to be shut down for investigation. This may affect the running of the organisation </p> <p>Legal Action:</p> <p>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. </p>	<p>An Advantage of physical security:</p> <p>Electronic locks record who enters or leaves. </p> <p>An Disadvantage of physical security:</p> <p>Keys/swipe cards may be lost, > copied, or stolen. PIN numbers might be written down by users.</p> <p>An Advantage of passwords:</p> <p>> Simple and cheap security method to setup</p> <p>An Disadvantage of passwords:</p> <p>Strong passwords are difficult to > remember, and do not protect from phishing.</p> <p>An Advantage of biometric security </p> <p>Alternative to hard to remember > passwords, and difficult to copy.</p> <p>An Disadvantage of biometric security:</p> <p>Expensive to setup as specialist > equipment is needed. </p> <p>An Advantage of access restrictions:</p> <p>Users who need to view files can do > so but cannot cause problems by making unauthorised changes</p> <p>An Disadvantage of access restrictions: </p> <p>Technical staff needed to setup. > Access levels need to be just right.</p> <p>An Advantage of 2FA:</p> <p>Higher level of security than just a > password, nothing additional to remember</p> <p>An Disadvantage of 2FA:</p> <p>It can require additional hardware or > software.</p>



Year 11 BTECDIT: Cyber security

Why are systems attacked?	External Threats	Internal Threats	Impact of a Security Breach	User Access Restrictions
<p>List the reasons why systems are attacked:</p> <ul style="list-style-type: none"> • • • • • • • 	<p>Describe as many external threats to data and computer systems as you can think of:</p> <div>  </div> <div>  </div> <div>  </div> <div>  </div> <div>  </div> <div>  </div> <div>  </div>	<p>Describe the following internal threats:</p> <p>Visiting untrustworthy websites:</p> <p>Accidental / unintended disclosure of data:</p> <p>Stealing /leaking information:</p> <p>Overriding security controls:</p> <p>Use of portable storage devices (USB sticks)</p> <p>Downloading from the internet:</p>	<p>Describe the following impacts of a security breach:</p> <p>Data Loss:</p> <p>Damage to public image:</p> <p>Financial Loss:</p> <p>Reduced productivity:</p> <p>Downtime:</p> <p>Legal Action:</p>	<p>An Advantage of physical security: Electronic locks record who enters or leaves.</p> <p>An Disadvantage of physical security:</p> <p>></p> <p>An Advantage of passwords:</p> <p>></p> <p>An Disadvantage of passwords:</p> <p>></p> <p>An Advantage of biometric security:</p> <p>></p> <p>An Disadvantage of biometric security:</p> <p>></p> <p>An Advantage of access restrictions:</p> <p>></p> <p>An Disadvantage of access restrictions:</p> <p>></p> <p>An Advantage of 2FA:</p> <p>></p> <p>An Disadvantage of 2FA:</p> <p>></p>




Year 11 BTECDIT: Cyber security

Data Level Protection (Firewalls and Interface Design)	Data Level Protection (Device Hardening)	Improving System Security	Policies	Disaster Recovery Policy
<p>Describe how a firewall protects a system:</p> <p>A firewall prevents unwanted internet traffic from accessing a system. It filters data, blocking illegitimate access, or cyber threats</p>  <p>Two benefits of using a firewall:</p> <p>Firewalls help block suspicious or malicious data, such as hackers trying to access a system.</p> <ol style="list-style-type: none"> 1. Software firewalls are easy to install and update. <p>Two drawbacks of firewalls:</p> <p>Hardware firewalls can be</p> <ol style="list-style-type: none"> 1. expensive. 2. Configuring firewalls can be complex. 3. They sometimes block legitimate traffic. <p>List ways that interface design can be used to protect data:</p> <ul style="list-style-type: none"> • 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. 	<p>List the measures that can be taken to 'harden' / protect a device against malware and cyber attack:</p> <p>Antivirus / anti-malware software protects computers from known malware and removes, or quarantines malware.</p> <p>Restrict user access with authentication (e.g. passwords, biometrics, 2FA etc...)</p> <p>Ensure security patches are installed and up to date.</p> <p>Install firewall software</p> <p>Uninstall software that is no longer required, or unsupported</p> <p>Remove old user accounts.</p> <p>Use strong passwords.</p> <p>Ensure default passwords on routers and other devices are changed.</p> 	<p>Describe what 'Penetration Testing' is:</p> <p>Penetration testing involves ethical white-hat hackers attempting to break into a system to test whether it is properly protected.</p> <p>The ethical hacker will then explain to an organisation, how to tighten security vulnerabilities.</p> <p>Give an Advantage of Penetration Testing:</p> <p>Can be expensive, and just because one hacker could not breach the system, other hackers still could.</p> <p>> Testing uses methods that real hackers use so is a realistic test. Vulnerabilities can be spotted and fixed</p> <p>An Disadvantage of Penetration Testing:</p> <p>> An independent security specialist who is authorised to test a system for security weaknesses.</p> <p>Describe what an 'ethical hacker' is:</p> <p>> White-hat hackers</p> <p>An independent security specialist who might discover an organisation's security vulnerabilities without permission and sometimes break the law.</p> <p>> Grey-hat hackers</p>	<p>Describe what the following types of policy cover:</p> <p>Internet Usage Policy:</p> <p>What internet websites and apps can and cannot be visited/used when at work.</p> <p>Email Policy:</p> <p>Appropriate use of email and how to deal with attachments from unknown sources.</p> <p>External Devices Policy:</p> <p>Rules on whether USB sticks and portable hard drives are permitted.</p> <p>Password Policy:</p> <p>Rules for making a strong password (complexity) and guidelines for keeping passwords secure.</p> <p>Software Policy:</p> <p>Rules on how software should be used and on downloading and installing software (is it allowed?).</p> <p>Personal Devices Policy:</p> <p>Rules about use of personal devices, such as smartphones and connecting them to company systems.</p> <p>Disposal of Equipment Policy:</p> <p>Rules about deleting data before disposing of a device and following environmentally friendly rules for disposal.</p> <p>Backup Policy:</p> <p>How data is backed up, who backs it up and how often.</p>	<p>Describe what a 'Disaster Recovery Policy' is:</p> <p>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.</p> <p>Describe the following steps to take after a Cyberattack:</p> <p>1. INVESTIGATE:</p> <p>Identify the type of attack. When did it start? How bad is it? What parts of the system are affected?</p> <p>2. RESPOND:</p> <p>Depending how bad the attack is: Inform relevant stakeholders, such as customers and ICO; Report to the police if a crime has been committed.</p> <p>3. MANAGE:</p> <p>Contain the attack: Disconnect, or shut down affected systems to prevent spread. Keep evidence for an investigation.</p> <p>4. RECOVER:</p> <p>Disinfect digital systems, restore data from backups, return systems to full working order.</p> <p>5. ANALYSE:</p> <p>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.</p>




Year 11 BTECDIT: Cyber security

Data Level Protection (Firewalls and Interface Design)	Data Level Protection (Device Hardening)	Improving System Security	Policies	Disaster Recovery Policy
<p>Describe how a firewall protects a system:</p>  <p>Two benefits of using a firewall:</p> <ol style="list-style-type: none"> 1. 2. <p>Two drawbacks of firewalls:</p> <ol style="list-style-type: none"> 1. 2. <p>List ways that interface design can be used to protect data:</p> <ul style="list-style-type: none"> • • • 	<p>List the measures that can be take to 'harden' / protect a device against malware and cyber attack:</p> 	<p>Describe what 'Penetration Testing' is:</p> <p>Give an Advantage of Penetration Testing:</p> <p>></p> <p>An Disadvantage of Penetration Testing:</p> <p>></p> <p>Describe what an 'ethical hacker' is:</p> <ul style="list-style-type: none"> ➤ White-hat hackers ➤ Grey-hat hackers 	<p>Describe what the following types of policy cover:</p> <p>Internet Usage Policy:</p> <p>Email Policy:</p> <p>External Devices Policy:</p> <p>Password Policy:</p> <p>Software Policy:</p> <p>Personal Devices Policy:</p> <p>Disposal of Equipment Policy:</p> <p>Backup Policy:</p>	<p>Describe what a 'Disaster Recovery Policy' is:</p> <p>Describe the following steps to take after a Cyberattack:</p> <ol style="list-style-type: none"> 1. INVESTIGATE: 2. RESPOND: 3. MANAGE: 4. RECOVER: 5. ANALYSE:









Year 11 BTECDIT: Wider implications of Technology

Shared Data	Environmental Impact	Equal Access	Net Neutrality
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p> <p>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.</p> <p>Describe a benefit to companies sharing data exchange between services: Online payments and e-commerce would not be possible without data exchange services.</p> <p>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</p>	<p>Give two examples of the environmental issues related to the following areas of computing:</p> <p>Manufacturing: </p> <ul style="list-style-type: none"> 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. <p>Disposal of computer hardware:</p> <ul style="list-style-type: none"> 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.  <p>Use:</p> <ul style="list-style-type: none"> Computers are powered by electricity, which requires huge amounts of energy to be generated. Batteries need to be recharged from a power supply. <p>Describe what an organisation's 'Environmental Policy' is:</p> <p>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.</p> <p>Computers might have power saving modes enabled to reduce power consumption and older computers might be upgraded, rather than replaced reducing e-waste.</p>	<p>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</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Describe a benefit of Equal Access for Society: Modern technologies promote equality and fairness, allowing more people to work in flexible ways.</p> <p>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.</p> <p>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.</p>	<p>Describe what is meant by the term 'Net Neutrality':</p> <p>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.</p> <p>Describe two things that organisations would be allowed to do if there was NO Net Neutrality:</p> <ul style="list-style-type: none"> 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. <p>Describe two benefits to organisations of Net Neutrality:</p> <ul style="list-style-type: none"> 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 <p>Describe two drawbacks to organisations of Net Neutrality:</p> <ul style="list-style-type: none"> Prevents ISPs exploiting a potential competitive advantage, by prioritising their own services. Stops ISPs from profiteering from setting up internet fast lanes.










Year 11 BTECDIT: Wider implications of Technology

Shared Data	Environmental Impact	Equal Access	Net Neutrality
Describe a benefit to companies sharing their customer's location-based data:	Give two examples of the environmental issues related to the following areas of computing: Manufacturing: 	Describe what 'Equal Access' means:	Describe what is meant by the term 'Net Neutrality':
Describe a drawback to companies sharing their customer's location-based data:	•	Describe what 'Unequal Access' means:	
Describe a benefit to companies sharing their customer's transactional data:	•	Describe a benefit of Equal Access for Organisations:	Describe two things that organisations would be allowed to do if there was NO Net Neutrality:
Describe a drawback to companies sharing their customer's transactional data:	Disposal of computer hardware: 	Describe a benefit of Equal Access for Individuals:	•
Describe a benefit to companies sharing their customer's Cookie data:	•		•
Describe a drawback to companies sharing their customer's Cookie data:	Use: 	Describe a benefit of Equal Access for Society:	Describe two benefits to organisations of Net Neutrality:
Describe a benefit to companies sharing data exchange between services:	•		•
Describe a drawback to companies sharing data exchange between services:	•	What grounds, Legally, must organisations not discriminate against people for:	Describe two drawbacks to organisations of Net Neutrality:
	Describe what an organisation's 'Environmental Policy' is:	Legally, what must employers provide for staff with accessibility needs:	•
			•

Year 11 BTECDIT: Wider implications of Technology

Acceptable Use Policy	Social and Business Boundaries	Data Protection Principles	Intellectual Property	Criminal Use of Computer Systems
<p>Describe what an 'acceptable use policy' (AUP) is:</p> <p>An AUP sets out the rules for how an organisation's IT systems should be used, and states what is not allowed.</p> <p>Give two hardware rules that might be in an AUP:</p> <p>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.</p> <p>Give two software and data rules that might be in an AUP:</p> <p>What software apps are</p> <ul style="list-style-type: none"> • acceptable to use for specific work tasks. Reminds employees of their responsibilities under the Data Protection Act, to keep data secure. <p>Give three methods an organisation can use to monitor acceptable use of their computer systems:</p> <ul style="list-style-type: none"> • 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. 	<p>Give 3 examples of the ways in which organisations can use social media networks:</p> <ul style="list-style-type: none"> • 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. <p>Describe 2 benefits of the impact of digital systems on professional life:</p> <ul style="list-style-type: none"> • 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. <p>Describe a drawback of the impact of digital systems on professional life:</p> <p>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.</p>	<p>Describe the 8 principles of the Data Protection Act?</p> <ol style="list-style-type: none"> 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 	<p>What is intellectual property?</p> <p>A unique creation of the mind, such as computer software, music, artworks, inventions, trademarks and logos etc...</p> <p>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.</p> <p>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.</p> <p>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</p> <p>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.</p>	<p>Describe the purpose of the Computer Misuse Act (1990):</p> <p>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.</p> <p>Describe 4 unlawful uses of computer systems that are covered by the Computer Misuse Act:</p> <ol style="list-style-type: none"> 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. Changing editing, or deleting data on a computer system.

Year 11 BTECDIT: Wider implications of Technology

Acceptable Use Policy	Social and Business Boundaries	Data Protection Principles	Intellectual Property	Criminal Use of Computer Systems
<p>Describe what an 'acceptable use policy' (AUP) is:</p> <p>Give two hardware rules that might be in an AUP:</p> <ul style="list-style-type: none"> • • <p>Give two software and data rules that might be in an AUP:</p> <ul style="list-style-type: none"> • • <p>Give three methods an organisation can use to monitor acceptable use of their computer systems:</p> <ul style="list-style-type: none"> • • • 	<p>Give 3 examples of the ways in which organisations can use social media networks:</p> <ul style="list-style-type: none"> • • • <p>Describe 2 benefits of the impact of digital systems on professional life:</p> <ul style="list-style-type: none"> • • <p>Describe a drawback of the impact of digital systems on professional life:</p>	<p>Describe the 8 principles of the Data Protection Act?</p> <ol style="list-style-type: none"> 1.  2.  3. 4.  5.  6.  7. 	<p>What is intellectual property?</p>  <p>What is copyright?</p>  <p>What is a Trade Mark?</p>  <p>What is a patent?</p> 	<p>Describe the purpose of the Computer Misuse Act (1990):</p> <p>Describe 4 unlawful uses of computer systems that are covered by the Computer Misuse Act:</p> <ol style="list-style-type: none"> 1. 2. 3. 4.

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..)

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

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)

Year 11 GCSE Media: Sketch

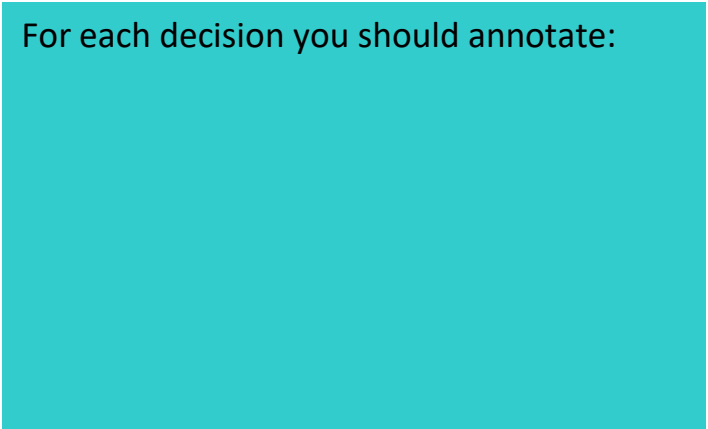


A detailed sketch will include:



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

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.

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?

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

Primary research	Secondary Research
<p>Primary data is information that you find yourselves. This information is 'new' and directly related to your project.</p> <ul style="list-style-type: none">• <i>This information could be gathered using:</i>• <i>interviews</i>• <i>questionnaires</i>• <i>analysis of products</i>• <i>materials' tests</i>• <i>observations.</i>	<p>Secondary data is 'second hand data which has already been collected by someone else.</p> <p>Examples of secondary research include:</p> <ul style="list-style-type: none">• information from books, magazine and newspaper articles.• Test reports.• internet research. <p>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.</p> <p>Data is not always accurate as its not specific to the users needs.</p>

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?

Primary research

Primary data is information that you find yourselves. This information is 'new' and directly related to your project.

Secondary Research

Secondary data is 'second hand data which has already been collected by someone else.

Product Analysis

Economic

This is about the effects a product has on the economy and is split into two types Linear economy and circular economy.

Linear economy – products are made as cheap as possible. Materials are processed into a product, the product is used, then it is simply disposed of.

Circular economy – Uses a few resources/materials and, possibly, 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

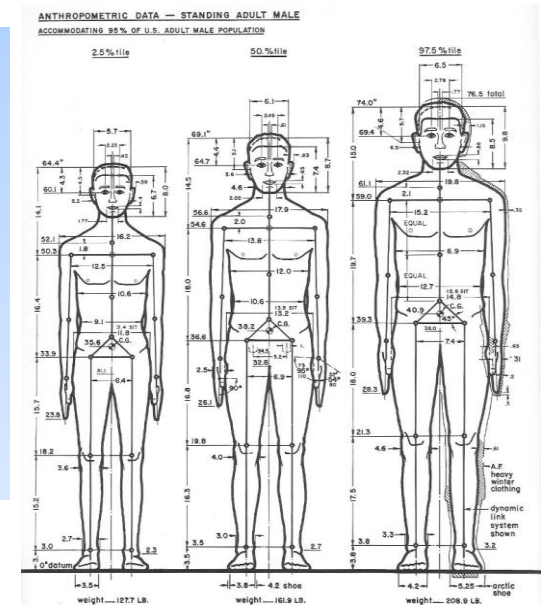
How the social factors of a group of people can influence the design of a product.

- ethnic groups
- political groups
- religious groups.
- Cultural factors.

Anthropometrics

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



Economic

Ergonomics

Ergonomics is the relationship between people and the products which they use.

Things to consider are:

-
-
-
-



Social

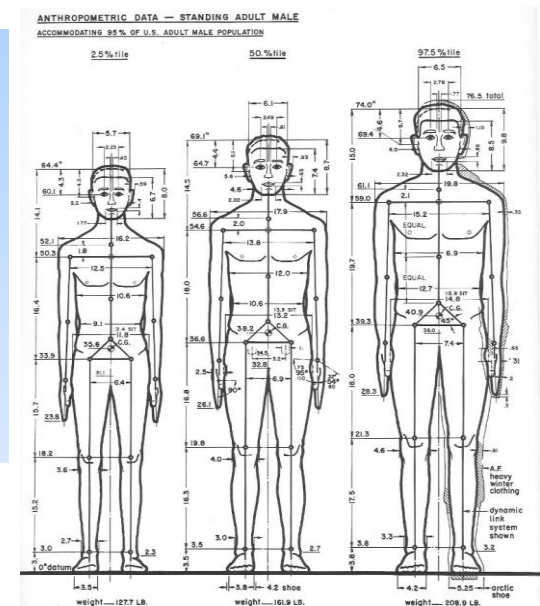
How the _____ factors of a group of people can influence the design of a product.

-
-
-
-

Anthropometrics

Is the study of Human _____, it is important to consider _____ of people in relation to products.

-
-
-



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



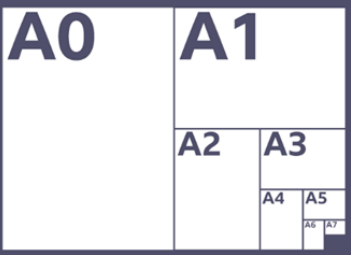
Lamination

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 x 210 mm) is half the size of A3 paper (297 mm x 420 mm).

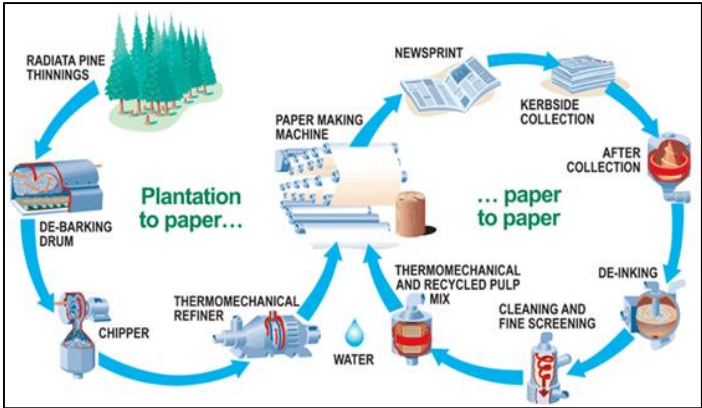
Type of board	Properties	Uses
Corrugated cardboard	Strong, lightweight	Packaging protection in transportation of products and used to package some hot food such as a pizza due to its insulating properties
Duplex board	Cheaper than white board, available with different finishes (metallic, holographic 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



Type of paper	Properties	Uses
Layout paper		
Bleedproof (marker) paper		
Tracing paper		
Grid paper		
Cartridge paper		

Weight and Thickness

Manufacture and recycling

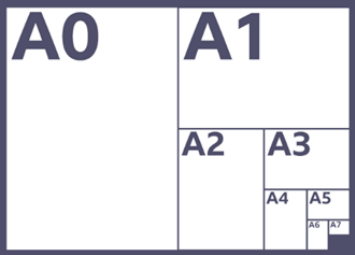


Lamination

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)		

Natural & Synthetic PolymersPolymers 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.

Examples of Natural and Synthetic Polymers

Natural polymers are made by living organisms. Synthetic polymers are made by chemical reactions in a lab.



DNA



Rubber



Nylon



Polyester



Cellulose



Wool



Teflon



Epoxy

Natural & Synthetic PolymersPolymers can be made from natural and synthetic resources.

- *Synthetic polymers* are
- *Natural polymers* are

Type	Property	USE
Epoxy resin		
Melamine formaldehyde		
Phenol formaldehyde		
Polyester resin		
Urea formaldehyde (UF)		

Type	Property	USE
Acrylic (PMMA)		
High-impact polystyrene (HIPS)		
High-density polythene (HDPE)		
Polypropylene (PP)		
Polyvinyl chloride (PVC)		
Polyethylene terephthate (PET)		

Categorisation of Polymers

Polymers are classified into ____ groups: _____ and thermosetting

Thermo_____ polymers...

Thermosetting polymers...

Examples of Natural and Synthetic Polymers

Natural polymers are made by living organisms. Synthetic polymers are made by chemical reactions in a lab.



DNA



Rubber



Nylon



Polyester



Cellulose



Wool



Teflon



Epoxy

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.

Categorisation

Non-ferrous

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Ferrous

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Types of Non Ferrous metals

Aluminium –

Copper –

Brass –

Bronze –

Types of Ferrous metal

Cast iron –

Low-carbon steel –

High-carbon steel –

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 –**

20th Century design movements



Memphis

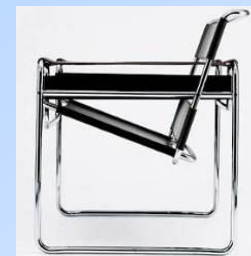
- A group of Italian designers, led by Ettore Sottsass exhibited an alternative viewpoint to minimalism.
- As a reaction to the clinical lines and lack of decoration which was typical of the Modernist movement
- They introduced highly decorative laminates and produced products which were amusing.
- Whilst 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



Bauhaus

Memphis

-
-
-
-



Art Deco

-
-
-
-



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.



Air Bus

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Apple



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Matthew Williamson

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Phillpe Stark

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James Dyson

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Drama



Helping every person achieve things they never thought they could.

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 was 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 was 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:



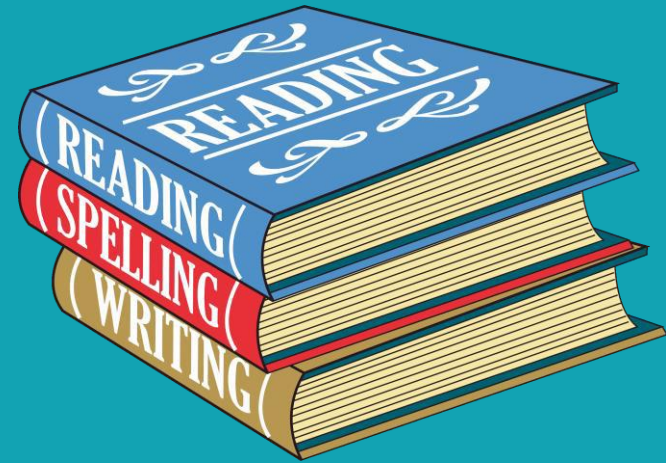
Year 11 Drama: Blood Brothers

Plot		
Act 1: before birth	Act 1- 7 years old	Act 2- 14 years old
<p>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.</p>	<p>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.</p>	<p>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.</p>
Act 2- 18 years old	Act 2- the end	
<p>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.</p>	<p>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?</p>	

Year 11 Drama: Blood Brothers

Plot		
Act 1: before birth	Act 1- 7 years old	Act 2- 14 years old
<p>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.</p>	<p>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.</p>	<p>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 ____.</p>
Act 2- 18 years old	Act 2- the end	
<p>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 _____.</p>	<p>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?</p>	

English



Helping every person achieve things they never thought they could.

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 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

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



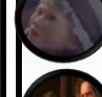
The Ghost of Christmas



The Ghost of Christmas



Belle



Fan



Portly Gentlemen



Ignorance and Want



Fezziwig

<p>“Secret and self contained and solitary as an oyster”</p> <p><i>Description of Scrooge</i> <i>Stave 1</i></p>	<p>“If they had rather die they had better do it, and decrease the surplus population”</p> <p><i>Scrooge, Stave 1</i></p>	<p>“Are there no prisons? Are the (...) workhouses still in operation?”</p> <p><i>Scrooge, Stave 1</i></p>	<p>“Dismal little cell”</p> <p><i>Description of Bob Cratchit's working conditions</i></p>	<p>“The fog came pouring in through every chink and every keyhole”</p> <p><i>Description of the weather, Stave 1</i></p>
<p>“I wear the chains I forged in life. I made them link by link and yard by yard”</p> <p><i>Marley, Stave 1</i></p>	<p>“Mankind was my business!”</p> <p><i>Marley, Stave 1</i></p>	<p>“Would you so soon put out the light I give?”</p> <p><i>Ghost of Christmas Past, Stave 2</i></p>	<p>“A solitary child, neglected by his friends”</p> <p><i>Description of Scrooge as a child, Stave 2</i></p>	<p>“Yo ho my boys!”</p> <p><i>Fezziwig, Stave 2</i></p>
<p>“Gain engrosses you” “Another idol has displaced me...a golden one”</p> <p><i>Belle, Stave 2</i></p>	<p>“Bore a little crutch and his limbs were supported by an iron frame”</p> <p><i>Description of Tiny Tim Stave 3</i></p>	<p>“To Mr Scrooge! The founder of the feast!”</p> <p><i>Bob Cratchit, Stave 3</i></p>	<p>“Yellow, meagre, ragged, scowling, wolfish”</p> <p><i>Description of Ignorance and Want, Stave 3</i></p>	<p>“Reeked of crime and filth and misery”</p> <p><i>Description of London slums</i></p>
<p>“Overrun by grass and weeds”</p> <p><i>Description of Scrooge’s grave, Stave 4</i></p>	<p>“Oh, tell me I may sponge away the writing on this stone!”</p> <p><i>Scrooge Stave 4</i></p>	<p>“No fog. No Mist. Clear, bright, jovial light. Sweet, fresh air”</p> <p><i>Description of the weather, Stave 5</i></p>	<p>“I’m as light as a feather, as happy and an angel, as merry as a schoolboy”</p> <p><i>Scrooge, Stave 5</i></p>	<p>“God bless us. Everyone!”</p> <p><i>Tiny Tim, Stave 5</i></p>

<p>“Secret and ...</p> <p><i>Description of Scrooge Stave 1</i></p>	<p>“If they had rather ...</p> <p><i>Scrooge, Stave 1</i></p>	<p>“Are there no ...</p> <p><i>Scrooge, Stave 1</i></p>	<p>“Dismal...</p> <p><i>Description of Bob Cratchit's working conditions</i></p>	<p>“The fog ...</p> <p><i>Description of the weather, Stave 1</i></p>
<p>“I wear ...</p> <p><i>Marley, Stave 1</i></p>	<p>“Mankind ...</p> <p><i>Marley, Stave 1</i></p>	<p>“Would ...</p> <p><i>Ghost of Christmas Past, Stave 2</i></p>	<p>“A solitary child, ...</p> <p><i>Description of Scrooge as a child, Stave 2</i></p>	<p>“Yo ho ...</p> <p><i>Fezziwig, Stave 2</i></p>
<p>“Gain ...</p> <p><i>Belle, Stave 2</i></p>	<p>“Bore a little crutch ...</p> <p><i>Description of Tiny Tim Stave 3</i></p>	<p>“To Mr Scrooge! ...</p> <p><i>Bob Cratchit, Stave 3</i></p>	<p>“Yellow, meagre, ...</p> <p><i>Description of Ignorance and Want, Stave 3</i></p>	<p>“Reeked of crime ...</p> <p><i>Description of London slums</i></p>
<p>“Overrun by ...</p> <p><i>Description of Scrooge’s grave, Stave 4</i></p>	<p>“Oh, tell ...</p> <p><i>Scrooge Stave 4</i></p>	<p>“No fog. No Mist. ...</p> <p><i>Description of the weather, Stave 5</i></p>	<p>“I’m as light as ...</p> <p><i>Scrooge, Stave 5</i></p>	<p>“God bless ...</p> <p><i>Tiny Tim, Stave 5</i></p>

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 - 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



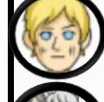
Malcolm
Duncan's son and heir



Donalbain
Duncan's youngest son



Banquo
Macbeth's friend



Fleance
Banquo's son



The Weird Sisters
Three Witches



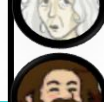
Macduff
Thane of Fife



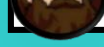
Lady Macduff
Macduff's wife



Ross
A Scottish Thane




Hecate
Queen of the witches




Macdonald
Traitor

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 _____

<p>"Fair is foul and foul is fair, hover through fog and filthy air"</p> <p><i>The Witches</i></p>	<p>"So foul and fair a day I have not seen"</p> <p><i>Macbeth's first line</i></p>	<p>"O valiant cousin! Worthy gentlemen"</p> <p><i>Duncan about Macbeth</i></p>	<p>"Unseamed him from knave to chaps and placed his head upon our battlements"</p> <p><i>Soldier about Macbeth killing Macdonald</i></p>	<p>"Whose horrid image doth unfix my hair and make my seated heart knock against my ribs"</p> <p><i>Macbeth when he heard the witches' prophecies</i></p>
<p>"I do fear thy nature is too full of the milk of human kindness"</p> <p><i>Lady Macbeth about Macbeth</i></p>	<p>"Come you spirits (...) unsex me here (...) fill me with direst cruelty"</p> <p><i>Lady Macbeth before Macbeth returns home</i></p>	<p>"Take my milk for gall" "Make thick my blood"</p> <p><i>Lady Macbeth to the spirits before Macbeth returns home</i></p>	<p>"I would have plucked my nipple from its boneless gums and dashed it's brains out, had I so have sworn to you"</p> <p><i>Lady Macbeth manipulating Macbeth</i></p>	<p>"I have no spur to prick the sides of my intent, only vaulting ambition"</p> <p><i>Macbeth to himself</i></p>
<p>"Look like the innocent flower but be the serpent under it"</p> <p><i>Lady Macbeth to the Macbeth</i></p>	<p>"Will all Great Neptune's Oceans wash this blood clean from my hands"</p> <p><i>Macbeth after regicide</i></p>	<p>"I fear thou has played most foully for it"</p> <p><i>Banquo, after Macbeth is King</i></p>	<p>"False face must hide what the false heart doth know"</p> <p><i>Macbeth to himself</i></p>	<p>"Fly good Fleance! Fly!"</p> <p><i>Banquo when murderers attack him</i></p>
<p>"Never shake thy gory locks at me"</p> <p><i>Macbeth to Banquo's ghost</i></p>	<p>"All the perfumes of Arabia will not sweeten this little hand"</p> <p><i>Lady Macbeth sleepwalking</i></p>	<p>"Til Birnham Wood move to Dunsinane I shall not taint with fear"</p> <p><i>Macbeth before his death</i></p>	<p>"Turn hellhound. Turn"</p> <p><i>Macduff to Macbeth before he kills him</i></p>	<p>"The dead butcher and his fiendlike queen"</p> <p><i>Malcom as king, about Macbeth</i></p>

<p>“Fair is ...</p> <p><i>The Witches</i></p>	<p>“So foul ...</p> <p><i>Macbeth’s first line</i></p>	<p>“O valiant ...</p> <p><i>Duncan about Macbeth</i></p>	<p>“Unseamed him ...</p> <p><i>Soldier about Macbeth killing Macdonald</i></p>	<p>“Whose horrid image ...</p> <p><i>Macbeth when he heard the witches’ prophecies</i></p>
<p>“I do fear thy nature ...</p> <p><i>Lady Macbeth about Macbeth</i></p>	<p>“Come you ...</p> <p><i>Lady Macbeth before Macbeth returns home</i></p>	<p>“Take my ... “Make thick ...</p> <p><i>Lady Macbeth to the spirits before Macbeth returns home</i></p>	<p>“I would have plucked...</p> <p><i>Lady Macbeth manipulating Macbeth</i></p>	<p>“I have no spur ...</p> <p><i>Macbeth to himself</i></p>
<p>“Look like the ...</p> <p><i>Lady Macbeth to the Macbeth</i></p>	<p>“Will all Great ...</p> <p><i>Macbeth after regicide</i></p>	<p>“I fear thou ...</p> <p><i>Banquo, after Macbeth is King</i></p>	<p>“False face must hide ...</p> <p><i>Macbeth to himself</i></p>	<p>“Fly good ...</p> <p><i>Banquo when murderers attack him</i></p>
<p>“Never shake ...</p> <p><i>Macbeth to Banquo’s ghost</i></p>	<p>“All the perfumes ...</p> <p><i>Lady Macbeth sleepwalking</i></p>	<p>“Til Birnham Wood ...</p> <p><i>Macbeth before his death</i></p>	<p>“Turn ...</p> <p><i>Macduff to Macbeth before he kills him</i></p>	<p>“The dead butcher ...</p> <p><i>Malcom as king, about Macbeth</i></p>

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 Attlee**) 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**

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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



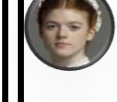
Gerald Croft
Sheila's fiancé



Inspector Goole
Police Inspector



Eva Smith/Daisy Renton

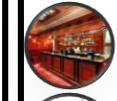


Edna
Maid

Places



Milwards
Department Store



The Palace Bar
Theatre Bar



Brumley
Town where they live

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 is 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

<p>Rather portentous man, provincial in his speech</p> <p><i>Stage direction describing Arthur</i></p>	<p>Half shy, half assertive</p> <p><i>Stage direction describing Eric</i></p>	<p>Rather cold woman and her husband's social superior</p> <p><i>Stage direction describing Sybil</i></p>	<p>Very pleased with life and rather excited</p> <p><i>Stage direction describing Sheila</i></p>	<p>Well bred man about town</p> <p><i>Stage direction describing Gerald</i></p>
<p>Creates an impression of massiveness, solidity and purposefulness</p> <p><i>Stage direction describing Goole</i></p>	<p>"It's my duty to keep labour costs down"</p> <p><i>Arthur - Act 1</i></p>	<p>"Community and all that nonsense"</p> <p><i>Arthur - Act 1</i></p>	<p>"Unsinkable! Absolutely unsinkable!"</p> <p><i>Arthur - Act 1</i></p>	<p>"We are responsible citizens not criminals"</p> <p><i>Gerald - Act 1</i></p>
<p>"But these girls aren't cheap labour; they're people"</p> <p><i>Sheila - Act 1</i></p>	<p>"He could have kept her on instead of throwing her out"</p> <p><i>Eric – Act 1</i></p>	<p>"I hate all those hard eyed, dough faced women"</p> <p><i>Gerald – Act 2</i></p>	<p>"Girls of that class -"</p> <p><i>Sybil – Act 2</i></p>	<p>"We have done a great deal of useful work in helping deserving cases."</p> <p><i>Sybil – Act 2</i></p>
<p>"I was in that state where a chap can easily turn nasty."</p> <p><i>Eric – Act 3</i></p>	<p>"She was pretty and a good sport"</p> <p><i>Eric – Act 3</i></p>	<p>"Look Inspector – I'd give thousands, yes thousands"</p> <p><i>Arthur – Act 3</i></p>	<p>"There are millions and millions and millions of Eva Smiths and John Smiths"</p> <p><i>Goole – Act 3</i></p>	<p>"We are all members of one body (...) responsible for each other"</p> <p><i>Goole - Act 3</i></p>

Rather portentous ... <i>Stage direction describing Arthur</i>	Half shy, ... <i>Stage direction describing Eric</i>	Rather cold ... <i>Stage direction describing Sybil</i>	Very pleased ... <i>Stage direction describing Sheila</i>	Well bred ... <i>Stage direction describing Gerald</i>
Creates an impression ... <i>Stage direction describing Goole</i>	“It’s my duty ... <i>Arthur - Act 1</i>	“Community ... <i>Arthur - Act 1</i>	“Unsinkable! ... <i>Arthur - Act 1</i>	“We are responsible ... <i>Gerald - Act 1</i>
“But these girls aren’t ... <i>Sheila - Act 1</i>	“He could have kept ... <i>Eric – Act 1</i>	“I hate all those ... <i>Gerald – Act 2</i>	“Girls of ... <i>Sybil – Act 2</i>	“We have done a ... <i>Sybil – Act 2</i>
“I was in that state ... <i>Eric – Act 3</i>	“She was pretty ... <i>Eric – Act 3</i>	“Look Inspector – I’d give ... <i>Arthur – Act 3</i>	“There are millions ... <i>Goole – Act 3</i>	“We are all members ... <i>Goole - Act 3</i>


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.

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

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

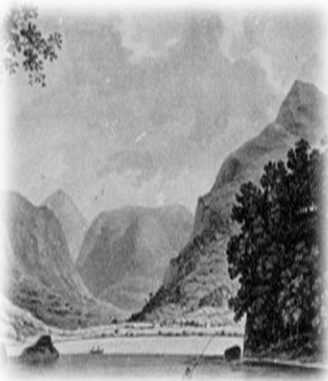
Link to Context

C

Compare to second poem in detail

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 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

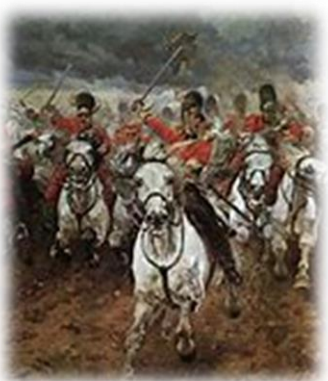


"My Last Duchess" by Robert Browning is a poem in which a wealthy Duke speaks about his former wife, who he had killed because of her alleged flirtatiousness. The Duke reveals his jealousy and possessiveness, as well as his desire for control and power. It offers a chilling insight into the mind of a 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 Alfred Lord Tennyson

"The Charge of the Light Brigade" recounts a heroic but tragic event of The Battle of Balaklava 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

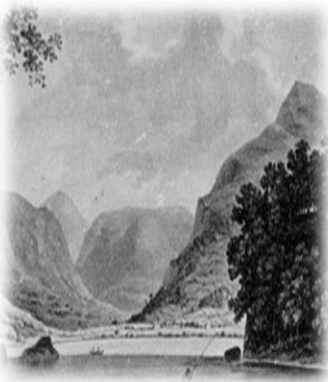


"Exposure" by Wilfred Owen is a powerful war poem that captures the harsh reality of soldiers in World War I, that was a contrast to the glory of war promised by Government propaganda. It vividly describes the freezing conditions, fear, and despair they face. Through haunting imagery and vivid descriptions, 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 knife 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.		

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?
- 5. Why is the poem structured in this way?



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?
- 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?

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?
- 4. Why does Tennyson use Biblical Allusions?



Key Quotes	"Into the valley _____"	"There's not to reason _____"	"noble _____"
	_____	_____	_____


Why was this poem unusual for the time period?

Exposure by Wilfred Owen



- 1. What does the poem focus on?
- 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?

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"
	 <p>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.</p>		

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 soldier 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"
	 <p>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.</p>		

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"
	 <p>Many soldiers face Post Traumatic Stress Disorder (PTSD) after they have returned from war.</p>		

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"
	 <p>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.</p>		

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?

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 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



"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.

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?





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 Quotes	"It may be at war, _____ _____"	"I am branded by _____ _____"	"I have no passport. _____ _____"



How are refugees often judged?

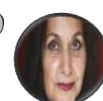



Tissue by Imtiaz Dharker


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 the light shine through, _____ _____"	"Maps too. _____ _____"	"Fine slips from grocery shops _____ _____"



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 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?



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"
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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

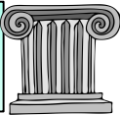
- 1. What story is told in the poem?
- 2. What conflict is explored?
- 3. What questions does the poem raise?
- 4. Why does the poet use lots of natural imagery in the poem?



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... _____

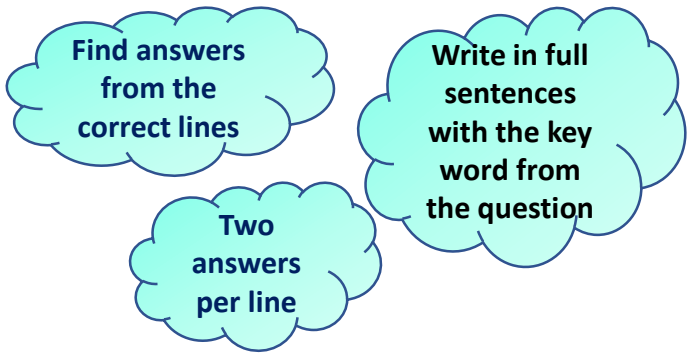
Repetition is... _____

Onomatopoeia is... _____

Question 1

List for 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

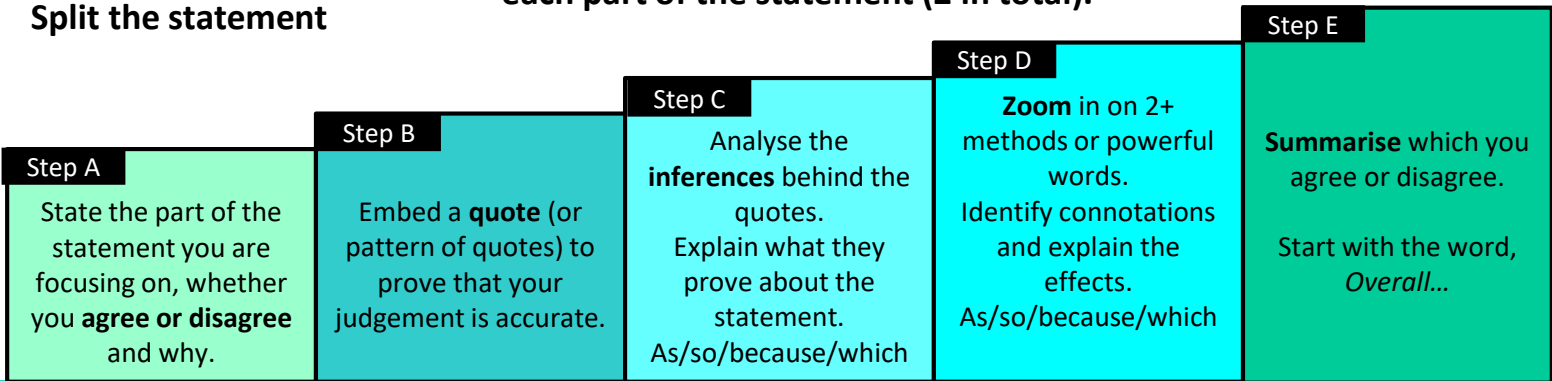
- W Withholding Information** – What does the writer not tell us to make us curious?
- A Atmosphere** – What atmosphere is created and why is this intriguing?
- T Topics/Themes**– Which topics and themes do we focus on? Why does this hold our attention?
- C Characters**– Why are we engaged by the character?
- H Hints**– What do we expect to happen next? What is foreshadowed?

Question 4

How far do you agree 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).



Question 1

- List _____...
- 4 marks
 - 5 mins (as part of your reading time)

Find answers

Write in full

Two

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).

Step A

Step B

Step C

As/___/because/___

Step D

As/___/because/___

Step E

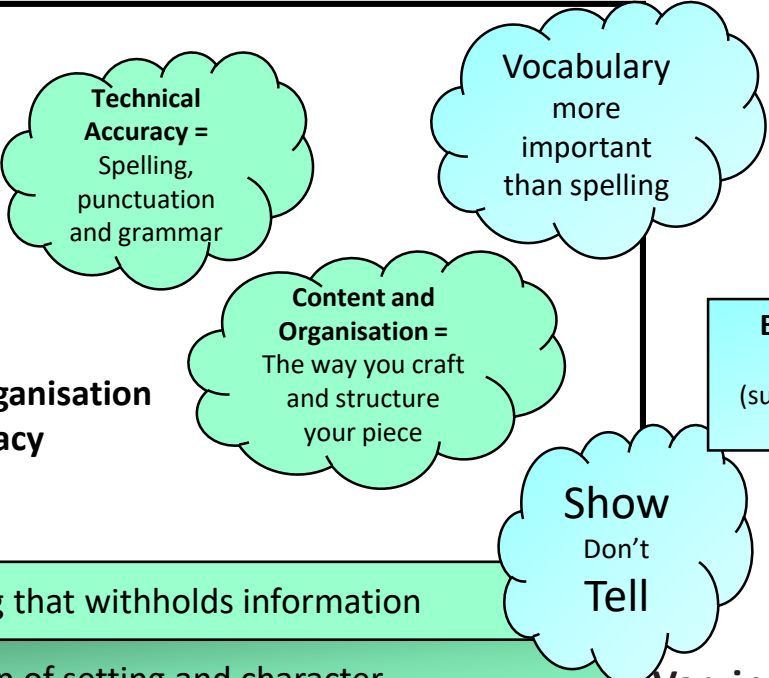
Start with the word, _____...

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

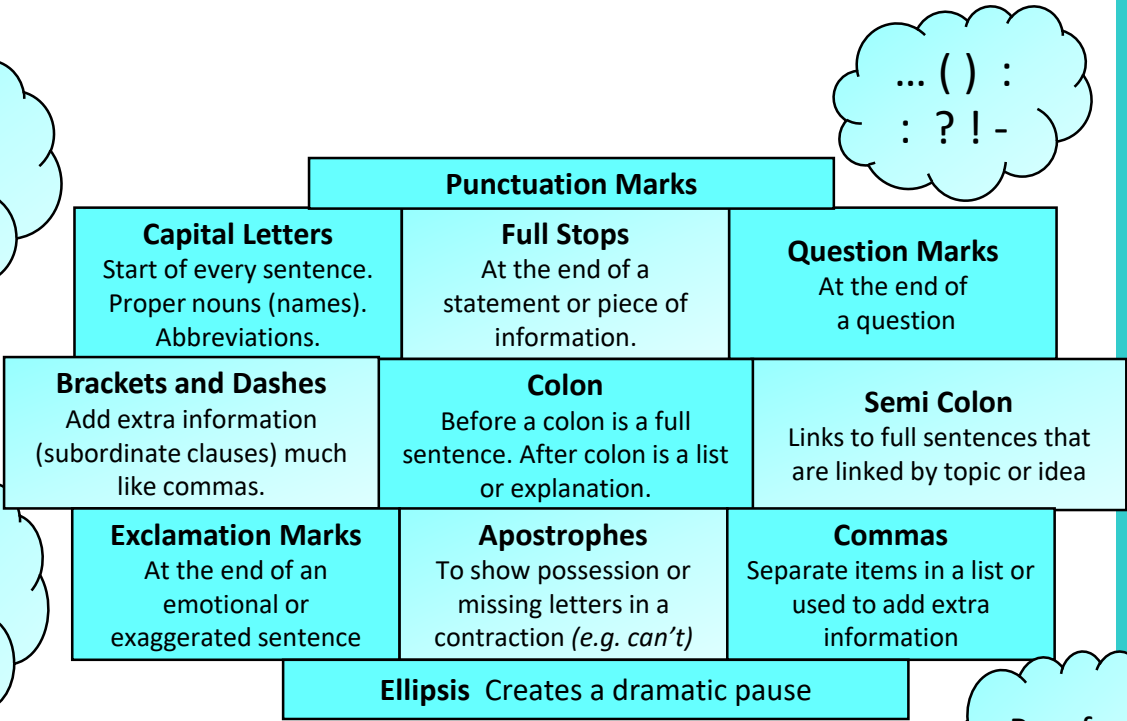


Paragraph structure:

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.



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.

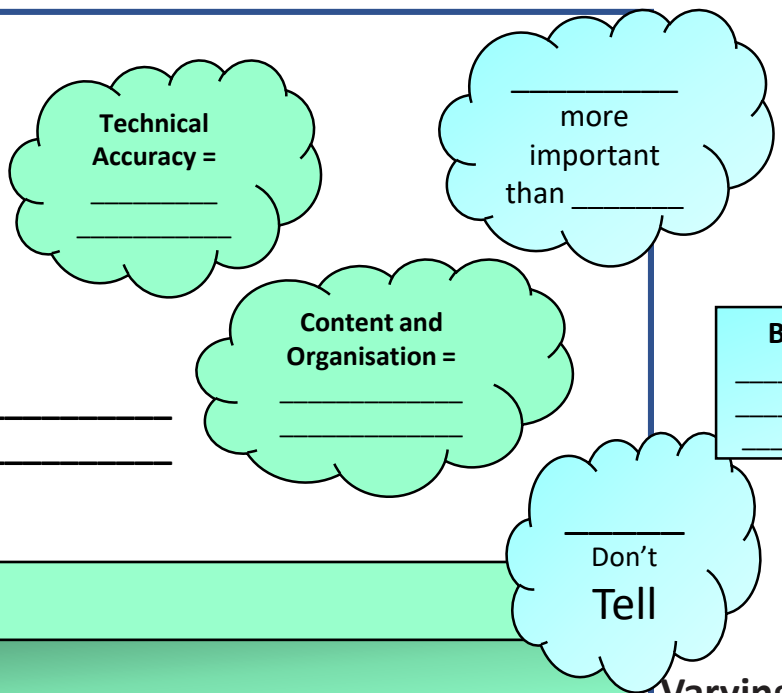
Proof Read!

Question 5

Write a _____.

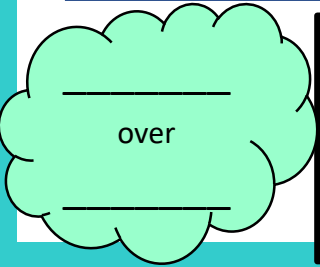
Choose from...

- A _____ stimulus
- A _____ stimulus
- 45 minutes
- 40 marks
 - 24 marks – _____
 - 16 marks – _____



Paragraph structure:

1	Hook	
2	Description	
3	Flashback	
4	One Liner	
5	Climax	
6	Cliff Hanger	



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.

Punctuation Marks

Capital Letters _____ _____ _____	Full Stops _____ _____ _____	Question Marks _____ _____ _____
Brackets and Dashes _____ _____ _____	Colon _____ _____ _____	Semi Colon _____ _____ _____
Exclamation Marks _____ _____ _____	Apostrophes _____ _____ _____	Commas _____ _____ _____

Ellipsis _____

... () :
: ? ! -

Varying sentence openings

Vary the way that you start sentences to keep your writing interesting and lively

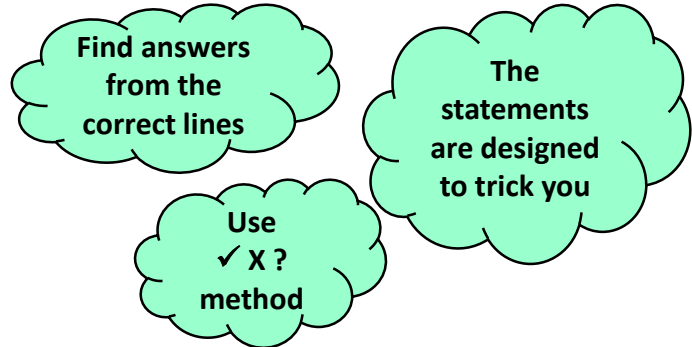
Start your sentence with a...	Example
_____ – an action word	Running for her life , Sarah shouted at the bus to stop.
_____ - comparing something to something else	As quiet as a whisper , he turned to me.
_____ – indicates the position of someone or something	Beyond the gate, the road stretched far away.
_____ – 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.



Question 1

Find 4 true statements...

- 4 marks
- 5 mins (as part of your reading time)



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...?

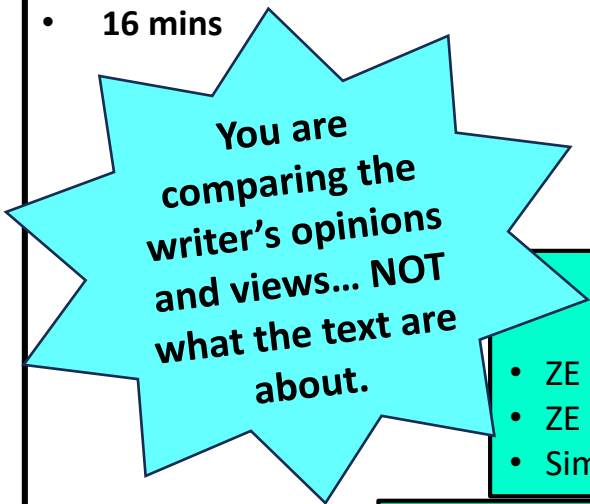
- 12 marks
- 12 mins
- 3 x ZE paragraphs

<u>Zoom</u> Pick a powerful word or language technique + Identify the connotations created	<u>Effect</u> 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



<u>Paragraph 1 – Compare the writer's opinions</u> <ul style="list-style-type: none">• PEA on Source A (Writer's opinion)• PEA on Source B (Writer's opinion)• Similarities/Differences
<u>Paragraph 2 – Compare the writer's methods</u> <ul style="list-style-type: none">• 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)• Similarities/Differences
<u>Paragraph 3 – Compare anything else (optional)</u> <ul style="list-style-type: none">• Compare any other attitude or method that you have not had chance to explore yet <i>e.g. tone, structure, format.</i>

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)
• _____

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

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?

Content and Organisation =
The way you craft and structure your piece

Technical Accuracy
= Spelling, punctuation and grammar

... () :
: ? ! -

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

Vocabulary more important than spelling

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 - <i>you</i> and <i>your</i>	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

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!

Question 5

Write a _____ text, arguing your views.

You may be asked to write...

- 45 minutes
- 40 marks
 - 24 marks – _____
 - 16 marks – _____

Paragraph structure:

1	Introduction	
2	Background	
3	Counterargument	
4	One Liner	
5	Mian Event	
6	Solution	

Content and Organisation =

Technical Accuracy
= Spelling,

... () :
: ? ! -

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.
_____ - <i>you</i> and <i>your</i>	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

_____ 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, _____!

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

Paragraph structure:

The image is a springboard – add ideas as you wish

Show don't tell

1	Top of the scene	<ul style="list-style-type: none">• Describe the sky, horizon, atmosphere, weather• Something falls from the sky to the scene below.
2	Drop into the scene	<ul style="list-style-type: none">• Describe the scene below: zoom in on 3 details.• A sound draws your attention to a character in the scene.
3	Character zoom	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• The object provokes the character to remember something from the past.• Describe how the character got the object.
5	Back to the present moment	<ul style="list-style-type: none">• The character picks up the object and watches something travel back up to the sky.

Give objects emotions <i>e.g. the sky's anger</i>	Give emotions colours <i>e.g. a black depression hung in the air</i>	Extend a metaphor over a number of sentences
Describe using an unlikely verb <i>e.g. the wind howled</i>	How to make a metaphor <i>(Personification is a type of metaphor)</i>	Make nature sound alive <i>e.g. the waves continued to roll, intent on destruction</i>
Give an animal/object human qualities <i>e.g. the wind's icy breath</i>	Give a human/object animal qualities <i>e.g. the shadows stalked the clouds</i>	Describe something as something it isn't <i>e.g. his eyes were ice; they melted at the sight of her</i>

Colour synonyms

grey	shadow	graphite	iron	pewter	brown	mocha	coffee	peanut	carob	orange	tangerine	marigold	cider	rust	red	cherry	rose	jam	merlot
cloud	silver	smoke	slate	anchor	hickory	wood	pecan	walnut	caramel	ginger	tiger	fire	bronze	melon	garnet	crimson	ruby	scarlet	wine
ash	porpoise	dove	fog	flint	gingerbread	syrup	chocolate	tortilla	amber	apricot	clay	honey	carrot	squash	brick	apple	mahogany	blood	sangria
charcoal	pebble	lead	coin	fossil	tawny	brunette	cinnamon	penny	cedar	spice	marmalade	amber	sandstone	ochre	berry	currant	blush	candy	lipstick
green	leaves	juniper	sage	lime	blue	cyan	sky	navy	indigo	purple	mauve	violet	boysenberry	lavender	pink	rose	fuchsia	punch	blush
fern	olive	emerald	pear	moss	cobalt	teal	ocean	peacock	azure	plum	burgundy	lilac	grape	periwinkle	watermelon	flamingo	rouge	salmon	coral
shamrock	seafoam	pine	parakeet	mint	cerulean	lapis	spruce	stone	denim	blackcurrant	aubergine	jam	iris	heather	peach	strawberry	rosewood	lemonade	marshmallow
seaweed	gherkin	pistachio	basil	crocodile	berry	butterfly	admiral	sapphire	arctic	amethyst	raisin	orchid	mulberry	wine	bubble-gum	blossom	crepe	magenta	hot pink
yellow	canary	gold	daffodil	flaxen	tan	beige	camel	hazel wood	granola	white	pearl	alabaster	snow	ivory	black	ebony	crow	charcoal	midnight
butter	lemon	mustard	corn	medallion	oat	taupe	fawn	magnolia	sand	cream	eggshell	cotton	chiffon	salt	ink	raven	oil	grease	onyx
dandelion	fire	bumblebee	banana	butterscotch	sepia	latte	oyster	biscotti	parmesan	lace	coconut	linen	bone	daisy	pitch	soot	sable	jet	coal
goldenrod	honey	blonde	pineapple	sunrise	hazelnut	sandcastle	buttermilk	sand dollar	shortbread	powder	frost	porcelain	parchment	rice	leather	obsidian	spider	blackberry	bat

Question 5

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Choose from...

- A picture stimulus or a written stimulus
- 45 minutes
- 40 marks 24 marks –
- 16 marks –

Paragraph structure:

1	Top of the scene	
2	Drop into the scene	
3	Character zoom	
4	Flashback	
5	Back to the present moment	

The image is a springboard – add ideas as you wish

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

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green	leaves	juniper	sage	lime	blue	cyan	sky	navy	indigo	purple	mauve	violet	boysenberry	lavender	pink	rose	fuchsia	punch	blush
fern	olive	emerald	pear	moss	cobalt	teal	ocean	peacock	azure	plum	burgundy	lilac	grape	periwinkle	watermelon	flamingo	rouge	salmon	coral
shamrock	seafoam	pine	parakeet	mint	cerulean	lapis	spruce	stone	denim	blackcurrant	aubergine	jam	iris	heather	peach	strawberry	rosewood	lemonade	marshmallow
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Geography



Helping every person achieve things they never thought they could.

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	What 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: <ul style="list-style-type: none"> Conservative Destructive: Constructive: 	<ul style="list-style-type: none"> 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

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	What is 'Subduction'?	
11	What is a 'Tectonic hazard'?	

Plate Margins:		
12	Describe the plate movement at the following plate margins:	

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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:

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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?	

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?	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Avoid building in high risk areas Emergency drills Evacuation routes
34	Protection	<ul style="list-style-type: none"> 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

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:

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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?

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 floodings 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	<ul style="list-style-type: none"> Alternative energy production Planting Trees Carbon Capture International Agreements
Adaptation	
30	<ul style="list-style-type: none"> 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

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	

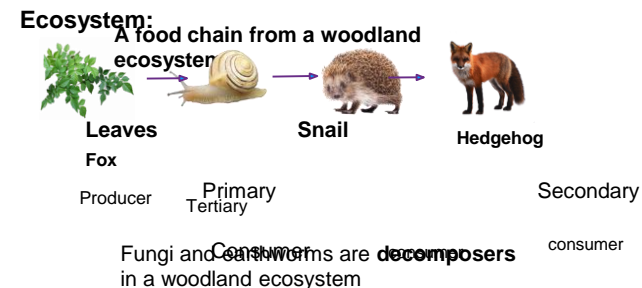
Key Vocabulary

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:



20	Some energy is lost through respiration and movement
21	Changing one element can affect the whole food web
22	<div> Human changes <ul style="list-style-type: none"> Deforestation Farming </div> <div> Physical Changes <ul style="list-style-type: none"> Drought Floods </div>

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

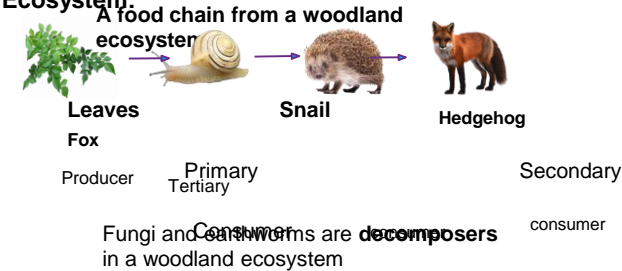
31	Curvature of the earth	Solar radiation is concentrated over a smaller surface area in low latitude regions
32		Solar radiation is scattered over a larger surface area in high latitude regions
33	Albedo effect	<ul style="list-style-type: none"> Lighter surfaces reflect sunlight Darker surfaces absorb sunlight
34	Hours of daylight	High latitude regions have less hours of daylight

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:



20	Some energy is lost through respiration and movement	
21	Changing one element can affect the whole food web	
22	Human changes <ul style="list-style-type: none">• Deforestation• Farming	Physical Changes <ul style="list-style-type: none">• 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	

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	Animals 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 Grosso 
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 water 	More CO ₂ = higher temperatures 	Economic gain

Rainforest Sustainable



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 <ul style="list-style-type: none"> 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

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

33	
34	
35	
36	
37	

History



Helping every person achieve things they never thought they could.

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?	<i>Judith</i>
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.

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?	

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?	<i>Elizabeth, Marigold, Benedict and the Swan</i>
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?	15 th November 1577
What caused them to turn back?	A storm
When did they set off again?	13 th 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

Question	Answer
What is the Strait of Anian?	
What does voyage mean?	
What members of the Privy Council supported Drakes voyages?	
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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?	



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



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?	
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Which ship was lost in the storm?	
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What was the name of the Spanish treasure ship?	
What did Drake discover on the ship?	
What was the value of the good?	

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?	23 rd July 1579
When did Drake arrive back at Plymouth?	26 th September 1580
How did Elizabeth reward Drake?	He was knighted
What does Drakes motto 'Sic parva magna' mean?	Great things from small beginnings



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?	



Life Chances



Helping every person achieve things they never thought they could.

Employers – a person or organization that employs people (gives them a job).

Employers have a responsibility to provide some basic conditions for their employees. These are:

Pay

Employers must ensure that their workers are paid in the form of a wage or salary.

A wage is an hourly rate of pay that is calculated and paid each week, or monthly.

A salary is a yearly rate of pay which is divided equally over twelve months.

Employers must ensure their employees pay income tax, make National Insurance payments and, in certain circumstances, are a member of a pension scheme.

Career Development

Employers are responsible for ensuring that their employees are fully trained in the use of all the equipment in the workplace.

Every employee must receive health and safety training, to make sure that accidents and injuries are kept to a minimum.

Other career development opportunities must be negotiated between the employer and employee.

Compassionate Leave

Employees are entitled to unpaid compassionate leave should an emergency arise with a dependent. Dependents include:

- Children
- Husbands and wives
- Partners and fiancés
- parents
- Elderly relatives.

This includes being able to attend a funeral. Some employers will pay staff who are absent on compassionate leave.



Employers – a person or organization that _____ people (gives them a job).

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Career Development

Employers are responsible for ensuring that their employees are _____ trained in the use of all the equipment in the workplace.

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Compassionate Leave

Employees are entitled to unpaid compassionate leave should an emergency arise with a dependent. Dependents include:

- C _____
- H _____
- P _____
- _____
- E _____

This includes being able to attend a _____. Some employers will pay staff who are _____ on compassionate leave.



Holidays

Employers have a responsibility to give their employees annual leave for holidays. They must put this in the employment contract. These holidays are in addition to annual bank holidays in the UK and Ireland.



Equality

Employers have a responsibility to ensure that their employees are treated fairly. They cannot discriminate against anyone based on their:

- Gender;
- Race;
- Religion;
- Sexual orientation;
- Disability
- Age;

Health & Safety

Employers have a responsibility to ensure the health and safety of everyone in their workplace including staff, customers and member of the public.

They must provide health and safety training to each of their workers. Health and Safety signs must be clearly visible throughout the workplace.



Holidays

Employers have a responsibility to give their employees _____ leave for holidays. They must put this in the employment _____. These holidays are in addition to annual _____ holidays in the _____ and Ireland.



Equality

Employers have a responsibility to ensure that their employees are treated fairly. They _____ discriminate against anyone based on their:

- G _____
- R _____
- R _____
- S _____
- D _____
- A _____

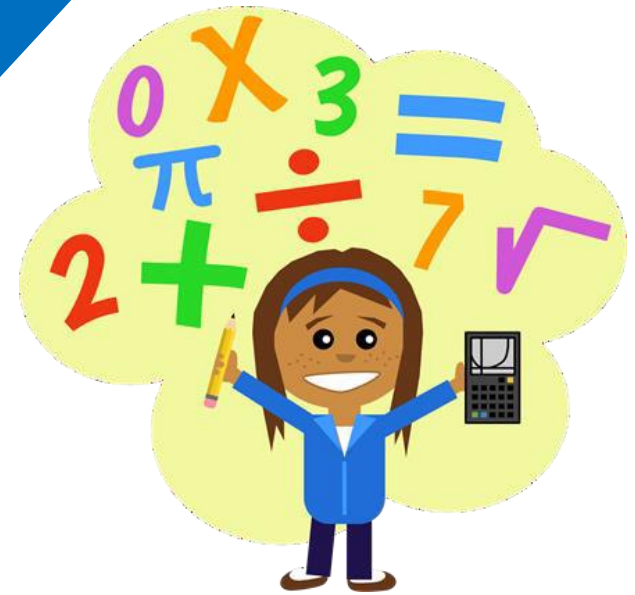
Health & Safety

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They _____ provide health and _____ training to each of their workers. Health and Safety _____ must be clearly visible throughout the _____.



Maths



Helping every person achieve things they never thought they could.

	Key Skill	Thinking Point	WAGOLL
1	Converting from standard form to an ordinary number positive powers	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Why do we write numbers in standard form? What do numbers in standard form look like?

	Key Skill	Thinking Point	Practice
1	Converting from standard form to an ordinary number positive powers	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Form	<ul style="list-style-type: none"> Why do we write numbers in standard form? What do numbers in standard form look like?

	Key Skill	Thinking Point	WAGOLL
1	Multiplying Standard form	<ul style="list-style-type: none">• Multiply ordinary numbers together• Add powers together• Check answer is written in standard form	Calculate $(4 \times 10^2) \times (3 \times 10^5)$ $(4 \times 3) \times (10^2 \times 10^5)$ $12 \times 10^{2+5}$ 12×10^7 Not in standard form as 12 is larger than 10. 1.2×10^6
2	Dividing Standard Form	<ul style="list-style-type: none">• Divide ordinary numbers together• Subtract second power from first power• Check answer is written in standard for	Calculate $(4 \times 10^2) \div (8 \times 10^5)$ $(4 \div 8) \times (10^2 \div 10^5)$ $0.5 \times 10^{2-5}$ 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	<ul style="list-style-type: none">• 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 $3 \times 10^5 + 4 \times 10^7$ $0.03 \times 10^7 + 4 \times 10^7$ 4.03×10^7 Calculate $5 \times 10^5 - 2 \times 10^2$ $5 \times 10^5 - 0.002 \times 10^5$ 4.998×10^5

	Key Skill	Thinking Point	WAGOLL
1	Multiplying Standard form	<ul style="list-style-type: none">What do we do with the powers when multiplying in standard form?At the end we must check the number is written in _____	<ul style="list-style-type: none">Calculate $(5 \times 10^2) \times (7 \times 10^6)$
2	Dividing Standard Form	<ul style="list-style-type: none">What do we do with the powers when dividing in standard form?At the end we must check the number is written in _____	<ul style="list-style-type: none">Calculate $(2 \times 10^3) \div (4 \times 10^8)$
Below is Higher Tier ONLY			
3	Adding and Subtracting Standard Form	<ul style="list-style-type: none">What is the first step?Why do we use the larger power of 10?	<p>Calculate $5 \times 10^5 + 2 \times 10^3$</p> <p>Calculate $7 \times 10^8 - 3 \times 10^5$</p>

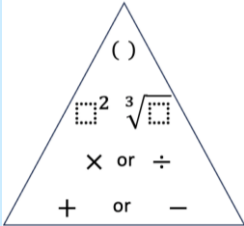
Year 11 Maths: Expanding Brackets

	Key Skill	Thinking Point	WAGOLL																								
1	Expanding Single Brackets	Multiply everything inside the bracket by outside the bracket	Expand $3x(2x - 4)$ <table><tr><td>\times</td><td>$2x$</td><td>-4</td><td></td></tr><tr><td>$3x$</td><td>$6x^2$</td><td>$-12x$</td><td>$= 6x^2 - 12x$</td></tr></table>	\times	$2x$	-4		$3x$	$6x^2$	$-12x$	$= 6x^2 - 12x$																
\times	$2x$	-4																									
$3x$	$6x^2$	$-12x$	$= 6x^2 - 12x$																								
2	Expanding Multiple single Brackets	<ul style="list-style-type: none">Expand each bracket separately by multiplying everything inside the bracket by outside the bracketNote: Be careful to notice the signs in front of the numbersSimplify by collecting like terms	Expand and simplify $3x(2x + 4) - 2x(x - 2)$ <table><tr><td>\times</td><td>$2x$</td><td>$+4$</td><td></td><td>\times</td><td>x</td><td>-2</td><td></td></tr><tr><td>$3x$</td><td>$6x^2$</td><td>$+12x$</td><td></td><td>$-2x$</td><td>$-2x^2$</td><td>$+4x$</td><td></td></tr></table> $= 6x^2 + 12x - 2x^2 + 4x$ $= 4x^2 + 6x$	\times	$2x$	$+4$		\times	x	-2		$3x$	$6x^2$	$+12x$		$-2x$	$-2x^2$	$+4x$									
\times	$2x$	$+4$		\times	x	-2																					
$3x$	$6x^2$	$+12x$		$-2x$	$-2x^2$	$+4x$																					
3	Expand Double Brackets	<ul style="list-style-type: none">Create a 3 by 3 gridThe first bracket should be written on topThe second bracket should be written on the sideThen multiply all termsSimplify by collecting like terms	Expand and simplify $(3x - 1)(2x + 4)$ <table><tr><td>\times</td><td>$3x$</td><td>-1</td><td></td></tr><tr><td>$2x$</td><td>$6x^2$</td><td>$-2x$</td><td>$= 6x^2 - 2x + 12x - 4$</td></tr><tr><td>$+4$</td><td>$+12x$</td><td>-4</td><td>$= 6x^2 + 10x - 4$</td></tr></table>	\times	$3x$	-1		$2x$	$6x^2$	$-2x$	$= 6x^2 - 2x + 12x - 4$	$+4$	$+12x$	-4	$= 6x^2 + 10x - 4$												
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$+4$	$+12x$	-4	$= 6x^2 + 10x - 4$																								
Below is Higher Tier ONLY																											
4	Expand Triple Brackets	<ul style="list-style-type: none">Expand the first two brackets, using the method aboveThen create a 4 by 3 gridMultiply all termsSimplify by collecting like termsThe final answer should be written in the form $ax^3 + bx^2 + cx + d$	Expand & simplify $(3x - 1)(2x + 4)(x - 3)$ <table><tr><td>\times</td><td>$3x$</td><td>-1</td><td></td><td>\times</td><td>$6x^2$</td><td>$+10x$</td><td>-4</td></tr><tr><td>$2x$</td><td>$6x^2$</td><td>$-2x$</td><td></td><td>x</td><td>$6x^3$</td><td>$+10x^2$</td><td>$-4x$</td></tr><tr><td>$+4$</td><td>$+12x$</td><td>-4</td><td></td><td>-3</td><td>$-18x^2$</td><td>$-30x$</td><td>$+12$</td></tr></table> $= 6x^2 - 2x + 12x - 4$ $= 6x^2 + 10x - 4$ $= 6x^3 + 10x^2 - 18x^2 - 4x - 30x + 12$ $= 6x^3 - 8x^2 - 34x + 12$	\times	$3x$	-1		\times	$6x^2$	$+10x$	-4	$2x$	$6x^2$	$-2x$		x	$6x^3$	$+10x^2$	$-4x$	$+4$	$+12x$	-4		-3	$-18x^2$	$-30x$	$+12$
\times	$3x$	-1		\times	$6x^2$	$+10x$	-4																				
$2x$	$6x^2$	$-2x$		x	$6x^3$	$+10x^2$	$-4x$																				
$+4$	$+12x$	-4		-3	$-18x^2$	$-30x$	$+12$																				

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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">What size grid should we draw?Where should the second bracket be written?What is the final step?	Expand and simplify $(2x - 3)(x - 4)$
Below is Higher Tier ONLY			
4	Expand Triple Brackets	<ul style="list-style-type: none">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?	<ul style="list-style-type: none">Expand & simplify $(2x - 3)(x - 4)(2x - 1)$

	Key Skill	Thinking Point	WAGOLL	
1	Order of Operations	<ul style="list-style-type: none">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	<ul style="list-style-type: none">Replace the letter with the given numberRemember 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	<ul style="list-style-type: none">Replacing a letter with a number in a formula	
Order of Operations	<ul style="list-style-type: none">The order mathematical operations are performed in	

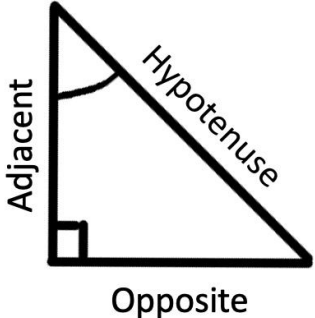
	Key Skill	Thinking Point	WAGOLL	
1	Order of Operations	<ul style="list-style-type: none">What operation do we perform first?	Calculate $5 + 3 \times 4$	Calculate $4 - 3^2 \times 2$
2	Substitution	<ul style="list-style-type: none">Replace the _____ with the given _____	Work out the value of p when $u = 3$. $p = 2u + 5$	Work out the value of p when $u = 2$ and $w = -3$.

Key Vocabulary	Definition
Substitution	<ul style="list-style-type: none">What is substitution
Order of Operations	<ul style="list-style-type: none">What order we complete mathematical operations in?

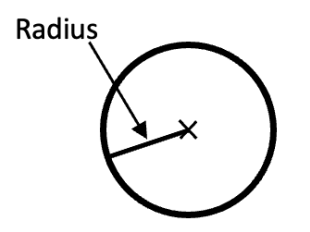
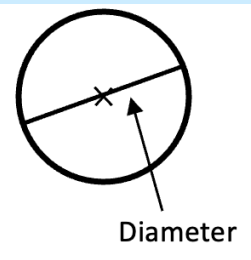
Percentages:

1	<ul style="list-style-type: none">Percentage Change	$\frac{\text{Difference}}{\text{Original}} \times 100$
---	---	--

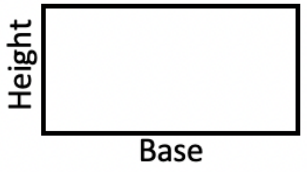
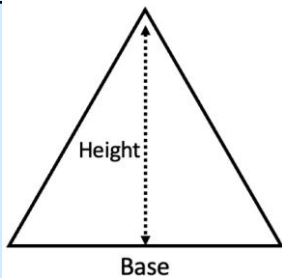
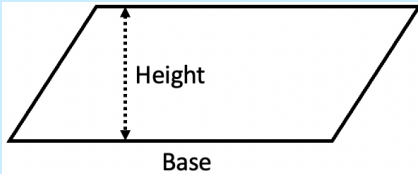
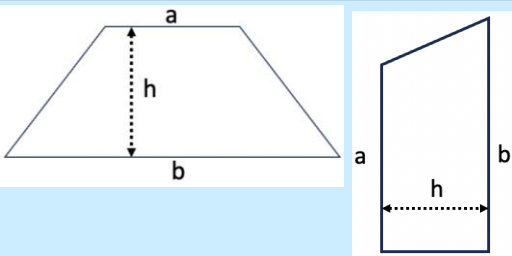
Trigonometry – SOHCAHTOA:

2	<ul style="list-style-type: none">Sin	$\sin(\theta) = \frac{o}{h}$	
3	<ul style="list-style-type: none">Cos	$\cos(\theta) = \frac{a}{h}$	
4	<ul style="list-style-type: none">Tan	$\tan(\theta) = \frac{o}{a}$	

Circles:

5	<ul style="list-style-type: none">Area of a Circle $\pi \times r^2$	
6	<ul style="list-style-type: none">Circumference of a Circle $\pi \times d$	

Area of Shapes:

7	<ul style="list-style-type: none">Rectangle $\text{Base} \times \text{Height}$	
8	<ul style="list-style-type: none">Triangle $\frac{\text{Base} \times \text{Height}}{2}$	
9	<ul style="list-style-type: none">Parallelogram $\text{Base} \times \text{Height}$	
10	<ul style="list-style-type: none">Trapezium $\frac{(a + b) \times h}{2}$	

Pythagoras:

11	<ul style="list-style-type: none">$a^2 + b^2 = h^2$	
----	--	---

Percentages:

1	• What is the formula for percentage change?
---	--

Trigonometry – SOHCAHTOA:

2	• What is the formula for sin?
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:

7	• What is 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:

11	• What is Pythagoras’ Theorem?
----	--------------------------------

Year 11 Maths Higher: Formula

These formulae will only be assessed on the Higher tier Mathematics GCSE.

Quadratic Formula:

1	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To calculate missing sides 	$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$
3	<ul style="list-style-type: none"> To calculate missing angles 	$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$

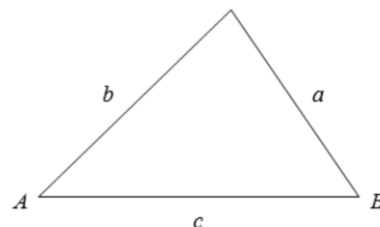
Cosine Rule:

4	<ul style="list-style-type: none"> To calculate missing sides 	$a^2 = b^2 + c^2 - 2bc \cos A$
5	<ul style="list-style-type: none"> To calculate missing angles 	$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$


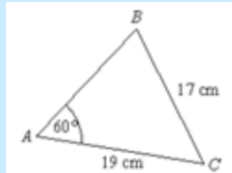
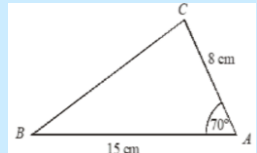
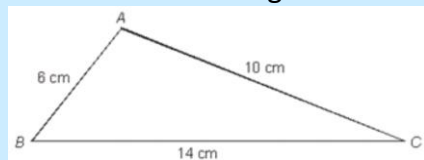
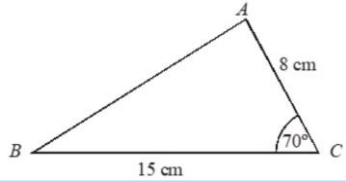
Area of any Triangle:

6	<ul style="list-style-type: none"> Formula to calculate the area of any triangle 	$Area = \frac{1}{2} ab \sin C$
---	---	--------------------------------

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: $3x^2 + 7x - 5 = 0$ $a = 3, b = 7, c = -5$	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ $x = \frac{-7 \pm \sqrt{(7)^2 - 4 \times 3 \times -5}}{2 \times 3}$ $x = 0.573 \text{ or } x = -2.907$
8	Use the sine rule to calculate the length BC.	 $\frac{a}{\sin A} = \frac{c}{\sin C}$ $\frac{13.2}{\sin(40)} = \frac{BC}{\sin(114)}$ $a = \frac{13.2}{\sin(114)} \times \sin(40) = 9.3m$
9	Used the sine rule to calculate the angle ABC.	 $\frac{\sin A}{a} = \frac{\sin B}{b} \quad \frac{\sin(60)}{17} = \frac{\sin B}{19}$ $\sin B = \frac{\sin(60)}{17} \times 19$ $B = \sin^{-1}\left(\frac{\sin(60)}{17} \times 19\right) = 75.4^\circ$
10	Use the cosine rule to calculate the length CB.	 $a^2 = b^2 + c^2 - 2bc \cos A$ $a^2 = 8^2 + 15^2 - 2 \times 8 \times 15 \times \cos(70)$ $a^2 = 206.915 \dots$ $a = \sqrt{Ans} = 14.4cm$
11	Use the cosine rule to calculate the angle BAC.	 $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$ $\cos A = \frac{10^2 + 8^2 - 14^2}{2 \times 10 \times 8}$ $\cos A = -0.2$ $A = \cos^{-1}(-0.2) = 101.5^\circ$
12	Calculate the area of this triangle.	 $Area = \frac{1}{2} ab \sin C$ $Area = \frac{1}{2} \times 15 \times 8 \times \sin(70)$ $Area = 56.4cm^2$

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?

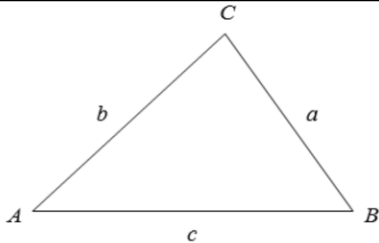
Cosine Rule:

4	What is the cosine rule to calculate missing sides?
5	What is the cosine rule to calculate missing angles?

Area of any Triangle:

6	What is the formula that can 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



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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 exemple	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

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

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)	joue	finis	vends
Tu (you)	joues	finis	vends
Il / elle / on (he/she/one)	joue	finit	vend
Nous (we)	jouons	finissons	vendons
Vous (you plural/formal)	jouez	finissez	vendez
Ils/Elles (they masculine / they feminine)	jouent	finissent	vendent

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 manger = to eat, étudier = to study, faire = to do, sortir = 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

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”.

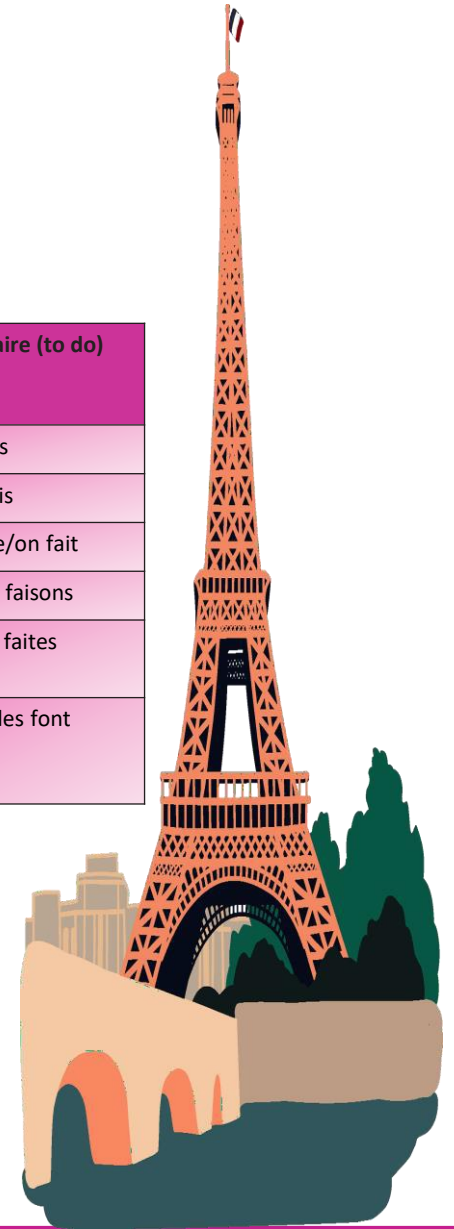
Je vais à la piscine

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

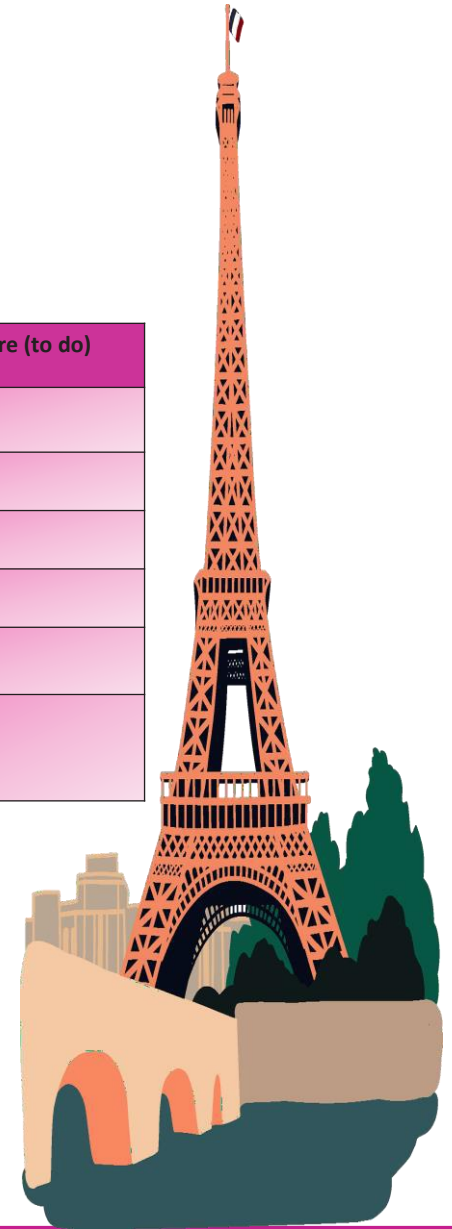
I go **to the** park



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.



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 mangé.	J'ai mangé = I have eaten
Regular IR verbs	Take the IR ending off and add i. For example, FINIR (to finish) changes to fini.	J'ai fini = I have finished
Regular RE verbs	Take the RE ending off and add u. For example RÉPONDRE (to respond) changes to répondu	J'ai répondu = I have responded
Note: there are some verbs that do not follow the above rule. These are called 'irregular verbs'.		

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		

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 allés (they are gone)	Je suis allée (I am gone) Elles sont allées (they are gone)
SORTIR (to go out)	Je suis sorti (I am went out) Ils sont sortis (they are went out)	Je suis sortie (I am went out) Elles sont allées (they are went out)



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

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 **jouons** would become **jou**

Add correct ending to the stem. The endings 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

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

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

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



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



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

[illegible]

The same verbs that have **irregular** stems in the simple future have irregular stems in the conditional:

[illegible]

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

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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

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Use with the **present tense**:

Hagamos lo que hagamos	
Aunque sea	
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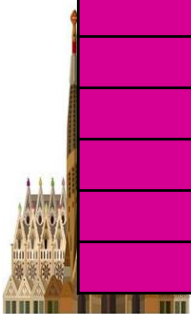
Use with the **conditional tense**

	When I'm older
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	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

Infinitive verbs

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 estudiar = to study, hacer = to do, vivir = 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)
echa	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



Revision - Grammar
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	to do, to make
	to become
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	to have, to own
	to take place
	to have to do something
	to do (something) again
	to become

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



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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:





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**.



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:

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Estar

_____ - My town is close to Manchester. This is a **location**.





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 escuchando música. - **I am listening** to music.

Mi hermano **está viendo** la tele. - My brother **is watching** TV.





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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 hablar would be habl
Add correct ending to the stem

Spanish	English
Fui	I went
Fuiste	You went
Fue	He/she/it went
Fuimos	We went
Fuisteis	You (plural) went
Fueron	They went

	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 ‘bailé’ 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



The preterite tense

How to conjugate verbs in the the preterite tense

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Remove the ar, er or ir to form the stem

For example the stem of hablar would be habl

Add correct ending to the stem

Spanish	English
	I went You went He/she/it went We went You (plural) went They went

yo (I)		
tú (you)		
él/ella (he/she)		
nosotros (we)		
vosotros (you plural)		
ellos/ellas (they masculine / they feminine)		

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Some key verbs are irregular. Important ones for you to know in the preterite tense are:

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 hablar 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



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	AR verbs	ER and IR verbs
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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)			



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)





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)		





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 = **tendría**
There would be = **habría**





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For example -



Music and Music Technology



Helping every person achieve things they never thought they could.

Year 11 Music: Areas of Study

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: <ul style="list-style-type: none"> • 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.

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

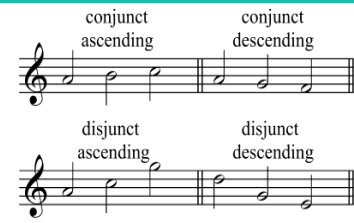
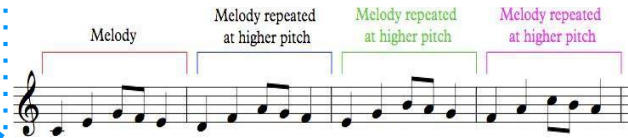
Romantic

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

Sequence

Repetition of a melodic or harmonic phrase in the same part, but at a higher or lower pitch



Imitation

A contrapuntal device, when a melodic idea is copied in another part



Arpeggio/Broken Chord

When the notes of a chord are played separately in succession



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.

Forms

Devices

AoS1

Musical Forms & Devices

Year 11 Music: Areas of Study

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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

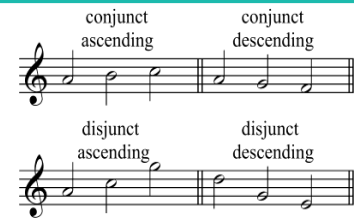
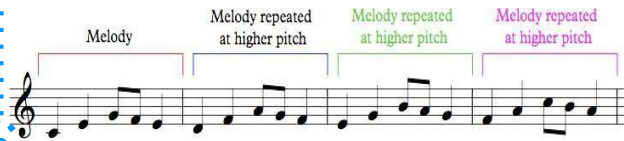
Theme	Variation 1	Variation 2	Variation 3
This could be in a certain structure- perhaps binary or ternary.	Some ways in which the theme could be transformed are:		

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 its 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 _____ 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.

Forms

Devices

AoS1

Musical Forms & Devices

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

Baroque

Basso Continuo

Double bass and harpsichord providing harmony



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.

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.

Jazz & Blues

12-bar blues

Head arrangement



Classic Blues band

Classical

String Quartet

2 Violina, a viola & cello. 4 movements.

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.

Musicals use various vocal ensembles which

are known as the chorus.

This features multiple vocal parts like **Soprano, Alto, Tenor and Bass.**



Modern Jazz band

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.



AoS2

Music for Ensemble

Chamber Ensemble

Musical Theatre

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

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.

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.



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AoS2

Music for Ensemble

Chamber Ensemble

Musical Theatre

Texture

Monophonic

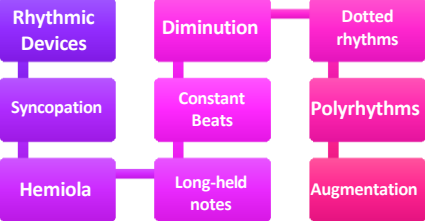
Homophonic

Polyphonic

Ensemble

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Year 11 Music: Areas of Study



Tempo

Allegro – fast/lively
 Andante – walking pace
 Adagio – slowly
 Accelerando – gradually getting faster
 Ritardando – gradually getting slower
 Rubato – not sticking to time, free

Use of dynamics
 Different timbres
 Vary textures
 Tonality

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

Balance between steps and leaps

Balanced phrases

Climactic Point

A strong sense of key

Use of repetition

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

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'.

Elements

Devices

AoS3

Film Music

Origins

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.

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

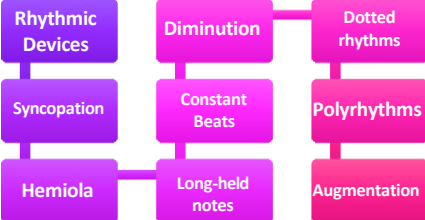
Clashing notes together to build suspense.



Layering

Building up musical ideas to fill out the texture

Year 11 Music: Areas of Study



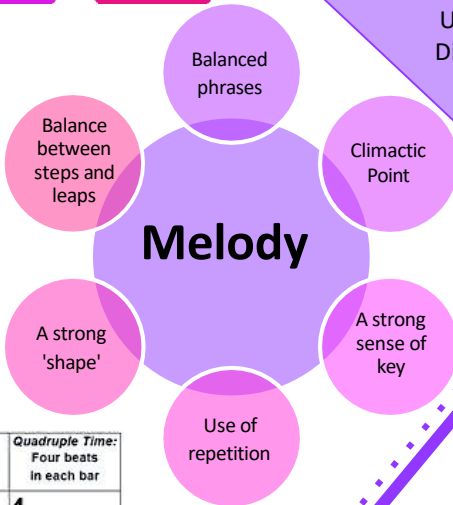
Tempo

Allegro – _____
 Andante – _____
 Adagio – _____
 Accelerando – _____
 Ritardando – _____
 Rubato – _____

Harmony

_____ – chords that relate to specific keys.
 _____ – chords that are not in the key.
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Melody



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 Different timbres
 Vary textures
 Tonality

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A harmonic device where the same note is _____ or _____.

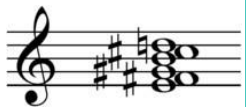


Melodic, rhythmic or harmonic patterns



Cluster chords

Clashing notes together to build suspense.



Layering

Building up musical ideas to fill out the texture

Year 11 Music: Areas of Study

Pop

Commercial genre which has mass audience appeal.



Electric Guitar

Supports the rhythm by strumming the chords

Rock & Pop



Drum kit

A collection of different sized drums and cymbals. Drummers keep the beat and add fills to add interest.

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.

Rock

Harsher and more serious form of popular music.



Bass Guitar

Strings are plucked or 'slapped'. Bass holds the low notes in a bass line.

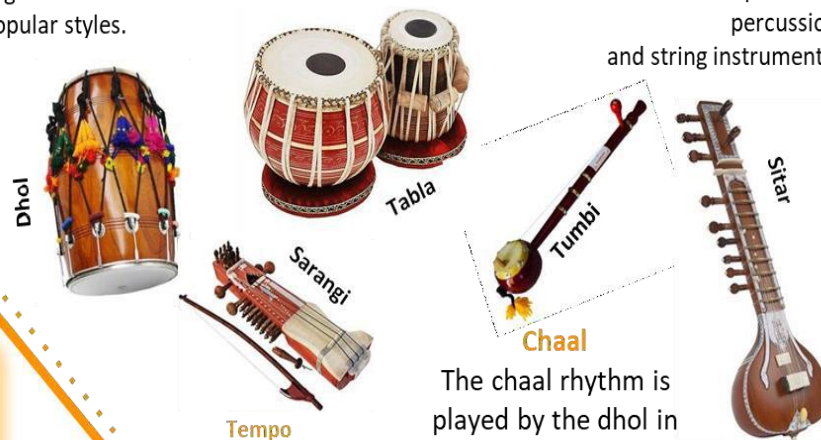
AoS4

Popular Music

Bhangra emerged in the UK as a type of fusion which features music from the Punjab region of India combined with other popular styles.

Bhangra

Traditional Punjab music used the folk instruments of the country, with the main emphasis on percussion and string instruments.



Tempo

Fast/moderate, lively, upbeat.

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!'

Chaal

The chaal rhythm is played by the dhol in a kind of swing rhythm.

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.

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.



Year 11 Music: Areas of Study

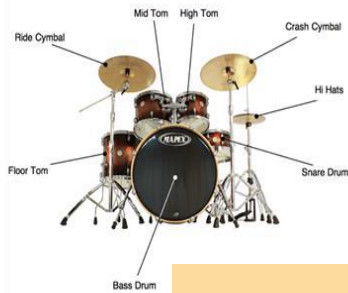
Pop

Commercial genre which has mass audience appeal.



Supports the rhythm by strumming the chords

Rock & Pop



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AoS4

Popular Music

Year 11 Music: Areas of Study

1738-39

The Baroque period

- Complex melodic lines with ornamentation
- Terraced dynamics
- Polyphonic texture
- Harpsichord and strings
- Basso Continuo

Instrumentation

Instrumentation: (Transverse)
Flute String Orchestra
Harpsichord (Basso Continuo).

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**.

Dynamics

Mostly **forte**
Use of **terraced dynamics**



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 8¹, 10¹, 15², 27², 30¹ and 32¹

Appoggiaturas: Bars 33¹ and 40¹

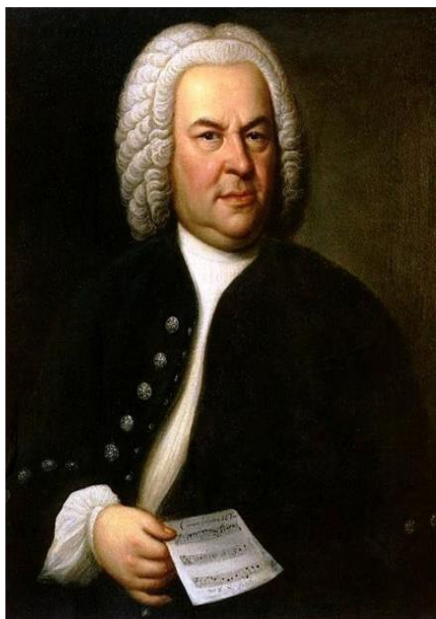
Sequences: 6²– 10¹ and bars 28²– 32¹.

Badinerie BACH

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



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.

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

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 8¹, 10¹ and 32¹.

Year 11 Music: Areas of Study

1738-39

The Baroque period

- Complex melodic lines with ornamentation
- Terraced dynamics
- Polyphonic texture
- Harpsichord and strings
- Basso Continuo

Instrumentation

Instrumentation: (Transverse)
Flute String Orchestra
Harpsichord (Basso Continuo).

Tonality

Section A begins in **B minor** and ends in [redacted]

Section B: the opposite, beginning in **F# minor** and ending in **B minor**.

Dynamics

Mostly [redacted]
Use of **terraced dynamics**



Melody

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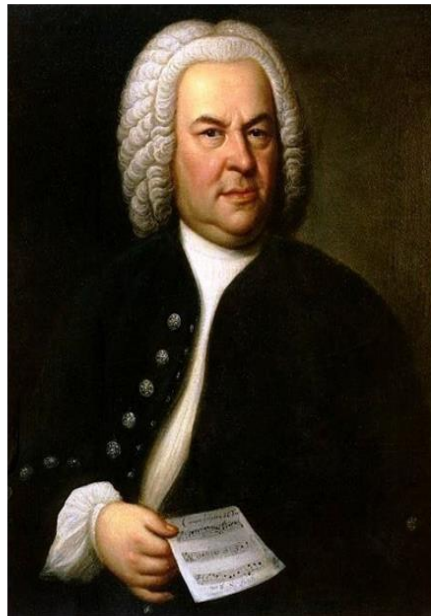
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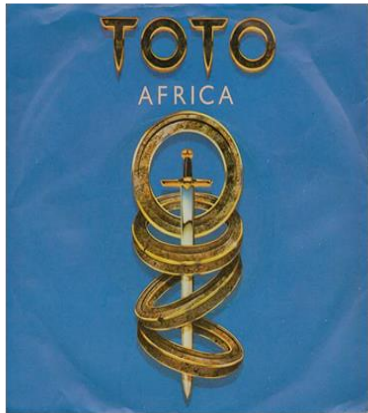
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1981
Toto IV
David Paich & Jess Porcaro

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.

Tempo

Moderately fast

Dynamics

Mainly mezzo forte, choruses are forte

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.

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.

1981
Toto IV

& Jess Porcaro

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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.

Tempo

Moderately fast

Dynamics

Mainly forte, choruses are forte

Instrumentation

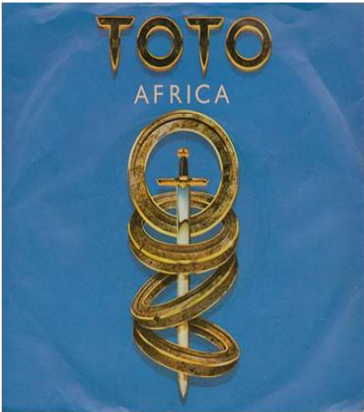
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Year 11 Music: Areas of Study

Direction Rising Falling



Repetition Doing the same thing again, without any changes.



Contrast Doing something completely different.



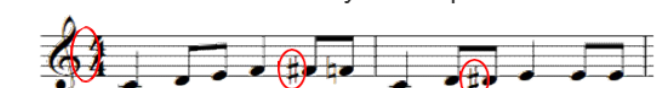
Imitation Doing the same thing again, with some changes (similar).



Ostinato A short repeated idea.



Chromatic The melody uses notes that aren't in the scale / key of the piece.



MELODY

High or low.



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.

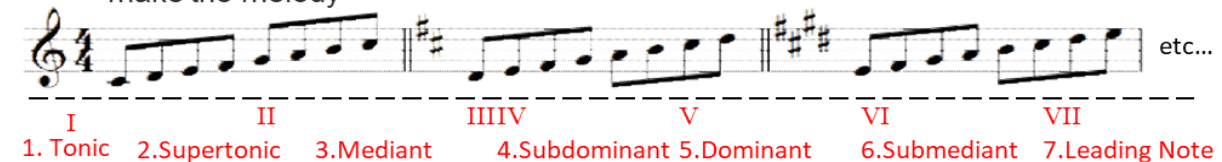


Ornaments Trills

Mordents




Scale The series of notes in a key that are used to make the melody




Year 11 Music: Areas of Study

A musical staff in 4/4 time showing a rising and falling scale. The rising scale consists of eight eighth notes: C4, D4, E4, F4, G4, A4, B4, and C5. The falling scale consists of eight eighth notes: B4, A4, G4, F4, E4, D4, C4, and B3. Red arrows indicate the direction of the scale: one arrow points up from the first note to the eighth, and another points down from the eighth note to the first.


Doing the same thing again, without any changes.



Doing something completely different.




Doing the same thing again, with some changes (similar).



The image shows a musical staff with a treble clef and a 4/4 time signature. The notes are: C4 (quarter), D4 (quarter), E4 (quarter), F4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), and C5 (quarter). A red box highlights the first four notes (C4, D4, E4, F4). A red arrow points from this box to a second red box that highlights the last four notes (G4, A4, B4, C5).

A short repeated idea.

A musical staff in treble clef with a key signature of one sharp (F#). The melody consists of four measures, each containing a quarter note followed by an eighth note. The notes are C4, D4, E4, F#4, G4, A4, B4, and C5. The first two measures are grouped together by a red rounded rectangle, and the last two measures are grouped together by another red rounded rectangle, illustrating a short repeated idea.

The melody uses notes that aren't in the scale / key of the piece.

A musical staff in treble clef with a key signature of one sharp (F#). The melody consists of the following notes: C4 (quarter), D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C4 (quarter). The notes F#4 and B4 are circled in red, indicating they are not in the natural scale of the piece.

MELODY

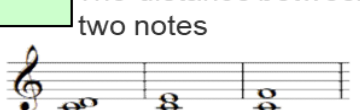
High or low. **Range**

The musical notation shows two staves. The top staff is in treble clef and the bottom staff is in bass clef. Both staves contain a sequence of notes: a half note G4, a quarter note A4, a quarter note B4, a half note C5, a quarter note B4, a quarter note A4, a half note G4, a quarter note F4, a quarter note E4, and a half note D4. To the right of the staves, there are two red double-headed vertical arrows. The top arrow is labeled 'High' and the bottom arrow is labeled 'Low'.

Big or Small.

The musical notation shows two staves. The top staff is in treble clef and the bottom staff is in bass clef. Both staves contain a sequence of notes: a half note G4, a quarter note A4, a quarter note B4, a half note C5, a quarter note B4, a quarter note A4, a half note G4, a quarter note F4, a quarter note E4, and a half note D4. To the right of the staves, there are two red double-headed vertical arrows. The top arrow is labeled 'Big' and the bottom arrow is labeled 'Small'.

The distance between two notes




2nd 4th

5th 6th 7th Octave

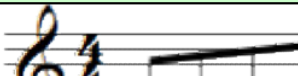
Trills		Mordents	
Written		Played	
Written		Performed	

The series of notes in a key that are used to make the melody

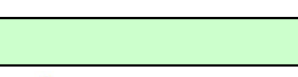


I II III IV V VI VII
1.Tonic 2.Supertonic 3.Mediant 4.Subdominant 5.Dominant 6.Submediant 7.Lead Note

Type of movement




A musical staff in 4/4 time with a treble clef. It contains a scale starting on G4 and ascending to G5. A single red arrow points from the first note to the last, indicating a continuous upward movement.




A musical staff in 4/4 time with a treble clef. It contains a scale starting on G4 and ascending to G5. Multiple red arrows point between adjacent notes, alternating between upward and downward directions to show the step-by-step movement.

Doing the same shape idea but at a different pitch.



The image shows a musical staff with a treble clef and a 4/4 time signature. A red box highlights a sequence of four eighth notes: G4, A4, B4, and C5. A red arrow points from this box to another red box on the right, which highlights a sequence of four eighth notes at a higher pitch: D5, E5, F#5, and G6. This illustrates the same melodic shape (ascending eighth notes) at a different pitch level.

The tune is based on notes from the chords / triads.



The musical notation is written on a single staff in treble clef with a key signature of one sharp (F#). The melody consists of the following notes: C4 (quarter), D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C4 (half). The notes are grouped into measures: the first measure contains C4, D4, and E4; the second measure contains F#4, G4, and A4; the third measure contains B4, C5, and B4; the fourth measure contains A4, G4, and F#4; the fifth measure contains E4, D4, and C4. The final note is a half note C4.

Year 11 Music:

Not Dynamics...

Articulation is **the way** the performer plays / sings the note, not how loud they do it. That would be Dynamics instead.

ARTICULATION

(How the notes are played)

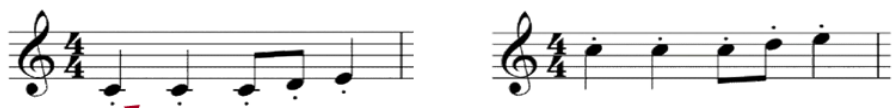
More Than One...

You can write more than one type of articulation for the same note. For example:



Staccato

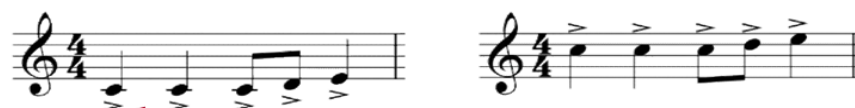
Staccato means short and detached /seperated. **You will likely hear a gap between each note.*



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.

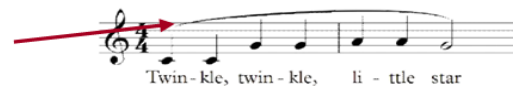
Marked with a **glissando** on the score.



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:

ARTICULATION

(How the notes are played)

More Than One...

You can write more than one type of articulation for the same note. For example:



Articulation is **the way** the performer plays / sings the note, not how loud they do it. That would be Dynamics instead.

Staccato means short and detached /seperated. **You will likely hear a gap between each note.*



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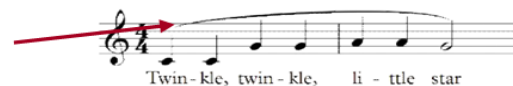
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Some Associated Markings On Vocal Music...

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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:

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...

On The Score

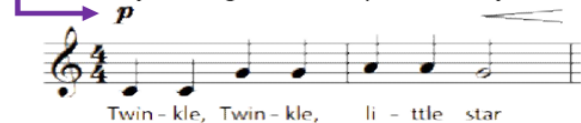
Dynamics are marked underneath the music, to show the instrument how loudly it should play:



If it is a piano, the dynamics usually go in-between the two staves:



For singers, dynamics usually go above the staff, so that they don't get mixed up with the lyrics:



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.

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	Sforzando	Sudden Accent

Shh



Change gradually

Baroque Period:

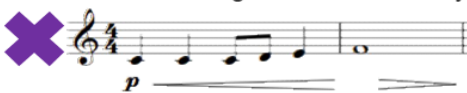
Dynamics were rarely used (no crescendos and diminuendos). Use of Terraced Dynamics.

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:

Describing What You Hear

Comment on any changes - don't sum up the whole example with one word (unless it doesn't change!)

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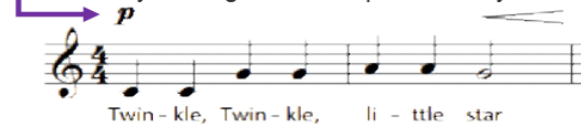
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	Scorzando	Sudden Accent

Shh



!!!

Change gradually

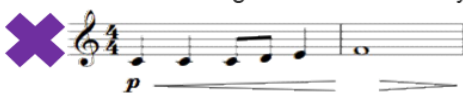
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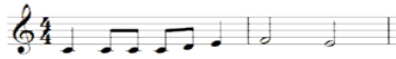
If using crescendos and diminuendos, make sure you say how loud/quiet you want the music to get. This will clearly show what you want.



Year 11 Music:

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!

TEXTURE

Antiphonal

Two groups of musicians play/respond to each other from two different performing positions.



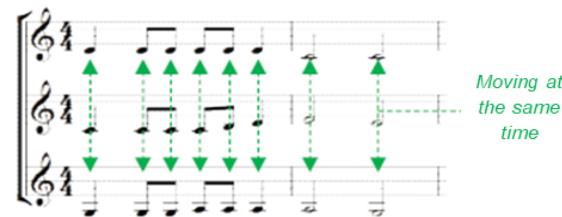
Melody & Accompaniment

A melody (tune) plus some accompanying chords or ideas.



Homophonic

All parts move in chords at the same time.



*Homo-phonics = same-sound... they have the same rhythm

Polyphonic

Several (2 or more) independent lines of music.



*Poly-phonics = many-sounds... several (two or more) different tunes.

Call And Response

One idea played/sung and then another performer(s) responding.



Octaves

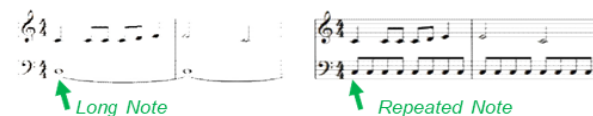
When parts move together, an octave apart.



*Same note name but different pitch.

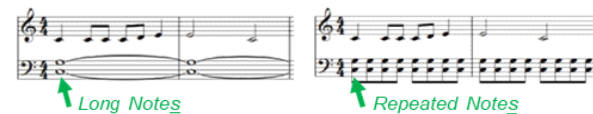
Pedal

A long or repeated note – usually in the bass.



Drone

Long or repeated notes – usually a 5th apart.



What Is The Instrument's Role

Melody – The tune.

Accompaniment – The parts supporting the tune.

Counter melody – 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.

Basso Continuo

The part given to instruments in The Baroque Period that played the bass line and chords, accompanying the melody, using **figured bass**.

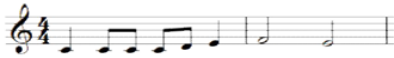


*Harpichord, bass viol, organ, lute...

Year 11 Music:

TEXTURE

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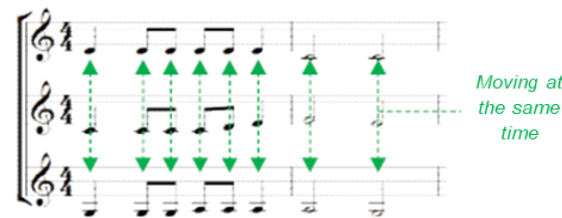
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Two groups of musicians play/respond to each other from two different performing positions.



Several (2 or more) independent lines of music.



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– The tune.

– The parts supporting the tune.

– A second melody that fits with the main tune.

– The lowest sounding part.

The part given to instruments in The Baroque Period that played the bass line and chords, accompanying the melody, using **figured bass**.



*Harpisichord, bass viol, organ, lute...

Year 11 Music:

Structure – The order that things happen in.

First... then... this is followed by... at the end.

Binary Form - Music in two parts

Section A and Section B.



Section B contrasts Section A in some way. Usually both sections are repeated.

Rondo Form – The opening section keeps returning, with contrasting sections in between.

Section A, Section B, Section A, Section C, Section A.

A – First section / idea



B – Contrasting section / idea



A – First section / idea



C – New contrasting section / idea



A – First section / idea



* The contrasting sections are called 'episodes'.

STRUCTURE

Ternary Form - Music in three parts

Section A, Section B, Section A.



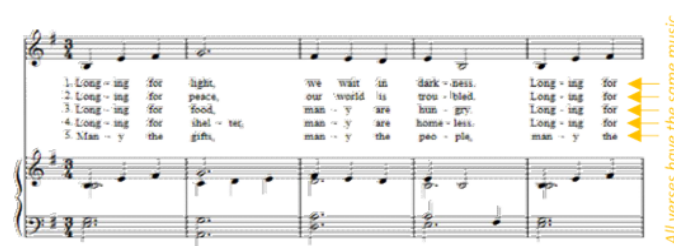
The 2nd Section A can be an exact repeat of the 1st Section A, or a slightly altered version.

Song Form

Intro Verse Chorus Middle 8 Bridge Outro

Strophic Form - Same music repeated each section.

Section A, Section A, Section A.



e.g. Hymns, Folk Songs...

All verses have the same music.

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	<p>There are many ways you can transform the theme:</p> <p>Change the instrumentation, tempo, key, harmony, metre, rhythm...</p> <p>Use imitation, inversion, sequence, diminution, augmentation...</p> <p>Developing harmonies without the tune... Introducing new tunes... Varying the style...</p>		

Year 11 Music:

Form – The order that things happen in.
First... then... this is followed by... at the end.

Form – Music in two parts
 Section A and Section B.



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Form – The opening section keeps returning, with contrasting sections in between.

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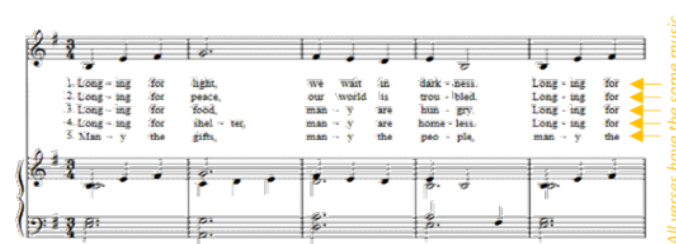
STRUCTURE

Form – Music in three parts
 Section A, Section B, Section A.



Form
 Intro Verse Chorus Middle 8 Bridge Outro

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Key Signature

The sharps or flats at the start of a piece of music, showing what key the music is in.

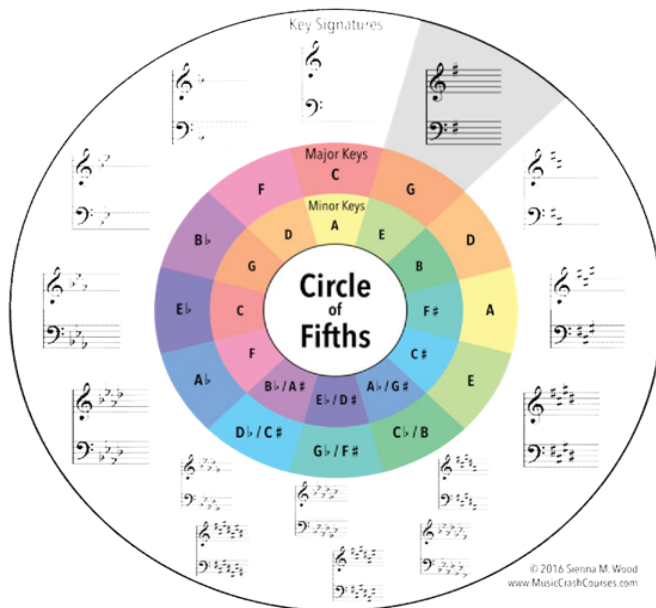
HARMONY & TONALITY

(The chords and keys used in the music)

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	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**.

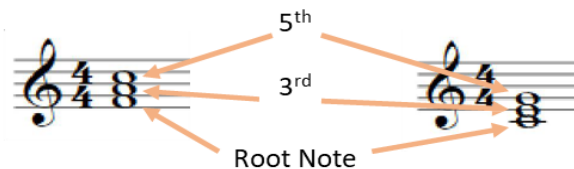
Diatonic

Music only uses notes that are found in the key signature of the piece

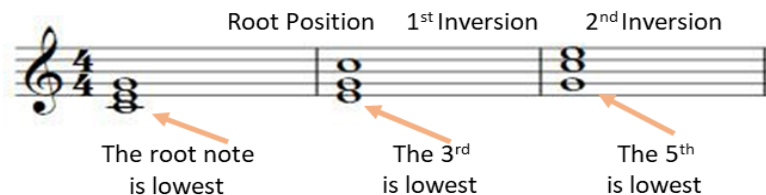
Chromatic

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:



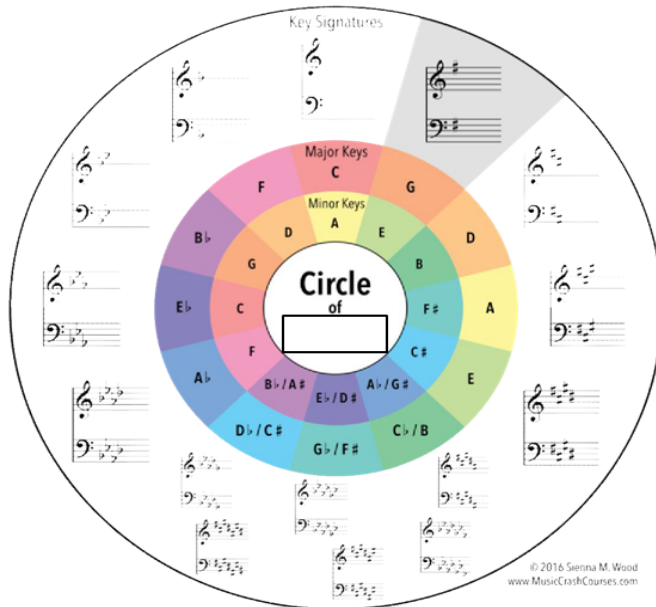
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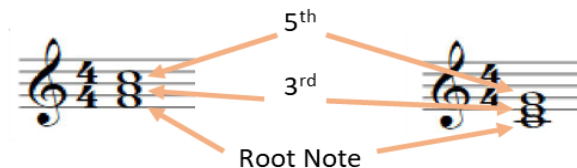
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There is no sense of key
Uses 'old-fashioned' scales called modes
The music only uses 5 notes

- 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

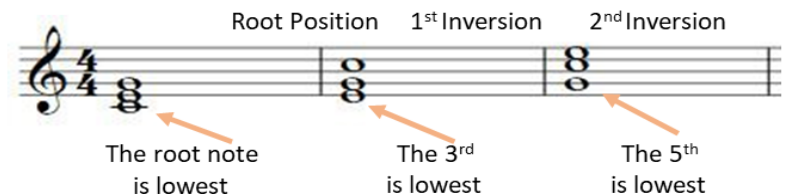
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Year 11 Music:

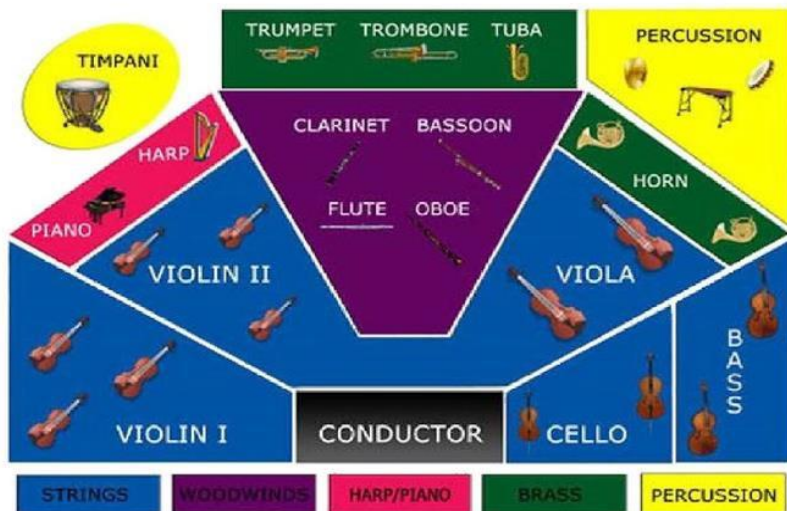
Instrumental Ensembles

- Solo - 1 performer
- Duet - 2 performers
- Trio - 3 performers
- Quartet - 4 performers

INSTRUMENTATION

(The instruments you can hear and what they are doing – sometimes called 'orchestration')

Instruments Of The Orchestra



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. (Harp, lute, organ, bass viol, etc.)

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

Rock & Pop Instruments



*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



Instrumental Techniques - The way you play / use an instrument.

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

Some Examples

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:

Instrumental Ensembles

- 1 performer
- 2 performers
- 3 performers
- 4 performers

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Rock & Pop Instruments

Electric Guitar

Singers



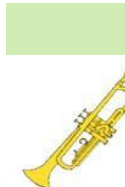
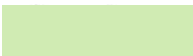
Bass Guitar



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



Instrumental Techniques - The way you play / use an instrument.

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:

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!

RHYTHM & TEMPO

(The Patterns Of Note Lengths & Silences)

(The Speed Of The Music)

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 *60bpm	60 beats per minute (One every second)
= 120 *120bpm	120 beats per minute (Two every second)

Syncopation

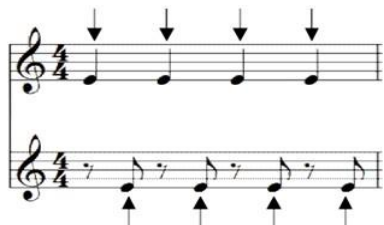
Playing off (or in-between) the beat / pulse

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.



Rubato

**Translates as 'to steal time'*

Not sticking strictly to the tempo - to add feeling (Romanic Period!)

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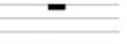




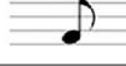
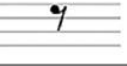
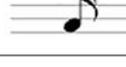
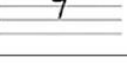
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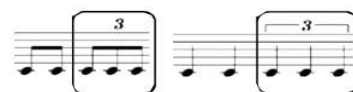
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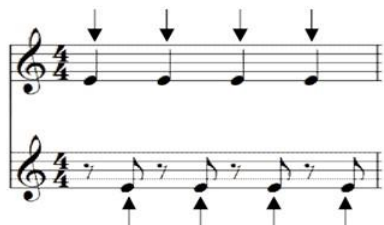
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Rubato

*Translates as 'to steal time'
Not sticking strictly to the tempo
- to add feeling (Romantic Period!)

Year 11 Music:

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 can't be divided into equal groups of 2 or 3.

5/8

7/8

↑
NOT EQUAL LENGTHS

Regular Time Signatures

Time signatures that can be divided into equal groups of 2 or 3.

4/4

3/4

↙ ↘
EQUAL LENGTHS

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.

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
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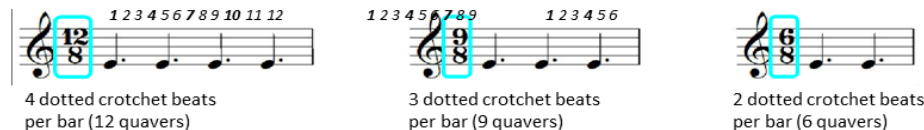
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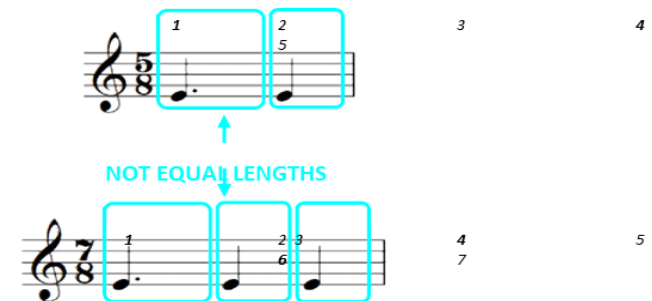


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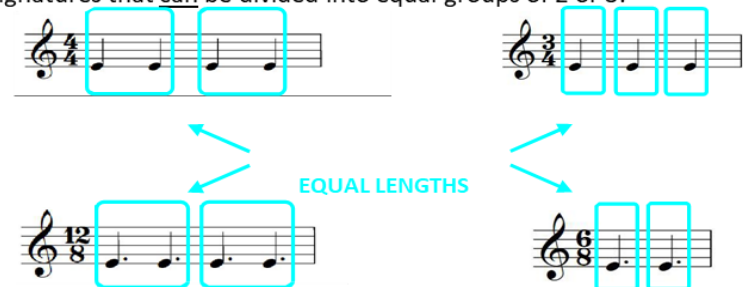
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Year 11 Music:

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
Harpischord	Pianoforte introduced	Use of chromatic chords
Small Orchestra (Mostly Strings)	Wider range of mood	Unusual Key Changes
Basso Continuo	Orchestra got bigger	Large Orchestra
	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

- ***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.

*Swung rhythms

*Extended chords: 7th, 9th...

*Blue notes – 'bending' some notes by a semitone



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.



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Bach, Vivaldi, Handel	Mozart, Haydn, Beethoven	Chopin, Schubert, Wagner
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- * [] - Performers make up music in the performance
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- * **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 Technology:



Term	Definition
Audio Interface	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Exporting a track to a format like an mp3 or wav file
Channel	<ul style="list-style-type: none"> Refers to one track of audio on a computer, part of the mixer or mixing desk
Chorus	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Another word for 'distorting' or 'peaking'
Compression	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Music Technology:



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 Music Technology:



Term	Definition
Envelope (ADSR)	<ul style="list-style-type: none"> 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 (attack), followed by a reduction in volume (decay). This quieter sound will continue for a time (sustain), before fading to nothing (release). 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Short for 'effects'. Common effects include reverb, chorus, distortion, and flange - processes or devices applied to a signal to alter its sound
Gain	<ul style="list-style-type: none"> How loud a signal is before it goes through an amplifier. Can be another word for volume, and another word for guitar distortion
Latency	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> A repeated section of a song, often using imported samples
Mastering	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Another acronym (musical instrument digital interface), 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 Music Technology:



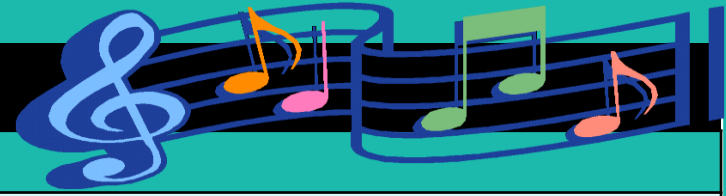
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Year 11 Music Technology:



Term	Definition
MIDI Controller	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Applying processing and levelling audio recordings with the goal of making a balanced and listenable end product
Mixing Desk	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Music Technology:



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 Music Technology:

Term	Definition
Sample	<ul style="list-style-type: none">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 <i>Bootylicious</i> by Destiny's Child (it originally comes from the track <i>Edge of Seventeen</i> by Stevie Nicks).Finding, editing, and reusing samples is a key part of much electronically produced music
Sampling	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">A virtual instrument (usually opened within a DAW), which interprets MIDI data and outputs it as the sound of an instrument
Tempo	<ul style="list-style-type: none">The speed of music. In BPM (beats per minute), 60 BPM for example is one beat a second
Velocity	<ul style="list-style-type: none">The force at which a note is played



Year 11 Music Technology:

Term	Definition
What is a sample ?	
Define sampling	
What are scores and lead sheets ?	
Define software instrument	
Define tempo	
Define velocity	



PE



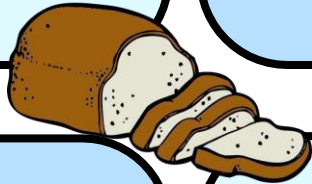
Helping every person achieve things they never thought they could.

Year 11 Core PE: Diet and nutrition

Carbohydrates

Carbohydrates are a source of energy. Athletes need 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 athlete's 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.



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.

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.



Year 11 Core PE: Diet and nutrition- summarise each food group below:

Carbohydrates

Examples:

Fats

Examples:

Mineral

Examples:



Water

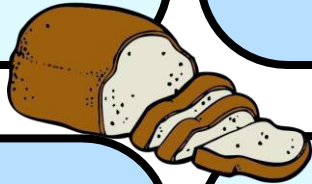
Protein

Examples:

Vitamins

Examples:

Fibre



Year 11 Core PE: Components of fitness

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

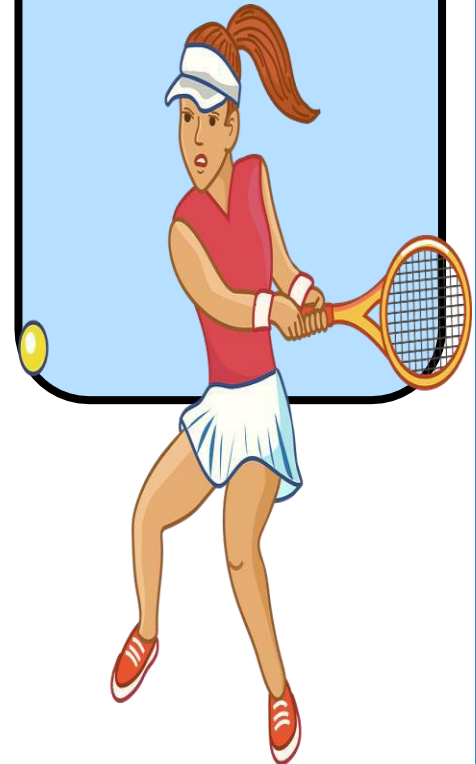
Example: weight lifting



Coordination

The ability to use different (two or more) parts of the body together smoothly and efficiently.

Example: Tennis



Components of fitness

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:



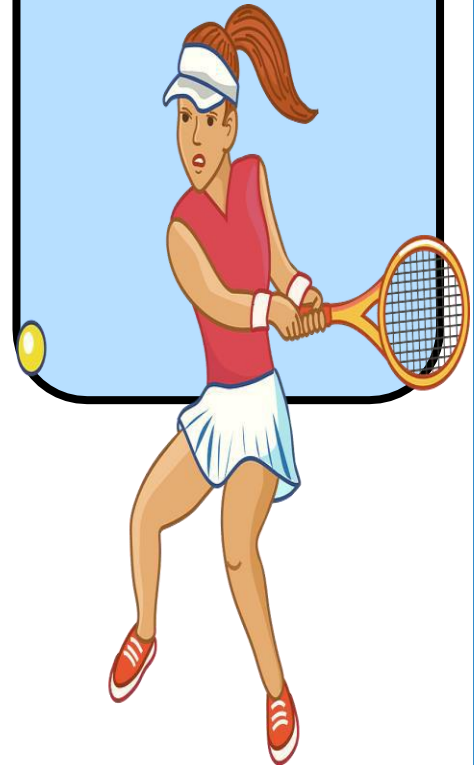
Power

Example:



Coordination

Example:



Explain the different components of fitness- give examples

Muscular Endurance

Example:



Strength

Example:




Flexibility

Example:



Hydration



Our body is made up of more than 60% water. That is more than 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.



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:

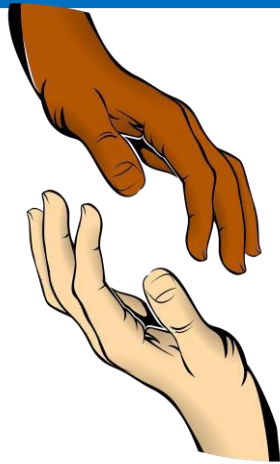
Flexibility Training:

Weight Training:

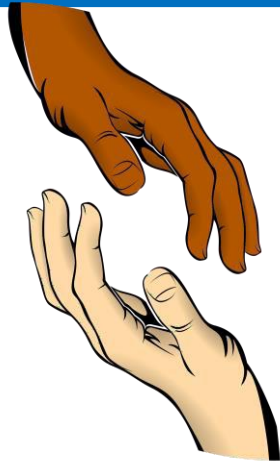
Year 11 Option PE: User Groups



- 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



Carers

- Commitments
- Lack of time
- Lack of disposable income
- Lack of appropriate activity



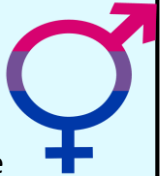
Families with children

- **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.



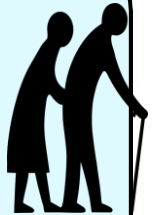
Gender

- 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.



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



Year 11 Option PE: Barriers

People from different ethnic backgrounds

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Gender

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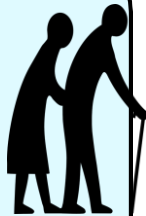
Carers

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Retired people/ people over 60

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Families with children

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Year 11 Option PE: Barriers

People with family commitments

- Commitments
- Lack of time
- Lack of disposable income
- Lack of appropriate activity



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



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.



People with family commitments

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Young Children

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People with disabilities

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Teenagers

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Year 11 Option PE: Barriers

Unemployed/economically disadvantaged

- Lack of disposable income.
- Lack of transport.
- Other priorities for use of leisure time.
- Cost of equipment.
- Lack of awareness.



People who work

- Commitment to work.
- Lack of time.
- Fatigue / tiredness.
- Unsuitable timing of activities.
- Lack of provision.
- Transport issues.
- Appeal of alternative leisure activities.

Teenagers

- Childcare costs
- Parenting commitments
- Limited childcare
- Transport issues
- Lack of time
- Appeal of alternative leisure activities
- Lack of role models

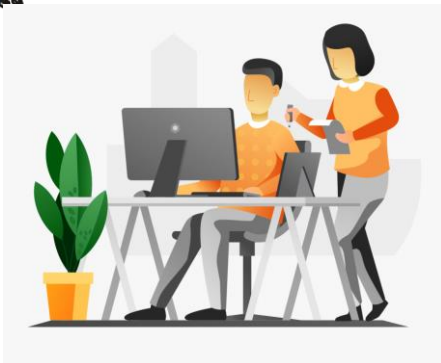


Year 11 Option PE: Barriers

Unemployed/economically disadvantaged

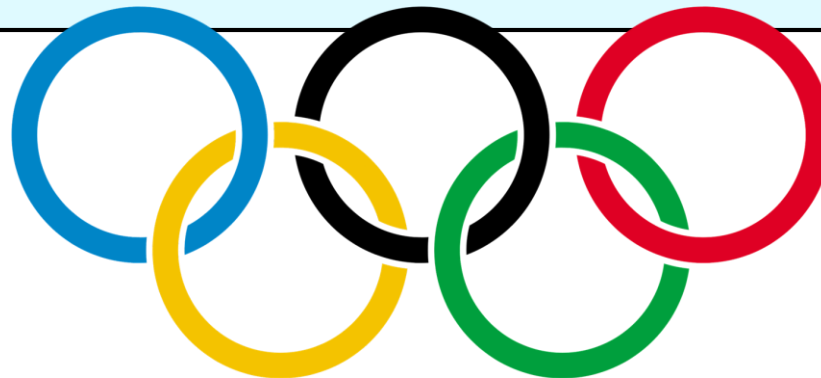
Teenagers

People who work

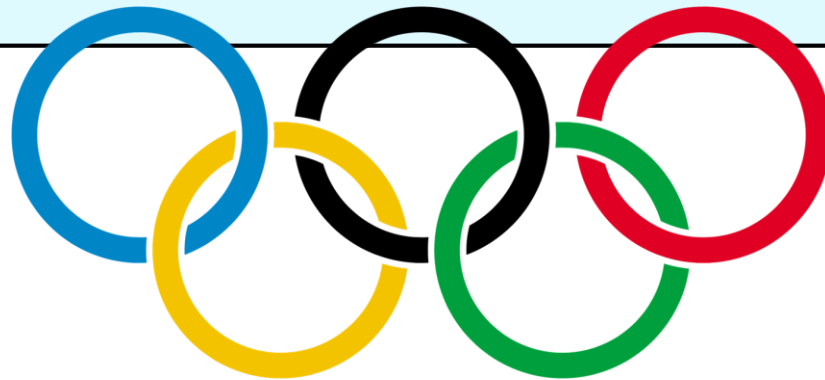
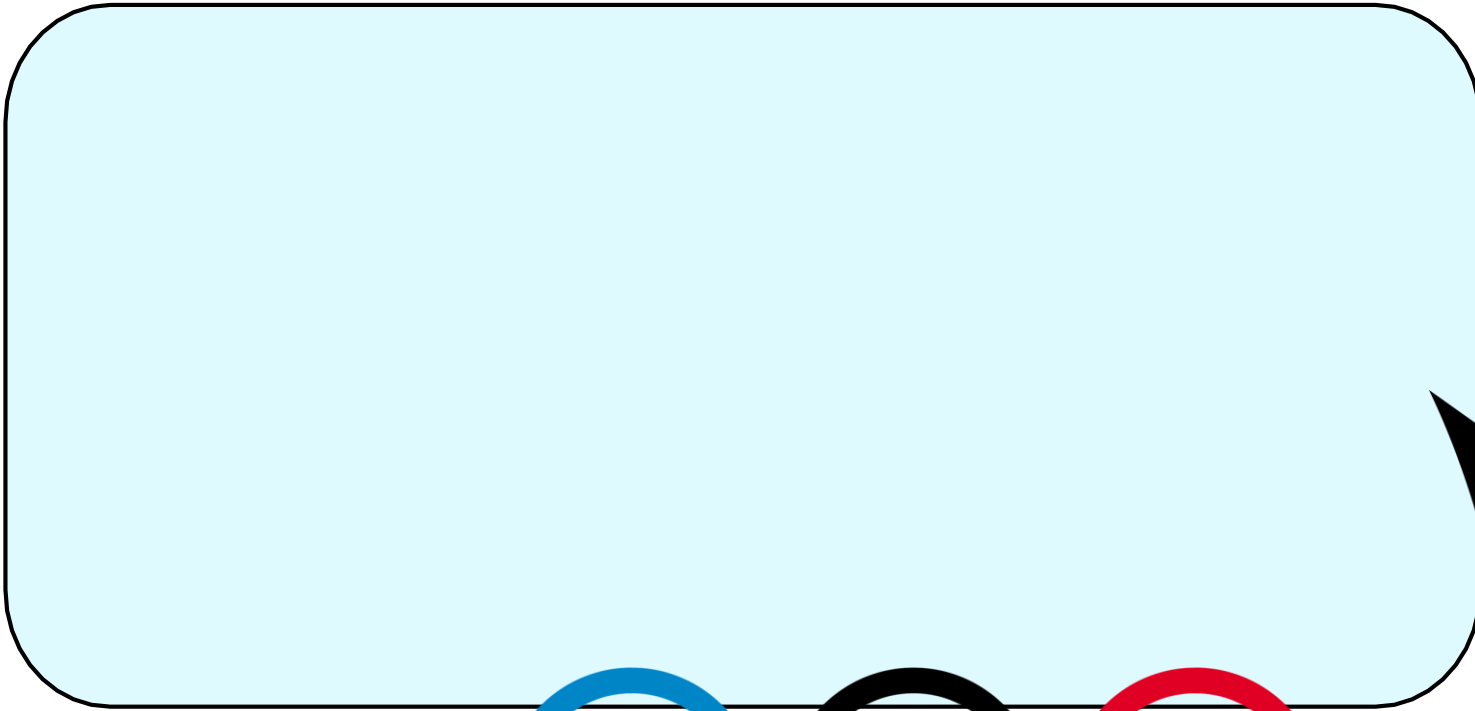


Year 11 Option PE: Regular and recurring sporting events

- **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 it has never returned.



Year 11 Option PE: Regular and recurring sporting events



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.

Values



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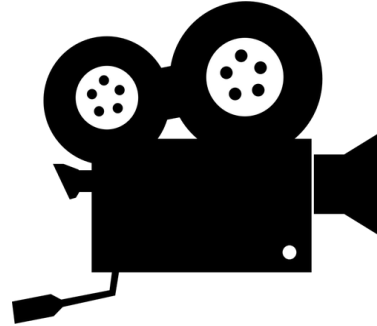
WADA

W
A
D
A

- Serves as the...
- Founded on the principles that...

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.

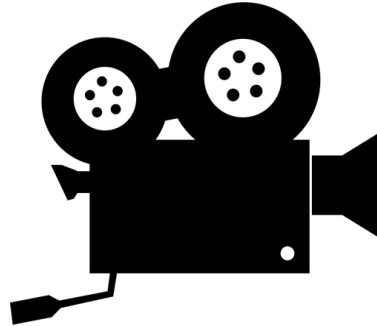
Recovery and rehabilitation

- 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.



Technology in sport

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Analysis

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Recovery and rehabilitation

Technology can be used to recover and rehabilitate quicker.

By using:

- -
- -
- -



Safety

Technology is used in different ways to provide safety:

- 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

- 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.

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.

Key Words

Liturgical worship	
Non-liturgical worship	
Prayer	
Sacrament	

Liturgical Worship

Prayer



Non-Liturgical Worship

Private Worship



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 water is 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.





_____ 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	



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.



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

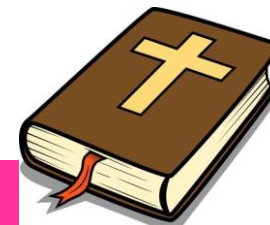


Pilgrimage

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 going 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.

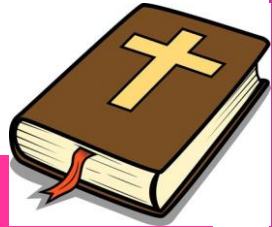


Pilgrimage

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

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- 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:

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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.



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:





Holy Week	What happened	Brief explanation or significance
Maundy Thursday	Last Supper, arrest and trials begin.	<p>Jesus washed his disciples' feet and told them to 'serve one another, as I have served you.' (Romans)</p> <p>He shared a meal with his disciples, including the bread and wine. He told them to 'do this in remembrance of me' (Luke).</p> <p>He prophesised about being denied by Peter and betrayed by Judas, showing his divine side.</p> <p>He spoke about the afterlife – 'My Father's house has many rooms' (John)</p> <p>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).</p>
Good Friday	<p>Trial with Pontius Pilate who sentences Jesus to death.</p> <p>Jesus is whipped, they place a crown of thorns on his head, his is nailed to the cross and left to die.</p>	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	<p>In the morning, the women went to the tomb to anoint Jesus' body. It was gone.</p> <p>A young man told them Christ was risen</p>	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

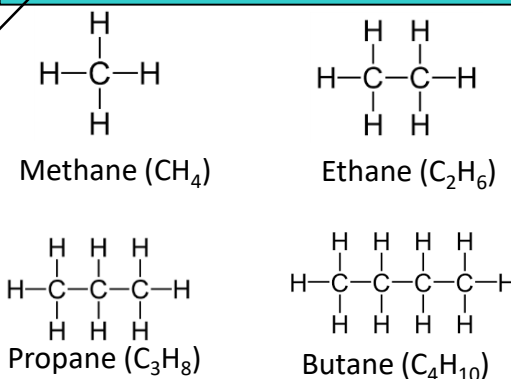


Helping every person achieve things they never thought they could.

Crude oil	<i>A finite resource</i>	Consisting mainly of plankton that was buried in the mud, crude oil is the remains of ancient biomass.
Hydrocarbons	<i>These make up the majority of the compounds in crude oil</i>	Most of these hydrocarbons are called alkanes.
General formula for alkanes	C_nH_{2n+2}	For example: C_2H_6 C_6H_{14}

Crude oil, hydrocarbons and alkanes

Display formula for first four alkanes



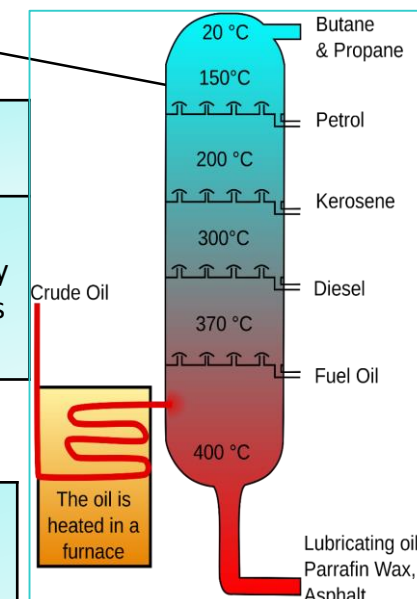
Carbon compounds as fuels and feedstock

Fractions	<i>The hydrocarbons in crude oil can be split into fractions</i>	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	<i>Fractions can be processed to produce fuels and feedstock for petrochemical industry</i>	We depend on many of these fuels; petrol, diesel and kerosene. Many useful materials are made by the petrochemical industry; solvents, lubricants and polymers.

Fractional distillation and petrochemicals

Carbon compounds as fuels and feedstock

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.



Alkanes to alkenes	<i>Long chain alkanes are cracked into short chain alkenes.</i>
Alkenes	<i>Alkenes are hydrocarbons with a double bond (some are formed during the cracking process).</i>
Properties of alkenes	<i>Alkenes are more reactive than alkanes and react with bromine water. Bromine water changes from orange to colourless in the presence of alkenes.</i>

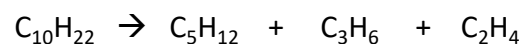
Cracking and alkenes

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.
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Cracking	<i>The breaking down of long chain hydrocarbons into smaller chains</i>	The smaller chains are more useful. Cracking can be done by various methods including catalytic cracking and steam cracking.
Catalytic cracking	<i>The heavy fraction is heated until vaporised</i>	After vaporisation, the vapour is passed over a hot catalyst forming smaller, more useful hydrocarbons.
Steam cracking	<i>The heavy fraction is heated until vaporised</i>	After vaporisation, the vapour is mixed with steam and heated to a very high temperature forming smaller, more useful hydrocarbons.

Decane \rightarrow pentane + propene + ethane



Complete combustion of methane:
Methane + oxygen \rightarrow carbon dioxide + water + energy
 $\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + 2\text{H}_2\text{O}(\text{l})$

Alkenes and uses as polymers	<i>Used to produce polymers. They are also used as the starting materials of many other chemicals, such as alcohol, plastics and detergents.</i>
Why do we crack long chains?	<i>Without cracking, many of the long hydrocarbons would be wasted as there is not much demand for these as for the shorter chains.</i>

Boiling point (temperature at which liquid boils)	<i>As the hydrocarbon chain length increases, boiling point increases.</i>
Viscosity (how easily it flows)	<i>As the hydrocarbon chain length increases, viscosity increases.</i>
Flammability (how easily it burns)	<i>As the hydrocarbon chain length increases, flammability decreases.</i>

Crude oil	<i>A finite resource</i>	
Hydrocarbons	<i>These make up the majority of the compounds in crude oil</i>	
General formula for alkanes		

Crude oil, hydrocarbons and alkanes

Display formula for first four alkanes

$\begin{array}{c} \text{H} \\ | \\ \text{H}-\text{C}-\text{H} \\ | \\ \text{H} \end{array}$
Methane (CH₄)

$\begin{array}{c} \text{H} \quad \text{H} \\ | \quad | \\ \text{H}-\text{C}-\text{C}-\text{H} \\ | \quad | \\ \text{H} \quad \text{H} \end{array}$
Ethane (C₂H₆)

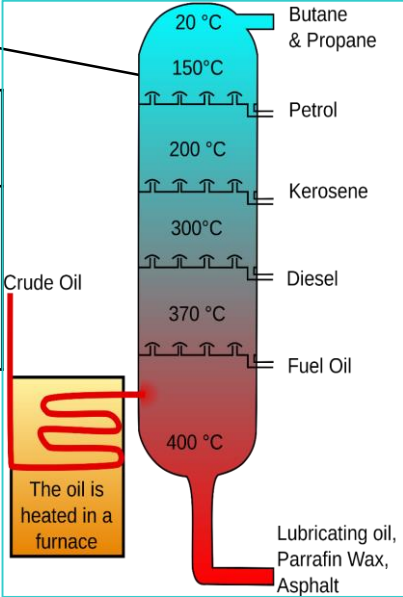
$\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ | \quad | \quad | \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{H} \\ | \quad | \quad | \\ \text{H} \quad \text{H} \quad \text{H} \end{array}$
Propane (C₃H₈)

$\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \quad \text{H} \\ | \quad | \quad | \quad | \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{C}-\text{H} \\ | \quad | \quad | \quad | \\ \text{H} \quad \text{H} \quad \text{H} \quad \text{H} \end{array}$
Butane (C₄H₁₀)

Fractions	<i>The hydrocarbons in crude oil can be split into fractions</i>	
Using fractions	<i>Fractions can be processed to produce fuels and feedstock for petrochemical industry</i>	

Carbon compounds as fuels and feedstock

Fractional distillation and petrochemicals



Alkanes to alkenes	
Alkenes	
Properties of alkenes	

Carbon compounds as fuels and feedstock

Hydrocarbon chains	In oil	
	Boiling points	

Properties of hydrocarbons

Cracking and alkenes

Combustion	
------------	--

Cracking	<i>The breaking down of long chain hydrocarbons into smaller chains</i>	
Catalytic cracking	<i>The heavy fraction is heated until vaporised</i>	
Steam cracking	<i>The heavy fraction is heated until vaporised</i>	

$$\text{C}_{10}\text{H}_{22} \rightarrow \text{C}_5\text{H}_{12} + \text{C}_3\text{H}_6 + \text{C}_2\text{H}_4$$


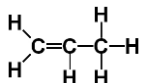
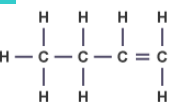
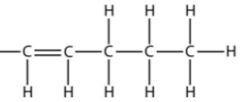
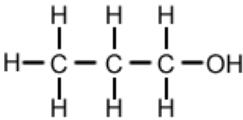
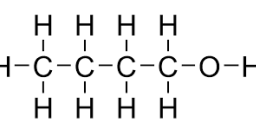
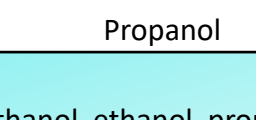
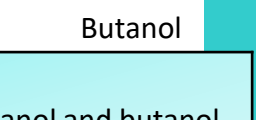
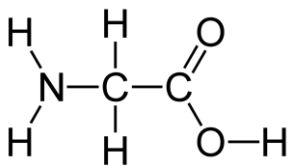
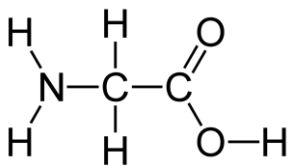
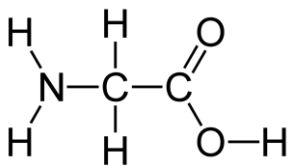
→ + propene + ethane

Alkenes and uses as polymers


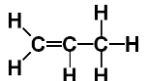
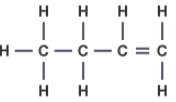
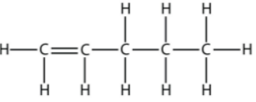
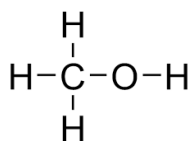
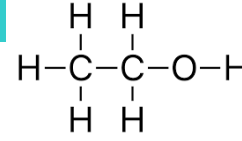
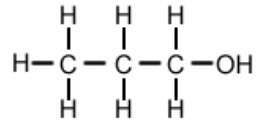
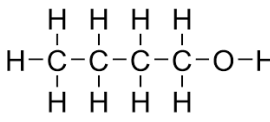
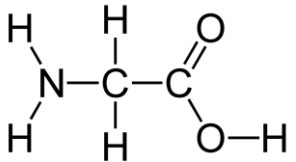
Why do we crack long chains?

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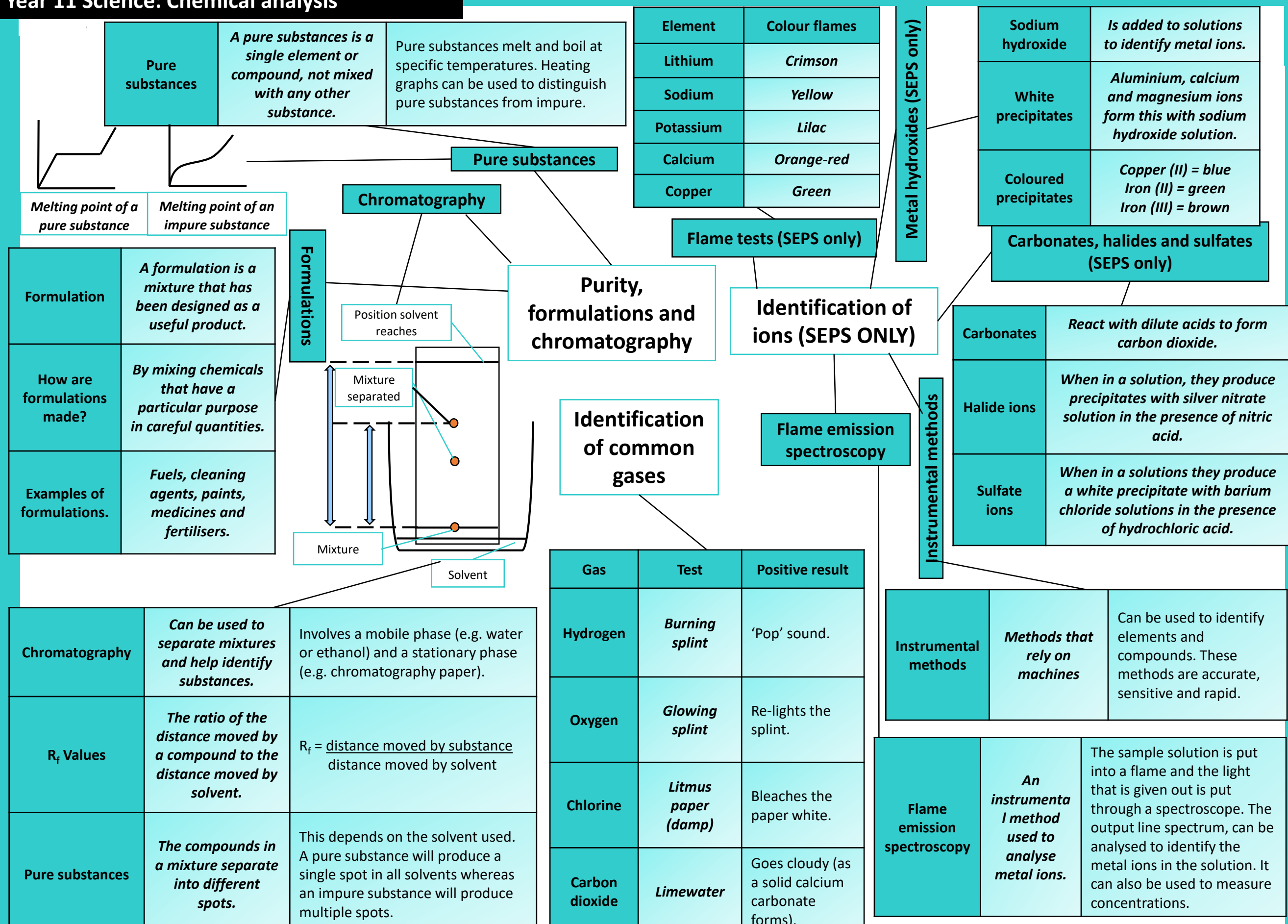
Year 11 Science: Organic Chemistry SEPS ONLY

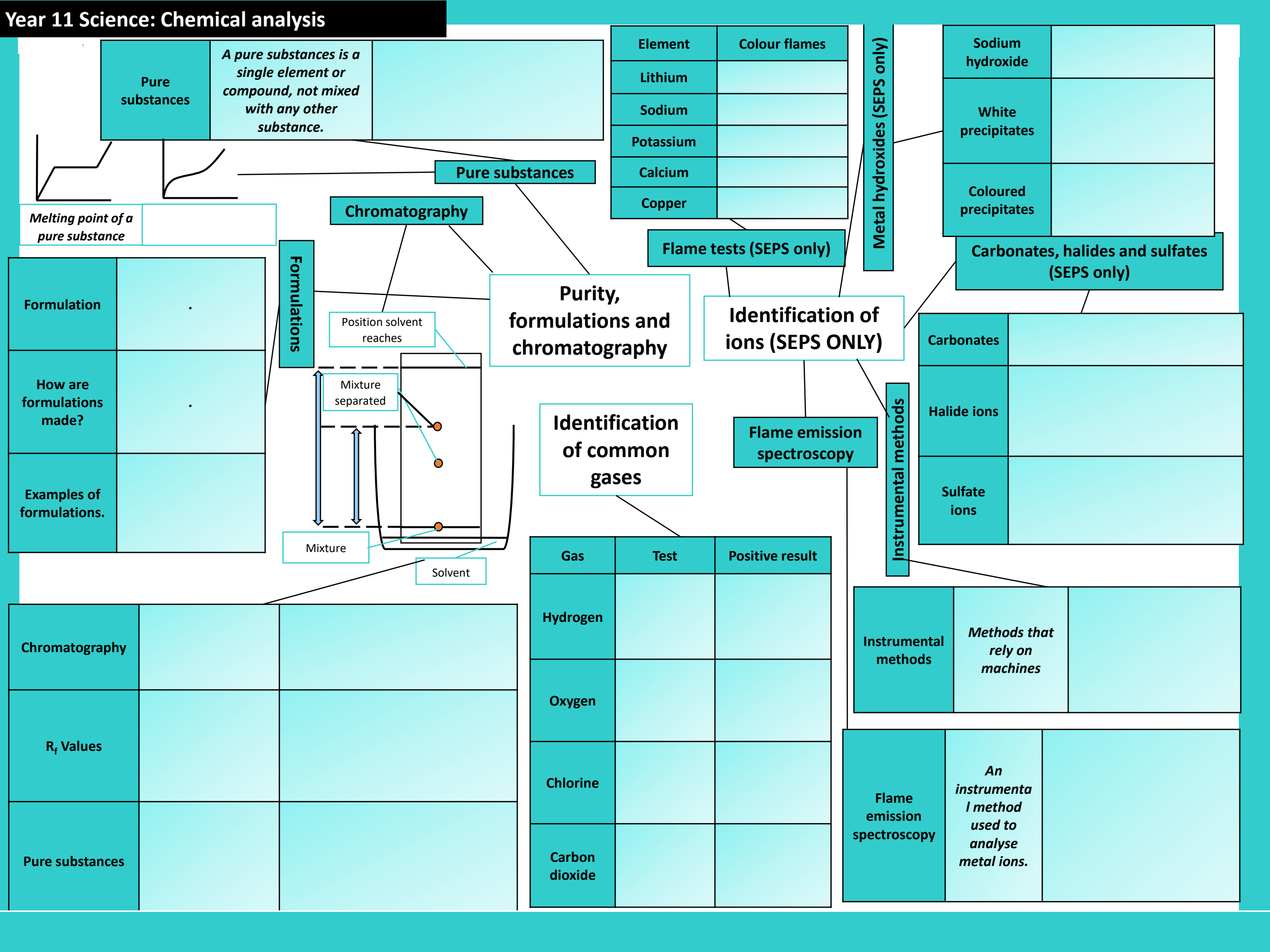
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Year 11 Science: Organic Chemistry SEPS ONLY

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<div>Alkenes</div> <div>Unsaturated</div> <div>General formula for alkenes</div>			<div>Structure and formula of alkenes</div> <div>Reactions of alkenes</div> <div>Reactions of alkenes and alcohols</div>			<div>Alcohols</div> <div>Functional group</div> <div>-OH For example: CH₃CH₂OH</div> <div>Alcohol reactions</div> <div>Alcohols react with sodium, air and water.</div> <div>Fermentation</div> <div>Ethanol is produced from fermentation.</div>		
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<div>Polymers</div> <div>It can be displayed like this:</div>			<div>Condensation polymerisation</div>					

Year 11 Science: Chemical analysis





Year 11 Science: Forces

Unit	Newton (N)	1N
Kilo	Kilonewton (KN) = 1000	1X 10 ³
Mega	Meganewton (MN) = 1000,000	1 X 10 ⁶

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

$W = m \times g$

Each Kg has a gravitational pull of 9.8N.

Weight = mass X gravitational field strength

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.

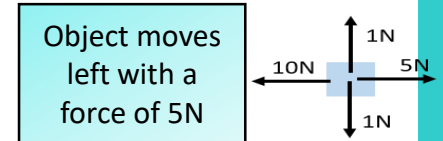
Two forces acting in the opposite direction are taken away.

HIGHER ONLY

Work done against frictional forces, temperature of object rises.

Free body diagram

Show magnitude and direction of all forces upon an object



Contact and Resultant forces

Weight	Force acting upon an object due to gravity	Newton (N)
Mass	How much matter	Kilograms (Kg)

Gravity

Work done and energy transfer

If force is at right angles to direction of movement, NO work is done.

Work done

When work is done, energy is transferred

Work done = force X distance moved
 $W = F \times s$

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 can bend an object.

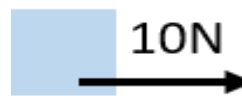
Scalar	A quantity that only has magnitude (size)	e.g. mass, time, speed, temperature, energy,
Vector	A quantity that only has magnitude and direction	e.g. force, velocity, momentum

Scalar and vector quantities

An arrow can be used to show vectors

Length of arrow = magnitude of vector

Direction of arrow = direction of vector



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 difference between stretched and unstretched lengths

Limit of proportionality

Beyond this point the spring is permanently deformed

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, $F = k \times e$

$EPE = \frac{1}{2} \times \text{spring constant} \times (\text{extension})^2$, $EPE = \frac{1}{2} k e^2$

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

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	
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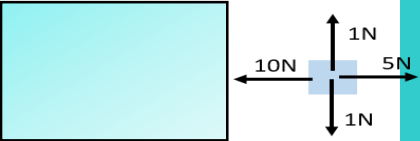
Centre of mass		W = m X g
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Resultant force	The overall effect of all of the forces acting upon an object	

HIGHER ONLY

Free body diagram	
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Gravitational field strength	Gravity exerted around an object.	Earth's gfs = _____ N/kg
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Weight		Newton (N)
Mass		Kilograms (_____)

Gravity

Contact and Resultant forces

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Work done	When work is done, energy is transferred	

Work done and energy transfer

Forces and elasticity

One force	
More than one force	

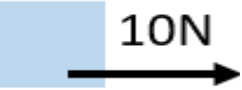
Scalar		
Vector		

Scalar and vector quantities

Elastic deformation	
Inelastic deformation	
Extension	

Limit of proportionality

An arrow can be used to show vectors	



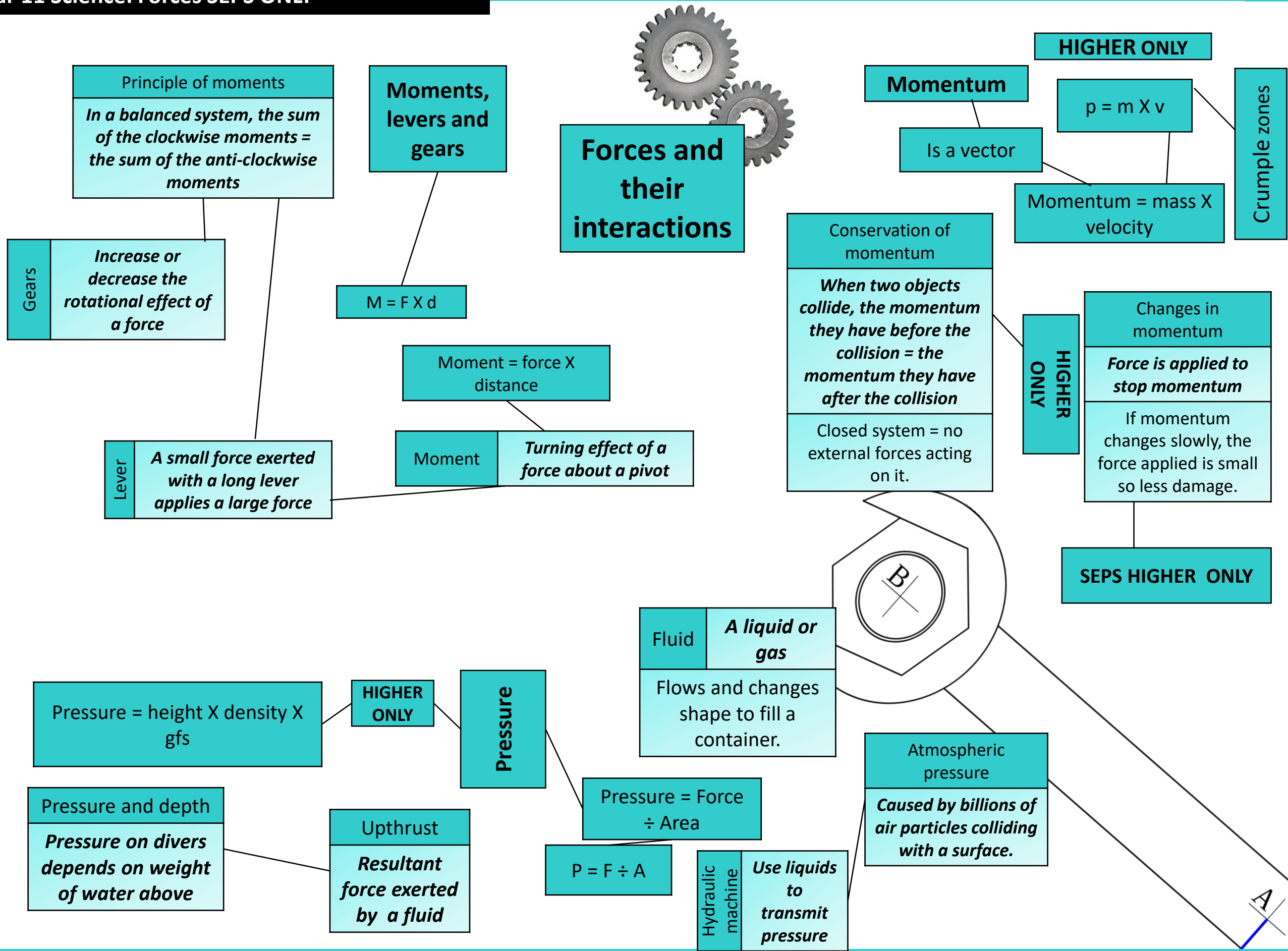
Area	
Weight	
Mass	
Gravitational field strength	
Force	
Work done	
Distance	
Moment	Newton-metres (Nm)

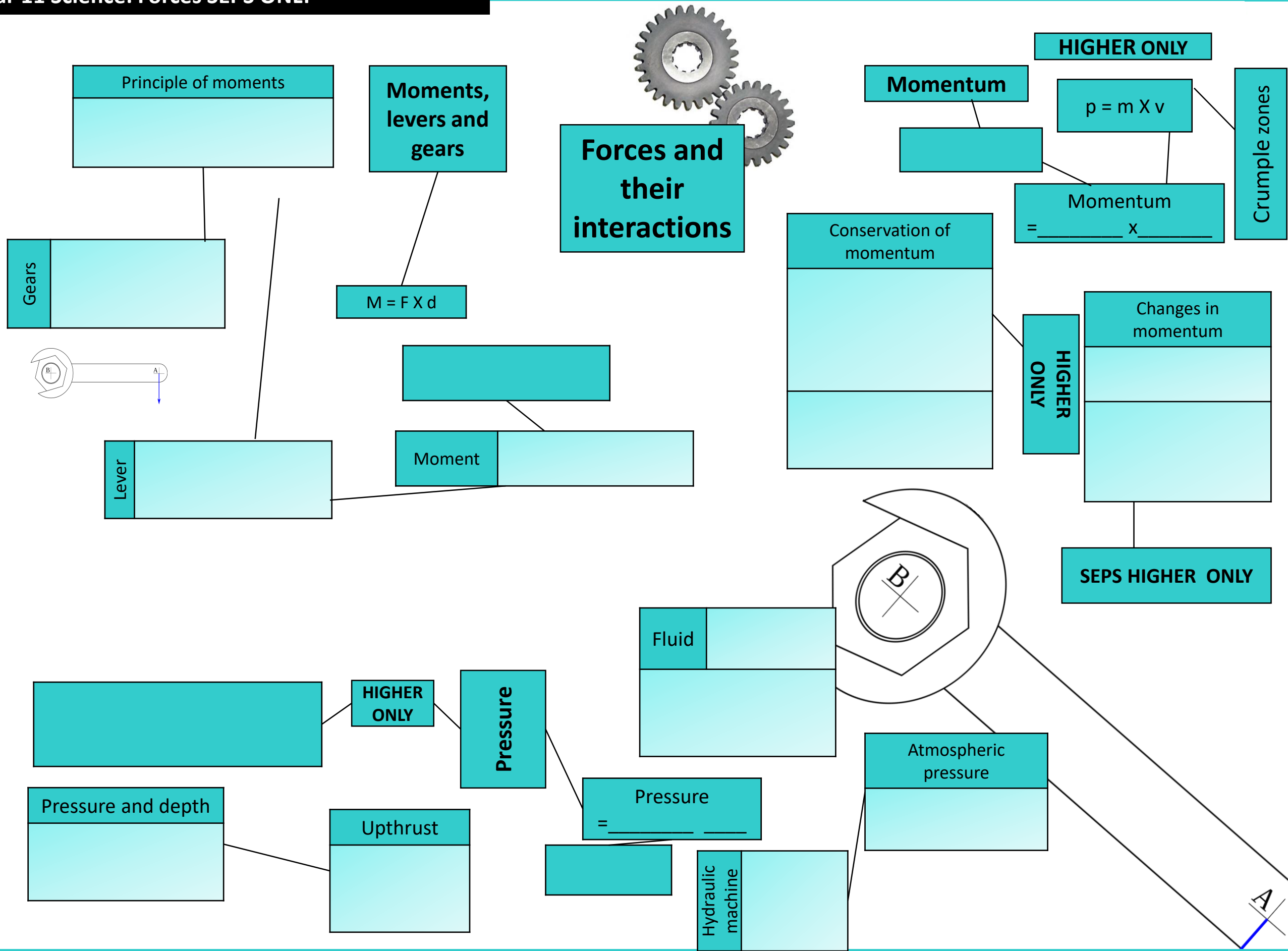
Stretching a spring	
	EPE = ½ X spring constant X (extension) ² , EPE = ½ ke ²

Elastic Potential energy (EPE)	
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Velocity		
Distance	How far	
Displacement		

Force	
Spring constant	
Extension	
EPE	





Year 11 Science: Forces

Aeroplane banks to change direction	Velocity changes.
Car travelling around a bend	Constant speed, direction changes.
Satellite orbiting the Earth	Constant speed, direction changes.

Distance travelled	Area under the graph shape
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HIGHER ONLY

Velocity-time graph	Shows speed of an object
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Constant acceleration
$(\text{final velocity})^2 - (\text{initial velocity})^2 = 2 \times \text{acceleration} \times \text{distance}$ $v^2 - u^2 = 2 \times a \times s$

Gradient = vertical \div horizontal

Changing velocity	Objects in a circular motion, change direction but keep a constant speed
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Velocity	The speed of an object with direction	Vector
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HIGHER ONLY
Speed of sound 330m/s.

Accelerating objects	It takes time for objects to reach top speed	Draw a tangent to the curve, work out gradient.
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Accelerating	Object getting faster
Decelerating	Object slowing down

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.
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Acceleration = change in velocity \div time taken

Terminal velocity	Weight of an object is balanced by resistive forces	Object moves at a constant velocity. Resultant force = 0.
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Speed = distance \div time
 $v = s \div t$

HIGHER ONLY

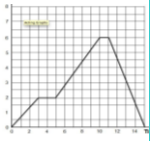
Acceleration	Change in velocity	Vector
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Speed	How fast an object moves	Scalar
Displacement	Includes the distance and direction an object moves	vector
Distance	How far an object moves	scalar

Distance-time graph	Shows how far an object moves along a straight line
Speed of object	Use the gradient of graph

Forces, acceleration and Newton's Laws of motion

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.	



Car on motorway	30m/s	Walking	1.5m/s
Train	60m/s	Running	3m/s
Jet plane	200m/s	Cycling	6m/s

Speed is rarely constant.

Describing motion

Observing and recording motion

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
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HIGHER ONLY

Speed or direction only changes if a resultant force acts on the object

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 distance	Total thinking and braking distances

Force = mass X acceleration
 $F = m \times a$

HIGHER ONLY

Inertial mass	How difficult it is to change the velocity of an object
Inertial mass = force \div 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.

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.
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Year 11 Science:
Forces

Aeroplane banks to change direction	
Car travelling around a bend	
Satellite orbiting the Earth	

Distance travelled	
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HIGHER ONLY

Velocity-time graph	
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Constant acceleration

Gradient = vertical ÷ horizontal

Changing velocity	
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Velocity		Vector
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HIGHER ONLY

Speed of sound

Accelerating objects

It takes time for objects to reach top speed

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Accelerating	
Decelerating	

Falling objects

Falling objects accelerate due to gravity.		
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Acceleration		Vector
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Terminal velocity		
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$v = s \div t$

Speed		
Displacement		
Distance		

Distance-time graph	
Speed of object	

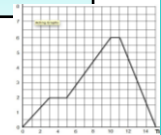
Speed is rarely constant.

Describing motion

Observing and recording motion

Forces, acceleration and Newton's Laws of motion

Parachuting	



Car on motorway	
Train	
Jet plane	

Walking	
Running	
Cycling	

Forces and braking

$F = m \times a$

Speed / velocity	
Distance	
Time	
Acceleration	
Force	
Mass	
Momentum	

Inertia	
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HIGHER ONLY

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Typical reaction time = s

Thinking distance	
Braking distance	
Stopping distance	

HIGHER ONLY

Inertial mass	

Acceleration is inversely proportional to mass.

Newton's first Law	Balanced forces	
Newton's second Law	Unbalanced forces	
Newton's third Law	Equal and opposite forces	

Factors affecting stopping distances	Drivers reaction times	
	Braking distances	

Braking and kinetic energy		
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