



Be Kind.



Work Hard.



Take Responsibility.

# Need To Know Book

## Year 8

Spring 2024

Name: \_\_\_\_\_

Form Group: \_\_\_\_\_



# My Aspirational Sentence.

Little Lever School

be kind | work hard | take responsibility

## What does the top of my mountain look like?

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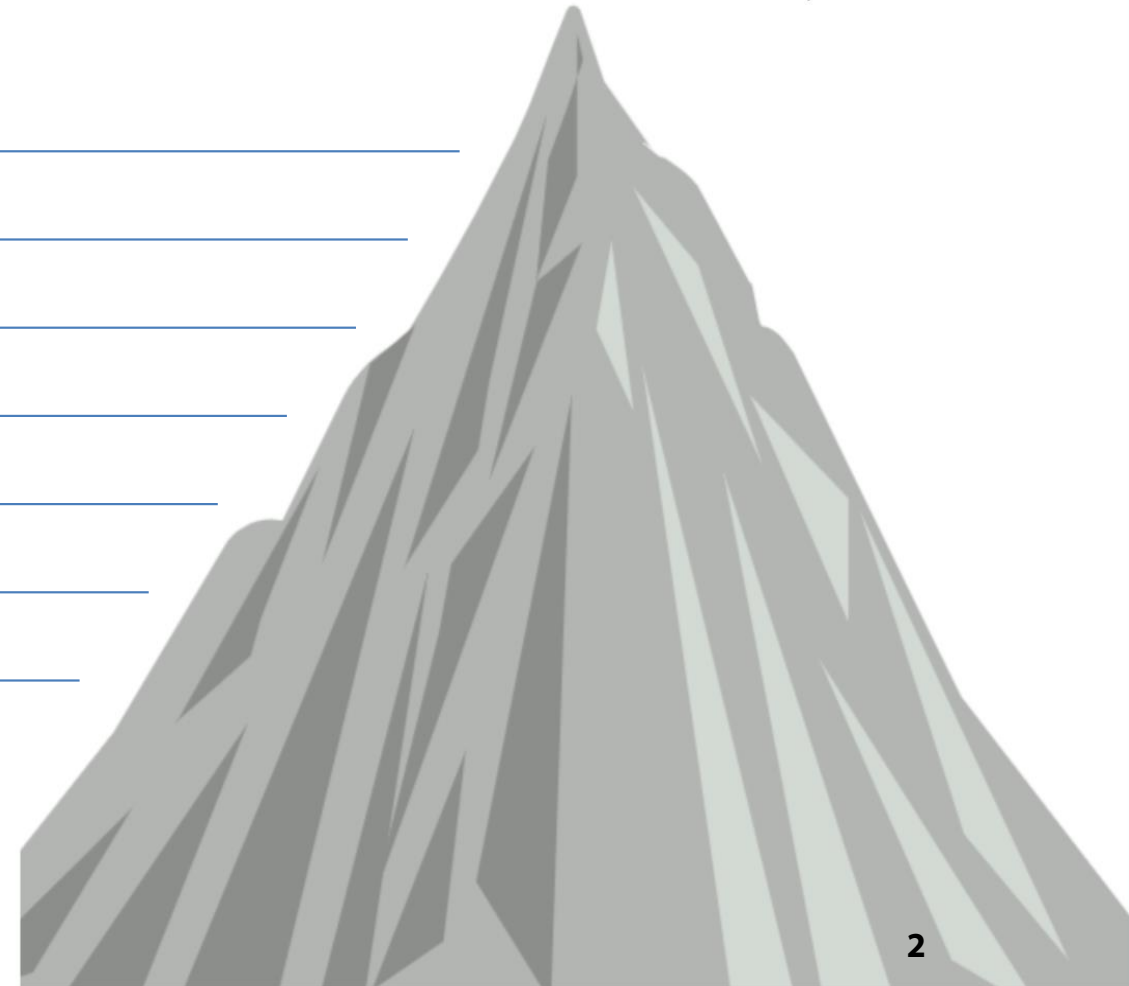
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**Be Kind.**

**Work Hard.**

**Take Responsibility.**





Take  
Responsibility.

# 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.

Work Hard.



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?



Helping every person achieve things they never thought they could.

Little Lever School  
be kind | work hard | take responsibility



# Art



**Helping every person achieve things they never thought they could.**





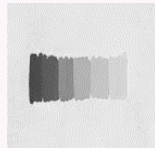
# Year 8 Art: Portraiture

## The Formal Elements of Art



### Line

A **line** is an identifiable path created by a point moving in **space**. It is one-dimensional and can vary in width, direction, and length. **Lines** can be horizontal, vertical, or diagonal, straight or curved, thick or thin.



### Tone

**Tone** refers to the relative lightness or darkness of a colour. One colour can have an almost infinite number of different **tones**.



### Colour

Made up of three properties: hue, value, and intensity. Red, yellow and blue are primary colours, which means they can't be mixed using any other colours. Two primary colours mixed make a secondary colour. A primary and a secondary colour mixed make a tertiary colour



### Shape

A shape is an area enclosed by a line. It could be just an outline or it could be shaded in. Shapes can be either geometric, like a circle, square or triangle, or irregular.



### Texture

**Texture** refers to the surface quality in a work of **art**. We associate **textures** with the way that things look or feel.



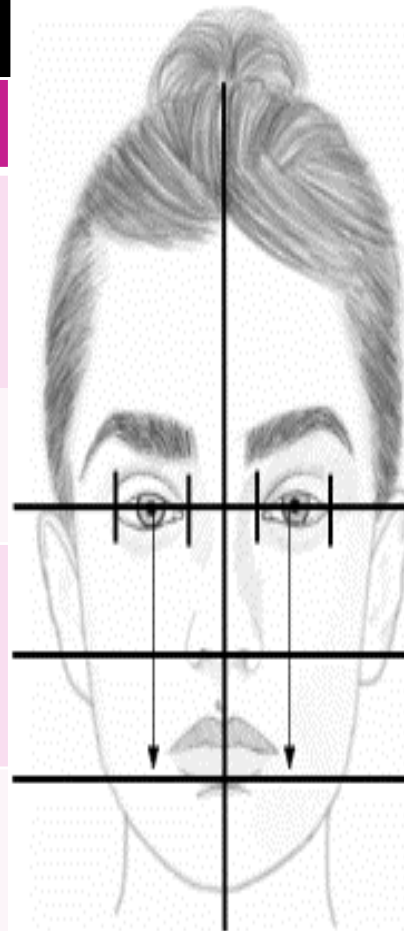
### Pattern

Pattern is created by repeating lines, shapes, tones or colours. The design used to create a pattern is often referred to as a motif. Motifs can be simple shapes or complex arrangements.



### Form

Form is a three-dimensional shape, such as a cube, sphere or cone. Sculpture and 3D design are about creating forms.



## Portraiture

A visual representation of a person which can be created in any artistic medium. Portraits of people are often in traditional oil paintings, and more recently photographs. However, sculpture and even mixed media artworks can also be portraits.

## Proportions of the human face

**Eyes:** roughly half way between the top of the head and chin

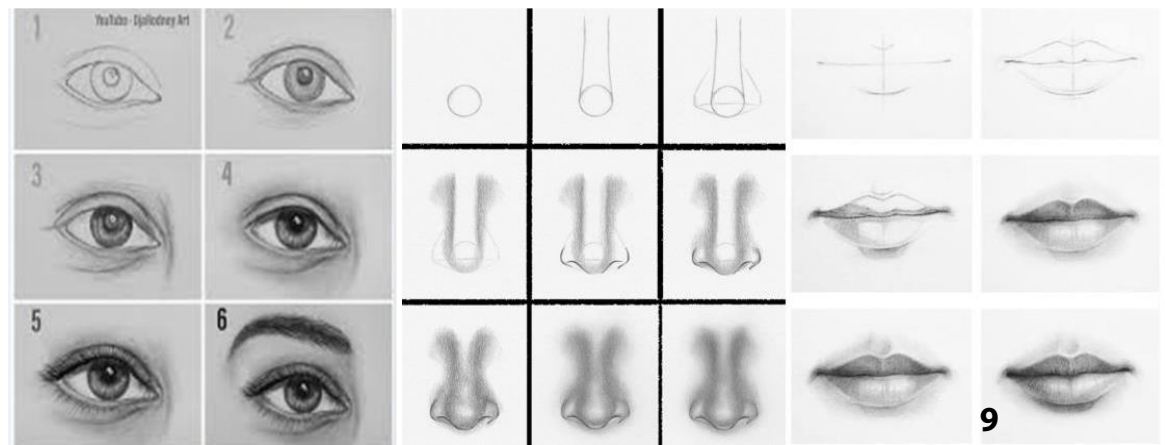
**Nose:** roughly half way between the eyeline and the chin

**Mouth:** roughly half way between the bottom of the nose and chin

### TIPS:

- Usually, the pupils in the eyes line up roughly with the corners of the mouth
- If you draw five equal sections along the eye line across the width of the face, the eyes sit in sections two and four.
- The tops of the ears usually line up to the eye line

## The Facial Features- Step by Step



# Year 8 Art: Portraiture

## The Formal Elements of Art

What do you know about **line**?

What do you know about **tone**?

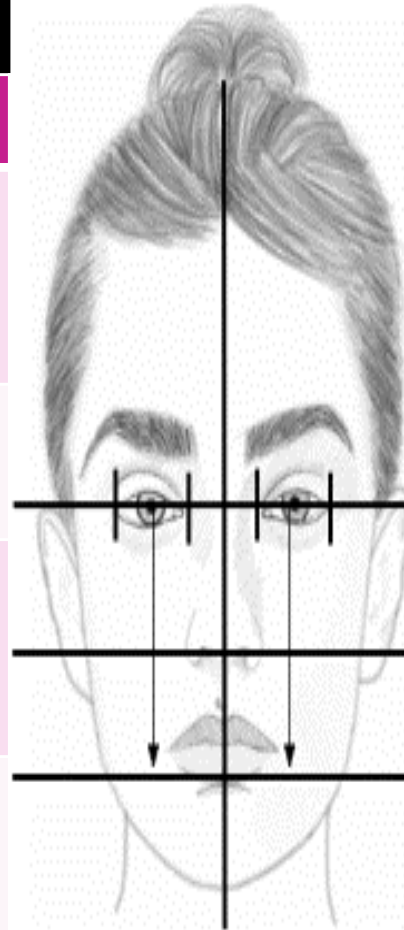
What do you know about **colour**?

What do you know about **shape**?

What do you know about **texture**?

What do you know about **pattern**?

What do you know about **form**?



## What is portraiture?

## Proportions of the human face

**Eyes:**

**Nose:**

**Mouth:**

**TIPS:**

- Usually, the pupils in the eyes line up roughly with the corners of the mouth
- If you draw five equal sections along the eye line across the width of the face, the eyes sit in sections two and four.
- The tops of the ears usually line up to the eye line

**TASK: Practice drawing out a human face with the guidelines to help you**

## The Facial Features- Step by Step

**TASK:** Practice drawing the **eyes** using the step by step guide

**TASK:** Practice drawing the **nose** using the step by step guide

**TASK:** Practice drawing the **mouth** using the step by step guide

# Year 8 Art: Lettering Project

## The Formal Elements of Art

	<p><b>Line</b></p>	<p>A <b>line</b> is an identifiable path created by a point moving in <b>space</b>. It is one-dimensional and can vary in width, direction, and length. <b>Lines</b> can be horizontal, vertical, or diagonal, straight or curved, thick or thin.</p>
	<p><b>Tone</b></p>	<p><b>Tone</b> refers to the relative lightness or darkness of a colour. One colour can have an almost infinite number of different <b>tones</b>.</p>
	<p><b>Colour</b></p>	<p>Made up of three properties: hue, value, and intensity. Red, yellow and blue are primary colours, which means they can't be mixed using any other colours. Two primary colours mixed make a secondary colour. A primary and a secondary colour mixed make a tertiary colour</p>
	<p><b>Shape</b></p>	<p>A shape is an area enclosed by a line. It could be just an outline or it could be shaded in. Shapes can be either geometric, like a circle, square or triangle, or irregular.</p>
	<p><b>Texture</b></p>	<p><b>Texture</b> refers to the surface quality in a work of art. We associate <b>textures</b> with the way that things look or feel.</p>
	<p><b>Pattern</b></p>	<p>Pattern is created by repeating lines, shapes, tones or colours. The design used to create a pattern is often referred to as a motif. Motifs can be simple shapes or complex arrangements.</p>
	<p><b>Form</b></p>	<p>Form is a three-dimensional shape, such as a cube, sphere or cone. Sculpture and 3D design are about creating forms.</p>

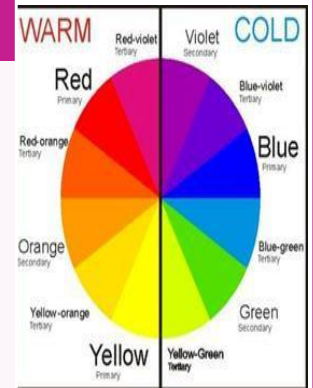
## Composition

The composition of an artwork is defined by how the image is depicted and laid out on the canvas. In other words, **the arrangement of elements within a work** of art. The artist uses composition to arrange the subject and object of the image in a way to engage the viewer or provide a visually compelling scene.

Artists aim to compose the subjects and objects of their works in a visually pleasing manner to engage the viewer. The composition can be considered the design or structure of what is depicted—the scaffolding that props up the subject within the image, directing the viewer's eye across the artwork.

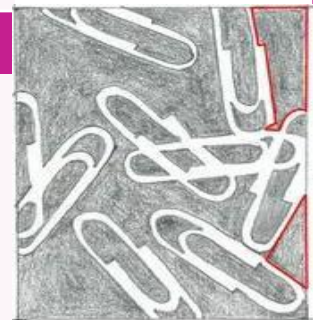
## Warm and Cold Colours

The colour wheel can be split into two halves. Yellow, orange and red are warm colours because they remind us of things associated with heat such as the sun, beaches, and fire. Purple, blue and green are called cold colours because they remind us of things with the absence of heat such as water, ice, and grass. Warm colours can be used to evoke stimulating feelings such as energy, while cold colours are more likely to have a calm, relaxing effect.



## Negative Space

In art, negative space is the space around and between the subject of the image. The positive space is the subject or object of the image. Negative space is important because it can help us to draw accurately and can help with creating an interesting composition. The negative space is shaded and outlined in red in this drawing of paperclips to the left.



## Jasper Johns

Jasper Johns is an American painter, sculptor and printmaker, whose work is associated with Abstract Expressionism and Pop Art. Since the mid-1950s, Johns has focused on everyday icons and emblems, or what the artist famously referred to as “things the mind already knows.” A key motif is the alphabet: Johns has repeatedly used letters, either depicted individually or layered atop one another, to address ideas of perception and knowledge.

# Year 8 Art: Lettering Project

## The Formal Elements of Art

What do you know about **line**?

What do you know about **tone**?

What do you know about **colour**?

What do you know about **shape**?

What do you know about **texture**?

What do you know about **pattern**?

What do you know about **form**?

## Composition

What is composition in art?

What is the aim of the artist when arranging a composition?

### THINKING POINT:

Which other subject have you heard the word composition in?

What does it mean in this case?

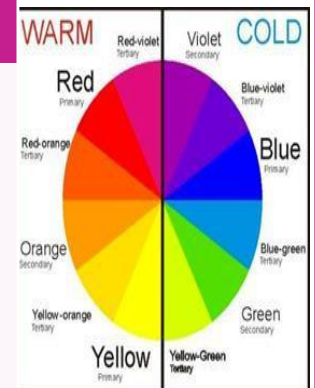
## Warm and Cold Colours

Name three warm colours:

Name three cold colours:

What kind of feelings can warm colours evoke?

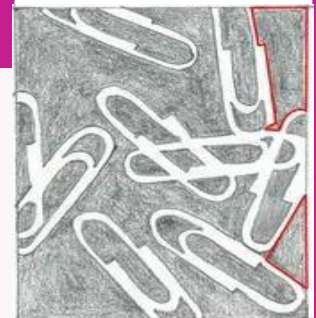
What kind of feelings can cold colours evoke?



## Negative Space

What is negative space?

Why is it important?



## Jasper Johns

Which art movements is the work of Jasper Johns associated with?

What has been Jasper Johns' focus since the 1950s?

Why has he been focused on this? What are the ideas he is trying to address?

# Catering





# Year 8 Catering

## Cuisine:

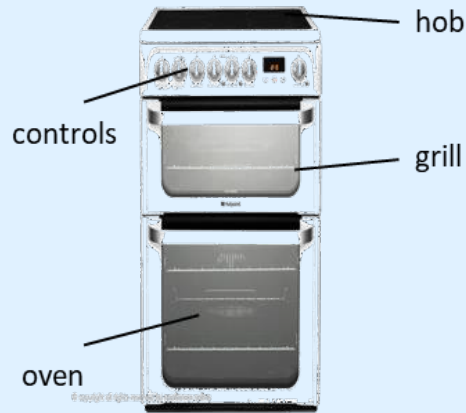
A style of cooking characterised by particular ingredients, methods or dishes. It is often associated with a specific culture or geographical area.

## Region:

An area or part of a country or the world which has specific characteristics.

## Factors that influence cuisines include:

Land  
Religion  
Cultures and lifestyles  
Economic factors



## What is gluten?

Gluten is a protein found in flour which when water is added and the dough is kneading allows it to stretch. For bread a flour with lots of gluten in it is needed.

## The **bridge hold** is used to cut many foods such as apples:

- Place the apple onto a chopping board
- Make a bridge with your hand. Your fingers should be on one side and your thumb should be on the other
- Pick up the knife with your other hand and check that the blade is facing downwards

## The **claw grip** is used to chop food such as banana or celery onto the chopping board.

- Make a claw with your hand by partly curling your fingers together. Decide how thick you want the slices before you begin.
- Then, pick up the knife with your other hand and check that the blade is facing downwards.

## Types of hob:

**An induction hob** is a flat, glass-topped plate that uses heat created by magnetism to warm pots and pans, rather than direct heat

**A gas hob** is a cooking device that uses gas as the main source in producing heat or energy in the form of flame onto the gas burners.

**A ceramic hob** is a cooker that uses a glass-topped heating element powered by electricity.

**A solid plate hob** has electric heating coils for each ring (or cooking zone) enclosed in a sealed metal plate.

**Rolling:** Flattening a piece of dough in order to be able to shape it further and add a filling or topping

**Shaping:** Dough to make it contain a filling or hold a topping,

**Sealing** dough products means to use a high protein liquid such as beaten egg to “glue” the edges together

**Glazing:** Means to brush the surface of a pastry or dough product with egg or milk to give it a shiny appearance once cooked

## How do you use a probe thermometer?

Insert the stem of a probe thermometer into the thickest part of the food, or in the centre of the food if the food is even in thickness.

Wait at least 15 seconds for the reading to steady and then record the reading.

Hot food should reach at least 75c

## What are high risk foods?

Foods are considered high-risk if they support the growth of harmful bacteria and will not undergo/ need cooking or treatment in order to destroy it.

e.g. **raw meat, raw fish, raw eggs, gravies and stocks, cooked rice.**

**Food provenance** means where ingredients and the foods made from them originally come from. Many consumers want to know where their food originated. Many ingredients and foods we eat are grown, reared or caught in the UK. Others are imported from other countries.

## Marinade 'v' Marinade

We make a **marinade** (noun) to **marinate** (verb) foods in.

Marinades usually contain an acid (such as vinegar, wine, or citrus), an oil (such as olive oil or sesame oil), and a flavouring agent (such as herbs and spices).

The purpose of marinating is to **add flavour** and **tenderise** meat, chicken and fish.



# Year 8 Catering

What is meant by the word cuisine?



List the factors that influence cuisines:

What is gluten?

Explain the **bridge hold** and how to use it.

- -
- -
- -

Explain the **claw grip** and how to use it.

- -
- -

What type of hob do we use in school?

What type of hob do you have at home?

Rolling:

Shaping:

Sealing:

Glazing:

How do you use a probe thermometer?

What are high risk foods? Give 4 examples:

Explain the term food provenance.

What is a **marinade**? Explain the difference between a **marinade** and **marinating**?





# Computing



**Helping every person achieve things they never thought they could.**



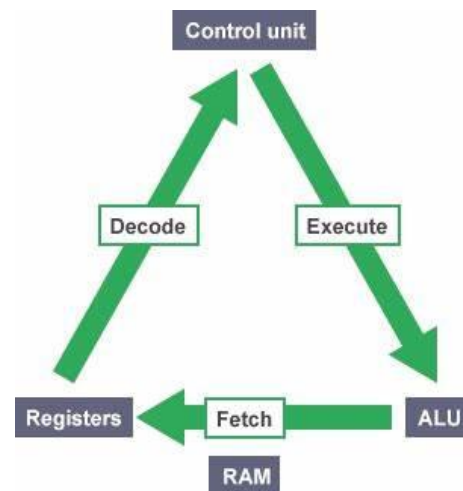
# Year 8 Computing: The Von Neumann Architecture Model and Fetch-Decode-Execute Cycle

The Von Neumann architecture model is a framework that describes a computer with a single, shared memory for instructions and data. This model has been pivotal in the development of modern computers.

The Fetch-Decode-Execute cycle is the fundamental process that the Central Processing Unit (CPU) follows to perform tasks. This sequence allows the computer to retrieve, understand, and act on instructions stored in memory.

Component	Description
CPU (Central Processing Unit)	Performs calculations and controls data flow.
Memory Unit	Stores both data and instructions for the CPU to access.
Input and Output Devices	Enable interaction with the computer, facilitating data input and output.
Control Unit	Manages the execution of instructions, ensuring proper coordination of components.

Stage	Description
Fetch	The CPU fetches an instruction from memory.
Decode	CPU decodes, or figures out, what the instruction means.
Execute	CPU carries out the instruction.



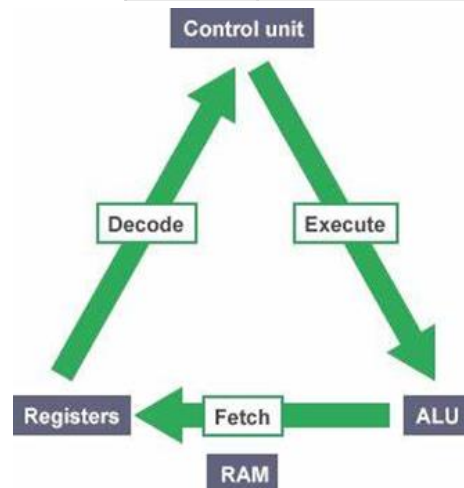
Key Term	Description
CPU	Central Processing Unit, the brain of the computer.
Memory	Where data and instructions are stored.
Instruction	The task for the CPU to perform.

# Year 8 Computing: The Von Neumann Architecture Model and Fetch-Decode-Execute Cycle



Component	Description
CPU (Central Processing Unit)	
Input and Output Devices	
Control Unit	

Stage	Description
Fetch	
Decode	
Execute	



Key Term	Description
CPU	
Memory	
Instruction	

# Year 8 Computing: Software and the Future of Computing

Software is the set of instructions that directs a computer to perform tasks. It is categorised into system software and application software based on its functions.

Term	Description
Software	Set of instructions that directs the computer.
System Software	Manages and controls computer hardware.
Application Software	Designed for specific tasks and user activities.

## System software

Term	Description	Examples
Operating Systems	Manage hardware and software resources.	Windows, macOS, Linux
Drivers	Enable communication between the operating system and hardware components.	Device drivers for printers, graphics cards, etc.
Utilities	Perform specific tasks to manage the computer, such as disk cleanup and antivirus.	Disk Cleanup, Antivirus software
Boot Loaders	Initialise the operating system during the computer's startup process.	GRUB, LILO (for Linux), NTLDR (for Windows)

## Application software

Software Category	Description	Examples
Productivity Software	Facilitates tasks like word processing and data management.	Microsoft Office, Google Workspace
Design Software	Used for graphic design and 3D modelling.	Adobe Photoshop, Autodesk
Audio and Video Software	Enables media creation and editing.	Audacity (audio), Adobe Premiere (video)

## The future of computing

Technology	Basic Principles/Differences	Potential Uses
Quantum Computing	<ul style="list-style-type: none"> <li>- Leverages quantum mechanics principles.</li> <li>- Exploits quantum superposition and entanglement for parallel processing.</li> <li>- Quantum computers use qubits.</li> </ul>	<ul style="list-style-type: none"> <li>- Performing complex calculations using qubits.</li> <li>- Differing from traditional computing through simultaneous states of qubits.</li> </ul>
DNA Computing	<ul style="list-style-type: none"> <li>- Explores using biological molecules for computation.</li> <li>- Future applications in solving genetics and medical-related issues.</li> </ul>	<ul style="list-style-type: none"> <li>- Solving complex problems in genetics, medicine, and optimization.</li> </ul>
Optical Computing	<ul style="list-style-type: none"> <li>- Utilises light signals for processing.</li> <li>- Offers advantages over traditional electronic computing.</li> </ul>	<ul style="list-style-type: none"> <li>- Faster data transfer and reduced energy consumption compared to electronic computing.</li> </ul>
Nanotechnology	<ul style="list-style-type: none"> <li>- Involves manipulating materials at the nanoscale (very small!).</li> </ul>	<ul style="list-style-type: none"> <li>- Impacts computing with advancements in miniaturization and increased processing power.</li> </ul>
The Metaverse	<ul style="list-style-type: none"> <li>- An immersive virtual shared space through VR technology.</li> </ul>	<ul style="list-style-type: none"> <li>- Users interact with each other and the environment in real-time.</li> </ul>

# Year 8 Computing: Software and the Future of Computing

Software is the set of instructions that directs a computer to perform tasks. It is categorised into system software and application software based on its functions.

Term	Description
Software	Set of instructions that directs the computer.
Application Software	

## System software

Term	Description	Examples
Operating Systems		
Drivers		
Utilities		
Boot Loaders		

## Application software

Software Category	Description	Examples
Productivity Software		
Audio and Video Software		

## The future of computing

Technology	Basic Principles/Differences	Potential Uses
DNA Computing		
Nanotechnology		
The Metaverse		

# Year 8 Computing: Networks and communications and History of Computing

Networks and communication refer to the interconnection of computers and other devices to share resources and information. It's an essential part of modern computing that allows for data transmission and collaborative work.

Category	Description
Computer Network	Interconnected computers for data sharing.
Devices	Hardware
Network Media	The means for data transmission
Data Transmission	Methods and speed for sending data.
Topologies	Ways in which a network is arranged.
Addressing and Protocols	Rules and identifiers for network communication.

Computing Pioneer	Contributions
Charles Babbage	<ul style="list-style-type: none"> <li>- Conceptualised the design for the Analytical Engine, an early mechanical general-purpose computer.</li> <li>- Pioneered the idea of a programmable machine.</li> </ul>
Lady Augusta Ada Lovelace	<ul style="list-style-type: none"> <li>- Recognised as the first computer programmer.</li> <li>- Collaborated with Babbage and wrote detailed notes on the Analytical Engine's operations.</li> </ul>
Alan Turing	<ul style="list-style-type: none"> <li>- Father of modern computer science and artificial intelligence.</li> <li>- Developed the concept of the Turing machine, a theoretical model for computation.</li> </ul>
John Vincent Atanasoff	<ul style="list-style-type: none"> <li>- Built the Atanasoff-Berry Computer (ABC), considered the first electronic digital computer.</li> <li>- Contributed to the development of early computer technologies.</li> </ul>
Howard Aiken	<ul style="list-style-type: none"> <li>- Designed and built the Harvard Mark I, an early electromechanical computer. - Pioneered the development of large-scale automatic digital computers.</li> </ul>
Grace Hopper	<ul style="list-style-type: none"> <li>- Developed the first compiler for a programming language.</li> <li>- Co-developed the COBOL programming language.</li> </ul>
Jack Kilby	<ul style="list-style-type: none"> <li>- Invented the integrated circuit, a crucial development for modern computer technology.</li> <li>- Received the Nobel Prize in Physics for his contributions.</li> </ul>
Bill Gates	<ul style="list-style-type: none"> <li>- Co-founder of Microsoft, a key player in the personal computer revolution.</li> <li>- Contributed to the development of operating systems and software.</li> </ul>
Steve Jobs	<ul style="list-style-type: none"> <li>- Co-founder of Apple Inc., a pioneer in personal computing.</li> <li>- Contributed to the development of iconic products like the Macintosh, iPhone, and iPad.</li> </ul>
Larry Page and Sergey Brin	<ul style="list-style-type: none"> <li>- Co-founders of Google, pioneers in internet search technology.</li> <li>- Contributed to the development of the world's leading search engine and various other technologies.</li> </ul>

## History of computing

Term	Description
LAN	Local Area Network, covers a small geographical area like a home or office.
WAN	Wide Area Network, spans a larger area, potentially global.
Routers	Direct data along the network.
Switches	Filter and forward data to specific devices.
Cables and Wi-Fi	Physical and wireless means for data transmission.
Packet Switching	Data is broken into packets and sent individually.
Bit Rate	Speed of data transmission, often in Mbps.
Star	All devices connect to a central hub.
Mesh	Devices connect to multiple other devices for redundancy.
IP Address	Unique identifier for each device.
HTTP/FTP	Examples of protocols for web browsing and file transfer.
The Internet	A global network of interconnected computers.
World Wide Web	System of interlinked hypertext documents accessed via the internet.

# Year 8 Computing: Networks and communications and History of Computing

Networks and communication refer to the interconnection of computers and other devices to share resources and information. It's an essential part of modern computing that allows for data transmission and collaborative work.

Category	Description
Computer Network	
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Topologies	
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Computing Pioneer	Contributions
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Howard Aiken	
Grace Hopper	
Jack Kilby	
Bill Gates	
Steve Jobs	
Larry Page and Sergey Brin	

## History of computing

Term	Description
LAN	
WAN	
Routers	
	Filter and forward data to specific devices.
	Data is broken into packets and sent individually.
Bit Rate	
Star	
Mesh	
	Unique identifier for each device.
	Examples of protocols for web browsing and file transfer.
The Internet	
World Wide Web	



# Year 8 Computing: Present: Artificial intelligence (AI) and Ethical and Societal Implications of AI

Concept	Definition	Examples
Artificial Intelligence (AI)	Refers to the development of computer systems that can perform tasks requiring human intelligence, such as learning, reasoning, problem-solving, perception, and language understanding.	Virtual assistants (Siri, Alexa), recommendation systems (Netflix, Amazon), autonomous vehicles.
Machine Learning (ML)	A subset of AI that involves the development of algorithms enabling computers to learn from data and improve their performance over time.	Spam filters, facial recognition, personalised content recommendations.



Implication	Description
Impact on Employment	AI can lead to job displacement as automation may replace certain tasks, impacting various industries.
Privacy Concerns	The collection and analysis of vast amounts of personal data for AI applications raise privacy concerns.
Bias in Algorithms	AI systems can inherit biases from training data, leading to unfair outcomes and reinforcing prejudices.
Security Risks	The integration of AI in critical systems introduces new vulnerabilities and potential security risks.
Decision-making Transparency	Understanding and interpreting the decision-making processes of complex AI systems can be challenging.
Social Inequality	Access to AI technologies may widen existing social and economic inequalities if not distributed equitably.
Accountability and Responsibility	Determining responsibility for AI decisions and actions poses challenges, especially in autonomous systems.
Ethical Use of AI	Ensuring that AI is used ethically and does not cause harm to individuals or society at large.

# Year 8 Computing: Present: Artificial intelligence (AI) and Ethical and Societal Implications of AI

Concept	Definition	Examples
Artificial Intelligence (AI)		
Machine Learning (ML)		



Implication	Description
Impact on Employment	
Privacy Concerns	
Security Risks	
Decision-making Transparency	
	Access to AI technologies may widen existing social and economic inequalities if not distributed equitably.
Accountability and Responsibility	
Ethical Use of AI	

# Design and Technology



Helping every person achieve things they never thought they could.



# Year 8 Design and Technology

## Safety Rules in the Workshop

1. Always **listen carefully** to the teacher and follow instructions.

2. **Do not run** in the workshop, you could 'bump' into another pupil and cause an injury

3. Know where the **emergency stop buttons** are positioned in the workshop.

4. Always **wear an apron** as it will protect your clothes and hold loose clothing such as ties in place.

### Design Technology Workshop Safety

- **Never touch** any machinery or equipment unless instructed by staff.



- Always **store bags and blazers under benches** or on hooks, **stools stacked** at the front.



- Always wear an **apron**.



- Always wear **safety glasses** when using machinery.



- **Long hair** must be tied back and **ties** tucked safely into shirt.



- Do not use any machinery unless you have been **instructed** how to use it by **staff**.



- Tell your teacher if you don't know or don't understand **instructions** for safely using equipment.

- **Control dust**, sweep or vacuum from benches directly into a bin.



## Vacuum forming and thermoplastic

Vacuum forming is where a sheet of thermoplastic is heated, stretched over a single surface mould, and forced onto the mould using a vacuum.

It uses a thermoplastic sheet which becomes or mouldable at a high temperature and solidifies upon cooling.

## Producing Design Ideas

- Consider the examples analysed at the start of the lesson
- Think about how were they made, what materials were used, and how they worked.
- Drawings should be in pencil.
- You must add notes (annotate) to explain the design and materials you intend to

## CAD / CAM

Using computers to draw and drive machines is called CAD / CAM or Computer Aided Design and Computer Aided Manufacture.

## CAD Drawing

### Vectorising an image

Doing this to an images changes the way it is drawn so that it is made of lines not pixels. This means the laser cutter can reproduce the image.

## TechSoft Design V3

### Contouring an image:

- Select a simple, stencil-like image from the internet and copy and paste into 2D design.
- Click the Contour tool from the tool menu and select your image.
- In the menu select 'graphical path' and 'outside of image' options then set a distance of 1mm.
- Select the new line created and press Ctrl+E to explode the image.
- Delete any unwanted lines

### Vectorising an image

- Select a simple, stencil-like image from the internet and copy and paste into 2D design.
- Go to 'Bitmaps' and 'Enable Transparency'.
- Go to 'Bitmaps' and click 'Vectorise Bitmap', then click on the image.
- Select 'Monochrome at the top and change the colour to black so that the laser cutter can engrave the design
- Click on the image and then select fill near the top of the screen. Choose no fill and click OK.

# Year 8 Design and Technology

What is meant by the word “annotation”?

List 4 safety rules for using the workshop

What do CAD/CAM stand for?

CAD Drawing- What happens when we vectorise an image?

## TechSoft Design V3

Explain the process of contouring an image in Techsoft 3D Design:

Explain the process of vectorising an image in Techsoft 3D Design:

## Vacuum forming and thermoplastic

Explain the process of **vacuum forming** and given an example of how it can be used.

What is a **thermoplastic**?

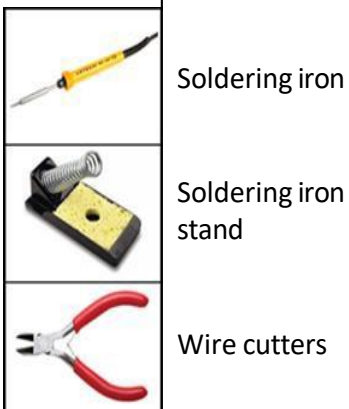
# Year 8 Design and Technology

## Access FM

This is an acronym to help us to analyse a product. The letters stand for:

- Aesthetics
- Cost
- Customer
- Environment/ergonomics
- Safety
- Size
- Function materials/Manufacture

## Electronics Equipment



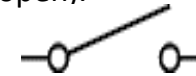
Soldering iron

Soldering iron stand

Wire cutters

## Switch

A switch used to turn a circuit on (closed) and off (open).

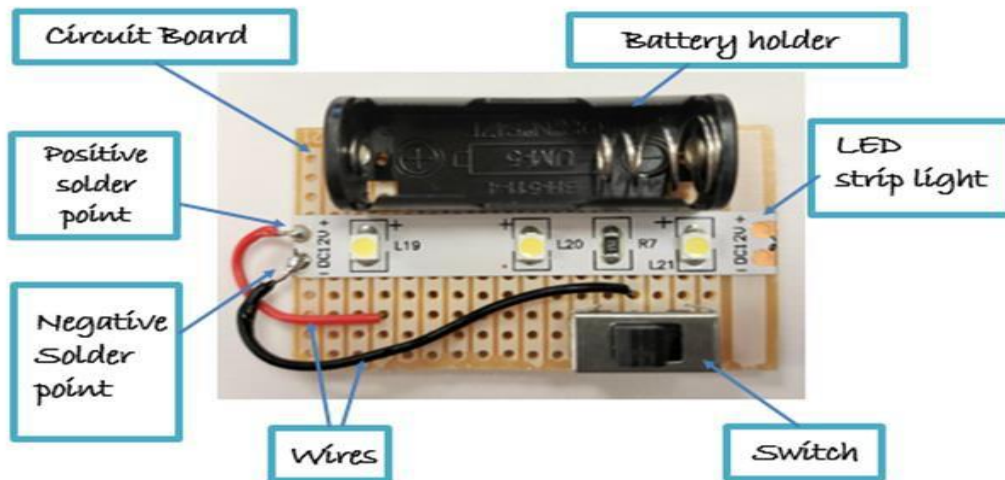


## Resistor

A resistor restricts or limits the flow of electrical current



## Identifying Electronic Components



Lamp/Bulb



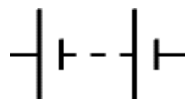
LED Light Emitting Diode



LED strip

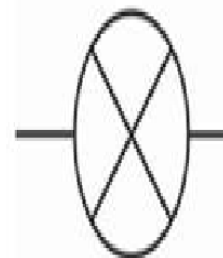
## Cell

Supplies electrical energy. The larger line is positive (+). A single cell is often called a battery, but strictly speaking a battery is two or more cells joined together.



## Battery

Supplies electrical energy. A battery is more than one cell.

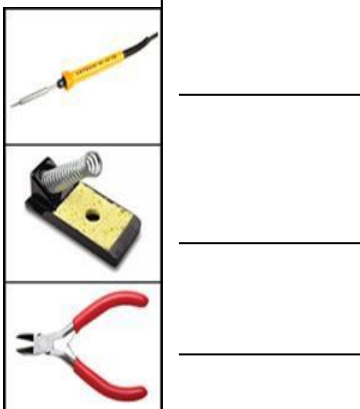


# Year 8 Design and Technology

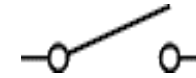
What does Access FM stand for?

A  
C  
C  
E  
S  
S  
F  
M

Electronics Equipment



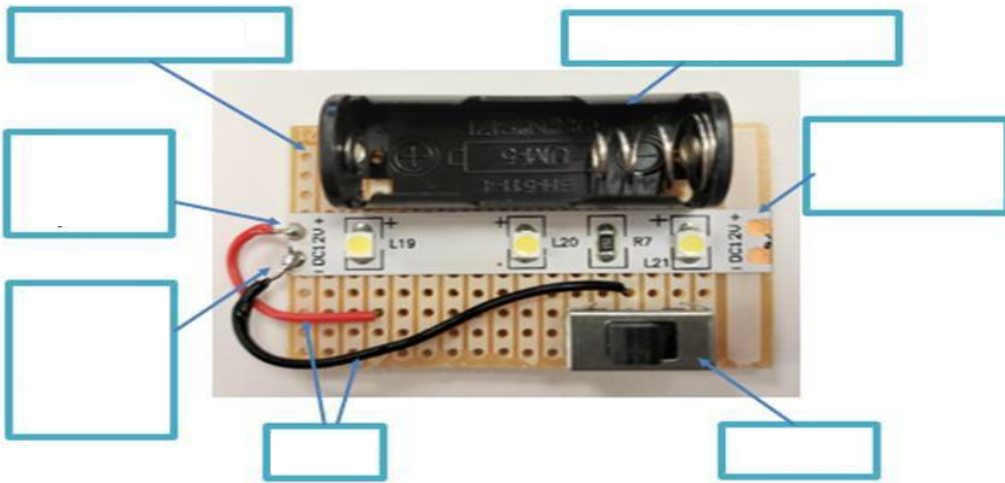
What is a switch used for?



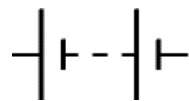
What does a resistor do?



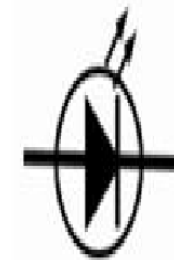
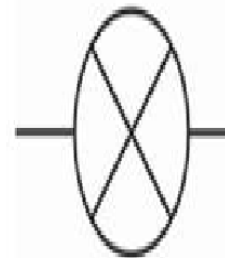
What are the electronic components below?



What does a cell do?



What is a battery?





# Drama



Helping every person achieve things they never thought they could.



<b>Script</b>	A <b>script</b> is a document that comprises <b>setting, characters, dialogue, and stage directions</b> for movies, TV shows, and stage plays.
<b>Playwright</b>	A <b>playwright</b> is responsible for <b>writing</b> a play.
<b>Practitioner</b>	A <b>theatre practitioner</b> is a person or theatre company that <b>creates practical work or theories</b> to do with performance and theatre.
<b>Status</b>	Status refers to the <b>power difference</b> between two characters.
<b>Physical Skills</b>	The way an actor moves to show character. Including: gesture, posture, body language, facial expression, levels.
<b>Naturalism</b>	Acting that is carefully and meticulously rehearsed in order to <b>give the impression of real life</b> – not over the top or melodramatic.
<b>Audience Awareness</b>	This is the actors understanding of what will be <b>seen</b> and understood by the audience. For example; you wouldn't turn your back to the audience as they wouldn't be able to see the action.
<b>Dialogue</b>	Spoken conversation used by two or more characters to express thoughts, feelings, and actions.
<b>Transitions</b>	In Drama, a transition refers to the <b>movement</b> from one scene to another.
<b>Blocking</b>	Blocking is the precise staging (placing) of actors on the stage.
<b>Hot Seating</b>	Hot seating is a Stanislavski technique where someone asks an actor who is playing a character questions to help them understand the character better. The actor has to answer the questions as the character and speak in first person.

## Konstantin Stanislavski 1865- 1938



Stanislavski was a Russian Theatre Practitioner who is considered to be one of the greatest practitioners.

Konstantin Stanislavski was the most influential person in the history of modern acting theory. His experiences as an actor, teacher and stage director drove him to search for a system of techniques an actor could use to consistently deliver **truthful performances**.

A lot of acting before Stanislavski was very over the top- This was called Melodrama.

Stanislavski believed that acting should be **natural**- He wanted actors to play **believable characters**.

He invented numerous techniques to enable actors to act in a very **naturalistic** manner.

## Tips and Tricks to Help You Learn Your Script.

- Read your script like a story first. Make sure it all makes sense to you.
- Walk and Talk! Take your script for a walk and say the lines out loud. This will help to commit them to your memory.
- Work on small sections at a time. Trying to learn it all at once is overwhelming, little by little is the key!
- Tell yourself it is easy to memorise – positive thinking!
- Spend at least 50% of your rehearsal time on the most difficult parts.
- Try and picture the scene. Use your imagination and the imagery you create will help you to perform the scene brilliantly.
- Remember – your memory is better than you think it is! You can do this!



## Stanislavski's method: GIVEN CIRCUMSTANCES

This means the actor needs to think about the **circumstances** that form the setting for an event, statement, or idea, and in terms of which it can be fully understood.

WHO, WHAT, WHEN, WHERE, WHY, HOW??

Script	
Playwright	
Practitioner	
Status	
Physical Skills	
Naturalism	
Audience Awareness	
Dialogue	
Transitions	
Blocking	
Hot Seating	

## Konstantin Stanislavski 1865- 1938



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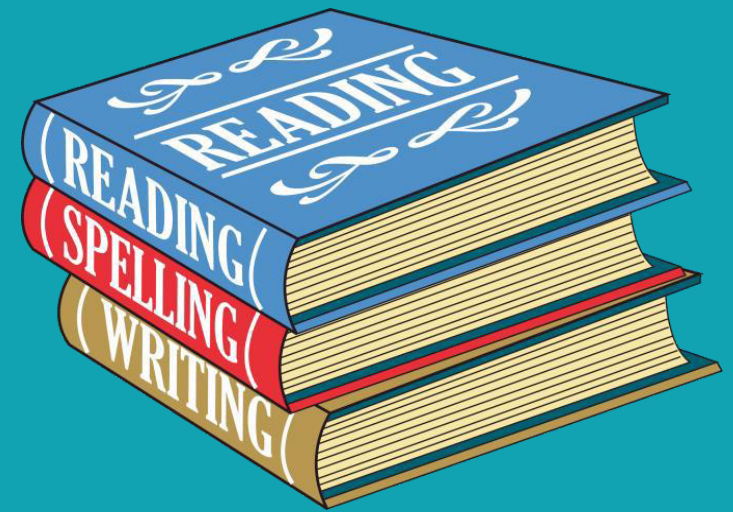


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This means the \_\_\_\_\_ needs to think about the \_\_\_\_\_ that form the setting for an event, statement, or \_\_\_\_\_, and in terms of which it can be fully understood.

WHO, WHAT, WHEN, \_\_\_\_\_, WHY, HOW??

# English



Helping every person achieve things they never thought they could.



**Inferences** are hidden meanings communicated in texts. We can normally make **lots of inferences** from one quotation.

It is not enough to just identify an inference. We must **explain** what we think and why we think it. **Connectives** (as, so, because, which) can help us to explain in detail.

We should make sure our **quotations** are **short** and **selective**. This means we choose 'just the right bit' of evidence.

We should **embed quotations** into our answers. This means we blend them into our writing.

A **motif** is an image, word or idea that is used repeatedly throughout a text.

Foil characters are designed to be the opposite of each other. This is so their traits are more obvious and exaggerated.

## Writing about Literature

- P Point** Answer the question
- E Evidence** Include a quote
- A Analyse** Explain the inferences behind the quote in detail
- Z Zoom** Explain what a powerful word or technique suggests
- E Effect** Explain what the writer wants us to feel or understand
- L Link to Context** Explain how these ideas link to the real world

When we are writing, we can control the **structure** of our text. This means we control...  
 a) **What information we give the reader**  
 b) **The part of the text that we give that information**

When we begin writing, we should **withhold some information from the reader**. This means we should keep some information secret to build curiosity in the reader.

We should also think carefully about which **narrative perspective** we want to story to be told from

Narrative Perspective	Definition
First Person	Told from the speaker's point of view so gives a biased view of events
Third Person Omniscient	Told by an onlooker who knows what characters are thinking
Third Person Limited	Told by an onlooker who doesn't know what characters are thinking

**The Social Class System** refers to the groups of people in society, based on people's jobs and the amount of money they have.

- **Working class** – get paid the lowest wages and have manual jobs.
- **Middle class** – Well educated people who have professional jobs.
- **Upper class** – born into wealth that is inherited from family. Have the most money so may not need to work.



What are inferences?

What must we do when we have identified an inference?  
What words can we use to help us do this?

What do quotations need to be?

What is an embedded quotation?

What is a motif?

What are foil characters?  
Why are they used?

## Writing about Literature

**P** Point \_\_\_\_\_

**E** Evidence \_\_\_\_\_

**A** Analyse \_\_\_\_\_  
\_\_\_\_\_

**Z** Zoom \_\_\_\_\_  
\_\_\_\_\_

**E** Effect \_\_\_\_\_  
\_\_\_\_\_

**L** Link to Context \_\_\_\_\_  
\_\_\_\_\_

What does it mean to control the structure of our text?  
a)  
b)

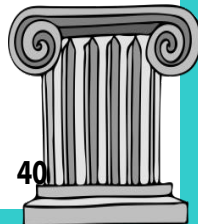
What does it mean to withhold information?

We should also think carefully about which narrative perspective we want to story to be told from

Narrative Perspective	Definition
First Person	
Third Person Omniscient	
Third Person Limited	



What is the social class system?  
Who is in the working class?  
Who is in the middle class?  
Who is in the upper class?





Vocabulary	Definition	Example
1. Superstition	When someone believes in something magical or mysterious that isn't based on science or evidence	<i>The belief that placing shoes on the table is bad luck is a superstition..</i>
2. Privilege	Having more advantages or benefits than other people based on who you are or where you come from	<i>Mrs Lyons' middle class status gives her privilege..</i>
3. Discrimination	Treating someone unfairly based on race, religion, gender, age, disability etc.	<i>Mickey suffers discrimination at school as he is working class</i>
4. Inequality	Unfairness between people, where some people have more advantages and opportunities than others	<i>The social class system creates inequality in Britain.</i>
5. Debt	Borrowing money or goods from a person or business, with the agreement that you will pay them back later	<i>Mrs Johnstone is used to living her life in debt.</i>
6. Nurture	To care for something or someone so that it grows and develops to be healthy and happy	<i>Mrs Johnstone does her best to nurture her children, even though she is in poverty.</i>
7. Manipulate	When a person controls or influences another person by pressure or trickery	<i>Mrs Lyons manipulates Mrs Johnstone.</i>
8. Stage Direction	The instructions given to the actors in the play	<i>Russell uses stage directions to suggest the tone actors should speak in.</i>
9. Musical	A play with songs and music.	<i>Blood Brothers is a musical, written by Willy Russell.</i>
10. Monologue	A long speech given by one character in a play, either talking to themselves or the audience	<i>Mickey's monologue is designed to make the audience laugh.</i>

## Grammar

### 11. Root word

The most basic part of a word that can be added to, to make new words.  
*Big – bigger, biggest*

### 12. Prefix

A group of letters added to the beginning of a word to create a new meaning  
*Microscope, microwave*

### 13. Suffix

A group of letters added to the end of a word to create a new meaning  
*Laughed, smiled, tried*

### 14. Word family

Group of words that all have the same root word  
*Writer, written, rewrite, writing.*

### 15. Compound word

Two root words blended together to make a new word  
*Basketball, starfish*

## Punctuation

### 17. ? Question Mark

Used to indicate a question.

*"Linda, do you think I am really stupid?"*

### 18. ! Exclamation Mark

Used to show something forceful, surprising, exaggerated or humorous

*"Mickey! No!"*

### 19. " " Speech Marks

Indicate a character's spoken words

*"I read it in the dictionary," said Edward..*

Vocabulary	Definition	Example
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2. Privilege		<i>Mrs Lyons' middle class status gives her privilege..</i>
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*Microscope, microwave*

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*Basketball, starfish*

## Punctuation



### 17. ? Question Mark

\_\_\_\_\_

*"Linda, do you think I am really stupid?"*

### 18. ! Exclamation Mark

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*"Mickey! No!"*



### 19. " " Speech Marks

\_\_\_\_\_

\_\_\_\_\_

*"I read it in the dictionary," said Edward..*



# Geography



**Helping every person achieve things they never thought they could.**



## Key Vocabulary:

1	<b>Quality of life</b>	A subjective term (opinion) that can measure happiness.
2	<b>Standard of living</b>	refers to the level of wealth, comfort, material goods and necessities available to a certain class or geographic area.
3	<b>Human Development Index (HDI)</b>	A statistic used to measure the development of a country using three measures: life expectancy, education and GNI per capita
4	<b>International Aid</b>	Assistance given to one country from another
5	<b>Birth rate</b>	<b>The number of babies born, per 1000 population per year</b>
6	<b>Death rate</b>	The number of people that die, per 1000 population per year
7	<b>Infant mortality rate</b>	The number of babies that are born alive but die before the age of 1, per 1000 births per year.
8	<b>Landlocked</b>	A country or region entirely surrounded by land
9	<b>Development</b>	Development is a process of change that affects peoples' lives
10	<b>Corruption</b>	The abuse of trusted power for private gain
11	<b>Poverty</b>	Not having enough money or access to resources to enjoy a decent standard of living.
12	<b>Inequality</b>	The idea that different people experience different standards of living

## Measuring Development:

13	<b>Social indicators</b>	<b>Economic indicators</b>
	<ul style="list-style-type: none"> <li>• Birth rate</li> <li>• Death rate</li> <li>• Adult literacy</li> <li>• Doctors per 1000 people</li> <li>• Life expectancy</li> </ul>	<ul style="list-style-type: none"> <li>• GNP per capita</li> <li>• Economic growth</li> <li>• Gross national product</li> </ul>


## Causes of uneven development:

14	Name a physical factor which limits development	Landlocked countries find it hard to develop as they cannot import and export good via boat, this is the cheapest way of transporting goods to trade, without trade countries find it hard to develop.
15	Name a political factor which limits development	Countries with high level of corruption find it hard to develop. This is because aid given to help those in need is kept by the government and not passed onto its people.
16	Name an historical factor which limits development	Colonialism, countries which have gained back control following historical invasion, such as India, find it hard to develop as they are often left with nothing following on from independence.
17	Name an economic factor which limits development	When you live in poverty it often leads to more poverty. This cycle of poverty is called the negative multiplier effect. (no job=no money=poor quality of life)

## Development projects and foreign aid:

18	Why is foreign aid not always a positive thing?	<p>There's a mosquito net maker in Africa. He manufactures around 500 nets a week. He employs 10 people, who each have to support upwards of 15 relatives. However hard they work; they cannot make enough nets to combat the malaria-carrying mosquito.</p> <p>Enter a Hollywood movie star who rallies the masses, and goads Western governments to collect and send 100,000 mosquito nets to the affected region, at a cost of \$1 million, the nets arrive, the nets are distributed and a good deed is done.</p> <p>With the market flooded with foreign nets, however, our mosquito net maker is promptly out of business. His ten workers can no longer support their dependents.</p>
----	---	--

## Nigeria and The DRC:

19	<p>Explain the distribution of wealth in Nigeria</p> 	<p>Most of the wealth is located in the south of Nigeria. This is because of the oil. And opens up international trade routes.</p> <p>An example of this is the wealth in the Delta district.</p> <p>The poor areas are to the north and north east of Nigeria. These area experience extreme poverty.</p>
----	---	--

## Sustainable development:

20	What are sustainable development goals?	<p>Sustainable Development Goals (SDGs) are a set of 17 goals that the United Nations (UN) established to make the world a better place. These goals aim to end poverty, protect the planet, and ensure that all people have a chance to live a happy and healthy life.</p>
----	---	---

## Key Vocabulary:

1	Quality of life	
2	Standard of living	
3	Human Development Index (HDI)	
4	International Aid	
5	Birth rate	
6	Death rate	
7	Infant mortality rate	
8	Landlocked	
9	Development	
10	Corruption	
11	Poverty	
12	Inequality	

## Measuring Development:

	<u>Social indicators</u>	<u>Economic indicators</u>
13		

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## Development projects and foreign aid:

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## Nigeria and The DRC:

19	Explain the distribution of wealth in Nigeria	
----	---	--

## Sustainable development:

20	What are sustainable development goals?	46
----	---	----

## Key Vocabulary

1	<b>What is a volcano?</b>	A vent at the surface of the earth, through which magma and other volcanic materials are ejected
2	<b>Define 'Immediate responses'</b>	The reaction of people as the disaster happens and in the immediate aftermath
3	<b>Define 'Long-term responses'</b>	Later reactions that occur in the weeks, months and years after the event
4	<b>Define 'Monitoring'</b>	Recording physical changes to help forecast when and where a natural hazard might strike
5	<b>Define 'Planning'</b>	Actions taken to respond to, and recover from, natural disasters
6	<b>Define 'Prediction'</b>	Attempts to forecast when and where a natural hazard will strike
7	<b>What is a 'Primary effects'?</b>	The initial impact of a natural event on people and property
8	<b>Define 'Protection'</b>	Actions taken before a hazard strikes to reduce its impact
9	<b>What is a 'Secondary effect'?</b>	The after-effects that occur as indirect impacts of a natural event
10	<b>What is 'Subduction'?</b>	A process occurring at destructive plate margins where a heavier oceanic plate is forced under a continental plate
11	<b>What is a 'Tectonic hazard'?</b>	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"> <li>• Conservative: plates move past each other</li> <li>• Destructive: plates move towards each other and one is subducted</li> <li>• Constructive: plates move away from each other</li> </ul>
	<ul style="list-style-type: none"> <li>• Conservative</li> <li>• Destructive:</li> <li>• Constructive:</li> </ul>	

## Plate Tectonics Theory:

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

## Types of volcanoes

### Volcano case study: Tonga

17	<b>Describe the location of Tonga</b>	Tonga is in the southern hemisphere. It is located in the Australian continent in the southern part of the Pacific Ocean. It is located to the west of Australia and north of New Zealand.
		

### Describe the characteristics of shield volcanoes and composite volcanoes



18	<b>Shield Volcano</b>	<ul style="list-style-type: none"> <li>• Very little explosive activity</li> <li>• Runny lava</li> <li>• Gentle, sloping sides</li> <li>• Lava travels long distances before it cools</li> </ul>
	<b>Composite Volcano</b>	<ul style="list-style-type: none"> <li>• Violent eruptions</li> <li>• Steep sides</li> <li>• Sticky lava which doesn't travel far</li> <li>• Alternate layers of ash and lava, also known as stratovolcanoes</li> </ul>

## Management of Tectonic Hazards:

19	How do people plan for tectonic hazards?	Hazard maps showing areas at risk
20	How do people predict tectonic hazards?	Measuring sulfur from volcano Seismometers measure vibrations
21	How can buildings be protected from tectonic hazards?	Earth embankments divert lava Earthquake resistant buildings

## Living with risk:

22	What kind of energy can be generated by volcanoes?	Geothermal energy to power homes and industry
23	What might attract tourists to risky areas?	Dramatic scenery attracts tourists
34	How is volcanic ash useful?	Lava and ash deposits provide valuable nutrients for soil

## Key Vocabulary

1	What is a volcano?	
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'?	
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## Plate Tectonics Theory:

13	Name the four layers of the earth	
14	What are the pieces of crust called?	
15	Where do convection currents happen?	
16	What do convection currents cause?	

## Volcano case study: Tonga

17	Describe the location of Tonga  	
----	--	--

## Types of volcanoes

18	Describe the characteristics of shield volcanoes and composite volcanoes  	
	Shield Volcano	Composite Volcano

## Management of Tectonic Hazards:

19	How do people plan for tectonic hazards?	
20	How do people predict tectonic hazards?	
21	How can buildings be protected from tectonic hazards?	

## Living with risk:

22	What kind of energy can be generated by volcanoes?	
23	What might attract tourists to risky areas?	
34	How is volcanic ash useful?	



# History



Helping every person achieve things they never thought they could.



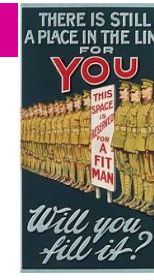
# Year 8 History: Causes and events of World War One



The assassination Franz Ferdinand (heir to the throne of Austria-Hungary). This triggers a domino effect of the alliance systems declaring war.

## 1914-1918

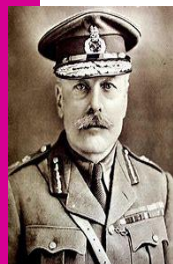
Propaganda- to influence or persuade.



WW1 was trench warfare, soldiers lived in the trenches.



The Battle of the Somme one the first day of conflict saw 20,000 killed and 40,000 wounded.



Sir Douglas Haig is held responsible for the huge loss of lives on the first day of the battle of the Somme.

The term "lions led by donkeys" refers to the poor military decisions that were made on the day.

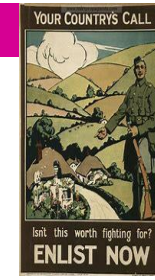
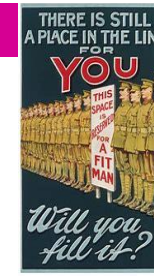
	Question	Answer
1	What is excessive devotion and loyalty to your country called?	Nationalism
2	Which countries were in the Triple Entente alliance?	Britain, France, Russia
3	What happened in Sarajevo on 28 June, 1914?	Archduke Franz Ferdinand was assassinated.
4	What was conscription?	Men were forced to join the armed forces.
5	What is propaganda?	The spreading of information, sometimes misleading, in order to influence the public.
6	Where did 1.4 million of Britain's soldiers come from?	India
7	Who was Walter Tull?	A professional footballer who became Britain's first black army officer.
8	What are conscientious objectors?	People who refuse to serve in the armed forces or bear arms on moral or religious grounds.
9	What did munitionettes do?	Work in dangerous factories making bullets and shells.
10	Where did most British soldiers fight in World War I?	The Western Front
11	What condition resulted from feet being wet for too long?	Trench foot.
12	What was no-man's land?	The area that separated opposing armies' trenches
13	How many were killed on the first day of the Battle of the Somme?	More than 19,000
14	Which three countries fought in the Battle of the Somme?	Britain, France and Germany.
15	Who led the British forces and was nicknamed "The Butcher" by some?	Field Marshall Douglas Haig
16	What happened to Russia in November 1917?	Russia had a revolution
17	How did America's entry to World War I help the allies win?	It provided more troops, arms, tanks, ships, fuel and food
18	Why did British Prime Minister Lloyd George not want to see Germany punished too harshly?	Wanted Britain to be able to trade with Germany
19	How much did Germany have to repay as reparations (compensation)?	£6.6 billion
20	What was the War Guilt Clause?	Germany had to accept blame for the war

# Year 8 History: Causes and events of World War One



The assassination \_\_\_\_\_ Ferdinand (heir to the throne of \_\_\_\_\_ - Hungary). This triggers a domino effect of the alliance systems declaring \_\_\_\_

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# Year 8 History: The rise of the Nazi Party



After the Armistice was signed to end WW1. The Big Three met at the **Palace of Versailles in France** to decide how to punish Germany after the war.



**29th October 1929** the stock market collapsed.

Unemployment rose in Germany following the Wall Street Crash, the Nazis used the slogan '**work and bread**' to gain support.



Question	Answer
Who were the Big Three?	Clemenceau (France), Wilson (USA) and Lloyd George (Britain)
Why was Clemenceau under great pressure?	France had suffered the most during the war
Why did Lloyd George not want to see Germany punished too harshly?	Wanted Britain to be able to trade with Germany
How much did Germany have to repay as reparations (compensation)	£6.6 billion
What was the War Guilt Clause?	Germany had to accept blame for the war
Why was the Wall Street Crash significant for Germany?	Germany had to repay loans to American banks
Give an example of how the Nazis used propaganda	Use of radio, posters, newspapers, rallies, film
Why was communism becoming popular in Germany?	The Weimar government was failing to reduce unemployment
How did the Nazi Party attract new members	Smart uniform and made them feel they were important
Who did the Nazis blame for the problems in Germany?	Jews, politicians and wealthy business owners

# Year 8 History: The rise of the Nazi Party



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# Year 8 History: The Holocaust

Question	Answer
Which infamous event on 9th/10th November 1938 marked a major turning point for Jews in Nazi Germany?	Kristallnacht ("The Night of Broken Glass")
Name TWO things that Jewish people experienced on Kristallnacht.	Jewish synagogues were burned down, Jewish businesses were attacked and looted, at least 91 Jewish people were killed, thirty thousand Jewish men arrested and sent to camps.
What is the name for a walled-off section of a city that certain people are forced to live in	Ghetto
In 1942, the Nazis began "Operation Reinhard" - what was it?	The deportation of Jews from ghettos to death camps
Which two camps experienced Jewish uprisings?	Sobibor and Treblinka
How could Jewish people in camps resist the Nazis without using violence? (name two)	Hide and escape, worship in secret (this was banned), work slowly, smuggle evidence of what was happening out of the camps
How did Jewish people resist violently?	Attack German soldiers, blow up railway lines, bomb offices where records were kept
Which city in Poland had the largest Jewish ghetto?	Warsaw
Which plan was created by leading Nazis at the Wannsee Conference?	"The Final Solution"
What was the main role of the SS in Nazi-controlled areas like Poland?	To find Jews, round them up and kill them.
Please provide the name of one of the Nazi death camps (not a concentration camp).	Auschwitz (Auschwitz-Birkenau), Treblinka, Sobibor, Belzec, Majdanek, Chelmno
The Nazis made many prisoners move from camp to camp by foot toward the end of World War 2. What were these brutal journeys called?	Death Marches
Which German city were many leading Nazis put on trial?	Nuremberg
Why did the Allies choose to host the trials in Nuremberg?	The Nazis held many rallies there. It was a symbolic place for Nazis. It was designed by Albert Speer, a leading Nazi
Name one of the four charges that Nazis could be accused of at Nuremberg.	War crimes (eg. Abusing prisoners), crimes against humanity (genocide), crimes against peace, conspiracy to commit either of the other three crimes



# Year 8 History: The Holocaust

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# Year 8 History: Events of World War Two

Question	Answer
What does Blitzkrieg mean?	Lightning war
What led to Britain and France declaring war on Germany?	Germany invaded Poland
What was the phoney war?	The period at the start of WWII with little fighting
Which countries had Germany invaded by Spring 1940?	Denmark, Norway, the Netherlands, Belgium, Poland
Why was 1940 frightening for the people of Britain?	Threat of invasion
Which countries did Germany invade in May 1940?	France, Belgium, Netherlands and Luxembourg
What was meant by the German term 'blitzkrieg?'	A quick and surprising attack using tanks and aircraft
Where did British and French troops retreat to?	The beaches at Dunkirk in Northern France
What was Operation Dynamo?	The plan to evacuate all troops by ship
Why was the evacuation from Dunkirk seen as victory in Britain?	It saved lives and raised morale back home
What was the Luftwaffe?	German Airforce
What was a major weakness of the German planes?	The planes had limited fuel



# Year 8 History: Events of World War Two

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What was a major weakness of the German planes?	



# Year 8 History: Events of World War Two



Question	Answer
How did Britain increase the number of planes with limited money?	Recycled old planes and used metal from pots and pans
Why was Britain able to supply a lot of pilots?	They recruited from the British empire and Eastern Europe
How were the British warned about German attacks?	Through the use of radar from ground teams
What was the Blitz?	German bombing campaign against Britain
When did the Blitz occur?	September 1940 to May 1941
Why were those living near the docks in more danger?	More likely to be killed as docks were a main target
Who supervised the blackouts?	Air Raid Precaution (ARP) wardens
Whereabouts in France did the Allied troops attack?	Normandy
What code names were used for the beaches attacked by the Allies?	Omaha, Utah, Gold, Sword and Juno
What was D-Day's codename?	Operation Overlord
How many ships were used in the D-day landings	Over 5,000
How many troops landed on the D-Day beaches?	Over 150,000
What were the code names for the two American atom bombs?	Little Boy and Fat man
Where did America drop two atom bombs?	Hiroshima and Nagasaki
Why did America say it dropped the atom bombs?	To save American lives and end the war.
Why do some historians argue dropping the atom bomb was unnecessary?	Around 214,000 people were killed, the Japanese were already preparing to surrender.
Which conflict do historians believe the dropping of the bomb started?	The Cold War

# Year 8 History: Events of World War Two



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# Life Chances



**Helping every person achieve things they never thought they could.**

**Little River School**  
be kind | work hard | take responsibility



## What is Good Health?

Good health is a state of complete physical, mental and social wellbeing. This means eating a balanced diet, getting regular exercise, avoiding tobacco and drugs, drinking in moderation and getting plenty of rest.

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## The benefits of a balanced diet are:

A strong immune system to prevent and fight infections

A lower risk of certain types of cancer

Lower blood pressure

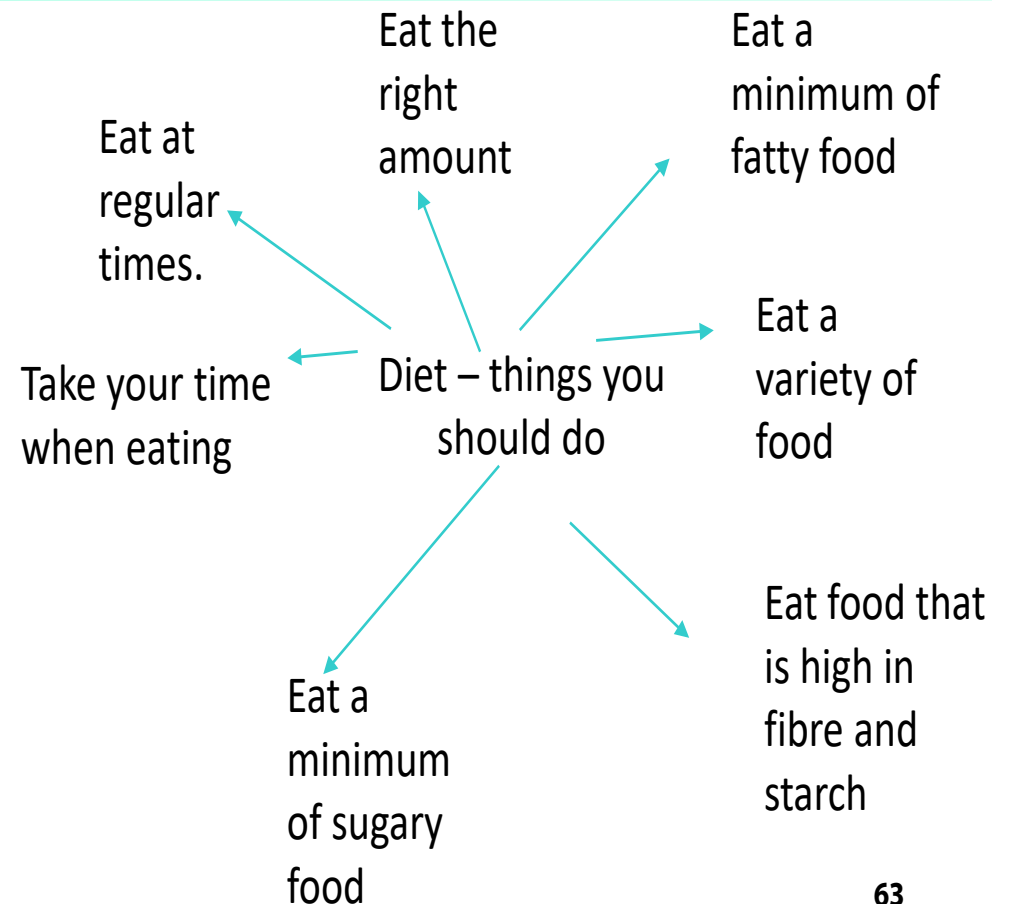
A healthy weight

More energy

Essential nutrients to support growth tissue

## Physical Health – Diet

Our bodies are like machines that require a balance of protein, carbohydrates, fat, vitamins, minerals and water to stay in good working order. A balanced diet means eating only so much as you expend in exercise. Any excess will be stored as fat if you eat more than you burn off.



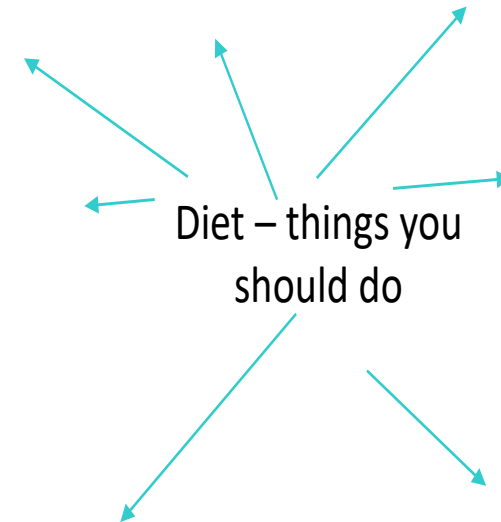
## What is Good Health?

Good health is a state of complete physical, mental and social \_\_\_\_\_. This means eating a balanced \_\_\_\_\_, getting regular \_\_\_\_\_, avoiding \_\_\_\_\_ and drugs, drinking in moderation and getting plenty of \_\_\_\_\_. This means eating a balanced diet, getting regular \_\_\_\_\_, avoiding tobacco and \_\_\_\_\_ and getting plenty of rest.

## The benefits of a balanced diet are:


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## Poor diet

Many people do not buy or prepare fresh food due to our busy lifestyles and cost. Often people are short of time and cheap, highly processed, convenience food is always available.



## Convenience food and its negative impact on our health:

Junk food, like crisps and chocolate is **high** in calories but **low** in nutritional value.

Fast food, such as hamburgers and fried chicken, is prepared and served quickly but is **high** in fat.

Convenience food, for example, microwave 'ready meals' often have too much salt and sugar.

## Personal Health Exercise

### The benefits of exercise are:

Your body finds it easier to deal with threats such as sickness, injury or the occasional sugary or fatty snack if you are active.

Exercise also helps you maintain a healthy attitude to problems and mental pressures. You gain less body fat, tire less easily and you look and feel better.

Exercise gives you greater flexibility and strength, prevents boredom and helps you sleep.

It also helps you find new friends and learn new skills<sup>65</sup>

## Poor diet

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**Convenience food and its negative impact on our health:**

**Personal Health Exercise**

**The benefits of exercise are:**







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### Vaccinations

#### Why are vaccinations important?

A simple injection can protect you from some major health problems. Vaccinations can protect you from diseases that once caused millions of deaths such as diphtheria, tetanus, measles, mumps, polio, meningitis and covid. Scientist had to develop new vaccines when the Covid-19 pandemic broke out in 2020 and these played a large role in fighting the disease.



#### Are Vaccinations Safe?

Getting a vaccination is much safer than catching the disease it prevents. A vaccination may cause **side-effects**, like any medicine, which may include soreness, redness and swelling in the area of the shot. Some people may experience a minor fever.

## Vaccinations

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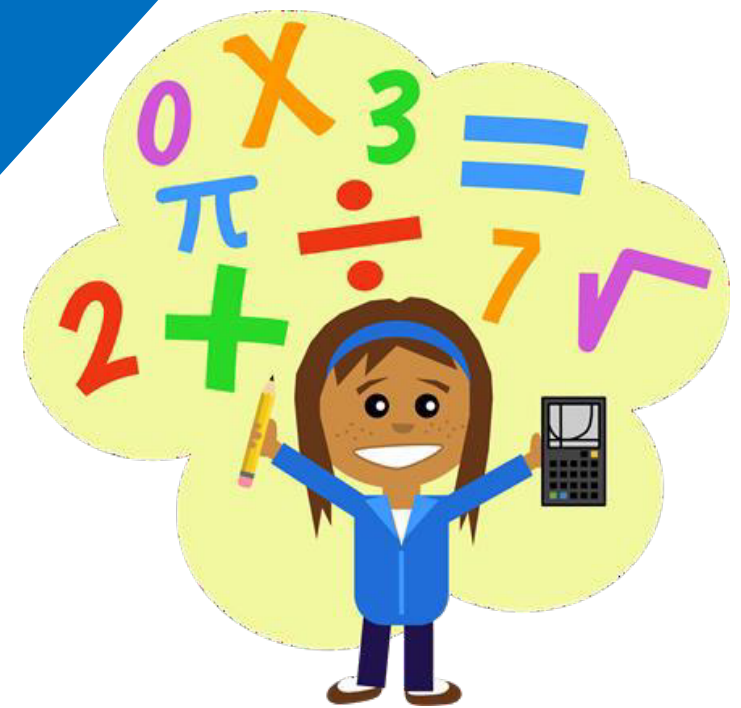


### Are Vaccinations Safe?

Getting a vaccination is much safer than \_\_\_\_\_ .

What are the possible side effects of a vaccine?

# Maths



Helping every person achieve things they never thought they could.



	Key Skill	Thinking Point	WAGOLL								
1	Construct a stem and leaf diagram from a list of numbers	<ul style="list-style-type: none"> <li>Partition each value into a stem and a leaf, e.g. 132 could be 13 2, and 16.8 could be 16 8</li> <li>Ensure your data is in ascending order</li> <li>Include a key as part of your diagram</li> </ul>	Construct a stem and leaf diagram for the following data 35, 50, 38, 44, 53, 41, 39, 45, 48, 55, 44 <table border="1" style="float: right; margin-top: 10px;"> <thead> <tr> <th>Stem</th> <th>Leaf</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>5 8 9</td> </tr> <tr> <td>4</td> <td>1 4 4 5 8</td> </tr> <tr> <td>5</td> <td>0 3 5</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 10px;">KEY: 3 5 = 35</p>	Stem	Leaf	3	5 8 9	4	1 4 4 5 8	5	0 3 5
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2	Calculate averages from a stem and leaf diagram	<ul style="list-style-type: none"> <li>Mean – the total shared equally</li> <li>Median – the middle value when in order</li> <li>Mode – the most common value</li> </ul>	<table border="1" style="float: left; margin-right: 20px;"> <thead> <tr> <th>Stem</th> <th>Leaf</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>5 8 9</td> </tr> <tr> <td>4</td> <td>1 4 4 5 8</td> </tr> <tr> <td>5</td> <td>0 3 5</td> </tr> </tbody> </table> <p>Mean = <math>(35+38+39+41+44+44+45+48+50+53+55) \div 11</math>            = <b><u>44.73</u></b> (2dp)</p> <p>Median = <math>(11+1) \div 2 = 6^{\text{th}}</math> value            6<sup>th</sup> value = <b><u>44</u></b></p> <p>Mode = <b><u>44</u></b></p>	Stem	Leaf	3	5 8 9	4	1 4 4 5 8	5	0 3 5
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Key Vocabulary	Definition
Discrete Data	Data that can only take certain values, e.g. number of pets, shoe size
Continuous Data	Data that can take any value, e.g. height, time taken to run 100 metres
Average	A number expressing a central or typical value of a set of data. Mean, Median and Mode are 3 different types of average
Spread	A measure of how much a set of data varies from the central value.

	Key Skill	Thinking Point	Practice
1	Construct a stem and leaf diagram from a list of numbers	<ul style="list-style-type: none"> <li>The data in your stem and leaf diagram should be in _____ order.</li> <li>Your stem and leaf diagram must include a _____.</li> </ul>	<p>Draw an ordered stem and leaf diagram for the following data sets</p> <p>a) 18, 42, 5, 28, 33, 9, 15, 38, 32, 9, 11, 24, 40, 29, 24</p> <p>b) 153, 144, 148, 140, 149, 145, 144, 142, 158, 135, 140, 139, 160</p>
2	Calculate averages from a stem and leaf diagram	<ul style="list-style-type: none"> <li>What is the mean?</li> <li>What is the median?</li> <li>What is the mode?</li> </ul>	Calculate mean, median and mode for the sets of data above

Key Vocabulary	Complete the definitions
Discrete Data	
Continuous Data	
Average	
Spread	



	Key Skill	Thinking Point	WAGOLL
1	Evaluating Indices	<ul style="list-style-type: none"> <li>The <i>index</i> (power) explains how many times to use the <i>base</i> in a multiplication</li> </ul>	$3^4 = 3 \times 3 \times 3 \times 3$ $= 81$
2	Evaluating Square Roots	<ul style="list-style-type: none"> <li>The square root of a number is a value that, when multiplied by itself, gives that number</li> </ul>	$\sqrt{64} = 8 \text{ or } -8$
3	Simplifying using Index Laws	<ul style="list-style-type: none"> <li>When multiplying terms with the same base, add the powers.</li> <li>When dividing terms with the same base, subtract the powers</li> <li>When raising a power to another power, multiply the powers.</li> </ul>	$4^5 \times 4^7 = 4^{5+7} = 4^{11}$ $6^9 \div 6^2 = 6^{9-2} = 6^7$ $(9^2)^4 = 9^8$

Key Vocabulary	Definition
Index	The index of a number says how many times to use the number in a multiplication.
Base	The number that gets multiplied when using an exponent. E.g. in $8^2$ , 8 is the base

	Key Skill	Thinking Point	Practise
1	Evaluating Indices	The <i>index</i> (power) explains how many times to use the <i>base</i> in a _____	(a) $10^2$ (b) $3^3$ (c) $2^6$ (d) $5^3$
2	Evaluating Square Roots	The square root of a number is a value that, when _____ by itself, gives that number	(a) $\sqrt{9}$ (b) $\sqrt{25}$ (c) $\sqrt{100}$ (d) $\sqrt{4}$ (e) $\sqrt{36}$ (f) $\sqrt{64}$
3	Simplifying using Index Laws	<ul style="list-style-type: none"> <li>When multiplying terms we must _____ the powers</li> <li>When dividing terms we must _____ the powers</li> </ul>	Simplify a) $2^6 \times 2$ b) $5^{45} \div 5^5$ c) $(8^7)^3$

Key Vocabulary	Complete the definitions
Index	
Base	

	Key Skill	Thinking Point	WAGOLL
1	Continuation of a sequence	<ul style="list-style-type: none"> <li>Identify the <i>term to term rule</i> and use it to continue the sequence</li> </ul>	6, 13, 20, 27, ..., .... Term to term rule is +7 $27 + 7 = \mathbf{34}$ $34 + 7 = \mathbf{41}$
2	Generate a sequence	<ul style="list-style-type: none"> <li>We can generate the first 5 terms by <i>substituting</i> the numbers 1 to 5 into the <math>n^{\text{th}}</math> term</li> <li>We can generate any given term of a sequence by substituting the position number into the <math>n^{\text{th}}</math> term</li> <li>Remember to follow our order of operations</li> </ul>	Generate the first 5 terms and the 10 <sup>th</sup> term of $5n - 8$ 1 <sup>st</sup> term; $5 \times 1 - 8 = -3$ 2 <sup>nd</sup> term; $5 \times 2 - 8 = 2$ 3 <sup>rd</sup> term; $5 \times 3 - 8 = 7$ 4 <sup>th</sup> term; $5 \times 4 - 8 = 12$ 5 <sup>th</sup> term; $5 \times 5 - 8 = 17$  10 <sup>th</sup> term; $5 \times 10 - 8 = 42$
3	Find the $n^{\text{th}}$ term of an arithmetic sequence	<ul style="list-style-type: none"> <li>Identify the term to term rule, and link it to a times-table.</li> <li>Identify the adjustment needed to get the required starting term</li> </ul>	6, 10, 14, 18.... Term to term rule is +4, so 4 times table 4 times-table is $4n$ , but this starts at 4. To change the starting position from 4 to 6 we must add 2  <u><math>4n + 2</math></u>

Key Vocabulary	Definition
Arithmetic Sequence	A sequence which ascends or descends with the same difference between each term
Geometric Sequence	A sequence made by multiplying (or dividing) by the same value each time.
Fibonacci Sequence	A sequence in which each number equals the sum of the two numbers before it.

	Key Skill	Thinking Point	Practise
1	Continuation of a sequence	<ul style="list-style-type: none"> <li>We must identify the _____ - ____ - _____ rule</li> </ul>	Find the next 2 terms of each sequence a) 20, 19, 18, 17, ... b) 5, 10, 20, 40, ... c) 10, 14, 18, 22, ...
2	Generate a sequence	<ul style="list-style-type: none"> <li>We can generate the first 5 terms by _____ the numbers 1 to 5 into the <math>n^{\text{th}}</math> term</li> </ul>	Generate the first 5 terms and the 10 <sup>th</sup> term of each sequence a) $5n + 3$ b) $2n + 9$ c) $3n - 2$
3	Find the $n^{\text{th}}$ term of an arithmetic sequence	<ul style="list-style-type: none"> <li>Identify the _____ - _____ that a sequence is linked to.</li> </ul>	Find the $n^{\text{th}}$ term of each sequence a) 11, 31, 51, 71, ... .. b) 20, 23, 26, 29, ... .. c) 1, 7, 13, 19, ... ..

Key Vocabulary	Complete the definitions
Arithmetic Sequence	
Geometric Sequence	
Fibonacci Sequence	

	Key Skill	Thinking Point	WAGOLL													
1	Expand a single bracket	<ul style="list-style-type: none"> <li>Multiply every term inside the bracket by the term outside the bracket</li> <li>Grid method will help you</li> </ul>	Expand $3(x + 2)$ $= \underline{3x + 6}$ <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td>x</td> <td>+2</td> </tr> <tr> <td>3</td> <td>3x</td> <td>+6</td> </tr> </table>	x	x	+2	3	3x	+6	Expand $4x(3x - 1)$ $= \underline{12x^2 - 4x}$ <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td>3x</td> <td>-1</td> </tr> <tr> <td>4x</td> <td>12x<sup>2</sup></td> <td>-4x</td> </tr> </table>	x	3x	-1	4x	12x <sup>2</sup>	-4x
x	x	+2														
3	3x	+6														
x	3x	-1														
4x	12x <sup>2</sup>	-4x														
2	Expand and simplify	<ul style="list-style-type: none"> <li>Expand each bracket</li> <li>Collect any like terms to simplify</li> </ul>	$3(x + 7) - 2(3x - 4)$ $3x + 21 - 6x + 8$ $= \underline{-3x + 29}$ <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td>x</td> <td>+7</td> </tr> <tr> <td>3</td> <td>3x</td> <td>+21</td> </tr> </table> <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td>3x</td> <td>-4</td> </tr> <tr> <td>-2</td> <td>-6x</td> <td>+8</td> </tr> </table>		x	x	+7	3	3x	+21	x	3x	-4	-2	-6x	+8
x	x	+7														
3	3x	+21														
x	3x	-4														
-2	-6x	+8														
3	Factorise an expression	<ul style="list-style-type: none"> <li>Find the highest common factor (HCF) of all terms. This belongs outside the bracket.</li> <li>Use reverse grid method to find what goes in the bracket</li> </ul>	Factorise fully $4x + 18$ HCF of $4x$ and $18$ is $2$ <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td>2x</td> <td>+9</td> </tr> <tr> <td>2</td> <td>4x</td> <td>+18</td> </tr> </table> $\underline{2(2x + 9)}$	x	2x	+9	2	4x	+18	Factorise fully $18y^3 - 12y$ HCF of $18y^3$ and $-12y$ is $6y$ <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td>3y<sup>2</sup></td> <td>-2</td> </tr> <tr> <td>6y</td> <td>18y<sup>3</sup></td> <td>-12y</td> </tr> </table> $\underline{6y(3y^2 - 2)}$	x	3y <sup>2</sup>	-2	6y	18y <sup>3</sup>	-12y
x	2x	+9														
2	4x	+18														
x	3y <sup>2</sup>	-2														
6y	18y <sup>3</sup>	-12y														

Key Vocabulary	Definition
Variable	A symbol or letter representing a value we do not know.
Coefficient	A number used to multiply a variable, e.g. in the term "4x", the coefficient of x is 4.
Expression	Numbers, variables and operators (+, -, x and ÷), grouped together to show the value of something. Expressions do not have an equals sign.
Constant	A number on its own, e.g. in the expression $5x + 8$ , the constant is 8.

	Key Skill	Thinking Point	Practice
1	Expand a single bracket	What method could I use to help expand brackets?	Expand a) $4(5x + 3)$ b) $6(2x - 1)$ c) $5x(3x + 8y)$
2	Expand and simplify	After expanding, I must collect _____ _____ in order to simplify	a) $3(2x + 1) + 4(x + 3)$ b) $7(3x + 11) - 4(5x - 2)$
3	Factorise an expression	What does HCF stand for?	Factorise fully a) $6x + 12$ b) $9t - 3$ c) $14p^2 + 7p^3$

Key Vocabulary	Complete the definitions
Variable	
Coefficient	
Expression	
Constant	

# Modern Foreign Languages



**Helping every person achieve things they never thought they could.**







## Describe my relationships with other people.

### Grammar

#### RECAP of Être (to be) in the present tense

This half term we will be using être to describe ourselves and other people. Revise être below to help you to do this.

You can use **être (to be)** alongside adjectives to describe someone. Remember, the spelling of the adjective changes to match the gender and the number of the person or people you are describing.

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)

## Adjectives to describe yourself and other people

Adjective	Masculine	Masculine Plural	Feminine	Feminine Plural
Funny	drôle	drôles	drôle	drôles
Fun	amusant	amusants	amusante	amusantes
Pretty	Joli	Jolis	Jolie	Jolies
Boring	ennuyeux	ennuyeux	ennuyeuse	ennuyeuses
Patient	Patient	patients	patiente	patientes
Big** goes before the noun	grand	grands	grande	grandes
Small** goes before the noun	petit	petits	petite	petites

### Using reflexive verbs to describe relationships

To say that you get on with someone, use 'je m'entends avec'.

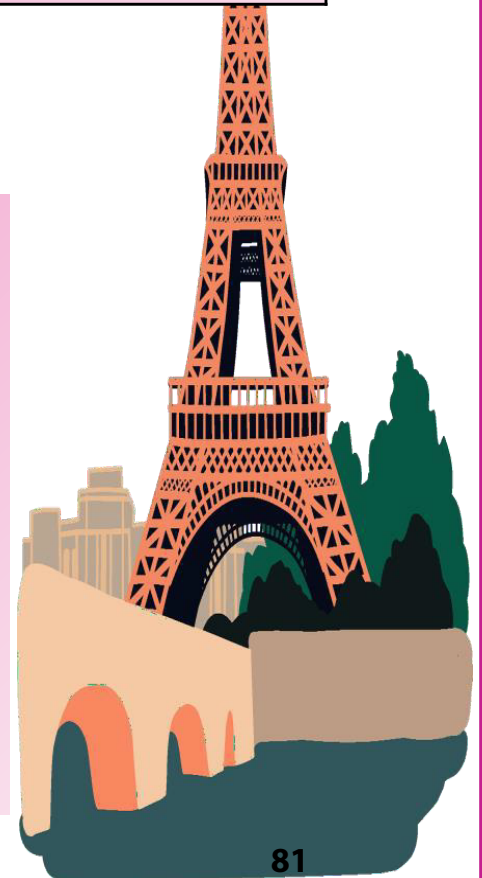
Je m'entends = I get on  
avec = with

To say you do not get on well with someone, use 'ne...pas' around the verb to make it negative. See below:

Je **ne** m'entends **pas** bien avec = I do not get on well with

Je me dispute = I argue with

Je me dispute avec = I argue with



# Year 8 French:

## Describe my relationships with other people.

### Grammar

#### RECAP of \_\_\_\_ (to be) in the present tense

This half term we will be using être to describe ourselves and other people. Revise être below to help you to do this.

You can use **être (to be)** alongside adjectives to describe someone. Remember, the spelling of the adjective changes to match the gender and the number of the person or people you are describing.

### Adjectives to describe yourself and other people

Adjective	Masculine	Masculine Plural	Feminine	Feminine Plural
Funny	drôle			
Fun				
Pretty				
Boring				
Patient				
Big** goes before the noun				
Small** goes before the noun				

	I am
	You are(singular/informal)
	He is
	She is
	One is (we are)
Nous sommes	We are
	You are (formal/plural)
	They are (masculine/mixed)
	They are (feminine)

### Using reflexive verbs to describe relationships

To say that you get on with someone, use 'je m'entends avec'.

Je m'entends =  
avec =

To say you do not get on well with someone, use 'ne...pas' around the verb to make it negative. See below:

Je **ne** m'entends **pas** bien avec =

Je me dispute =

Je me dispute avec =



# Year 8 French:

## Describe my appearance and other people's appearance.

### Using AVOIR (to have) in the present tense to describe hair and eye colour

You can use the verb avoir to describe your hair and eye colour, and other people's hair and eye colour. Recap the verb avoir to help you to do this.

### Describing hair and eye colour

Les yeux = eyes

Les cheveux = hair. Hair is plural in French.

Both yeux and cheveux are masculine nouns

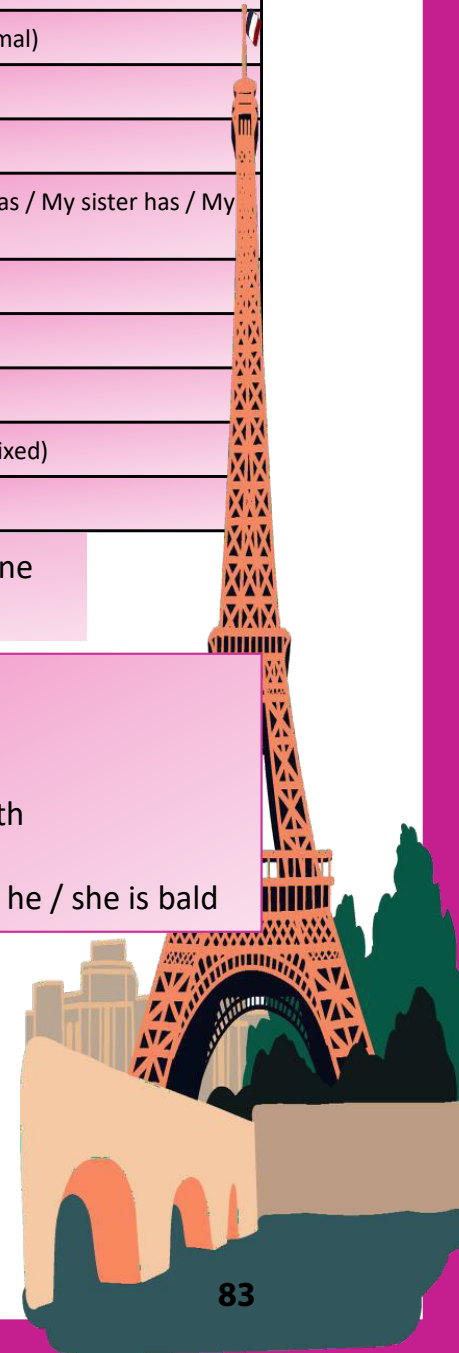
**Note: Colours go after the noun in French. So, where we would say 'I have blue eyes', in French you would say 'I have eyes blue'.**

J'ai	I have
Tu as	You have (singular/informal)
Il a	He has
Elle a	She has
Ma mère a / mon père a / ma soeur a / mon frère a	My mum has / My dad has / My sister has / My brother has
On a	One has (we like)
Nous avons	We have
Vous avez	You have (formal/plural)
Ils ont	They have (masculine/mixed)
Elles ont	They have (feminine)

As hair and eyes are masculine, you will use the masculine plural column to describe hair and eye colour

Colour	Masculine	Masculine Plural	Feminine	Feminine Plural
Blue	Bleu	Bleus	Bleue	Bleues
Black	noir	noirs	noire	noires
Blond	blond	blonds	blonde	blondes
Brown	marron	marrons	marron	marrons
Grey	gris	gris	grise	grises
Red	roux	roux	rousse	rousses
Light-brown	châtain	châtains	châtain	châtains
White	blanc	blancs	blanche	blanches
Green	vert	verts	verte	vertes
Pink	rose	roses	rose	roses
Black	noir	noirs	noire	noires

frisés = curly  
raides = straight  
longs = long  
mi-longs = mid length  
courts = short  
il / elle est chauve = he / she is bald



# Year 8 French:

## Describe my appearance and other people's appearance.

Using \_\_\_\_\_ (to have) in the present tense to describe hair and eye colour

You can use the verb avoir to describe your hair and eye colour, and other people's hair and eye colour. Recap the verb avoir to help you to do this.

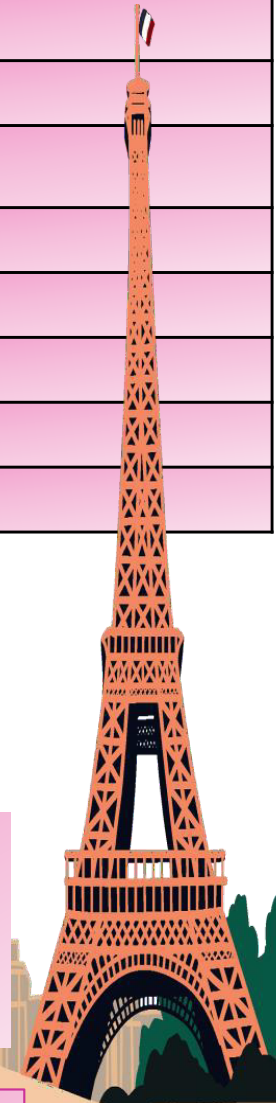
### Describing hair and eye colour

= eyes

= hair. Hair is plural in French.

Both yeux and \_\_\_\_\_ are masculine noun

**Note:** Colours go after the noun in French. So, where we would say 'I have blue eyes', in French you would say 'I have eyes blue'.

Colour	Masculine	Masculine Plural	Feminine	Feminine Plural
Blue				
Black				
Blond				
Brown				
Grey				
Red				
Light-brown				
White				
Green				
Pink				
Black				

As hair and eyes are masculine, you will use the masculine plural column to describe hair and eye colour

= curly  
 = straight  
 = long  
 = mid length  
 = short  
 = he / she is bald

# Year 8 French:



Say how I am going to spend this weekend with my family and friends.

### Using the verb ALLER (to go) to describe a future event

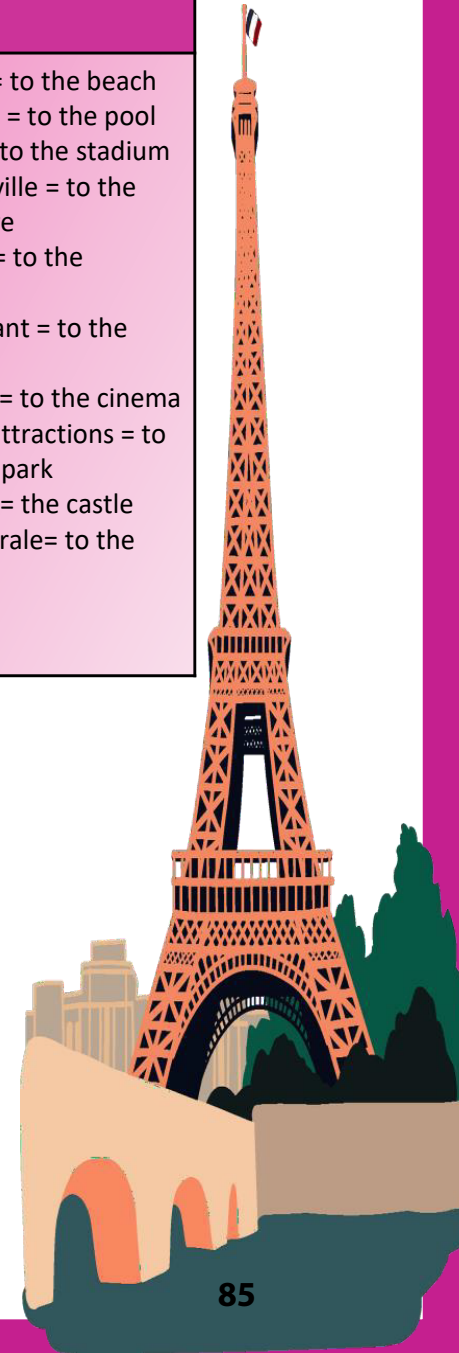
You can use the verb **aller** to describe what you are going to do in the future.

To do this, use the correct part of **aller** plus an **infinitive verb**.

For example, je vais manger = I am going to eat. This is because **je vais** means I am going and **manger** means to eat.

Another example is je vais aller = I am going to go  
You can then add on the place you are going at the end. See example table below

Aller in the present tense	Infinitive	Place
Je vais - I am going Tu va - You are going Il va - He is going Elle va - She is going On va - One is (we are) going Nous allons - We are going Vous allez - You are going Ils vont - They are going (masculine/mixed) Elles vont - They are going (feminine)	aller - to go visiter - to visit	à la plage = to the beach à la piscine = to the pool au stade = to the stadium au centre-ville = to the town centre au musée = to the museum au restaurant = to the restaurant au cinéma = to the cinema au parc d'attractions = to the theme park le château = the castle à la cathédrale = to the cathedral



When you say you go somewhere you have to use the preposition “à” and “au”.

### For feminine places (nouns):

Je vais aller **à la** piscine  
I am going to go **to** the swimming pool

### For masculine places (nouns):

Je vais aller **au** cinéma  
I am going to go **to the** cinema

For masculine nouns the “au” replaces the normal article “le”.

# Year 8 French:



Say how I am going to spend this weekend with my family and friends.

**Using the verb ALLER (to go) to describe a future event**

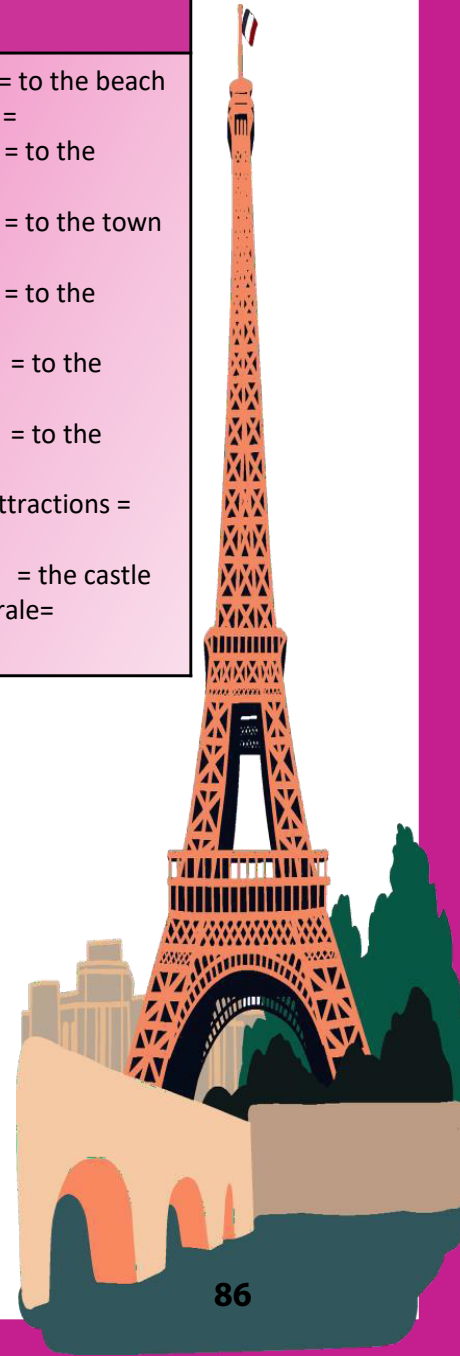
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Another example is je vais aller = I am going to go  
You can then add on the place you are going at the end. See example table below

Aller in the present tense	Infinitive	Place
- I am going	- to go	= to the beach
- You are going	- to visit	à la piscine =
- He is going		= to the
- She is going		stadium
- One is (we are) going		= to the town
- We are going		centre
- You are going		= to the
- They are going		museum
I (masculine/mixed)		= to the
- They are going		restaurant
(feminine)		= to the
		cinema
		au parc d'attractions =
		= the castle
		à la cathédrale=



When you say you go somewhere you have to use the preposition “à” and “au”.

**For feminine places (nouns):**

I am going to go **to** the swimming pool

**For masculine places (nouns):**

Je vais aller **au** cinéma

For masculine nouns the “**au**” replaces the normal article “**le**”.



## Describe my relationships with other people.

### RECAP of SER (to be) in the present tense

This half term we will be using ser to describe ourselves and other people. Revise ser below to help you to do this.

Adjective	Masculine	Masculine Plural	Feminine	Feminine Plural
Funny	divertido	divertidos	divertida	divertidos
Entertaining	entretenido	entretenidos	entretenida	entretenidas
Pretty	bonito	bonitos	bonita	bonitas
Boring	aburrido	aburridos	aburrida	aburridas
Patient	paciente	pacientes	paciente	pacientes
Big	grande	grandes	grande	grandes
Small	pequeño	pequeños	pequeña	pequeñas

### Using reflexive verbs to describe relationships

To say that you get on well with someone, use 'me llevo bien con'.

Me llevo bien = I get on well

Con = with

To say you do not get on well with someone, use 'no' before the verb to make it negative. See below:

**No** llevo bien con = I do not get on well with

Me enojo con = I get angry with

Discuto con = I argue with

### Adjectives to describe yourself and other people

You can use **ser** alongside adjectives to describe someone.

Remember that in Spanish adjectives change depending on the **noun** you are talking about and how many nouns you are talking about.

A noun is the name of a person, place or thing.

For example:

Mi padre es divertido

My Dad is fun

Mi madre es divertida

My Mum is fun

Mis hermanos son divertidos

My siblings are fun

Soy	I am
Eres	You are(singular/informal)
Es	He/she/it is
Somos	We are
Sois	You are (plural)
Son	They are





## Describe my relationships with other people.

### RECAP of \_\_\_\_\_ (to be) in the present tense

This half term we will be using **ser** to describe ourselves and other people. Revise **ser** below to help you to do this.

Adjective	Masculine	Masculine Plural	Feminine	Feminine Plural
Funny				
Entertaining				
Pretty				
Boring				
Patient				
Big				
Small				

### Using reflexive verbs to describe relationships

To say that you get on well with someone, use 'me llevo bien con'.

= I get on well

= with

To say you do not get on well with someone, use 'no' before the verb to make it negative. See below:

= I do not get on well with

= I get angry with

= I argue with

### Adjectives to describe yourself and other people

You can use **ser** alongside adjectives to describe someone. Remember that in Spanish adjectives change depending on the **noun** you are talking about and how many nouns you are talking about.

A noun is the name of a person, place or thing.

For example:

My Dad is fun

My Mum is fun

My siblings are fun

Soy	I am
	You are(singular/informal)
	He/she/it is
	We are
	You are (plural)
	They are







## Describe my appearance and other people's appearance.

Using **TENER (to have)** in the present tense to describe hair and eye colour  
 You can use the verb tener to describe your hair and eye colour, and other people's hair and eye colour. Recap the verb tener to help you to do this.

Tengo	I have
Tienes	You have (singular/informal)
Tiene	He/she/it has
Mi madre tiene / mi padre tiene / mi hermana tiene / mi hermano tiene	My mum has / My dad has / My sister has / My brother has
Tenemos	We have
Tenéis	You have(plural)
Tienen	They have



## Describing hair and eye colour

Los ojos = eyes  
 El pelo = hair  
 Both ojos and pelo are **masculine** nouns

**Note: Adjectives go after the noun in Spanish. Colours are adjectives.**

So, where we would say 'I have blue eyes', in Spanish you say 'I have eyes blue'.

Tengo los ojos **azules**  
 I have **blue** eyes

## Describing hair

Blond - rubio  
 Brown - castaño  
 Redhead - pelirrojo  
 Black - negro  
 Grey - gris  
 Curly - rizado  
 Straight - liso  
 Short - corto

Long - largo  
 He/she is bald - Es calvo  
 Remember, adjectives go after the noun in Spanish. So, where we would say 'I have brown year', in Spanish you say 'I have hair brown'.

Tengo el pelo **castaño**  
 I have **brown** hair

Colour	Masculine	Masculine Plural	Feminine	Feminine Plural
yellow	amarillo	amarillos	amarilla	amarillas
blue	azul	azules	azul	azules
white	blanco	blancos	blanca	blancas
grey	gris	grises	gris	gris
brown	marrón	marrónes	marrón	marrónes
purple	morado	morados	morada	moradas
orange	naranja	naranjas	naranja	naranjas
black	negro	negros	negra	negras
red	rojo	rojos	roja	rojas
pink	rosa	rosas	rosa	rosas
green	verde	verdes	verde	verdes



## Describe my appearance and other people's appearance.

Using \_\_\_\_\_ (to have) in the present tense to describe hair and eye colour

You can use the verb tener to describe your hair and eye colour, and other people's hair and eye colour. Recap the verb tener to help you to do this.

	I have
	You have (singular/informal)
	He/she/it has
	My mum has / My dad has / My sister has / My brother has
	We have
	You have(plural)



## Describing hair and eye colour

= eyes

= hair

Both ojos and pelo are **masculine** nouns

**Note: Adjectives go after the noun in Spanish. Colours are adjectives.**

So, where we would say 'I have blue eyes', in Spanish you say 'I have eyes blue'.

I have **blue** eyes

## Describing hair

Blond –  
Brown –  
Redhead –  
Black –  
Grey –  
Curly –  
Straight –  
Short -

Long –  
He/she is bald-

Remember, adjectives go after the noun in Spanish. So, where we would say 'I have brown hair', in Spanish you say 'I have hair brown'.

I have **brown** hair

Colour	Masculine	Masculine Plural	Feminine	Feminine Plural



Say how I am going to spend this weekend with my family and friends.

Using the verb **IR (to go)** to describe a future event

You can use the verb **ir** to describe what you are going to do in the future.

To do this, use the correct part of **ir** plus an **infinitive verb**.

For example, **voy a comer** = I am going to eat. This is because **voy a** means I am going and **comer** means to eat.

Another example is **voy a ir** = I am going to go

You can then add on the place you are going at the end.

Ir in the present tense	Infinitive	Place
Voy a - I am going Vas a - You are going Va a - He/she is going Vamos a - We are going Van a - They are going	ir- to go visitar- to visit	a la playa = to the beach a la piscina = to the pool al estadio = to the stadium al centro de la ciudad = to the town centre al museo = to the museum al restaurante = to the restaurant al cine = to the cinema al parque de atracciones = to the theme park al castillo = the castle al catedral = to the cathedral



When you say you **go somewhere** you have to use the preposition **“a”**.

Voy a ir **a** la piscina

I am going to 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 a ir **al** parque

I am going to go **to the** park





Say how I am going to spend this weekend with my family and friends.

Using the verb **IR (to go)** to describe a future event

You can use the verb **ir** to describe what you are going to do in the future.

To do this, use the correct part of **ir** plus an **infinitive verb**.

For example, voy a comer = \_\_\_\_\_. This is because **voy a** means I am going and **comer** means to eat.

Another example is voy a ir = \_\_\_\_\_

You can then add on the place you are going at the end.

Ir in the present tense	Infinitive	Place
<ul style="list-style-type: none"> <li>- I am going</li> <li>- You are going</li> <li>- He/she is going</li> <li>- We are going</li> <li>- They are going</li> </ul>	<ul style="list-style-type: none"> <li>- to go</li> <li>- to visit</li> </ul>	<ul style="list-style-type: none"> <li>= to the beach</li> <li>= to the pool</li> <li>= to the stadium</li> <li>= to the town centre</li> <li>= to the museum</li> <li>= to the restaurant</li> <li>= to the cinema</li> <li>= to the theme park</li> <li>= the castle</li> <li>= to the cathedral</li> </ul>



When you say you **go somewhere** you have to use the preposition “a”.

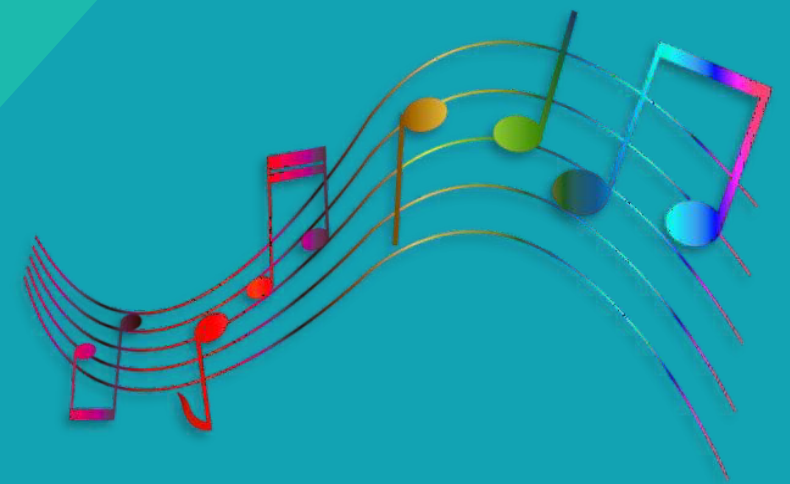
I am going to go \_\_\_ the swimming pool

However when you say you are going to a place (noun) that is masculine you merge the preposition “\_” and the article “\_”.

I am going to go **to the park**



# Music



**Helping every person achieve things they never thought they could.**



# Year 8 Music:

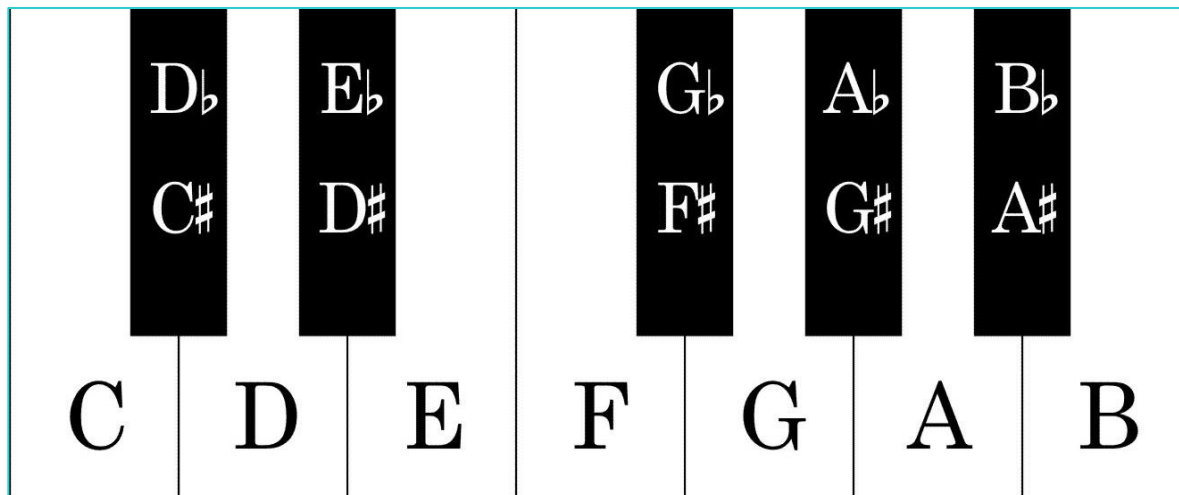
1	<b>Pitch</b>	How high or low a note/ sound is
2	<b>Dynamics</b>	How loud or quiet a note/sound is.
3	<b>Ukulele</b>	A small guitar like instrument with only four strings
4	<b>Plectrum</b>	A small plastic object used to strum the Ukulele
5	<b>Pop Music</b>	Music that is popular at the current time
6	<b>Chord</b>	More than two notes played at the same time
7	<b>Sharp</b>	When you raise a note one step on the keyboard
8	<b>Flat</b>	When you lower a note one step on the keyboard



Ukulele

Chords

## Sharps and Flats



Chord	Keyboard	Ukulele	Notes
<b>C</b>			<b>C E G</b>
<b>F</b>			<b>F A C</b>
<b>G</b>			<b>G B D</b>
<b>Am</b>			<b>A C E</b>

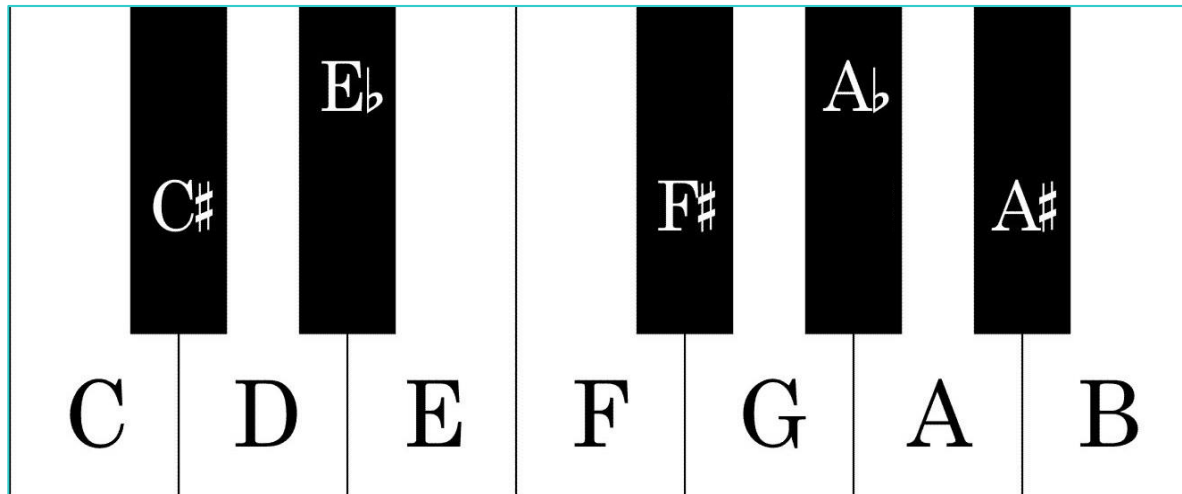
# Year 8 Music:

1	Pitch	
2	Dynamics	
3	Ukulele	
4	Plectrum	
5	Pop Music	
6	Chord	
7	Sharp	
8	Flat	



Chords

Sharps and Flats



Chord	Keyboard	Ukulele	Notes



# PE



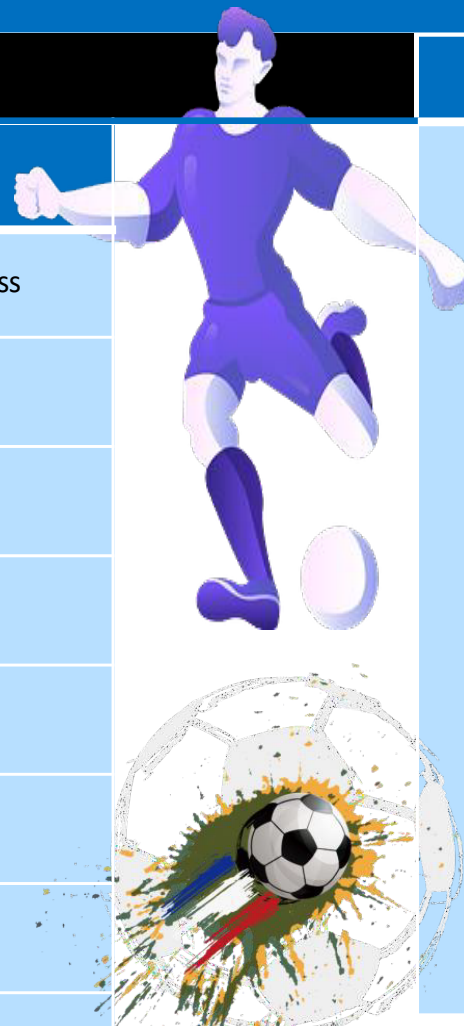
**Helping every person achieve things they never thought they could.**



# Year 8 PE: Football

# Rules, Strategies and Tactics

## Motor Competence



<b>Passing</b>	Accuracy, weight of pass
<b>Receiving</b>	Get in line, cushion
<b>Dribbling</b>	Little touches
<b>Possession</b>	Back foot
<b>Outwitting an opponent</b>	1v1, one - two
<b>Defending</b>	Jockeying, touch tight
<b>Shooting</b>	Placement
<b>Game play</b>	Basic rules

### A goal kick

Occurs when the attacking team has the last touch before the ball goes behind the goal line. Any player can then pass the ball from the six yard box.

### A corner kick

Occurs when the defending team has the last touch before the ball goes behind the goal line. Any player can then pass the ball from the corner of the goal and side line. The corner ball must be placed in the quadrant.

### Restarting

The game after a goal is scored from the halfway line.

### Free kick

When a player makes contact or handles the ball a foul is committed and the ball will be restarted with a free kick. A goalkeeper can only handle the ball in their penalty area.

### Throw in

If the ball goes over the side lines of the pitch, the team who touches the ball last will give away a throw in to the other team. The throw in must be taken from the point it goes out of play.

## Healthy Participation

### Muscles

Gluteal, hamstrings, quadriceps, gastrocnemius

### Fitness components

Foot eye coordination, pace, speed, stamina.



## Key Terms:

- 1.Spatial awareness
- 2.Team work
- 3.Cooperation
- 4.Communication
- 5.Fair play
- 6.Sportsmanship
- 7.Etiquette
- 8.Leadership
- 9.Gamesmanship
- 11.Values
- 12.Teamwork

# Year 8 PE: Football



What are the key ideas linked to each motor competence? Complete below.

Passing	
Receiving	
Dribbling	
Possession	
Outwitting an opponent	
Defending	
Shooting	
Game play	



## Rules, Strategies and Tactics

What is a goal kick? →

What is a corner kick? →

What happens when a match is 'restarting'? →

What is a free kick? →

What is a throw in? →

## Healthy Participation

Which **muscles** are used in football?

What are the **fitness components** of football?

## Key Terms:

- 1.Spatial awareness
- 2.Team work
- 3.Cooperation
- 4.Communication
- 5.Fair play
- 6.Sportsmanship
- 7.Etiquette
- 8.Leadership
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- 11.Values
- 12.Teamwork



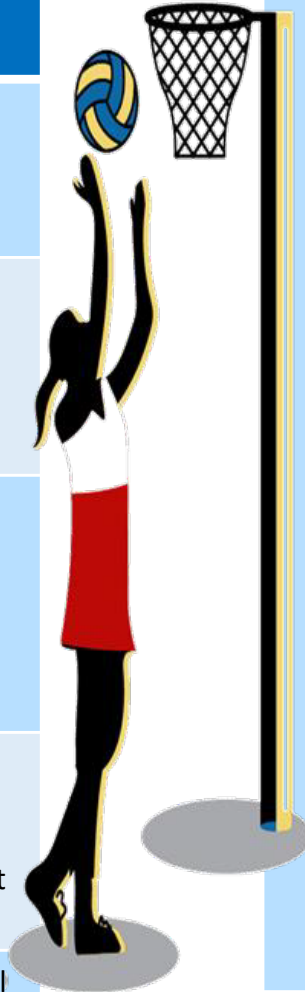
# Year 8 PE: Netball

## Rules, Strategies and Tactics



### Motor Competence

<b>Passing</b>	As soon as a player receives the ball they pass the ball straight away. Pass without looking for a player who is free to pass to.
<b>Chest Pass</b>	Ball held in front of the chest, elbows tucked in. Push the ball from your chest aiming at the chest of the person you are passing the ball to.
<b>Bounce Pass</b>	Ball held in front of the chest, elbows tucked in. Push the ball from your chest down to the floor, aiming your body towards the person you are passing the ball to.
<b>Overhead Pass</b>	Place the ball above your head. Step forwards with your dominant foot and push the ball through transferring your weight to push the ball forwards.
<b>Shoulder Pass</b>	Hands positioned behind the ball with fingers spread. Step forwards with the opposite leg to your throwing arm and transfer your body weight forwards. Ensure the pass is flat and direct to the player you are passing to. Fully extended the arm and fingers to where you want the ball to finish.



<b>Held ball</b>	Once gaining possession of a ball a player must release the ball within 3 seconds.
<b>Sanction</b>	Free pass to the opposing team where the player caught the ball.
<b>Short pass</b>	A pass of the ball between teammates too close together to allow an opponent to get between them.
<b>Possession</b>	A player may gain possession of the ball by catching the ball either from another player or rebounding off the goalpost or rolling the ball to oneself.
<b>Contact</b>	Occurs when a players actions interfere with an opponents play whether these are accidental or deliberate.
<b>Free pass</b>	A player with or without the ball cannot move into an area of the court that isn't designated for their position and if this happens opposite team will receive a free pass

### Healthy Participation

<b>Muscles</b>	Glutes, hamstrings, quadriceps, gastrocnemius.
<b>Fitness components</b>	Hand eye coordination, power, speed, balance.



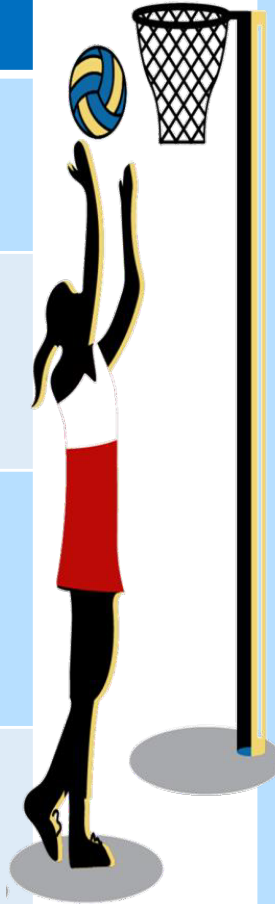
# Year 8 PE: Netball

## Rules, Strategies and Tactics



### Motor Competence

Passing	
Chest Pass	
Bounce Pass	
Overhead Pass	
Shoulder Pass	



What is a held ball? →

What is a sanction? →

What is a short pass? →

What is possession? →

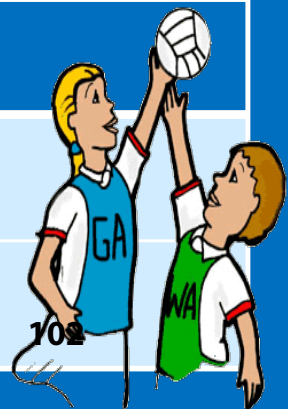
What is contact? →

What is a free pass? →

### Healthy Participation

Which **muscles** are used in netball?

What are the **fitness components** of netball?



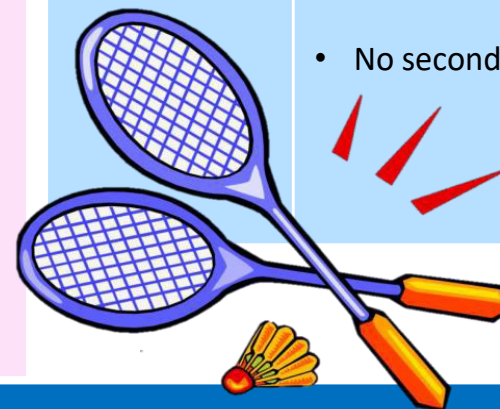
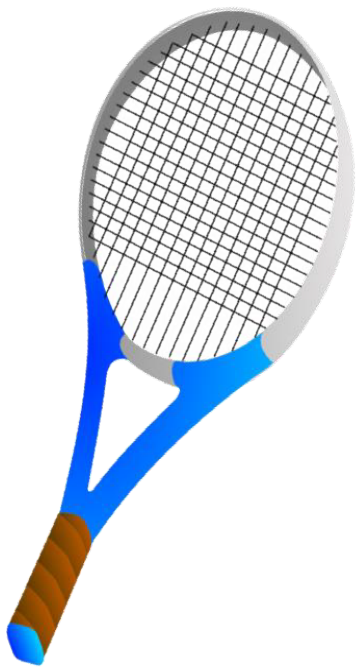
### Motor Competence

<b>Serve</b>	Holding the shuttle, High Serve, Low Serve, disguising your serve
<b>Outwitting an opponent</b>	Attacking Shots - Smash, Drop Shot, Jump Smash, Net Shot
<b>Defensive shots</b>	Net Lift
<b>Gameplay in singles</b>	Select the correct shot to play
<b>Gameplay in doubles</b>	Choosing the correct shot to play, understanding positioning when attacking and defending

### Healthy Participation

**Muscles commonly used:**  
Gluteal, hamstrings, quadriceps, gastrocnemius, biceps, triceps, deltoids.

**Fitness components:**  
Hand-eye coordination, agility, speed, reaction time, balance.

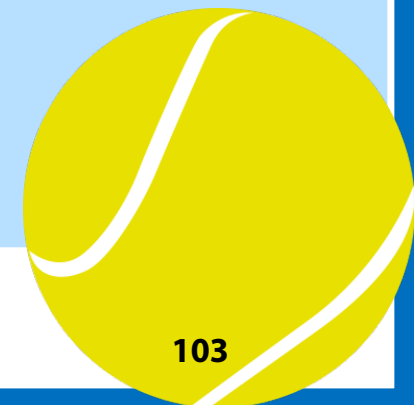


#### Points

- A point is scored if the shuttlecock lands in the opponent's court.
- If you touch the net, it is a foul and your opponent wins the point
- A player cannot hit the shuttlecock twice
- A match consists of the best of 3 games of 21 points.
- At 20-all, the player/pair which reaches 2 clear points wins the game

#### Service

- The shuttlecocks have to fall within the corresponding service areas and this is different in singles (long and narrow) and doubles (short and fat).
- At the start of the rally, the server and receiver stand in diagonally opposite service courts.
- Serves must be hit diagonally
- Serves must be underarm
- No second serves



### Motor Competence

Serve	
Outwitting an opponent	
Defensive shots	
Gameplay in singles	
Gameplay in doubles	

### Healthy Participation

Muscles commonly used:

Fitness components:

Points

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• -

• -

• -

Service

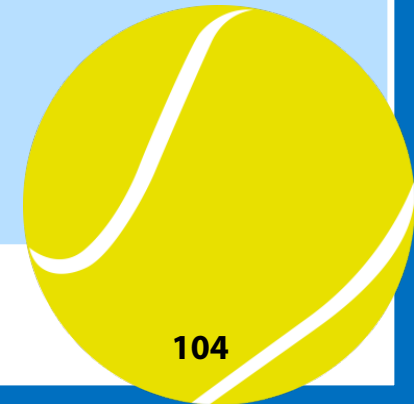
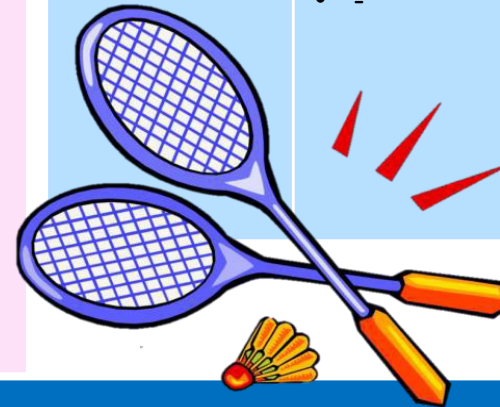
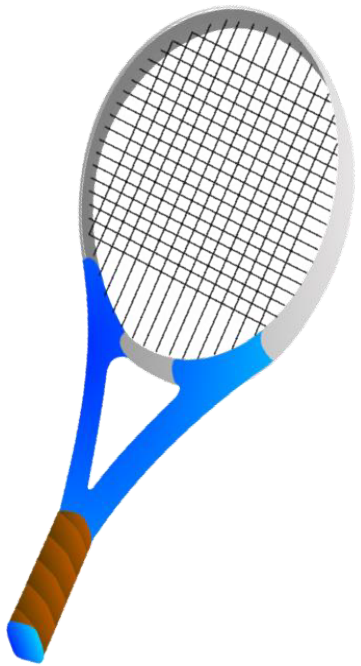
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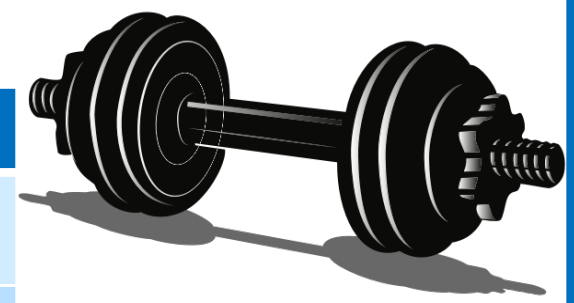
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**Motor Competence**

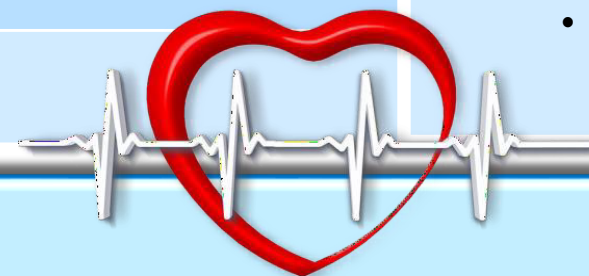
<b>Muscular strength</b>	The amount of force you can put out or the amount of weight you can lift.
<b>Muscular Endurance</b>	Perform exercises to failure so that you improve your muscular endurance.
<b>Speed</b>	Moving your body fast as possible
<b>Agility</b>	Changing direction rapidly, whilst maintaining speed and precision.
<b>Flexibility</b>	A joint or series of joints to move through an unrestricted, pain free range of motion.
<b>Balance</b>	Even distribution of weight enabling someone or something to remain upright and steady.
<b>Coordination</b>	Throw with one hand, catch with the other.
<b>Reaction time</b>	How fast an athlete is able to respond to a stimulus.
<b>Cardiovascular Fitness</b>	To exercise the whole body for long periods



**Healthy Participation**

**Muscles commonly used in the lesson:**

- Gluteal
- Hamstrings
- Quadriceps
- Gastrocnemius
- Abdominals



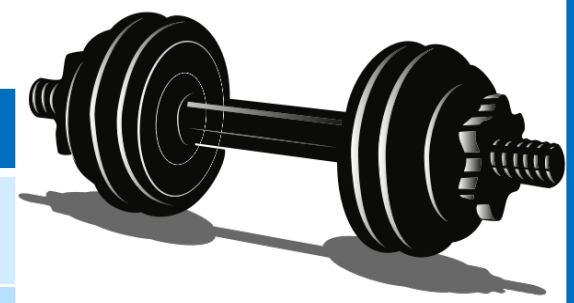
**Rules, Strategies and Tactics**

All of the movements completed to improve agility and speed must use the **correct technique** as this would stop any injuries or muscular injuries occurring.

All participants must have **warmed up** their muscles before completing flexibility and balance skills as if not muscles can easily be torn or damaged.

**Motor Competence**

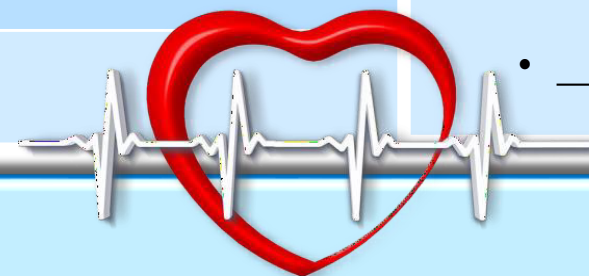
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**Healthy Participation**

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- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



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# Religious Education



Helping every person achieve things they never thought they could.



### Holy scriptures

Some Hindu holy books date back almost 5000 years. They are written in Sanskrit, the classical language of India. They contain either:

- Epic stories
- Philosophical ideas
- Texts to aid meditation and contemplation.

All the holy texts aim to help humans understand reality.



### Hindu Holy Books – Sruti / Shruti

Shruti are scriptures that were **‘heard and seen’**. Many Hindus believe that wise and holy men (sages) received these words directly from Brahman (God). They were passed on by word of mouth and later written down unchanged. They are books of authority, offering spiritual knowledge.

### Hindu Holy Books – Smriti

Smriti are scriptures that are **‘remembered’** – they are what people were told by God. They were remembered and written down by people. Great stories to give religious teachings include the Ramayana, the Puranas, the Mahabharata and the Laws of Manu. These stories help Hindus understand the sruti better.

Hindu scriptures are often written in story form, known as ‘epics’. These stories teach Hindus about the qualities of Brahman and provide lessons for their own lives. Stories were used so people could remember the scriptures more easily and so pass them on. They capture the imagination of both children and adults. Probably the most famous story is of Rama and Sita, which is told during Diwali.



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  - \_\_\_\_\_
  - \_\_\_\_\_
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### Significant places for Hindus

The Hindu word for pilgrimage ( a religious journey) is Yatra.

Pilgrimage is important for Hindus for several reasons:

- The scriptures say it brings good karma.
- It strengthens their faith.
- It helps their understanding of the history of their religion.

Also, a Hindu might go on pilgrimage to complete a promise to a family member, so it shows respect to them.

For different Hindus, a pilgrimage can take them to different places.



### Vrindavan

Vrindavan is sacred to followers of **Vishnu**. They believe that **Krishna** (an avatar of Vishnu) spent much of his childhood here, having been adopted by cowherds after his uncle wanted to kill him. He looked after the cows and played in the forest with the other cowherders. So, the forests are believed to be sacred to Vrindavan.

There are over 5,000 temples in Vrindavan. New ones are planned, including what will be the tallest religious building in the world.



### Varanasi

The city of Varanasi is built at the side of the River Ganges. It is the oldest continuously inhabited city in the world, inhabited since at least 2000 BCE.

The city has thousands of temples and is dedicated to **Shiva**.

Many Hindus will go to Varanasi to visit temples, carry out worship and learn from holy men and women.

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### The River Ganges

Also known as Mother Ganga – it is believed to be a living goddess. Hindus believe that bathing in the river brings great blessings and even freedom from **moksha** (rebirth).

Hindus believe it helps a person’s rebirth if their ashes are scattered in the River Ganges, so many people are cremated at **ghats** (steps leading to the water) beside the River Ganges at Varanasi.

Families of Hindus around the world will return to Varanasi with the ashes of their relatives for scattering.



Key word	Definition
<b>Shruti</b>	Scriptures that were <b>‘heard and seen’</b> .
<b>Smriti</b>	Scriptures that are <b>‘remembered’</b>
<b>Yatra</b>	Pilgrimage – holy journey
<b>Atman</b>	The soul
<b>Moksha</b>	Rebirth

### Diwali

Diwali is the festival of lights. Hindus put lines of diva lamps in their windows. The festival originates from the story of Rama and Sita. The lights represent the ordinary people lighting the way home for Rama and Sita after Rama had defeated the evil demon, Ravanna. They also represent the light of knowledge, which Hindus try to gain so they can achieve moksha (freedom) and reunion with Brahman.

The festival lasts for five days, which includes preparation time. Homes, temples and places of work are cleaned thoroughly. Rangoli patterns are drawn. People wear their best clothes, eat special food and visit friends and relatives. On the third day it is tradition to give offerings to Lakshmi – the goddess of wealth – and to light up the houses.

In the UK, Diwali celebrations include food, music, dance drama performances, fireworks and people wearing henna.

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Key word	Definition
Shruti	
Smriti	
Yatra	
Atman	
Moksha	

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In the UK, Diwali celebrations include food, music, dance drama performances, \_\_\_\_\_ and people wearing \_\_\_\_\_.



## Holi

The festival of Holi takes place in spring and remembers how Vishnu saved the demon King's son, Prahlad, from his father. Celebrations start on the evening before.

Today, Hindus celebrate this festival in many ways, but it is traditional to have a bonfire, to which offerings such as grain, coconuts and dates are made. They may place a figure of Holika on the bonfire, who is burnt to death in the original story. There are fireworks and special foods, and also fun celebrations such as giving gifts and cards and meeting up with friends and relatives.

The second day is Rangwali Holi. In the morning, people gather in public places and chase each other around, throwing coloured powders and water at each other. This is why it is also known as a festival of colour. It is a celebration of spring and rejuvenation in nature. This is a day of fun, and music, singing and dancing are common.



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# Science



**Helping every person achieve things they never thought they could.**



# Year 8 science: Electricity and magnetism



Cell	Battery	Switch	Lamp	Ammeter	Volt meter
Store of chemical energy	Two or more cells in series	Breaks circuit, turning current off	Lights when current flows	Measures current	Measures potential difference

Diode	LED	LDR	Fuse	Resistor	Variable resistor	Thermistor
Current flows one way	Emits light when current flows	Resistance low in bright light	Melts when current is too high	Affects the size of current flowing	Allows current to be varied	Resistance low at high temp

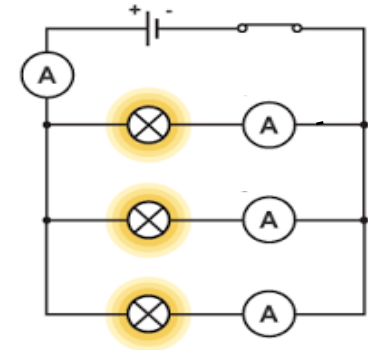
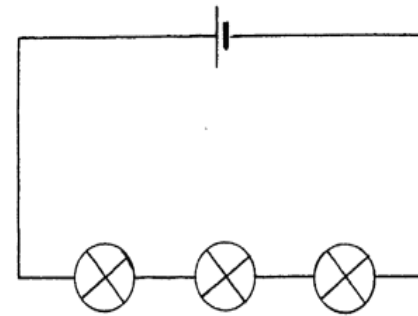
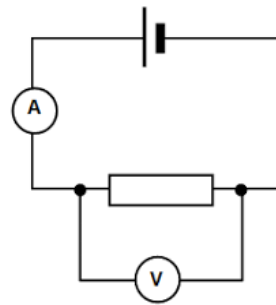
## Circuit symbols

Electrons carry current. Electrons are free to move in metal.

## Current and Charge

## Current, potential difference and resistance

Current	Flow of electrical charge	Ampere (A)
Potential difference (p.d.)	How much electrical work is done by a cell	Volts (V)
Charge	Amount of electricity travelling in a circuit	Coulombs (C)



## Series and parallel circuits

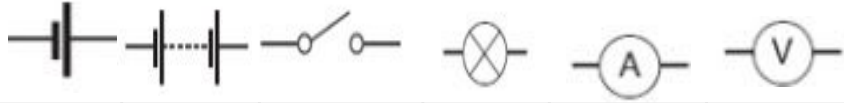
Series circuit	Current is the same in all components.	Total p.d. from battery is shared between all the components.	Total resistance is the sum of each component's resistance.
Parallel circuit	Total current is the sum of each component's current.	p.d. across all components is the same.	Total resistance is less than the resistance value of the smallest individual resistor.

Series	Parallel
A circuit with one loop	A circuit with two or more loops

Total p.d. If cells are joined in series, add up individual cell values  
**119**

Ammeter	Set up in series with components
Voltmeter	Set up parallel to components

# Year 8 science: Electricity and magnetism



Cell	Battery	Switch	Lamp	Ammeter	Volt meter



Diode	LED	LDR			Variable resistor	
			Melts when current is too high	Affects the size of current flowing		Resistance low at high temp

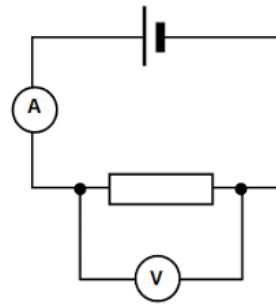
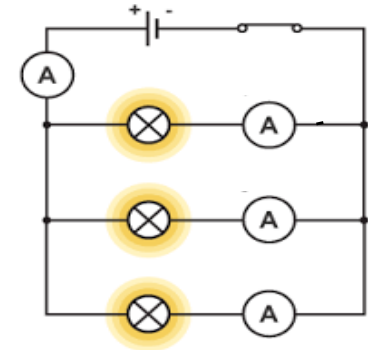
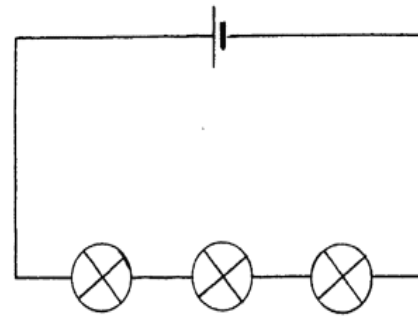
Circuit symbols



Current and Charge

Current, potential difference and resistance

Current	Flow of electrical charge	
Potential difference (p.d.)		Volts (V)
Charge	Amount of electricity travelling in a circuit	



Series and parallel circuits

Series	Parallel

Series circuit			
Parallel circuit			

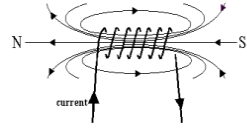
Total p.d	120
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Ammeter	
Voltmeter	



# Year 8 science: Electricity and magnetism

**Solenoid**  
**A long coil of wire**  
 Magnetic field from each loop adds to the next.



Reverse current, magnetic field direction reverses.

Further away from the wire, magnetic field is weaker.

Current large enough, iron filings show circular magnetic field.

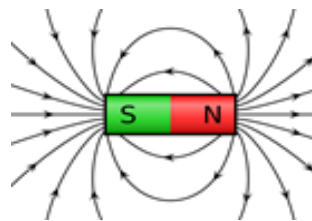
If current is small, magnetic field is very weak.

**Electromagnet**  
**Lots of turns of wire increase the magnetising effect when current flows**  
 Turn current off, magnetism lost.

## Magnetic field around a wire

Electric current flowing in a wire produces a magnetic field around it.

## Permanent and Induced Magnetism



Magnetic	<b>Materials attracted by magnets</b>	Uses non-contact force to attract magnetic materials.
North seeking pole	<b>End of magnet pointing north</b>	Compass needle is a bar magnet and points north.
South seeking pole	<b>End of magnet pointing south</b>	Like poles (N – N) repel, unlike poles (N – S) attract.
Magnetic field	<b>Region of force around magnet</b>	Strong field, force big. Weak field, force small. Field is strongest at the poles.
Permanent	<b>A magnet that produces its own magnetic field</b>	Will repel or attract other magnets and magnetic materials.
Induced	<b>A temporary magnet</b>	Becomes magnet when placed in a magnetic field.

## Static electricity

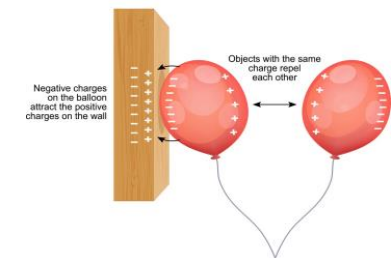
Like charges	<b>Repel</b>
Unlike charges	<b>Attract</b>

**Static electricity**  
**Electrical charge is stationary**  
 When two insulating material are rubbed together, electrons move from one material to the other.

**Shocks**  
 Walking on carpet causes friction. Electrons move to the person and charge builds up. When the person touches a metal object, the electrons conduct away, making a spark.

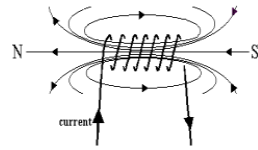
**Electric fields**  
 Charged objects create electric fields around them. Strongest closest to the object. The field direction is the direction of force on a positive charge. Add more charge increases field strength.

## STATIC ELECTRICITY



# Year 8 science: Electricity and magnetism

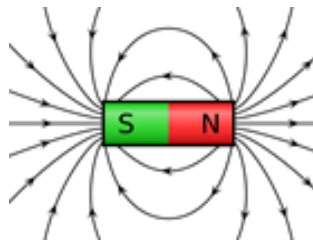
Solenoid



Electromagnet

Magnetic field around a wire

## Permanent and Induced Magnetism



Magnetic		
North seeking pole		
South seeking pole		
Magnetic field		
Permanent		
Induced		

## Static electricity

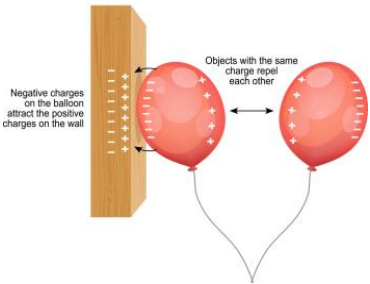
Like charges	
Unlike charges	

Static electricity

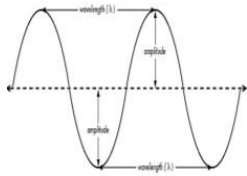
Shocks

Electric fields

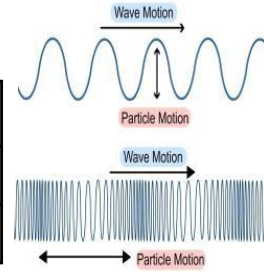
### STATIC ELECTRICITY



# Year 8 Science: Properties of Waves



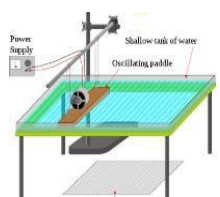
<b>Wave speed</b>	Wave speed = frequency X wavelength	$V = f \times \lambda$
<b>Wave period</b>	Wave period = $1 \div$ frequency	$T = 1 \div f$
<b>Speed</b>	Speed = distance $\div$ time	$v = d \div t$



<b>Wavelength</b>	Distance from one point on a wave to the same point of the next wave
<b>Amplitude</b>	The maximum disturbance from its rest position
<b>Frequency</b>	Number of waves per second
<b>Period</b>	Time taken to produce 1 complete wave

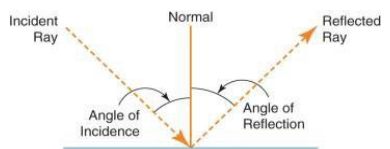
**Transverse and Longitudinal waves**  
**Waves in air, fluids and solids**

<b>Transverse wave</b>	Vibration causing the wave is at right angles to the direction of energy transfer	Water waves, all electromagnetic waves
<b>Longitudinal wave</b>	Vibration causing the wave is parallel to the direction of energy transfer	Sound waves, waves in springs
<b>Ultra sound</b>	Partially reflected off boundary	Used for medical and foetal scans.
<b>Sonar</b>	Reflected off objects	Used to determine depth of objects under the sea.



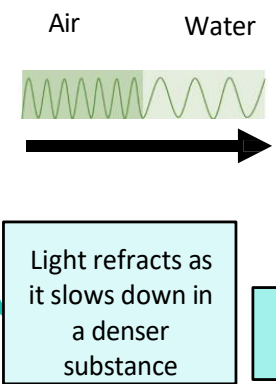
**Measuring speed**  
In water, use a ripple tank.  
In air, use echoes.

Sound waves travelling through different mediums, the frequency stay constant.

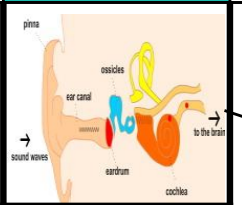


Angle of incidence = angle of reflection (i) = (r)

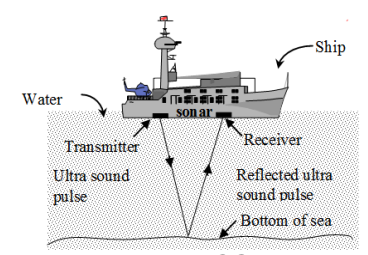
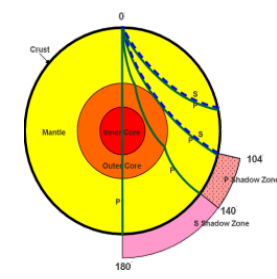
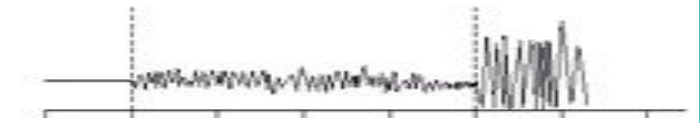
<b>Reflection</b>	Wave bounces off the surface.
<b>Refraction</b>	Waves changes direction at boundary.
<b>Transmitted</b>	Passes through the object.
<b>Absorbed</b>	Passes into but not out of a substance, transfers energy and heats up the object.



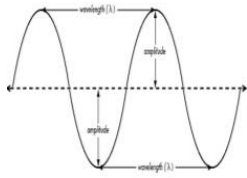
**Seismic waves**



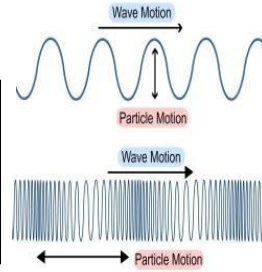
**Hearing**  
**Frequencies between 20 – 20,000 Hz**  
Longitudinal waves cause ear drum to vibrate, amplified by three ossicles which creates pressure in the cochlea.



# Year 8 Science: Properties of Waves



Wave speed		$v = f \times \lambda$
Wave period		$T = 1 \div f$
Speed		$v = d \div t$

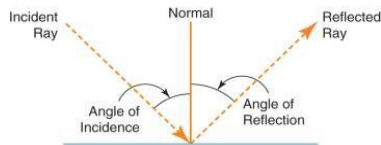
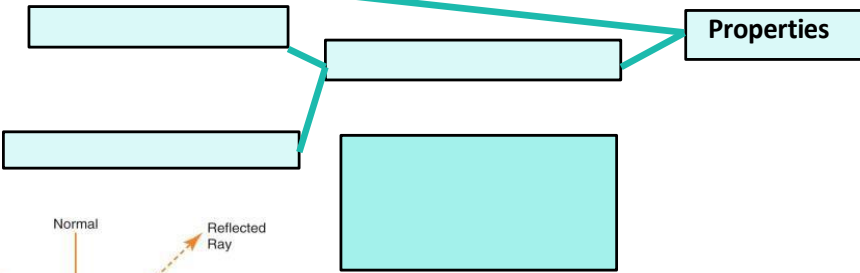
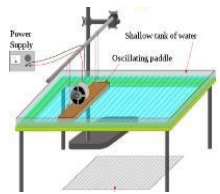


Transverse wave		
Longitudinal wave		

Wavelength	
Amplitude	
Frequency	
Period	

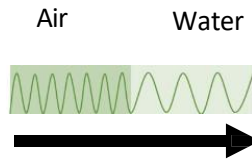
Transverse and Longitudinal waves

Waves in air, fluids and solids

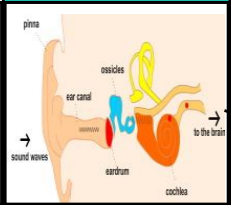
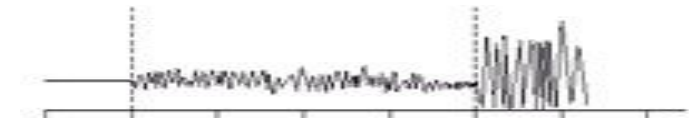


Ultra sound		
Sonar		

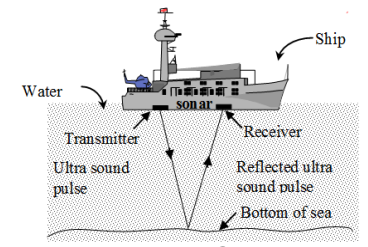
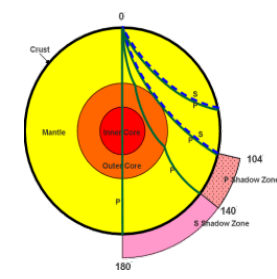
Reflection	
Refraction	
Transmitted	
Absorbed	



Seismic waves



Hearing		
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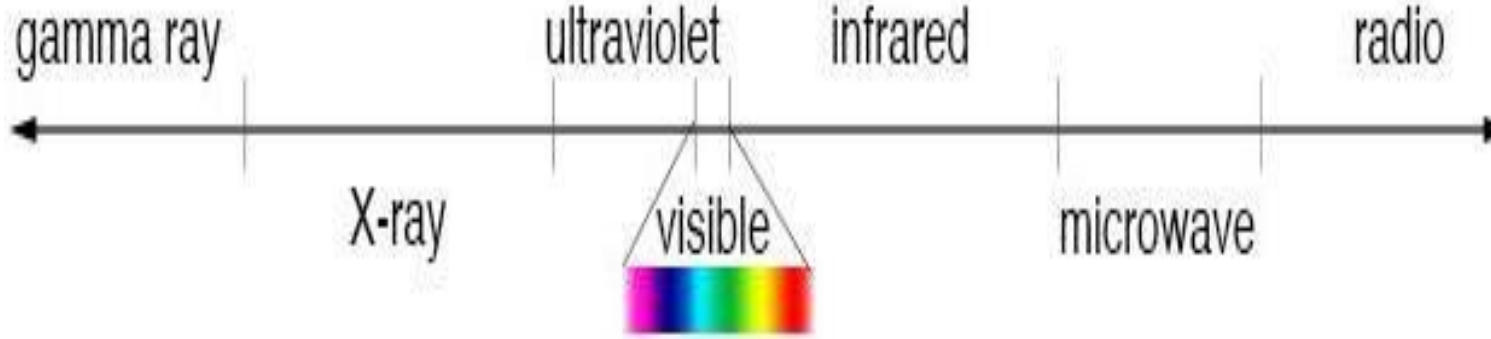


# Year 8 Science: Electromagnetic waves

## Electromagnetic waves

Continuous spectrum of transverse waves

	Units
Distance	Metres (m)
Wave speed	Metres per second (m/s)
Wavelength	Metres (m)
Frequency	Hertz (Hz)
Period	Seconds (s)



EM wave	Danger	Use
Radio	None known	Communications, TV, radio.
Microwave	Burning if concentrated.	Mobile phones, cooking, satellites.
Infrared		Heating, remote controls, cooking.
Visible	Damage to eyes.	Illumination, photography, fibre optics.
Ultra violet	Sunburn, skin cancer.	Security marking, disinfecting water.
X-ray	Cell destruction / mutation, cancer.	Broken bones, airport security.
Gamma		Sterilising, detecting and killing cancer.

Short wavelengths have high frequency and high energy.

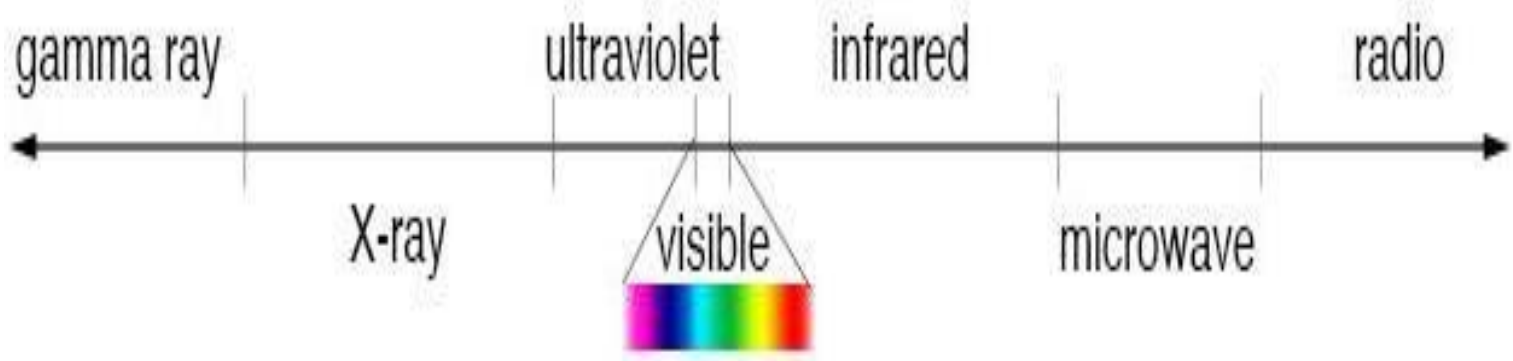
e.g. Gamma

High frequency, short wavelength

# Year 8 Science: Electromagnetic waves

**Electromagnetic waves**

	Units
Distance	
Wave speed	
Wavelength	
Frequency	
Period	



EM wave	Danger	Use
Radio		
Microwave		
Visible		
Gamma		

e.g.

