Need To Know Book

Year 8

2024/2025

Name:_____

Form Group: _____

Ofsted Good Provider 2022

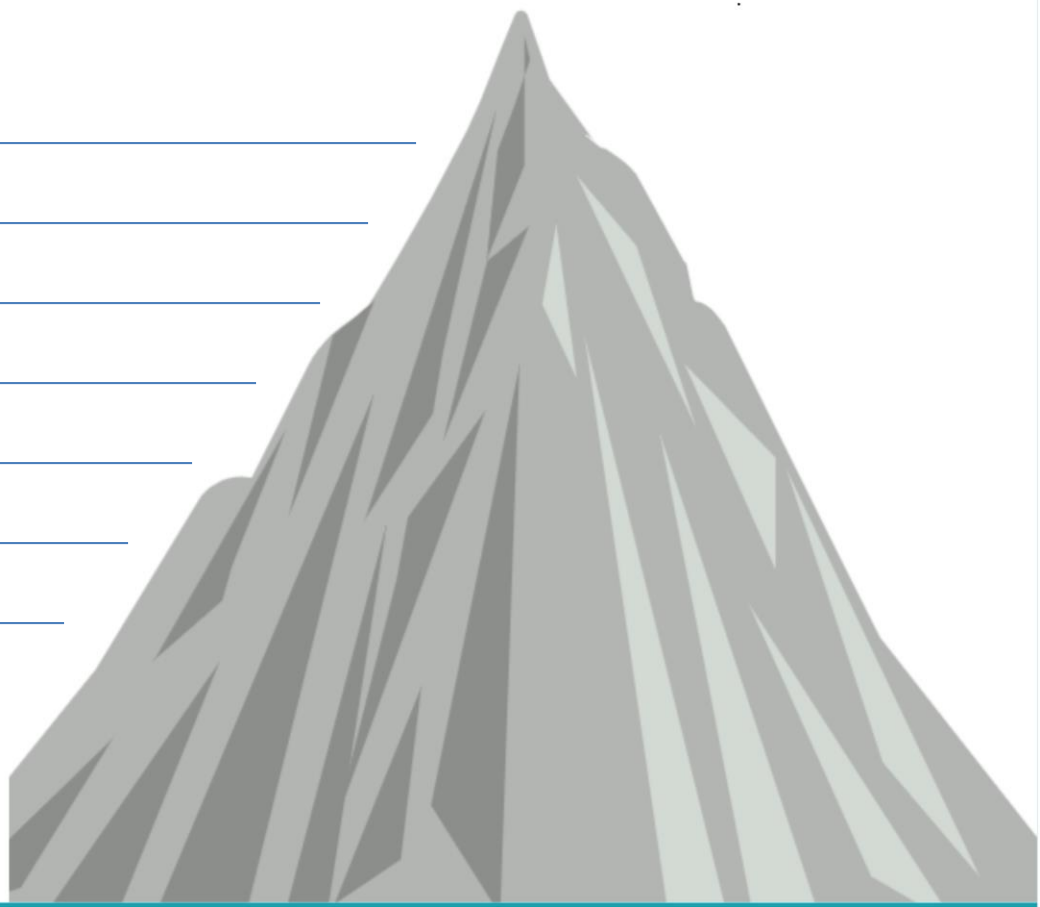
Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

My Aspirational Sentence.

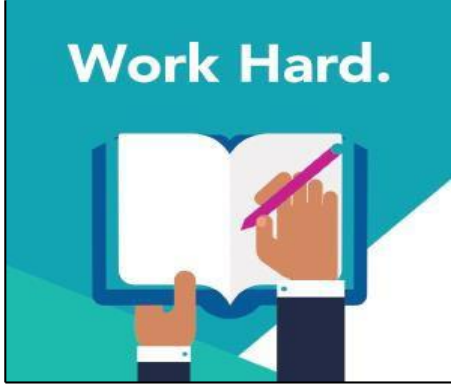
Little Lever School
be kind | work hard | take responsibility

What does the top of my mountain look like?



Contents Page

Knowledge Retrieval Sheet



What are knowledge retrieval sheets?

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

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

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

Using Knowledge Retrieval Sheets- 5 Top Tips:

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

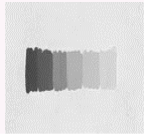
Art

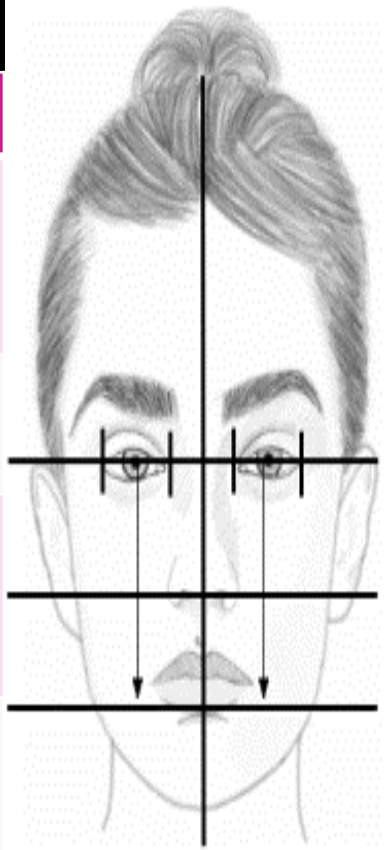
Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

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**	T**one** 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.

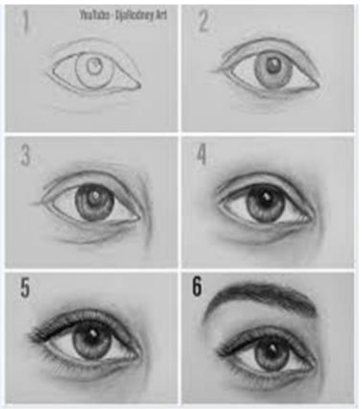
Proportions of the human face

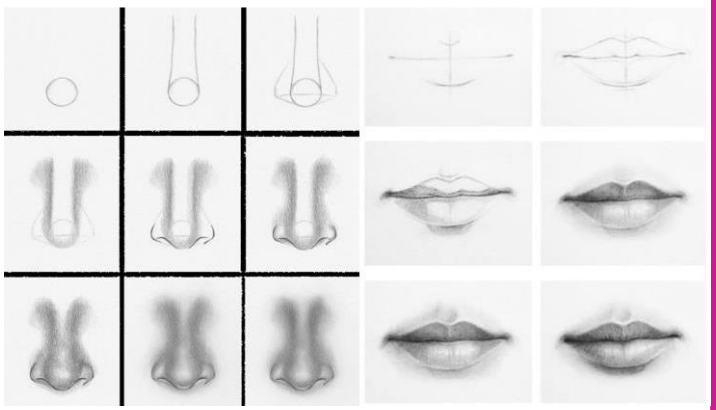
Eyes: roughly half way between the top of the head and chin
Nose: roughly half way between the eyeline and the chin
Mouth: roughly half way between the bottom of the nose and chin

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

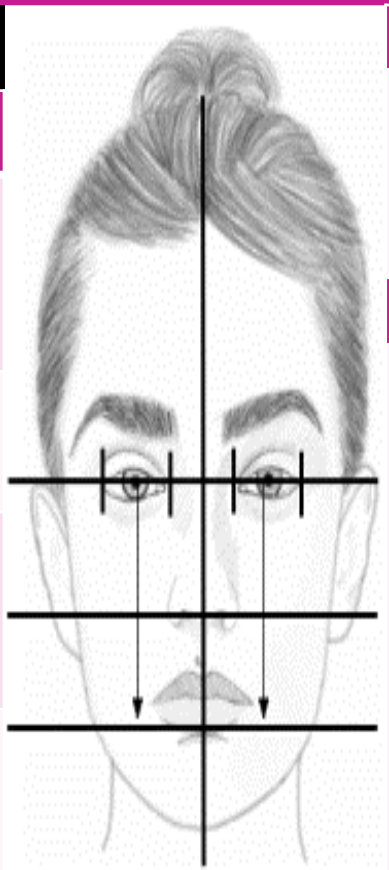




Year 8 Art: Portraiture

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

 **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.
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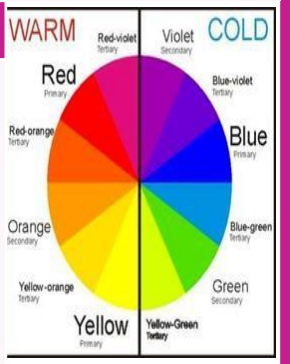
Composition

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.

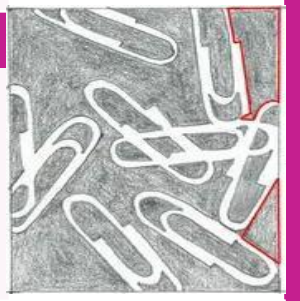
Warm and Cold Colours

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?

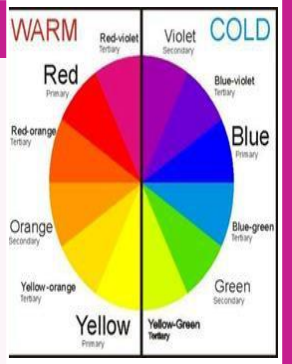
Warm and Cold Colours

Name three warm colours:

Name three cold colours:

What kind of feelings can warm colours evoke?

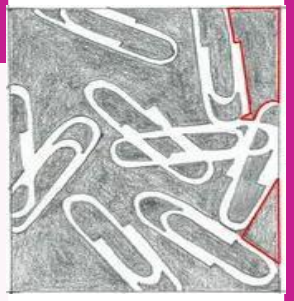
What kind of feelings can cold colours evoke?



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

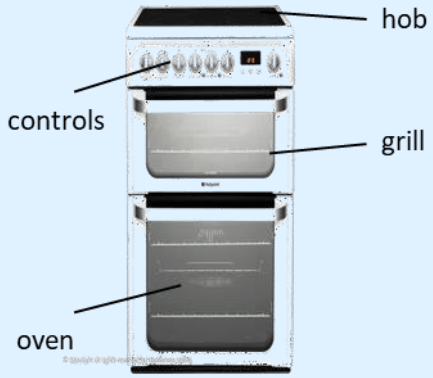
Helping every person achieve things they never thought they could.

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 a 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.**

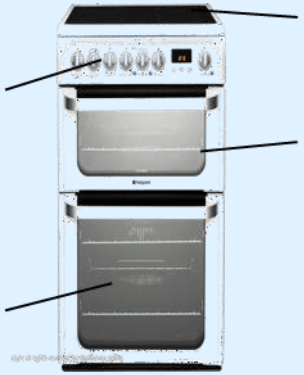
Food provenance means where ingredients and the foods made from them originally come from. Many consumers want to know where their food originated. Many ingredients and foods we eat are grown, reared or caught in the UK. Others are imported from other countries.

Marinade 'v' Marinate

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.

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be kind | work hard | take responsibility

Year 8 Computing

Definition: Digital Footprint

The information about a particular person that exists on the Internet as a result of their online activity.

Ways you can protect your digital footprint:

1. Search your name online and see what is already out there about you.
2. Consider what you post online before you post it.
3. Check the security settings of the websites you use. Don't post on sites you are not sure about.
4. Deactivate old accounts such as Facebook.

Sending nude images

Young people can feel pressured into sharing content that could be harmful to themselves or others. This could be in the form of sharing nudes or semi-nudes.

The Protection of Children Act 1978 states:

- It is an offence to make, share, possess or show any indecent images of anyone aged under 18, even if the content was created with the consent of that young person.
- Sharing a nude or semi-nude image or video of a someone under 18 is illegal, even if it's shared between people of the same age.

Sharing images:

- Remember any image you share will last a lifetime.
- Creating, sharing or even possessing a nude or partially nude image of a child is an illegal offence.

Ways to say no:

- **Someone you're in a relationship with -** Let them know you're not comfortable. If they respect and care about you, they should understand.
- **Someone you know and like, but are not in a relationship with -** It might feel easier to say no in a funny way, like sending a GIF or meme.
- **Someone you don't know -** Ignore, block and report them, so they can't continue to contact you.

Active digital footprint: is one you know about. It is all the information you share about yourself online.

Passive digital footprint: is information you share online without realising. Such as cookies and browser history.

Definition: Phishing

The fraudulent practice of sending emails purporting to be from reputable companies in order to induce individuals to reveal personal information, such as passwords and credit card numbers.

Clues that you have been sent a phishing email:

- Spelling, punctuation and grammar mistakes.
- Links take you to random websites.
- Email address from the sender doesn't look right.
- Urgent content wanting you to act right away.
- Often wants you to update your private details.

Communicating safely online

Communicating online and making new friends with people around the world is an enjoyable way to use the Internet. But there are dangers that young people need to be aware about:

Radicalisation: when someone starts to believe or support extreme views, and in some cases, then participates in terrorist groups or acts. Young people can be at risk from being targeted by radical groups online.

Sexual exploitation: young people can be at risk of being manipulated into sexual activities online by adults posing at children. These people use the Internet to groom and harass young people.

Year 8 Computing

Definition: Digital Footprint

The information about a particular person that exists on the Internet as a result of their online activity.

Ways you can protect your digital footprint:

1. _____
2. _____
3. _____
4. _____

Sharing nude images

Young people can feel pressured into sharing content that could be harmful to themselves or others. This could be in the form of sharing nudes or semi-nudes.

The Protection of Children Act 1978 states:

-
-

Sharing images:

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Ways to say no:

- **Someone you're in a relationship with –**
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Active digital footprint:

Passive digital footprint:

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Radicalisation:

Sexual exploitation:

Year 8 Computing: Data and data representation

What is Binary?

Binary is a number system that only uses two digits: 1 and 0.

All information that is processed by a computer is in the form of a sequence of 1s and 0s.

Therefore, all data we want a computer to process needs to be converted into binary.

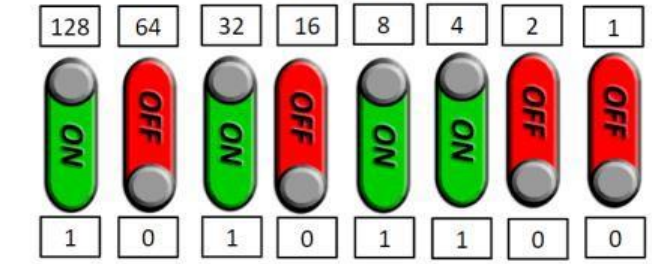
File size:

- 0 or 1 = 1 Bit(Binary Digit)
- 8 Bits = 1 Byte
- 1024 Bytes = 1 Kibibyte (KiB)
- 1024 Kibibyte = 1 Mebibyte (MiB)
- 1024 Mebibytes = 1 Gibibyte (GiB)

What range of numbers can be represented by 8 bits?	0 - 255

How many different values can be represented with 8 bits?	**256**

How Do We Convert Binary to Denary Numbers?



= 128 + 32 + 8 + 4

= 172

Binary Addition

	128	64	32	16	8	4	2	1	
	1	0	1	0	1	1	0	0	= 172
+	**0**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**= 47**
Answer	**1**	**1**	**0**	**1**	**1**	**0**	**1**	**1**	**= 219**
Sub-Total			**2**		**3**	**2**			

+1 +1 +1

Each binary column doubles in size as we move from right to left.
If the sub-total when adding units in a column is 2 you leave a 0 behind and carry a 1 into the next column.
If the sub-total when adding units in a column is 3 you leave a 1 behind and carry a 1 into the next column.

Hexadecimal conversion:

Decimal	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

Hexadecimal is a Base 16 number system, which uses the same 0 – 9 digits as our usual decimal number system, however to represent 10 – 15 the letters A – F are used.

Hexadecimal is shorthand for binary and is much easier for programmers to use than 1s and 0s

Year 8 Computing: Data and data representation

What is binary?

File size:

- 0 or 1 = _____
- 8 Bits = _____
- 1024 Bytes = _____
- 1024 Kibibyte = _____
- 1024 Mebibytes = _____

What range of numbers can be represented by 8 bits?	0 - 255
How many different values can be represented with 8 bits?	**256**

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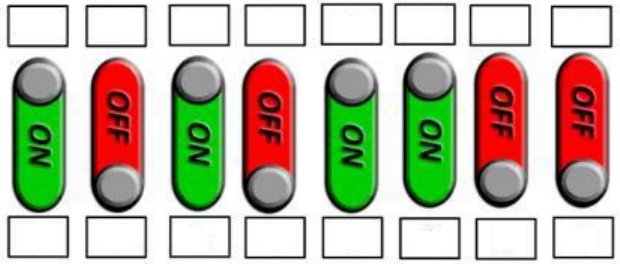

= ☐ + ☐ + ☐ + ☐

=

Binary Addition

	1	0	1	0	1	1	0	0	= 172
+	**0**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**= 47**
Answer									
Sub-Total									

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Hexadecimal is

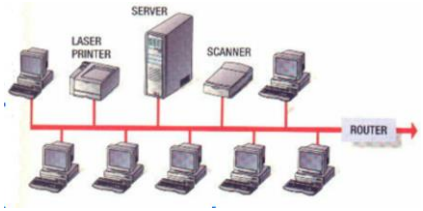
Hexadecimal is shorthand for

Year 8 Computing: Networks and communications

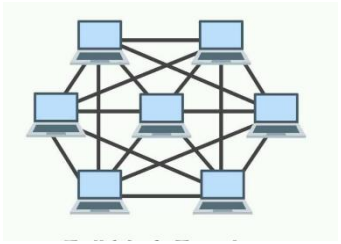
Networks and communication refer to the interconnection of computers and other devices to share resources and information. It's an essential part of modern computing that allows for data transmission and collaborative work.

Keyword	Description
Computer Network	Two or more computers (or electronic devices) connected together.
Network Media	The means for data transmission e.g Fibre optic cable (fast), ethernet cable, Wifi (wireless).
NIC (network interface card)	Hardware component (typically a circuit board or chip, installed on a computer so it can connect to a network.
Protocols	Rules that computers use to communicate with each other.

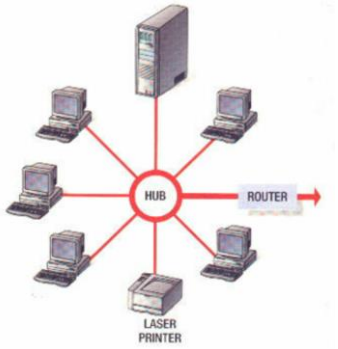
Network topologies: ways in which a network is arranged.



Bus topology



Mesh topology



Star topology

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	Hardware device forwards data from one network to another from source to destination.
Packet Switching	Data is broken into smaller **data packets** and sent individually.
Bit Rate	Speed of data transmission, often in Mbps.
IP Address	A numerical label such as 192.0.2.1 that is assigned to a device connected to a computer network.
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.
Web browser	A piece of software used to view information on the World Wide Web
Hub	Common connection point on a network. When a message is sent from a computer in a network it is sent to ALL the computers on the network.
Switch	Filters and forwards data to a specific devices on a network.
Server	A device that accepts and responds to requests made over a network.

Year 8 Computing: Networks and communications

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.

Keyword	Description
Computer Network	
Network Media	
NIC (network interface card)	
Protocols	

Network topologies: ways in which a network is arranged.

Bus topology

Star topology

Mesh topology

Term	Description
LAN	
WAN	
Routers	
Packet Switching	
Bit Rate	
IP Address	
HTTP/FTP	
The Internet	
World Wide Web	
Web browser	
Hub	
Switch	
Server	

Year 8 Computing: Computing past, present and future

History of computing

Computing Pioneer	Contributions
Charles Babbage	- Conceptualised the design for the Analytical Engine, an early mechanical general-purpose computer. - Pioneered the idea of a programmable machine.
Lady Augusta Ada Lovelace	- Recognised as the first computer programmer. - Collaborated with Babbage and wrote detailed notes on the Analytical Engine's operations.
Alan Turing	- Father of modern computer science and artificial intelligence. - Developed the concept of the Turing machine, a theoretical model for computation.
John Vincent Atanasoff	- Built the Atanasoff-Berry Computer (ABC), considered the first electronic digital computer. - Contributed to the development of early computer technologies.
Howard Aiken	- Designed and built the Harvard Mark I, an early electromechanical computer. - Pioneered the development of large-scale automatic digital computers.
Grace Hopper	- Developed the first compiler for a programming language. - Co-developed the COBOL programming language.
Jack Kilby	- Invented the integrated circuit, a crucial development for modern computer technology. - Received the Nobel Prize in Physics for his contributions.
Bill Gates	- Co-founder of Microsoft, a key player in the personal computer revolution. - Contributed to the development of operating systems and software.
Steve Jobs	- Co-founder of Apple Inc., a pioneer in personal computing. - Contributed to the development of iconic products like the Macintosh, iPhone, and iPad.
Larry Page and Sergey Brin	- Co-founders of Google, pioneers in internet search technology. - Contributed to the development of the world's leading search engine and various other technologies.

Computing present

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.

The future of computing

Technology	Basic Principles/Differences	Potential Uses
Quantum Computing	- Leverages quantum mechanics principles. - Exploits quantum superposition and entanglement for parallel processing. - Quantum computers use qubits.	- Performing complex calculations using qubits. - Differing from traditional computing through simultaneous states of qubits.
DNA Computing	- Explores using biological molecules for computation. - Future applications in solving genetics and medical-related issues.	- Solving complex problems in genetics, medicine, and optimization.
Optical Computing	- Utilises light signals for processing. - Offers advantages over traditional electronic computing.	- Faster data transfer and reduced energy consumption compared to electronic computing.
Nanotechnology	- Involves manipulating materials at the nanoscale (very small!).	- Impacts computing with advancements in miniaturization and increased processing power.
The Metaverse	- An immersive virtual shared space through VR technology.	- Users interact with each other and the environment in real-time.

Year 8 Computing: Computing past, present and future

History of computing

Computing Pioneer	Contributions
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Lady Augusta Ada Lovelace	
Alan Turing	
John Vincent Atanasoff	
Howard Aiken	
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Larry Page and Sergey Brin	

Computing present

Concept	Definition	Examples
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Machine Learning (ML)		

The future of computing

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DNA Computing		
Optical Computing		
Nanotechnology		
The Metaverse		- Users interact with each other and the environment in real-time.

Year 8 Computing: Text programming using Python

Python is a **text** based **programming language**. That can be used to create programs, games, applications and much more!

Programming Key Words	
Abstraction	Identify the important aspects to start with
Algorithm	Precise sequence of instructions
Computational thinking	Solving problems with or without a computer
Debugging	Looking at where a program might have errors or can be improved
Decomposition	Breaking down a problem into smaller parts
Iteration	Doing the same thing more than once
Selection	Making choices
Sequence	Running instructions in order
Syntax errors	Syntax errors occur when the rules of the programming language are not followed, e.g. a command word is misspelled
Logic errors	Occur when there is a flaw in the design of a program, which does not prevent it from running but it causes it to produce an incorrect or unexpected result.
Run-time errors	Occur during program execution when the processor is asked to perform an impossible operation, e.g. to divide by zero, or open a non-existent file.

Key Term	Description	Example
Print function	Used to *display* text on the screen.	print("Hello World")
Escape sequences	*Special characters* that are used to control the *formatting* of text E.g \n causes the print function to print a text on a new lines.	print("Hello, \n World") Will output: **Hello** **World**
Variable	Is a place in memory where you can *store* a value. You can use variables to store **numbers (**and other **data types)**.	My_number = 5
Calculations	Variables can also be used to store the answer to calculations.	total = 5 + 7 Print (total)
Inputs	A way of asking a user to enter a value, which is then stored on a variable.	Name = input("enter your name: ")
Data types	Are used to *store and organise* data in Python. When we use numbers in python we use **integers** (whole numbers)and **floats (decimal numbers).**	age = int(input("What is your age?") temp = float(input("What is today's temperature?")
for loops	Loops through a block of code in the program a set number of times.	for i in range(1, 6): print(i) This program will generate numbers from 1 to 5, then output them to the screen.

if, else	An if-else statement allows you to execute one block of code if a condition is true, and another block if the condition is false.	x = 10
		if x > 5:
		  print("x is greater than 5")
		else:
		  print("x is 5 or less")

Year 8 Computing: Text programming using Python

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Year 8 Computing: Graphical User Interface

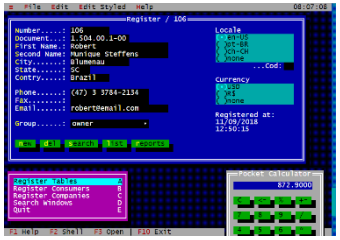
- **User Interface** – a piece of software that allows users to interact with their devices.
- **Software** – the programs and other operating information used by a computer.
- **Accessibility** – is about how well devices are designed for people with disabilities to use with ease.
- **GUI** - Graphical User Interface. An interface that allow users to interact with the device using icons, buttons and menus.

Different types of user interface:

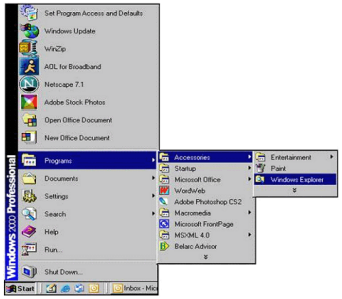
- Text based interface
- Menu based interface
- Sensor based user interface
- Sound based user interface
- Graphical user interface

Sound based interface

Graphical User Interface



Text based interface



Menu based interface

Sensor based interface

Feature of a GUI	Explanation
Windows	Rectangular areas that display information and allow users to perform tasks. They can be moved, resized, or closed.
Icons	Small pictures that represent programs, files, or commands. Clicking an icon can open a program or a document.
Menus	Lists of options or commands that can be selected to perform specific actions. They can be displayed in a bar or can pop up when needed.
Pointing Device (e.g., Mouse)	Hardware used to select items and navigate through the interface. For example, a mouse lets you click on icons and menus.
Buttons	Small boxes that you can click to make a choice, like starting a program or choosing an option.
Scroll Bars	Vertical or horizontal sliders that help you view different parts of content in a window by moving the slider up, down, left, or right.
Dialog Boxes	Special windows that ask for more information or provide choices/options before completing a task.
Sounds	Provides audio feedback as well as allowing music and audio from video.
Sensors	Sensors can be added to provide extra interface input such as light, motion or even fingerprint sensors for security.

Year 8 Computing: Graphical User Interface

- **User Interface** –

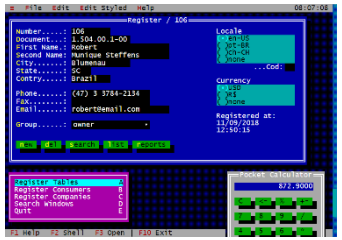
- **Software –**

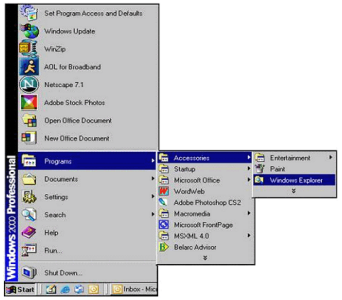
- **Accessibility** –

- **GUI** -

Different types of user interface:

-
-
-
-
-





Feature of a GUI	Explanation
Windows	
Icons	
Menus	
Pointing Device (e.g., Mouse)	
Buttons	
Scroll Bars	
Dialog Boxes	
Sounds	
Sensors	

Design and Technology

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

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.

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

List 4 safety rules for using the workshop

Vacuum forming and thermoplastic

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

What is a **thermoplastic**?

What is meant by the word “annotation”?

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:

Year 8 Design and Technology

Access FM

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

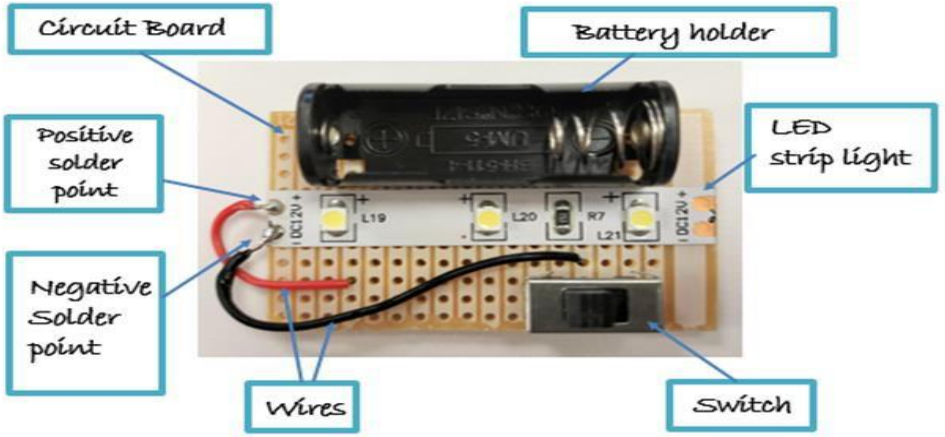
Aesthetics
Cost
Customer
Environment/ergonomics
Safety
Size
Function materials/**M**anufacture

Electronics Equipment

Soldering iron

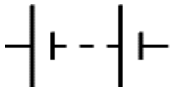
Soldering iron stand

Wire cutters



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.

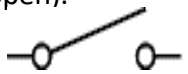


Battery

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

Switch

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



Resistor

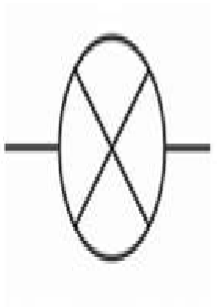
A resistor restricts or limits the flow of electrical current

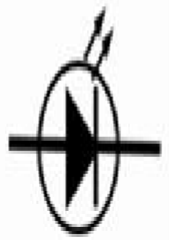
Identifying Electronic Components

Lamp/Bulb

LED
Light Emitting Diode

LED strip





Year 8 Design and Technology

What does Access FM stand for?

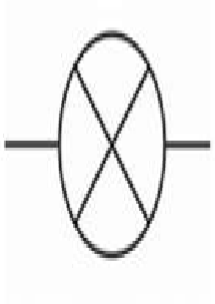
A
C
C
E
S
S
F
M

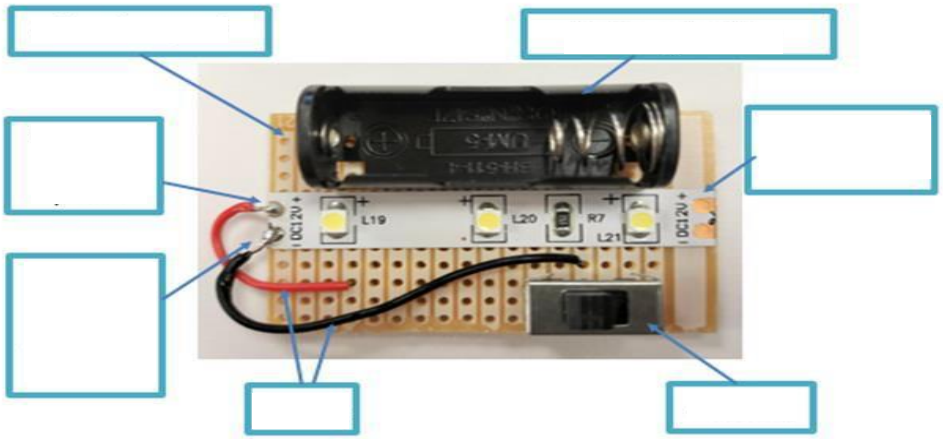
Electronics Equipment

What is a switch used for?

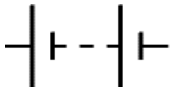
What does a resistor do?

What are the electronic components below?





What does a cell do?



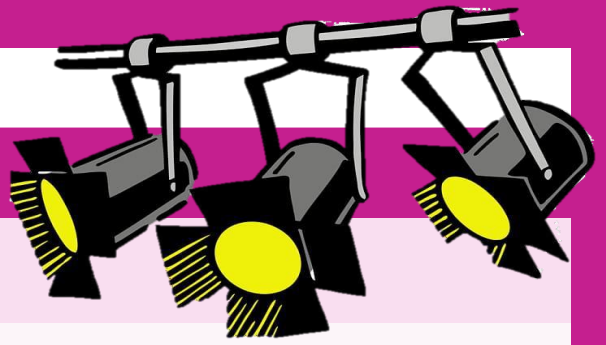
What is a battery?

Drama

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 Drama:



Key Terms	Definitions
Physical Theatre	A style of theatre where the actor uses their body as the primary tool for performance
Body As Prop/Object	The actor creates the shape and form of a prop or object. This replaces the use of set/props and/or physical objects on stage
Soundscape	Using the body to create sounds that establish the environment/atmosphere. This could be vocal delivery (using the mouth to create sounds) or percussive (tapping different parts of the body to create sound eg clapping, clicking fingers, stamping feet)
Mime	A physical performance that uses non-verbal performance skills to communicate meaning to the audience. The actor uses their facial expressions, gestures, body language and movement to communicate meaning – no spoken words are used.
Movement in Unison	All of the actors move in the same way, at the same time.
Ensemble	The term given to a group of actors who work closely together.
Physical Tension	The actor uses their muscles to create physical tension within their body. This gives the performance precision and accuracy for movement and positioning.

Physical Theatre Practitioners:

- **Stomp!**
- **DV8**
- **Frantic Assembly**
- **Splendid Theatre**
- **Complicit Push**

Physical Skills:

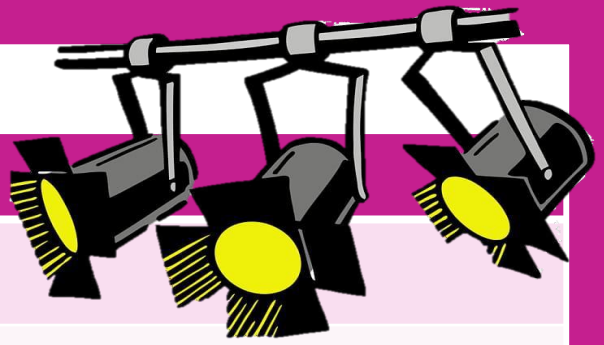
Facial Expressions: Smile, frown, wincing, furrowed brow

Body Language: Closed, open, tall, withdrawn, imposing

Gestures: Use of hands to create meaning – wave, point, thumbs up

Walk (Gait): Attitude of walk – purposeful, urgent, erratic

Year 8 Drama:



Key Terms	Definitions
Physical Theatre	
Body As Prop/Object	
Soundscape	
Mime	
Movement in Unison	
Ensemble	
Physical Tension	

Physical Theatre Practitioners:	Physical Skills:
• - • - • - • - • -	Facial Expressions = Body Language = Gestures = Walk (Gait) =

Year 8 Drama:

Script	A **script** is **a document that comprises setting, characters, dialogue, and stage directions for movies, TV shows, and stage plays.**
Playwright	A **playwright** is responsible for **writing** a play.
Practitioner	A **theatre practitioner** is a person or theatre company that **creates practical work or theories** to do with performance and theatre.
Status	Status refers to the **power difference** between two characters.
Physical Skills	The way an actor moves to show character. Including; gesture, posture, body language, facial expression, levels.
Naturalism	Acting that is carefully and meticulously rehearsed in order to **give the impression of real life** – not over the top or melodramatic.
Audience Awareness	This is the actors understanding of what will be **seen** 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.
Dialogue	Spoken conversation used by two or more characters to express thoughts, feelings, and actions.
Transitions	In Drama, a transition refers to the **movement** from one scene to another.
Blocking	Blocking is the precise staging (placing) of actors on the stage.
Hot Seating	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.

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 they 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??

Year 8 Drama:

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

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Year 8 Drama: Documentary drama

Documentary Drama

Documentary Drama is a form of theatre where real life events are used and re-enacted in a dramatized way. It uses pre-existing material (such as newspapers, government reports, interviews, journals, and correspondences) as source material for stories about real events and people, frequently without altering the text in performance.
Any documentary drama piece would need to be researched fully so accurate information is shown. There are many TV shows and films which use real life events as their starting point.

Levels of Tension

There are 7 different levels of tension which actors use to show different emotions.

Fun Fact! The 7 levels of tension were invented by a French acting teacher called Jacques Lecoq who specialised in mime.

1. **Exhausted**, catatonic, no tension. Floppy, unable to stand.
2. **Relaxed**, laid back, little energy, not very observant, zombie like.
3. **Neutral**, good posture, aware.
4. **Alert**, interested, aware, curious, suspicious.
5. **Melodramatic/suspense**; exaggerated, reactive, use of arms legs and face.
6. **Passionate**, confident, reactive, strong emotions, powerful gesture, seeking attention.
7. **Tragic**, rigid, frozen in anger or fear, unable to move.

Role on the Wall is a dramatic technique used to explore a character's emotions and actions. In and around the human outline you would invent ideas using the headings.

- Looks
- Job/ Education
- Family and Relationships
- Personality
- Enemies

Drama Terminology

Stimulus	This is the starting point or source of information for starting a piece of Drama.
Backstory	This refers to the history of the character or plot before the drama begins.
Hot Seating	A drama technique where a character is questioned about his/her background, behaviour and motivation.
Flashback	A dramatic technique used to interrupt the current chronological scenes and show earlier events.
Narration	A dramatic technique where one or more performers talk directly to the audience to tell the story.
Captions	Captions are written words on a placard or screen on the stage.

Year 8 Drama: Documentary drama

Documentary Drama

Documentary Drama is a form of _____ where real _____ events are used and re-enacted in a _____ way. It uses pre-existing material (such as newspapers, government reports, _____, journals, and correspondences) as source material for stories about real _____ and people, frequently without altering the text in _____.

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Fun Fact!

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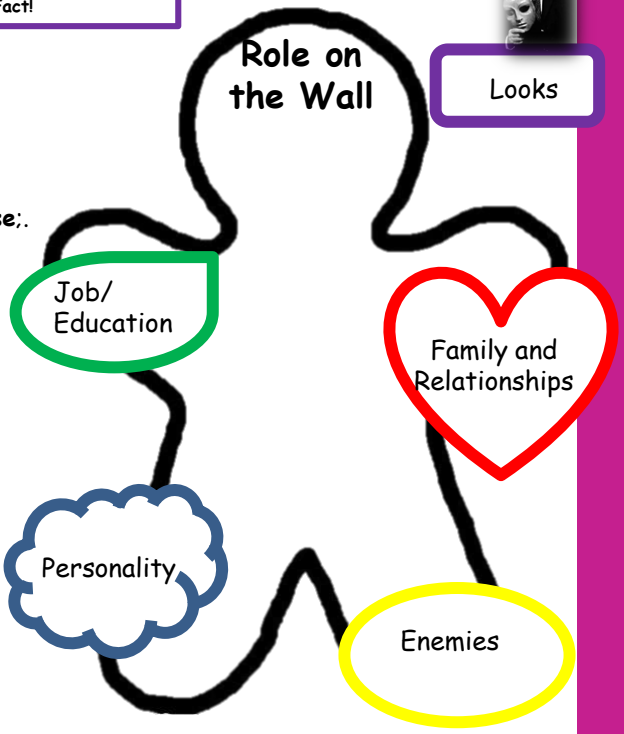
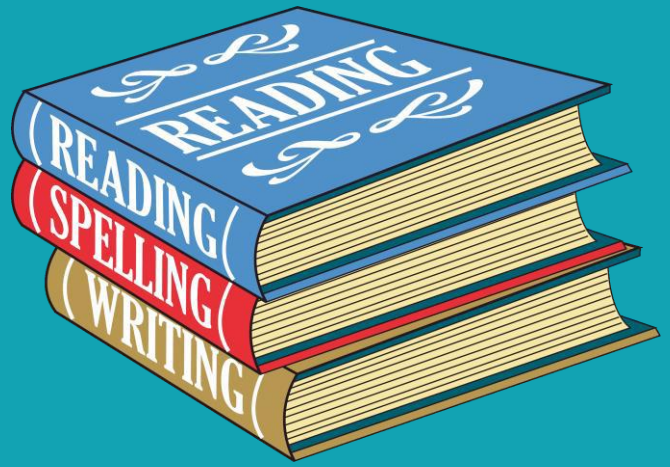
3. **Neutral**,.
4. **Alert**,
5. **Melodramatic/suspense**;.
6. **Passionate**,
7. **Tragic**,



Drama Terminology	
Stimulus	
Backstory	
Hot Seating	
Flashback	
Narration	
Captions	

English



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be kind | work hard | take responsibility

Year 8 English: 'Of Mice and Men' and Transactional Writing

When talking about a writer, we always use their **surname** – not their first name (e.g. Steinbeck, Austen).

Characterisation is the way a writer designs a character. It is usually done on purpose to make the reader think or feel something.

Zoomorphism is where an object or person is described to have the characteristics of an animal.

Symbolism is where an object, character or event represents something else, in the text or in real life.

Foreshadowing is where a writer hints at something that will happen later in the text

Texts can be written in a **cyclical structure**. This is where the text starts and ends in the same way.

Knowledge for Reading

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 think
L	Link	Explain how these ideas link to the real world

Knowledge for Writing

When we are writing to persuade someone to agree with our view, we can use persuasive techniques to help us do that. The first letter of each technique spells out **DAVE FORESTER**

Language Technique	Definition
Direct Address	Speak to the audience directly (pronouns you/your)
Adjectives	Powerful adjectives
Vocabulary	Powerful words
Exaggeration (hyperbole)	Making something sound more extreme than it is
Facts	True information
Opinions	People's views/beliefs
Rhetorical Questions	A question making people think
Emotive Language	Words that make the audience feel an emotion
Statistics	Researched information in percentages
Tripartite Structure	List of 3 (facts, adjectives, reasons etc)
Expert Evidence	The views of people who know a lot about the topic
Repetition	Important words/phrases use more than once

'Of Mice and Men' is set in the USA, during The Great Depression.

The Great Depression was an economic (money related) issue, that began in the USA and spread across the world. Many people were out of work, hungry or homeless.

It started with The Wall Street Crash in 1929, where the stock markets crashed and people's shares in businesses were worth nearly nothing. People lost all of their savings as a result. This was made worse by very dry weather, known as The Dust Bowl, which meant crops didn't grow.

Year 8 English: 'Of Mice and Men' and Transactional Writing

How should we refer to writers when we write about them?

What is **characterisation?**

What is **zoomorphism?**

What is **symbolism?**

What is **foreshadowing?**

What is a **cyclical structure?**

Knowledge for Reading

Writing about Literature

- **P** Point
- **E** Evidence
- **A** Analyse
- **Z** Zoom
- **E** Effect
- **L** Link

Knowledge for Writing

When we are writing to persuade someone to agree with our view, we can use persuasive techniques to help us do that. The first letter of each technique spells out **DAVE FORESTER**

Language Technique	Definition
D	
A	
V	
E (hyperbole)	
F	
O	
R	
E	
S	
T	
E	
R	

'Of Mice and Men' is set in the USA, during The Great Depression.

How did The Great Depression affect people in America?

How did The Wall Street Crash cause poverty?

Why did the Dust Bowl make things worse?

Year 8 English:

Vocabulary	Definition	Example
1. Novella	A short novel.	*Steinbeck wrote his novella about The Great Depression.*
2. Patriarchal	Describes a society where men are considered to be more powerful and important.	*1930s California was a patriarchal society.*
3. Poverty	Where a person is poor and is struggling to afford the essentials they need to live.	*The Great Depression caused lots of people to be living in poverty.*
4. Prejudiced	A way of describing an unfair opinion or dislike you have for someone because of race, gender, religion, disability etc.	*Candy, Lennie, Crooks and Curley's Wife all suffer in the novella because people have prejudiced views towards them.*
5. Rivalry	A competition between two people to have the most power.	*Curley and Slim have a rivalry on the ranch.*
6. Innocent	Has two meanings. It can mean that someone is not guilty of a crime. It can also describe a person who has no knowledge of evil or unpleasant things in the world.	*The police thought the prisoner was innocent.* *Lennie is innocent like a child.*
7. Segregated	When people are separated or divided from each other.	*On the ranch, Crooks is segregated from the other ranchers.*
8. Loyal	Describes someone who can be trusted to be supportive and committed to someone or something else.	*George and Lennie are loyal friends.*
9. Status	Someone's rank or importance in a group	*On the ranch, the boss has the highest status.*
10. Desperate	Describes someone who needs something so much they are suffering.	*Curley's Wife is desperate for attention.*

Grammar

11. Interrogatives

Questions

What time is it please?

12. Imperatives

Commands

Come over here!

13. Declaratives

Statements

The novel is set in America.

14. Past Tense

Refers to events that have already happened

Lennie found a mouse

15. Present Tense

Refers to events that are happening now

Lennie is finding a mouse.

16. Future Tense

Refers to events that will happen but haven't yet

Lennie will find a mouse.

Punctuation

17. Ellipsis …

Used to create a dramatic pause

Then he saw it… the terrifying shadow.

18. Brackets ( )

Add parenthesis *(extra information)* to a sentence

19. Comma ,

Separate a main clause and a subordinate clause

When they got to the ranch, George and Lennie went to speak to the boss.

Year 8 English:

Vocabulary	Definition	Example
1. Novella		*Steinbeck wrote his novella about The Great Depression.*
2. Patriarchal		*1930s California was a patriarchal society.*
3. Poverty		*The Great Depression caused lots of people to be living in poverty.*
4. Prejudiced		*Candy, Lennie, Crooks and Curley's Wife all suffer in the novella because people have prejudiced views towards them.*
5. Rivalry		*Curley and Slim have a rivalry on the ranch.*
6. Innocent		*The police thought the prisoner was innocent.* *Lennie is innocent like a child.*
7. Segregated		*On the ranch, Crooks is segregated from the other ranchers.*
8. Loyal		*George and Lennie are loyal friends.*
9. Status		*On the ranch, the boss has the highest status.*
10. Desperate		*Curley's Wife is desperate for attention.*

Grammar

11.	12.	13.	14.	15.	16.
Questions *What time is it please?*	Commands *Come over here!*	Statements *The novel is set in America.*	Refers to events that have already happened *Lennie found a mouse*	Refers to events that are happening now *Lennie is finding a mouse.*	Refers to events that will happen but haven't yet *Lennie will find a mouse.*

Punctuation

17. _____ ...

Used to create a dramatic pause

Then he saw it... the terrifying shadow.

18. _____ ( )

Add parenthesis *(extra information)* to a sentence

19. _____ ,

Separate a main clause and a subordinate clause

When they got to the ranch, George and Lennie went to speak to the boss.

Year 8 English: 'Blood brothers' and Narrative Writing

Knowledge for Reading

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 out 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

Knowledge for Writing

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**

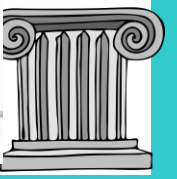
When we begin writing, we should **withhold some information from the reader**. This means we should keep some information secret to build curiosity in the reader.

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.



Year 8 English: 'Blood brothers' and Narrative Writing

Knowledge for Reading

What are inferences?

What must we do when we have identified and 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 _____

_____

_____

Knowledge for Writing

What does it mean to control the structure of **our text?**

a)

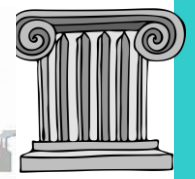
b)

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?



Year 8 English:

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

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..

Year 8 English:

	Definition	Example
1. Superstition		*The belief that placing shoes on the table is bad luck is a superstition..*
2. Privilege		*Mrs Lyons' middle class status gives her privilege..*
3. Discrimination		*Mickey suffers discrimination at school as he is working class*
4. Inequality		*The social class system creates inequality in Britain.*
5. Debt	Borrowing money or goods from a person or business, with the agreement that you will pay them back later	
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7. Manipulate	When a person controls or influences another person by pressure or trickery	
8. Stage Direction		*Russell uses stage directions to suggest the tone actors should speak in.*
9. Musical		*Blood Brothers is a musical, written by Willy Russell.*
10. Monologue		*Mickey's monologue is designed to make the audience laugh.*

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..

Grammar

11. Root word

_____

–

_____

–

_____

_Big – bigger, biggest

12. Prefix

_____

–

_____

–

_____

–

Microscope, microwave

13. Suffix

_____

_____

_____

_Laughed, smiled, tried

14. Word family

_____

–

_____

_____

Writer, written, rewrite, writing.

15. Compound word

_____

_____

_____

Basketball, starfish

Year 8 English: 'The Book Thief' and Descriptive writing

Knowledge for Reading

A **connotation** is a thought or feeling you associate with a particular word or phrase

Hyperbole is an exaggerated word form, used to emphasise a meaning

A **simile** compares two objects/ideas /actions, using the terms 'like' or 'as'

A **metaphor** describes something as being/doing something it isn't/doesn't

Personification is where an inanimate object or animal is described as having human characteristics

Pathetic fallacy is where human emotions are given to something not human
e.g. the weather

Methods like similes, metaphors etc. are all types of **imagery**, that provoke the reader to form a mental picture

Symbolism is where an object/character/ event represents something else

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

Knowledge for Writing

Description is different to Narration.

Description –
write what a scene is like, by zooming in on its parts and describing them in detail.
Nothing should happen.

Narrative –
Writing a story or retelling events,
Good narrative writing includes lots of description.

Narrative Structure	Definition
Exposition	Introduce the characters and setting
Inciting incident	An event that moves the story forward (good or bad)
Rising action	Tension rises towards the climax
Climax	Most dramatic part of the narrative
Falling action	Tension falls
Denouement	The outcome of the story

What is The Grim Reaper?

- A legendary figure who represents death, appearing in Europe in the 14thC (around the time of The Black Death)
- The figure is thought to take souls from Earth to the afterlife
- The figure has been alluded to in a wide range of Literature over time

Year 8 English: 'The Book Thief' and Descriptive writing

Knowledge for Reading

- What is a connotation?
- What is hyperbole?
- What is a simile?
- What is a metaphor?
- What is personification?
- What is pathetic fallacy?
- What is imagery?
- What is symbolism?

Writing about Literature

- **P** Point _____
- **E** Evidence _____
- **A** Analyse _____
- **Z** Zoom _____
- **E** Effect _____
- **L** Link to Context _____

Knowledge for Writing

Description is different to Narration.

Description –

_____

_____

_____

Narrative –

_____

_____

_____

_____

Narrative Structure	Definition
Exposition	
Inciting incident	
Rising action	
Climax	
Falling action	
Denouement	

What is The Grim Reaper?

- _____
- _____
- _____

Year 8 English:

	Definition	Example
1. Courage	Bravery, valour, gallantry	*Liesel and her foster family demonstrate courage throughout the book*
2. Dictatorship	A country run by a leader who has complete power and gained power by force and violence	*Nazi Germany was a dictatorship.*
3. Discrimination	Treating someone unfairly based on race, religion, gender, age, disability etc.	*Max suffers discrimination from the Nazis as he is Jewish*
4. Morals	An understanding of what is right and what is wrong	*Hans demonstrates that he has morals as he risks his safety to help Max*
5. Responsibility	Having a duty to take care of something and keep it safe	*As Hans was saved by Max's father in World War 1, so feels he has a responsibility over Max.*
6. Narrator	A character who tells the details of the story to the reader	*The character of Death is the narrator in the novel.*
7. Ignorance	When people have little awareness or understanding of something – this can lead to prejudice or discrimination	*Nazi Germany was full of ignorance.*
8. Dehumanise	Treat someone as if they are an object or animal, not seeing them as a human being with human rights	*Jewish people are dehumanised in the novel.*
9. Segregation	Separating people in society and not allowing them to mix, based race, gender, ethnicity, religion, ability etc.	*In 'The Book Thief', segregation breeds prejudice.*
10. Censorship	Where the government control and supress what books, films, news, media etc. the public see and hear	*Censorship is a way for a government to control what the people know and think.*

Punctuation

17. , Commas

Add extra information to a sentence

Leisel's life changed forever, in just a matter of seconds.

18. ( ) Brackets

Add extra information to a sentence

Leisel's life changed forever (in just a matter of seconds).

19. – Dashes

Add extra information to a sentence

Leisel's life changed forever - in just a matter of seconds

Grammar

11. Adverbials

A phrase that gives information about how or when an action occurs

Instantly, she dropped her cup.

12. Prepositional Phrase

Phrases that tell you where/when something is in relation to something else

The bag is in the car.

13. Interrogative

A question

Where were you yesterday?

14. Imperative

A command

Answer the question

15. Declarative

A statement giving information.

Tomorrow is Wednesday.

Year 8 English:

	Definition	Example
1. Courage		*Liesel and her foster family demonstrate courage throughout the book*
2. Dictatorship		*Nazi Germany was a dictatorship.*
3. Discrimination		*Max suffers discrimination from the Nazis as he is Jewish*
4. Morals		*Hans demonstrates that he has morals as he risks his safety to help Max*
5. Responsibility		*As Hans was saved by Max's father in World War 1, so feels he has a responsibility over Max.*
6. Narrator		*The character of Death is the narrator in the novel.*
7. Ignorance		*Nazi Germany was full of ignorance.*
8. Dehumanise		*Jewish people are dehumanised in the novel.*
9. Segregation		*In 'The Book Thief', segregation breeds prejudice.*
10. Censorship		*Censorship is a way for a government to control what the people know and think.*

Grammar

11. ____________________

Instantly, she dropped her cup.

12. ____________________

The bag is in the car.

13. ____________________

Where were you yesterday?

14. ____________________

Answer the question

15. ____________________

Tomorrow is Wednesday.

Punctuation

17. , ____________________

Leisel's life changed forever, in just a matter of seconds.

18. () ____________________

Leisel's life changed forever (in just a matter of seconds).

19. - ____________________

Leisel's life changed forever - in just a matter of seconds

English: Spelling Challenge- Most commonly misspelled words.

1. Acceptable	11. Believe	21. Disappear	31. Foreign	41. Ignorance
2. Accidentally	12. Calendar	22. Disappoint	32. Fourth	42. Immediate
3. Accommodate	13. Category	23. Drought	33. Gauge	43. Independent
4. Acquire	14. Cemetery	24. Embarrass	34. Generally	44. Indispensable
5. Acquit	15. Changeable	25. Equipment	35. Grammar	45. Intelligence
6. A lot	16. Collectible	26. Exceed	36. Grateful	46. Interrupt
7. Amateur	17. Committed	27. Excite	37. Guarantee	47. Judgement
8. Apparent	18. Conscience	28. Existence	38. Harass	48. Knowledge
9. Argument	19. Conscientious	29. Experience	39. Height	49. Leisure
10. Because	20.Definitely	30. February	40. Hierarchy	50. Library

English: Spelling Challenge- Most commonly misspelled words.

1.	11.	21.	31.	41.
2.	12.	22.	32.	42.
3.	13.	23.	33.	43.
4.	14.	24.	34.	44.
5.	15.	25.	35.	45.
6.	16.	26.	36.	46.
7.	17.	27.	37.	47.
8.	18.	28.	38.	48.
9.	19.	29.	39.	49.
10.	20.	30.	40.	50.

English: Spelling Challenge- Most commonly misspelled words.

51. Lightning	61. Occurrence	71. Questionnaire	81. Rhythm	91. Umbrella
52. Maintenance	62. Official	72. Receive	82. Schedule	92. Vacuum
53. Manoeuvre	63. Parallel	73. Recommend	83. Scissors	93. Vicious
54. Millennium	64. Parliament	74. Referred	84. Sensible	94. Whether
55. Miniature	65. Particle	75. Reference	85. Separate	95. Weigh
56. Minute	66. Pigeon	76. Relevant	86. Special	96. Weird
57. Mischievous	67. Possession	77. Religious	87. Success	97. Whistle
58. Noticeable	68. Preferable	78. Restaurant	88. Tomorrow	98. Wonderful
59. Occasion	69. Principle	79. Ridiculous	89. Twelfth	99. Yoghurt
60. Occur	70. Privilege	80. Rhyme	90. Tyranny	100. Youth

English: Spelling Challenge- Most commonly misspelled words.

51.	61.	71.	81.	91.
52.	62.	72.	82.	92.
53.	63.	73.	83.	93.
54.	64.	74.	84.	94.
55.	65.	75.	85.	95.
56.	66.	76.	86.	96.
57.	67.	77.	87.	97.
58.	68.	78.	88.	98.
59.	69.	79.	89.	99.
60.	70.	80.	90.	100.

Geography

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 Geography: Ecosystems

Key Vocabulary

1	**Biome**	An ecosystem on a larger or global scale e.g. tropical rainforest
2	**Consumer**	Eats herbivores and/or plants
3	**Decomposer**	Breaks down dead organic matter and returns nutrients to the soil
4	**Ecosystem**	A biological community of living and non living organisms.
5	**Food Chain**	Connections between different organisms that rely on one another for food
6	**Food web**	A complex hierarchy of plants and animals relying on each other for food.
7	**Producer**	Produces its own energy by absorbing carbon dioxide and solar radiation in the process of photosynthesis.
8	**Adaptation**	How plants and animals change their bodies to survive in different locations.
9	**Precipitation**	Moisture that falls from the sky (rain, hail, sleet or snow)

Tropical Rainforests

10 Use the map to describe the distribution of tropical rainforests

Tropical rainforests are found on and near to the equator where the climate is warm and wet.

They can be found in coastal regions and inland.

They are located in…

- Northern South America (Brazil, Peru)
- Central Africa (DRC, Gabon, Equatorial Guinea)
- South East Asia (Indonesia)

Key Vocabulary

11	**What are the characteristics of a desert biome?**	-Days are extremely hot. -Precipitation is less than 10 inches per year. -Home to cacti, bunch grasses, and shrubs. -Snakes, lizards, scorpions and insects live here.
12	**What are the characteristics of a tropical rainforest biome?**	-Mostly located around the equator. -Hot all year round with 80-100 inches of precipitation every year. -High biodiversity -Home to reptiles, monkeys, birds, and in some places even elephants.
13	**What are the characteristics of a deciduous forest biome?**	-Mild summers and cold winters. -Large variety of trees including oak, beech, maple. -Home to deer, small mammals, and insects.
14	**What are the characteristics of a savanna/ grassland biome?**	-Largely located in central and southern Africa. -Tall grasses and shrubs but limited trees. -Home to elephants, zebras, ostrich.
15	**What are the characteristics of a tundra biome?**	-Cold climate, little rainfall. -Permafrost (a layer of frozen soil) -Small short plants with a short growing season. -Animals such as the Arctic fox, mountain goats, and snowy owls.

Year 8 Geography: Ecosystems

Key Vocabulary

1	What is a biome?
2	What is a consumer?
3	What is a decomposer?
4	What is an ecosystem?
5	What is a food chain?
6	What is a food web?
7	What is a producer?
8	What is adaptation?
9	What is precipitation?

Tropical Rainforests

Use the map to label the distribution of tropical rainforests

10

Tropical rainforests are found on and near to the _____.

They can be found in _____.

They are located in…

- _____
- _____

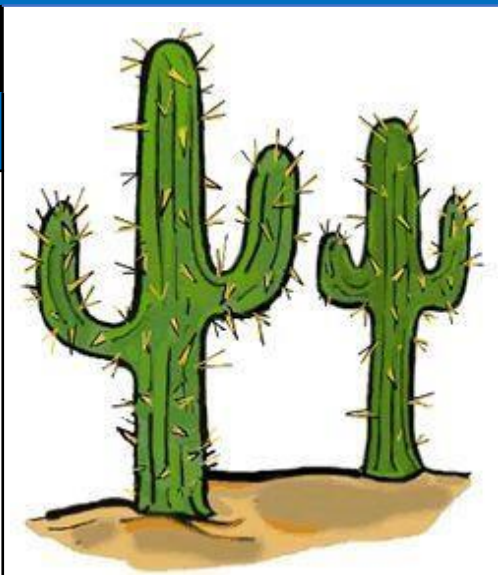
Key Vocabulary

11	**What are the characteristics of a desert biome?**
12	**What are the characteristics of a tropical rainforest biome?**
13	**What are the characteristics of a deciduous forest biome?**
14	**What are the characteristics of a savanna/ grassland biome?**
15	**What are the characteristics of a tundra biome?**

Year 8 Geography: Ecosystems

Cold Environments

16	**Name the characteristics of a tundra environment**	• There is a layer of permanently frozen soil called permafrost • Very cold winters and very brief winters • Vegetation includes mosses, grasses, and low shrubs • Tundra is found at high altitudes **(above 60 degrees north)**



Hot Deserts

17	**How do camels adapt to the hot desert environment?**	**Thick eye lashes** - Prevents sand from getting into the eyes. **Hump** - Stores fat as a source of energy. **Tolerant to high temperatures** - Does not need to sweat to keep cool, so conserving water. **Thick tough lips** - Enables it to eat a range of spiky plants. **Large feet** - To help prevent sinking into the sand. **Sandy coloured** - Camouflage.
18	**How do cacti adapt to the hot desert environment?**	**Long, wide roots** - To reach out further, near the surface to collect more water. **Taproots** - These act as anchors and grow deep into the soil to reach water. **Spines (spikes)** - They reduce the surface area, reducing the amount of water lost from evaporation. The spines also protect the plant from being eaten by predators. **A large, fleshy stem** - This is a good store of water. The cactus expands or contracts depending on how much water it holds.

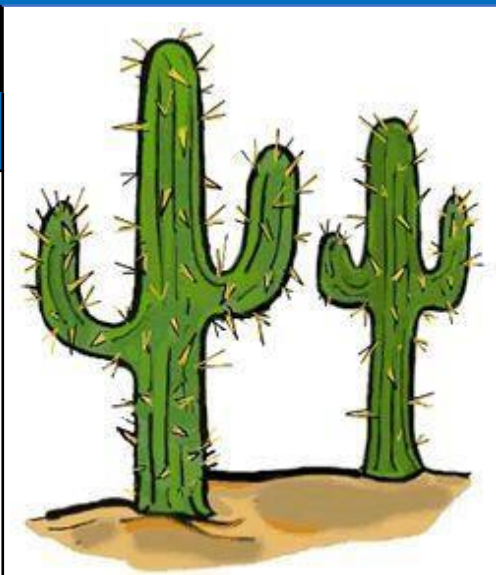
Small Ecosystems

19	**What is interdependence?**	Each part of the ecosystem relies on another part. Living things depend on each other for growth and survival.
20	**What is the difference between a food chain and a food web?**	A food chain outlines who eats whom. A food web is all of the food chains in an ecosystem
21	**Who are the producers, primary consumers and secondary consumer in the pond food web?**	In a pond ecosystem an example of a producer is **algae**. In a pond ecosystem an example of a primary consumer is a **mayfly**. In a pond ecosystem an example of a secondary consumer is a **fish**.

Year 8 Geography: Ecosystems

Cold Environments

16	Name the characteristics of a tundra environment	



Hot Deserts

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Small Ecosystems

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Year 8 Geography: Oceans

Key vocabulary:

1	**Ocean**	The ocean is a body of salt-water that are a continuous space, divided into 5 parts.
2	**Threat**	The possibility of trouble, danger, or ruin.
3	**Greenwashing**	Disinformation presented to the public to make a company appear environmentally friendly.
4	**Import**	Bringing goods or services into a country
5	**Export**	Sending goods or services out of a country.
6	**Seas**	Seas are large bodies of mainly salt-water, smaller than an ocean but flows or feeds into the oceans.
7	**Pollution**	The presence in or introduction into the environment of a substance which is harmful.
8	**Overfishing**	To catch too many fish so that there are not enough remaining
9	**Habitat**	A natural environment an animal lives in.

Where are the oceans?

10	**Where are the 5 oceans of the world?**	
11	**What are the five ocean zones and how deep are they?**	Sunlit zone - 0 -200 metres Twilight zone - 200 - 1000 metres Midnight zone - 1000 - 4000 metres The abyss - 4000 - 6000 metres The trenches -.6000 metres and lower

How do we use the ocean?

12	**How do we use the ocean for fishing?**	More than 1 million people rely on fish as their primary source of *protein*. Between 0.97 and 2.7 trillion fish are caught every year. *Tuna* is the most popular fish and the Pacific Ocean's greatest asset is its fish.
13	**How do we use the ocean for renewable energy?**	Offshore *wind energy* is wind turbines in oceans and seas. They are vital is combating climate change. The vast majority of *wind turbines* are currently in the Atlantic ocean but more are planned, especially in the Pacific.
14	**How do we use the ocean for imports and exports?**	80% of the world's goods are transported by sea. In the last 20 years the average size of a container ship has doubled. A container ship can now carry up to 24,000 containers.
15	**How is the ocean used as a habitat?**	Many plants and animals live in the ocean. The number of species is currently unknown. Scientists believe *91% of ocean species have yet to be classified.*
16	**How do we use the ocean for leisure?**	Popular activities in the ocean include *swimming, snorkelling, scuba diving, sailing, fishing and surfing*.
17	**What is carbon storage and how do we use the ocean for it?**	Scientists have found oceans a good location to store (sequester) carbon. Oceans currently take up to *a third of carbon emitted by human activity*. This is roughly 2 billion metric tonnes every year.

Threats to our oceans

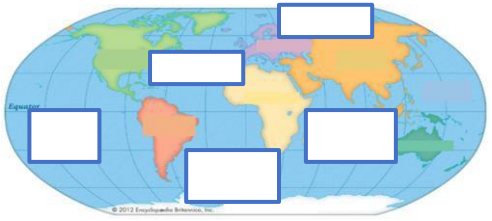
20	**What is coral bleaching?**	Stress caused by changes in temperature and pollution can cause coral bleaching. 1. Coral and algae depend on each other to survive. 2. If stressed, algae leaves the coral. 3. Coral is left bleached and vulnerable.
21	**What is overfishing?**	Overfishing is when too many fish are taken out of the oceans. This happens because many people rely on fish as a source of protein. High demand and larger fishing vessels means there are now fewer fish in the oceans than ever before.
22	**What are oil spills?**	An oil spill is when oil is leaked into a body of water, like an ocean. Oil spills are very dangerous as they kill plants and animals and destroy habitats.

Year 8 Geography: Oceans

Key vocabulary:

1	What is an ocean?
2	What is a threat?
3	What is greenwashing?
4	What is an import?
5	What is an export?
6	What are seas?
7	What is pollution?
8	What is overfishing?
9	What is a habitat?

Where are the oceans?

10	Where are the 5 oceans of the world?	
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How do we use the ocean?

12	How do we use the ocean for fishing?	
13	How do we use the ocean for renewable energy?	
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16	How do we use the ocean for leisure?	
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Threats to our oceans

20	What is coral bleaching?	
21	What is overfishing?	
22	What are oil spills?	

Year 8 Geography: International Development

Key Vocabulary:

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

Measuring Development:

13	**Social indicators** • Birth rate • Death rate • Adult literacy • Doctors per 1000 people • Life expectancy	**Economic indicators** • GNP per capita • Economic growth • Gross national product

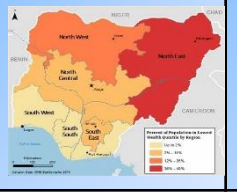
Causes of uneven

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?	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. 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. 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.

Nigeria and The DRC:

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

Sustainable development:

20	What are sustainable development goals?	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.

Year 8 Geography: International Development

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	
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12	Inequality	

Measuring Development:

13	**Social indicators**	**Economic indicators**

Causes of uneven

14	Name a physical factor which limits development	
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Nigeria and The DRC:

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Sustainable development:

20	What are sustainable development goals?	

Year 8 Geography: Natural Hazards

Key Vocabulary

1	**What is a volcano?**	A vent at the surface of the earth, through which magma and other volcanic materials are ejected
2	**Define 'Immediate responses'**	The reaction of people as the disaster happens and in the immediate aftermath
3	**Define 'Long-term responses'**	Later reactions that occur in the weeks, months and years after the event
4	**Define 'Monitoring'**	Recording physical changes to help forecast when and where a natural hazard might strike
5	**Define 'Planning'**	Actions taken to respond to, and recover from, natural disasters
6	**Define 'Prediction'**	Attempts to forecast when and where a natural hazard will strike
7	**What is a 'Primary effects'?**	The initial impact of a natural event on people and property
8	**Define 'Protection'**	Actions taken before a hazard strikes to reduce its impact
9	**What is a 'Secondary effect'?**	The after-effects that occur as indirect impacts of a natural event
10	**What is 'Subduction'?**	A process occurring at destructive plate margins where a heavier oceanic plate is forced under a continental plate
11	**What is a 'Tectonic hazard'?**	A natural hazard caused by movement of tectonic plates

Plate Margins:

12	Describe the plate movement at the following plate margins: ● Conservative ● Destructive: ● Constructive:	● Conservative: plates move past each other ● Destructive: plates move towards each other and one is subducted ● Constructive: plates move away from each other

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

Volcano case study: Tonga

17	**Describe the location of Tonga** 	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.

Types of volcanoes

18	**Describe the characteristics of shield volcanoes and composite volcanoes** 	**Shield Volcano** · Very little explosive activity · Runny lava · Gentle, sloping sides · Lava travels long distances before it cools **Composite Volcano** · Violent eruptions · Steep sides · Sticky lava which doesn't travel far · Alternate layers of ash and lava, also known as stratovolcanoes

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

Year 8 Geography: Natural Hazards

Key Vocabulary

1	What is a volcano?	
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	Shield Volcano	**Composite Volcano**

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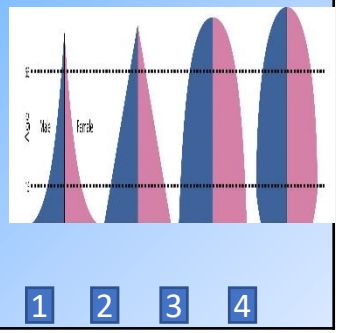
Year 8 Geography: Population

Key Vocabulary

1	**Population**	The amount of inhabitants of a particular place
2	**Population density**	How many people are in a particular area e.g. per square mile
3	**Life expectancy**	The average age people live till
4	**Natural increase**	When there are more births than deaths
5	**Natural decrease**	When there are more deaths than births
6	**Working population**	The number of people at working age
7	**Overpopulation**	Where there are too many people in an area
8	**Population control**	Systems to limit the number of people in an area
9	**Birth rate**	The number of babies born per 1000 population per year
10	**Death rate**	The number of deaths per 1000 population per year
11	**Migration**	The movement of someone from one place to another.
12	**Youthful population**	A population with a higher percentage of young people.

Population pyramids:

13	Pyramid 1 – rapidly expanding Pyramid 2 – Expanding Pyramid 3 – Stationary Pyramid 4 - Contracting	

Youthful population:

14	Name 3 advantages of a youthful population	• There are more taxes paid as there are more citizens working • There are lots of workers for the future • Lots of young people could join the military creating a strong armed forces
15	Name 3 disadvantages of a youthful population	• Young children need healthcare e.g vaccination. These can be expensive to provide • There may be a lack of housing resulting in homelessness • Providing schools and teachers are expensive

Overpopulation:

16	Can the world achieve zero hunger by 2030?	No. If recent trends continue, the number of people affected by hunger will surpass 840 million by 2030, 9.8% of the population
17	How many people in the world go hungry?	Currently, 690 million people are hungry, 8.9% of world population.

Population control:

18	What are birth control programmes?	• These aim to reduce the birth rate. • Some governments do this by having laws about how many children you can have. • Others may help couples plan to have children by providing free contraception and sex education.
19	What are immigration laws?	• Immigration laws aim to control the number of people moving into a country. • Governments can limit the number of people that are allowed to immigrate. • They can also be selective about who they let in.
20	What is the China one child policy??	Established in 1979, it meant that each couple was only allowed one child.

What's next:

21	Name two positives of population growth in Africa?	• There may be a larger number of the population who are educated • There will be a large working population. This will bring benefits to the economy.
22	Name two negatives of population growth in Africa	• Population is growing faster than jobs are created • More people means more greenhouse gas emissions that contribute to climate change • Waste disposal may be an issue, leading to dirty cities

Year 8 Geography: Population

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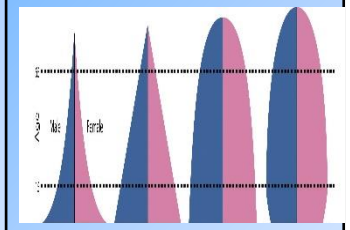
13		 1 2 3 4

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Year 8 Geography: Disease

Key Vocabulary

1	Disease	An illness of people, animals or plants caused by infection.
2	Type of transmission - Direct contact	This can be sexual contact or non-sexual contact. e.g. shaking hands.
3	Type of transmission - Vector	An organism that spreads disease. e.g. mosquitoes carry Malaria.
4	Type of transmission – water	Dirty water can transmit diseases such as the cholera bacterium.
5	HIV AIDS	A viral infection that damages cells in the immune system reducing your ability to fight infection.
6	Epidemic:	An outbreak in a single community, population or region.
7	Pandemic:	An epidemic which has spread around the world affecting hundreds of thousands of people, across many countries.
8	COVID-19	A respiratory illness caused by a coronavirus transmitted by direct contact.
9	Malaria	A disease spread by mosquitos causing fever and flu- like symptoms that kills.
10	Infant morality	The number of babies that die before the age of 1, per 1000 of population, per year.
11	Climate change	The change in the world's temperature and weather due to an increase in greenhouse gases.
12	prevalent	Widespread, common, frequent

Introduction to disease:

13	What is the most common disease in HICs? What about LICs? What are the 5 ways disease are transmitted?	In HICs, the most common disease is heart disease. In LICs, the most common disease is HIV – AIDs. Diseases are transmitted by 1. Vector 2. Water 3. Unhygienic food preparation 4. Air 5. Direct contact

HIV - AIDs:

14	How is AIDs transmitted? When was the first ever case? Where is it most prevalent?	It is transmitted by direct sexual contact and the passing of bodily fluids. The first ever case was in 1980. It is most prevalent in Africa.
15	What are the reasons for its rapid spread in Africa?	The reasons for its rapid spread are 1. Lack of education 2. Lack of testing 3. The cost of medicine 4. Lack of doctors available

COVID-19:

16	Who are the WHO and what do they do?	They are the World Health Organisation. Their role is to discover the origins of diseases and direct international health responses in UN countries.
17	Name a social, environmental and economic impact of COVID-19?	Social – millions of deaths Environmental – reduced air and noise pollution. Economic – reduced trade and business costing billions.

Malaria:

18	How many people die each year from malaria?	725,000 people die each year from malaria.
19	How can malaria be prevented?	1. Use insect repellent to prevent bites. 2.Use mosquito nets to prevent biting. 3.Spray insecticides on the walls to prevent mosquitos coming in. 4.Use anti-malaria drugs available to take before and during your trip.
20	How is malaria transmitted?	It is transmitted by vector e.g. mosquito

The next pandemic:

21	Where might the next pandemic come from?	The next pandemic may come from viruses and bacteria locked in glaciers and permafrost. They would infect local wildlife.
22	What can we do to reduce the risk of a new pandemic?	- Wash our hands - Stay at home if sick - Cover mouths when coughing of sneezing - Clean shared surfaces - Keep your distance from others.

Year 8 Geography: Disease

Key Vocabulary

1	Disease	
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3	Type of transmission - Vector	
4	Type of transmission – water	
5	HIV AIDS	
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7	Pandemic:	
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History

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

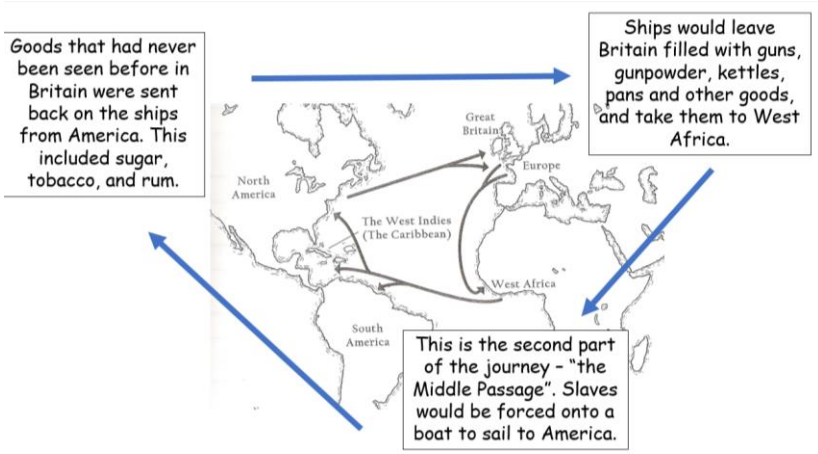
Year 8 History:

How did Britain get involved in the Slave Trade?

Question	Answer
What is John Hawkins often referred to as?	'father of the English slave trade'
What is a voyage?	A trip made at sea
What years did John Hawkins complete voyages?	Between 1562 and 1569
What was Hawkins doing?	transporting African captives from the area of West Africa now known as Sierra Leone to Spanish colonial ports in the Caribbean and Central America. His ships came home filled with pearls and sugar.

Key Word	*Meaning*
Freedom	the power to do or say what we want without somebody else telling us otherwise.
Slavery	when a person or group of people are the legal property of somebody else.
The "scramble"	groups of slaves would be sold as soon as they arrived. Buyers would just grab the slaves that they wanted to buy.
Auctions	some slaves were sold in auctions, where the higher bidder would "win". Slaves were examined like animals, and often separated from their families at this point.
Plantation	an agricultural and livestock estate that was large enough to contain the house of the master or slave owner and the residences of the slaves. On the slave plantation, slaves were used to harvest cash crops and complete other related agricultural work

How did the slave process work?



The different roles

Once 'bought' slaves would be branded with their owner's initials and be given a role on the plantation.
House servants could be:

- Cooks
- Butlers
- Housemaids
- Child minders
- Coachmen (drivers of horse-drawn carriages)

These slaves often had a good diet and better clothing than field slaves.

The stronger slaves would be chosen to work in the fields. This does not mean that they were all men – lots of field slaves were women and young people.

The work was hard – slaves would work for long hours and had a poor diet. Slaves would be punished if their master wasn't happy with their work.

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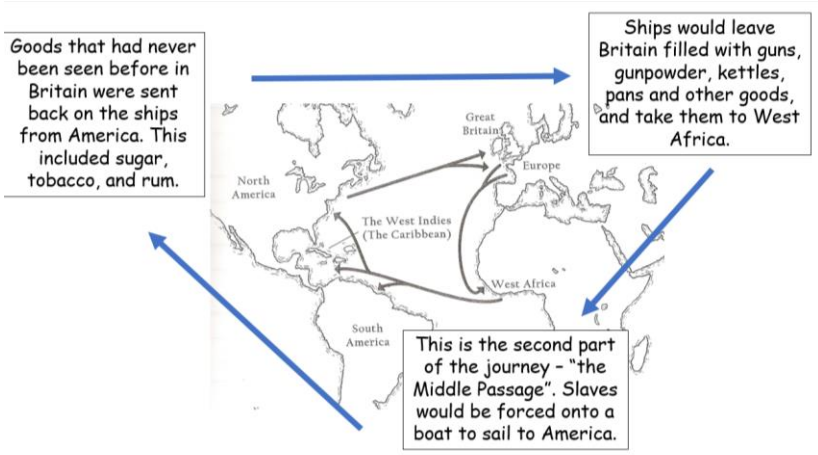

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Year 8 History:

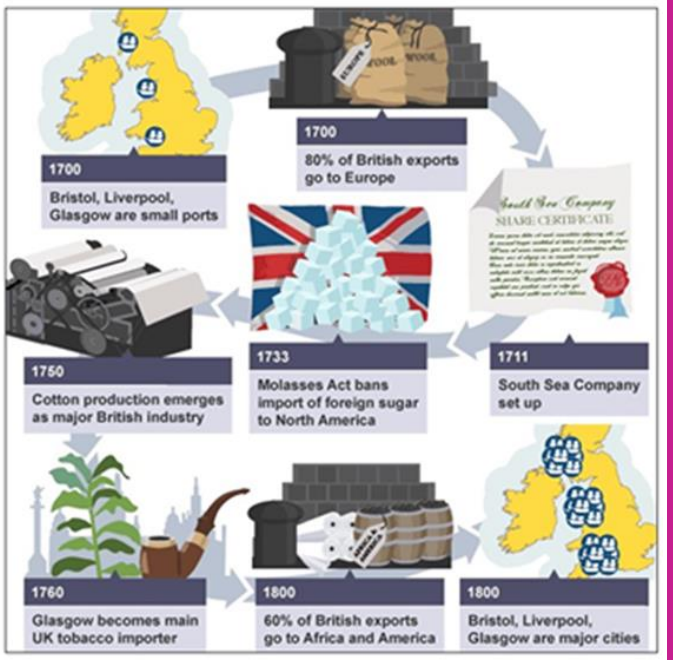
What is the Middle Passage?

Question	Answer
What is the Middle Passage?	This is the transportation of slaves from Africa to the Americas, across the Atlantic Ocean
How long could it take to cross the Atlantic Ocean?	Up to 3 months
Why were slaves kept below the decks?	Out of sighs as the ships left the docks, and slaves were made to lie-down in order to fir as many on board as possible.
Why were slaves made to dance?	As a form of exercise, to keep muscle definition, people needed to look strong
What does tight packing mean?	Fitting as many people on board as possible
Why was tight packing used?	The more slaves on board the ship meant more profit when reached the Americas.
What is scurvy?	A disease caused by lack of vitamin C. it leads to bleeding of the gums and loss of teeth.

Image of the Brookes ship

Question	Answer
Where did the Brookes set sail from?	Liverpool
How many people did it transport?	500

How did Britain benefit from slavery?



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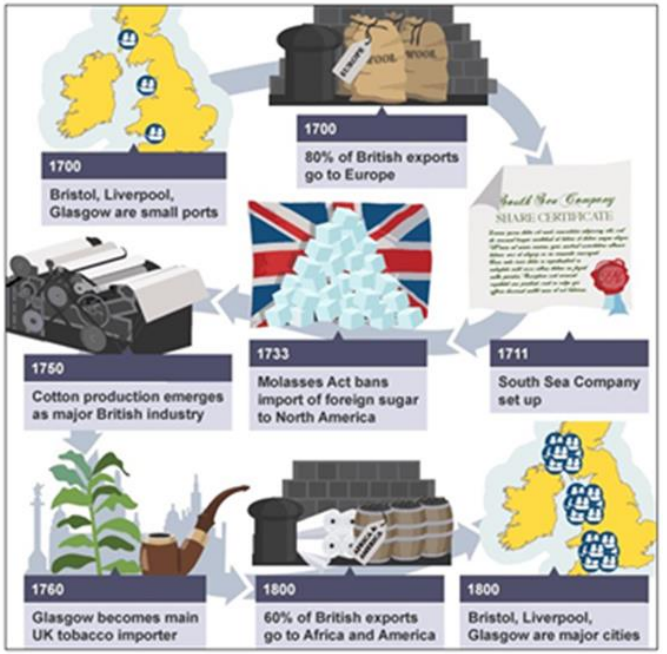
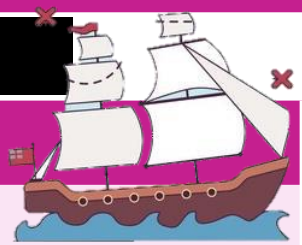
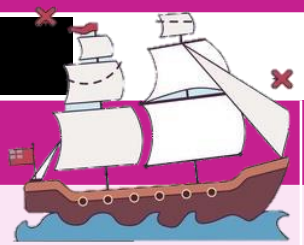


Year 8 History:



Topic		Question	Answer
Empire - proud or ashamed?	1	What is an empire?	Group of countries ruled by a single monarch or ruling power
	2	What was the second British Empire based upon?	British sea power, India and huge conquests in Africa
	3	What did the Maori tribesmen exchange with the British?	The whole of New Zealand for guns and alcohol
	4	By 1865, how many British people were living in Canada?	3 million
	5	In 1920, what percentage of the worlds population was part of the British Empire?	23%
East India Company	6	What did the East India Company hope to achieve?	To become rich through the trade of silk, spices and jewels
	7	How did the Mughal emperors react to the East India Company?	Protected them at first as they were impressed with their trade
	8	Why did the East India Company hire soldiers?	To keep the peace and protect trade from local disputes
	9	Why has there been arguments about the Koh-i-Noor diamond?	Some say it was a gift to the East India Company but some say it was stolen
India - Robert Clive	10	Why was it dangerous to travel to India in the 18th century?	50% would die of disease
	11	How did Robert Clive become well known in India?	He captured an important city despite being attacked by elephants in armour
	12	In 1756, what became known as the Black Hole of Calcutta?	122 English settlers suffocated to death in an 18 foot square prison cell
	13	Why was the Battle of Plassey so important?	It was the East India Company's first victory in India

Year 8 History:



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Year 8 History:

Topic		Question	Answer
India - British rule	14	What is the 'British Raj?'	Period of British rule in India between 1858 and 1947
	15	How did the British improve transportation in India?	Canals, roads and railways were quickly built
	16	What caused the Indian Mutiny of 1857?	Indian troops did not want to use ammunition that was greased in pig and cow fat
	17	Who was made Empress of India in 1876?	Queen Victoria
	18	Why did Indians not benefit from the taxes that were introduced by the British?	Most of the money went back to Britain and was not invested in India
India - Gandhi and Independence	19	What power did the Rowlatt Act give the British?	Could arrest and imprison any Indian they suspected of plotting against them
	20	What happened at Jallianwala Bagh park in 1919?	British opened fire on a crowd killing over 1000 in 10 minutes
	21	Why did Gandhi encourage passive resistance?	Believed that acts of violence against the British only provoked a negative reaction
	22	What was Gandhi's Salt March?	A protest against the British who would not let the Indians produce their own salt

Year 8 History:

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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.

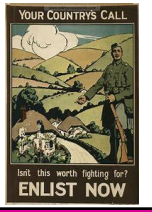
WW1 was trench warfare, soldiers lived in the trenches.

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.

1914-1918
Propaganda- to influence or persuade.



	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 ___

1914-____
Propaganda- to influence or persuade.

Domino Effect

Germany declares war on Russia.

France pledges their support for Russia.

Germany declares war on France.

Germany invades Belgium on the way to France.

Great Britain supports Belgium and declares war on Germany.

WW1 was _____ warfare, soldiers _____ in the trenches.

The Battle of the _____ one the _____ day of conflict saw 20,000 killed and _____ wounded.

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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 forces to live in	Ghetto
In 1942, the Nazis began "Operation Reinhard" - what was it?	The deportation of Jews from ghettoes 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 Wansee 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

HOLOCAUST MEMORIAL DAY 27/1

Year 8 History: The Holocaust

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HOLOCAUST MEMORIAL DAY 27/1

Year 8 History: Causes & 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 'blitzkreig?'	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

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 warmed 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
Where abouts 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: Causes & Events of World War Two

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Life Chances

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 Life Chances: CEIAG (careers)

Soft skills are general skills that most **employers** look for when recruiting and are **needed for most** jobs. They are sometimes called **transferable skills** or **employability skills** by employers.

Hard skills are skills needed to do a specific job, generally gained through **work**, **learning** or **training**.

What is a job sector?

A job sector is a term used to classify a broad group of jobs that are related by what they do

Media and Creative	Education	Retail	Science
Healthcare	Engineering	IT	Construction
Law	Agriculture	Sport	Finance

Employment Skills

Transferable skills can make you really stand out to employers, even if you don't have specific experience in their industry.
These can include:

- Team work
- Flexibility
- Problem solving
- Time management
- Positivity
- Creativity
- Flexibility

Institution	Age	Year Group	Qualification	Level	Status
Primary School	4-11 years	Reception – Year 6	SATs (In year 6)	N/A	Compulsory
Secondary School	11-16 years	Year 7 – Year 11	GCSEs (taken in year 11)	Level 2	Compulsory
Further Education (College/Sixth Form)	16+	Year 12 – Year 13	A Levels / T Levels / BTECs / Apprenticeships	Level 3	Compulsory
Higher Education (University/College)	18+	Undergraduate	Degree / Foundation degree / Degree apprenticeships	Level 4 - 6	Optional

Year 8 Life Chances: CEIAG (careers)

What are soft skills?

What are hard skills?

What is a job sector? (Provide examples

• -	• -	• -	• -
• -	• -	• -	• -
• -	• -	• -	• -

What are transferable skills- provide examples:

Institution	Age	Year Group	Qualification	Level	Status
	4-11 years	Reception – Year 6		N/A	
	11-16 years	Year 7 – Year 11		Level 2	
	16+	Year 12 – Year 13		Level 3	
	18+	Undergraduate		Level 4 - 6	

Year 8 Life Chances: CEIAG

Your GCSEs will have an impact on a lot of the decisions you make after you leave school – for example the sixth form/college you attend, the subjects you can study at Level 3, the subjects you can study at higher education and university, and the career you can go into

Rights	Responsibilities
A **RIGHT** is a **privilege** granted by a governing body that is written into law. A right is protected, such as the right to education, religion and freedom of speech.	**RESPONSIBILITIES** are duties or something an individual should do such as following the law and rules.

But what options are available to you after you leave school?

A Levels	T Levels	Apprenticeships
Description: Carry on studying subjects you took for GCSE to a higher level, or pick new ones you may not have done before like economics, law or psychology.	**Description:** Designed in partnership with employers to give you the skills and knowledge to get on in the workplace. You'll combine classroom learning with real work placements. 1 T Level is the equivalent of 3 A levels.	**Description:** Apprenticeships combine practical on-the-job skills training with off-the-job learning. You'll get training that is relevant to your job and be paid a salary.
Duration: 2 years	**Duration:** 2 years	**Duration:** A minimum of 1 year
Assessment: Mostly exams at the end of the course	**Assessment:** Exams, projects and practical assignments	**Location:** You'll spend 80% of your time in the workplace and 20% off-the-job with some study in a college, training centre or Institute of Technology (IoT)
Entry Requirements: Typically 5 GCSEs Grade 9-4 (usually including English and maths) and at least grade 6 in the specific subject(s) you want to study.	**Entry Requirements:** Course dependent **Work experience**: At least 45 days on industry placement	**Entry Requirements:** Will be dependent on the industry, job role and apprenticeship level

Year 8 Life Chances: CEIAG

Why are your GCSEs important?

What are rights?	What are responsibilities?

But what options are available to you after you leave school? Complete below.

A Levels	T Levels	Apprenticeships
Description:	Description:	Description:
Duration:	Duration:	Duration:
Assessment:	Assessment:	Location:
Entry Requirements:	Entry Requirements: Work experience:	Entry Requirements:

Year 8 Life Chances: Health

What is Good Health?

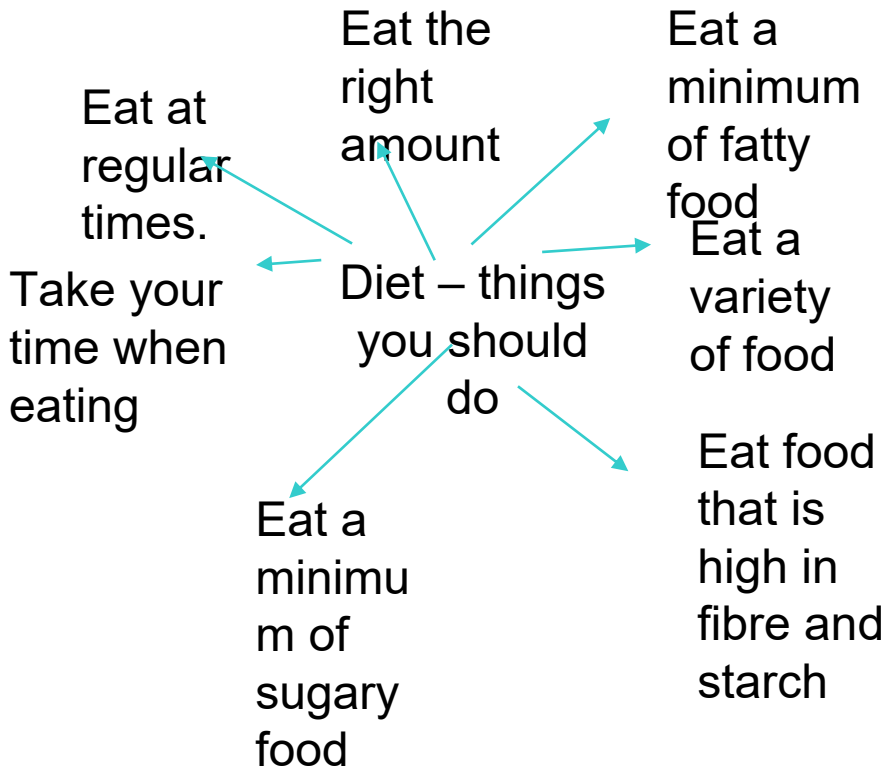
Good health is a state of complete physical, mental and social wellbeing. This means eating a balanced diet, getting regular exercise, avoiding tobacco and drugs, drinking in moderation and getting plenty of rest.

This means eating a balanced diet, getting regular exercise, avoiding tobacco and drugs and getting plenty of rest.

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.



Year 8 Life Chances: Health

What is Good Health?

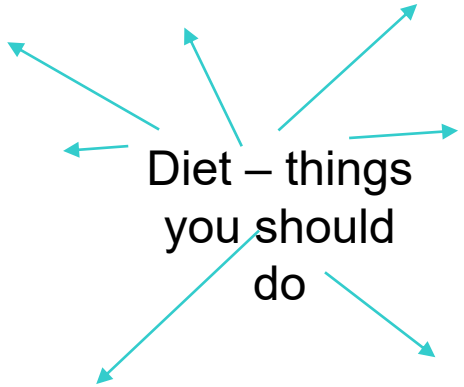
Good health is a state of complete physical, mental and social _____. This means eating a balanced _____, getting regular _____, avoiding _____ and drugs, drinking in moderation and getting plenty of _____.

This means eating a balanced diet, getting regular _____, avoiding tobacco and _____ and getting plenty of rest.

The benefits of a balanced diet are:

Physical Health – Diet

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



Year 8 Life Chances: Health

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:	**Personal Health Exercise** **The benefits of exercise are:**
Junk food, like crisps and chocolate is **high** in calories but **low** in nutritional value.	Your body finds it easier to deal with threats such as sickness, injury or the occasional sugary or fatty snack if you are active.
Fast food, such as hamburgers and fried chicken, is prepared and served quickly but is **high** in fat.	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.
Convenience food, for example, microwave 'ready meals' often have too much salt and sugar.	Exercise gives you greater flexibility and strength, prevents boredom and helps you sleep.
	It also helps you find new friends and learn new skills.

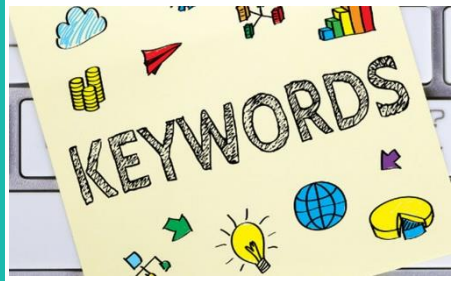
Year 8 Life Chances: Health

Poor diet

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

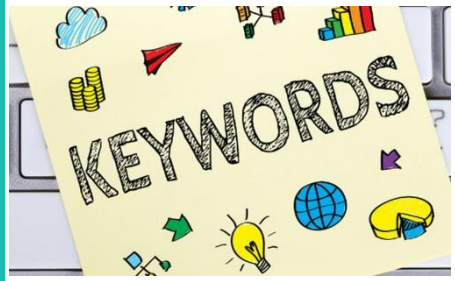
Convenience food and its negative impact on our health:	Personal Health Exercise The benefits of exercise are:

Year 8 Life Chances: Relationships



Friends	A person who has a strong liking for and a trust for another person.
Values	These are a person's beliefs about good behaviour and what things are important. These can be influenced by someone's outlook on life, religion and upbringing. Examples can be honesty or kindness. If these are your values, you will try your best to be honest and kind to others and expect honesty and kindness from others in return.
Boundaries	The limits and the rules we set for ourselves within relationships. A person with healthy boundaries can say 'no' to others when they do not wish to do something.
Consent	Consent means agreeing to do something freely and with full understanding of what that thing is. Consent has to be clear, enthusiastic, and ongoing (need to keep checking in). Someone cannot consent if they are pressured, are not conscious/sober or are under 16, the legal age of consent.

Year 8 Life Chances: Relationships



Friends	**A person who has a strong liking for and a trust for another person.**
Values	
Boundaries	
Consent	

Year 8 Life Chances: Relationships

Healthy

A healthy relationship means both you and your partner are:

- Communicating
- Respectful
- Trusting
- Honest
- Equal
- Enjoying personal time away from each other
- Making mutual choices
- Economic/financial partners

Unhealthy

You may be in an unhealthy relationship if your partner is:

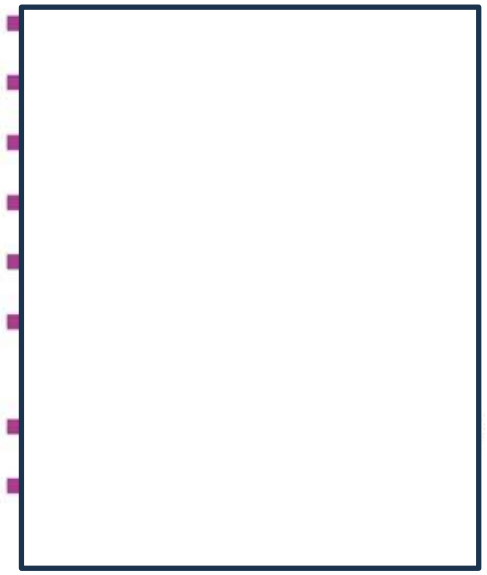
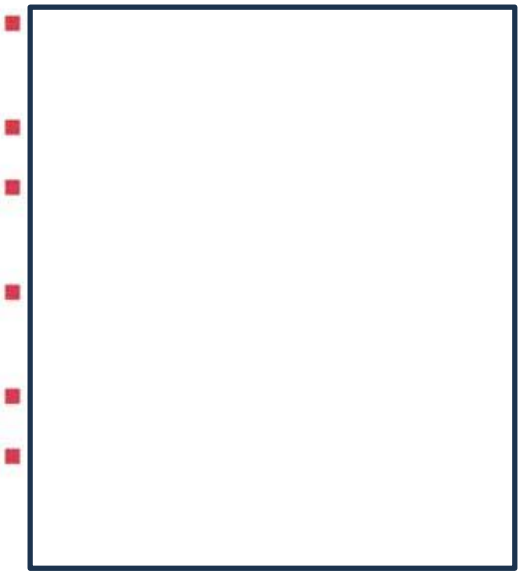
- Not communicating
- Disrespectful
- Not trusting
- Dishonest
- Trying to take control
- Only spending time together
- Pressured into activities
- Unequal economically

Abusive

Abuse is occurring in a relationship when one partner is:

- Communicating in a hurtful or threatening way
- Mistreating
- Accusing the other of cheating when it's untrue
- Denying their actions are abusive
- Controlling
- Isolating their partner from others

Year 8 Life Chances: Relationships

Healthy	Unhealthy	Abusive
A healthy relationship means both you and your partner are:	You may be in an unhealthy relationship if your partner is:	Abuse is occurring in a relationship when one partner is:
		

Year 8 Life Chances: Relationships

Consent means agreeing to do something freely and with full understanding of what that thing is. Consent has to be clear, enthusiastic, and ongoing (need to keep checking in). Someone cannot consent if they are pressured, are not conscious/sober or are under 16, the legal age of consent.

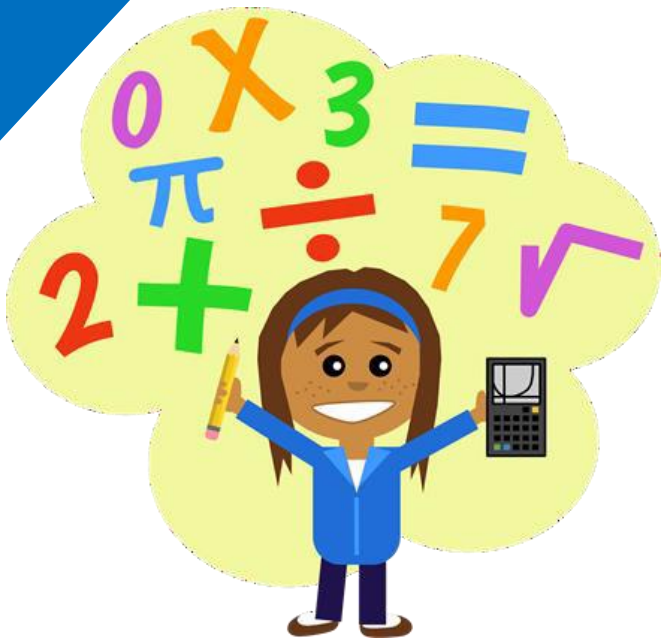
- Seeking someone's consent by pressurising or manipulating them is wrong.
- Consent cannot be obtained through pressure or manipulation.
- If we ask for another's consent, they have the right to say no. and to have that decision respected without justifying themselves.
- If a situation does not feel right to someone, they always have the right to not give their consent, and this must be respected.
- If someone doesn't say 'No' this does NOT mean they have given their consent.
- Giving consent once, does not mean you give consent for the next time.

Year 8 Life Chances: Relationships

Consent means

- Seeking someone's consent by pressurising or manipulating them is wrong.

Maths



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be kind | work hard | take responsibility

Year 8: All the topics that will be taught this year.		
	Topic	**Sparx Code**
Rounding, Bounds & Estimation	Rounding Integers	M111
	Rounding Decimals	M431
	Rounding Integers using Significant Figures	M994
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	Dividing Mixed Numbers	M265
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	Interpreting Stem and Leaf Diagrams	M210
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	Angles on a line and about a point	M818
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Area and Perimeter	Perimeter of rectangles, triangles and parallelograms	M635
	Area of Rectangles	M390
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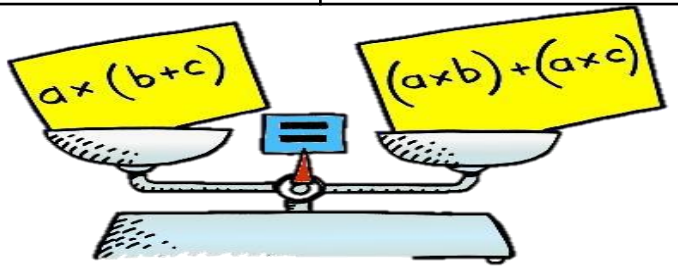
Year 8 Maths:

1	**Algebra**	• Uses letters (like $x, y, a,$ or b) or other symbols in place of values	$3x + 4y$ $a + 4 = 2$ $3r(r - 4)$
2	**Term**	• A number, variable or combination of both	$5x$ ab 8
3	**Algebraic Expression**	• Terms that may be separated by operations	$5x + 3y$ $8a$ $y^2 - 9y$
4	**Simplify**	• To make expressions look simpler by collecting like terms.	$2 \times 5x = 10x$ $8a + 3a = 11a$
5	**Coefficient**	• The number in front of the letter	$5x$ means 5 is multiplied by x. 5 is the coefficient.
6	**Equation**	• A mathematical statement that says that two things are equal	$5x = 10$ $8a + 3 = 11$ $8(2a + 3) = 11a - 6$
7	**Inverse**	• Means the opposite of another operation	Operation / Inverse $+/-$ / $-/+$ $\times/\div$ / $\div/\times$
8	**Probability**	• The likelihood that something will happen, measured on a scale from 0 to 1 • Probability can be written as a percentages, decimal or fraction.	The probability it will rain today is 50% $(or\ 0.5\ or\ \frac{1}{2})$. Usually written as P(Rain) =50%
9	**Fair**	• All outcomes are equally likely	Rolling a fair die: $P(2) = \frac{1}{6}$

Key Facts

10	Simplify $2y^2 - 9y + 3y^2 + 2y$	$2y^2 - 9y + 3y^2 + 2y$ $2y^2 + 3y^2 = 5y^2$ $-9y + 2y = -7y$ Answer: $5y^2 - 7y$
11	Solve $3x - 4 = 11$	$3x - 4 = 11$ $+4 \quad +4$ $3x = 15$ $\div 3 \quad \div 3$ $x = 5$
12	Probability has a sum of 1	The probability a biased coin lands on tails is 0.3. The probability it lands on heads is $1 - 0.3 = 0.7$
13	A survey of 60 cars in a car park is taken, 27 of them are white. What is the probability of a white car in the car park?	$\frac{27}{60}$
14	Find the probability of throwing an even number on a fair sided die	There are 6 numbers on a die, so the denominator is 6 and there are 3 even numbers (2, 4 & 6) so the numerator is 3. $= \frac{3}{6}$

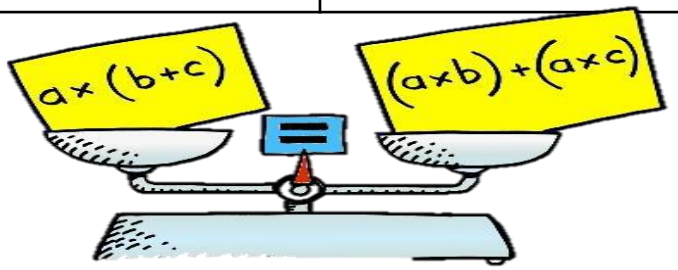


Year 8 Maths:

1	What is **algebra**?	
2	Write down some examples of **mathematical terms**:	
3	What is an **algebraic expression**?	
4	How do you **simplify** an algebraic expression?	
5	What is a **coefficient**?	
6	What is an **equation**?	
7	What is the definition of **inverse**?	
8	What is meant by **probability**?	
9	What is the meaning of the term **fair**?	

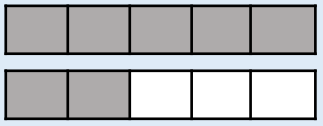
Key Facts

10	Simplify $4y^2 - 2y - 2y^2 + 7y$	
11	Solve $2x + 5 = 11$	
12	What is the sum of the probabilities of all possible outcomes of an event occurring?	
13	A survey of 80 cars in a car park is taken, 35 of them are white. What is the probability of a white car in the car park?	
14	Find the probability of throwing an odd number on a fair sided die.	



Year 8 Maths:

Key Vocabulary

1	**Approximation**	• Anything that is similar but exactly equal to something else • We use ≈ to mean "is approximately equal to"	$33 \approx 30$ $1.8 \approx 2$
2	**Rounding**	• Making a number simpler, but close to what it was	Rounding to the nearest: **Ten**: $27 \approx 30$ **Hundred** $163 \approx 200$
3	**Decimal Place**	• When rounding, the result will have that number of digits after the decimal point.	$1.375 \approx 1.38\ (2\ dp)$ $21.14 \approx 21.1\ (1\ dp)$
4	**Significant Figures**	• The greater the number of significant figures, the more accurate the result. • Zeros at the start of a number are not counted as significant	**e.g. 273.658** To 1 sf is 300, 2 sf is 270, 3sf is 274, 4 sf is 273.7 **e.g. 0.462** To 1 sf is 0.5, 2 sf 0.46
5	**Estimation**	• To approximate calculations • Rounding the number to one significant figure before calculating.	$303 \approx 300 \qquad 18 \approx 20$ $303 \times 18 \approx 300 \times 20$ $= 6000$
6	**Fraction**	• Has a numerator (top number, the number of parts we have) and a denominator (bottom number, the equal number of parts something has been split into)	1 
7	**Improper Fraction**	• Where the numerator is greater than the denominator e.g. $\frac{7}{5}$	

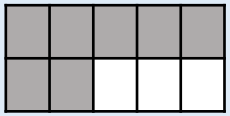
Year 8 Maths:

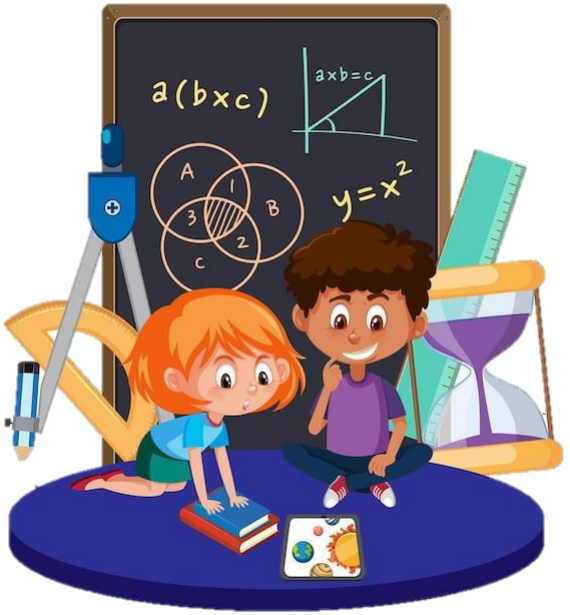
Key Vocabulary

1	When would you use **approximation**?	
2	When would you use **rounding**?	
3	What is the definition for **decimal place**?	
4	When would you use rounding to a **significant figure**?	
5	Define the meaning of the word **estimation**	
6	What do we call the **top number** and **bottom number** of a fraction respectively?	
7	What makes a **fraction** an **improper fraction**?	

Year 8 Maths:

Key Vocabulary

1	**Mixed Number**	• When whole numbers and fractions are written together e.g. $1\frac{2}{5}$	
2	**Equivalent**	• Equal in value • Fractions that are written differently but represent the same amount	Equivalent fractions: $\frac{1}{2} = \frac{2}{4} = \frac{25}{50}$



Key Facts

10	To find **equivalent fractions** multiply the numerator and denominator by the same number.
11	**Simplifying** a fraction means to reduce a fraction to its lowest term by dividing the numerator and the denominator by a common factor.
12	To **convert mixed numbers to improper fractions** multiply the whole part by the denominator then add this to the numerator. $3\frac{3}{4} = \frac{15}{4}$
13	**To convert improper fractions to mixed numbers** divide the numerator by the denominator. Write down the whole part. The remainder becomes the new numerator. $\frac{11}{2} = 5\frac{1}{2}$
14	To **multiply fractions** multiply the numerators and then multiply the denominators. $\frac{3}{5} \times \frac{1}{3} = \frac{3}{15} = \frac{1}{5}$
15	To **divide fractions**, multiply the first fraction by reciprocal of the second fraction. $\frac{3}{5} \div \frac{1}{3} = \frac{3}{5} \times \frac{3}{1} = \frac{9}{5} = 1\frac{4}{5}$

Year 8 Maths:

Key Vocabulary

1	What is a **mixed number?**	
2	What is the definition of **equivalent numbers**?	

Key Facts

10	Describe how to find **equivalent fractions**:
11	Describe how to **simplify fractions:**
12	How do you **convert mixed numbers to improper fractions**?
13	How do you **convert improper fractions to mixed numbers?**
14	Explain how to **multiply fractions**.
15	Describe how to **divide fractions**.

Year 8 Maths: Stem and Leaf Diagrams

	Key Skill	Thinking Point	WAGOLL
1	Construct a stem and leaf diagram from a list of numbers	• Partition each value into a stem and a leaf, e.g. 132 could be 13|2, and 16.8 could be 16|8 • Ensure your data is in ascending order • Include a key as part of your diagram	Construct a stem and leaf diagram for the following data 35, 50, 38, 44, 53, 41, 39, 45, 48, 55, 44 **KEY: 3|5 = 35**
2	Calculate averages from a stem and leaf diagram	• Mean – the total shared equally • Median – the middle value when in order • Mode – the most common value	Mean = (35+38+39+41+44+44+45+48+50+53+55)÷11 = **44.73** (2dp) Median = (11+1) ÷ 2 = 6th value 6th value = **44** Mode = **44**

Stem	Leaf
3	5 8 9
4	1 4 4 5 8
5	0 3 5

Stem	Leaf
3	5 8 9
4	1 4 4 5 8
5	0 3 5

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 of 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.

Year 8 Maths: Stem and Leaf Diagrams

	Key Skill	Thinking Point	Practice
1	Construct a stem and leaf diagram from a list of numbers	• The data in your stem and leaf diagram should be in _____ order. • Your stem and leaf diagram must include a _____.	Draw an ordered stem and leaf diagram for the following data sets a) 18, 42, 5, 28, 33, 9, 15, 38, 32, 9, 11, 24, 40, 29, 24 b) 153, 144, 148, 140, 149, 145, 144, 142, 158, 135, 140, 139, 160
2	Calculate averages from a stem and leaf diagram	• What is the mean? • What is the median? • What is the mode?	Calculate mean, median and mode for the sets of data above

Key Vocabulary	Complete the definitions
Discrete Data	
Continuous Data	
Average	
Spread	

Year 8 Maths: Powers, Roots and Surds

	Key Skill	Thinking Point	WAGOLL
1	Evaluating Indices	• The *index* (power) explains how many times to use the *base* in a multiplication	$3^4 = 3 \times 3 \times 3 \times 3 = 81$
2	Evaluating Square Roots	• The square root of a number is a value that, when multiplied by itself, gives that number	$\sqrt{64} = 8$ or -8
3	Simplifying using Index Laws	• When multiplying terms with the same base, add the powers. • When dividing terms with the same base, subtract the powers • When raising a power to another power, multiply the powers.	$4^5 \times 4^7 = 4^{5+7} = 4^{11}$ $6^9 \div 6^2 = 6^{9-2} = 6^7$ $(9^2)^4 = 9^8$

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

Year 8 Maths: Powers, Roots and Surds

	Key Skill	Thinking Point	Practise
1	Evaluating Indices	The *index* (power) explains how many times to use the *base* 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) √9 (b) √25 (c) √100 (d) √4 (e) √36 (f) √64
3	Simplifying using Index Laws	• When multiplying terms we must _____ the powers • When dividing terms we must _____ the powers	Simplify a) $2^6 \times 2$ b) $5^{45} \div 5^5$ c) $(8^7)^3$

Key Vocabulary	Complete the definitions
Index	
Base	

Year 8 Maths: Sequences

	Key Skill	Thinking Point	WAGOLL
1	Continuation of a sequence	• Identify the *term to term rule* and use it to continue the sequence	6, 13, 20, 27, …., ….. Term to term rule is +7 27 + 7 = **34** 34 + 7 = **41**
2	Generate a sequence	• We can generate the first 5 terms by *substituting* the numbers 1 to 5 into the n^{th} term • We can generate any given term of a sequence by substituting the position number into the n^{th} term • Remember to follow our order of operations	Generate the first 5 terms and the 10^{th} term of 5n – 8 1^{st} term; $5 \times 1 - 8 = \mathbf{-3}$ 2^{nd} term; $5 \times 2 - 8 = \mathbf{2}$ 3^{rd} term; $5 \times 3 - 8 = \mathbf{7}$ 4^{th} term; $5 \times 4 - 8 = \mathbf{12}$ 5^{th} term; $5 \times 5 - 8 = \mathbf{17}$ 10^{th} term; $5 \times 10 - 8 = \mathbf{42}$
3	Find the n^{th} term of an arithmetic sequence	• Identify the term to term rule, and link it to a times-table. • Identify the adjustment needed to get the required starting term	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 **4n + 2**

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.

Year 8 Maths: Sequences

	Key Skill	Thinking Point	Practise
1	Continuation of a sequence	• We must identify the _____ - __ - _____ rule	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	• We can generate the first 5 terms by _____ the numbers 1 to 5 into the n^{th} term	Generate the first 5 terms and the 10^{th} term of each sequence a) $5n + 3$ b) $2n + 9$ c) $3n - 2$
3	Find the n^{th} term of an arithmetic sequence	• Identify the _____ - _____ that a sequence is linked to.	Find the n^{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	

Year 8 Maths: Algebra - Brackets

	Key Skill	Thinking Point	WAGOLL
1	Expand a single bracket	• Multiply every term inside the bracket by the term outside the bracket • Grid method will help you	Expand $3(x + 2)$ $= \underline{3x + 6}$ | x | x | +2 | | 3 | $3x$ | +6 | Expand $4x\ (3x - 1)$ $= \underline{12x^2 - 4x}$ | x | $3x$ | -1 | | $4x$ | $12x^2$ | $-4x$ |
2	Expand and simplify	• Expand each bracket • Collect any like terms to simplify	$3(x + 7) - 2(3x - 4)$ $3x + 21 - 6x + 8$ $= \underline{-3x + 29}$ | x | x | +7 | | 3 | $3x$ | +21 | | x | $3x$ | -4 | | -2 | $-6x$ | +8 |
3	Factorise an expression	• Find the highest common factor (HCF) of all terms. This belongs outside the bracket. • Use reverse grid method to find what goes in the bracket	Factorise fully $4x + 18$ HCF of $4x$ and 18 is 2 | × | $2x$ | +9 | | 2 | $4x$ | + 18 | $\underline{2(2x + 9)}$ Factorise fully $18y^3 - 12y$ HCF of $18y^3$ and -12y is 6y | × | $3y^2$ | -2 | | 6y | $18y^3$ | - 12y | $\underline{6y(3y^2 - 2)}$

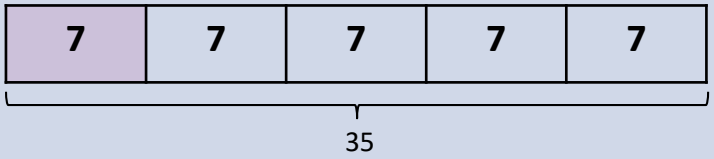
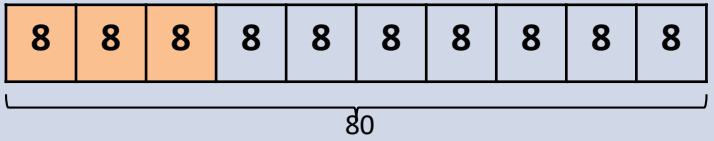
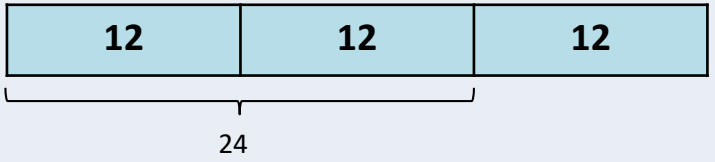
Key Vocabulary	Definition
Variable	A symbol or letter representing a value we do not know.
Coefficient	A number used to multiply a variable, e.g. in the term "$4x$", the coefficient of x is 4.
Expression	Numbers, variables and operators (+, - , x and ÷), grouped together to show the value of something.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

Year 8 Maths: Algebra - Brackets

	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	

Year 8 Maths: Fractions and Percentages

Key Skill	Thinking Point	WAGOLL
Working out a fraction of an amount	• Divide the whole number by how many parts there are altogether (the denominator) • Multiply your answer by how many parts you want (the numerator)	Work out of $\frac{1}{5}$ of 35  = 7 Work out of $\frac{3}{10}$ of 80  = 24
Reverse fraction of amounts	• Divide the whole number into how many parts you have (the numerator) • Multiply by how many parts there are altogether (the denominator)	$\frac{2}{3}$ of an amount is 24. What is the full amount?  = 36

Year 8 Maths: Fractions and Percentages

Key Skill	Thinking Point	Practice
Working out a fraction of an amount	• _____ the whole number by how many parts there are altogether (the denominator) • _____ your answer by how many parts you want (the numerator)	Work out of $\frac{1}{8}$ of 24 Work out of $\frac{2}{7}$ of 42 Work out of $\frac{3}{4}$ of 88 Work out of $\frac{5}{12}$ of 96
Reverse fraction of amounts	• Divide the whole number into how many parts you have (the _____) • Multiply by how many parts there are altogether (the _____)	$\frac{1}{4}$ of an amount is 15. What is the full amount? $\frac{3}{8}$ of an amount is 9. What is the full amount? $\frac{2}{5}$ of an amount is 14. What is the full amount? $\frac{8}{9}$ of an amount is 64. What is the full amount?

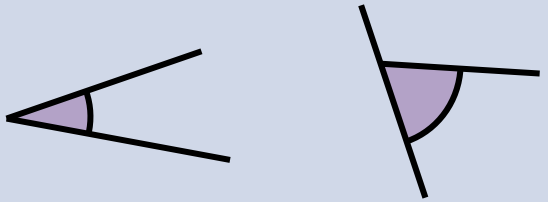
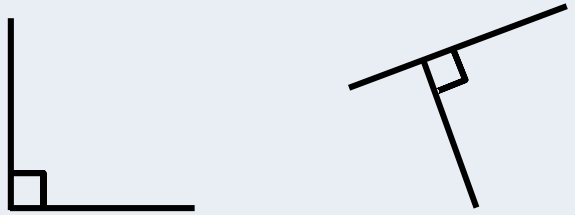
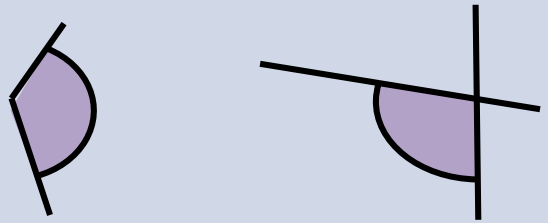
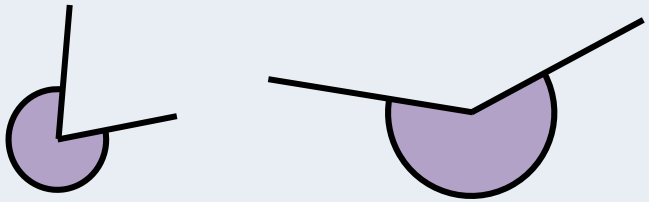
Year 8 Maths: Fractions and Percentages

Key Skill	Thinking Point	WAGOLL	
Calculate a percentage of a quantity	• 10% is the same as $\frac{1}{10}$, so I can find 10% by dividing by 10 • 1% is the same as $\frac{1}{100}$, so I can find 1% by dividing by 100 • 50% is the same as $\frac{1}{2}$, so I can find 50% by dividing by 2	Find 2% of 150 1% = 150 ÷ 10 = 15 × 2 [1% = 15, 2% = 30] × 2 2% = 30	Find 41% of 900 10% = 900 ÷ 10 = 90 1% = 900 ÷ 100 = 9 × 4 [10% = 90, 40% = 36] × 4 41% = 40% + 1% = 36 + 9 = 45
Calculate a percentage increase or decrease	• Increase, appreciate, profit, expand are some often used key words meaning to get bigger. • Decrease, devalue, depreciate, reduce, discount, lose are some often used key words meaning to get smaller.	A drink is normally 300 ml. The bottle is now 20% larger. What size is it now? × 2 [10% of 300 = 30, 20% of 300 = 60] × 2 300ml + 60ml = 360ml	Leo invested £500 in a business. He lost 5% of the money. How much money does Leo have now? × 5 [1% = 5, 5% = 25] × 5 £500 - £25 = £475

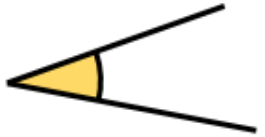
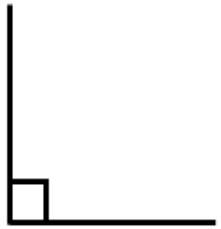
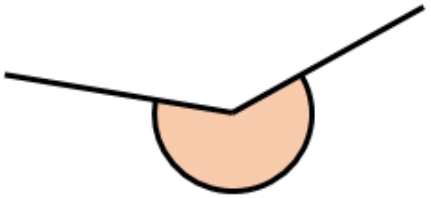
Year 8 Maths: Fractions and Percentages

Calculate a percentage of a quantity	• **_____% is the same as $\frac{1}{10}$, so I can find it by dividing by 10** • **1% is the same as $\frac{1}{100}$, so I can find 1% by dividing by _____** • **_____% is the same as $\frac{1}{2}$, so I can find it by dividing by 2**	**Work out 13% of 500** **Work out 51% of 2000** **Work out 16% of 300**
Calculate a percentage increase or decrease	• Increase, appreciate, _____, expand are some often used key words meaning to get _____. • Decrease, devalue, _____, reduce, _____, lose are some often used key words meaning to get _____.	A pair of trainers are normally £80. In the sale they are discounted by 35%! How much do they cost in the sale? Poppy is paid £1700 a month. She is going to get a pay rise of 3%. What is going to be her new pay per month?

Year 8 Maths: Angle Facts

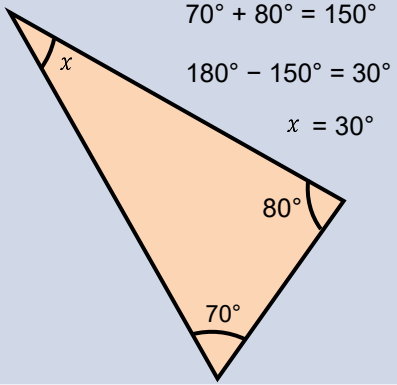
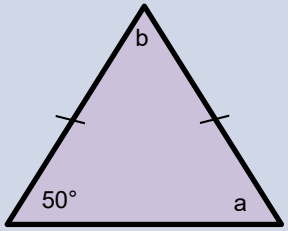
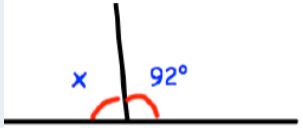
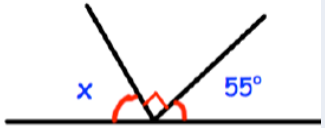
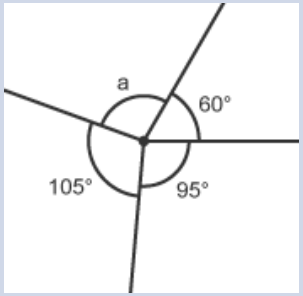
Type of angle	Thinking Point	WAGOLL
Acute angle	• Less than 90°	
Right angle	• Exactly 90°	
Obtuse angle	• Greater than 90° • Less than 180°	
Reflex angle	• Greater than 180°	

Year 8 Maths: Angle Facts

Type of angle	Thinking Point	WAGOLL
_____ angle	• Less than _____	
_____ angle	• _____ 90°	
_____ angle	• Greater than ____ • Less than _____	
_____ angle	• Greater than _____	

Draw another example of each

Year 8 Maths: Angle Facts

Key Skill	Thinking Point	WAGOLL
Angles in a triangle	• Angles in a triangle add to 180° • Base angles in an isosceles triangle are equal	 70° + 80° = 150° 180° − 150° = 30° x = 30°  a = 50° 50° + 50° = 100° 180° − 100° = 80° b = 80°
Angles on a straight line	• Angles on a straight line add to 180°	 180° − 92° = 88°  55° + 90° = 145° 180° − 145° = 35°
Angles around a point	• Angles around a point add to 360°	 105° + 60° + 95° = 260° 360° − 260° = 100° a = 100°

Year 8 Maths: Angle Facts

Fill in the blanks

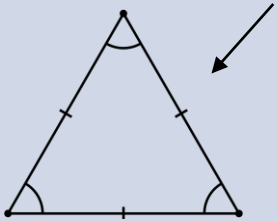
1) Angles in a triangle add to _____.

2) _____ angles in an isosceles _____ are equal.

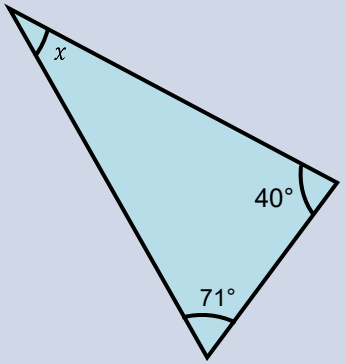
3) Angles on a straight line _____.

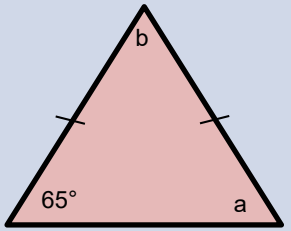
4) Angles around _____ add to 360°.

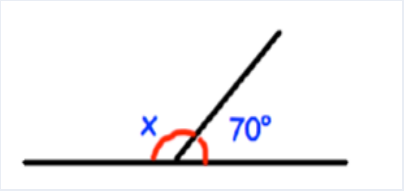
5) Each angle in an equilateral triangle is _____° .

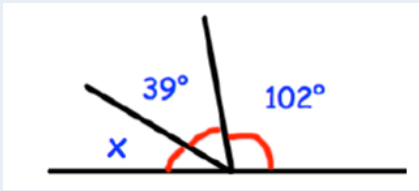


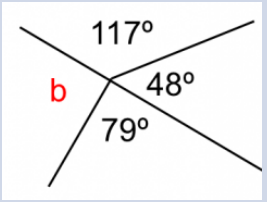
Practice

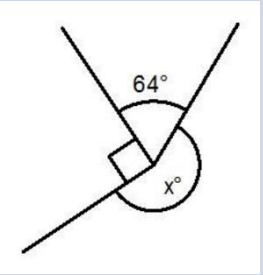




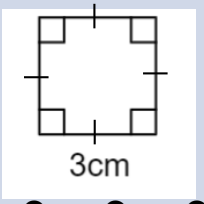
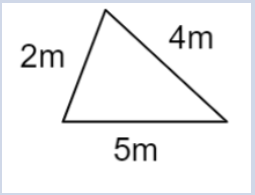
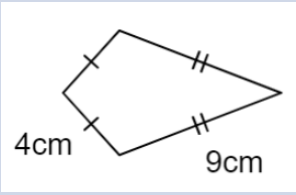
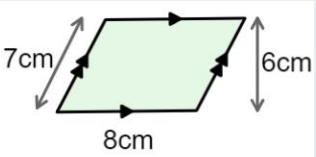
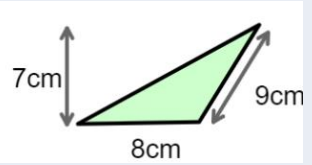
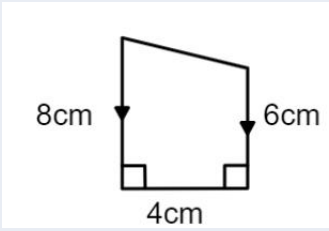




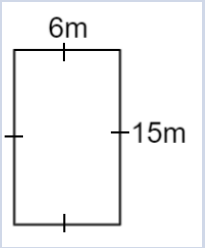
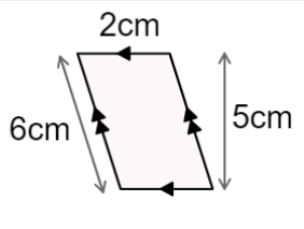
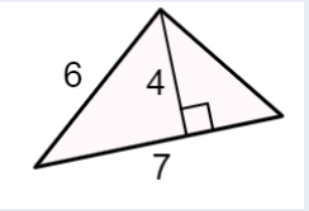
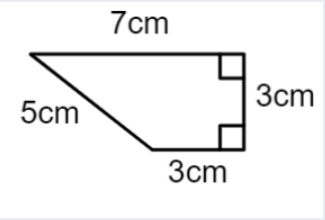
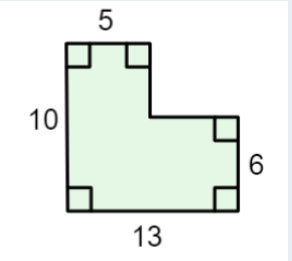
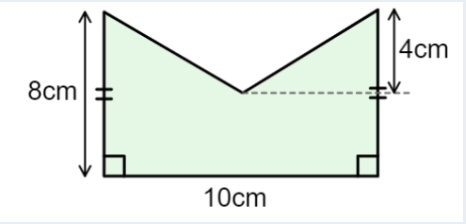




Year 8 Maths: Perimeter and Area

Key Skill	Thinking Point	WAGOLL
Perimeter	• The distance around the edge of a shape	Work out the perimeter for each shape:  3 + 3 + 3 + 3 = 12cm  2 + 4 + 5 = 11cm  4 + 4 + 9 + 9 = 26cm
Area	• The amount of space inside a shape • Area of a rectangle, square, parallelogram: $base \times perpendicular\ height$ • Area of a triangle: $\frac{base \times perpendicular\ height}{2}$ • Area of a trapezium: $\frac{a+b}{2} \times h$	Calculate the area  $= 8 \times 6$ $= 48cm^2$ Calculate the area  $= \frac{1}{2} \times 8 \times 7$ $= 28cm^2$  $Area = \frac{8+6}{2} \times 4$ $= \frac{14}{2} \times 4$ $= 7 \times 4$ $= 28cm^2$

Year 8 Maths: Perimeter and Area

Key Skill	Thinking Point	Practice
Perimeter	• The _____ _____ _____ a shape	 
Area	• Area of a rectangle, square, parallelogram: • Area of a triangle: • Area of a trapezium:	    

Modern Foreign Languages

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Little Lever School
be kind | work hard | take responsibility

Year 8 French:

Grammar Explanation

Using 'there is'

In French you use the article after ***il y a*** (there is) when describing what there is in your house or town.

However when you say that there is **not** something, you remove the article (i.e. you remove the un or une).
For example:

Il y a un parc - there **is** a park

Il n'y a pas **de** parc - there **is not** a park

Grammar Explanation (Immediate future)

To say that you are going to do something,
You can use '***je vais***' (I am going) plus an infinitive verb. For example:

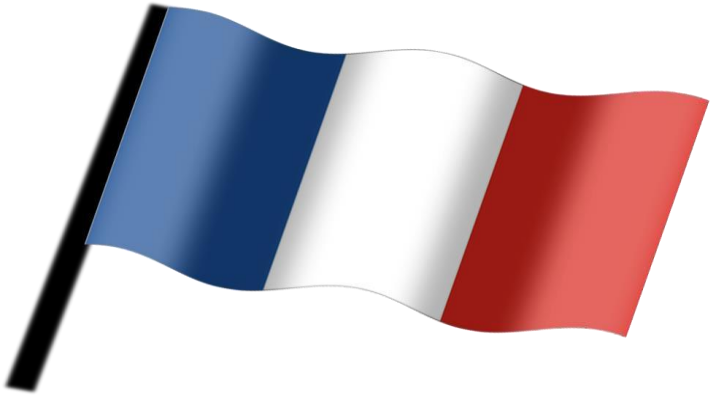
je vais+habiter = ***je vais habiter*** = I am going to live.

Grammar Explanation (Conditional tense)

Saying what you would like to do…
To say you would like to do something, you can use '***je voudrais***' (I would like) or '***on voudrait***' (we would like) plus an infinitive verb. For example:

Je voudrais+habiter = ***je voudrais habiter*** = I would like to live.

On voudrait+habiter = ***on voudrait habiter*** = we would like to live



High-Frequency Infinitives

Aller	**To go**
Visiter	**To visit**
Jouer	**To play**
Regarder	**To watch**
Faire	**To do**
Monter	**To ride**
Être	**To be**
Avoir	**To have**

Infinitive Verbs

Infinitive verbs in French are the most basic form of verbs.

You can recognize them because they end in

-er, -ir, or **-re.**

When we use an infinitive verb, we're referring to the action in general.

For example, when we say "***parler***" (to speak), we're not talking about a specific person speaking, but simply mentioning the action of 'to speak'.

Year 8 French:

Grammar Explanation

Using 'there is'

In French you use the article after ***il y a*** (there is) when describing what there is in your house or town.

However when you say that there is **not** something, you remove the article (i.e. you remove the un or une).

For example:

_____- there **is** a park

_____- there **is not** a park

Grammar Explanation (Immediate future)

To say that you are going to do something, You can use '***je vais***' (I am going) plus an infinitive verb. For example:

_____+_____= _____= I am going to live.

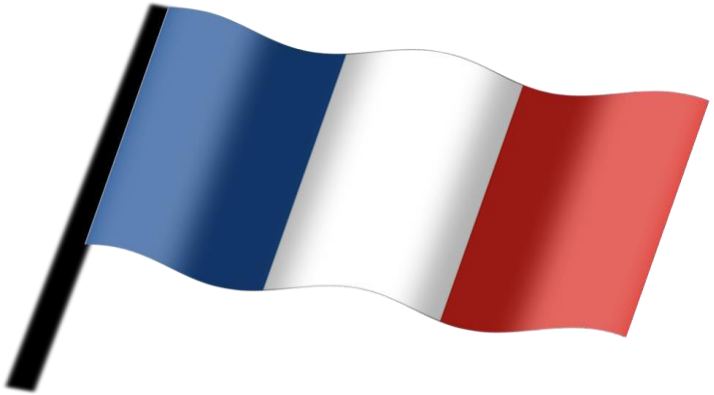
Grammar Explanation (Conditional tense)

Saying what you would like to do…

To say you would like to do something, you can use ***'je voudrais***' (I would like) or '***on voudrait***' (we would like) plus an infinitive verb. For example:

_____+ _____= _____= I would like to live.

_____+ _____= _____= we would like to live



Complete the high-frequency Infinitives below	
	To go
	To visit
	To play
	To watch
	To do
	To ride
	To be
	To have

Infinitive Verbs

Infinitive verbs in French are the most basic form of verbs.

You can recognize them because they end in

_____.

When we use an infinitive verb, we're referring to the action in general.

For example, when we say "***parler***" (to speak), we're not talking about a specific person speaking, but simply mentioning the action of 'to speak'.

Year 8 French:

Dans ma ville
In my city/town

Dans mon quartier
In my neighbourhood

A l'avenir
In the future

Ce weekend
This weekend

Quand je serai plus âgé
When I am older

Je voudrais
I would like

On voudrait
We would like

Je ne voudrais pas
I wouldn't like

On ne voudrait pas
We wouldn't like

Monter mon vélo
To ride my bike

Aller au restaurant
To go to the restaurant

Aller à la plage
To go to the beach

Visiter le château
To visit the castle

Jouer au golf
To play golf

Voir la cathédrale
To see the cathedral

Faire de la randonnée
To do hiking

Car
Parce que
Puisque

Because / as / since

Ce serait
it will be

Divertissant
Entertaining

Fascinant
Fascinating

Cool
Cool

Passionnant
Exciting

Ennuyeux
Boring

Fatigant
Tiring

Mal
Bad

Difficile
Difficult

To wear... (Verb)	
Porter	To wear
Je porte	I wear...
Tu portes	You wear...
Il porte	He wears...
Elle porte	She wears...
On porte	One wears (We wear)
Nous portons	We wear...
Vous portez	You wear *(formal/plural)*
Ils portent	They wear *(mixed/masculine)*
Elles portent	They wear *(feminine)*

Clothes/Shoes

Hat = Un Chapeau
A suit = Un costume
A top = Un haut
Jeans = Un jean
A coat = Un manteaux

Trousers = Un pantalon
A jumper = Un pull
Shorts = Un short
A uniform = Un uniforme
A T-shirt = Un tee-shirt

A cap = Une casquette
A shirt = Une chemise
A tie = Une cravate
A scarf = Une écharpe

A skirt = Une jupe
A watch = Une montre
A dress = Une robe
A jacket = Une veste

Trainers = Des baskets
Socks = Des chaussettes
Shoes = Des chaussures

Boots = Des bottes
Flip flips = Des tongs

Year 8 French:

In my city/town	In the future	I would like	To ride my bike			Entertaining
						Fascinating
In my neighbourhood	This weekend	We would like	To go to the restaurant			Cool
						Exciting
	When I am older	I wouldn't like	To go to the beach	Because / as / since	it will be	
						Boring
		We wouldn't like	To visit the castle			Tiring
						Bad
			To play golf			
						Difficult
			To see the cathedral			
			To do hiking			

To wear... (Verb) Complete below:

	To wear
	I wear...
	You wear...
	He wears...
	She wears...
	One wears (We wear)
	We wear...
	You wear *(formal/plural)*
	They wear *(mixed/masculine)*
	They wear *(feminine)*

Clothes/Shoes

Hat =	**Trousers =**	**A cap =**	**A skirt =**	**Trainers =**	**Boots =**
A suit =	**A jumper =**	**A shirt =**	**A watch =**	**Socks =**	**Flip flips =**
A top =	**Shorts =**	**A tie =**	**A dress =**	**Shoes =**	
Jeans =	**A uniform =**	**A scarf =**	**A jacket =**		
A coat =	**A T-shirt =**				

Year 8 French:

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.

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)

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.

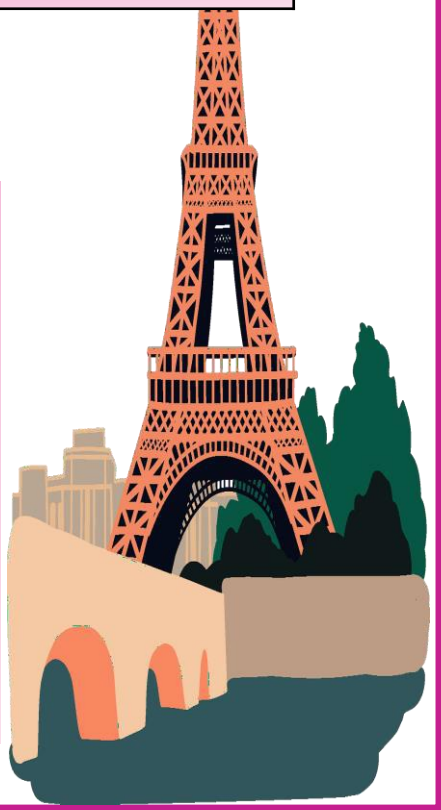
Adjectives to describe yourself and other people

Adjective	Masculine	Masculine Plural	Feminine	Feminine Plural
Funny	drôle	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



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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.

	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)

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				

Using reflexive verbs to describe relationships

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

Je m'entends =

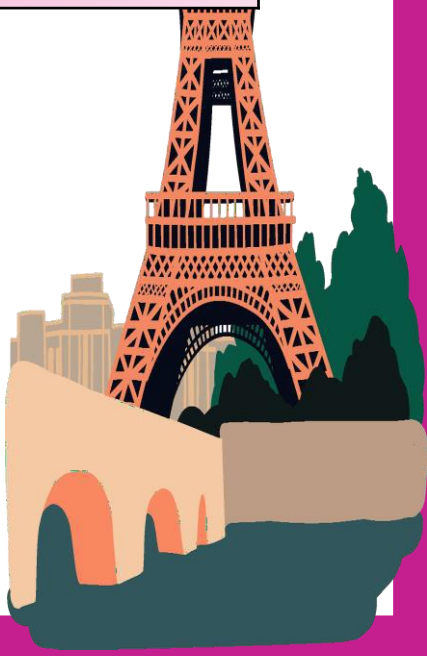
avec =

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.

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)

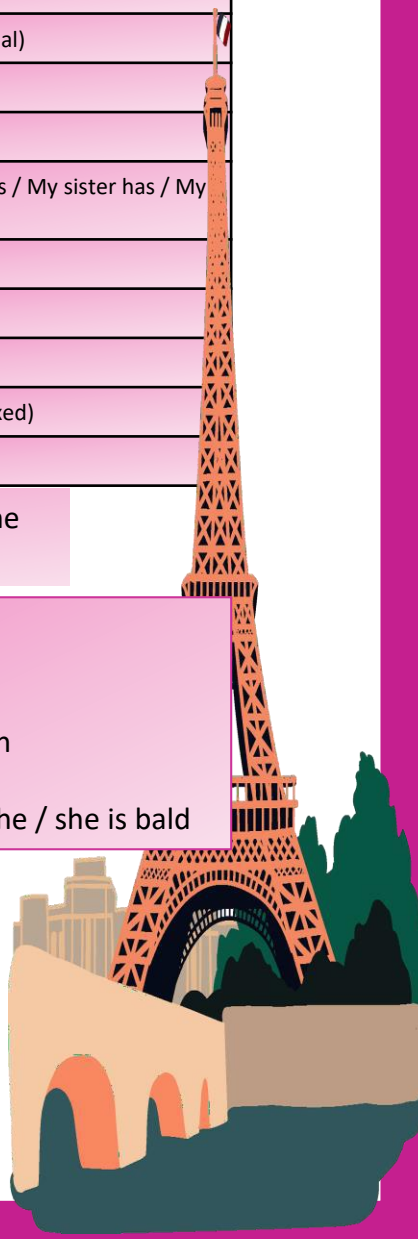
Describing hair and eye colour

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'.

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

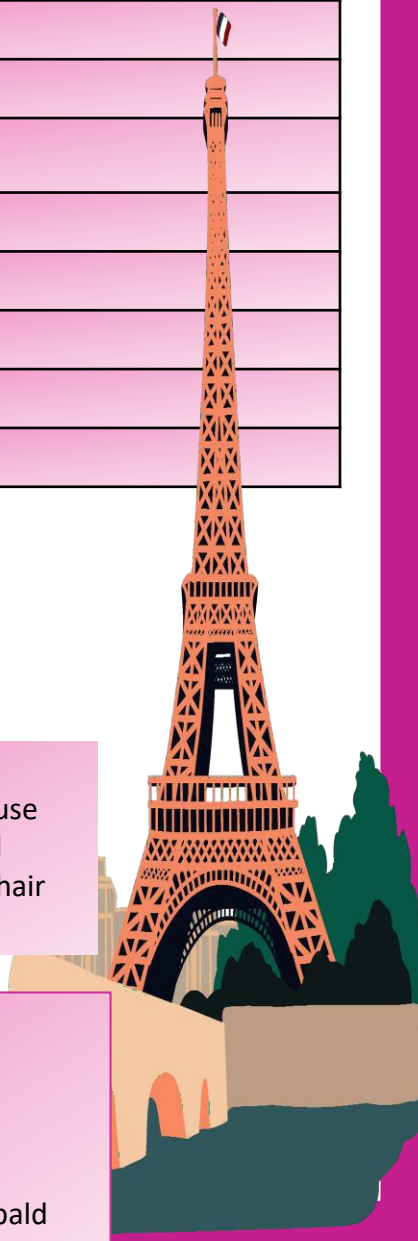
= eyes

= 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.

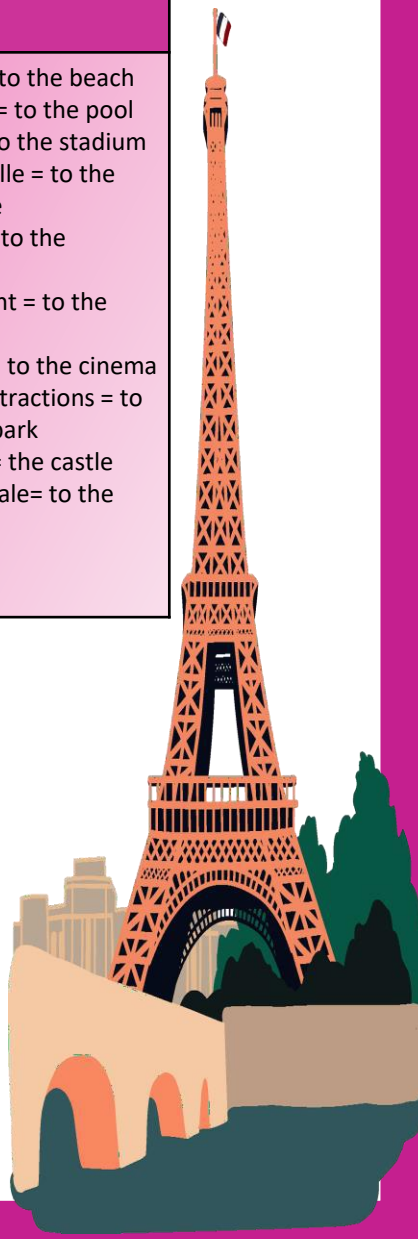
To do this, use the correct part of **aller** plus an **infinitive verb.**

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):	**For masculine places (nouns):**
Je vais aller **à la** piscine I am going to go **to** the swimming pool	Je vais aller **au** cinéma I am going to go **to the** cinema For masculine nouns the "au" replaces the normal article "le".



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

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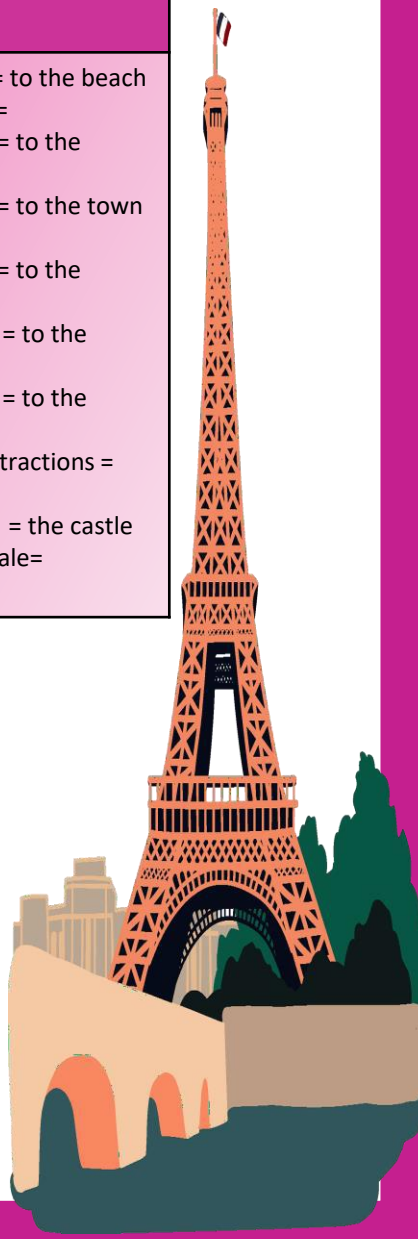


Year 8 French:

Forming the perfect tense (passé composé)
The perfect tense is how you say that you have done something in the past. For example, 'I have eaten' or 'I have played'.

To form the perfect tense, usually you use an auxiliary verb. To do this, take the correct form of the verb avoir (to have) and add a past participle (reference to the past).

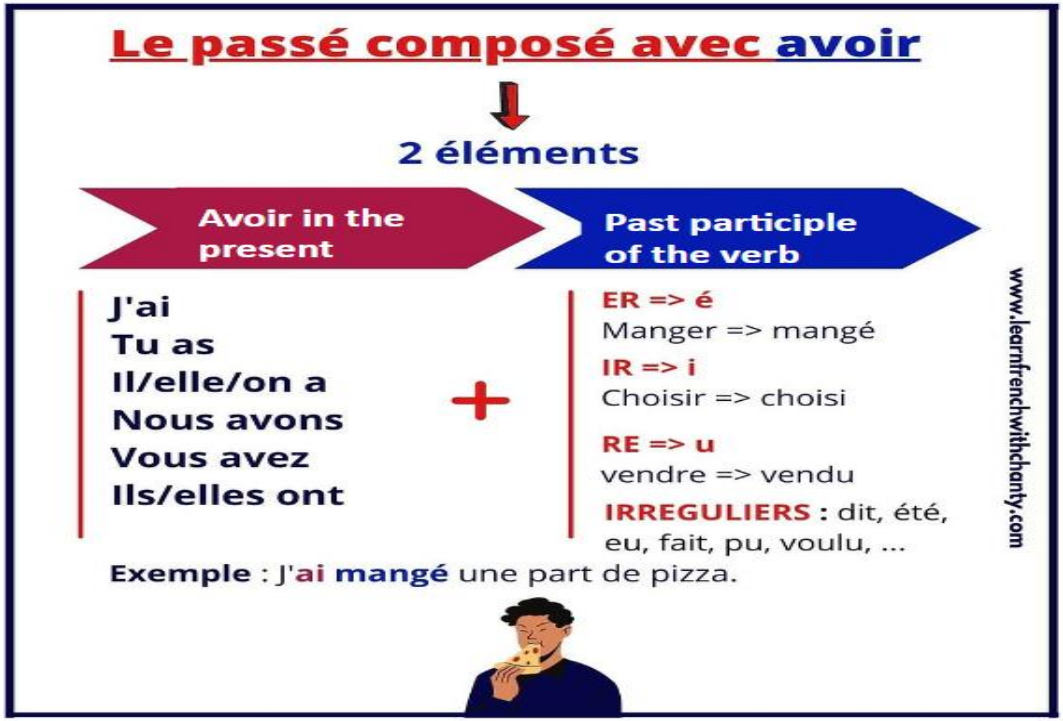
For example, to say 'I have eaten' you use **j'ai** for 'I have' and add **mangé** for eaten. So it is **j'ai 'mangé.**

Mangé (ate) is the past participle of manger (to eat).

J'ai	I have
Tu as	You have (singular/informal)
Il a	He has
Elle a	She has
On a	One has(we have)
Nous avons	We have
Vous avez	You have(formal/plural)
Ils ont	They have (masculine/mixed)
Elles ont	They have (feminine)

Forming a past participle:

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



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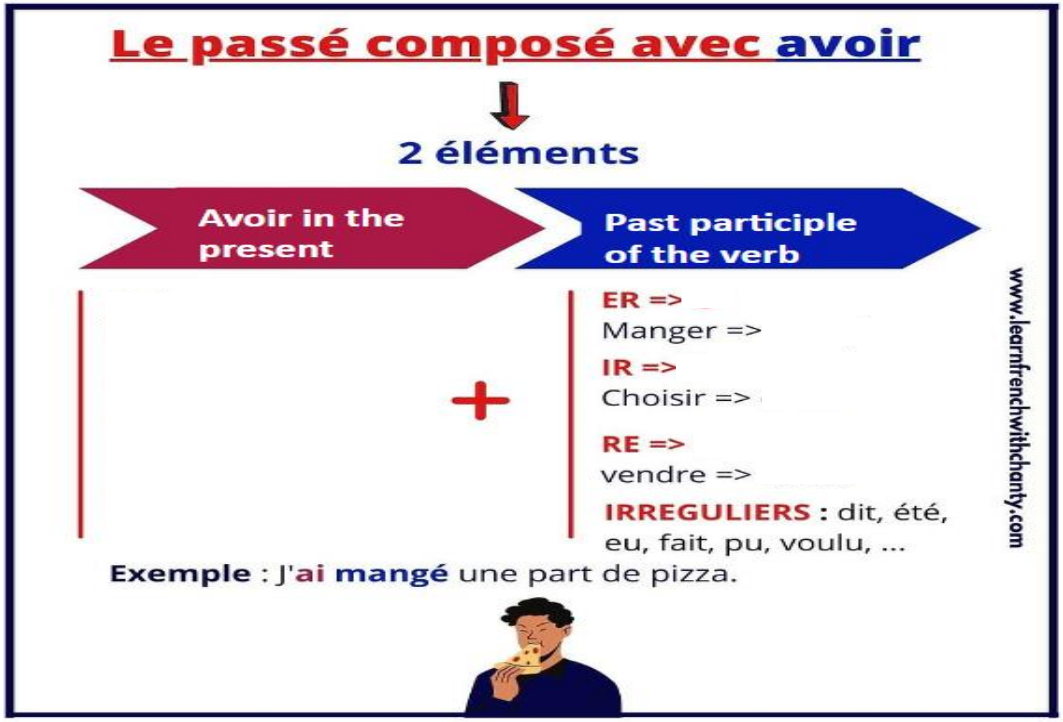
	I have
	You have (singular/informal)
	He has
	She has
	One has(we have)
	We have
	You have(formal/plural)
	They have (masculine/mixed)
	They have (feminine)

Forming a past participle:

Regular ER verbs		
Regular IR verbs		
Regular RE verbs		

Note: there are some verbs that do not follow the above rule. These are called 'irregular verbs'. One example is BOIRE (to drink) which changes to bu. J'ai bu = I drank



Year 8 French:

When forming the perfect tense for some verbs, you need to use **ÊTRE as the auxiliary verb instead of AVOIR**

Examples of verbs that take être are aller (to go), sortir (to go out).
RECAP of the auxiliary verb Être = to be

Je suis	I am
Tu es	You are(singular/informal)
Il est	He is
Elle est	She is
On est	One is (we are)
Nous sommes	We are
Vous êtes	You are (formal/plural)
Ils sont	They are (masculine/mixed)
Elles sont	They are (feminine)

In French you do not say "I went" instead you say "I am gone".
Je suis allé
I am gone (e.g. I went)

Il est allé
He is gone (e.g. he went)

To make it even trickier, the past participle agrees with the person using it.

Verb	Masculine	Feminine
ALLER (to go)	Je suis allé (I am gone) Ils sont allé**s** (they are gone)	Je suis allé**e** (I am gone) Elles sont allé**es** (they are gone)
SORTIR (to go out)	Je suis sorti (I am went out)	Je suis sorti**e** (I am went out)

Verbs:
Using être in le passé composé

Le passé composé has 3 parts:
subject + auxiliary verb + past participle of verb

E.g. Je suis né en 1990 - I was born in 1990

Only two auxiliary verbs are used: AVOIR (to have) and ÊTRE (to be), conjugated to PRESENT tense and agrees w/subject

Most past participle verbs use avoir as the auxiliary verb.

The verbs that use être are «motion/movement» verbs & can be remembered by the mnemonic:

DR & MRS VANDERTRAMP

	Present	Meaning	Past Participle
D	Descendre	To descend	Descendu
R	Revenir	To come back	Revenu
M	Mourir	To die	Mort
R	Retourner	To go back	Retourné
S	Sortir	To go out	Sorti
V	Venir	To come	Venu
A	Arriver	To arrive	Arrivé
N	Naître	To be born	Né
D	Devenir	To become	Devenu
E	Entrer	To enter	Entré
R	Rentrer	To go (home)	Rentré
T	Tomber	To fall	Tombé
R	Rester	To stay	Resté
A	Aller	To go	Allé
M	Monter	To go up	Monté
P	Partir	To leave	Parti

Note: irregular conjugated pp. endings are marked in white

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Examples of verbs that take être are aller (to go), sortir (to go out).
RECAP of the auxiliary verb Être = to be

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

In French you do not say "I went" instead you say "I am gone".
Je suis allé
I am gone (e.g. I went)

Il est allé
He is gone (e.g. he went)

To make it even trickier, the past participle agrees with the person using it.

Verb	Masculine	Feminine
ALLER (to go)		
SORTIR (to go out)		

Verbs:
Using être in le passé composé

Le passé composé has 3 parts:
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N		To be born	
D		To become	
E		To enter	
R		To go (home)	
T		To fall	
R		To stay	
A		To go	
M		To go up	
P		To leave	

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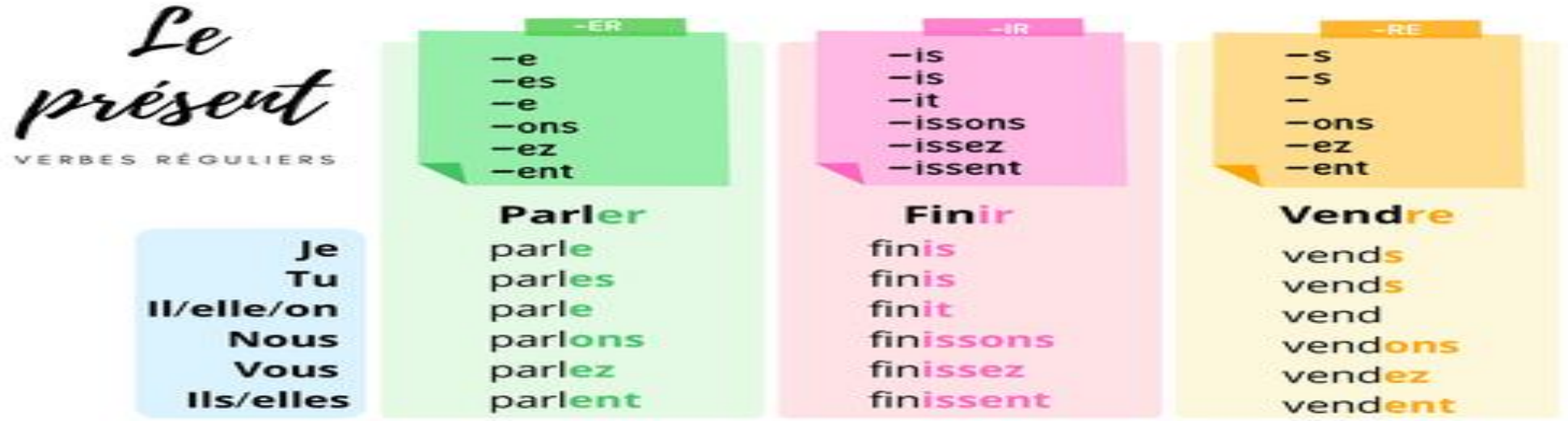
Year 8 French: Conjugating the present tense in French

Conjugate = to list the forms of a verb in a particular order.
Infinitive = A verb before it has been changed into a different tense or person doing the action. E.g. To play. To be. To have.

In French there are 3 types of infinitive verbs: verbs ending in ER (e.g. parler – to talk), verbs ending in IR (e.g. finir – to finish), and verbs ending in RE (e.g. vendre – to sell).

To conjugate a verb you need to:
1) Select the correct subject pronoun based on who you want to talk about. E.g. I, you, we.
2) Remove the ER, IR or RE from the infinitive verb.
3) Add the correct endings.



Example: **I** talk 1) I = Je 2) parl~~er~~ = parl 3) parl + e = **Je** parl<u>e</u>

Year 8 French: Conjugating the present tense in French

Conjugate =.
Infinitive =

In French there are 3 types of infinitive verbs: verbs ending in ER (e.g. parler – to talk), verbs ending in IR (e.g. finir – to finish), and verbs ending in RE (e.g. vendre – to sell).

To conjugate a verb you need to:

Example: **I** talk 1) I = 2) parl~~er~~ = 3) parl + e =

Year 8 French: Conjugating the present tense in French

Days of the week (recap)

Remember that days of the week do not take a capital letter in French.

lundi = Monday
mardi = Tuesday
mercredi =Wednesday
jeudi = Thursday
vendredi = Friday
samedi = Saturday
dimanche = Sunday

Adverbs of frequency

Adverbs of frequency can be used to ask how often or how many times something happens.

Tous les jours - everyday
Quelquefois - sometimes
Souvent - often
De temps en temps - from time to time
Une fois par semaine - once a week
Chaque semaine - every week
Le samedi - On Saturdays

C'est = it is

Year 8 French: Conjugating the present tense in French

Days of the week (recap)

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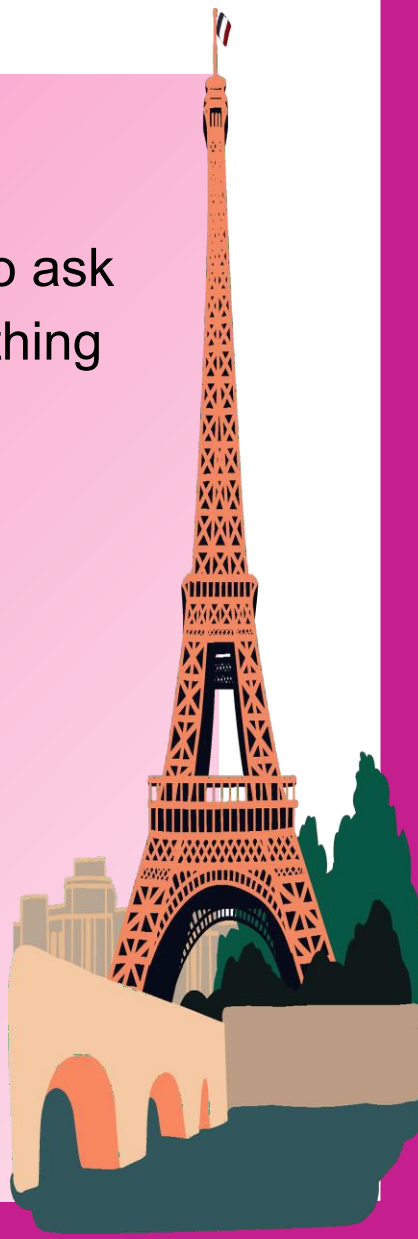

Year 8 Spanish:

Grammar Explanation

How to form the immediate future tense:

To say what you are going to do, you can use the near immediate future tense.
This is formed by using the correct part of the verb **ir** (to go), plus the **infinitive** of another verb.

Voy (I am going)

Vas (you are going)

Va (he/she is going)

Vamos a (we are going)

Van a (they are going)

Voy a ir al cine
I am going to go to the cinema

Va a jugar al fútbol
He is going to play football

Grammar Explanation

How to form the conditional tense:
The easiest way to form the conditional tense is to use the conditional form of '**gustarse**' + **an infinitive verb**

Me gustaría (I would like)
Le gustaría (He/she would like)
Nos gustaría (We would like)

High-Frequency Infinitives	
Ir	To go
Visitar	To visit
Jugar	To play
Ver	To see
Hacer	To do
Montar	To ride
Ser	To be
Tener	To have

Infinitive Verbs

Infinitive verbs in Spanish are the most basic form of verbs.

You can recognize them because they end in

-ar, -er, or **–ir**

When we use an infinitive verb, we're referring to the action in general. For example, when we say "**hablar**" (to speak), we're not talking about a specific person speaking, but simply mentioning the action of 'to speak'

Year 8 Spanish:

Grammar Explanation

How do you form the immediate future tense?

- _____(I am going)
- _____(you are going)
- _____(he/she is going)
- _____(we are going)
- _____(we are going)

I am going to go to the cinema

He is going to play football

Grammar Explanation

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	To be
	To have

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Year 8 Spanish:

El fin de semana
(On the weekend)

Este fin de semana
(This weekend)

El fin de semana que viene
(Next weekend)

Voy a llevar
(I am going to wear)

Clothes/Shoes		Colours	
• A coat = **Un abrigo** • A swimsuit = **Un bañador** • A tracksuit = **Un chándal** • A jumper = **Un jersey**	• A hat = **Un sombrero** • A suit = **Un traje** • A uniform = **Un uniforme** • A dress = **Un vestido**	**Rojo** (red) **Azul** (blue) **Amarillo** (yellow) **Rosa** (pink) **Negro** (black) **Gris** (grey)	**Verde** (green) **Naranja** (orange) **Morado** (purple) **Marrón** (brown) **Blanco** (white)
• A scarf = **Una bufanda** • A shirt = **Una camisa** • A T-shirt = **Una camiseta**	• A tie = **Una corbata** • A skirt = **Una falda** • A cap = **Una gorra**	**Roja** (red) **Azul** (blue) **Amarilla** (yellow) **Rosa** (pink) **Negra** (black) **Gris** (grey)	**Verde** (green) **Naranja** (orange) **Morada** (purple) **Marrón** (brown) **Blanca** (white)
• Socks = **Calcetines** • Gloves = **Guantes** • Trousers = **Pantalones**	• Shorts = **Pantalones cortos** • Jeans = **Vaqueros** • Shoes = **Zapatos**	**Rojos** (red) **Azules** (blue) **Amarillos** (yellow) **Rosas** (pink) **Negros** (black) **Grises** (grey)	**Verdes** (green) **Naranjas** (orange) **Morados** (purple) **Marrónes** (brown) **Blancos** (white)
• Boots = **Botas** • Flip flops = **Chanclas** • Slippers = **Pantuflas**	• Sandals = **Sandalias** • Trainers = **Zapatillas de deporte**	**Rojas** (red) **Azules** (blue) **Amarillas** (yellow) **Rosas** (pink) **Negras** (black) **Grises** (grey)	**Verdes** (green) **Naranjas** (orange) **Moradas** (purple) **Marrónes** (brown) **Blancas** (white)

Year 8 Spanish:

~~(On the weekend)~~

~~(This weekend)~~

~~(Next weekend)~~

_____ (I am going to wear)

Clothes/Shoes		Colours	
• A coat = • A swimsuit = • A tracksuit = • A jumper =	• A hat = • A suit = • A uniform = • A dress =	**Rojo** (red) **Azul** (blue) **Amarillo** (yellow) _____(pink) **Negro** (black) **Gris** (grey)	_____(green) **Naranja** (orange) **Morado** (purple) **Marrón** (brown) **Blanco** (white)
• A scarf = • A shirt = • A T-shirt =	• A tie = • A skirt = • A cap =	_____(red) **Azul** (blue) _____(yellow) **Rosa** (pink) _____(black) **Gris** (grey)	**Verde** (green) **Naranja** (orange) _____(purple) **Marrón** (brown) **Blanca** (white)
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• Boots = • Flip flops = • Slippers =	• Sandals = • Trainers =	_____(red) **Azules** (blue) _____(yellow) **Rosas** (pink) _____(black) **Grises** (grey)	**Verdes** (green) **Naranjas** (orange) _____(purple) **Marrónes** (brown) **Blancas** (white)

Year 8 Spanish:

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	patientes
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 divertid**o**
My Dad is fun

Mi madre es divertid**a**
My Mum is fun

Mis hermanos son divertid**os**
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

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For example:

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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

Year 8 Spanish:

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

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

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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 year', in Spanish you say 'I have hair brown'.

I have **brown** hair

Colour	Masculine	Masculine Plural	Feminine	Feminine Plural

Year 8 Spanish:

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

Year 8 Spanish:

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
- I am going - You are going - He/she is going - We are going - They are going	- to go - to visit	= to the beach = to the pool = to the stadium = to the town centre = to the museum = to the restaurant = to the cinema = to the theme park = the castle = to the cathedral

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

Year 8 Spanish: Conjugating the present tense in Spanish (regular verbs)

Conjugate = to list the forms of a verb in a particular order.
Infinitive = A verb before it has been changed into a different tense or person doing the action.
E.g. To play. To be. To have.

In Spanish there are 3 types of infinitive verbs: verbs ending in AR (e.g. hablar – to talk), verbs ending in ER (e.g. comer – to eat), and verbs ending in IR (e.g. vivir – to live).
To conjugate a verb you need to:

1) Take an infinitive
2) Remove the AR, ER or IR from the infinitive verb.
3) Add the correct endings based on who you want to talk about.

Regular verbs – present tense endings			
	AR verbs	ER verbs	IR verbs
I	o	o	o
you	as	es	es
he/she/it	a	e	e
we	amos	emos	imos
you(pl)	áis	éis	ís
they	an	en	en

Example: **I** talk | 1) Hablar | 2) habl~~ar~~ = habl | 3) habl + o = Habl**o**

Year 8 Spanish: Conjugating the present tense in Spanish (regular verbs)

Conjugate =
Infinitive =

In Spanish there are 3 types of infinitive verbs: verbs ending in AR (e.g. hablar – to talk), verbs ending in ER (e.g. comer – to eat), and verbs ending in IR (e.g. vivir – to live).
To conjugate a verb you need to:

Regular verbs – present tense endings			
	AR verbs	ER verbs	IR verbs
I			
you			
he/she/it			
we			
you(pl)			
they			

Example: **I** talk

Year 8 Spanish:

Recap: Infinitive verbs

An infinitive verb is the verb in the 'to' form before it has been changed.
Infinitive verbs end in AR, ER or IR

Days of the week:

Remember that days of the week **do not** take a capital letter in Spanish.

AR	ER	IR
Hablar = to speak Jugar = to play Bailar = to dance Escuchar = to listen	Hacer = to do Ser = to be Ver = to watch	Salir = to go out Ir = to go

Lunes	*Monday*
Martes	*Tuesday*
Miércoles	*Wednesday*
Jueves	*Thursday*
Viernes	*Friday*
Sábado	*Saturday*
Domingo	*Sunday*

Adverbs of frequency can be used to ask how often or how many times something happens.

Todos los días - everyday
A veces - sometimes
A menudo - often
De vez en cuando - from time to time
Una vez por semana - once a week
Cada semana - every week

Es = it is

Day of the week	Action
Los lunes = on Mondays Los martes = on Tuesdays Los miércoles = On Wednesdays Los jueves = On Thursdays Los viernes = On Fridays Los sábados = On Saturdays Los domingos = On sundays	veo la televisión = I watch voy al cine = I go to the cinema juego al fútbol = I play football salgo con mis amigos = I go out with my friends leo = I read hablo con mi mejor amigo = I talk to my best friend visito la casa de mis abuelos = I visit my Grandparent's house

Year 8 Spanish:

Recap: Infinitive verbs

Infinitive verbs end in AR, ER or IR

Days of the week:
Remember that days of the week **do not** take a capital letter in Spanish.

AR	ER	IR

Adverbs of frequency can be used to ask how often or how many times something happens.

Todos los días -
A veces –
A menudo -
De vez en cuando –
Una vez por semana –
Cada semana –

Es =

Day of the week	Action

Year 8 Spanish: Preterite tense

Grammar Explanation

The preterite tense is used to describe **completed actions in the past**. For example:

- *Fui al cine ayer* (I went to the cinema yesterday).
- *Viajamos en tren* (We travelled by train).

The preterite tense is used if the past action had a definite beginning and definite end and is often used with phrases that give a specific time frame, eg:

- *ayer* (yesterday)
- *anteayer* (the day before yesterday)
- *anoche* (last night)
- *el año pasado* (last year)
- *el mes pasado* (last month)
- *la semana pasada* (last week)

There is a three-step method that will make conjugating regular Spanish verbs very easy for you.

1. Take the infinitive (full verb)
2. Cut off the -ar -er or –ir to form the stem
3. Add the endings

Example: I spoke = 1) hablar 2) hablar = habl 3) habl + é = habl**é**

Regular preterite tense verb endings

English subject pronoun	Spanish subject pronoun	AR ending	hablar (to speak)
I	yo	é	**hablé**
you	tú	aste	**hablaste**
he/she	él/ella	ó	**habló**
we	nosotros/nosotras	amos	**hablamos**
you (plural)	vosotros/vosotras	asteis	**hablasteis**
they	ellos/ellas	aron	**hablaron**

English subject pronoun	Spanish subject pronoun	ER/IR ending	Comer (to eat)
I	yo	í	**comí**
you	tú	iste	**comiste**
he/she	él/ella	ió	**comió**
we	nosotros/nosotras	imos	**comimos**
you (plural)	vosotros/vosotras	isteis	**comisteis**
they	ellos/ellas	ieron	**comieron**

Year 8 Spanish: Preterite tense

Grammar Explanation

The preterite tense is used to describe **completed actions in the past**. For example:

- *Fui al cine ayer* ( ).
- *Viajamos en tren* ( ).

The preterite tense is used if the past action had a definite beginning and definite end and is often used with phrases that give a specific time frame, eg:

(yesterday)
(the day before yesterday)
(last night)
(last year)
(last month)
(last week)

There is a three-step method that will make conjugating regular Spanish verbs very easy for you.

1.
2.
3.

Example: I spoke = 1) hablar 2) hablar = habl 3) habl + é = habl**é**

Regular preterite tense verb endings

English subject pronoun	Spanish subject pronoun	AR ending	hablar (to speak)
I			
you			
he/she			
we			
you (plural)			
they			

English subject pronoun	Spanish subject pronoun	ER/IR ending	Comer (to eat)
I			
you			
he/she			
we			
you (plural)			
they			

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

jugué - I played
estuve - I was (emotion, location)
hice- I did
fui - I went
tuve - I had
saqué - I took (photos)
vi- I watched / saw

Past Tense Time Phrases

El fin de semana pasado = last weekend
La semana pasada = Last week
Ayer = yesterday
El lunes pasado = last Monday

Fue = it was

Sequencers

Sequencers can be used when you are telling a story, to help you tell events in a certain order.

Luego - then
Más tarde - later
Después - after
Por la manaña - in the morning
Por la tarde - in the afternoon

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

Past Tense Time Phrases

El fin de semana pasado =

La semana pasada =

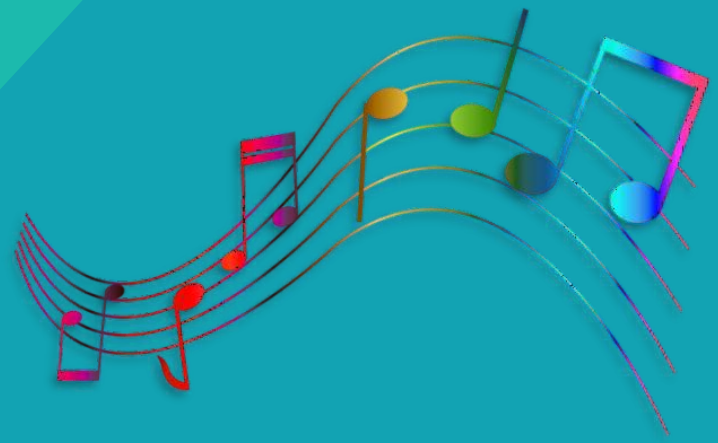
Ayer =

El lunes pasado =

Fue =

Sequencers

Music



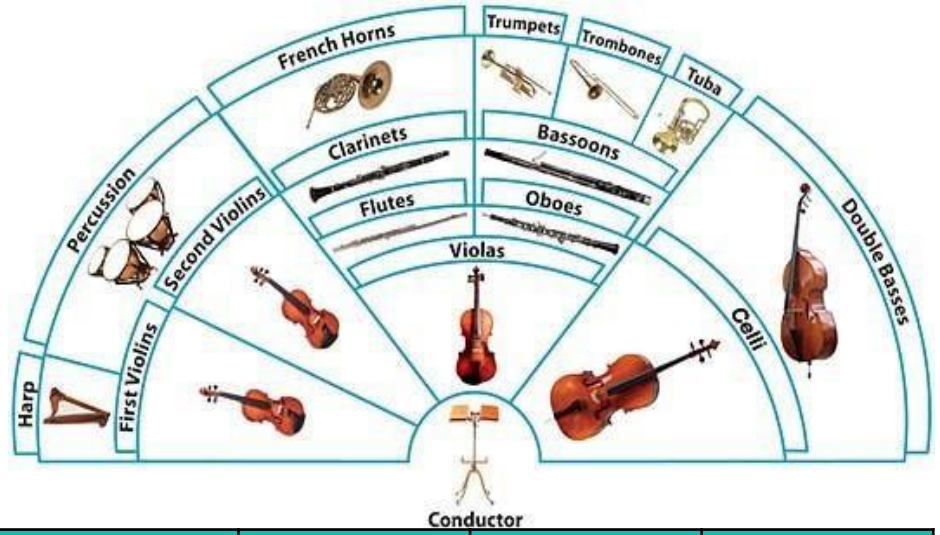
Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 Music:

Orchestral Instruments

Strings	Woodwind	Brass	Percussion (Tuned)	Percussion (Untuned)
Violin	Piccolo	Trumpet	Piano	Bass Drum
Viola	Flute	French Horn	Xylophone	Snare Drum
Cello	Oboe	Trombone	Glockenspiel	Triangle
Double Bass	Clarinet	Tuba	Timpani	Gong
	Cor Anglais			Cymbals
	Bassoon			



Time	Name of period	Section of orchestra developed	Composer
1600 - 1750	Baroque	Strings	J.S Bach
1750 - 1830	Classical	Woodwind	Mozart
1830 - 1900	Romantic	Brass	Tchaikovsky
1900 -	Modern	Percussion	Stravinsky

The Families

Conductor: Stands at the front of the orchestra and *directs* it. They will indicate the main beats in the music using a '*baton*'. All musicians look at the conductor whilst playing as they are *ultimately in control of the whole piece*.

Strings: Made from wood and have strings. They are usually played with a bow but can also be *plucked (called pizzicato)*

Woodwind: A selection of instruments divided into 2 subfamilies: *flutes* and *reeds*. *Flutes* create sound by air passing over a small hole. It creates a light breathy tone. *Reed* instruments use a piece of bamboo reed to create a **vibration**.

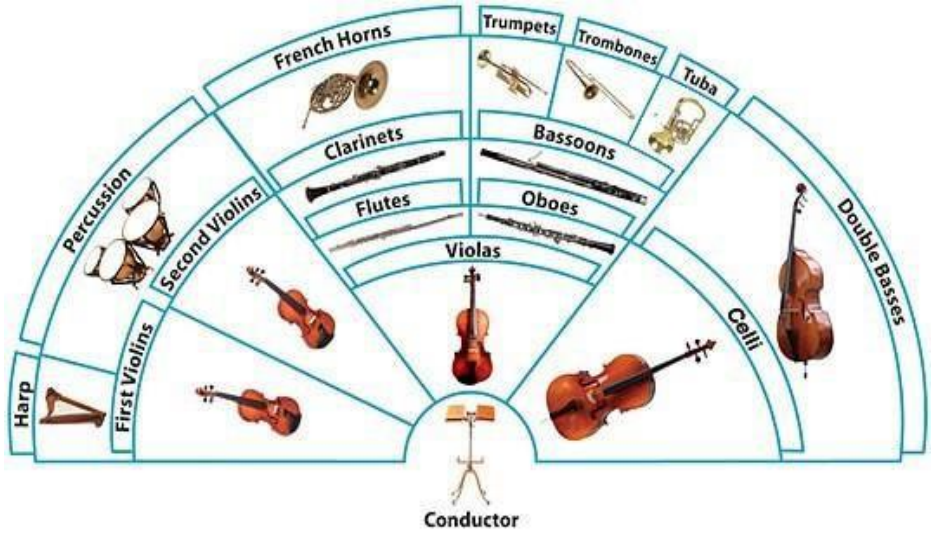
Brass: Made out of *metal*. The sound vibrations are *created by the player's lips.*

Percussion: Instruments which are *hit*. These fall into 2 subfamilies: *tuned* (able to play different pitch) and *untuned* (e.g. drums)

Year 8 Music:

Orchestral Instruments

Strings	Woodwind	Brass	Percussion (Tuned)	Percussion (Untuned)



Time	Name of period	Section of orchestra developed	Composer
1600 - 1750			
1750 - 1830			
1830 - 1900			
1900 -			

The Families

Conductor:

Strings:

Woodwind:

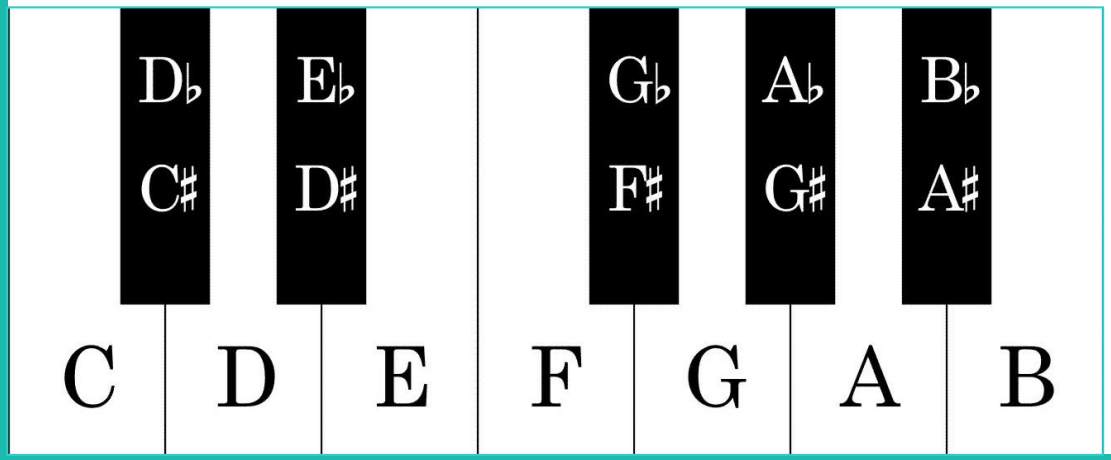
Brass:

Percussion:

Year 8 Music:

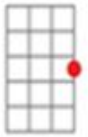
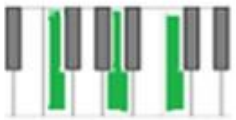
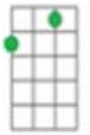
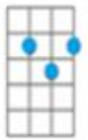
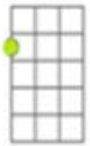
1	**Pitch**	How high or low a note/ sound is
2	**Dynamics**	How loud or quiet a note/sound is.
3	**Ukulele**	A small guitar like instrument with only four strings
4	**Plectrum**	A small plastic object used to strum the Ukulele
5	**Pop Music**	Music that is popular at the current time
6	**Chord**	More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

Sharps and Flats



Ukulele

Chords

Chord	Keyboard	Ukulele	Notes
C			C E G
F			F A C
G			G B D
Am			A C E

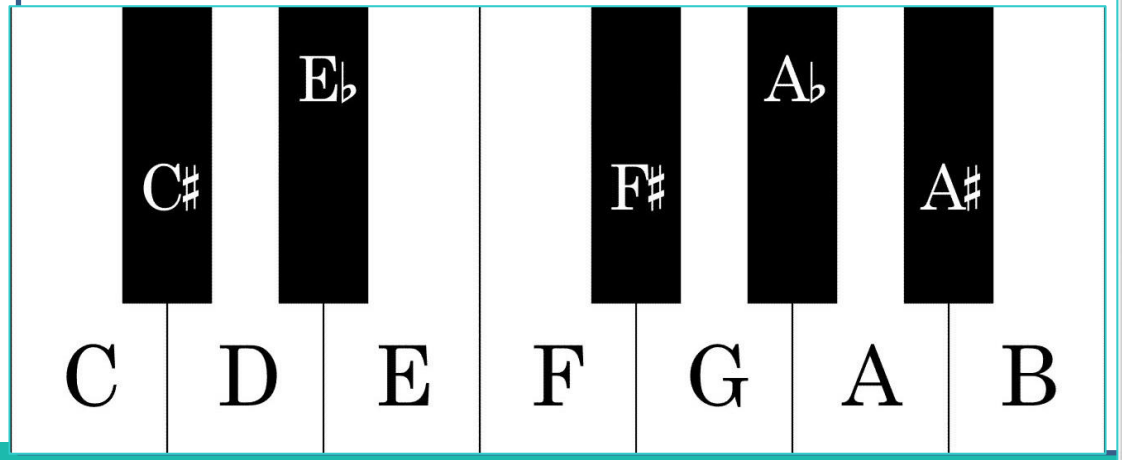
Year 8 Music:

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

Chords

Chord	Keyboard	Ukulele	Notes

Sharps and Flats



Year 8 Music:

Latin Dance: The Tango

Originated in Argentina and became a popular **LATIN BALLROOM DANCE**. A dramatic and sensual **PAIRED DANCE** with close contact, serious expressions, and quick, jerky movements.

Characteristic crisp "**TANGO RHYTHMS**" (see E.) often **DOTTED/SYNCOPATED RHYTHMS**.

SIMPLE DUPLE METRE (2/4) or **SIMPLE QUADRUPLE METRE** (4/4).

Often **MINOR TONALITY** (sometimes **MAJOR** for contrast).

Clear **MELODY** and **ACCOMPANIMENT** (**HOMOPHONIC TEXTURE**).

Uses mainly **PRIMARY CHORDS (I, IV & V)**.

Instruments such as **BANDONEON, VIOLIN, CELLO, DOUBLE BASS** (often plucked – **PIZZICATO**), **SPANISH/ACOUSTIC GUITAR, PIANO**.

How did Reggae develop?

REGGAE is one of the traditional musical styles from **JAMAICA**. It developed from :

REGGAE

MENTO	SKA	ROCK STEADY
A form of Jamaican **FOLK MUSIC** like **CALYPSO** popular in the 1950's.	Fast dance music that emerged in the 1950's fusing American R&B with **MENTO** rhythms and featuring **ELECTRIC GUITARS, JAZZY HORN SECTIONS** and characteristic **OFFBEAT RHYTHMS.**	A more vocal style of dance music which used **RIFFS, SIMPLE HARMONIES, OFFBEAT RHYTHMS** and a strong **BASS LINE.**

Reggae was first heard in the UK in the 1950's when immigrants began to settle. During the 1960's, people began importing singles from Jamaica to sell in UK shops. Now, Reggae is known as the national music of Jamaica.

Origins and Cultural Context of the Traditional Music	Musical Characteristics of Folk Music
Calypso is the national dance of Trinidad and Tobago and is based on a traditional syncopated rhythm. Steel Bands also originated from these islands. Steel Drums were discovered in the late 1930's by hitting a dented section of an oil barrel which produced a particular tone.	Calypso and Steel Band music has African musical influences including: Syncopations and Cross-Rhythms, use of percussion instruments, call and response and singing styles as well as European musical influences including tonal harmonies and melodies and instruments such as the guitar.

Year 8 Music:

Latin Dance: The Tango

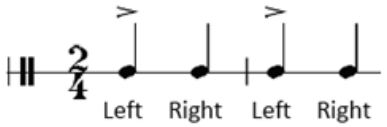
How did Reggae develop?

Origins and Cultural Context of the Traditional Music	Musical Characteristics of Folk Music

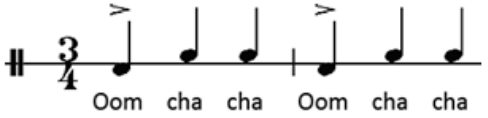
Year 8 Music:

Characteristic Rhythms in Dance Music

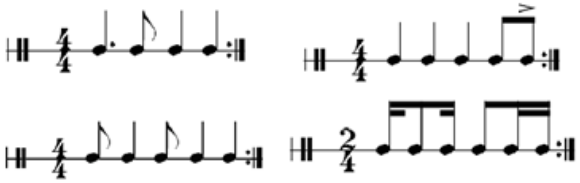
The **MARCH** has a strong **LEFT**, right, **LEFT**, right rhythm:



The **WALTZ** has a strong **OOM**-cha-cha, **OOM**-cha-cha rhythm:



The **TANGO** has several rhythms:



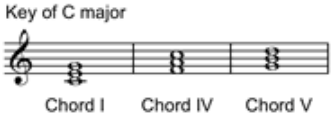
FOUR-ON-THE-FLOOR is a common rhythm in **DISCO** and more modern dance music:

What are Reggae Songs About?

Reggae is closely associated with **RASTAFARIANISM** (a religious movement worshipping Haile Selassie as the Messiah and that black people are the chosen people and will eventually return to their African homeland). The **LYRICS** of Reggae songs are strongly influenced by Rastafarianism and are often political including themes such as **LOVE, BROTHERHOOD, PEACE, POVERTY, ANTI-RACISM, OPTIMISM** and **FREEDOM**.

Reggae Key Words

1. **MELODY** – The main 'tune' of a piece of music, often sung by the **LEAD SINGER**.
2. **IMPROVISATION** – Previously unprepared performance.
3. **CALL AND RESPONSE** – Similar to a "Question and Answer" often the call sung by the lead singer and answered by the backing singers or instruments (the response) – musical dialogue.
4. **SIMPLE HARMONIES** – using a limited number of **CHORDS,** mainly **PRIMARY TRIADS** such as the **TONIC, DOMINANT** and **SUBDOMINANT** chords.



5. **RIFF** – A repeated musical pattern. Often the **BASS GUITAR** plays repeated **MELODIC BASS RIFFS** in Reggae songs.
6. **BASS/BASS LINE** – The lowest pitched part of a piece of music often played by the **BASS GUITAR** in Reggae which plays an important role.
7. **CHORD** – 2 or more notes played together in **HARMONY**.
8. **RHYTHM** – A series of long and short sounds.
9. **TEXTURE** – Layers of sound combined to make music.

Year 8 Music:

Reggae Key Words

Characteristic Rhythms in Dance Music

What are Reggae Songs About?

PE

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 PE: Football

Motor Competence

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

Rules, Strategies and Tactics

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?	

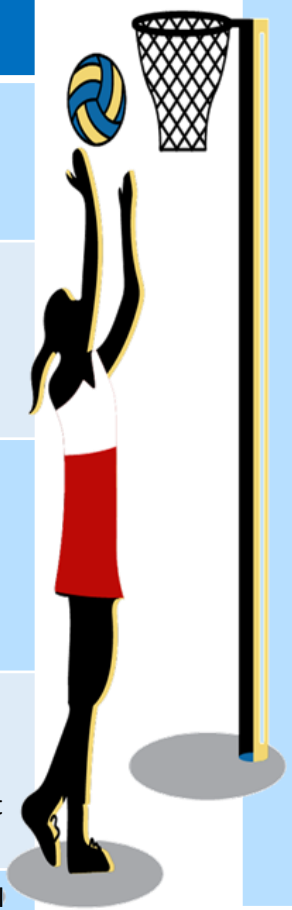
Key Terms:

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

Year 8 PE: Netball

Motor Competence

Passing	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.
Chest Pass	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.
Bounce Pass	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.
Overhead Pass	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.
Shoulder Pass	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.



Rules, Strategies and Tactics

Held ball	Once gaining possession of a ball a player must release the ball within 3 seconds.
Sanction	Free pass to the opposing team where the player caught the ball.
Short pass	A pass of the ball between teammates too close together to allow an opponent to get between them.
Possession	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.
Contact	Occurs when a players actions interfere with an opponents play whether these are accidental or deliberate.
Free pass	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

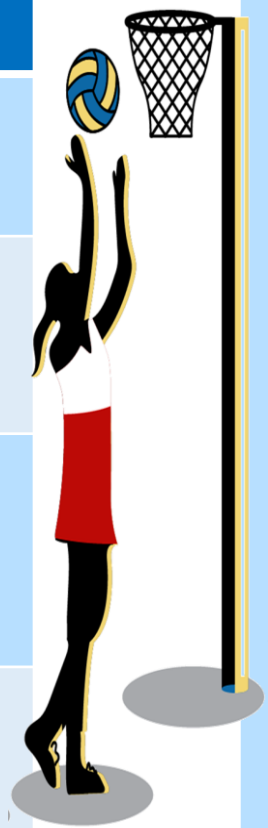
Healthy Participation

Muscles	Glutes, hamstrings, quadriceps, gastrocnemius.
Fitness components	Hand eye coordination, power, speed, balance.

Year 8 PE: Netball

Motor Competence

Passing	
Chest Pass	
Bounce Pass	
Overhead Pass	
Shoulder Pass	



Rules, Strategies and Tactics

What is a held ball?

What is a sanction?

What is a short pass?

What is possession?

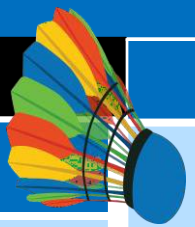
What is contact?

What is a free pass?

Healthy Participation

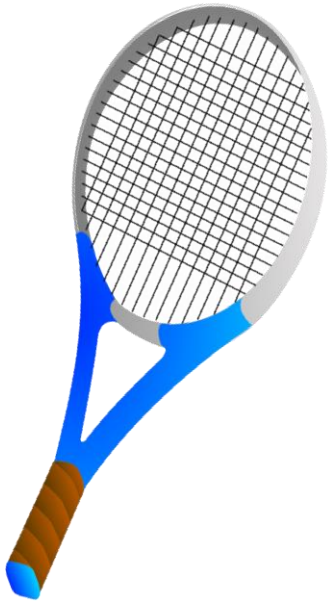
Which **muscles** are used in netball?	
What are the **fitness components** of netball?	

Year 8 PE: Racket Sports



Motor Competence

Serve	Holding the shuttle, High Serve, Low Serve, disguising your serve
Outwitting an opponent	Attacking Shots - Smash, Drop Shot, Jump Smash, Net Shot
Defensive shots	Net Lift
Gameplay in singles	Select the correct shot to play
Gameplay in doubles	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.

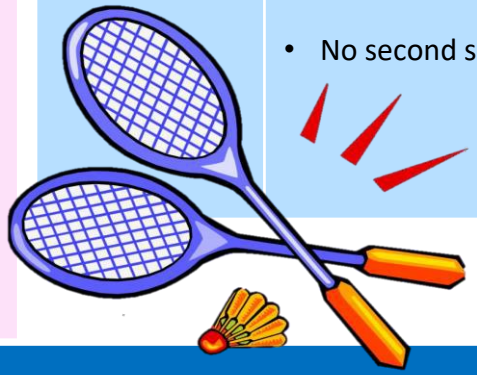
Rules, Strategies and Tactics

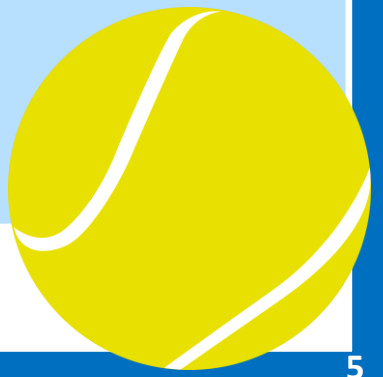
Points

- 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 is consists of the best of 3 games of 21 points.
- At 20-all, the player/pair which reaches 2 clear points wins the game

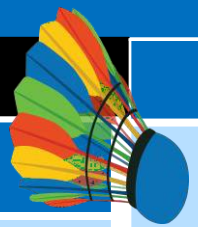
Service

- 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



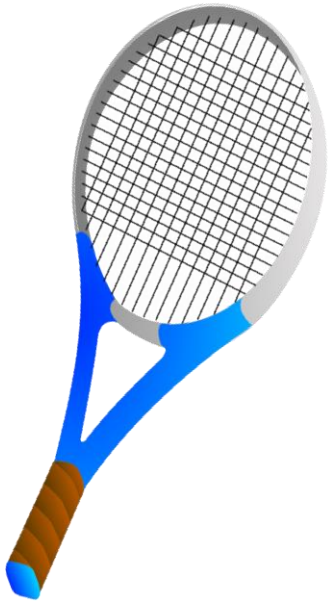


Year 8 PE: Racket Sports



Motor Competence

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



Healthy Participation

Muscles commonly used:

Fitness components:

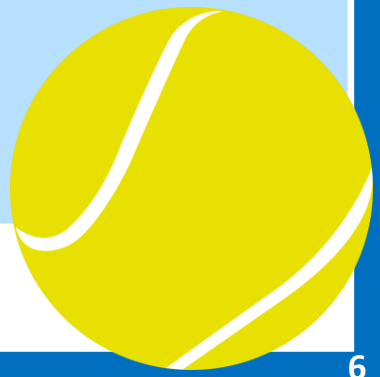
Rules, Strategies and Tactics

Points

- -
- -
- -
- -
- -

Service

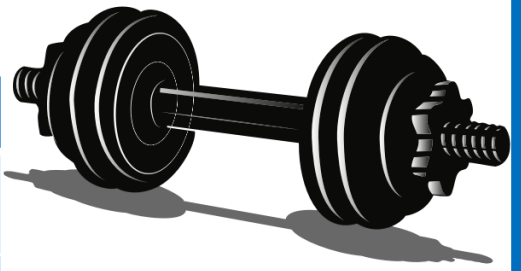
- -
- -
- -
- -
- -



Year 8 PE: Fitness

Motor Competence

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

Year 8 PE: Fitness

Motor Competence

Muscular strength	The amount of force you can put out or the amount of weight you can lift.
Muscular Endurance	Perform exercises to failure so that you improve your muscular endurance.
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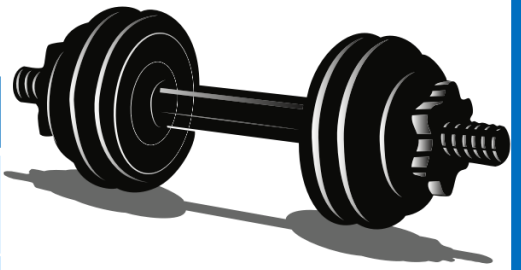


Healthy Participation

Muscles commonly used in the lesson:

- _____
- _____
- _____
- _____
- _____

Rules, Strategies and Tactics

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

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

Year 8 PE: Striking an d Fielding

Motor Competence

Throwing Technique - underarm for short distances and overarm for long distances, see it out

Catching technique - See it in, cupped hands, fingers pointed up and thumbs together if above the waist, fingers down and pinkies together if below the waist

Long Barrier - get in line, whole body behind the ball, bend knee and twist to the side, fingers pointing down to collect

One handed pick up - moving forward, fingers pointing down, collect from front foot

Rounders bowling - knees bent, smooth underarm action, aim between shoulder and hip

Cricket bowling - Seam between index and middle finger, straight arm, release at top of swing

Rounders batting - Hold with one hand, stand side one, keep your eye on the ball and time your swing, aim for the space

Rules, Strategies and Tactics

Flat Bat Rounders: Where should the fielders stand. Can only stump batters out at first base. Where do you go after they have passed that base in order to prevent them from scoring? After first base to get the batter out, they must be touched or hit with the ball. Do you chase them or throw the ball at them to hit them and get them out?

Only score by hitting the ball so contact must be made.

The backstop may hit the batter with the ball, throw to first base fielder to stump them out or to other fielders to hit the batter with the ball to get them out. If the backstop catches the ball when the batter has hit it, the batter is out.

Cricket: Throwing the ball at the correct wickets. Backing up.

Required to hit the ball in order to score runs.

To catch the ball when missed by the batsman, or when thrown towards him.

Healthy Participation

Pupils to understand the importance of warm ups. Biceps, triceps, deltoid, pectorals, latissimus dorsi, hamstrings, gluteals, quadriceps, gastrocnemius.

How exercise improves health and the benefits of being physically active long term. What happens to out body during exercise? - Heart rate increases, breathing deepens, increase in body temp, sweat.

Understanding why these things happen and how they Benefit us?

Social enjoyment, having fun, learning new skills and improving them. becoming part of a team - teamwork and ultimately representing the school or playing for a team outside of school - club links.

Year 8 PE: Striking an d Fielding

Rules, Strategies and Tactics

Motor Competence

Throwing Technique –

Catching technique –

Long Barrier –

One handed pick up –

Rounders bowling –

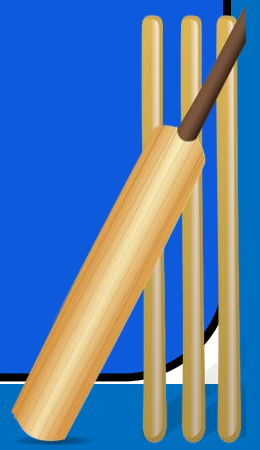
Cricket bowling –

Rounders batting –

Flat Bat Rounders:

Cricket:

Healthy Participation



Year 8 PE: Athletics

Motor Competence

Running - Fingers must be behind the white line during a sprint start
100&200m - stay in your lane

800&1500m - use inside lanes

Throwing - Only throw and collect when instructed to do so

Throwing - Feet behind the throwing line. Score from where the equipment lands, not where it rolls to
Jumping - score from part of the body that is furthest back

Rules, Strategies and Tactics

Running - 100m and 200m - Standing or crouched starts.. Stay in your lane. Tall posture, lead with the 'belt buckle'. High knees with stepping action. Accelerate with forward lean from ankle to ears. Big arm action 'hip to lip'.

Running - Relay - when passing over, hold opposite arm back and straight. Start to accelerate facing forward as teammate approaches. Place baton in palm of hand.

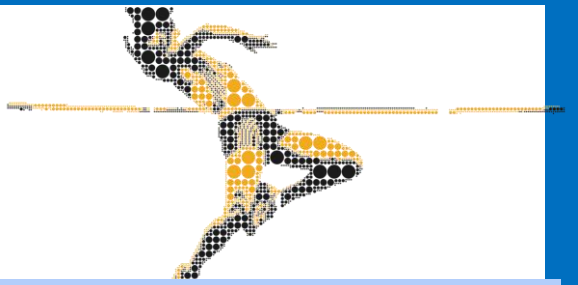
Throwing - Javelin - grip using the palm with fingers wrapped around. Throw with pulling action. Side on with dominant arm at the back. Rotate body for power. See it out.

Running - 800m and 1500m - Standing start, move to the inside lanes, steady pace throughout , breathing in through the nose, out through the mouth. Increase of speed at the finish, duck at the line.

Throwing - Discus - grip flat in the palm, wrap fingers around the edge, stand side on with dominant hand at the back. Release from index finger, see it out.

Jumping - Standing long and triple - bend knees, swing arms, fall forwards

Throwing - Shot Putt - Dirty fingers, dirty neck, 'chin-knee-toe' stance. Push and use power from the legs and body. Aim for a 45 degree trajectory. See it out.



Healthy Participation

Warm up - Involves a pulse raiser and dynamic stretches. Prepares participants physically and mentally. Helps to prevent injury.

Muscles used when running - Quadriceps, hamstrings, gastrocnemius, deltoids, biceps, triceps

Muscles used when throwing - Quadriceps, deltoids, biceps, triceps, trapezius

Muscles used when jumping - Gluteus Maximus, quadriceps, hamstrings, gastrocnemius

Fitness components used during athletics - Cardiovascular endurance, muscular strength & endurance, speed and power

Year 8 PE: Athletics

Motor Competence

Running –

00&200m –

800&1500m –

Throwing –

Throwing –

Jumping -

Rules, Strategies and Tactics

Running –

Running –

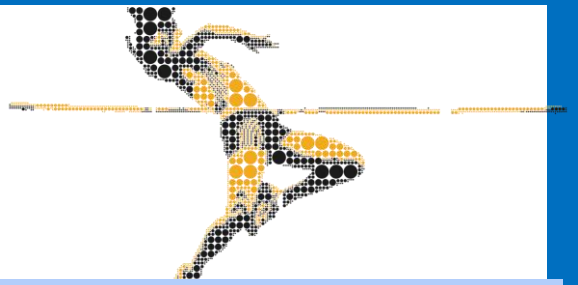
Throwing –

Running –

Throwing-

Jumping

Throwing



Healthy Participation

Warm up -

Muscles used when running –

Muscles used when throwing –

Muscles used when jumping –

Fitness components used during athletics -

Year 8 PE: Officiating and Fair play

Whistle

You need to blow your whistle to get the attention of the players

Reason

Explain why you have made that decision with confidence and assertiveness

Sportsmanship

Applauding opponents when they do something well. Admitting if a foul is made of if the ball is out of play. Playing fair.

Signal

Use arm signals to give a visual cue of what decision you have made

Etiquette

Polite behaviour in sport. Shaking hands with opponents. Complimenting them if they do something well.

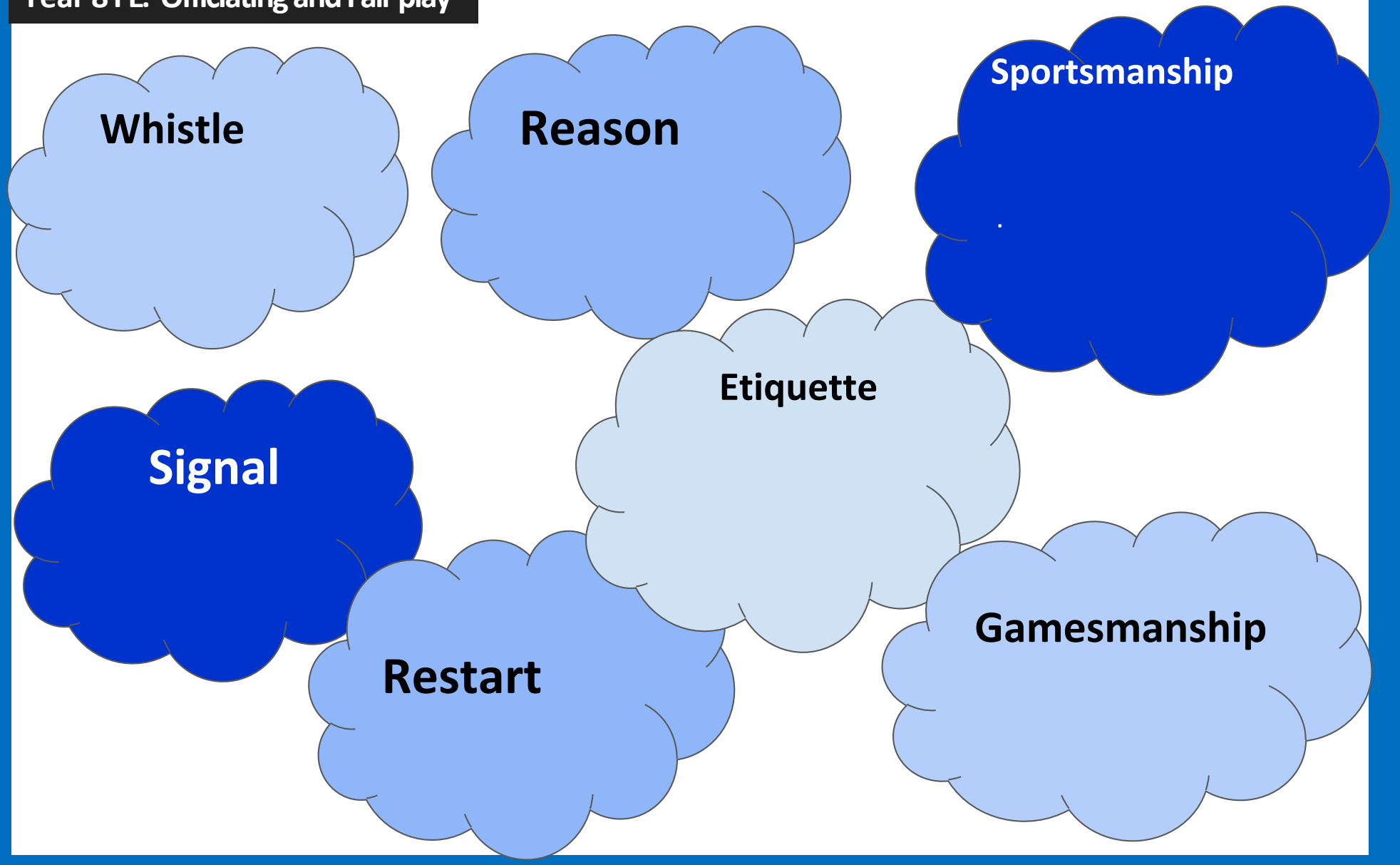
Restart

Know how to restart the game correctly

Gamesmanship

Bending the rules to gain an advantage. Not classed as cheating.

Year 8 PE: Officiating and Fair play



Religious Education

Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 RE: : Hinduism

Hinduism is the religion and way of life of Hindus. The religion originally started in North-West India, but the exact date of origin is unknown. Today, it is a major world religion and has **about 700 million believers** and is **one of the oldest religions in the world.**

Hinduism has **more than one holy** book and has no specific founder.

During worship, Hindus use many items, which are kept on a puja tray.

Item	What it represents	Item	What is represents
A bell	To wake the God or Goddess	**Spoon**	Used to offer the water to the God
A pot of water	To wash the statue	**Incense**	Cleans the air and brings a nice smell
Diva lamp	A symbol of God's presence	**Kum kum powder**	To put a red mark on the forehead of the God as a sign of respect and devotion to the God.

Key learning / concepts

Reincarnation	Atman	Puja
Belief that a soul is reborn	The soul in everything	Worship of a God or Goddess

Key word meanings

Brahman	God
Pluralism	The idea that we can think of God in different ways.
Ahimsa	Non - violence
Trimurti	`The three gods` Brahma, Vishnu, Shiva
Mantra	Short sacred text or prayer
Shrine	Holy place

During **puja**, worshippers will offer food to the deities (gods) and chant mantras.

Year 8 RE: : Hinduism

Where did Hinduism originally begin?

How many believers of Hinduism currently exist?

Write down 1 more fact about Hinduism:

During worship, Hindus use many items, which are kept on a puja tray.

Item	What does it represent?	Item	What does it represents?
A bell		Spoon	
A pot of water		Incense	
Diva lamp		Kum kum powder	

Key learning / concepts- define below:		
Reincarnation	Atman	Puja

What do each of the key words mean?	
Brahman	
Pluralism	
Ahimsa	
Trimurti	
Mantra	
Shrine	

During **puja**, worshippers will…

Year 8 RE: Hinduism

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.

Year 8 RE: Hinduism

Holy scriptures

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

- _____
- _____
- _____ contemplation.

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Hindu Holy Books – Sruti / Shruti

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Year 8 RE: Hinduism

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.

Year 8 RE: Hinduism

Significant places for Hindus

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

Pilgrimage is important for Hindus for several reasons:

- _____ _____.
- _____.
- _____ _____.

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Vrindavan

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

Year 8 RE: Hinduism

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
Shruti	Scriptures that were **'heard and seen'.**
Smriti	Scriptures that are **'remembered'**
Yatra	Pilgrimage – holy journey
Atman	The soul
Moksha	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.

Year 8 RE: Hinduism

The River Ganges

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

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

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Key word	Definition
Shruti	
Smriti	
Yatra	
Atman	
Moksha	

Diwali

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

Year 8 RE: Hinduism

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.

Year 8 RE: Hinduism

Holi

The festival of _____ takes place in _____and remembers how _____ saved the demon King's son, _____, from his father. Celebrations start on the evening before.

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

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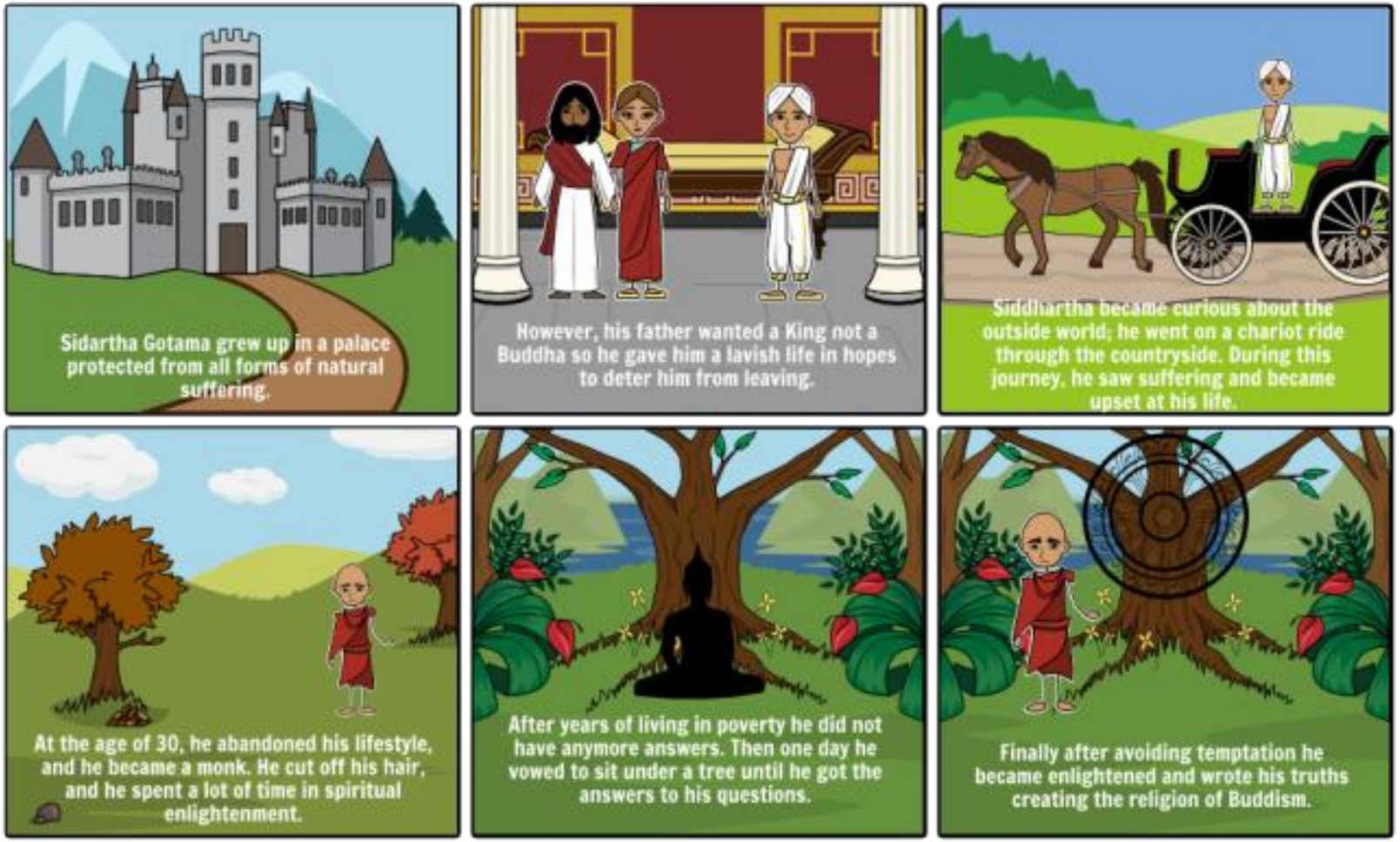
Year 8 RE: Buddhism

The Early Life of the Buddha



Year 8 RE: Buddhism

The Early Life of the Buddha

Year 8 RE: Buddhism

The Buddha was the founder of the religion known as Buddhism. There are many records of his life and teachings, some of which we can see as factual, others which we can see as stories or myths.

Buddhism teaches about the dharma or 'laws of life'.

Key word	Meaning
Buddhism	The religion followed by Buddhists
Buddha	The title given to the founder of Buddhism. A person who understands life at its deepest level.
Dharma	The Buddha's teachings. The 'laws of life.'
Sadhu	A holy man
Enlightenment	To understand what life is about.
Dukkha	Suffering
Anicca	Impermanence – everything changes
Anatta	No fixed self – we change, because the things around us change. Everything is interconnected.

Year 8 RE: Buddhism

The _____ was the founder of the _____ known as Buddhism. There are many records of his life and_____, some of which we can see as factual, others which we can see as stories or _____.

Buddhism teaches about the dharma or '_____ of life'.

Key word	Meaning
Buddhism	
Buddha	
Dharma	
Sadhu	
Enlightenment	
Dukkha	
Anicca	
Anatta	

Year 8 RE: Buddhism

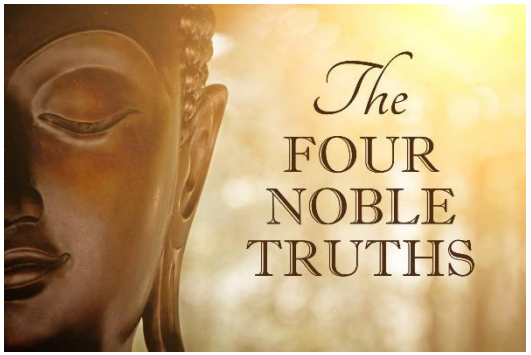
The Buddha described the Dharma as a path. Like a path, if you follow it exactly, you will reach your destination. You cannot blame the path if you wander off it and get lost. This is why, when he taught the Dharma, the Buddha set it out in a series of steps that build on each other.

Step 1: The Three Marks of Existence

- Dukkha – We suffer.
- Anicca – Nothing lasts forever
- Anatta – We change, because the things around us change. Everything is interconnected.

Step 2: The Four Noble Truths

1. Dukkha / Suffering is part of life.
2. Dukkha is caused by craving and hatred, by wanting things to stay the same.
3. To overcome dukkha we need to overcome craving and hatred.
4. If we overcome craving and hatred, we achieve a state of happiness and peace called **Nibbana**. The way to do this is to live the Middle Way. This a life of moderation.



Step 3: The Noble Eightfold Path

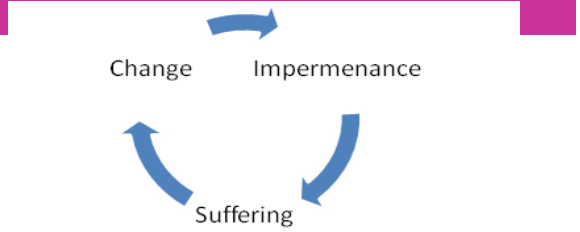
The Buddha said it is up to you how to live the Middle Way, but he suggested eight practices, under three headings.

Year 8 RE: Buddhism

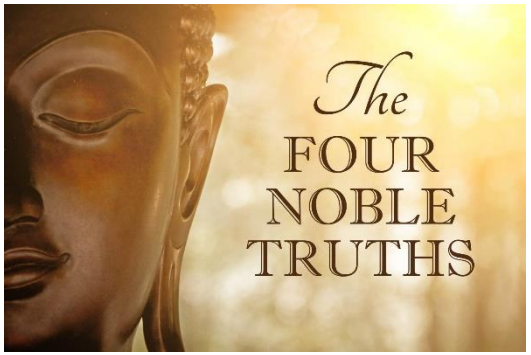
The Buddha described the _____ as a path. Like a path, if you follow it _____, you will _____ your destination. You cannot _____ the path if you wander off it and get lost. This is why, when he taught the Dharma, the Buddha set it out in a _____ of steps that _____ on each other.

Step 1: The Three Marks of Existence

- Dukkha –
- Anicca –
- Anatta –



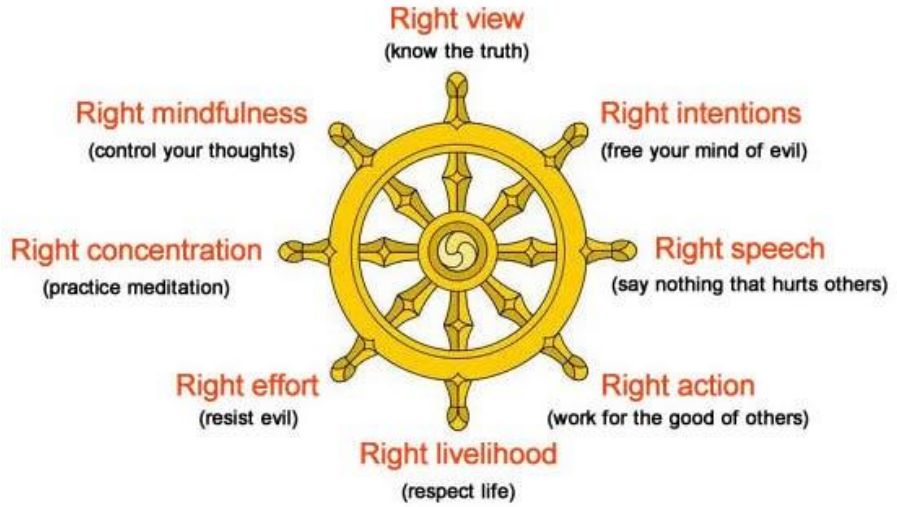
Step 2: The Four Noble Truths



Step 3: The Noble Eightfold Path

Year 8 RE: Buddhism

The Buddha taught that the Eightfold Path was the right way to gain enlightenment and Nibbana. It is usually presented as a wheel rather than a path, because it is not intended to be a series of steps, taken in order.



The Headings of the Noble Eightfold Path

Wisdom

1. Having the right understanding of life and the Dharma.
2. Having the right attitude and motivation

Morality

3. Speaking positively to and about others.
4. Behaving well and conducting positive relationships.
5. Having a job that makes a positive contribution.

Mental Training

6. Putting in effort to make every thought and activity worthwhile.
7. Being alert and mindful to what is going on inside and around you.
8. Practising meditation to develop loving kindness.

Year 8 RE: Buddhism

The _____ taught that the _____ Path was the right way to gain _____ and Nibbana. It is usually presented as a _____ rather than a ____, because it is not intended to be a series of _____, taken in order.

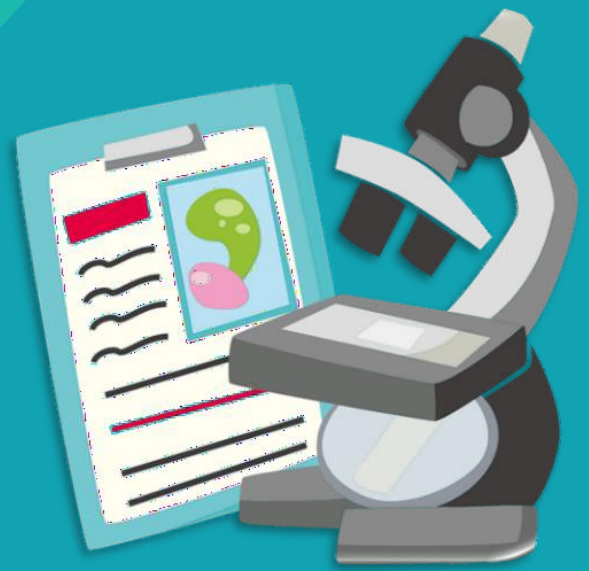
The Headings of the Noble Eightfold Path

Wisdom

Morality

Mental Training

Science



Helping every person achieve things they never thought they could.

Little Lever School
be kind | work hard | take responsibility

Year 8 Science: Food and Diet

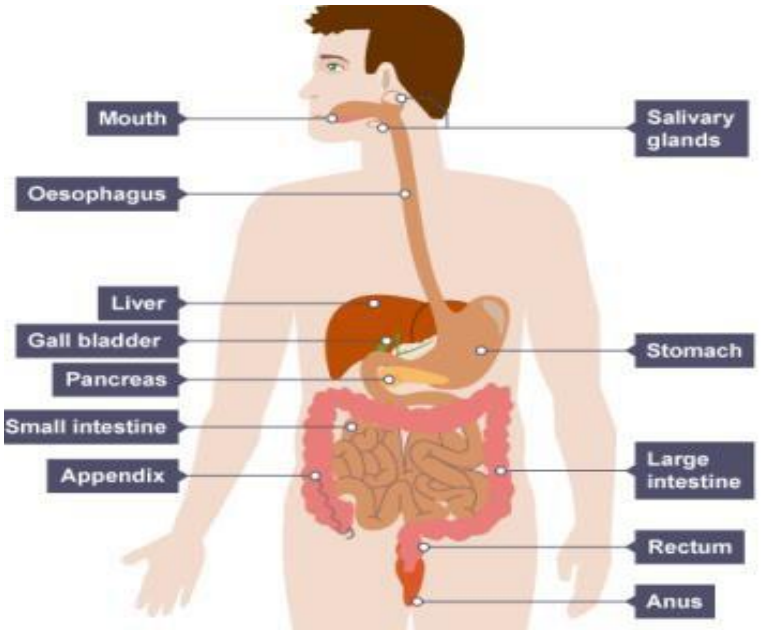
Food groups	Water
Carbohydrates	Vitamins
Proteins	Minerals
Fats	Fibre

An unbalanced diet can lead to:

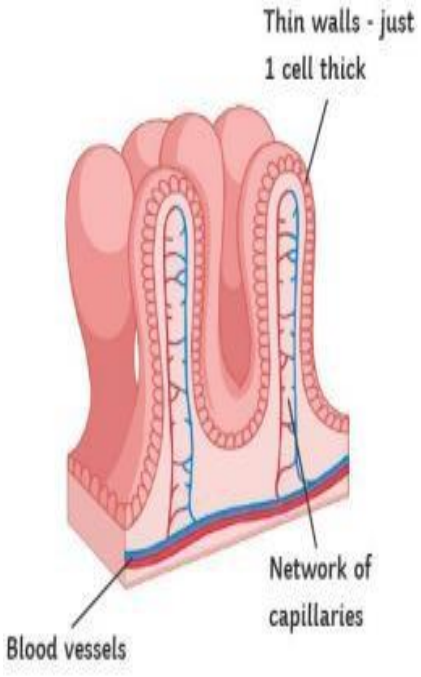
- Starvation
- Obesity
- Mineral deficiency
- Vitamin deficiency

As well as:

- Heart disease
- Diabetes
- Tooth decay



What are you testing for?	What indicator do you use?	What does a positive result look like?
Carbohydrates	Iodine	Iodine turns blue/black
Proteins	Biuret solution	Biuret turns purple
Fats	Sudan III/ Ethanol	Sudan III forms a fat layer/ Forms a cloudy precipitate
Sugar	Benedict's solution	Benedict's turns green/orange/red

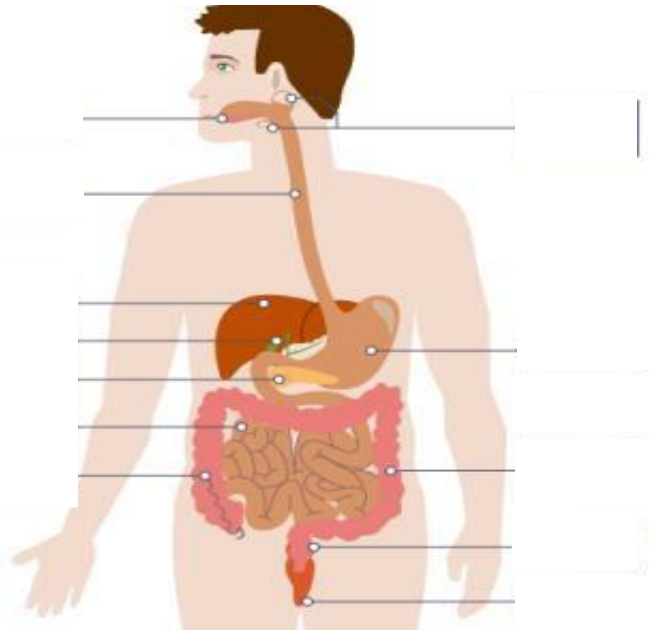


Food Group	Role in the body
Carbohydrate	To provide energy
Protein	Growth and repair
Lipids	Provide energy and energy store. Insulates the body against the cold
Fibre	Helps food move through the intestines

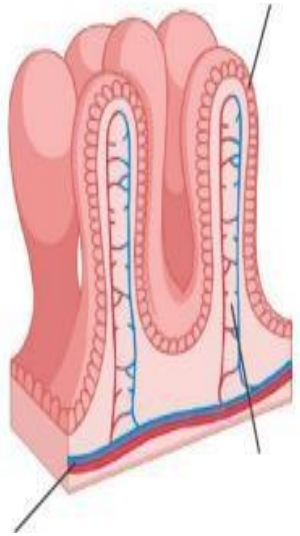
Year 8 Science: Food and Diet

What are the food groups?	

An unbalanced diet can lead to:



What are you testing for?	What indicator do you use?	What does a positive result look like?
Carbohydrates		
Proteins		
Fats		
Sugar		



Food Group	Role in the body
Carbohydrate	
Protein	
Lipids	
Fibre	

Year 8 Science: Food and Diet

Part of the gas exchange system		Function
1	**Trachea**	This is also called the windpipe. This tube runs from the mouth, down the throat towards the lungs. It is lined with rings of cartilage which keep it open at all times.
2	**Bronchus**	The trachea splits into a left and right bronchus (plural: bronchi), each leads to a lung.
3	**Bronchiole**	Each bronchus splits again and again into thousands of smaller tubes called bronchioles which take the air deeper into the lungs.
4	**Alveoli**	At the ends of bronchioles are tiny air sacs called alveoli. Here oxygen moves into the blood and carbon dioxide moves out, both by diffusion.
5	**Intercostal muscles**	These muscles run between the ribs and form the chest wall. They contract and relax with the diaphragm when a person breathes.
6	**Diaphragm**	The diaphragm is a dome-shaped, flat sheet of muscle under the lungs. It contracts and relaxes with the intercostal muscles during breathing

How does exercise affect the gas exchange system?

When a person exercises more, the body grows more new **capillaries** a process called **capillarisation**.

Capillarisation takes place at the alveoli in the lungs and in the skeletal muscles. This has the effect of increasing the amount of oxygen that can be transferred to the working muscles as well as increasing the amount of carbon dioxide that can be removed.

Regular exercise also has some additional effects, including an increase in the:

- Strength of the diaphragm and intercostal muscles
- Vital lung capacity; the volume of air that can be forcibly exhaled after inhaling fully.

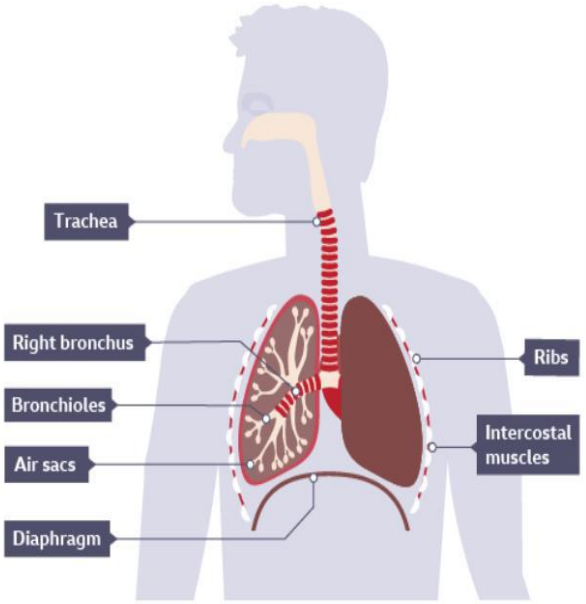
Muscles

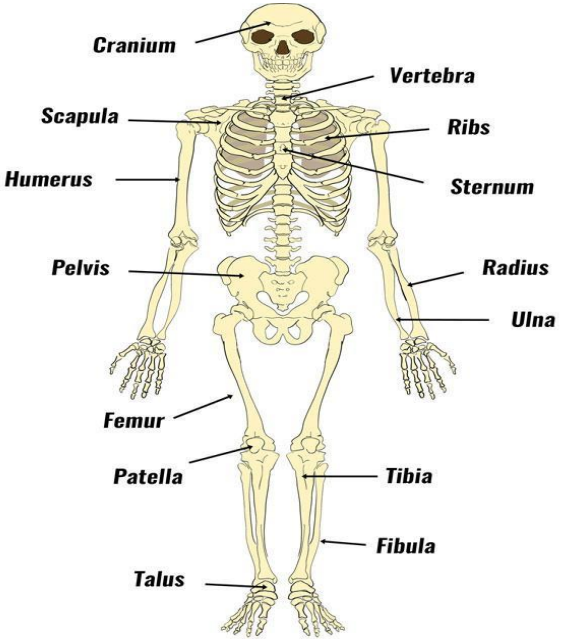
Your muscles are made of bundles of muscle cells forming muscle tissue. There are three different types of muscle:

- Cardiac muscle cells contract and relax to pump blood around our bodies.
- Smooth muscle cells make up thin sheets of muscle, such as the stomach lining.
- Skeletal muscle is joined to bones. Its cells contract to make bones move and joints bend.

Antagonistic Muscles

Muscles can only contract. This means for skeletal muscles, they can only pull on bones. They cannot push them back. This would mean that if your joints were moved by one muscle, then you would be able to move them once and not return them to their original position. We can move our joints backwards and forwards because our skeletal muscles come in pairs, called antagonistic pairs





Year 8 Science: Food and Diet

Part of the gas exchange system		Function
1	Trachea	
2	Bronchus	
3	Bronchiole	
4	Alveoli	
5	Intercostal muscles	
6	Diaphragm	

How does exercise affect the gas exchange system?

When a person exercises more, the body grows more new **capillaries** a process called _____.

Capillarisation takes place at the alveoli in the lungs and in the skeletal muscles. This has the effect of increasing the amount of oxygen that can be transferred to the working muscles as well as increasing the amount of _____ that can be removed.

Regular exercise also has some additional effects, including an increase in the:

- _____
- _____

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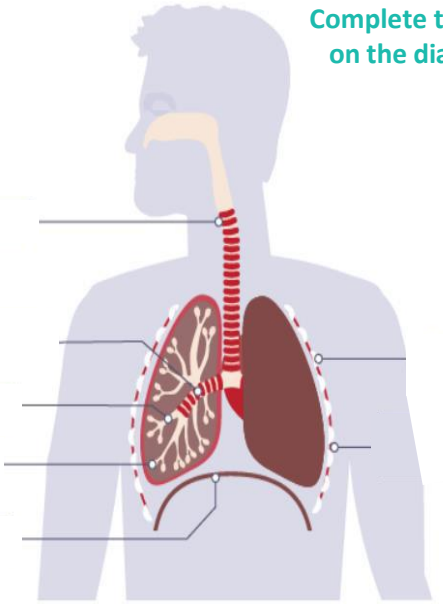
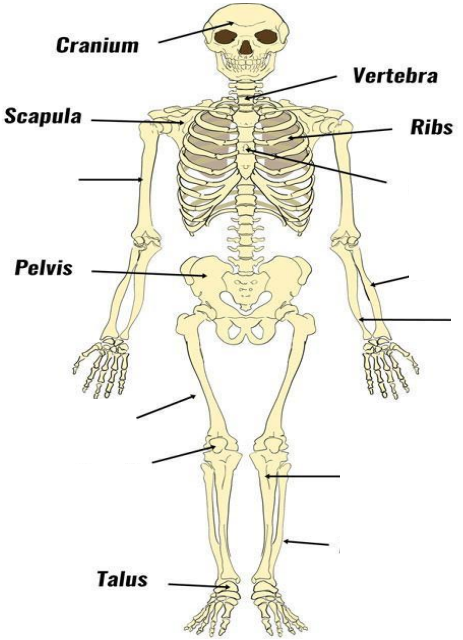


Complete the labels on the diagrams:



Year 8 Science: Chemical Reactions

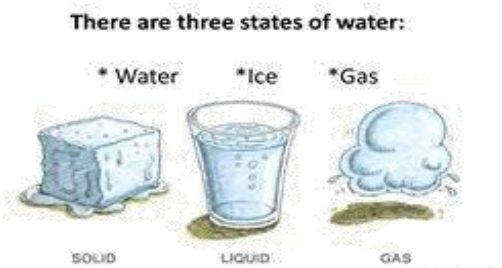
Reactions can be physical or chemical:

Physical Reactions	These do not involve new chemicals being produced and are usually easy to reverse – for example ice melting
Chemical Reactions	These involve new chemicals being produced. They normally require a chemical reaction to reverse or change them – for example iron rusting

What happens when chemicals react?

Chemical reactions usually show at least one of the following:

- **A temperature change**
- **A colour change**
- **A solid being formed**
- **A gas given off**



Catalysts

Catalysts change the rate of a chemical reaction without being used in the reaction

They do this by lowering the amount of energy that needs to be taken in in order for the chemicals to react

Modern cars that use petrol or diesel have a catalytic converter. This makes nitrogen oxides formed in the engine turn back into nitrogen and oxygen. They never have to be replaced as the catalyst is never used up.

Combustion is any reaction involving something burning. It is a quick chemical reaction with oxygen for example wood burning

Oxidation is a chemical reaction where a substance reacts with oxygen to form an oxide. Oxidation can happen quickly or slowly for example rusting is a slow oxidation process

Thermal decomposition is a chemical reaction where thermal energy causes a chemical to break down into 2 or more chemicals

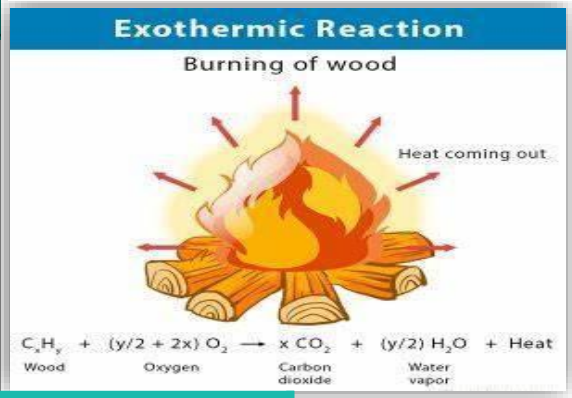
Endothermic and exothermic reactions

When chemicals react they take in energy to break bonds and give out energy when new bonds are formed

If more energy is given out than taken in then the reaction is **exothermic**
If more energy is taken in than given out then the reaction is **endothermic**

Exothermic reactions cause the temperature of the surroundings to increase
Endothermic reactions cause the temperature of the surroundings to decrease

Most reactions are exothermic, for example burning.
A few reactions are endothermic for example photosynthesis
Ice packs use endothermic reactions.
When the ice pack is used it makes 2 chemicals react to take in energy



Writing word equations for chemical reactions

When chemical reactions happen we can show this as a word equation. We write it as:

Reactants → **Products**

For example

Iron + oxygen → Iron oxide

Methane + Oxygen → Carbon dioxide + water

Calcium carbonate → Calcium oxide + carbon dioxide

Year 8 Science: Chemical Reactions

Reactions can be physical or chemical:

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	These involve new chemicals being produced. They normally require a chemical reaction to reverse or change them – for example iron rusting

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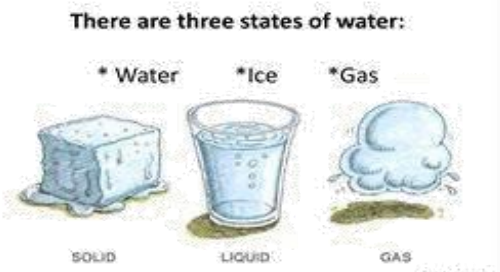
- **A _____change**
- **A _____being formed**
- **A _____given off**



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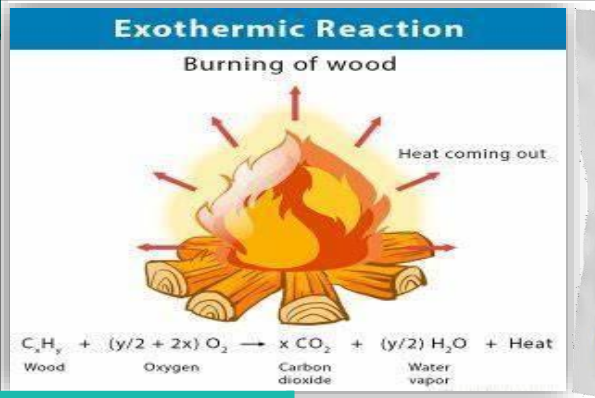

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Writing word equations for chemical reactions

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_____ → _____

For example

Iron + oxygen → _____

Methane + Oxygen → _____

Calcium carbonate → _____

Year 8 Science: PH and Neutralisation

Acids and alkalis

Acids are a chemical group that are commonly found in foods, everyday items and also in scientific laboratories .

Alkalis are the chemical opposite of acids.

Examples of acids are citric acid found in some fruits, ethanoic acid which is vinegar.

In the laboratory we use hydrochloric acid, sulfuric acid and nitric acid.

Examples of alkalis are toothpaste, bleach, indigestion tablets.

In the laboratory we use sodium hydroxide and ammonium hydroxide

Are acids and alkalis dangerous?

Many acids and alkalis are not dangerous
Some are irritants and strong acids and alkalis can be corrosive

Can we tell whether something is an acid or an alkali by using indicators?

Yes.

Indicators change colour when they are added to an acid or an alkali.

Universal indicator is the most common one that we use in the school laboratory. It changes from green to red in a strong acid and from green to purple in a strong alkali

We can tell how strong an acid or an alkali is using the PH scale

The PH scale ranges from 1 to 14 (although the PH scale actually starts at 0 we do not use acids in school below 1)

The closer an acid gets to PH7 the weaker it is. PH 7 is neutral, neither an acid or an alkali

The closer an alkali gets to PH7 the weaker it is.

Neutralisation

When an acid and alkali react together they form a neutral solution
The general formula for this is:
Acid + Alkali Salt + water

An example of this is:
Hydrochloric acid + Sodium hydroxide
Sodium chloride + water

When acids react to form salts they always form the same ones

Hydrochloric acid forms **chlorides**
Sulfuric acid forms **sulphates**
Nitric acid forms **nitrates**

Making an indicator: We can make an indicator from some plants. Simply crush up the plant add a neutral substance to make it liquid and it should change colour when added to an acid or an alkali. Red cabbage is a good vegetable to use.

pH	Examples of solutions
0	Battery acid, strong hydrofluoric acid
1	Hydrochloric acid secreted by stomach lining
2	Lemon juice, gastric acid, vinegar
3	Grapefruit juice, orange juice, soda
4	Tomato juice, acid rain
5	Soft drinking water, black coffee
6	Urine, saliva
7	"Pure" water
8	Sea water
9	Baking soda
10	Great Salt Lake, milk of magnesia
11	Ammonia solution
12	Soapy water
13	Bleach, oven cleaner
14	Liquid drain cleaner

Reactions of metals and acids

Some metals will react with acids. They react at different rates. We can place them in order and this forms the reactivity series.
Potassium is the most reactive metal that we use in the school laboratory (it is too reactive to mix with acid)
Platinum is the least reactive.

The general formula for a metal reacting with an acid is:
Metal + acid → salt + water

For example

Magnesium + hydrochloric acid
↓
Magnesium chloride + hydrogen

Year 8 Science: PH and Neutralisation

Acids and alkalis

Acids are a chemical group that are commonly found in foods, everyday items and also in scientific laboratories .

Alkalis are the _____of acids.

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_____
_____
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Nitric acid forms _____

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3	Grapefruit juice, orange juice, soda
4	Tomato juice, acid rain
5	Soft drinking water, black coffee
6	Urine, saliva
7	"Pure" water
8	Sea water
9	Baking soda
10	Great Salt Lake, milk of magnesia
11	Ammonia solution
12	Soapy water
13	Bleach, oven cleaner
14	Liquid drain cleaner

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Metal + acid → salt + water

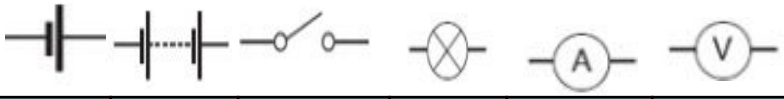
For example

Magnesium + hydrochloric acid

↓

Magnesium _____+ _____

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***

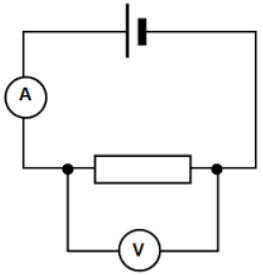
Diode	LED	LDR	Fuse	Resistor	Variable resistor	Thermistor
Current flows one way	***Emits light when current flows***	***Resistance low in bright light***	***Melts when current is too high***	***Affects the size of current flowing***	***Allows current to be varied***	***Resistance low at high temp***

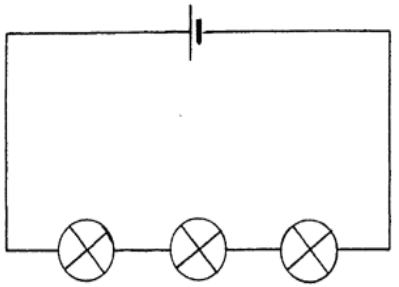
Circuit symbols

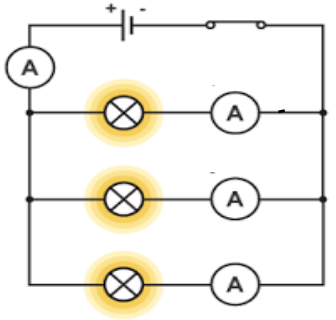
Electrons carry current. Electrons are free to move in metal.

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)

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

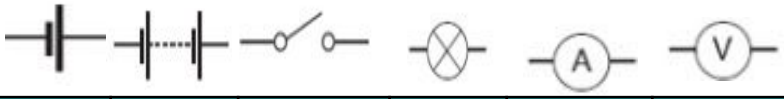
Series and parallel circuits

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***

Year 8 science: Electricity and magnetism



Cell	Battery	Switch	Lamp	Ammeter	Volt meter

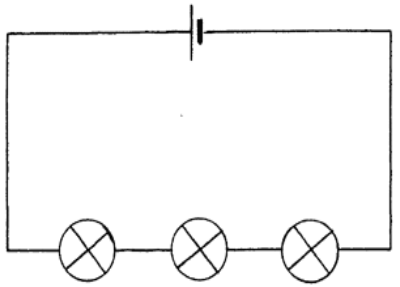
Diode	LED	LDR			Variable resistor	
			Melts when current is too high	***Affects the size of current flowing***		***Resistance low at high temp***

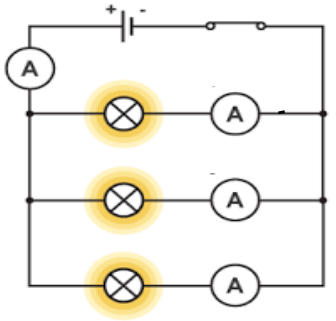
Circuit symbols

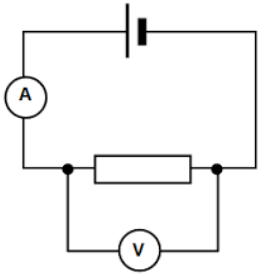
.

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

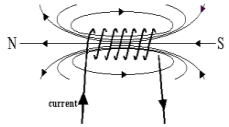
Total p.d	

Series circuit	.	.	
Parallel circuit	.	.	.

Ammeter	
Voltmeter	

Year 8 science: Electricity and magnetism

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



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

Reverse current, magnetic field direction reverses.

Further away from the wire, magnetic field is weaker.

Current large enough, iron filings show circular magnetic field.

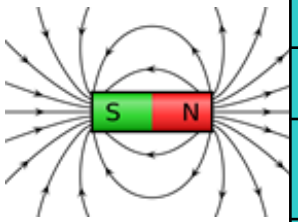
If current is small, magnetic field is very weak.

Magnetic field around a wire

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

Permanent and Induced Magnetism

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



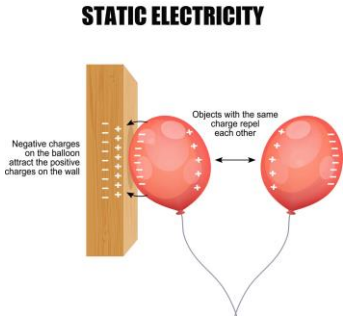
Static electricity

Like charges	***Repel***
Unlike charges	***Attract***

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

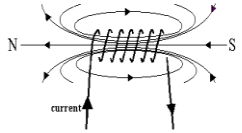
Shocks	Walking on carpet causes friction. Electrons move to the person and charge builds up. When the person touches a metal object, the electrons conduct away, making a spark.

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.



Year 8 science: Electricity and magnetism

Solenoid



Electromagnet

Magnetic field around a wire

Static electricity

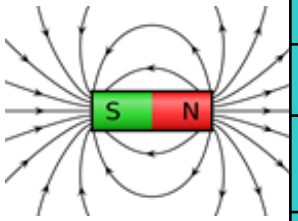
Like charges	
Unlike charges	

Static electricity

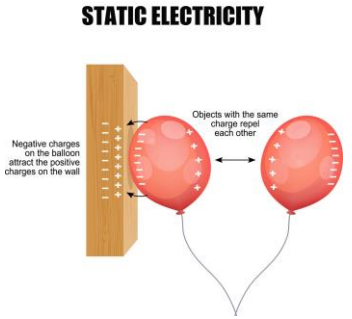
Shocks

Electric fields

Permanent and Induced Magnetism



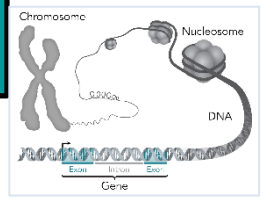
Magnetic		
North seeking pole		
South seeking pole		
Magnetic field		
Permanent		
Induced		



Year 8 Science: Genetics and Evolution

DNA and the genome

Genetic material in the nucleus is composed of a chemical called DNA.



DNA structure

Polymer made up of two strands forming a double helix.

Contained in structures called chromosomes. A gene is a small section of DNA on a chromosome. Each gene codes for a sequence of amino acids to make a specific protein.

The genome is the entire genetic material of an organism.

Some characteristics are controlled by a single gene e.g. fur colour, colour blindness.

The alleles present, or genotype operate at a molecular level to develop characteristics that can be expressed as a phenotype.

Most characteristics are as a result of multiple genes interacting.

Define terms linked to genetics

Gamete	Sex cells produced in meiosis.
Chromosome	A long chain of DNA found in the nucleus.
Gene	Small section of DNA that codes for a particular protein.
Allele	Alternate forms of the same gene.
Dominant	A type of allele – always expressed if only one copy present and when paired with a recessive allele.
Recessive	A type of allele – only expressed when paired with another recessive allele.
Homozygous	Pair of the same alleles, dominant or recessive.
Heterozygous	Two different alleles are present 1 dominant and 1 recessive.
Genotype	Alleles that are present for a particular feature e.g. Bb or bb
Phenotype	Physical expression of an allele combination e.g. black fur, blonde hair, blue eyes.

Dominant and recessive allele combinations

Dominant	***Recessive***
Represented by a capital letter e.g. B.	Represented by a lower case letter e.g. b.

3 possible combinations:
Homozygous dominant BB
Heterozygous dominant Bb
Homozygous recessive bb

Using a punnet square (using mouse fur colour as an example)

Parent phenotype	Black fur 	White fur 
Parent genotype	BB	bb
What gametes are present	In each egg B B	In each sperm b b

Gametes	b	b
B	Bb	Bb
B	Bb	Bb

The probability of black fur offspring phenotype is 100%. All offspring genotypes are heterozygous (Bb).

Crossing two heterozygous mice (Bb)

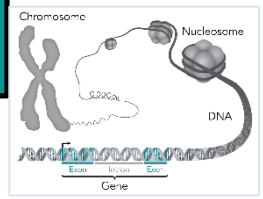
Gametes	B	b
B	BB	Bb
b	Bb	bb

The probability of black fur is 75% and white fur 25%. The ratio of black to white mice is 3:1

The concept of probability in predicting results of a single gene cross.

Year 8 Science: Genetics and Evolution

DNA and the genome



Some characteristics are controlled by a single gene e.g. fur colour, colour blindness.

DNA structure

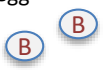
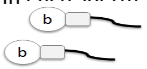
Define terms linked to genetics

Gamete	
Chromosome	
Gene	
Allele	
Dominant	
Recessive	
Homozygous	
Heterozygous	
Genotype	
Phenotype	

Dominant and recessive allele combinations

Dominant	*Recessive*

Using a punnet square (using mouse fur colour as an example)

	Black fur 	White fur 
	BB	bb
	In each egg 	In each sperm 

Gametes	b	b
B	Bb	Bb
B	Bb	Bb

Crossing two heterozygous mice (Bb)

Gametes	B	b
B	BB	Bb
b	Bb	bb

Year 8 Science: Genetics and Evolution

Theory of evolution

Evidence from around the world, experimentation, geology, fossils, discussion with other scientists (Alfred Wallace) lead to:

Charles Darwin	***Theory of evolution by natural selection.***	Individual organisms within a particular species show a wide range of variation for a characteristic.
		Individual most suited to the environment are more likely to breed successfully.
		Characteristics enable individuals to survive are then passed on to the next generation.

Developed since its proposal from information gathered by other scientists.

Charles Darwin 'On the Origin of the Species' (1859)	***Published the theory of evolution by natural selection***	Slowly accepted; challenged creation theory (God), insufficient evidence at time, mechanism of inheritance not yet known.

Did much pioneering work on speciation but more evidence over time has lead to our current understanding.

Alfred Wallace	***Independently proposed the theory of evolution by natural selection***	Published joint writings with Darwin in 1858.
		Worked worldwide gathering evidence.
		Best know for work on warning colouration in animals and his theory of speciation.

Speciation

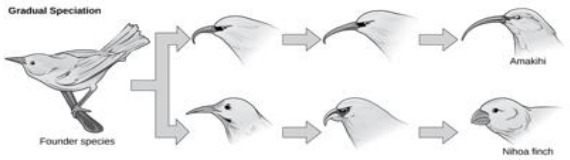
Due to isolation of a population of a species e.g. species are split across far apart islands.

Environmental conditions differ for populations e.g. types of food available, habitat.

Individuals in each population most suited to their environments are more likely to breed successfully.

Over long periods of time each population will have greater differences in their genotype.

If two populations of one species become so different in phenotype that they can no longer interbreed to produce fertile offspring they have formed two new species.



Year 8 Science: Genetics and Evolution

Charles Darwin

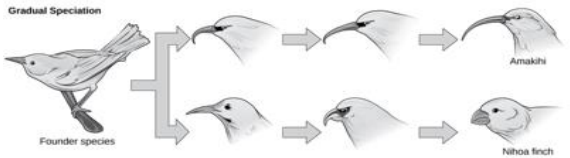
Theory of evolution by natural selection.

Theory of evolution

Charles Darwin 'On the Origin of the Species' (1859)

Alfred Wallace

Speciation

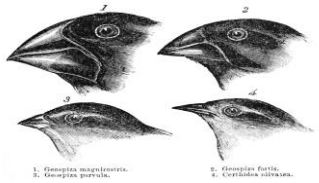


Year 8 Science: Genetics and Evolution

Evolution

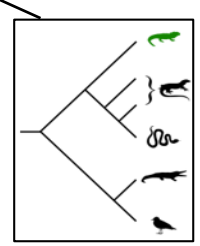
A change in the inherited characteristics of a population over time through the process of natural selection.

Over time this results in the formation of new species.



Darwin's finches

Evolutionary trees are a method used by scientists to show how organisms are related



Evidence for evolution

Evolution is widely accepted. Evidence is now available as it has been shown that characteristics are passed on to offspring in genes.

Fossils and antibiotic resistance in bacteria provide evidence for evolution.

Fossils
'remains' of ancient organisms which are found in rocks
Parts of organism that have not decayed as necessary conditions are absent.
Parts of the organism replaced by minerals as they decay.
Preserved traces of organisms such as footprints, burrows and rootlet traces.

Antibiotic resistant bacteria		
	Mutations produce antibiotic resistant strains which can spread	Resistant strains are not killed.
		Strain survives and reproduces.
		People have no immunity to strain and treatment is ineffective.

Early forms of life were soft bodied and few traces are left behind and have been destroyed by geological activity, cannot be certain about how life began.

Fossils tell scientists how much or how little different organisms have changed over time.

Extinction
When no members of a species survive
Due to extreme geological events, disease, climate change, habitat destruction, hunting by humans.

Very rarely a mutation will lead to a new phenotype which if is suited to environmental change can lead to rapid change in the species.

Variation

Mutations occur continuously

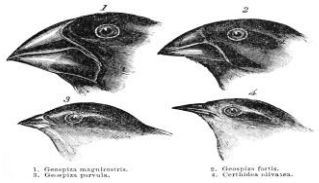
Variation: difference in the characteristics of individuals in a population may be due to		
	Genetic causes (inheritance)	There is usually extensive genetic variation within the population of a species e.g. hair colour, skin colour, height that can also be affected by environment e.g. nutrition, sunlight.
	Environmental causes (condition they have developed in)	
	A combination of genes and environment	

All genetic variation arises in mutation, most have no effect on phenotype, some influence but very few determine phenotype.

The genome and its interaction with the environment influence the development of phenotypes

Year 8 Science: Genetics and Evolution

Evolution



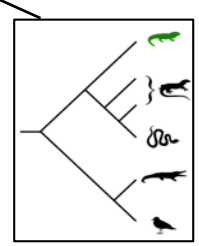
Darwin's finches

Variation

Mutations occur continuously

Evidence for evolution

.



Fossils

Antibiotic resistant bacteria

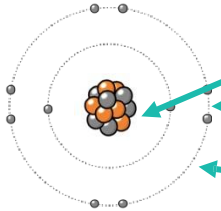
Extinction

Variation: difference in the characteristics of individuals in a population may be due to

Year 8 Science: The Periodic table

Atoms, elements and compounds

Atom	***The smallest part of an element that can exist***	Have a radius of around 0.1 nanometres and have no charge (0).
Element	***Contains only one type of atom***	Around 100 different elements each one is represented by a symbol e.g. O, Na, Br.
Compound	***Two or more elements chemically combined***	Compounds can only be separated into elements by chemical reactions.



Central nucleus	**Contains protons and neutrons**
Electron shells	**Contains electrons**

Name of Particle	Relative Charge	Relative Mass
Proton	+1	1
Neutron	0	1
Electron	-1	Very small

Relative electrical charges of subatomic particles

Electronic shell	Max number of electrons
1	2
2	8
3	8
4	8

Electronic structures

7 Li 3

Mass number	The sum of the protons and neutrons in the nucleus	
Atomic number	The number of protons in the atom	Number of electrons = number of protons

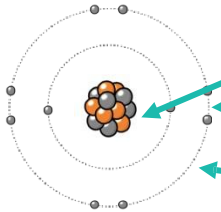
Mixtures	**Two or more elements or compounds not chemically combined together**	Can be separated by physical processes.

Method	Description	Example
Filtration	Separating an insoluble solid from a liquid	To get sand from a mixture of sand, salt and water.
Crystallisation	To separate a solid from a solution	To obtain pure crystals of sodium chloride from salt water.
Simple distillation	To separate a solvent from a solution	To get pure water from salt water.
Fractional distillation	Separating a mixture of liquids each with different boiling points	To separate the different compounds in crude oil.
Chromatography	Separating substances that move by different amounts (due to solubility) through a medium	To separate out the dyes in food colouring.

Year 8 Science: The Periodic table

Atoms, elements and compounds

Atom	*The smallest part of an element that can exist*	
Element	*Contains only one type of atom*	
Compound	*Two or more elements chemically combined*	



Central nucleus	
Electron shells	

Name of Particle	Relative Charge	Relative Mass
Proton		
Neutron		
Electron		

Relative electrical charges of subatomic particles

Electronic shell	Max number of electrons
1	
2	
3	
4	

Electronic structures

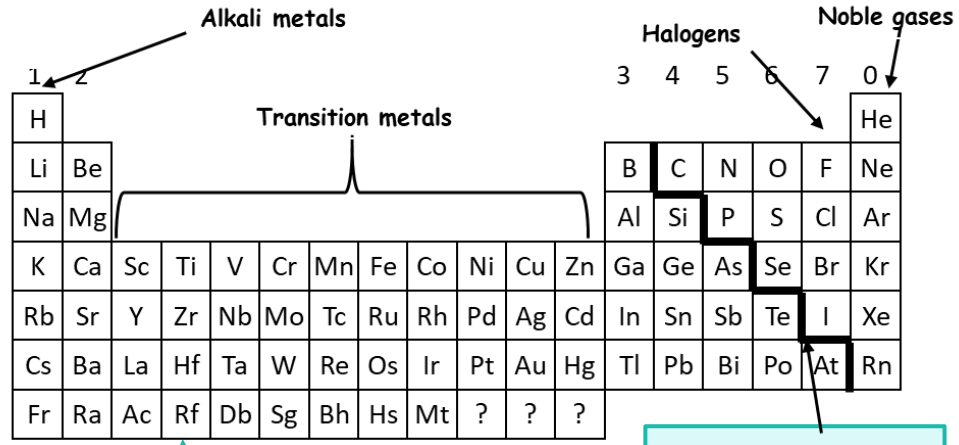
7 Li 3

Mass number		
Atomic number		

Mixtures	Two or more elements or compounds not chemically combined together	

Method	Description	Example
Filtration		
Crystallisation		
Simple distillation		
Fractional distillation		
Chromatography		

Year 8 Science: The Periodic table



The Periodic table

Development of the Periodic table

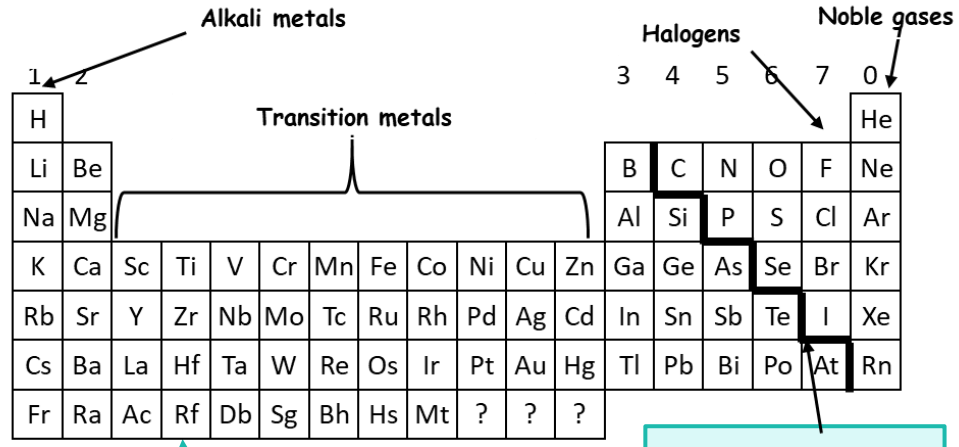
Metals	**To the left of the Periodic table**	Form positive ions. Conductors, high melting and boiling points, ductile, malleable.
Non metals	**To the right of the Periodic table**	Form negative ions. Insulators, low melting and boiling points.

Halogens	**Consist of molecules made of a pair of atoms**	Have seven electrons in their outer shell. Form -1 ions.
	Melting and boiling points increase down the group (gas → liquid → solid)	Increasing atomic mass number.
	Reactivity decreases down the group	Increasing proton number means an electron is harder to gain.

Elements arranged in order of atomic number	***Elements with similar properties are in columns* called *groups***	Elements in the same group have the same number of outer shell electrons and elements in the same period (row) have the same number of electron shells.
Before discovery of protons, neutrons and electrons	**Elements arranged in order of atomic weight**	Early periodic tables were incomplete, some elements were placed in inappropriate groups if the strict order atomic weights was followed.
Mendeleev	**Left gaps for elements that hadn't been discovered yet**	Elements with properties predicted by Mendeleev were discovered and filled in the gaps. Knowledge of isotopes explained why order based on atomic weights was not always correct.

Alkali metals	**Very reactive with oxygen, water and chlorine**	Only have one electron in their outer shell. Form +1 ions.
	Reactivity increases down the group	Negative outer electron is further away from the positive nucleus so is more easily lost.

Year 8 Science: The Periodic table



The Periodic table

Development of the Periodic table

Metals	**To the left of the Periodic table**	
Non metals	**To the right of the Periodic table**	

Halogens	**Consist of molecules made of a pair of atoms**	
	Melting and boiling points increase down the group (gas → liquid → solid)	
	Reactivity decreases down the group	

Elements arranged in order of atomic number	***Elements with similar properties are in columns called groups***	
Before discovery of protons, neutrons and electrons	**Elements arranged in order of atomic weight**	
Mendeleev	**Left gaps for elements that hadn't been discovered yet**	

Alkali metals	**Very reactive with oxygen, water and chlorine**	
	Reactivity increases down the group	

Year 8 Science: The Periodic table

Transition metals

With oxygen	**Forms a metal oxide**	Metal + oxygen ➔ metal oxide e.g. $4Na + O_2 \rightarrow 2Na_2O$
With water	**Forms a metal hydroxide and hydrogen**	Metal + water ➔ metal hydroxide + hydrogen e.g. $2Na + 2H_2O \rightarrow 2NaOH + H_2$
With chlorine	**Forms a metal chloride**	Metal + chlorine ➔ metal chloride e.g. $2Na + Cl_2 \rightarrow 2NaCl$

Noble gases	**Very unreactive, do not form molecules**	This is due to having full outer shells of electrons.
	Boiling points increase down the group	Increasing atomic number.

Compared to group 1	• **Less reactive** • **Harder** • **Denser** • **Higher melting points**	• ***Cu^{2+} is blue*** • ***Ni^{2+} is pale green, used in the manufacture of margarine*** • ***Fe^{2+} is green, used in the Haber process*** • ***Fe^{3+} is reddish-brown*** • ***Mn^{2+} is pale pink***
Typical properties	• **Many have different ion possibilities with different charges** • **Used as catalysts** • **Form coloured compounds**	

With metals	**Forms a metal halide**	Metal + halogen ➔ metal halide e.g. Sodium + chlorine ➔ sodium chloride	e.g. NaCl metal atom loses outer shell electrons and halogen gains an outer shell electron
With hydrogen	**Forms a hydrogen halide**	Hydrogen + halogen ➔ hydrogen halide e.g. Hydrogen + bromine ➔ hydrogen bromide	e.g. $Cl_2 + H_2 \rightarrow 2HCl$
With aqueous solution of a halide salt	**A more reactive halogen will displace the less reactive halogen from the salt**	Chlorine + potassium bromide ➔ potassium chloride + bromine	e.g. $Cl_2 + 2KBr \rightarrow 2KCl + Br_2$

Year 8 Science: The Periodic table

Transition metals

With oxygen	Forms a metal oxide		e.g. $4Na + O_2 \rightarrow 2Na_2O$
With water	Forms a metal hydroxide and hydrogen		e.g. $2Na + 2H_2O \rightarrow 2NaOH + H_2$
With chlorine	Forms a metal chloride		e.g. $2Na + Cl_2 \rightarrow 2NaCl$

Noble gases	Very unreactive, do not form molecules	
	Boiling points increase down the group	

Compared to group 1		• *Cu^{2+} is blue* • *Ni^{2+} is pale green, used in the manufacture of margarine* • *Fe^{2+} is green, used in the Haber process* • *Fe^{3+} is reddish-brown* • *Mn^{2+} is pale pink*
Typical properties		

With metals			e.g. NaCl metal atom loses outer shell electrons and halogen gains an outer shell electron
With hydrogen			e.g. $Cl_2 + H_2 \rightarrow 2HCl$
With aqueous solution of a halide salt			e.g. $Cl_2 + 2KBr \rightarrow 2KCl + Br_2$

Year 8 Science: Chemistry of the Earth

The Earth's early atmosphere

Volcano activity 1st Billion years	***Billions of years ago there was intense volcanic activity***	This released gases (mainly CO_2) that formed to early atmosphere and water vapour that condensed to form the oceans.
Other gases	***Released from volcanic eruptions***	Nitrogen was also released, gradually building up in the atmosphere. Small proportions of ammonia and methane also produced.
Reducing carbon dioxide in the atmosphere	***When the oceans formed, carbon dioxide dissolved into it***	This formed carbonate precipitates, forming sediments. This reduced the levels of carbon dioxide in the atmosphere.

How oxygen increased

Algae and plants	***These produced the oxygen that is now in the atmosphere, through photosynthesis.***	carbon dioxide + water → glucose + oxygen $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$
Oxygen in the atmosphere	***First produced by algae 2.7 billion years ago.***	Over the next billion years plants evolved to gradually produce more oxygen. This gradually increased to a level that enabled animals to evolve.

Proportions of gases in the atmosphere

Gas	*Percentage*
Nitrogen	***~80%***
Oxygen	***~20%***
Argon	***0.93%***
Carbon dioxide	***0.04%***

How carbon dioxide decreased

Reducing carbon dioxide in the atmosphere	***Algae and plants***	These gradually reduced the carbon dioxide levels in the atmosphere by absorbing it for photosynthesis.
Formation of sedimentary rocks and fossil fuels	***These are made out of the remains of biological matter, formed over millions of years***	Remains of biological matter falls to the bottom of oceans. Over millions of years layers of sediment settled on top of them and the huge pressures turned them into coal, oil, natural gas and sedimentary rocks. The sedimentary rocks contain carbon dioxide from the biological matter.

Properties and effects of atmospheric pollutants

Carbon monoxide	***Toxic, colourless and odourless gas. Not easily detected, can kill.***
Sulfur dioxide and oxides of nitrogen	***Cause respiratory problems in humans and acid rain which affects the environment.***
Particulates	***Cause global dimming and health problems in humans.***

Carbon dioxide	***Human activities that increase carbon dioxide levels include burning fossil fuels and deforestation.***
Methane	***Human activities that increase methane levels include raising livestock (for food) and using landfills (the decay of organic matter released methane).***
Climate change	***There is evidence to suggest that human activities will cause the Earth's atmospheric temperature to increase and cause climate change.***

Carbon dioxide, water vapour and methane	***Examples of greenhouse gases that maintain temperatures on Earth in order to support life***
The greenhouse effect	***Radiation from the Sun enters the Earth's atmosphere and reflects off of the Earth. Some of this radiation is re-radiated back by the atmosphere to the Earth, warming up the global temperature.***

Year 8 Science: Chemistry of the Earth

The Earth's early atmosphere

Volcano activity 1st Billion years		
Other gases		
Reducing carbon dioxide in the atmosphere		

How oxygen increased

Algae and plants		
Oxygen in the atmosphere		

Proportions of gases in the atmosphere

Gas	*Percentage*
Nitrogen	
Oxygen	
Argon	
Carbon dioxide	

How carbon dioxide decreased

Reducing carbon dioxide in the atmosphere		
Formation of sedimentary rocks and fossil fuels		

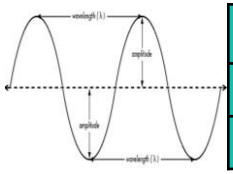
Properties and effects of atmospheric pollutants

Carbon monoxide	
Sulfur dioxide and oxides of nitrogen	
Particulates	

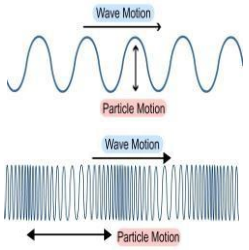
Carbon dioxide	
Methane	
Climate change	

Carbon dioxide, water vapour and methane	
The greenhouse effect	

Year 8 Science: Properties of Waves



Wave speed	Wave speed = frequency X wavelength	V = f X λ
Wave period	Wave period = 1 ÷ frequency	T = 1 ÷ f
Speed	Speed = distance ÷ time	v = d ÷ t



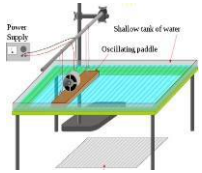
Wavelength	Distance from one point on a wave to the same point of the next wave
Amplitude	The maximum disturbance from its rest position
Frequency	Number of waves per second
Period	Time taken to produce 1 complete wave

Transverse and Longitudinal waves

Transverse wave	**Vibration causing the wave is at right angles to the direction of energy transfer**	Water waves, all electromagnetic waves
Longitudinal wave	**Vibration causing the wave is parallel to the direction of energy transfer**	Sound waves, waves in springs

Waves in air, fluids and solids

Properties

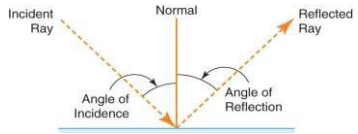


In water, use a ripple tank.

Measuring speed

In air, use echoes.

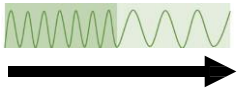
Sound waves travelling through different mediums, the frequency stay constant.



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

Ultra sound	**Partially reflected off boundary**	Used for medical and foetal scans.
Sonar	**Reflected off objects**	Used to determine depth of objects under the sea.

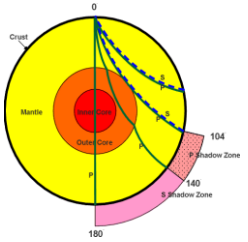
Air Water

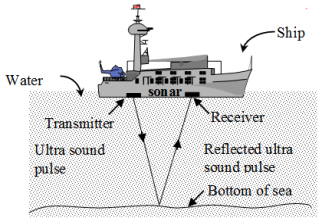


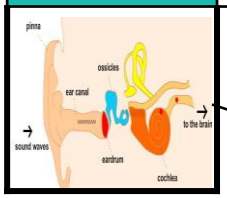
Reflection	Wave bounces off the surface.
Refraction	Waves changes direction at boundary.
Transmitted	Passes through the object.
Absorbed	Passes into but not out of a substance, transfers energy and heats up the object.

Light refracts as it slows down in a denser substance

Seismic waves

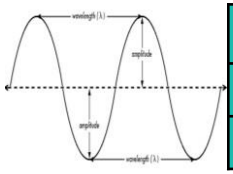




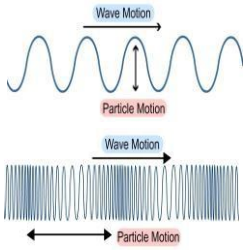


Hearing	**Frequencies between 20 – 20,000 Hz**	Longitudinal waves cause ear drum to vibrate, amplified by three ossicles which creates pressure in the cochlea.

Year 8 Science: Properties of Waves



Wave speed		V = f X λ
Wave period		T = 1 ÷ f
Speed		v = d ÷ t

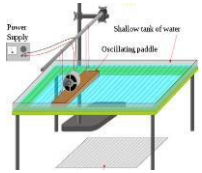


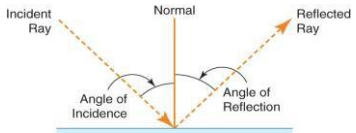
Wavelength	
Amplitude	
Frequency	
Period	

Transverse and Longitudinal waves

Waves in air, fluids and solids

Properties



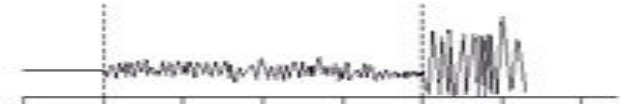


Transverse wave	
Longitudinal wave	

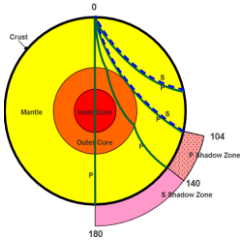
Ultra sound	
Sonar	

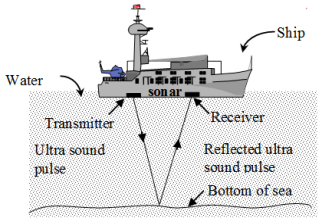
Air Water

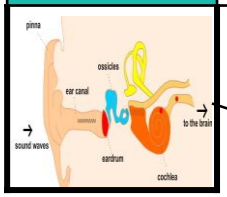
Reflection	
Refraction	
Transmitted	
Absorbed	



Seismic waves







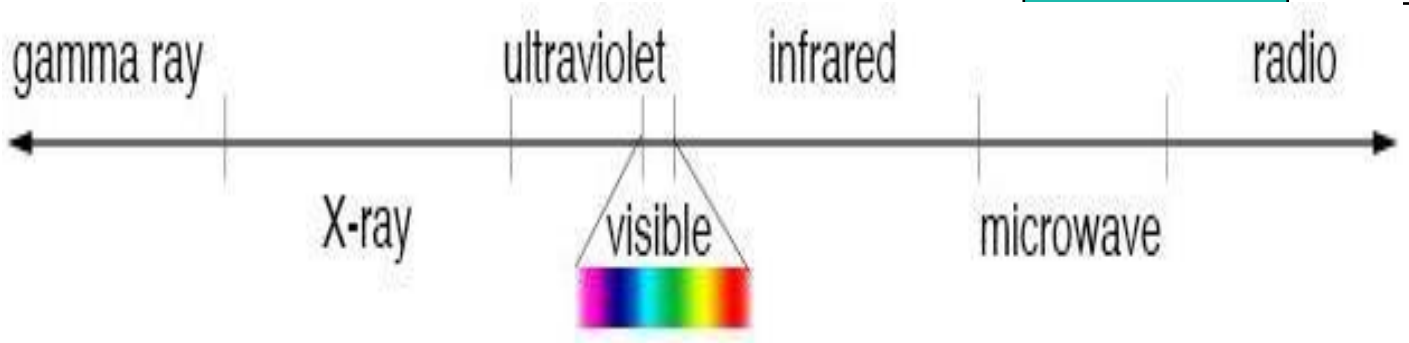
Hearing		

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.

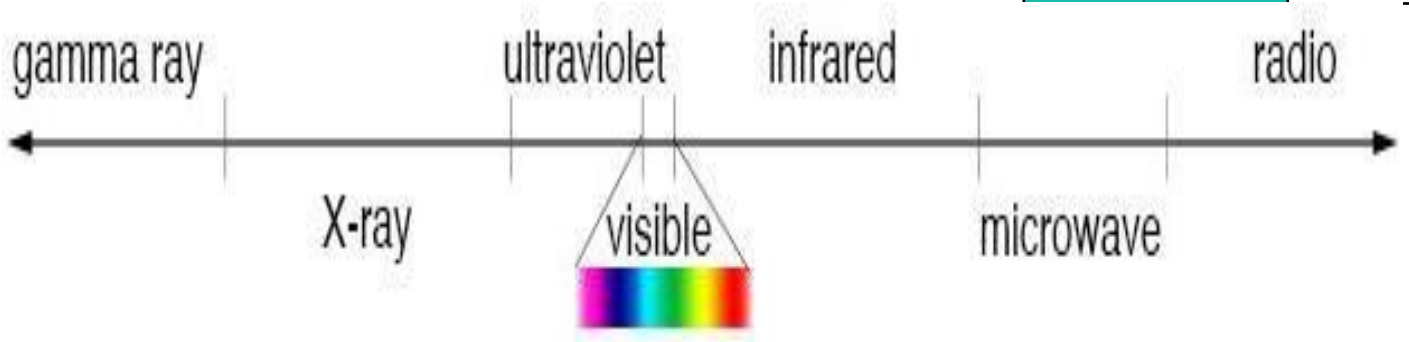
e.g. Gamma

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.