KNOWLEDGE ORGANISERS

YEAR 8

BODMIN COLLEGE

SCHOOL DAY

08:50am	Tutor Time
09:25am	Lesson 1
10.40am	Break 1
11:10am	Lesson 2
12:25pm	Lesson 3
1.40pm	Break 2
2.10pm	Lesson 4
3.25pm	End of School Day

EQUIPMENT


School Bag


Knowledge Organiser

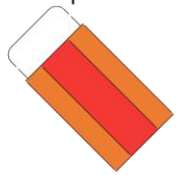

Black and Purple Pens


Pencil Case


Knowledge Organiser


Calculator

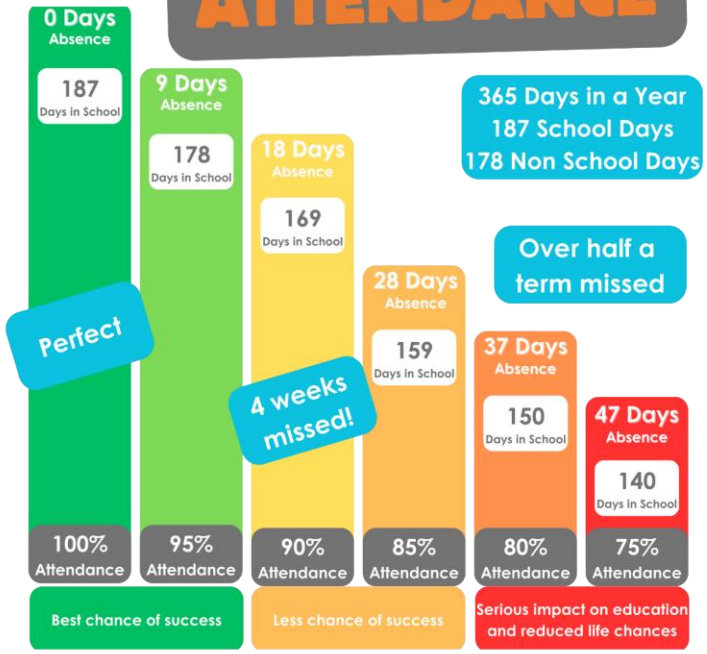

Pencil


Rubber


Ruler


Whiteboard and whiteboard pen

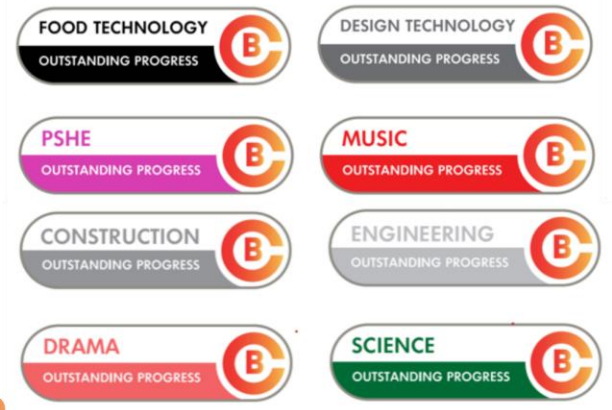
ATTENDANCE



REWARDS

Student Leaders

Subject Awards



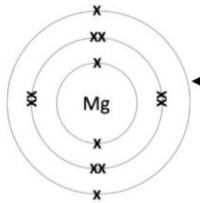
Merit Badges

THE PERIODIC TABLE OF THE ELEMENTS

Group 1 – **Alkali Metals**

Group number – tells you the number of **electrons** in an elements **outer** shell.

Elements in the **same group** have **similar properties**.



Magnesium (Mg) has **12 electrons** in total. It is in **group 2** so has 2 electrons in its **outer** shell. Mg's electronic configuration is 2,8,2.

Element **symbol**

Element **name**

Key

relative atomic mass
atomic symbol
name
atomic (proton) number

Mass Number = number of **protons** and **neutrons** added together.

Atomic / Proton Number = number of **protons** which is the same as the number of **electrons**.

Neutrons = Mass number – Atomic number

Group 7 – **Halogens**

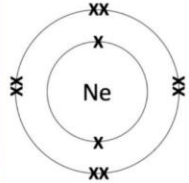
Group 0 – **Noble gases**

Non-Metals

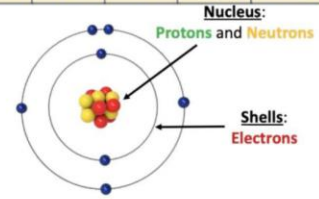
Transition Metals

1	2											3	4	5	6	7	0
																	4 He helium 2
7 Li lithium 3	9 Be beryllium 4											11 B boron 5	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluorine 9	20 Ne neon 10
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulfur 16	35.5 Cl chlorine 17	40 Ar argon 18
39 K potassium 19	40 Ca calcium 20	45 Sc scandium 21	48 Ti titanium 22	51 V vanadium 23	52 Cr chromium 24	55 Mn manganese 25	56 Fe iron 26	59 Co cobalt 27	59 Ni nickel 28	63.5 Cu copper 29	65 Zn zinc 30	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36
85 Rb rubidium 37	88 Sr strontium 38	89 Y yttrium 39	91 Zr zirconium 40	93 Nb niobium 41	96 Mo molybdenum 42	[97] Tc technetium 43	101 Ru ruthenium 44	103 Rh rhodium 45	106 Pd palladium 46	108 Ag silver 47	112 Cd cadmium 48	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54
133 Cs caesium 55	137 Ba barium 56	139 La* lanthanum 57	178 Hf hafnium 72	181 Ta tantalum 73	184 W tungsten 74	186 Re rhenium 75	190 Os osmium 76	192 Ir iridium 77	195 Pt platinum 78	197 Au gold 79	201 Hg mercury 80	204 Tl thallium 81	207 Pb lead 82	209 Bi bismuth 83	[209] Po polonium 84	[210] At astatine 85	[222] Rn radon 86
[223] Fr francium 87	[226] Ra radium 88	[227] Ac* actinium 89	[267] Rf rutherfordium 104	[270] Db dubnium 105	[269] Sg seaborgium 106	[270] Bh bohrium 107	[270] Hs hassium 108	[278] Mt meitnerium 109	[281] Ds darmstadtium 110	[281] Rg roentgenium 111	[285] Cn copernicium 112	[286] Nh nihonium 113	[289] Fl flerovium 114	[289] Mc moscovium 115	[293] Lv livermorium 116	[293] Ts tennessine 117	[294] Og oganesson 118

Noble gases have a **full outer shell** of electrons E.g., Neon (Ne)



Subatomic Particle	Mass	Charge
Proton	1	+1
Neutron	1	0
Electron	Negligible	-1



HOW CAN I USE THE PHYSICS EQUATION SHEET?

Triple only equations

HT = Higher Tier only equations

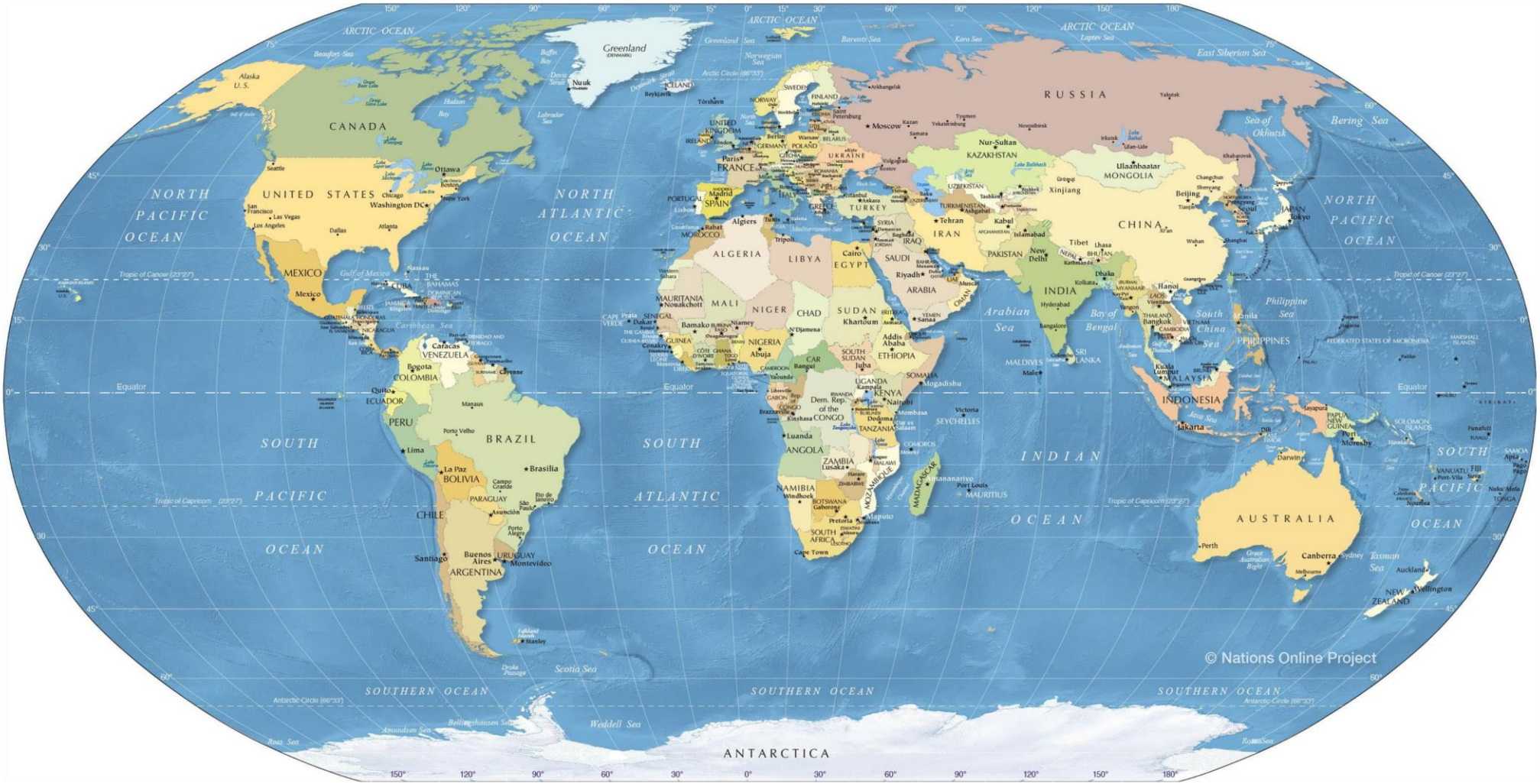
kinetic energy = 0.5 × mass × (speed)^2	$E_k = \frac{1}{2} m v^2$
elastic potential energy = 0.5 × spring constant × (extension)^2	$E_e = \frac{1}{2} k e^2$
gravitational potential energy = mass × gravitational field strength × height	$E_p = m g h$
change in thermal energy = mass × specific heat capacity × temperature change	$\Delta E = m c \Delta\theta$
power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
charge flow = current × time	$Q = I t$
potential difference = current × resistance	$V = I R$
power = potential difference × current	$P = V I$
power = (current)^2 × resistance	$P = I^2 R$
energy transferred = power × time	$E = P t$
energy transferred = charge flow × potential difference	$E = Q V$
density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$

	thermal energy for a change of state = mass × specific latent heat	$E = m L$
	For gases: pressure × volume = constant	$p V = \text{constant}$
	weight = mass × gravitational field strength	$W = m g$
	work done = force × distance (along the line of action of the force)	$W = F s$
	force = spring constant × extension	$F = k e$
	moment of a force = force × distance (normal to direction of force)	$M = F d$
	pressure = $\frac{\text{force normal to a surface}}{\text{area of that surface}}$	$p = \frac{F}{A}$
HT	**pressure due to a column of liquid = height of column × density of liquid × gravitational field strength**	$p = h \rho g$
	distance travelled = speed × time	$s = v t$
	acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
	(final velocity)^2 – (initial velocity)^2 = 2 × acceleration × distance	$v^2 - u^2 = 2 a s$
	resultant force = mass × acceleration	$F = m a$
HT	**momentum = mass × velocity**	$p = m v$
HT	**force = $\frac{\text{change in momentum}}{\text{time taken}}$**	$F = \frac{m \Delta v}{\Delta t}$
	period = $\frac{1}{\text{frequency}}$	$T = \frac{1}{f}$
	wave speed = frequency × wavelength	$v = f \lambda$
	magnification = $\frac{\text{image height}}{\text{object height}}$	
HT	**force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length**	$F = B I l$
HT	**$\frac{\text{potential difference across primary coil}}{\text{potential difference across secondary coil}} = \frac{\text{number of turns in primary coil}}{\text{number of turns in secondary coil}}$**	$\frac{V_p}{V_s} = \frac{n_p}{n_s}$
HT	**potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil**	$V_p I_p = V_s I_s$

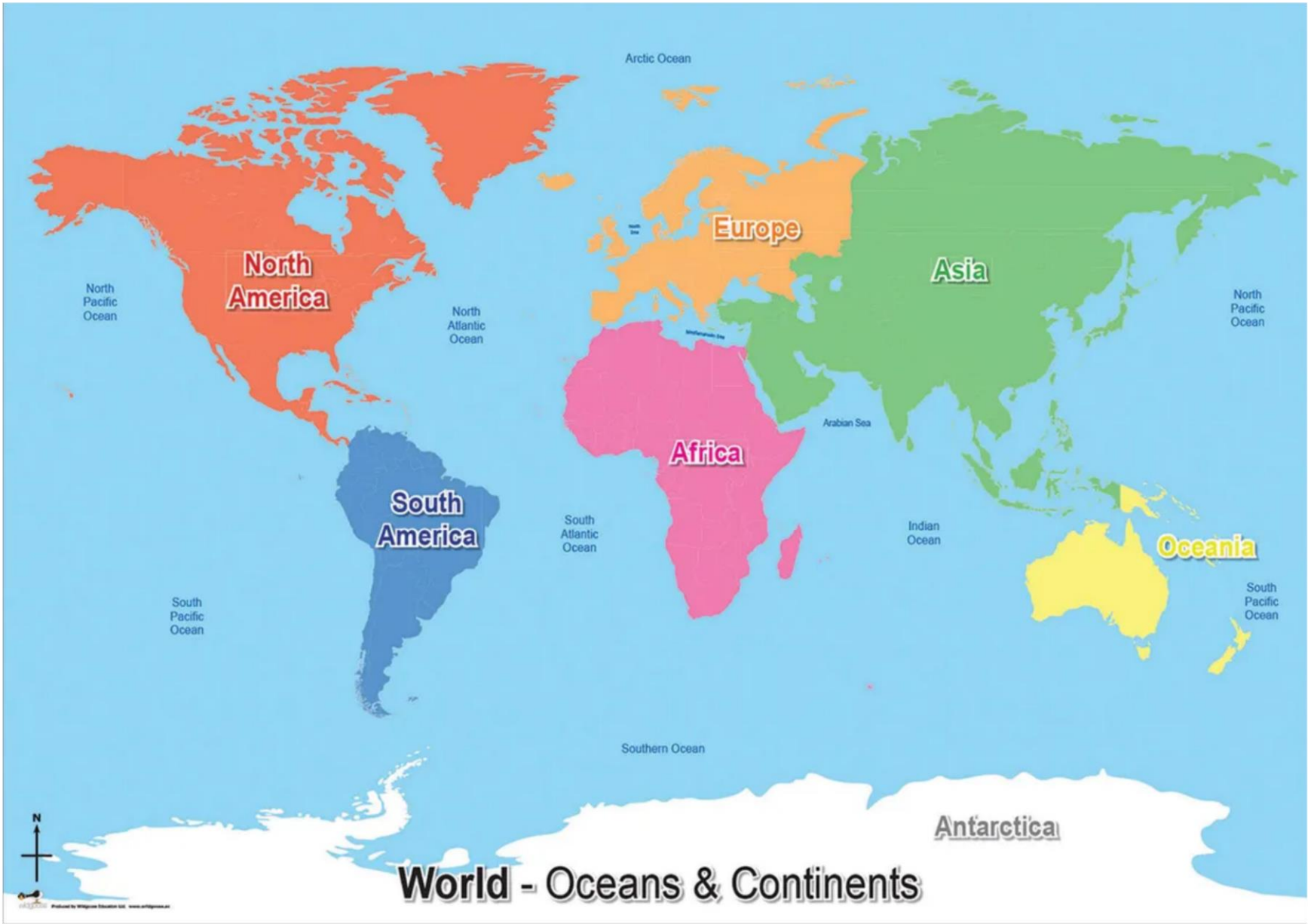
Give
Give
Want

1. What does it give you? What does it want you to calculate?
2. Do you need to rearrange?
3. Do you need to convert?
4. Include the figures
5. Do you need to put it into standard form?
6. Do you need to include the unit?
7. Do you need to give the answer in significant figures?

WORLD MAP


ARCTIC OCEAN
Greenland
RUSSIA
CANADA
UNITED STATES
NORTH PACIFIC OCEAN
NORTH ATLANTIC OCEAN
CHINA
INDIA
AUSTRALIA
INDONESIA
BRAZIL
SOUTH PACIFIC OCEAN
SOUTH ATLANTIC OCEAN
INDIAN OCEAN
SOUTHERN OCEAN
ANTARCTICA
Equator
Tropic of Cancer (23°27')
Tropic of Capricorn (23°27')
Antarctic Circle (66°33')
© Nations Online Project

CONTINENTS AND OCEANS



PROTECTED CHARACTERISTICS

Sex

Sexual Orientation

Age

Disability

Gender Reassignment

Marriage and Civil Partnership

Pregnancy and Maternity

Race

Religion or belief

BRITISH VALUES

Democracy

- I can **influence** the decisions that affect me in the school
- I can work **effectively** with others in the school

Liberty

- I am **free to think** as I see fit
- I have the freedom to **make choices** that affect me but I **recognise** I am **accountable** for **all my actions**

Respect

- I recognise that **everyone is entitled** to their opinion as long as it **does not promote extremism**
- I understand that everyone is **entitled to a voice** within the classroom and I will **listen to others**

Law

- I understand that the school **rules** are used to mirror **society laws** and must be respected
- I recognise that there will be **consequences for my actions**

Responsibility

- I recognise that I am as **equally responsible** for my learning as the teacher
- I take **responsibility** for my actions - good or bad
- We **all** have a **responsibility** to **promote** and **protect** the wellbeing of others

Tolerance

- I recognise that it is **unacceptable** to dismiss the **beliefs** and **opinions** of anyone
- I understand that discussions about **sensitive issues** will be **controlled** and **structured**

STAYING SAFE AT SCHOOL

At Bodmin College we want to ensure that all of our students feel happy, safe and supported at all times. Everyone has a duty of care to safeguard your physical and mental health when at school.
During tutor and PSHE lessons you will be taught how to stay safe both in school, outside of school and online. There is always someone from the 'Safeguarding Team' to talk to during school hours, should you need to. However, you can talk to any member of staff that you feel comfortable talking to.

FULL STOP

Bullying is not ok and we need to work together to stop it from happening.'Full Stop' is our online bullying report form, that allows you to report any occurrences of bullying, either in school, out of school, or online. You can complete the form through the QR code. A member of the pastoral team will then investigate the incident and behaviour sanctions will be issued if bullying has happened.

LANYARDS

All staff, visitors and sixth form students where lanyards whilst on the college campus.

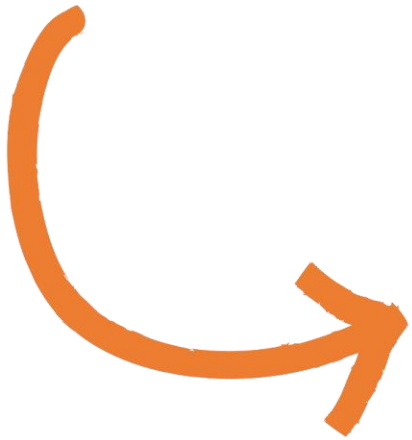
The purpose of lanyards are to keep our college campuses safe places to work and learn in. It is essential that all post-16 students, staff and visitors when on the college premises are easily identified and that we are aware of who everyone is on our campuses during all periods of the day. This is an important employability skill that you need to understand, as many sectors always require visible ID as a safeguarding requirement and a way of registering attendance.

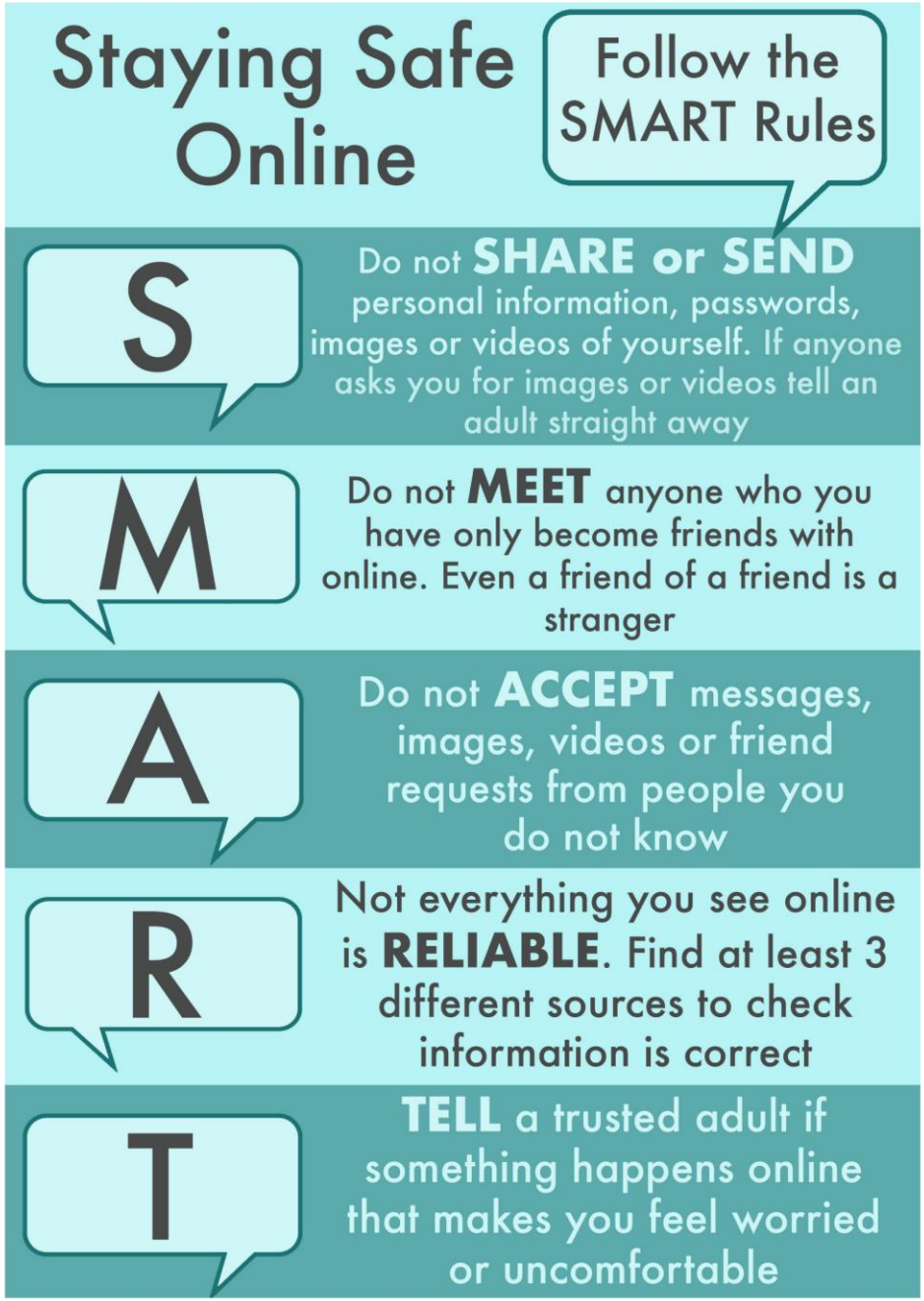
ONLINE SAFETY

Staying safe online is really important, especially now that we have smartphones and devices connected to the internet all of the time.

In school we use a system called **Smoothwall** so monitor the use of computers and devices connected to the internet. This helps us to keep you and our school community safe.

There are lots of tops to help you keep safe online. Checkout out the SMART Rules here.





Wellbeing

Signposting

External Support
See websites below:

- kooth — Kooth.com
- YOUNGMINDS fighting for young people's mental health — Youngminds.org.uk
- childline ONLINE, ON THE PHONE, ANYTIME — Childline.org.uk
- Intercom Trust — Intercomtrust.org.uk

Internal Pastoral Support
Tutor, Director of Key Stage, Year Manager, Safeguarding Team

- CLEAR Emotional Trauma & Therapy Specialists — clearsupport.net
- Young People Cornwall Making Waves — Youngpeoplecornwall.org
- Penhaligon's Friends — Penhaligonsfriends.org.uk
- Cornwall Carers Service — Cornwallcarers.org.uk/young-carers
- withyou — wearewithyou.org.uk

MENTAL HEALTH & WELLBEING

Five self care tips

Get plenty of sleep

Teenagers need 8-10 hours of sleep per night

Maintain a healthy diet

Eating well – a balanced diet full of vegetables and nutrients – can improve your sense of well-being and mood

Exercise regularly

Even if it's just a walk around the block or to school - you'll feel better

"Talk to someone"

Talking can provide stress relief, and can lighten the load of a concern you might be having. Talking about a problem can help to stop you from feeling so overwhelmed.

Make time for yourself

Whether it's reading, watching a film or having a bath, making time for yourself is essential

Art

Weeks 1 & 2

Recap from cycle 2:

- **Pop art -** Pop art is an art movement that emerged in the 1950s, characterized by its use of bold colors, everyday consumer imagery, and popular culture references, blending fine art with mass media.
- **Consumerism -** The belief that it is good for a society or an individual person to buy and use a large quantity of goods and services.
- **Advertising -** The activity or profession of producing advertisements for commercial products or services.

Weeks 3 & 4

- **Screen printing -** Screen printing is a versatile technique used to transfer ink onto various surfaces, typically fabric or paper, by pressing ink through a mesh stencil or screen.
- **Activism -** Activism is the practice of taking direct action to promote, impede, or direct social, political, or environmental change.
- **Repetition -** Repetition is the act of repeating words, phrases, or actions to emphasize a point or create a pattern.
- **Saturation -** Is the level or intensity of a colour.
- **Print making** - An art process that transfers an image from one material one another surface

Weeks 5 & 6

- **Stencil -** A stencil is a template with a cut-out design that allows for the application of paint, ink, or other substances to create a specific pattern or image.
- **Ink -** Ink is a liquid or paste used for writing, printing, or drawing, typically made from pigments, dyes, and other chemicals.
- **Squeegee -** A squeegee is a tool with a flat, rubber blade used to spread or remove liquid, often employed in screen printing or cleaning surfaces.
- **Mass production -** Mass production is the process of manufacturing large quantities of standardized products, typically using assembly lines and automated machinery to increase efficiency and reduce costs.

Weeks 7 & 8

- **Layers -** Application of different materials or techniques on top of one another to build depth, texture, and complexity in a composition.
- **Contrast** – The arrangement of opposite elements (i.e light vs dark)
- **Colour way** – A designed selection of colours
- **Flat - T**wo-dimensional surface or a lack of depth, often achieved through the use of bold colors and shapes without shading or perspective.
- **Silhouette** – An image created by cutting a shape out of paper. It creates a sharp outline of an object.

Weeks 9 & 10

- **Negative space -** Negative space is the empty area around and between objects, helping to highlight the main subjects.
- **Positive space -** Positive space in art refers to the area occupied by the main subjects or objects in a composition.
- **Highlights** – The bright reflective area on an object of piece of art
- **Shadows** – The darker areas with a piece of art or object
- **Form -** The three-dimensional shape or structure of an object, including its height, width, and depth.

Weeks 11 & 12

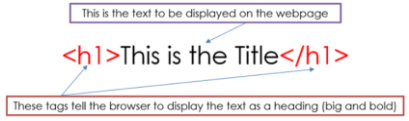
- **Background -** The part of a composition that appears furthest from the viewer, often setting the scene or context for the main subjects.
- **Foreground -** Part of a composition that appears closest to the viewer, often featuring the main subjects or focus of the artwork.
- **Refine -** Making adjustments and adding details to improve and perfect the composition or technique.
- **Evaluate -** Assessing and analysing the elements, techniques, and overall impact of an artwork to form an informed judgment.
- **Annotate -** Adding notes or comments to describe, explain, or analyse specific elements, techniques, or ideas in the piece.

Computer Science

Weeks 1 & 2

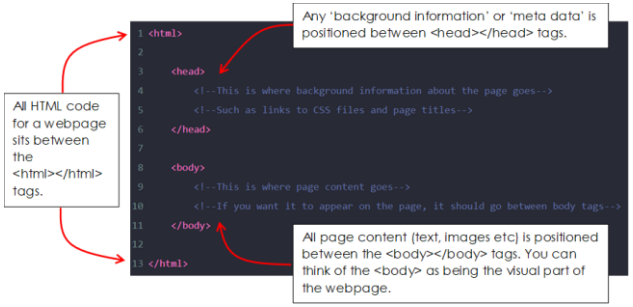
What is HTML?
HTML stands for 'Hypertext Mark-up Language' and it is the language of the web. Almost all webpages are written in HTML.

- HTML is made up of "Tags" (often in pairs).
- HTML tags are used to tell the browser how some text (or an image) is to be arranged on the webpage, giving the page content some structure.
- Different tags do different jobs, for example, this is the HTML tag that tells the browser to display some text as a heading:



Weeks 3 & 4

Page Layout Code
All pages written in HTML will begin with some basic starter code. These include 3 important pairs of tags (html, head and body):



Weeks 5 & 6

Tags
For pairs of tags, the closing tag will always contain a forward slash.
For example, < tag_name > < / tag_name >

Paragraph Tags
Paragraph <p> tags have a property that allows text to bed aligned.
In the example below, you can see how the property 'align' has been given the value 'center' (notice American spelling) to centre align the text. It will also accept the alignment values 'left', 'right' and 'justify'.

Weeks 7 & 8

Headings, Breaks and Background Colours

Heading <h1> tags, will restyle the text it surrounds so that it is big and bold.

Horizontal Rule <hr> tags add a line across the page.

Break <br> tags create a new line (like hitting enter on a keyboard when typing).

Adding the <body> tag's 'bgcolor' attribute, along with a colour name or code as its value, will change the background colour of the webpage.

Weeks 9 & 10

Hyperlinks

When we create a text-based hyperlink, we surround the text with anchor tags. In the opening anchor tag, we need to add the address of the webpage that we would like the text to open, when it is clicked. This is done using the 'href' attribute along with an address for the attribute's value.

Weeks 11 & 12

Key Vocabulary

Tags
Code which commands how a browser displays text and images

Browser
Program in which websites are displayed

Hyperlink
A piece of text which when clicked takes you to another page.

Design & Technology

Weeks 1 & 2

We are demonstrating different embroidery stitches.

Theory

Embroidery
Hand stitches used to add decoration.
Running stitch
A hand-sewn stitch that weaves in and out of the material. This creates a dashed line effect
Blanket stitch
A hand stitch used for finishing a fabric edge.
Back stitch
2 or 3 reverse stitches to secure the stitches at the beginning and end of a seam.

Tools

- **Thread** connects fabric together (can be used for decoration).
- **Seam** ripper undoes thread.
- **Sewing needle** used with thread to hand sew.
- **Fabric scissors** cut fabric (and thread only).
- **Pins** hold fabric together for sewing
- **Pin cushion** to store pins

Manufacturing considerations:
Quality control is when you carry out checks to make sure your product turns out as expected. Quality control check examples for stitching:
Stitch Quality: Ensuring uniform stitch length, density, and neatness throughout the design.
Fabric Condition: Checking for fabric defects like holes, stains, or wrinkles before beginning the embroidery process to avoid any damage to the finished product.

Weeks 3 & 4

We are designing an item that incorporates the embroidery stitches we have learnt.

Theory

Design Brief:
A short description outlining the product that needs to be designed (or problem that needs to be solved).
Design Specification
A criterion that details the requirements of the design outcome.

Tools
Pencils – For sketching rough ideas and outlines (use different grades for shading).

Pencil Grades:
Hard pencils (H grades): For precise, light lines, detailed sketches, or technical drawings.
Soft pencils (B grades): For shading, bold lines, and expressive, softer drawings.
HB: Versatile for general writing and light drawing.

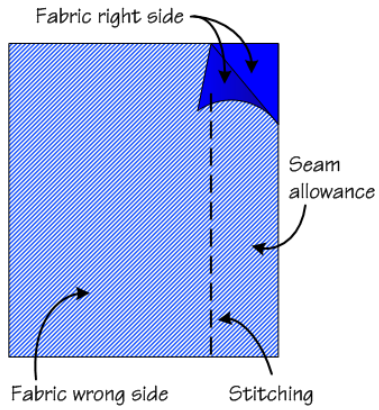
Design considerations:
It is important to fully represent your design, this can be done by rendering and adding annotation.
Annotation:
Labels explaining a design including the materials and processes that will be used.
Rendering:
Shading/colouring a design to make it look realistic.

Weeks 5 & 6

We are creating a pattern to manufacture our bag design.

Theory

Pattern
A template or guide used to cut fabric pieces accurately to create a garment or other sewn item.
Applique
Joining materials together for decorative purposes.



Tools
Pin: A small, slender, pointed tool typically made of metal and used to temporarily hold pieces of fabric together before they are sewn.
Fabric Scissors: Also known as sewing shears, are specialised cutting tools designed specifically for cutting fabric.

Manufacturing considerations:
Seam allowance
A seam allowance is the area between the edge of the fabric and the stitching line on a piece of fabric.

Design & Technology

Weeks 7 & 8

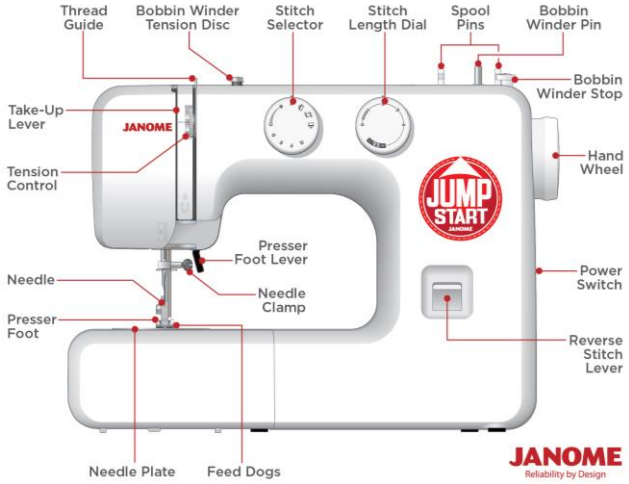
We are cutting and stitching out pattern.

Theory

Health & Safety: When using tools, you must follow the workshop H&S rules. These rules include training before using tools, acting sensibly and wearing PPE (personal protective equipment).

Tools

Sewing machine:



Manufacturing considerations:

Health and Safety on a machine:

PPE: Wear fitted clothing, secure long hair, and use safety glasses if needed.

Needle Check: Always check for bent or damaged needles and replace them regularly.

Hand Safety: Keep hands away from the needle and moving parts. Use the handwheel to adjust fabric manually.

Foot Pedal: Start at a slow speed and avoid sudden movements with the foot pedal.

Weeks 9 & 10

Assessment Week

- Recall tool names and technical terms.
- Consider health and safety when using tools.
- Recall equipment and their uses.
- Describe manufacturing techniques.

How do I revise?

Mind maps: Create a mind map for each week. Try and represent theory with icons, use colours and minimise the amount of text.

Flash cards: Put the key information on a flash card, such as definitions or tools names. On the other side write a question. You can then quiz yourself or have a friend help you.

Follow the link for revision tips:

Top revision techniques for exams - BBC Bitesize

Goodluck!

Weeks 11 & 12

We are completing our bag and evaluating.

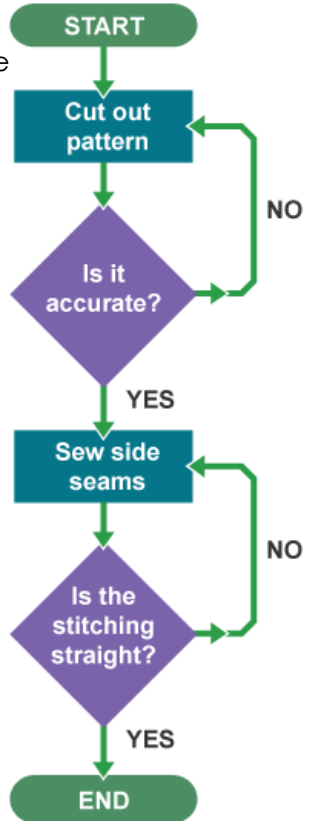
Theory

What is QC?

Quality control is like making sure things are just right! Imagine you have a favourite toy that you love playing with. Quality control is all about checking that every toy that comes out of the factory or store is as good as yours.

Tools

- **Fabric shears** - sharp, have long blades and are designed to cut fabric easily and cleanly.
- **Embroidery scissors** - small, have a sharp pointed blade and are used for cutting intricate work.



Manufacturing Considerations:

When will QC checks be carried out?

- **Before** manufacture to ensure fabric has no faults or misprints
- **During** manufacture to ensure seams are sewn straight, stitching is even in length and neat
- **After** manufacture to ensure components are sewn on straight and sewing is strong.

Drama

Weeks 1 & 2

Blood Brothers Plot Summary:

1. Mrs. Johnston, struggling with many children, gives one of her twins, Edward, to her wealthy employer, Mrs. Lyons.
2. The twins, Edward and Mickey, grow up unaware of their sibling connection.
3. They become close friends despite their different social classes.
4. Tension arises as their differing lives and Mrs. Lyons' secret threaten their bond.
5. The truth is revealed, leading to a tragic death for both boys.

Weeks 3 & 4

Proxemics: the distance between people on stage, and what this tells the audience.

Duologue: a conversation between two or more people, expressing thoughts, ideas, or emotions.

Weeks 5 & 6

Mickey:

1. **Energetic and playful** as a child, full of curiosity and mischief.
2. **Insecure and troubled** as an adult, struggling with class differences and jealousy.
3. **Loyal and loving**, but ultimately trapped by his circumstances, leading to tragedy.

Eddie:

1. **Privileged and kind-hearted**, raised in a wealthy family, unaware of his true origins.
2. **Generous and loyal**, always supportive of Mickey, despite their contrasting backgrounds.
3. **Innocent and naïve**, unaware of the tension around him.

Weeks 7 & 8

Status: Status is the level of power or influence a character has.

We can show status using:

- **Levels** – a higher status character could be physically higher than other characters
- **Body language** – a higher status character could have more open, confident body language
- **Vocal tone –** a lower status character might be quieter or more reserved in their speech

Dramatic irony: Dramatic irony is when the audience knows something important that the characters do not, creating tension or humour.

Weeks 9 & 10

Assessment Fortnight:

- Creating **characters** in performance
- Use **vocal** characterisation skills: pitch, tone, pace, projection, pause, silence, intonation
- Use **physical** characterisation skills: body language, gesture, gait, facial expressions, levels

Weeks 11 & 12

Improvement Week: Steps to Success

- Select your stage configuration carefully
  - Traverse
  - Proscenium Arch
  - In-the-round
  - Thrust
- Consider your **blocking** and **stage positioning** carefully
- Choose your **vocal** and **physical characterisation** skills to suit your character and their feelings.

English

Week 1

The Signal Man

Pathetic fallacy – when the writer uses aspects of nature or the weather to create the mood or atmosphere of a story.
Setting – The location/s a writer places the events of the story, where the events take place.
Characterisation – the creation or construction of a fictional character. These may sometimes use stereotypes or be linked to current trends.
Genre conventions – these are the features that are typical within different types (genres) of stories. For example the features typical to **ghost stories** are: ghosts, messages from the dead, a graveyard, darkness/ night time, strange visions or spooky noises, fearful or odd characters, haunted houses…

Context:

The Victorian Supernatural – gathering around the fire to read a **Christmas ghost story** was a beloved Victorian tradition. The Victorians were very interested in anything to do with the supernatural, such as: ghosts, spirit séances, astrological predictions, psychic abilities and anything occult. This led to the popularisation of Victorian gothic fiction.
Gothic fiction - Gothic fiction is characterized by an environment of fear, the threat of supernatural events, and the intrusion of the past upon the present.

Key Quotations: Setting

'barbarous, depressing and forbidding air'
'gloomier entrance to a black tunnel'

MINDMAP: **The Signal Man**

Week 2

The Signal Man

Cyclical structure – when a writer ends a story in a similar way to how it began.
Motif – a recurring image or object that is thread through the narrative.
Premonition – a strong feeling that something (possibly unpleasant) is about to happen.
Foreboding – a feeling that something bad will happen

Context: Charles Dickens

- Dickens is famous for his Christmas Ghost stories: one of his more famous is 'A Christmas Carol'.
- The Signal Man was his last story. The story involves a train accident.
- In 1865, Dickens was on board a train that derailed going across a viaduct (bridge).
- The incident is known as **The Staplehurst rail crash**. 10 people died. Although Dickens was unharmed, the incident impacted him significantly causing trauma.
- The story also represents Dickens' fear of advancing technology, as trains were the newest innovations in technology at the time.

Key Quotations: Cyclical structure

Beginning: "HALLOA! Below there!"
Middle: "I was sitting here, when I heard a voice cry, 'Halloa! Below there!'… it cried, 'Look out! Look out!'
End: "I said, 'Below there! Look out! Look out! For God's sake, clear the way!' "

MIND MAP: The Signal Man

Week 3

The Monkey's Paw

Superstition – A superstition is a belief or practice that isn't entirely based on facts or reality, like carrying a rabbit's foot because you think it brings you good fortune or believing that Friday the 13th is a day of bad luck.
Foreshadowing - When a writer hints about later events in the story.
Stereotypes - A stereotype is a very easy and simple idea or opinion of a person, group or thing. Mostly, it is an incorrect judgement, idea or belief many people have about a group that is based upon how they look or behave.

Context:

The story was published in 1902, which was during the time of Britain's occupation of India (1858-1947). At the time, many British travellers were interested in objects that might have magic or supernatural powers. They were known as **talismans.** The monkey's paw is a talisman obtained from a **fakir** (Indian monk) in the story. The fact that the talisman in this story is a monkey's hand, could link to the idea that modern humans evolved from apes/ monkeys. This creates a horrifying connection to the destruction of the natural world and supernatural revenge in the idea of having it as a talisman.

Key Quotations: Foreshadowing

"putting his king into such sharp and unnecessary perils
'"Hark at the wind," said Mr. White… having seen a fatal mistake…"

MIND MAP: The Monkey's Paw

English

Week 4

The Monkey's Paw

Narrative Twist – Plot twists are an unexpected change in the events of a story that changes the direction of the plot and surprises the reader.
Exploitation – taking unfair advantage of people or resources for personal gain. The monkey's paw reflects the exploitation of apes / natural world.
Evolution – Darwin's theory of evolution (1859) suggested that all animals on earth are descended from a common ancestor. In his publication 'The descent of Man' (1871) he made evolutionary links between modern humans and apes.
Symbols - Symbolism is a literary device in which an image is used to represent something else. The monkey's paw is a symbol of desire /greed.

Context:

Humanity's **exploitation** of the natural world increased dramatically during the industrial revolution in the 19th century. Developing industry and growing human populations have impacted wildlife populations around the world, the climate and caused changes in the land and sea. The Monkey's Paw is a reflection of the killing, capture and trade in apes that has gone on so long now that all great apes and gibbons are at risk of extinction.

Key Quotations: Narrative Twist

"The paw!...The monkey's paw!"
"Go down and get it quickly and wish our boy alive again."
"a knock… sounded on the front door …"A perfect fusillade of knocks reverberated through the house"

MIND MAP: The Monkey's Paw

Week 5

The Lottery

Lottery a selection process where everyone's entry has an equal chance of winning
Community a group of people living in the same place or with the same characteristics
Ritual a ceremony or series of actions performed in an identical way each time, giving the ceremony power
Microcosm 'a little world' elements of a much larger 'society' portrayed by presenting a much smaller 'society'

Context:

'The Lottery' by Shirley Jackson was published in 1948 in the *New Yorker* magazine is a short story with a shocking twist.
The story was very controversial when it was first published, angering many readers when it was published as it seemed to criticise Amercian ideals, and way of life. It depicts a society in a state of moral, political and social decline clinging on to an imagined past.

Key Quotations

"Mr. Summers spoke frequently to the villagers about making a new box, but no one liked to upset even as much tradition as was represented by the black box".
"The morning of June 27th was clear and sunny, with the fresh warmth of a full-summer day; the flowers were blossoming profusely and the grass was richly green."
"Old Man Warner snorted. "Pack of crazy fools," he said. "Listening to the young folks, nothing's good enough for them. Next thing you know, they'll be wanting to go back to living in caves."

MIND MAP: The Lottery

Week 6

The Lottery

Allegory a story with a hidden moral message
Quotidian the ordinary, repetitive and mundane aspects of everyday life
Morality the distinction between right and wrong and choosing the proper behaviour
Savagery cruel and vicious behaviour, uncivilised and animalistic

Context:

Some have described "The Lottery" as one of the most terrifying stories every written. The lottery is a reflection on the Holocaust, groupthink and societal intolerance more generally.
After WWII writers had to grapple with ideas of the cruelty and brutality of the powerful.
It criticises cultural traditions and the way groups of people blindly accept these practises.
The story also illuminates the human capacity for violence, and the power of tradition and ritual.
The story depicts suffering and oppression – and the terrible treatment of human beings by other human beings.

Key Quotations

"Although the villagers had forgotten the ritual and lost the original black box, they still remembered to use stones".
"The people had done it so many times that they only half listened to the directions; most of them were quiet, wetting their lips, not looking around."
"The children had stones already, and someone gave little Davy Hutchinson a few pebbles."

MIND MAP: The Lottery

English

Week 7

There Will Come Soft Rains

Allegory: *the hidden message of a story*: – technology that defines civilisation will ultimately destroy civilisation; nature will outlast the avarice and ignorance of man

Register: *how language is adjusted to fit the requirements of the writing (a voice or tone that fits)*: the automated voices provide a light and child-like narration, devoid of emotion even when dealing with tragedy

Chronology /temporal references: *Using the time of day as a structural device:* heavily used to structure the paragraphing; the passage of a single day, reflecting how time is a construct invented by man /ignored by nature.

Juxtaposition: *the deliberate placing of two things to highlight their differences:* the failing technology of the house juxtaposed with the gradual creep of nature.

Context: America ended WWII in 1945 by dropping two **atomic bombs** above the busy cities of **Hiroshima** and **Nagasaki.** Up to 250,000 people died**. Human shadows** were permanently bleached into the stones where victims had been incinerated. **Robert Oppenheimer,** the lead scientist on the Manhattan project that developed the atomic bomb for the Americans, later expressed regret: "Now I am become death, destroyer of worlds." *Hindu Scripture*

Key Quotations:

"their images burned in wood in one titanic instant"

"the sighing vent of an incinerator...sat like an evil Baal in the corner"

MIND MAP: There will come soft rains

Week 8

There Will Come Soft Rains

Post Apocalyptic Dystopia: Life after a nuclear war will be brutal and unforgiving

Macabre: an emphasis and fascination with darkness, evil and death; the city, the family, the dog and the house

Personification: the house is personified throughout as the protagonist of the story

Simulacrum: a representation or imitation of a real thing –often one that is not quite accurate; the machine mice, rats and snakes, the psychedelic nursey walls, the attic brain.

Context

Post-war American Dream of the **Future** based on **Consumerism** and the **ideal home** lived in by a nuclear family. **Conformity** was seen as a strength.

Sara Teasdale, Pulitzer-prize winning poet, wrote the poem that the gives the story its name. Bradbury embeds her themes of the destructive power of man and the healing but indifferent power of nature

Picasso and **Matisse** are painters who symbolise for Bradbury the genius of humanity from the previous century –who without humans to admire them are now lost, reduced to black shavings (like the McClellan family)

Key Quotations

"At ten o'clock the house began to die."

"It fed on Picassos and Matisses...like delicacies, baking off oily flesh, tenderly crisping the canvasses into black shavings"

"Dawn showed faintly in the east. Among the ruins, one wall stood alone."

MIND MAP There will come soft rains

Week 9

A Piece of Wood

Protagonist /Antagonist: the person at the centre of the story –and the person who opposes them

Hubris: the arrogance, over-confidence and complacency of those with power

Duality: an opposing, contrasting and yet linked pairing of ideas, themes and objects: Life and death, nature and technology, body and mind, rational and irrational, war and peace.

Irony: meanings that are the opposite of intention, events that are not what should be expected: being run over by an ambulance, arresting a police officer, writing a song called 'Ironic' that lists things that are actually not ironic.

Context

Bradbury was concerned about the American Government's spending on the Military. He worried they would continually fund more and more Wars as a way of controlling its citizens. The **Military Industrial Complex (MIC)** is an expression that highlights how companies who supply weapons benefit from War. With the money they make, companies can then fund politicians who will support more military spending. **Mutually Assured Destruction (MAD):** countries who have capability of destroying the world with nuclear bombs are safe from attack as no one country wants to be destroyed.

Key Quotations

"What would the world do if we woke up tomorrow with the guns in flaking ruin?"

"By this time next month, the world would be free of war forever"

MIND MAP: A Piece of Wood

English

Week 10

A Piece of Wood

Dichotomy: the contrast and difference between two completely opposite ideas or viewpoints: the contrasting views about War and Peace of the Official and Hollis

Homophone: words that sound the same but have different spellings and meanings:
'A Peace of Would'

Futility: pointlessness, something that ends up meaning nothing and has no purpose. A war that does not end or ends up killing everyone.

Nihilism: not believing in anything –a belief that life is meaningless, and society's rules do not apply. Hollis does not believe in his society's view of War and wants to destroy the weapons that are causing so much death and destruction.

Context

At the start, the Official thinks that Hollis is insane. He humours Hollis and considers his state of mind by asking if he thinks he is 'Christ'. This was standard practise in a mental health assessment in those days. The invention makes use of water in the air to accelerate the rust in specific metals in close proximity to Hollis.

Key Quotations:

"he sprinkled it on his desk... –a small filtering powder of yellow-red rust."

"You know him, name of Sgt Hollis, stop him, shoot him down, kill him if necessary..."

"He grabbed a chair...hurled it against the wall...then he seized one of the legs, clenched it hard in his fist, his face bursting red..."

"There will be no fighting in the war room!"
Dr Strangelove

MIND MAP: A Piece of Wood

Week 11

The Sound of Thunder

Define this key vocabulary from the unit

- **Exploitation**
- **Motif**
- **Allegory**
- **Foreshadowing**
- **Ritual**

Context

Ray Bradbury's short story "A Sound of Thunder" explores the idea that seemingly insignificant actions can have a profound effect on the future.

Bradbury's story suggests we are all linked. The actions of individuals—limited both in understanding and in the ability to overcome their own flaws—are likely to lead to disaster.

In this story, the **privileged trophy hunters** of a futuristic society attempt to hunt the biggest game in history – a Tyrannosaurus Rex.

Key Quotations

"The jungle was high, and the jungle was broad and the jungle was the entire world forever and forever".

"Stay on the Path. Don't go off it. I repeat. Don't go off. For any reason! If you fall off, there's a penalty."

"Not knowing it, we might kill an important animal, a small bird, a roach, a flower even, thus destroying an important link in a growing species".

MIND MAP: The Sound of Thunder

Week 12

The Sound of Thunder

Define this key vocabulary from the unit

- **Dystopia**
- **Semantic field**
- **Hubris**
- **Foreboding**
- **Register**

Context

The butterfly effect is a concept of chaos theory in which the flapping of a butterfly's wings in one part of the world could create a hurricane on the opposite side of the globe. Bradbury is really interested in this idea of a chain of events. In this story, Eckels kills a butterfly.

This small event changes the future considerably. Bradbury also explores the idea that technology impacts environmentalism.

Bradbury's language is teeming with similes and metaphors – especially when he describes the majesty of the Tyrannosaurus and the vibrancy of the jungle.

Key Quotations

"It came on great oiled, resilient, striding legs".

"It towered thirty feet above half of the trees, a great evil god, folding its delicate watchmaker's claws close to its oily reptilian chest."

"The Monster lay, a hill of solid flesh".

MIND MAP : A Sound of Thunder

Food

Week 1/2

Practical: Greek Lentil Salad

Nutrition -
Low biological value (LBV) proteins - are missing one or more of the essential amino acids we need.

LBV sources - Found in plant sources *e.g. peas, lentils, nuts, seeds and most beans*

Vegan – Vegans do not eat foods that come from animals, including dairy products and eggs.
Vegetarian – vegetarians eat dairy products and eggs, but no meat

Knowledge -
Beans – are part of a group called legumes and pulses which also include lentils and peas

Types of beans -
runner beans, broad beans, kidney beans, butter beans, haricot beans, cannellini beans, pinto beans and brolotti beans

Lentils – lentils come in many different varieties red, and green etc. they are a good source of protein and iron

Basic equipment –
Mixing bowl – used for mixing items
Saucepan – used for heating foods on the hob
Wooden spoon – used for mixing items
Chopping board – use for cutting and preparing food items on

Week 3/4

Practical – Banana and Poppy Seed Muffins

Nutrition -
Low biological value (LBV) proteins -
Don't contain all the essential amino acids that humans need. Only located in plant-based foods. E.g. cereals, pulses, nuts etc.

High biological value (HBV) proteins -
Have all the essential amino acids that humans need. Mostly located in animal sources (like chicken, salmon etc.) Soya beans also contain HBV proteins.

Knowledge -
Portion control – making sure food items are equal/even

Soya Milk - A plant-based milk alternative made from soybeans, used in this recipe as a substitute for dairy milk.

Over mixing the batter - overmixing can lead to gluten development, resulting in dense and tough muffins. It's important to mix the batter just until the dry ingredients are incorporated, leaving some lumps for tender muffins.

Basic equipment –
Mixing bowl – used for mixing items
Measuring jug – used to measure liquids
Muffin tin – Muffin tins are used for holding batters or mixes while they bake in the oven
Muffin cases – prevents the mixture from sticking to the tin while cooking

Week 5/6

Practical – Pizza

Nutrition -
Nutrient requirement - The amount of each individual nutrient needed to maintain an individual's is based on age and gender

Knowledge -
Bread Base - The foundation of the pizza made from homemade bread dough. It serves as the crust for the pizza.

Dough - The mixture of flour, water, yeast, and other ingredients used to make the bread base.

Knead - The process of working the dough with your hands to develop gluten and create a smooth, elastic texture.

Cereals - grass cultivated for its edible grains - wheat, corn/maize, rice, oats, barley and rye

Basic equipment –
Measuring jug – used to measure liquids
Mixing bowl – used to mix food item in
Chopping board – use for cutting and preparing food items on
Baking tray - is a flat, rectangular metal pan placed in an oven and used for baking.
Greaseproof paper – paper which is used to line tins and baking trays with to prevent food items from sticking

Food

Week 7/8

Practical – Spaghetti Puttanesca

Nutrition -
Deficiency – not having enough of certain nutrient

Fibre - Fibre is the term given to the non-digestible, mainly carbohydrate material, found in plants.

Deficiencies of a low fibre diet - constipation, irritable bowel syndrome (IBS), overweight and obesity, heart disease, diabetes and bowel cancer.

Knowledge -
Al Dente - A term used to describe pasta that is cooked to be firm to the bite. In Italian, it means "to the tooth."

Spaghetti – a type of pasta shape

Pasta – Pasta is a type of food typically made from an unleavened dough of wheat flour mixed with water or eggs, and formed into sheets or other shapes

Basic equipment –
Mixing bowl – used for mixing ingredients in
Saucepan – used for heating foods on the hob
Wooden spoon – used for mixing items
Chopping board – use for cutting and preparing food items on

Week 9/10

Assessment Week

- Recall practical techniques
- Consider food safety and scientific terms
- Recognise dietary conditions and basic nutrition
- Recall equipment and there uses

Week 11/12

Theory

Nutrition -
Energy balance is the relationship between energy input (calories consumed through food and drink) to energy output (calories used by the body for our energy requirements) being equal.

Knowledge -
Government guidelines say our dietary fibre intake should increase to 30g a day, as part of a healthy balanced diet. As most adults are only eating an average of about 20g day, we need to find ways of increasing our intake.

Evaluation –
- The quality of the products that you have made.
- The skills that you have developed.
- Equipment that you have learned how to use.
- Skills or processes that you need to improve.
- How you could improve the way in which you work in practical lessons.

Reflect – What went well?
React - Even better if
Retain – Imbedding knowledge

French

Week 1 – TV programmes

What I watch on TV	
Je regarde	I watch
Je ne regarde jamais	I never watch
les documentaires	documentaries
les émissions de sport	sports programmes
les émissions de télé-réalité	reality TV shows
les émissions de musique	music programmes
les informations	the news
la météo	the weather
les series policières	crime series
les jeux télévisés	game shows
Mon émission préférée c'est….	My favourite programme is…

Week 2 – Favourite celebrities

Opinions and adjectives	
Ma célébrité préférée est…	My favourite celebrity is…
Il/elle est/ n'est pas	he/she is/ is not…
arrogant/e	arrogant
intelligent/e	intelligent
gentil/lle	kind
généreux/se	generous
travailleur/euse	hardworking
sérieux/se	serious
beau/belle	beautiful
Il/Elle fait beaucoup de choses pour les bonnes causes	He/she does a lot for charity

Week 3 – What I do online

Online activities	
J'envoie des emails	I send emails
Je fais beaucoup de choses	I do a lot of things
Je fais des recherches pour mes devoirs	I do research for my hwk
Je fais des achats	I buy things
Je joue à des jeux en ligne	I play online games
Je mets ma page personnelle à jour	I update my homepage
Je vais sur mes sites préférés	I go onto my favourite sites
Je vais sur des blogs	I go onto blogs
Je vais sur des forums	I go onto forums
Je télécharge des films/ de la musique	I download films/music
Je regarde des vidéos	I watch videos

Week 4 – Why I do on my mobile

What I use my phone for	
Je passe des heures sur mon portable	I spend hours on my phone
J'envoie des messages	I send messages
Je regarde des photos	I look at photos
Je partage des photos	I share photos
Je partage des liens vers des vidéos	I share video links
Je joue à des jeux	I play games
J'appelle mes amis/ma famille	I phone my friends/family
J'organise des sorties	I arrange to go out
J'écoute de la musique	I listen to music

Week 5 – Question words

Questions	
Qu'est-ce que….	What
Comment…	How
Pourquoi…	Why
Oú…	where
D'oú…	From where
Quand…	When
Combien…	How much/ many
Quel/lle	Which
Qui	Who
À quelle heure…	At what time
À une heure	At one o'clock
À deux heures et demie	At half past two

Week 6 – Revision – the autumn term

Words you may have forgotten	
l'année dernière	last year
l'été dernier	last summer
le mois dernier	last month
la semaine dernière	last week
le week-end dernier	last weekend
hier	yesterday
récemment	recently
cet été	this summer
Où es-tu allé(e)?	Where did you go?
l'année dernière	last year
cet été	this summer
je suis allé(e)…	I went

French

Week 7 – Revision – the Spring term

My school	
Comment est ton collège?	What's your school like?
mon collège est	my school is
(assez) grand	(quite) big
(très) petit	(very) small
de taille moyenne	medium sized
(un peu) moderne	(a bit) modern
vieux	old
bien	nice
au bord de la mer	(near to) the coast
à la montagne	In the mountains
à la campagne	In the countryside
en centre ville	in the city centre
Il y a/ il n'y a pas	there is (not)
un terrain de sport	a sports field
un terrain de foot	a football pitch
une bibliothèque	a library
des étudiants	students
des profs	teachers

Week 8 – Independent study

Personalised revision list	
During your revision lessons this week, compile a list of words that you need to revise ahead of the test	

Week 9 – Independent study

Personalised revision list	
During your revision lessons this week, compile a list of words that you need to revise ahead of the test	

Week 10 - Phonics

SSCs – Sound-spelling correspondence

a = ah, e= euh, i/y = ee, o = oh, u= ew (nude)

er / é / ez / ai = ay (tame)

eau / au / ô = oh (home)

en/an/em/am = like the /o/ in on but without the n!

ch = /sh/ (soft sound) th = /t/

s / t / x are silent at the ends of words

au = /k/

ail / aille = eye

Week 11 – Asking for directions

Où est… ? / Où sont….?	Where is …? / Where are …?
Pour aller au musée?	How do I get to … ?
C'est loin?	Is it far?
C'est tout près	It's very close
C'est….	It's
à gauche	to/on the left
à droite	to/on the right
tout droit	straight ahead
Allez…	Go…
Tournez…	Turn…
Prenez…	Take…
Continuez…	Continue…
Traversez…	Cross…
Prenez la première rue à gauche	Take the first road on the left
Prenez la deuxième rue à droite	Take the second road on the right

Week 12 – Shopping related vocab

Shopping	
Pouvez-vous m'aider?	Can you help me?
Je voudrais	I would like
C'est combien?	How much is it?
Je peux essayer..?	Can I try…?
Ce/cette	this
Ces	these
Pull	jumper
T-shirt	t-shirt
Chemise	shirt
Robe	dress
Pantalon	trousers
Short	shorts
Jupe	skirt
Veste	jacket
Chapeau de soleil	sun hat

Geography

Week 1

Resources – a stock or supply of something that has value or a purpose.

Imports – buying goods from other countries and bringing them into the UK. **Exports** – selling goods to other countries.

Flow line map – indicates the direction and volume of movement.

Food miles – the distance covered when supplying food to consumers - 'from plough to plate'.

Carbon footprint – a measurement of the greenhouse gases individuals produce through burning fossil fuels.

Week 2

Famine – an extreme shortage of food, which can cause illness or death.

Drought – a long period of very little or no rain, causing water shortage.

Agribusiness – Large farms that have high inputs of money and fertilizers to maximise the food produced.

Organic – growing food without chemicals.

Fair Trade – producers in LICs are given a better price for their goods, such as cocoa, coffee and cotton.

Week 3

Food consumption – the act of, using, eating or drinking food goods.
Food supply - the amount of food available.

Food security – access to sufficient, safe, nutritious food to maintain a healthy and active life. **Food insecurity** – being without reliable access to enough affordable, nutritious food.

Food surplus – when countries produce more food than is needed.
Food deficit – countries that do not produce enough food to feed their population.

Irrigation - the practice of supplying land with water so that crops and plants can grow.

Week 4

Undernourished – the lack of a balanced diet, and deficiency in minerals and vitamins.

Soil erosion – the removal of fertile topsoil by wind or rain.

Cultivation – using land to grow crops.

Deforestation - cutting down trees means that there are no roots in the soil, so water doesn't soak in.

Overgrazing - letting the animals stay in the same place means they eat all the grass.

Week 5

South Sudan – a landlocked country established in 2011 after a civil war in Sudan. It is one of the poorest countries in the world.

Poverty – living on less than $1.50 a day.

Aid - money, food and emergency supplies donated to help improve people's lives.

UNICEF – United Nations International Children's Emergency Fund.

Week 6

Sustainability – actions that meet the needs of the present without reducing the ability of future generations to meet their needs.

Social – Opportunities and challenges that impact human activities.

Economic - Opportunities and challenges that impact income.

Environmental - Opportunities and challenges that impact the natural world around us, including on land, in the sea or atmosphere.

Political – How the decisions of politicians (Government) help to shape our world.

Geography

Week 7

Climate Graph for Savannah Grasslands

How to draw and plot a climate graph

1. Along the x-axis arrange the months.
2. On one y-axis there will be rainfall (mm).
3. On the other y-axis there will be temp (°C).
4. The rainfall must be plotted as bars.
5. The temperature must be plotted as a series of crosses and connected to form a line.
6. Typically the bars are blue, and the line is red.
7. Remember to label each axis
8. Give the graph a title.
9. Always use a sharp pencil and a ruler.
10. Include a key.

Week 8

Adaptation – plants and animals change some of their characteristics to allow then to cope in their environment.
Baobab tree - trees that have very thick trunks to store water, ready for the dry season. They are deciduous (lose their leaves) to prevent water loss. Thick bark to withstand forest fires. Long tap roots to reach moisture.
Acacia tree - when grazed they produce a bad taste, and grazers are only able to eat a few mouthfuls before it starts to taste terrible. Guarded by four species of aggressive ants that sting grazers. Has large thorns to protect them from being eaten by most animals. Has a deep taproot to get water during the dry season. Umbrella shape allows it to get sunlight.

Week 9

An opposable thumb - *(like humans)* can be placed opposite the fingers of the same hand which allows the digits to grasp and handle objects. This makes picking up food easier for example.

Prehensile – something that can grip – an elephant's trunk is prehensile.

Camouflage – animals have adapted by changing colour to disguise themselves as per their surroundings to protect them from predators, or attack prey.

Endangered animal – seriously at risk of becoming extinct.

Week 10

Maasi – an African tribe that live in the Maasai Mara in southwest Kenya and northeast Tanzania.

Maasai Mara - a large game reserve.

Game reserve - a large area of land set aside as a protected area for wild animals.

Nomad – people that travel from place to place to find fresh pasture for its animals and has no permanent home.

Herders – a person who looks after a herd of livestock or makes a living keeping livestock.

Week 11

Desert - an area that has less than 250mm of precipitation per year. However, some deserts can go years without any precipitation.
Desertification – when land turns to desert.

Overgrazing - letting the animals stay in the same place means they eat all the grass; this can turn the land into desert.
Over farming - over use of the land to grow crops. This leaves poor quality soil.

Deforestation - cutting down trees means that there are no roots in the soil, so water doesn't soak in.

Fertiliser - a chemical or natural substance added to soil or land to increase its fertility.

Week 12

Revision tips!
- **Make yourself some flash cards**
- **Look, cover, write, check!**

Don't forget to REBUGG the question

R – **Read** the question carefully *(What is it asking for?)*
E – **Expand**; take time to think about the question *(Try and picture it in your mind)*
B – **Box** the command term *(make sure you know what the command words mean!)*
U – **Underline** the key geographical terms *(and ensure they are in your answer)*
G – **Gauge** how many marks the question is worth *(a mark a minute!)*
G – **Go for it!**

History

Week 1

What were the main causes of the First World War?

Important Key Words:

Militarism: Building up armed forces, getting ready for war.

Alliances: Agreements or promises to defend and help another country.

Imperialism: Trying to build up an Empire by bring other countries

Nationalism: Having pride in your country, willing to defend it.

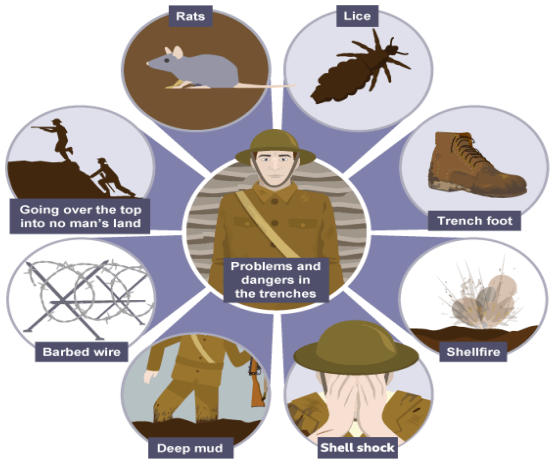
Week 2

What happened in Sarajevo?

In 1914, a group was formed called the Black Hand. The Black Hand was a group of Serbians who wanted Austria-Hungary to leave Bosnia and planned to assassinate the heir to the Austrian throne, Archduke Franz Ferdinand, the nephew of Austria-Hungary's emperor Franz Joseph.
On 28 June, Ferdinand was visiting Sarajevo in Bosnia. The Black Hand's first attempt at assassination failed when their bomb exploded and missed the car he was travelling in.
When Ferdinand ordered his car to take him to visit the injured in hospital, it drove back past one of the assassins, Gavrilo Princip. He fired two bullets, killing both Franz Ferdinand and his wife, Sophie.

Week 3

What was the fighting like in the Trenches?



Week 4

What new technologies were used in the First World War?
Machine Guns
Machine guns could shoot up to 600 bullets per minute. They caused many deaths as soldiers tried to cross no man's land towards enemy trenches.
Gas
Different gases were used as weapons. **Mustard gas** caused painful blisters and burns, killing 4,000 British soldiers. **Chlorine gas** made it hard to breathe and caused over 150,000 injuries.
Planes
Planes were used for spying and gathering information about the enemy.

Week 5

Why was the Battle of the Somme so significant?
The British army started an offensive in the trenches near the river Somme.
For seven days, the British fired 3 million shells at the German trenches, aiming to destroy their defences.
On 1 July 1916, British soldiers were ordered to walk across no man's land to capture the German trenches as their own.
Their plan had failed. The German soldiers had taken shelter in underground bunkers made of concrete, protecting themselves from the shellfire. By the end of the first day of the battle, 19,240 British soldiers had been killed, and 38,230 were injured. It was the deadliest day in the history of the British army.

Week 6

What was the role of women in the First World War?
During World War One, women stepped into a range of roles. Men had signed up in huge numbers to go and fight on the front line, leaving jobs behind that needed to be filled. Stepping in and doing this work helped to change the perception as to what women were capable of and proved they were capable of carrying out many of the same jobs as men. Many working class women took up jobs in factories, working as munitionettes producing weapons. Middle class women were more likely to take up administrative roles with the providing support to the armed forces, such as the Women's Army Auxiliary Corps.

History

Week 7

Why was this known as the First WORLD war?

The war involved people from **all over the world**. Great Britain, Germany, Russia and Austria-Hungary all ruled empires. Their colonies sent supplies, food and soldiers to help in the war effort.
Britain's colonies sent over two and a half million men to fight for Britain during the war.
India sent the most soldiers. At that time, India included both **Pakistan** and **Bangladesh**.
Colonies as far away as **Canada, Australia, New Zealand, South Africa** and **Rhodesia** (which is now **Zimbabwe**) also sent thousands of soldiers.
That meant that Britain had soldiers from **five different continents**: Europe, North America, Australasia, Asia and Africa.

Week 8

How did medicine develop in the trenches?

Soldiers not only took **injuries** in battle. They also suffered from **illnesses** and **diseases** caused by the dreadful conditions in the trenches.
The **Royal Army Medical Corps (RAMC)** was set up to care for British troops.
X-ray technology helped surgeons to detect where a bullet had penetrated. Blood was first stored successfully during World War One.
Doctors could now give **blood transfusions** to soldiers. Before, soldiers with burns, tissue damage and contagious diseases would have usually died.
Trench fever was caused by body lice
It made soldiers suffer from fever, headaches, aching muscles and skin sores. It took around twelve weeks to recover.

Week 9

How did the First World War end?

World War One ended at 11am on 11 November, 1918.
At the start of **1918**, Germany was in a strong position. Russia had already left the year before which made Germany even stronger.
A few events turned things around:
Britain and France counterattacked after Germany's *Michael Offensive* in March 1918.
The German Navy was on strike.
In April 1917 the United States joined the war against Germany.
Germany and her allies realised it was no longer possible to win the war.
The leaders of the German army told the government to stop. **Kaiser Wilhelm**, Germany's ruler, stepped down on **9 November 1918**.

Week 10

What was decided by the Treaty of Versailles?

Germany was shocked by it because:
They had to accept total blame for starting the war.
They could not join the new **League of Nations**, where countries worked together for peace.
Some places Germany used to own, like **Alsace-Lorraine**, were taken from them.
They were banned from having an army of more than **100,000 men** and from having any **submarines** or an **air force**.
People in Germany were angry. The country had to pay **132 billion gold marks** (their currency before the Euro) to repair the damages of war.

Week 11

What are primary sources?

Primary sources give you direct access to the subject that you're researching or learning about. They contain raw information. They can provide you with a first-hand account of an event or time-period, represent original thinking and give you new information. They're usually the centre of a piece of research.
Examples of primary sources include:
diaries
biographies and autobiographies
interviews
speeches and oral histories
government data

Week 12

What are secondary sources?

Secondary sources provide second-hand information and often offer explanations for primary sources. They were made after the event.
Examples of secondary sources include:
textbooks
dictionaries and encyclopaedias
biographies
Films or songs made about the event after it happened
A documentary about the history of an event or a person

Maths

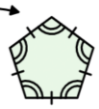
Week 1

polygons

learn by heart

Polygon: *a closed shape with straight sides.*

Regular Polygon: *all angles & all sides are equal*



Interior angles: *the angles at the corners of a polygon.*

Concave Polygon: *a polygon containing a reflex angle*

Convex Polygon: *a polygon where all angles are less than 180°*

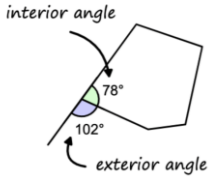
Shape Name	Sides
Quadrilateral	4
Pentagon	5
Hexagon	6
Heptagon	7
Octagon	8
Nonagon	9
Decagon	10

angles in polygons : exterior angles

learn by heart

Exterior Angle + Interior Angle = 180°

Exterior angles in a convex polygon: *sum to 360°*

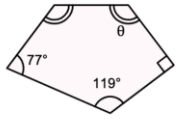


Sum of the interior angles in a polygon: $(n - 2) \times 180$ where n is the number of sides.

Regular: all sides equal and all angles equal.

examples

Work out the size of angle θ



Angles in a pentagon add up to:
(5 - 2) × 180 = 540°

540 - 90 - 77 - 119 = 254°
254 ÷ 2 = 127°

The diagram shows a regular octagon.
Work out the size of angle θ

Angle sum = 6 × 180 = 1080°
1080 ÷ 8 = 135°

Week 2

probability: equally likely outcomes

learn by heart

Probability: **the chance of an event occuring.**
We can describe probabilities in words:
Impossible: will never happen
Unlikely: will happen less than half the time
Even chance: as likely to happen as not
Likely: will happen more than half the time
Certain: will definitely happen

More accurately, we can describe probabilities using fractions, decimals or percentages. As a fraction, the probability of an event is:

$$\frac{\text{number of successful outcomes}}{\text{total number of equally likely outcomes}}$$

A list of **exhaustive outcomes** includes all possible outcomes. For example, if you pick a bead from a bag that contains ONLY green and blue beads, then 'picking a green' and 'picking a blue' is an exhaustive list - it includes **all** the things that could happen.

If a set of outcomes are all mutually exclusive and the list is exhaustive, then the probabilities of these events add up to 1, because it is CERTAIN that exactly one of them will happen.

If P(A) is the probability of A happening, then the probability of A **not** happening is 1 - P(A)

listing equally likely outcomes and sample space diagrams

learn by heart

Equally likley outcomes all have the same chance of happening. Just because there are 2 outcomes, doesn't mean the chance of each one is $\frac{1}{2}$ - the two outcomes have to have the same chance in order for that to be the case.

example

A coin is flipped and a die is rolled.
The sample space diagram shows the twelve equally-likely combinations of outcomes.

		outcome from die					
		1	2	3	4	5	6
outcome from coin	Heads	H1	H2	H3	H4	H5	H6
	Tails	T1	T2	T3	T4	T5	T6

Sample space diagrams are a way of listing all the equally likely outcomes, so we can see if there are any repeated outcomes, which would make the chance of that outcome more likely.

Week 3

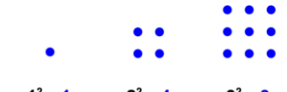
Experimental Probability or Relative Frequency : is the probability in practice, *estimated* by conducting an experiment with a number of trials and calculating

$$\frac{\text{number of OBSERVED successful outcomes}}{\text{total number of trials}}$$

powers

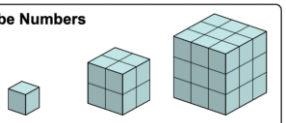
learn by heart

Square Numbers



$1^2 = 1$ 1×1
$2^2 = 4$ 2×2
$3^2 = 9$ 3×3

Cube Numbers



$1^3 = 1$ $1 \times 1 \times 1$
$2^3 = 8$ $2 \times 2 \times 2$
$3^3 = 27$ $3 \times 3 \times 3$

Higher Powers

2^5 is 'two to the power five'

$2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$

The index tells you how many times the number is multiplied by itself.

$10^4 = 10 \times 10 \times 10 \times 10 = 10{,}000$

roots

learn by heart

Square Roots ($\sqrt{\ }$)

The **square root** of a number is a value that, when multiplied by itself, gives the number.

eg. What is $\sqrt{16}$?

$4 \times 4 = 16$ so $\sqrt{16} = 4$

Cube Roots ($\sqrt[3]{\ }$)

The **cube root** of a number is a value that, when cubed, gives the number.

eg. What is $\sqrt[3]{27}$?

$3 \times 3 \times 3 = 27$ so $\sqrt[3]{27} = 3$

Maths

Week 4

laws of indices: multiplication

learn by heart

The **index** of a power is the small number.
Indices is the plural of index.

3^4 → the **base** is 3 and the **index** is 4
$3^2 \times 3^5$ → the **indices** are 2 and 5

To **multiply** powers of the same number, **add the indices.**

$7^2 \times 7^4 = (7 \times 7) \times (7 \times 7 \times 7 \times 7)$
$= 7^{2+4}$
$= 7^6$

The **total** number of times 7 is multiplied by itself is 6.

This can be found by **adding the indices** 2 and 4.

$9^4 \times 9 = 9^4 \times 9^1$
$= 9^{4+1}$
$= 9^5$

A number without a power is the same as the number to the power of 1

laws of indices: the power law

learn by heart

If a power is raised to another power, **multiply the indices**.

$(5^2)^3 = 5^2 \times 5^2 \times 5^2$
$= 5^{2\times3}$
$= 5^6$

$(y^6)^2 = y^6 \times y^6$
$= y^{6\times2}$
$= y^{12}$

Remember, the base number stays the same.

laws of indices: division

learn by heart

To **divide** powers of the same number, **subtract the indices.**

$\frac{6^7}{6^3} = \frac{6\times6\times6\times6\times\cancel{6}\times\cancel{6}\times\cancel{6}}{\cancel{6}\times\cancel{6}\times\cancel{6}}$
$= 6^{7-3}$
$= 6^4$

Cancel matching factors from the numerator and denominator.

$m^5 \div m^4 = m^{5-4}$
$= m^1$
$= m$

m^1 simplifies to m

Week 5

negative indices

learn by heart

Descending powers of 3

3^4	3^3	3^2	3^1	3^0	3^{-1}	3^{-2}	3^{-3}	3^{-4}
81	27	9	3	1	$\frac{1}{3}$	$\frac{1}{9}$	$\frac{1}{27}$	$\frac{1}{81}$
	÷3	÷3	÷3	÷3	÷3	÷3	÷3	÷3

Any number to the power of 0 is equal to 1.

A power with a negative index is equal to 'one over the power with a positive index'.

Evaluate 5^{-3} as a fraction.
$5^{-3} = \frac{1}{5^3} = \frac{1}{125}$

Evaluate 9^{-1} as a fraction.
$9^{-1} = \frac{1}{9^1} = \frac{1}{9}$

Evaluate 7^0
$7^0 = 1$
Any number to the power of 0 is equal to 1.

Evaluate 2^{-2} as a decimal.
$2^{-2} = \frac{1}{2^2} = \frac{1}{4} = 0.25$
Work out the fraction, then convert to a decimal.

fractional indices

learn by heart

If a power has a **fractional index**, you will need to work out a root of the base number.

An index of $\frac{1}{2}$ is the equivalent of square rooting, so $9^{\frac{1}{2}} = \sqrt{9} = 3$

Why?
$a^{\frac{1}{2}} \times a^{\frac{1}{2}} = a^1 = a$
What number multiplied by itself equals a? The square root of a!

An index of $\frac{1}{n}$ is the equivalent of taking the nth root: $a^{\frac{1}{n}} = \sqrt[n]{a}$

An index of $\frac{x}{n}$ is the equivalent of taking the nth root and then raising it to the xth power: $a^{\frac{x}{n}} = (\sqrt[n]{a})^x$ (also equal to $\sqrt[n]{a^x}$)

Week 6

co-ordinates

learn by heart

Co-ordinates are written (x, y)

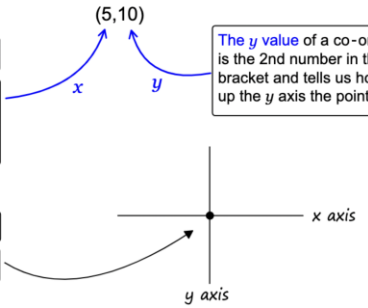
The x value of a co-ordinate is the first number in the bracket and tells us how far along the x axis the point is.

The y value of a co-ordinate is the 2nd number in the bracket and tells us how far up the y axis the point is.

The x axis is horizontal

The y axis is vertical

The **origin** is the point (0, 0)



learn by heart

Sets of co-ordinates that follow a rule or pattern can form a straight line, called a linear graph.

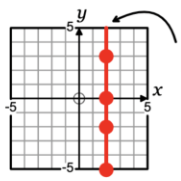
$y = a$ — If the rule is 'y = a number' the co-ordinates will form a straight horizontal line passing through the y axis.

$x = a$ — If the rule is 'x = a number' the co-ordinates will form a straight vertical line passing through the x axis.

example

Here are some co-ordinates with an x-value of 2:
(2,3), (2,0), (2,-2), (2,-5).

If we plot all the co-ordinates with an x value of 2, we get a straight line....



The line x = 2 passes through 2 on the x axis.

Note it is parallel to the y axis!

linear graphs 2

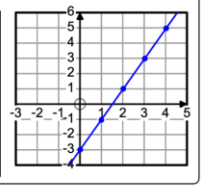
learn by heart

A linear graph is created when we plot a set of co-ordinates that follow a rule or function. You can also think of the y values as following an arithmetic (aka linear) sequence. The co-ordinates form a straight line.

example

Plot the graph of $y = 2x - 3$

x	y
0	-3
1	-1
2	1
3	3
4	5



this is also the sequence with nth term $2n - 3$

Maths

Week 7

gradient △ Review

recall

Gradient is a measure of the **steepness** of a line.

Gradient of a line = $\frac{\text{Change in } y \text{ values}}{\text{Change in } x \text{ values}}$

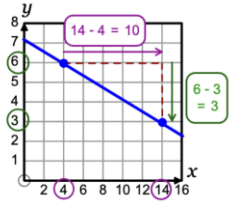
Lines that slope **upwards** *(from left to right)* have a **positive gradient**. ↗

Lines that slope **downwards** *(from left to right)* have a **negative gradient**. ↘

gradient (2) : lines on co-ordinate grids

example

To find the gradient of the line on the right:
1. Choose two points on the line that sit exactly on the grid lines.
2. Draw a right angled triangle between them
3. Work out the horizontal and vertical distance (Pay attention to the scales!)
4. Divide and decide if negative: $-\frac{3}{10}$

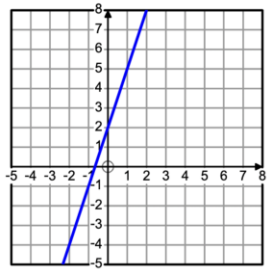


linear graphs (1) : y = mx + c with integer gradients

learn by heart

The equation of a linear graph is $y = mx + c$, where m is the gradient and c is the y-intercept.

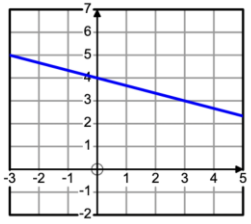
The gradient is 3, the y-intercept is 2, the equation is $y = 3x + 2$.



linear graphs (2) : fractional gradients

learn by heart

Fractional gradients can be written in two ways.
For example, if the gradient is $\frac{3}{4}$, the equation of the line could be written $y = \frac{3}{4}x$ or $y = \frac{3x}{4}$



The gradient is $-\frac{1}{3}$, the y-intercept is 4, the equation can be written $y = -\frac{x}{3} + 4$ or $y = -\frac{1}{3}x + 4$ or $y = 4 - \frac{1}{3}x$

Week 8

plotting quadratic graphs

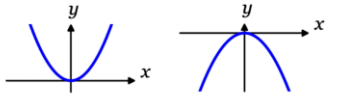
learn by heart

A function is a rule connecting a set of inputs and outputs.

A linear function has a simple rule, such as $y = 3x + 1$
The variable x is not squared or raised to any higher power.

A quadratic function is a rule containing x^2, such as $y = x^2 + 2x - 1$
The variable x is squared in at least one term. There are no higher powers.

The graph of a quadratic function is a symmetrical curve.
If the coefficient of x^2 is positive, it opens upwards. If the coefficient of x^2 is negative, it opens downwards.



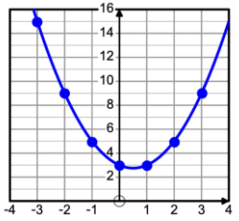
plotting complex quadratic functions (with a calculator)

example

Plot the graph of $y = x^2 - x + 3$

x	-3	-2	-1	0	1	2	3
y	15	9	5	3	3	5	9

When using your calculator, negative values should be in brackets. Type in $(-3)^2 - (-3) + 3$ and watch out for your calculator having different keys for a negative sign and subtraction.



Week 9

What fraction is shaded in each diagram?

a) $\frac{6}{10}$ or $\frac{3}{5}$

b) $\frac{5}{8}$

c) $\frac{2}{10}$ or $\frac{1}{5}$

d) $\frac{15}{15}$ or 1

Fraction	Decimal	Percentage
$\frac{1}{10}$	0.1	10%
$\frac{1}{5}$	0.2	20%
$\frac{1}{4}$	0.25	25%
$\frac{3}{4}$	0.75	75%
$\frac{1}{2}$	0.5	50%
$\frac{1}{3}$	$0.\dot{3}$	$33.\dot{3}\%$

fdp conversions : fractions & decimals

recall

To convert a fraction to a decimal....

If the denominator is 10,100,1000... use place value, e.g. $\frac{3}{10} = 0.3$

→ If the denominator is a factor of 10, 100, 1000.. use equivalent fractions $\frac{3}{5} = \frac{6}{10} = 0.6$

→ Otherwise, use short division: $\frac{1}{8} = 8\overline{)1.0000}$ (0.125...)

tens	units	tenths	hundredths	thousandths	ten thousandths
10	1	0.1	0.01	0.001	0.0001
10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$	$\frac{1}{10,000}$

Maths

Week 10

fdp conversions : fractions & percentages

recall

Equivalent Fractions: have the same value but different denominators. For example, $\frac{2}{3} = \frac{4}{6}$ (× 2)

A Percentage is a fraction out of 100. For example, $\frac{3}{20} = \frac{15}{100} = 15\%$

5 × 20 = 100 | 4 × 25 = 100

examples

Convert $\frac{4}{50}$ to a percentage.

$\frac{4}{50} = \frac{8}{100} = 8\%$

Convert 60% to a fraction.

$60\% = \frac{60}{100} = \frac{6}{10} = \frac{2}{5}$

simplifying a fraction first can sometimes help

Convert $\frac{4}{20}$ to a percentage

$\frac{4}{20} = \frac{2}{10} = \frac{20}{100} = 20\%$

fdp conversions 2: mixed fractions, decimals & percentages △

examples

Convert $\frac{4}{5}$ to decimal.

$\frac{4}{5} = \frac{8}{10} = \mathbf{0.8}$

Convert $1\frac{7}{20}$ to a percentage.

$1\frac{7}{20} = 1\frac{35}{100}$ or $\frac{135}{100} = \mathbf{135\%}$

1 represents 100%

Convert 1.28 to a mixed number in simplest form.

$1.28 = 1\frac{28}{100} = 1\frac{14}{50} = \mathbf{1\frac{7}{25}}$

fractions, decimals and percentages

examples

Convert 18% to a decimal.

$\frac{18}{100} = 0.18$

Convert 0.45 to a percentage.

$0.45 = \frac{45}{100} = 45\%$

Week 11

fdp conversions 1 : percentages & decimals △ Review

learn by heart

A percentage is a fraction out of 100, so 23% is $\frac{23}{100}$ as a fraction and 0.23 as a decimal.

To convert a decimal to a percentage, we can multiply it by 100.

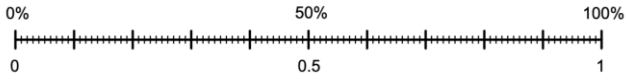
0.1% = 0.001 | 1% = 0.01 | 10% = 0.1 | 100% = 1

equivalent percentages and decimals

learn by heart

All percentages can be written as an equivalent decimal number.

The decimal equivalent can be very useful when calculating with percentages.



examples

Write 45% as a decimal

45% = 45 ÷ 100 → 0.45

Write 0.13 as a percentage

0.13 × 100 = 13 → 13%

Write 8% as a decimal

8% = 8 ÷ 100 → 0.08

Write 0.6 as a percentage

0.6 × 100 = 60 → 60%

Write 125% as a decimal

125% = 125 ÷ 100 → 1.25

Write 6.5% as a decimal

6.5% = 6.5 ÷ 100 → 0.065

Week 12

percentage of an amount: using decimal multipliers

learn by heart

A percentage of an amount can be worked out by multiplying:

the percentage as a **decimal** × the amount = the percentage of the amount

examples

41% of 88

0.41 × 88 = 36.08

8% of 32

0.08 × 32 = 2.56

90% of £75

0.9 × 75 = 67.5 £67.50

Write the answer correctly in pounds and pence.

percentage increases

learn by heart

For a **percentage increase** of **12%**, the **decimal multiplier** can be worked out as follows:

100%	+	12%	=	112%	→	**1.12**
original amount		increase		percentage wanted		**decimal multiplier**

Increasing an amount by 12% is equivalent to finding 112% of the amount.

examples

Increase 246 by 5%

100% + 5% = 105% → 1.05

Original amount	Multiplier	New amount
246	× 1.05	

246 × 1.05 = 258.3

Increase £75 by 30%

100% + 30% = 130% → 1.3

Original amount	Multiplier	New amount
75	× 1.3	

75 × 1.3 = 97.5 £97.50

Music

Weeks 1 & 2

The Beatles were an English rock band formed in Liverpool in 1960.

Beatlemania was the intense popularity of the English rock band The Beatles from 1963 to 1966.

Notable songs include *She Loves You* (1963), *I Want To Hold Your Hand* (1964), *Yellow Submarine* (1968), and *Let It Be* (1970).

Weeks 3 & 4

"From Me to You," a song by The Beatles, features a **melody** that is "more chromatic than usual" and has a rhythm characterized by a "jumpy" feel in the verses.

Chromatic: a chromatic scale includes all twelve notes within an octave.

Chorus: a part of a song which is repeated after each verse.

Refrain: a repeated line or number of lines

Chord Progression: a sequence of chords played one after another

Weeks 5 & 6

Britpop: British pop music of the mid 1990s that was typically influenced by the Beatles and other British groups of the 1960s.

Key bands of the Britpop movement include Oasis, Blue, Suede and Pulp.

Characteristics of Britpop:

- Simple chord progressions
- Catchy melodies
- Guitar-driven
- Lyrics referencing British culture
- Vocals often with regional accents

Weeks 7 & 8

Verse: a verse is a repeated section of a song that typically features a new set of lyrics, while maintaining the same or a similar musical structure and melody as other verses.

Bridge: a contrasting section within a song, usually occurring after the second chorus, that introduces new musical and lyrical ideas

Melody: A melody is made up of a mixture of high and low pitch sounds played one after the other.

Broken Chord Voicing: when the notes of a chord are played individually in sequence, rather than simultaneously, creating a dynamic and rhythmic texture, often called an arpeggio.

Weeks 9 & 10

Assessment Fortnight

Demonstrate:

- Writing song lyrics – think about your melody and the structure of a song
- Focus on Britpop as your influence

Weeks 11 & 12

Improvement Week

- Check your lyrics – Britpop does not need to be overly complex

- Check your understanding of the difference between lyrics and melody:
  - Lyrics: the words in the song
  - Melody: the tune of the song.

PE

Week 1 & 2

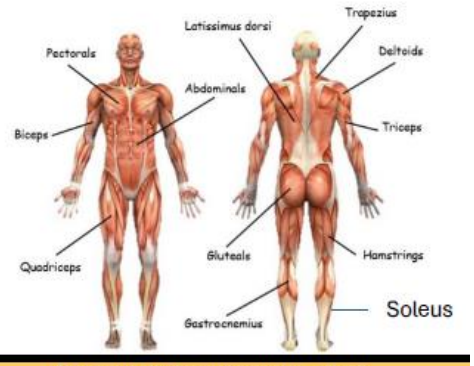
Major muscle groups

Upper Body	Lower Body
Biceps	Hamstrings
Triceps	Quadriceps
Abdominals	Gluteals
Pectorals	Gastrocnemius
Latissimus Dorsi	Soleus
Deltoids	
Trapezius	

Verbal Communication
This is how we send information to someone else through the words we speak aloud.

Week 3 & 4

Muscle location



Non-verbal communication
Is body language, gestures, tone of voice, facial expressions, body posture, used for conveying information.

Week 5 & 6

There are 3 types of muscle,
1: **Smooth muscle** – found in internal organs and blood vessels (involuntary)
2: **Cardiac muscle** – Found only in the heart (involuntary)
3: **Skeletal muscle** – Attached to the skeleton (voluntary)

Involuntary -not under our conscious control meaning we can't make them contract when we want to.
Voluntary – under our conscious control so we can control when we move these muscles.

Active Listening
Listen attentively to others, understand what they're saying, respond and reflect on what's being said, and retain the information.

Week 7 & 8

Muscle functions

Deltoid	Lifting the arm at the shoulder (the deltoid muscle has different parts which flex, extend and abduct the shoulder joint)
Trapezius	Shoulder horizontal extension (moving the arms backwards at shoulder level)
Pectorals	Adduction of the shoulder (moving the arm towards the body); Shoulder horizontal flexion (moving the arms forwards in front of the body)
Triceps	Extension of the elbow (straightening the arm)
Biceps	Flexion of the elbow (bending the arm)

Conflict Resolution
The informal or formal process that two or more parties use to find a peaceful solution to their dispute.

Week 9 & 10

Latissimus dorsi	Adduction of the shoulder (moving the arm down towards the mid-line of the body)
Gluteals	Hip extension (moving the femur backwards)
Quadriceps	Extension of the knee (straightening the leg)
Hamstrings	Flexion of the knee (bending the leg)
Gastrocnemius	Plantar flexion of the ankle (pointing the toes downwards)

Asking Questions
Questions are important in attaining knowledge, problem solving and making connections. Asking them is essential. It helps us identify gaps In your understanding.

Week 11 & 12

Antagonistic muscle pairs

One muscle contracts the other muscle relaxes and lengthens.

Joint	Antagonistic pair	Movements produced
Elbow	Biceps; triceps	Flexion; extension
Knee	Hamstrings; quadriceps	Flexion; extension
Shoulder	Latissimus dorsi; deltoid	Adduction; abduction

Providing and receiving feedback
Feedback tells the performers how well they performed. It can focus on knowledge of results, performance and can intrinsic or extrinsic, positive, or negative.

PSHE

Weeks 1 & 2

Tips for promoting positive image

- **Focus on What Your Body Can Do** – Appreciate your body for its strength, health, and abilities, rather than just how it looks.
- **Avoid Comparing Yourself to Others** – Embrace your individuality.
- **Surround Yourself with Positivity** – Spend time with people who lift you up and avoid those who make you feel bad about yourself.
- **Take Care of Yourself** – Eat nutritious foods, exercise, and get enough sleep. Taking care of your body helps you feel good inside and out.
- **Limit Social Media** – Social media can create unrealistic body standards. Take breaks and remember that not everything online is real or healthy.

Weeks 3 & 4

Why should we be mindful of online influencers?

- **Not everything is real** – Influencers might show only the best parts of their lives, which can make you feel like you're not enough or create unrealistic expectations.
- **They can impact your choices** – Influencers might promote products or lifestyles that aren't always healthy or good for you.
- **They influence self-image** – Constantly comparing yourself to influencers can affect how you feel about your own appearance or life.
- **Privacy and safety** – Some influencers might share too much personal information, and it's important to remember the risks of sharing too much online.

Weeks 5 & 6

Managing our emotions with a healthy lifestyle

- **Exercise boosts mood** – Physical activity releases chemicals like endorphins that make you feel happier and less stressed.
- **Healthy eating** – Eating nutritious foods helps keep your energy stable and your mood balanced, reducing feelings of irritability or mood swings.
- **Sleep helps you feel better** – Getting enough sleep helps you think clearly and feel more emotionally balanced throughout the day.
- **Reduces stress** – Healthy habits like yoga, walking, or deep breathing can help lower stress, making it easier to manage tough emotions.

Weeks 7 & 8

What are different patterns of work?

- **Full-time employment** – A job where you work the full number of hours (usually 35-40 hours a week) and often receive benefits like paid time off.
- **Part-time employment** – A job where you work fewer hours than a full-time job, usually less than 35 hours a week.
- **Self-employment** – When you work for yourself instead of an employer, running your own business or working as a freelancer.
- **Temporary employment or a fixed-term contract** – A job that lasts for a specific period of time, such as a few months or a year, and ends when the contract is up.

Weeks 9 & 10

What are the Protected Characteristics?
The **protected characteristics in the UK** under the Equality Act 2010 are:

- **Age**
- **Disability**
- **Gender reassignment**
- **Marriage and civil partnership**
- **Pregnancy and maternity**
- **Race**
- **Religion or belief**
- **Sex**
- **Sexual orientation**.

Weeks 11 & 12

Why is it important for everyone to be treated with respect in the workplace?

- **It creates a positive environment** – When people are treated kindly, they feel happier and more motivated to do their best work.
- **It builds trust** – Respect helps people trust each other, which leads to better teamwork and cooperation.
- **It prevents problems** – When people are treated unfairly, it can lead to conflicts and stress, which can make the workplace less productive.
- **It promotes fairness** – Treating everyone with respect ensures that no one is left out or mistreated, making the workplace more equal for everyone.

RE

Week 1-2

Life of the Buddha

Siddhartha Gautama: The given name of the Buddha.

The Four Signs of Being: Old age, disease, death and a Holy Man

Ascetic: Living a deliberately harsh life to overcome suffering.

Enlightenment: A state of being free from suffering.

Sangha: Buddhist monastic community.

Week 3-4

Three Universal Truths and the Four Noble Truths

Annica: Impermanence, nothing lasts forever.

Anatta: No-self, you have no fixed identity.

Dukkha: Life involves suffering.

Craving: Wanting something you don't have.

Attachment: Having an emotional connection to someone or something.

Week 5-6

Noble Eightfold Path

Wisdom: Having experience, knowledge and good judgement

Morality: Choosing to do the right thing.

Mental Training: Practicing awareness, meditation and mindfulness.

Bikkhu: A Buddhist monk. Someone who has devoted their life to their religion.

Week 7-8

Karma and Enlightenment

Karma: The universal law of moral causation.

Samsara: Buddhist belief in rebirth.

Nirvana/Nibbana: The state of enlightenment that is free from suffering.

Arahat: A monk who achieves Nirvana.

Buddha Nature: The capacity for everyone to achieve Nirvana.

Week 9-10

Meditation and Mindfulness

Mindfulness: Deep awareness of your thoughts, feelings and those of others.

Meditation: Activities that allow for states of mindfulness.

Samatha: Breathing exercises designed to help start meditation.

Vipassana: Traditional sitting meditation.

Chanting and Mantras: Repeated recitation of the Buddha's teachings.

Week 11-12

Zen Gardens

Zen: A denomination of Buddhism that focuses on achieving *Zazen*.

Zazen: A state of peace and contentment achieved by focusing on the moment.

Tranquility: A calm and peaceful atmosphere.

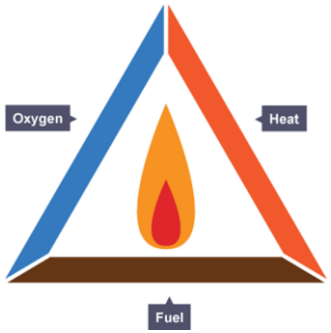
Contemplation: Looking thoughtfully at something for a long time.

Bonsai: The art of growing ornamental and artificially dwarfed plants, trees and shrubs.

Science

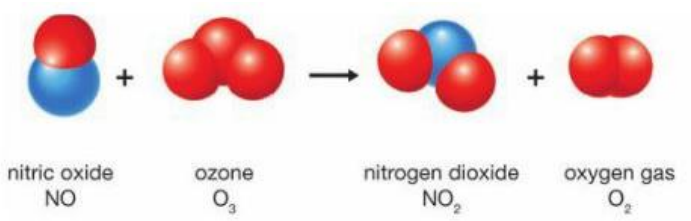
Week 1 – Earth and its resources

- **Combustion** (burning) is a chemical reaction between a **fuel and oxygen**.
- For a fuel to **combust**, three things are required: **Oxygen, a fuel, heat** or a source of ignition.
- **Hydrocarbons** are compounds made up of **only hydrogen and carbon**.
- **Complete** combustion of a hydrocarbon produces only **carbon dioxide and water**.



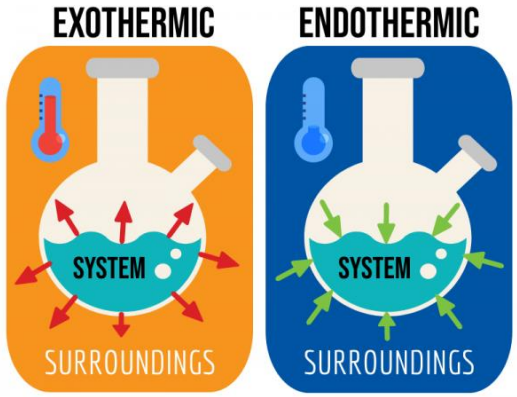
- **Incomplete** combustion can form **carbon monoxide and carbon** (soot).
- Carbon monoxide is a **colourless, odourless gas** which is **toxic** since it prevents **red blood cells from absorbing oxygen.**
- **Oxidation** is the reaction of a substance with **oxygen**. When metals are oxidised they form **metal oxides**.

In a chemical reaction **no atoms are created or destroyed**, they are only rearranged. This means the **total mass of the products equals the total mass of the reactants.**



Week 2 – Earth and its resources

- **Fuels** are stores of **chemical potential energy.**
- When burnt they **transfer energy by heating to a thermal store.**
- The most **efficient** fuel will produce the **greatest temperature increase per gram of fuel burnt.**
- **Exothermic** reactions **transfer heat** energy **to their surroundings**, causing a **temperature rise.**
- **Endothermic** reactions transfer (absorb) heat energy **from their surroundings**, causing a **temperature decrease**.
- **Temperature** is a measure of the **average kinetic energy** of particles.
- Temperature is measured using a **thermometer**, its units are **degrees Celsius, °c.**



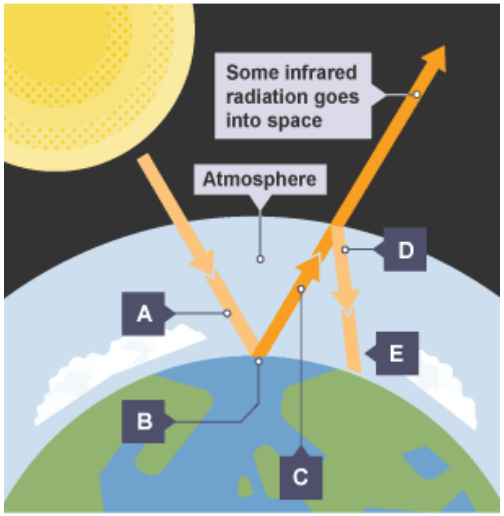
- **Independent** variables are ones that are being **changed.**
- **Dependent** variables are ones that are **measured**.
- **Controlled** variables are ones that are maintained to **avoid affecting the outcome of an investigation**.

Science

Week 3 – Earth and its resources

- **Removing air, fuel or heat** from a fire will **extinguish** it.
- **Electrical** fires should **not** be extinguished using **water**.
- **Oil fires** (eg chip pan) should be put out using a **fire blanket.**
- The atmosphere is composed of **78% nitrogen, 21% oxygen**, 0.9% argon and 0.1% other gases including carbon dioxide.
- **Greenhouse gases** such as carbon dioxide **contribute to climate change**.
- The **Greenhouse effect** is the **warming** of **Earth's atmosphere** due to greenhouse gases **absorbing infrared radiation.**

- **Climate change** is a **long term** change to global **weather patterns.**
- **Acid rain** is rain which has a **lower pH** than normal; lower **than approx. 5.5**.
- The effects of acid rain include **chemical weathering of limestone and marble, acidification of soils and acidification of waterways.**



A Electromagnetic radiation at most wavelengths passes through the Earth's atmosphere

B The Earth absorbs most of the radiation and warms up

C The Earth radiates energy as infrared radiation

D Some of the infrared radiation is absorbed by greenhouse gases in the atmosphere

E The lower atmosphere warms up

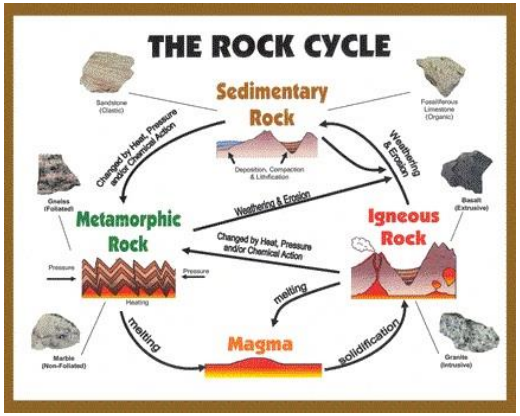
Week 4 – Earth and its resources

Tectonic plates make up the **Earth's crust**.

Fossil fuels are formed over hundreds of millions of years by the **anaerobic decomposition** of organisms.
Rocks are mixtures of different crystalline chemical compounds known as **minerals**.

Igneous rocks form when **molten rock solidifies**.

Metamorphic rocks are formed when other rocks are **heated and put under pressure**, without melting.



- **Weathering** is the breakdown of rocks into **smaller pieces**.
- **Transportation** is the **movement** of these pieces by **rivers and streams**.
- Formation of **sedimentary** rocks involves **deposition, compaction and cementation**.
- **Intrusive** igneous rocks are formed when **magma cools slowly underground**, forming **large crystals**.
- **Extrusive** igneous rocks are formed when lava **cools quickly overground**, forming **small crystals**.
- **Porous** rocks have **spaces** within them, reducing their densities.
- **Ores** are rocks made up of a **mixture** of compounds, from which useful **metals can be extracted**.
- Greenhouse gases absorb infrared radiation form the Earth's surface. They then release this energy, further warming the earth and atmosphere.
- Climate change is the result of an accelerated greenhouse effect.
- Carbon dioxide, methane and water are greenhouse gases.

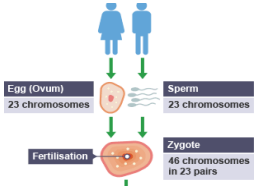
Science

Week 5 - Plants and respiration

- **Genus** – a small group of several species
- **Species** – a group of organisms able to interbreed and produce **fertile offspring**
- **Fungi** – made up of complex eukaryotic cells like animals and plants.
- **Protoctists** - A single-celled organism with characteristics of animals, plants or both.
- **Prokaryotes** - Microscopic single-celled organisms without a nucleus
- **Classification** - The organisation of living things into groups according to their similarities and characteristics.
- **Binomial** – Latin naming system. Each name has two parts, the genus and the species.

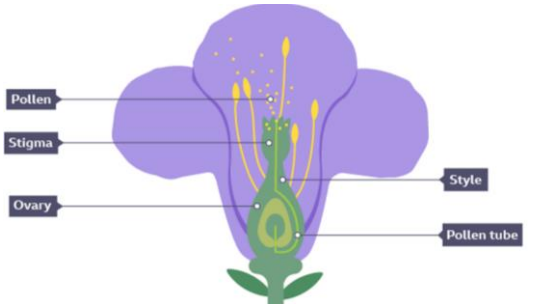
- **Biodiversity** - A measure of the range of living organisms within a habitat
- **Seed banks** – example of a gene bank
- **Captive breeding** – undertaken by scientists to breed more of these organisms to release into the wild.
- **Gene banks** - used to preserve genetic material for use in the future
- **Conservation** - The process that preserves and protects organisms and their habitats
- **Extinction** - an organism that is no longer in existence.

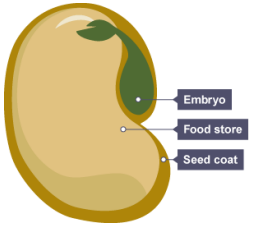
- **Sexual reproduction** – a male and female gamete join together.
- **Asexual reproduction** - does not involve sex cells
- **Runners** - Asexual reproduction, involves stem that grows horizontally over the soil surface and puts down roots to form new plants eg strawberry



Week 6 – Plants and respiration

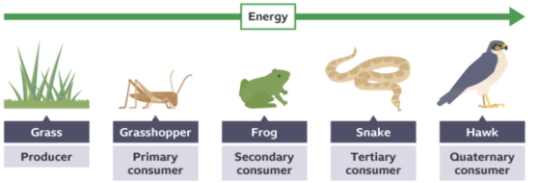
- **Fertilisation** - The joining of male and female **gametes** (sperm and ova or eggs).
- **Pollination** - The fertilisation of flowers by the transfer of **pollen** from one to another
- **Pollen** -male gamete in a plant





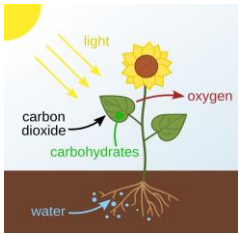
- **Seed** – a tiny parcel containing everything that a new plant needs to start growing
- **Germination** - The process controlled by **enzymes** in which the seed begins to develop into a new young plant.
- **Seed Dispersal** – transport of seeds from the plant to another area in order to grow

- **Interdependence** – organisms depending on each other for survival
- **Food chain** - show the flow of energy from one organism to another
- **Food webs** - A diagram which shows all the interlinked food chains in a habitat
- **Prey** - Animals that are hunted and eaten
- **Producer** - The first organism in a food chain. Usually a green plant or alga which stores energy from sunlight as glucose during photosynthesis.
- **Primary consumer** – eats a producer
- **Secondary consumer**- eats a primary consumer
- **Tertiary consumer** – eats a secondary consumer
- **Populations** - All the members of a single species that live in a habitat



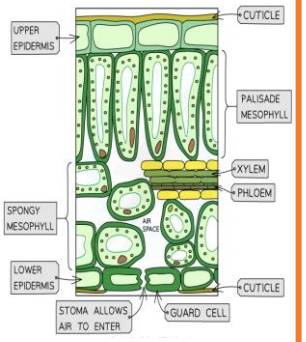
Science

Week 7 - Plants and respiration

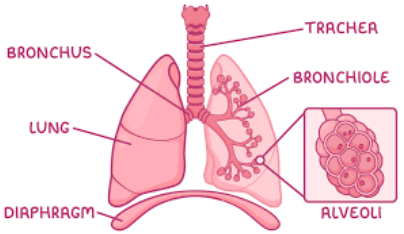


Carbon dioxide + water → glucose + oxygen

- **Photosynthesis** - A chemical reaction that occurs in the chloroplasts of plants in which the energy in light is stored in glucose.
- **Chlorophyll** - Green pigment found within chloroplast that enables the process of photosynthesis to occur.



- **Stomata** - Tiny holes found mainly underneath the leaf to allow gases to diffuse into and out of the leaf.
- **Cuticle** - A waxy later on the outside of plant leaves and stems to reduce water loss.
- **Palisade layer** - adapted to absorb a lot of light. It has lots of chloroplasts.
- **Epidermis** – outermost layer of cells in plant structures, provide protective barrier
- **Guard cells** - Controls the opening and closing of stomata.



- **Diffusion** - the movement of particles from higher to lower concentrations.
- **Breathing** – also called 'ventilation' and is the movement of gases into and out of the lungs
- **Inhalation** -breathing in, **Exhalation** – breathing out
- **Gas exchange** – movement of **oxygen into your blood** and **carbon dioxide out of the blood** and into the lungs
- **Trachea** – also called the windpipe.
- **Bronchus** – The trachea splits into a left and right bronchus (plural: bronchi), each leads to a lung
- **Bronchioles** – Each bronchiole splits again and again into thousands of smaller tubes called bronchioles, taking air deep into the lungs
- **Alveoli** – tiny air sacs found at the end of bronchioles in your lungs
- **Diaphragm** – a dome-shaped, flat sheet of muscle under the lungs

Week 8 - Plants and respiration

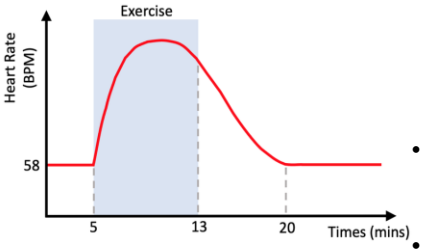
- **Haemoglobin** - a red pigment which binds with the oxygen to carry oxygen to where it is needed for respiration
- **Glucose** – the sugar present in blood

- **Aerobic respiration** – the release of energy from glucose, in the presence of oxygen

Glucose + oxygen → carbon dioxide + water

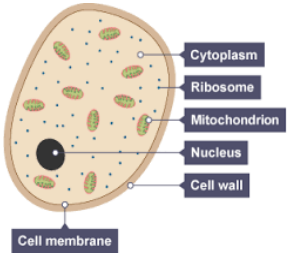
- **Anaerobic respiration** – respiration without the presence of oxygen

Glucose → lactic acid



- **Excessive post-exercise oxygen consumption** - After you finish vigorous exercise your breathing rate and heart rate will stay elevated for a short period (was called oxygen debt)
- **Pulse** - As the heart beats, a pulse can be felt in locations where an artery passes over a solid structure, such as bone.
- **Cramp** - pain and tiredness in muscles, due to lactic acid build up

- **Ethanol** – the alcohol found in beer, wine and other alcoholic drinks.
- **Yeast** – single-celled fungi
- **Fermentation** - Anaerobic respiration which occurs in yeast and bacteria in which glucose is broken down into alcohol (ethanol) and carbon dioxide, releasing energy
- **Yogurt** - A fermented milk product formed by the action of bacteria



- **Combustion** – another name for burning, fuel is burned and reacts with oxygen to release energy.
- **Fuel** – a substance that reacts exothermically with oxygen. The energy contained in the fuel is released when it burns.

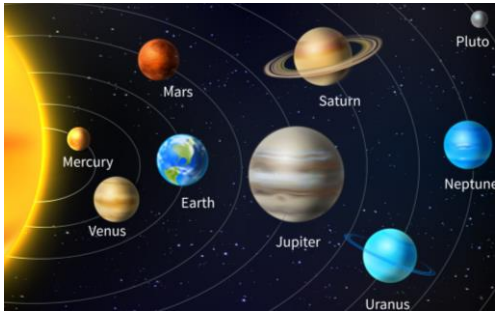
Science

Week 9 - Revision

One of the earliest known astronomers was an Egyptian named Ptolemy.
He described a model of the solar system based on his observations of the sun, moon, stars and planets.

Today we know that the sun is at the centre of the solar system.

List all of the other differences and the similarities between Ptolemy's model and the modern model of the solar system.



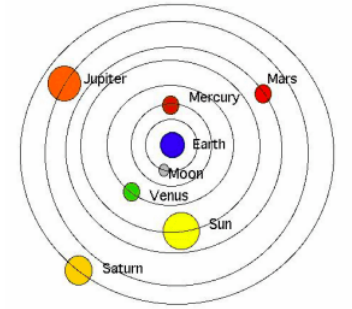
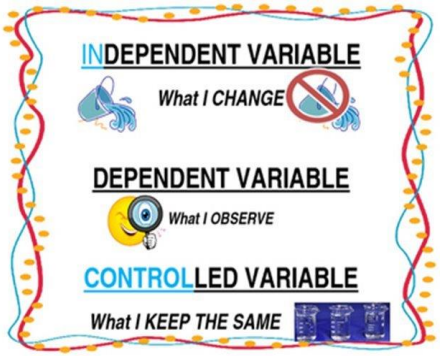


Fig 1. Ptolemy's Model of the Solar System. He proposed the Earth was at the centre of the Solar System.

Body or Object	What it Orbits
Planet	Sun
Moon	Planet
Comet	Sun
Asteroid	Sun
Artificial satellite	Any object or body in solar system

Follow the link or scan the QR code for help!
Our solar system

Week 10 – Assessment week



Steps to success:

- Attempt all questions
- Write out calculations and give units
- Plot data with crosses
- 1 mark per minute
- Plan your 6 mark questions before you write
- Give, give, want when using mathematical formulae
- If it states tick one box, then only tick one box – Guess if you are unsure
- HUG the question (Highlight the command words, underline keywords and glance at the number of marks)
- Keep writing until you see end of questions

Use BBC bitesize to make mind maps and test yourself using the quizzes

BITESIZE

Science

Week 11 – Improvement week

What Went Well?

You've completed your assessment, what next?

1. Review – what were your strengths and weaknesses?
2. Reflect – what could you have done differently in you preparation?
3. Improve – act to address your weaknesses and implement improvements for next time!

Even Better If...

Week 12 – Mission to Mars

Your mission:

1. Investigate the Martian environment
2. Survive the journey to Mars
3. Build a habitable environment
4. Colonise the planet!

Spanish

Week 1 – On my mobile

Actividades en el móvil y la música	
sacar fotos	to take a photo
hablar por skype	to talk on skype
mandar mensajes	to send messages
jugar	to play
leer mensajes	to read messages
descargar aplicaciones	to download apps
chatear con amigos	to chat with friends
compartir vídeos	to share videos
ver películas	to watch films
escuchar música	to listen to music
escuchar de todo	to listen to anything
la música clásica	classical music
un cantante	a singer
una canción	a song

Week 2 – Things I like

Opinions and adjectives	
me gusta	I like
le gusta	he / she likes
nos gusta	we like
preferir	to prefer
prefiero	I prefer
prefiere	he / she prefers
mas ... que	more ... than
divertido	fun
aburrido	boring
emocionante	exciting
guay	cool
educativo	educational
nuevo	new

Week 3 – TV and film

Programas y películas	
un programa de deportes	a sports programme
un documental	a documentary
una comedia	a comedy
una serie	a series
un programa de tele-realidad	a reality TV show
una película de acción	an action film
una película de amor	a romantic film
una película de aventuras	an adventure film
una película de dibujos animados	an animated film
una película de ciencia ficción	a sci-fi film
una película del oeste	a western
una película de terror	a horror film

Week 4 – The advantages of technology

Las ventajas y desventahas	
un ordenador	a computer
las redes sociales	social networks
un móvil inteligente	a smart phone
un videoconsola	a video console
correo electrónico	email
útil	useful
seguro	safe
peligroso	dangerous
caro	expensive
barato	cheap
pesado	annoying
lento	slow
emocionante	exciting
fácil de usar	easy to use
difícil de usar	difficult to use

Week 5 – Question words

Las preguntas	
qué	what
cómo	how
por qué	why
dónde	where
adónde	where to
de dónde	from where
cuándo	when
cuánto/a	how much
cuántos/as	how many
cuál	which
quién	who
a qué hora	at what time
a la una	at one o'clock
a las dos y media	at half past two

Week 6 – Revision – the autumn term

Words you may have forgotten	
el verano pasado	last summer
ir	to go
voy	I go
fui	I went
una playa	a beach
una piscina	a pool
una plaza	a town square
una tienda	a shop
un mercado	a market
un estadio	a stadium
un parque de atracciones	a theme park
me quedé	I stayed
demasiado	too
¡qué guay!	how cool!

Spanish

Week 7 – Revision – the Spring term

Spring Revision	
mi colegio es grande	my school is big
mi insti está en la costa	my school is on the coast
mi cole se llama…	my school is called…
en mi cole (no) hay	in my school there is(n't)
voy al insti en coche	I go to school by car
(no) estudio el teatro	I (don't) study drama
me gustan las ciencias	I love science
odio el inglés	I hate English
pienso que es difícil	I think that it's difficult
durante el recreo como	during break I eat
mi asignatura favorita	my favourite subject
mi profesor de historia	my history teacher
el / la peor / mejor	the worst / best

Week 8 – Independent study

Personalised revision list	
During your revision lessons this week, compile a list of words that you need to revise ahead of the test	

Week 9 – Independent study

Personalised revision list	
During your revision lessons this week, compile a list of words that you need to revise ahead of the test	

Week 10 - Phonics

Revise your phonics
Sound Symbol Correspondence (SSCs)
These sounds never change!

a = c<u>a</u>t e = <u>egg</u> i = f<u>ee</u>t o = h<u>o</u>t u = w<u>oo</u>

ca - <u>ce</u> - <u>ci</u> - co - cu
Stick your tongue out like the English **/th/** for **/ce/** and **/ci/** and also **z**
/que/ = **ke** **/qui/** = **key**

ga - <u>ge</u> -<u>gi</u> - go - gu
Soft **/g/** sound, except for **/ge/** and **/gi/** these are pronounced like a Spanish **/j/** in the back of your throat.
Soft **/gue/** = **<u>get</u>** and **/gui/** = **<u>geese</u>**

h = silent, **ll** = like an English **y**, **v** like an English **b**, **ñ** = **ny**, **r**oll your **r**s if they come at the beginning of a word, or are a double **rr**

Week 11 – Asking for directions

¿Dónde está?	
¿dónde está …?	where is...?
está lejos	it is far away
está cerca	it is near
al final de	the end of
a la derecha	to/on the right
a la izquierda	to/on the left
sigue esta calle	follow this road
gira….	turn
toma….	take
pasa...	go past
cruza	cross
coge	catch
la primera calle	the first street
la segunda calle	the second street
la tercera calle	the third street

Week 12 – Shopping related vocab

Vamos de compras	
¿Me puede ayudar?	Can you help me?
Quisiera	I would like
¿Cuánto cuesta?	How much is it?
¿Cuánto cuestan?	How much are they?
¿Puedo probar…?	Can I try…?
este / esta	this
estos / estas	these
jersey	jumper
camiseta	t-shirt
camisa	shirt
vestido	dress
pantalones	trousers
pantalones cortos	shorts
falda	skirt
chaqueta	jacket
sombrero	sunhat