KNOWLEDGE ORGANISERS

YEAR 8

BODMIN COLLEGE

Contents

SCHOOL DAY

08:45am Start of the School Day

08:45am Tutor Time

09:15am Lesson 1

10:30am Break 1

11:00am Lesson 2

12:15pm Lesson 3

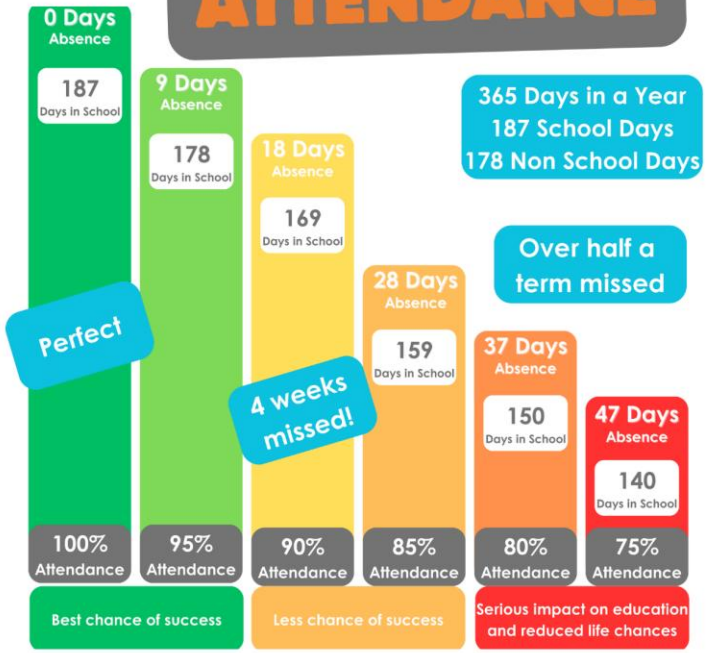
1.30pm Break 2

2:00pm Lesson 4

3.15pm End of the School Day

3:30pm Bodmin+

ATTENDANCE



EQUIPMENT

School Bag

Knowledge Organiser

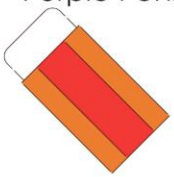
Black and Purple Pens

Pencil Case

Knowledge Organiser

Calculator

Pencil

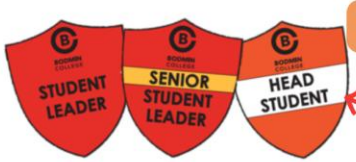


Rubber

Ruler

Whiteboard and whiteboard pen

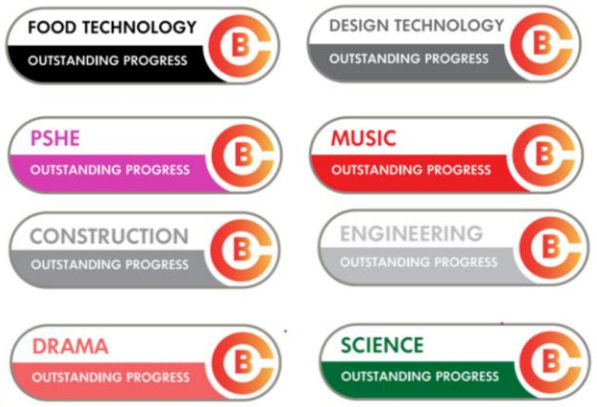
REWARDS



Student Leaders

Subject Awards

Merit Badges



TIMETABLE

	A Mon	A Tue	A Wed	A Thu	A Fri
T					
1					
2					
3					
4					

	B Mon	B Tue	B Wed	B Thu	B Fri
T					
1					
2					
3					
4					

THE PERIODIC TABLE OF THE ELEMENTS

Group 1 – **Alkali Metals**

Group 7 – **Halogens**

Group 0 – **Noble gases**

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

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

Element **symbol**

Element **name**

Key

relative atomic mass
atomic symbol
name
atomic (proton) number

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

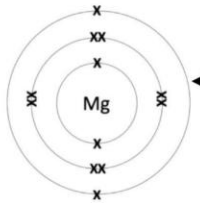
Atomic / Proton Number = number of **protons** which is the same as the number of **electrons**.

Neutrons = Mass number – Atomic number

Transition Metals

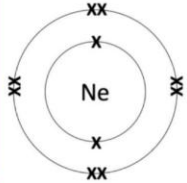
Non-Metals

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

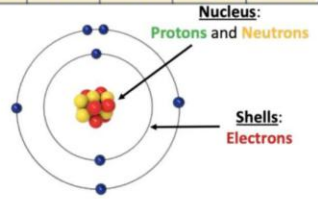


Magnesium (Mg) has **12 electrons** in total. It is in **group 2** so has 2 electrons in its **outer** shell. Mg's electronic configuration is 2,8,2.

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?

HT = Higher Tier only equations

Triple only equations

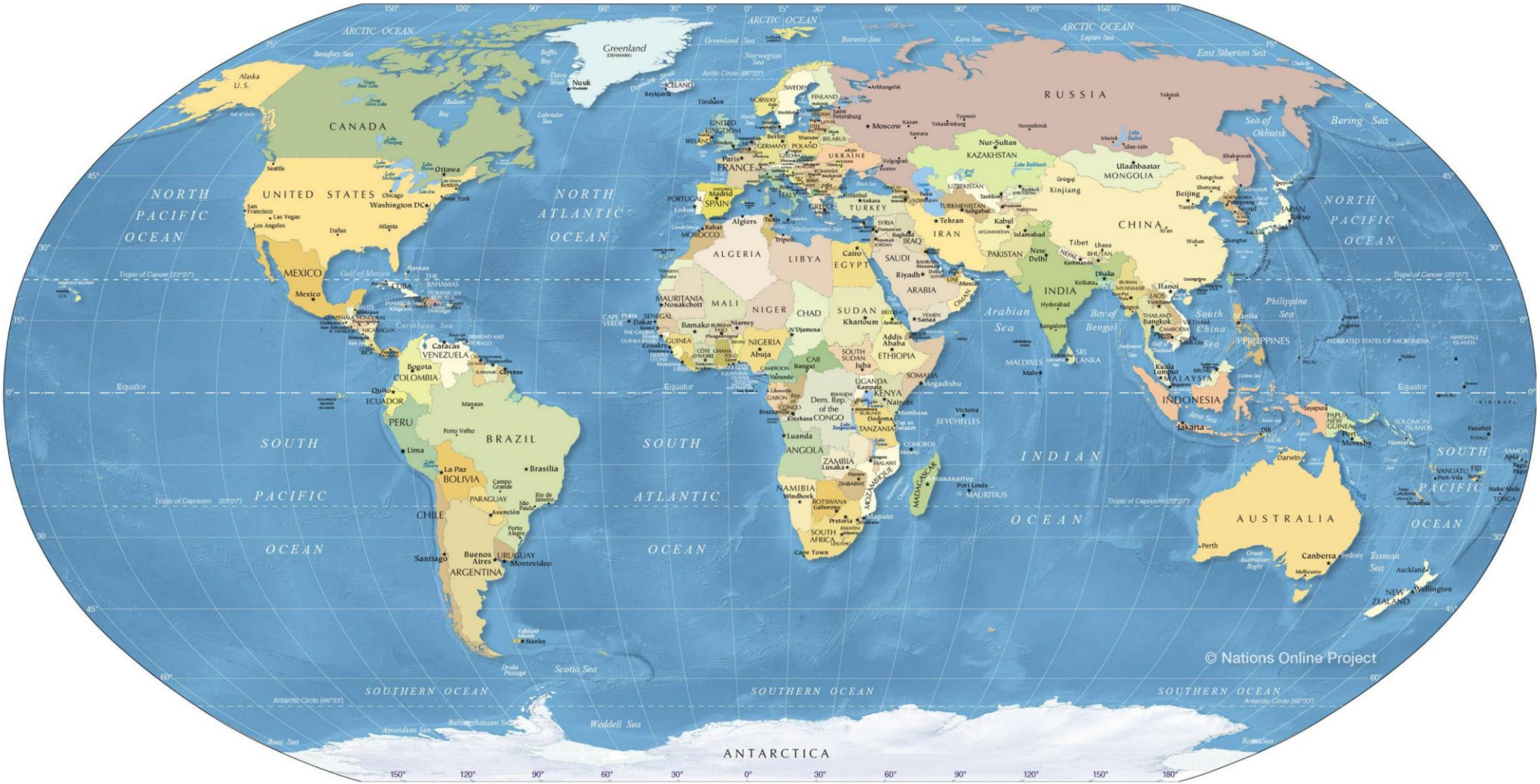
kinetic energy = 0.5 × mass × (speed)^2	$E_k = \frac{1}{2} m v^2$
elastic potential energy = 0.5 × spring constant × (extension)^2	$E_e = \frac{1}{2} k e^2$
gravitational potential energy = mass × gravitational field strength × height	$E_p = m g h$
change in thermal energy = mass × specific heat capacity × 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
CANADA
Alaska
U.S.
RUSSIA
UNITED STATES
NORTH PACIFIC OCEAN
NORTH ATLANTIC OCEAN
EUROPE
ASIA
MEXICO
Gulf of Mexico
Caribbean Sea
CUBA
THE BAHAMAS
VENEZUELA
COLOMBIA
ECUADOR
PERU
BRAZIL
BOLIVIA
PARAGUAY
CHILE
ARGENTINA
URUGUAY
SOUTH PACIFIC OCEAN
SOUTH ATLANTIC OCEAN
INDIAN OCEAN
AUSTRALIA
INDONESIA
PHILIPPINES
CHINA
INDIA
MONGOLIA
KAZAKHSTAN
IRAN
SAUDI ARABIA
EGYPT
LIBYA
ALGERIA
SUDAN
NIGERIA
ETHIOPIA
KENYA
Dem. Rep. of the CONGO
ANGOLA
SOUTH AFRICA
Arctic Circle (66°33')
Tropic of Cancer (23°27')
Equator
Tropic of Capricorn (23°27')
Antarctic Circle (66°33')
SOUTHERN OCEAN
ANTARCTICA
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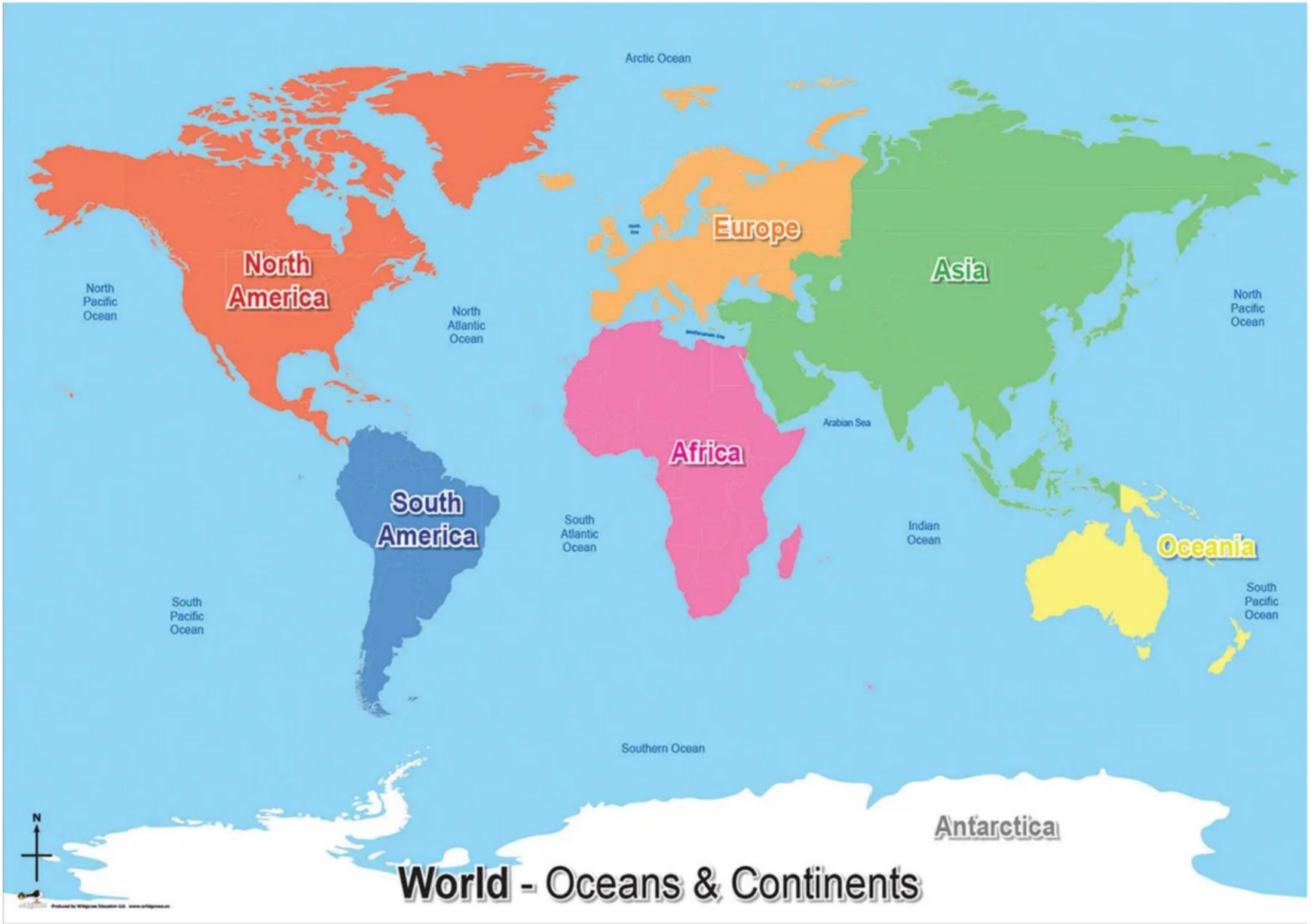
CONTINENTS AND OCEANS



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 via the school website. 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

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

Signposting

CLEAR
Emotional Trauma & Therapy Specialists
clearsupport.net

External Support
See websites below:

Young People Cornwall – Making Waves
Youngpeoplecornwall.org

kooth
Kooth.com

Penhaligon's Friends
Penhaligonsfriends.org.uk

YOUNGMiNDS
fighting for young people's mental health
Youngminds.org.uk

Cornwall Carers Service
Cornwallcarers.org.uk/young-carers

childline
ONLINE, ON THE PHONE, ANYTIME
Childline.org.uk

withyou
wearewithyou.org.uk

Intercom Trust
Intercomtrust.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

Clay: is a natural material that becomes soft when mixed with water. It can be shaped using hands and simple tools due to its **plasticity**.

Pinching, coiling, and smoothing help form strong vessels. Clay must be kept damp while working to stop it cracking.

Joining pieces securely is important for strength, potters use a process called **slip and score** to do this.

Weeks 3 & 4

Clay techniques: Slab building uses flat pieces of rolled clay to create shapes and decorations.

Slabs can be cut to form symbols and **motifs,** which are carefully attached to vessels.

Carving and drawing into the surface of clay adds texture, pattern, and detail helping to communicate ideas and stories.

Weeks 5 & 6

Clay drying stages: Clay must dry slowly so water can safely leave the vessel. Once fully dry, it is placed in a **kiln** and fired at a high temperature.

Firing makes the clay hard and permanent, changing it into ceramic so it can be handled and decorated safely.

Weeks 7 & 8

Colour and clay: When applying watercolour or **glaze** to clay, you can achieve different effects depending on the amount of water and layers used.

Colour can be built up gradually to create depth and tone.

Thoughtful colour choices help communicate symbolism, mood, and meaning, linking your final vessel back to your original design.

Glazing – Applying a liquid glass coating to fired clay, which adds colour and a shiny protective surface after firing.

Weeks 9 & 10

Surface decoration: When painting onto clay using watercolour or glaze, you can refine your work by adding layers, patterns, and simple marks. Different brush sizes and amounts of water create a range of lines, textures, and effects. Repeating shapes and marks develops **pattern**, while careful control improves detail, clarity, and finish.

Pattern – A repeated arrangement of shapes, lines, or marks used to decorate surfaces and add visual interest.

Weeks 11 & 12

Formal Elements of Art recap:

- Line = marks
- Shape = enclosed areas
- Colour = mood & contrast
- Tone = light & dark
- Texture = surface quality
- Pattern = repetition
- Form = 3D shape
- Space = around objects

Formal elements are the basic building blocks of art. Artists use them to create, describe, and analyse artwork

Vocabulary

Plasticity – How soft and bendable the clay is, allowing it to be shaped without cracking.

Slip and score – A joining method where lines are scratched into clay and wet clay (slip) is added to help pieces stick together.

Slab Building – A clay technique where flat sheets of clay are rolled, cut, and joined to build forms and decorations.

Motif – A repeated symbol or image used to communicate meaning, ideas, or stories in art.

Kiln – A special high-temperature oven used to fire clay and turn it into hard ceramic.

Art

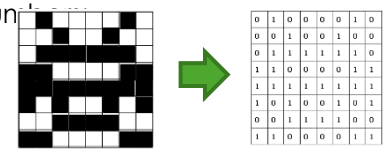
Weeks 13 & 14	Weeks 15 & 16	Weeks 17 & 18	Vocabulary
Artist: David Hockney is a British artist known for his bold use of colour, **expressive** brushwork, and imaginative landscapes. His work is inspired by nature, seasons, and everyday places. He often uses bright tones, strong lines, and unusual **viewpoints** to create energetic, modern images that celebrate observation And creativity. 	An **artist research** page includes images, written analysis, and drawings to show understanding of an artists style. The following are important things to remember on an artist research page: • Title (Artists name) • Creative background • Information • Printed imagery • Copy of the artist work • Your own opinion of the artists work	**Reviewing your artwork: Annotation** explains ideas, observations, and choices using short written notes alongside artwork. It helps show understanding of an artist's style, techniques, and meaning. **Evaluation** is a thoughtful review of your own work, identifying strengths, areas for improvement, and how successfully your final piece communicates your ideas.	**Firing** – The process of heating clay in a kiln to make it strong, permanent, and durable. **Expressive** – Showing strong feeling, mood, or personal style in artwork. **Viewpoint** – The position or angle from which a scene or object is seen.

Computer Science

Weeks 1 & 2

Representing images

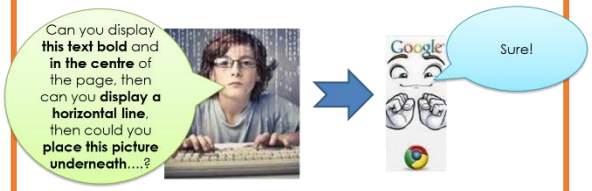
Bitmaps
Bitmap images are made up of rows of "dots" called "pixels" (picture elements). Each pixel is represented by a binary number. Behind the scenes, this 1-bit image (with each shade represented by a bit) is in fact a series of nu



Weeks 3 & 4

HTML and CSS

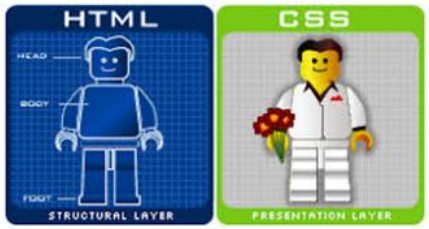
HTML allows us to write webpages. Using tags, we can inform the browser how different page elements can be arranged and displayed on the screen. HTML is known as the structural layer of webpages.



Weeks 5 & 6

CSS

CSS is an additional language which can help improve the presentation of webpage, by styling tags, either individually or from a central location. **CSS** is known as the presentation layer.



Vocabulary

CSS (Cascading Style Sheets)
A language used to control how HTML elements look on a webpage, including colours, fonts, and backgrounds.

background-color
A **CSS** property that sets the colour behind an element.

Hexadecimal colour code
A six-digit code (e.g. #FF0000) used to represent colours in **CSS**.

RGB value
A colour model using red, green, and blue values (0–255) to create colours.

Element
A specific part of a webpage (such as a paragraph or div) that **CSS** styles are applied to.

Weeks 7 & 8

Background Colour
Used to change the colour behind content.

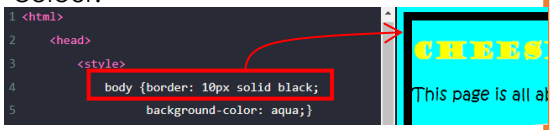
```
body {
  background-color: aqua;
}
```

Where Backgrounds Are Applied
body → affects the whole page
div → affects a section

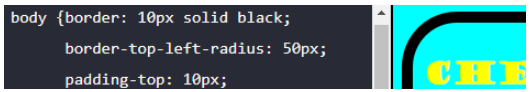
Other elements (e.g. p, h1) → affects only that item

Weeks 9 & 10

Borders
CSS can allow us to insert borders to a page. This is done using the ***border*** property, which will require values such as the border thickness, style, and colour:



Often, we will need to add padding to move the page content away from the border. We can also give our border curved edges using the radius property:



Weeks 11& 12

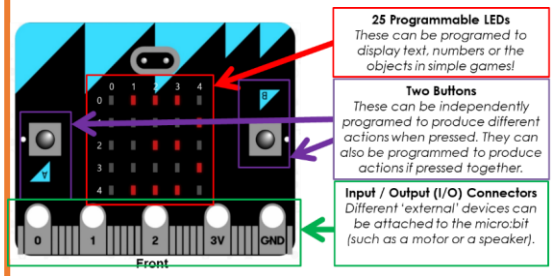
Adding structure to a HTML page
remember to give each section an ID, so that we can apply **CSS** code to the divisions individually.

Computer Science

Weeks 13 & 14

The Micro:Bit

The **BBC Micro:Bit** is a pocket-sized codable computer. It is fully programmable…you can turn it into whatever device you want (within reason).



Weeks 15 & 16

How do we program the Micro:Bit?

We program the **Micro:Bit** use the tools and facilities at https://makecode.microbit.org/.
We can write our code in either a blocks-based language or text-based language.

The process of getting our **Micro:Bits** working (with software) is as follows:

Weeks 17 & 18

Micro:Bit Core Knowledge

Compile - The process of translating our program code into machine code.

Flash - The process of transferring machine code onto a computer chip

Accelerometer - A component of the Micro:Bit which can sense movement.

Variables - A memory store in a program (think of it as a box which stores a piece of data).

Vocabulary

MicroBit – Key Vocabulary

Input – data into device

Output – data from device

Program – instruction sequence

Loop – repeated instructions

Design & Technology

Week 1

Creating a Product Design Specification.

A product specification is a clear list of requirements that a final product must meet. It acts as a design checklist to guide designing, making, and evaluating.

Why Is a Specification Important?

1. Ensures the product meets the needs of the user/client
2. Helps designers make consistent decisions
3. Provides criteria for testing and evaluation
4. Helps avoid unsuitable design ideas early on

A strong specification includes quantifiable, measurable, and clear statements.

What Makes a Good Specification?

1. Specific (not vague)
2. Measurable (can be tested)
3. Achievable
4. Relevant to the brief
5. Time-bound where suitable

What's included in the Specification?

A product specification should include clear, measurable requirements for function, user/target market, aesthetics, materials, size/dimensions, safety, cost, environmental impact, ergonomics, and quality.

Week 2

Initial Design Ideas

An initial design sketch is a quick drawing used to communicate an early idea. It should show the overall shape, function, and main features. It will link clearly to the product specification. Does not need full detail—focus on clarity and ideas.

What do I Include in an Initial Design Sketch?

1. A sketch of the product that is coloured
2. Key features labelled
3. Evaluation of design (likes and areas for improvement).
4. How it meets key Specification and/or Brief.
5. Possible materials or ideas of how you may make the product.

5 top tips for drawing initial design ideas.

1. Keep sketches quick and simple—focus on ideas, not perfection.
2. Use basic shapes and correct proportions to show form clearly.
3. Add labels and short notes to explain materials, features, and function.
4. Show movement or function with arrows and simple indicators.
5. Link every idea to your product specification to meet user needs.

Remember to draw in pencil (pressing lightly), use a ruler and to shade the design by adjusting the tone of colour to add depth. You could even use a fine liner to go over your pencil lines.

Week 3

Design Development

What is Design Development?

Design development is the process of improving, refining design ideas to present a final design.

It ensures the final product is functional, feasible, and meets the specification. It involves iteration: making changes based on evaluation and testing.

Success Criteria

By the end of design development, you should be able to:

- Review your initial ideas and identify improvements
- Produce refined sketches with clear labels and measurements
- Consider materials, manufacture, and user requirements
- Explore alternatives and iterations
- Produce a developed idea ready for modelling or final production

Final Design idea would include…

- Detailed annotation (materials and processes).
- Multiple views of the product, displaying all the features.
- Shaded and coloured realistically (rendered).
- A sense of scale (size) of the product.
- Links to the design brief and specificaition.

Vocabulary

Aesthetics: How something looks.

Dimensions: Measurements of the product.

Manufacture: Making a product.

Function: Describes what the product is intended to do.

Iteration: Making repeated improvements to a design.

Refinement: Improving and clarifying a design.

Prototype: A model of the design used for testing.

Feasibility: How realistic or possible a design is to make.

Ergonomics: How comfortable and user-friendly a product is.

Annotation: Notes added to sketches to explain ideas.

Design & Technology

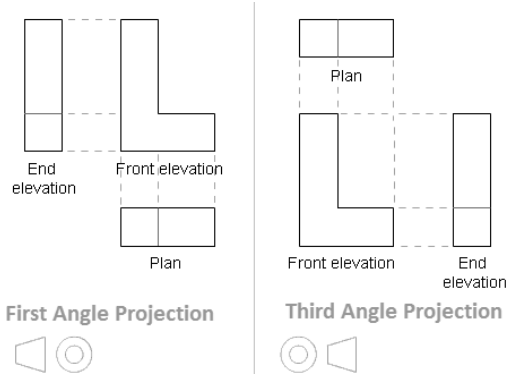
Week 4

Technical/Engineering Drawings

Engineering Drawing
An engineering drawing is a detailed drawing that shows exactly how something is made. It gives precise information about the size, shape, materials, and how parts fit together.

Orthographic projection is a way of drawing an 3D object from different directions. Usually a front, side and plan view are drawn so that a person looking at the drawing can see all the important sides.

1st and 3rd angle orthographic projection:



BS: 8888
So, engineers can understand each others' designs, there are rules that they must follow. BS8888 is a British Standard which sets out how working drawings should be drawn and the symbols that should be used.

Week 5

Manufacture Planning

What is planning for manufacture?
Planning for manufacture is working out, step by step, how your design will be made before you start making it.

A manufacture plan includes:
- What materials you will use
- What tools and machines you will use
- The order of the steps
- How long each step will take

Why is planning important?
Planning is important because it helps you:
- Avoid mistakes
- Save time
- Use less material (less waste)
- Stay safe
- Keep work neat and accurate
- Work more independently

Without a plan, you might:
- Cut the wrong size
- Use the wrong tool
- Run out of time
- Waste materials
- Make unsafe choices

Planning methods in DT:
- Flow charts
- Gantt charts
- Bullet pointed lists
- Tables
- Diagrams

Week 6

Workshop Health and Safety

General Workshop Rules:
- Always listen to the teacher's instructions
- Never run or push in the workshop
- Do not use tools or machines without permission
- Wear appropriate PPE (Personal Protective Equipment).
- Keep your area tidy and organised
- Report any accidents or broken tools immediately
- Tie back long hair and remove loose jewellery
- No eating or drinking in the workshop

Tool Safety

Hand Tools:
- Always carry tools carefully
- Use tools for their correct purpose
- Keep fingers away from blades
- Pass tools handle-first to others

Machine Safety:
- Ask permission before using
- Listen carefully to the demonstration
- Check guards are in place
- Use correct body position
- Never distract someone using a machine
- Turn off machines when finished

What tools are used when marking out?
- Tri-Square/Set-Square
- Steel rule
- Marking Gauge
- Centre punch

Remember: 'Cut once, measure twice'.

Vocabulary

Datum:
A datum is a fixed starting point that you measure from when marking out a material.

Tools:
Hand equipment (e.g. saw, file, ruler, scissors)

Machines:
Powered equipment (e.g. drill, laser cutter, sewing machine)Risk

Assessment:
Thinking about dangers and how to stay safe

Quality Control:
Checking the product during and after making

Sequence:
The correct order of steps

Tolerance:
Allowed amount of error (e.g. ±2mm)

Marking out:
The process of transferring measurements from a drawing or plan onto a raw material.

Design & Technology

Week 7

Power Tools: Scroll Saw

A scroll saw is a small electric machine used to cut detailed shapes and curves in thin wood, plastic, or light metal.

Do	Do not:
Wear PPE and tie up hair.	Do not look away or distract others
Turn on extraction	Do not try to fix the machine yourself
Use guard and have both hands flat on the material.	Do not let others crowd around you
Check the blade prior to use.	Do not put fingers near the moving blade
Report any problems to teacher.	Do not push the material too quickly

Week 8

Applying a Finish

A finish is a coating you apply to wood to:

- Protect it from damage
- Improve its appearance
- Make it smooth, shiny, or colourful
- Help it last longer

Types of wood finishes include paint, varnish, wax, stain, oil and lacquer, which are used to protect and decorate wooden products.

If wood is not prepared first, the finish will:

- Look patchy
- Feel rough
- Soak in unevenly
- Peel or flake off

Steps to prepare wood for a finish

Check the surface

1. Look for rough areas, splinters, glue marks, or pencil lines.
2. Sand the wood: Start with coarse sandpaper (e.g. 80–100 grit)Then use medium sandpaper (e.g. 120–180 grit)Finish with fine sandpaper (e.g. 220–240 grit)
3. Always sand with the grain.
4. Remove dust: Use a brush or slightly damp cloth to remove all dust.
5. Check the surface again: The wood should now feel smooth and even.

Health and Safety

- Work in a well-ventilated area
- Wear an apron, gloves, and a mask if needed
- Keep lids closed on finish containers
- Clean brushes safely when finished
- Never put your face close to chemicals

Week 9

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!

Vocabulary

Finish:
This refers to the surface quality or treatment of a material or part after it has been made.

Keying:
This is a process used to create a roughened or textured surface on a material to improve the adhesion of paint, glue, or other coatings.

Aluminium oxide paper:
This is a type of abrasive sandpaper coated with aluminium oxide grains, which are very durable and effective for sanding hard materials like wood, metal, and plastic.

Coarse refers to a rough or large-grained texture or surface.

Fine refers to a smooth or small-grained texture or surface.

Drama

Weeks 1 & 2

Face: The Play – Content and Context
Face is a story about what is on the surface and what is underneath. Of course it deals with the pain of disfigurement, but the real story is about what goes on in Martin's heart and mind. Martin is embarking on a journey, but we only see the first few steps. What Martin begins to realise as we leave him is that he should be judged not on his skin, but on his character. The lessons learned by Martin and those around him are universal. They have something valuable to say about attitudes to disabilities as well as colour and national prejudices.

Past Martin – before the car accident
Present Martin – after the car accident
Narrative Martin – "above and beyond the action of the play"

Weeks 3 & 4

Gait	How we walk
Body Language	How we use our body to express feelings
Gestures	The use of our hands
Facial Expressions	How we use our face to express feelings
Proxemics	The distance between people
Pitch	How **high** or **low** the voice is
Tone	The **mood** of the voice
Pace	How **fast** or **slow** the voice is
Projection	How **loud** or **quiet** the voice is
Pause	Intentional **wait**
Intonation	The **rise** and **fall** of the voice

Weeks 5 & 6

Physical theatre is a **style** of theatre that uses movement to tell a story. In *Face* physical theatre can be used to physicalise and represent action moments, such as the car crash.

Physical theatre is anything that puts the human body at the centre of the storytelling process. As a result it's often abstract in style, using movement in a stylised and representational way.

Vocabulary

Prologue: Introductory section before main story

Physical Theatre: a form of theatre that puts emphasis on movement rather than dialogue

Chorus: The chorus in Classical Greek drama was a group of actors who described and commented upon the main action of a play with song, dance, and recitation.

Duologue: a performance with two characters.

Weeks 7 & 8

The purpose of a Greek **chorus** was to provide background and summary information to the audience to help them understand what was going on in the performance. They commented on themes, expressed what the main characters couldn't say (like secrets, thoughts, and fears) and provided other characters with information and insights.

In *Face*, the *Street Voices* are the **chorus**.

Often a chorus will exaggerate their gestures to make their messages clearer to the audience. Their diction and lines must be presented clearly and crisply so that the entire audience can hear and follow the story.

Weeks 9 & 10

Roles and Responsibilities:
Creative roles:
- Director – shapes the performance, blocks scenes, guides actors
- Playwright – writes the script or text

Design roles:
- Set designer – designs the stage space and scenery
- Lighting designer – plans lighting to create mood and focus
- Sound designer – creates and controls sound effects and music
- Costume designer – designs clothing to suit character and style
- Props master – sources and manages props

Weeks 11 & 12

Performing a Duologue:
1. **Know your character** – Understand who you are, what you want, and how you feel.
2. **Listen to your partner** – React naturally to what they say, not just your own lines.
3. **Use your voice clearly** – Speak loudly, vary your tone, and show emotion.
4. **Use body language** – Facial expressions and movement make your character believable.
5. **Practise together** – Rehearse as a team to build timing and confidence.

Drama

Weeks 13 & 14

Assessment – Areas to focus on

1. **Participation and rehearsals:** I can take part in all lessons confidently, offering consistently excellent contributions.
2. **Audience Awareness:** I can engage my audience throughout because my characterisation has consistent flair.
3. **Vocal Skills:** I can demonstrate that my vocal characterisation works in conjunction with my physical characterisation.
4. **Movement Skills:** I can demonstrate that my physical characterisation works in conjunction with my vocal characterisation.
5. **Performance Techniques:** I can confidently and consistently use a variety of techniques when devising.

Weeks 15 & 16

Costume is an important aspect of a production, as it helps to:

- establish a character
- convey the context of the play
- support the style of the production

Different coloured costumes have different meanings.

The condition of the costume can convey information about a character's circumstances. For example, a Victorian street beggar leading a hard life may wear dirty rags with holes to show wear and tear, and may also have make-up to appear dirty with missing teeth, cuts and bruises.

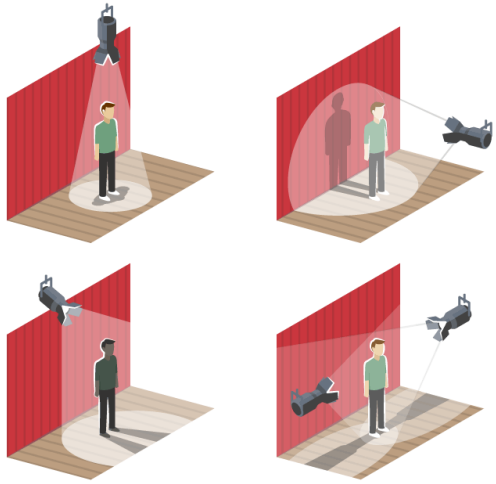
Weeks 17 & 18

One of the most important functions of lighting design is illuminating the action on stage. Lighting is needed so that the audience can see clearly what is happening.

Lighting design can also:

- Convey the time of day
- Create mood and atmosphere
- Focus the audience's attention
- Influence pace
- Communication themes or symbols

Some lighting design used a **gobo**.



Vocabulary

Gobo: A stencil placed in a lantern to control the shape of the light.

English

Week 1

Chapter Six (2nd half) – Beast from air

Three-Part Thesis

1. The overall purpose of the literature
2. What the writer uses to achieve this purpose and your overall arguments
3. Explore how the focus is presented at the beginning and end of the story

How to write a three-part thesis for Lord of the Flies:

1. In William Golding's **allegorical tale** 'Lord of the Flies', he explores how the **absence of civilisation can lead humankind to savagery.**
2. Golding utilises the characterisation/theme of _____ as a vehicle to express/illuminate/criticise/magnify/manipulate/chastise…
3. At the beginning…at the end…

Chapter Seven – Shadows & tall trees

Key Quotation:
"Robert snarled at him… and everybody laughed. Presently they were all jabbing at Robert who made mock rushes… The circle moved in and round. Robert squealed in mock terror, then in real pain… The butt end of a spear fell on his back as he blundered among them."

Week 2

Chapter Eight – Gift for the darkness

- Civilisation and savagery are two **juxtaposed** ideas, and Jack and Ralph are two **juxtaposed** characters who embody these ideas.
- Jack becomes the **epitome** of savagery whereas Piggy becomes the **epitome** of civilisation.
- This chapter, the divide of the two groups of boys, becomes a **catalyst** for the decline of civilisation.
- Jack is obsessed with killing and showing aggression which suggests he is of poor **morals**, whereas Ralph, Simon and Piggy wanted to the right thing to get rescued.

Golding illuminates:

- "Humanity is inherently wicked and destructive"
- "Humanity requires rules and law. Without it, humans return to their natural primitive, savage state.
- "Fear is a catalyst for violence and the destruction of civilisation."

Key Quotations:
"And about the beast. When we kill we'll some of the kill for it. Then it won't bother us." – Jack

Week 3

Chapter Nine – A view to death

- For example, a dark and gloomy night can create a sense of **foreboding**.
- When the boys are out of control – the island descends into **anarchy**.
- Some of the characters are seen to shift their morals in order to fit into the crowd. This is called a mob mentality.
- It is **ironic** that the boys have ended up on the island having been evacuated from a warzone and a time of division, only to recreate this themselves on the island.

Key Quotations:
Simon was crying out something about a dead man on a hill… The sticks fell and the mouth of the new circle crunched and screamed. The beast was on its knees in the centre, its arms folded over its face. It was crying out against the abominable noise, something about a body on the hill… At once the crowd surged after it, poured down the rock, leapt on to the beast, screamed, struck, bit, tore.

Vocabulary

Thesis: A central argument or claim presented in a piece of writing or analysis.

Innocence – a state of being free from guilt, wrongdoing, or understanding of evil.

Morality – principles or beliefs about what is right and wrong behaviour.

Violence - behaviour that involves physical force intended to hurt, damage, or kill someone or something.

Juxtaposition – two things being seen or placed near to each other with contrasting effect.

Epitome – a person or thing that is the perfect example of particular quality or type.

Catalyst – something that speeds up the reaction of other events.

Foreboding – a feeling that something bad will happen; fearful apprehension.

English

Week 4

Chapter Ten – The Shell and the Glasses

Golding obscures the once-clear dichotomy between the "good" Ralph and the "evil" Jack, demonstrating that the compulsion towards violence and destruction is present inside all individuals.

How to layer analysis for the main body of a literature essay

- **Contextualise quotation:** *At this moment in the story…*
- **Explain what quotation suggests:** *This could suggest that…*
- **Single word quotations analysis:** *The word "_____" could tell the reader that…*
- **Multiple interpretations analysis:** *While on the one hand the word could suggest _____, on the other hand it may also imply that…*

Key Quotation:
"the fragile white conch still gleamed by the polished seat"
"A savage raised his hand"
"From his left hand dangled Piggy's broken glasses"

Week 5

Chapter Eleven – Castle Rock and Chapter Twelve – Cry of the Hunters

- Ralph's and Jack's camps come into direct conflict and the two important symbols in the novel - the conch shell and the Lord of the Flies - are destroyed.
- A **deus ex machina** appears, at the last possible moment, in the form of the naval officer who brings the boys back to the world of law, order, and society.
- Golding's use of **irony** in the last chapter blurs the boundary between civilization and savagery and implies that the two are more closely connected than the story has illustrated.

Key Quotations:
"They understood only too well the liberation into savagery that the concealing paint brought."
"arms and legs twitches a bit, like a pig's after it has been killed"
"They were savages it was true; but they were human"
"I should have thought that a pack of British boys--you're all British, aren't you?--would have been able to put up a better show than that--I mean--"

Week 6

Golding's Message

Symbols in the novel
- The fire
- The beast
- The conch
- Piggy's glasses
- Masks/body paint
- Clothing

Authorial Intent Verbs
Illuminate – to make something visible/to shine a light on something.
Emphasise – to place special importance on something.
Educate – to give intellectual, moral and social instruction.
Promulgate – to make widely known.
Communicate – to share information, ideas and ideologies.

Reveal the importance of…
Foreground – to make something more visible.
Manipulate – to handle and control something in a skilful way
Criticise – to indicate the faults in something in a disapproving way
Expose – to make something visible by uncovering something.
Galvanise – shock or excite an audience into action against something.
Advocate - publicly recommend someone or something.

Vocabulary

Writer's Intent – What the author is trying to communicate or achieve through their writing.

Layered Analysis - Exploring a quote in depth by analysing language, structure, and multiple meanings.

Deus ex machina – a plot device used when a seemingly unsolvable conflict or impossible problem is solved by the sudden appearance of an unexpected person, object, or event.

Irony – when words or actions provide the opposite outcome that what was intended.

English

Week 7

The Signal Man

- 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 Quotation: Setting:
'barbarous, depressing and forbidding air'
'gloomier entrance to a black tunnel'

Week 8

The Signal Man

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 Quotation: 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!'*

Week 9

The Monkey's Paw

Superstitions are usually not based on fact or reality, for example, 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.

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

Vocabulary

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. **Genre conventions** – these are the features that are typical within different types (genres) of stories.
Cyclical structure: when a writer ends a story in a similar way to how it began.
Motif: a recurring image or object in the narrative.
Premonition – a strong feeling that something (possibly unpleasant) is about to happen.
Superstition: a belief or practice that isn't entirely based on facts or reality.
Foreshadowing: When a writer hints about later events in the story.
Stereotypes: an oversimplified, fixed, and often inaccurate idea or belief about a particular type of person or group.

English

Week 10

The Monkey's Paw

- The monkey's paw reflects the **exploitation** of apes / natural world.
- In Charles Darwin's 'The Descent of Man' (1871) he made **evolutionary** links between modern humans and apes.
- 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 Quotation: 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"

Week 11

The Lottery

The Lottery a selection process where everyone's entry has an equal chance of winning.

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 Quotation:

"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".
"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."

Week 12

The Lottery

Context:

Some describe this story 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 Quotation:

"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."

Vocabulary

Narrative Twist a change in the events of a story that's unexpected and changes the direction of the plot and surprises the reader.
Exploitation: taking unfair advantage of people or resources for personal gain.
Evolution – Darwin's theory of evolution (1859) suggested that all animals on earth are descended from a common ancestor. **Symbols -** Symbolism is a literary device in which an image is used to represent something else. **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'
Allegory: the hidden message of a story.
Morality: the distinction between right and wrong and choosing the proper behaviour.
Savagery: cruel and vicious behaviour, uncivilised and animalistic

English

Week 13

There Will Come Soft Rains

- The **allegory** of this short story is that technology that defines civilisation will ultimately destroy civilisation; nature will outlast the avarice and ignorance of man
- The **register** of automated voices provide a light and child-like narration, devoid of emotion even when dealing with tragedy
- **Chronology references** are used heavily to structure the paragraphing; the passage of a single day, reflecting how time is a construct invented by man /ignored by nature.
- The failing technology of the house is **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*

Week 14

There Will Come Soft Rains

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

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 Quotation:

"their images burned in wood in one titanic instant"

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

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

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

Week 15

A Piece of Wood

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 Quotation:

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

Vocabulary

Register: how language is adjusted to fit the requirements of the writing (a voice or tone that fits).

Chronology /temporal references: Using the time of day as a structural device

Juxtaposition: the deliberate placing of two things to highlight their differences

Macabre: an emphasis and fascination with darkness, evil and death.

Personification: giving an inanimate object / thing human qualities.

Simulacrum: a representation or imitation of a real thing

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

English

Week 16

A Piece of Wood

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.

- The contrasting views about War and Peace of the Official and Hollis represents a **dichotomy**,
- Hollis has a **nihilistic** view of society as he does not believe in his society's view of War and wants to destroy the weapons that are causing so much death and destruction.

Key Quotation:
"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!"

Week 17

The Sound of Thunder

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 Quotation:
"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".

Week 18

The Sound of Thunder

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 Quotation:
"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".

Vocabulary

Dichotomy: the contrast and difference between two completely opposite ideas or viewpoints.

Homophone: words that sound the same but have different spellings and meanings.

Futility: pointlessness, something that ends up meaning nothing and has no purpose.

Nihilism: not believing in anything –a belief that life is meaningless, and society's rules do not apply.

Food

Weeks 1 & 2	Weeks 3 & 4	Weeks 5 & 6	Vocabulary
Practical – Cheese and Tomato Bites Cheese is an important source of **protein** and **calcium**, which supports strong bones and teeth. Some cheeses are fortified with vitamin D, which helps the body absorb calcium. The protein in cheese is **high biological value (HBV)**, meaning it contains all the essential amino acids needed by the body. Pastry may also be made with fortified flour, adding extra nutrients depending on the product used. Tomatoes may travel long distances to reach the UK, which links to the idea of food miles and the environmental impact of food. Dairy foods such as cheese must be stored in the fridge to reduce bacterial growth. Good food safety is important, especially to prevent **cross-contamination,** for example if bacon is added as an extra ingredient. When preparing cheese and tomato bites, kitchen rules and oven safety must be followed. Tomatoes should be washed and sliced safely using the bridge and claw knife techniques. The pastry should be divided into equal portions and folded evenly over the cheese and tomatoes.	**Practical** – Greek Lentil Salad Greek lentil salad is a vegetarian dish made using lentils and a variety of vegetables. Lentils are a type of bean and provide **LBV (low biological value)** protein, meaning they are missing one or more essential amino acids and come from plant sources like peas, beans, nuts, and seeds. This dish is suitable for **vegetarians**, who eat dairy and eggs but no meat, and can be adapted for **vegans** by removing ingredients like honey or feta cheese. Many beans and lentils are imported, which links to **food miles** and the environmental impact of transporting food. Proper storage of beans and lentils is important to prevent spoilage and keep them safe to eat. When preparing the salad, knife safety is essential. Vegetables should be chopped or diced accurately, for example onions finely diced, cucumber small dice or quartered, and tomatoes halved. Lentils or beans should be drained before adding.	**Theory** - Seeds Seeds are plant foods that come from a wide range of environments around the world. In this lesson, we are learning about **LBV (low biological value)** protein products so that we understand where they come from, the different varieties, and how they affect our diet. Common seeds include **sunflower, pumpkin, sesame, flax, and chia seeds.** Protein can be classified as HBV or LBV. HBV proteins contain all the essential amino acids the body needs, such as meat, eggs, dairy, quinoa, and soya. LBV proteins are missing one or more **essential amino acids** and include foods such as beans, lentils, nuts, and seeds. Eating a variety of plant-based foods or combining them with HBV foods helps provide a balanced protein intake. Many seeds and **plant-based** foods are imported, which links to food miles and environmental impact. Seeds and plant-based products must be stored correctly to keep them safe to eat. Once opened, they should be kept in airtight containers in a cool, dry place to prevent spoilage.	**Beans** – are part of a group called legumes and pulses which also include lentils and peas **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 **HBV (High Biological Value)** - A protein that contains all the essential amino acids (e.g., eggs, meat, soya). **LBV (Low Biological Value)** - A protein that lacks one or more essential amino acids (e.g., lentils, nuts, beans).

Food

Weeks 7 & 8	Weeks 9 & 10	Weeks 11 & 12	Vocabulary
Practical – Pizza **Pizza** is made using a bread dough base, primarily from wheat flour. Understanding bread-making and how yeast works as a raising agent is key to achieving a light and airy crust. Yeast produces **carbon dioxide** (CO_2) as it ferments, which creates air pockets in the dough and helps it rise. The dough must be **kneaded** correctly by pushing with the palm and pulling back with the fingertips to develop gluten, giving the base its structure and elasticity. Safe oven use and proper food hygiene are essential during preparation. Wheat is the main cereal used to make pizza dough, and cereals must be stored correctly to keep them safe. Knife skills are important when preparing toppings, such as slicing tomatoes "**across the equator**" and cutting onions evenly. After shaping the dough into a circular base and adding toppings, the pizza is baked until cooked.	**Practical** - Neapolitan Spaghetti Neapolitan spaghetti is made using pasta, which is produced from wheat, a type of cereal. Understanding cereals, their storage, and the role of **fibre** in the diet is important for both cooking and health. Cereals like wheat are processed into flour and then used to make pasta. Pasta should be stored in a cool, dry place to keep it safe. Fibre is an important part of the diet, and a low-**fibre** diet can lead to **constipation, irritable bowel syndrome (IBS), overweight, obesity, heart disease, diabetes, and bowel cancer.** Cooking pasta to the al dente stage, meaning **firm to the bite**, helps retain texture and nutrients. Good knife skills are important when preparing the vegetables, such as finely chopping garlic, slicing olives, and dicing tomatoes. Safe hob practices must be followed when boiling and draining pasta.	**Assessment week** • Recall practical techniques. • Consider food safety and scientific terms. • Recognise dietary conditions and basic nutrition. • Recall equipment and there uses.	**Al Dente** - A term used to describe pasta that is cooked to be firm to the bite. In Italian, it means "to the tooth." **Deficiency** – not having enough of certain nutrient **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. **Fibre** - Fibre is the term given to the non-digestible, mainly carbohydrate material, found in plants.

Food

Weeks 13 - 18

KS3 Food Design Project: Design, Make & Evaluate

Project Overview
After completing a range of practical dishes throughout the academic year, students will take part in a final design challenge during the last part of the summer term. This project is inspired by a real-world brief from a well-known food company, encouraging creativity, independence, and practical skill development.

Key Focus Areas

Design – developing ideas and planning

Make – applying practical cooking skills

Evaluate – reflecting and improving

Vocabulary

Design Brief - A set of instructions or requirements given by a company that explains what the product should be like and who it is for.
Design - The process of planning and creating ideas for a product before making it.
Target Market - The group of people a product is designed for, such as children, families, or teenagers.
Creativity - Using imagination to develop original and interesting ideas.
Function - What a product is meant to do or how it is used.
Ingredients - The foods used to make a product or dish.
Practical Skills - The hands-on cooking skills used when preparing and making food safely.
Make - The stage where the product is prepared and cooked following the design plan.
Evaluate - To review and judge how successful a product is after it has been made.
Strengths - The parts of the product that worked well or were successful.
Improvements - Changes that could be made to make the product better in the future.
Final Product - The completed food item that has been designed and made.
Presentation - How the food looks when it is served, including colour, shape, and finishing touches.
Feedback - Comments or opinions about the product that help identify what worked well and what could be improved.

Geography

Week 1

Introduction to Glacial Landscapes
Glaciers are large, slow-moving masses of ice that flow downhill under gravity. They often resemble rivers of ice winding through mountains, with surfaces that can appear cracked, jagged, and mixed with rock debris. Glaciers form in cold places where more snow falls than melts, allowing layers to build up over many years.

How Glaciers Form
Glaciers develop when snowfall persists year-round. As snow accumulates, the weight of the upper layers compresses the lower layers into dense glacial ice. Over long periods, this compaction creates a thick body of ice capable of slowly moving downslope. Glaciers typically form in high mountain areas or polar regions where temperatures remain cold.

How Glaciers Move
Glaciers move like slow, frozen rivers. Ice forms and builds in the **zone of accumulation**, and its weight causes the glacier to slide downhill. At the **snout**, in the **zone of ablation**, ice melts, especially in warmer months. This movement shapes the landscape through erosion and deposition.

Week 2

Glaciers shape upland landscapes through weathering, erosion, transportation and deposition.

Glacial Movement
Glaciers move downslope under gravity, often using **rotational slip**, where ice slides on a curved plane. This motion is crucial in forming corries by enabling erosion at the back and base of the hollow.

Erosional Processes
Abrasion: Rocks frozen into the glacier scrape the bedrock like sandpaper, leaving striations.
Plucking: Meltwater refreezes around rocks and pulls them from the ground.
Freeze–thaw weathering: Water freezes, expands in cracks, and breaks rock apart over repeated cycles.

Formation of a Corrie
Snow accumulates in a hollow, compacts into ice, and begins to move. Rotational slip steepens the back wall through plucking. Freeze–thaw supplies debris, and abrasion deepens the basin. The result is a steep-sided, armchair-shaped hollow open at the front.

Week 3

An **arête** is a narrow, knife-edged ridge formed between **two corries** that have developed back-to-back. As glaciers erode both sides through **plucking** and **abrasion**, the corrie back walls retreat, sharpening the ridge. Arêtes have steep slopes on either side and connect towards higher peaks.

How Arêtes Form
- Two glaciers form in adjacent valleys.
- Each glacier erodes its corrie by **plucking and abrasion**.
- Back walls of the corries retreat toward one another.
- This creates a sharp ridge: an arête.

A **pyramidal peak** is a steep, pointed mountain summit formed when **three or more corries** erode a mountain from different sides. Continued erosion sharpens the central point into a pyramid-shaped peak.

How Pyramidal Peaks Form
- Three or more glaciers form around a mountain.
- Each glacier erodes its corrie by plucking and abrasion.
- Corrie back walls retreat towards the centre.
- A sharp, pyramid-shaped peak is left behind.

Vocabulary

Zone of accumulation - the upper part of a glacier where snow continually builds up because more snow falls than melts.

Zone of ablation - the lower part of a glacier where ice is lost because melting is greater than snowfall.

Snout -the very end of the glacier, where the ice melts and the glacier slowly gets smaller.

Rotational slip - the downhill movement of glacial ice along a curved plane under the force of gravity.

Corrie - a steep-walled, bowl-shaped hollow on a mountainside formed by glacial erosion, often containing a tarn after the glacier melts.

Geography

Week 4

Economic Opportunities
Glaciated areas provide several economic opportunities, including farming, forestry, **quarrying**, water storage and **HEP**, wind farms, and tourism.

Upland areas support sheep farming, while forests are often planted on thin, acidic soils. Quarrying limestone, slate, and granite provides valuable building materials. Reservoirs supply water and allow hydroelectric power generation. Wind farms offer renewable energy, and tourism is highly significant in areas such as the Lake District.

Conflicts from Economic Use
These opportunities can cause conflict. Quarrying may pollute land and rivers and damage scenery; tourism can increase congestion and house prices; reservoirs may flood farmland; wind farms can be seen as unattractive and may reduce tourist numbers or lower house prices.

The Lake District
The Lake District is a popular glaciated region attracting visitors for its mountains, lakes, scenery, and cultural heritage, forming a major tourism hub.

Week 5

Glacial Retreat Explained
Glacial retreat occurs when melting in the zone of ablation is greater than snowfall in the zone of accumulation. This imbalance causes glaciers to shrink over time. Since 1970, glaciers on nearly every continent have thinned, with only a few anomalies such as parts of Scandinavia. The main cause of this retreat is global climate change, as rising temperatures increase melting and reduce snowfall.

Environmental Impacts
Retreating glaciers contribute to rising sea levels, increased flooding, and more landslides as unstable material collapses into valleys. Greater meltwater also raises the risk of glacial lake outburst floods, which can cause severe downstream damage.

Social Impacts
Communities relying on glacier meltwater may lose access to clean drinking water. Increased flooding can destroy homes and displace people, while unsafe water supplies raise the risk of diseases such as cholera.

Economic Impacts
Ski resorts may close due to reduced snowfall, and rising sea levels threaten coastal businesses and infrastructure.

Week 6

Why Glacial Landscapes Need Managing
Areas like the Lake District are managed to protect wildlife, conserve cultural and historical heritage, and maintain the scenery for future generations. Management also supports tourism, which is essential for the local economy.

Key Management Issues and Strategies
Rising House Prices
High demand for second homes makes housing unaffordable.
Strategy: Build affordable homes and restrict some properties to local buyers.
Effect: Helps local and first-time buyers, though many homes remain second homes.

Traffic Congestion
Tourist traffic leads to pollution and overcrowding.
Strategy: GoLakes Travel Scheme improves public transport, adds parking limits and bike-hire.
Effect: Cuts emissions but can inconvenience workers.

Footpath Erosion
Heavy use damages paths.
Strategy: Fix the Fells repairs routes using local stone and vegetation.
Effect: Strengthens paths, though reliant on volunteers.

Vocabulary

Economic opportunity - a way for people or businesses to earn an income.

HEP – Hydroelectric power is electricity generated by using the movement of flowing or falling water to turn turbines.

Economic impacts - the financial effects of an activity such as changes in jobs, income, or the cost of goods and services.

Social impacts - the effect an activity has on people's lives, communities, health, and wellbeing.

Environmental impacts - the effects an activity has on the natural world, including air, water, land, and ecosystems.

Geography

Week 7

Where Our Food Comes From
The UK relies on a global network of food suppliers. Many fruits and vegetables come from warmer climates, such as bananas from Colombia, sugar snap peas from Zimbabwe, satsumas and strawberries from Spain, and avocados from Peru.

European neighbours supply key products too, including beef from Ireland, fish from Norway, lemons from Spain, and turkey from Poland.

Other imports include rice and ginger from China, lamb from New Zealand, cocoa from Côte d'Ivoire, coffee from Brazil, and tomatoes from the Netherlands.

Why the UK Imports Food
The UK imports around 40% of its food because its climate cannot grow all crops year-round.

Growing demand for exotic foods, cheaper overseas production, population growth, and occasional poor harvests all increase dependence on imports.

Extreme weather and changing consumer expectations also make global sourcing essential.

Week 8

Food Miles
Food miles are the distance food travels from where it is grown or produced to where it is sold. Many items travel long distances because their ingredients come from multiple countries.

Examples include Heinz ketchup (18,804 miles), Coca-Cola (1,719.5 miles), Skittles (29,558 miles), Starbucks coffee (5,427 miles) and Nutella (28,731 miles).

Carbon Emissions
Carbon emissions are harmful gases, such as carbon dioxide, produced when fossil fuels are burned during food production, processing and transport. Higher food miles mean more energy use and higher emissions.

Environmental Impact
High food-mile products contribute to increased pollution, fuel consumption and climate change, making them less environmentally sustainable.

Week 9

Who Has Food Security?
Countries that are richer (HICs) usually have good food security. This is because they have strong economies, good farming and transport systems, and can buy food from other countries when they need it.

Poorer countries (LICs) often find it harder to have enough food. They may not have enough money, their food systems are weaker, and they are more easily affected when things go wrong.

What Causes Food Insecurity?
There are many reasons why some places don't have enough food.

Changes in the weather, more extreme storms, and climate change can damage crops. Wars and fighting can stop food from being grown or transported. Prices of food can also rise, making it hard for people to buy what they need.

Nature can also cause problems. Soil can be washed or blown away (soil erosion), and long periods without rain (drought) can stop plants from growing. When countries face unrest or unstable governments, food shortages can become even worse.

Vocabulary

Food miles – the distance food travels from the farm or factory to the supermarket.

Carbon emissions – harmful gases, including carbon dioxide, released when fossil fuels are burned.

Food security - having reliable access to enough safe, affordable and nutritious food for a healthy life.

Food insecurity -when a country cannot supply enough food to meet the needs of its population, leading to undernutrition, malnutrition and sometimes famine.

Climate - the long-term average pattern of temperature and precipitation in a region.

Geography

Week 10

What Does 'Sustainable Food' Mean?
Sustainable food means growing and producing food in a way that is good for people, the planet, and the future. It's about making sure we have enough food now without harming the environment for future generations.

How Can We Make Food More Sustainable?

Organic farming – farmers grow food without using harmful chemicals. This helps nature but can cost more money.
Urban farming & permaculture – people grow food in cities, such as rooftop gardens. This reduces food miles and helps communities.
Sustainable fish and meat – choosing food from farms that look after animals and don't damage ecosystems.
Eating seasonal and local food – choosing food grown near you and at the right time of year reduces pollution and supports local farmers.
Reducing waste – cutting waste is one of the easiest ways to help the planet.

How Do We Know Food Is Sustainable?
Labels like **Red Tractor**, **Organic**, and **Fair Trade** help us choose food that is safe, fair to farmers, and kinder to the environment.

Week 11

Food Crisis in South Sudan
South Sudan faces severe **food insecurity**, with around 5 million of its 11 million people lacking enough nutritious food. Conflict forces families to flee, destroys crops and cattle, and makes it dangerous for charities to deliver aid.

Frequent droughts also limit farming, while high food prices prevent many—80% living on under US$1 a day—from affording supplies.

Aid organisations such as UNICEF, the World Food Programme and the UK government provide emergency food, water, and support to rebuild farms.

Overnutrition in the UK
In contrast, the UK experiences overnutrition. People consume too many calories due to fast food availability, busy lifestyles leading to ready-meal diets, and high alcohol intake.

This contributes to rising obesity levels—predicted to reach 50% of adults and 25% of children by 2050. Health consequences include heart disease, stroke, diabetes and reduced physical health.

Week 12

Fair Trade
Chocolate is produced from cocoa beans, which grow in tropical regions located around 20° north and south of the equator. After harvesting, the beans are picked, dried and roasted, then ground down to create the base ingredients used in chocolate production.

Most cocoa is grown in West Africa, where the climate is hot and humid. Despite the high global demand for chocolate, cocoa farmers often earn very low incomes, receiving only a small fraction of the retail price of a chocolate bar—sometimes just a few pence from a 70p bar. This imbalance happens because most profits are made further along the supply chain by manufacturers and retailers.

As a result, many farmers experience poverty, unstable income and limited opportunities to improve their livelihoods.

Fairer trade seeks to address these inequalities by ensuring farmers receive better, more reliable prices, improved working conditions and increased support for sustainable farming practices.

Vocabulary

Sustainable - using resources in a way that meets present needs without harming the ability of future generations to meet theirs.

Fair trade - a system that ensures producers in developing countries receive fair prices, decent working conditions, and greater economic security.

Aid - help or support given by one country or organisation to another, usually to improve living conditions or respond to a crisis.

Drought - a prolonged period of unusually low rainfall that leads to water shortages in the environment.

Geography

Week 13

A biome is a large-scale ecosystem defined by its climate, vegetation, and animal life. Plants and animals in each biome have **adaptations** that enable them to survive in those specific environmental conditions.

Major World Biomes
The eight major biomes are: tropical rainforest, desert, deciduous forest, coniferous forest, tundra, savannah grassland, temperate grassland, and Mediterranean.

Global Distribution
Biome distribution is controlled largely by **latitude**, which affects temperature and solar concentration. Areas near the **Equator** are hotter because the sun's energy is more concentrated, while the poles are colder due to more dispersed energy. This creates predictable biome zones (e.g., tundra above 60°N, savannah between rainforest and desert belts).

Climate as a Key Influence
Climate—especially temperature, precipitation and seasonality—determines vegetation types, soil quality, and animal diversity, explaining why savannahs differ greatly from cold, nutrient-poor tundra regions.

Week 14

Savannah Grasslands:
Savannah grasslands are large biomes defined by a warm climate and a mixture of grasses with scattered trees.

They occur mainly between the tropics and experience two distinct seasons: a wet season with heavy rainfall and a dry season with very little rain.

Rainfall is highly seasonal, peaking in March (239 mm) and reaching its lowest in October (36 mm).

Temperatures remain consistently warm throughout the year, staying between 20–26°C, with an average of 23°C.

Savannahs support diverse wildlife and iconic landscapes, such as the Serengeti in East Africa.

These regions feature open plains, scattered vegetation and habitats shaped by seasonal rainfall patterns.

Overall, savannahs are defined by their climate, vegetation structure and predictable seasonal changes.

Week 15

Overview of Savannah Vegetation
Savannah plants must survive long dry seasons, shorter wet seasons, frequent fires, and grazing pressure. Their **adaptations** help them conserve water, protect themselves from herbivores, and withstand harsh climates.

Baobab Tree
The baobab grows up to 25 m and can live thousands of years. It stores water in its thick trunk, has fire-resistant bark, and sheds leaves for nine months to reduce water loss. Deep **taproots** help it access moisture in dry seasons, and its height keeps leaves out of reach of many animals. Its bark, fruit, leaves and trunk are used by people.

Acacia Tree
Acacias have small leaves, long thorns, bitter-tasting chemicals, and deep **taproots.** They are protected by aggressive ants that defend the tree and clean fungal growth.

Candelabra Tree & Elephant Grass
The candelabra tree stores water like a cactus and uses spines instead of leaves. Elephant grass grows in dense, sharp-bladed clumps, offering wildlife shelter and farmers useful fodder.

Vocabulary

Biome - a large geographic area defined by its climate, soils, plants, and animals.

Adaptations - the specialised features or behaviours that help plants and animals survive and reproduce in their specific environments.

Latitude - the distance north or south of the Equator, measured in degrees.

Vegetation - the collective term for all plant life growing in an area.

Tap roots - long, deeply-growing roots that anchor a plant and allow it to reach water stored far below the surface.

Geography

Week 16

Overview of Savannah Animals
The African savannah is home to a wide variety of animals including elephants, giraffes, lions, cheetahs, zebras, rhinos, ostriches, meerkats, mandrills, African wild dogs, secretary birds and ground hornbills. These species face challenges such as heat, drought, predators and limited shelter.

Key Physical Adaptations
Many animals have evolved body features to survive. Examples include giraffes' long necks for reaching food, elephants' large ears to keep cool and widen vision, and rhinos' thick skin for protection. Zebras' stripes confuse predators and insects, while ostriches' long legs support fast running. Birds like secretary birds and hornbills have strong legs or powerful beaks for hunting.

Behavioural Adaptations
Predators such as cheetahs and African wild dogs rely on speed, teamwork and sharp senses. Forward-facing eyes help hunters judge distance, while prey species use camouflage, wide vision and group behaviour to detect danger.

Week 17

Who Are the Maasai?
The Maasai are a **semi-nomadic** tribe living in the savannah regions of Kenya and northern Tanzania, known as the Maasai Mara.

Cattle and Daily Life
Cattle are central to Maasai life, providing milk, blood, and materials for homes. Wealth is measured by the number of cows a man owns. Because cattle need fresh grazing, the Maasai move frequently and rebuild their homes each time.

Homes and Villages
Women build houses from sticks, grass, mud and cow dung. Villages are arranged in circles and protected with thorn fences to keep out predators like lions.

Culture, Clothing and Roles
The Maasai wear bright red clothing and intricate beadwork with symbolic colours. Men traditionally become warriors at around 14, while women care for children, cook, and make jewellery.

Children and Traditions
Children herd animals, help at home, and increasingly attend school. Music and dance are important, including the famous jumping dance.

Week 18

Desertification is the process where productive land becomes desert, affecting two-thirds of Africa's drylands.

Main Causes
Key drivers include **overfarming, overgrazing, deforestation, overpopulation,** excessive fertiliser use, and reduced rainfall.

Key Effects
Soil quality declines, vegetation is lost, and land becomes unusable, threatening food security and local livelihoods.

Why Prevention Matters
Desertification reduces soil fertility, increases food insecurity, triggers migration and conflict, and damages biodiversity and economic stability.

Management Strategies
Water and soil management, **national parks,** tree planting, and appropriate technology help reduce erosion and improve soil and water retention.

Sustainability
Using local materials, community involvement, and long-term solutions—such as stone lines and the Great Green Wall—creates sustainable, low-cost protection.

Vocabulary

Semi-nomadic - living a lifestyle in which people move from place to place for part of the year—often to find water or grazing for animals.

Overfarming - when land is farmed too intensively or too frequently, causing the soil to lose nutrients faster than they can be replaced.

Overgrazing - when too many animals feed on the same land for too long, removing vegetation faster than it can regrow and damaging the soil.

National parks – protected areas of land set aside by governments to conserve wildlife, landscapes, and natural resources, while limiting human activities that could cause damage.

History

Week 1

Why was a Police Force necessary in Victorian England?

In the early 1800s, Britain had no organised police force. Law and order was enforced by parish constables and watchmen, who were often unpaid, poorly trained and ineffective. As a result, crime was difficult to prevent or control.
During the Victorian period, rapid industrialisation and urbanisation led to huge population growth in towns and cities. Overcrowded housing, poverty and unemployment increased crime such as theft, violence and public disorder. Existing systems could not cope with these changes.
There was also growing concern about public order. Riots, protests and crime waves caused fear among the middle and upper classes, who wanted better protection for people and property. Events such as food riots and Chartist protests highlighted the need for stronger law enforcement.
In response, Sir Robert Peel set up the Metropolitan Police Force in 1829. The new police aimed to prevent crime rather than just punish it, patrolling streets regularly. Although some people feared the police would limit freedom, over time they became accepted as an essential part of Victorian society.

Week 2

How was Cornwall affected by the Industrial Revolution?

The Industrial Revolution affected Cornwall differently from industrial areas such as Manchester or Birmingham. Cornwall did not develop large factories, but it became a major centre for mining, especially tin and copper. New technologies, such as steam engines, were used to pump water from deep mines, allowing them to operate for longer and at greater depths.
Men worked underground in dangerous conditions, while women and girls, known as Bal Maidens, worked above ground crushing and sorting ore. They were paid low wages and worked long hours in harsh weather.
Children were also employed in the mines. Young boys worked underground opening and closing ventilation doors or carrying materials, while girls often worked as Bal Maidens from a very young age. This work was physically demanding and dangerous, and many children missed out on education.
When copper prices fell in the late 1800s, many mines closed. This led to unemployment and forced thousands of Cornish people to emigrate to other countries such as the USA and Australia.

Week 3

Who were the Suffragettes and what tactics did they use?

The Suffragettes were women who campaigned for the right to vote in Britain in the early 1900s. They were led by Emmeline Pankhurst and members of the Women's Social and Political Union (WSPU), founded in 1903. Unlike earlier campaigners, they believed that peaceful methods had failed and that stronger action was needed.
The Suffragettes used militant tactics to attract attention and force the government to act. These included protests, marches and heckling politicians. Some Suffragettes also carried out damage to property, such as breaking windows, cutting telephone wires and setting fire to empty buildings. They believed this would make their cause impossible to ignore.
Many Suffragettes were arrested and sent to prison. While imprisoned, some went on hunger strike to protest against their treatment. The government responded with force-feeding, which caused public outrage. Later, the government passed the Cat and Mouse Act (1913), allowing ill prisoners to be released and then re-arrested once they recovered.

Vocabulary

Metropolitan Police – the first professional police force set up in London in 1829
Mining – the extraction of minerals such as tin and copper from the ground
Bal maidens – women and girls who worked above ground in Cornish mines crushing and sorting ore
Child labour – the employment of children in hard and often dangerous jobs
Emigration – leaving one country or region to settle in another
Suffragettes – women who used militant action to campaign for the right to vote
Militant – using strong or confrontational methods to achieve a goal

History

Week 4

Were the Suffragettes justified in their tactics?

There are many arguments to support the violent tactics used by the Suffragettes:

- Peaceful campaigning had failed for many years.
- Women had no vote but were expected to obey laws they had no role in creating.
- Law-breaking gained attention and publicity.
- Hunger strikes and force-feeding created sympathy from the public and focused attention on votes for women.

However, there are many arguments against also:

- Violence and damage scared the public.
- Breaking the law was seen as wrong and undemocratic.
- Some politicians used violence as an excuse to delay votes for women- this was damaging to the Suffragettes.
- Peaceful Suffragists (non violent campaigners) gained support without violence.

Week 5

"The Industrial Revolution was not just about factories, but about a transformation in the whole way people lived and worked."

Reasons to agree:

- **Urbanisation** – People moved from the countryside to towns, changing where and how they lived.
- **Working life changed** – Factory hours, discipline and wages replaced home-based work.
- **Family life changed** – Women and children worked; family roles shifted.
- **Living conditions changed** – Overcrowded housing, pollution and poor sanitation affected daily life.

Reasons to disagree:

- **Factories were central** – Most changes were caused by factory work and machines.
- **Not everyone was affected equally** – Many rural areas changed slowly.
- **Some jobs stayed the same** – Agriculture and domestic work continued much as before.

Week 6

What were the main long-term causes of World War One?

Historians give the main causes of World War One as:

Militarism – the build-up of armies and weapons, and the belief that a country should be ready to fight wars.
Alliances – agreements between countries to support and defend each other if war broke out.
Imperialism – powerful countries competing to control land, resources and people in other parts of the world.
Nationalism – strong pride in your country, often believing it is better than others and should be more powerful.

We can remember this as M.A.I.N.

Vocabulary

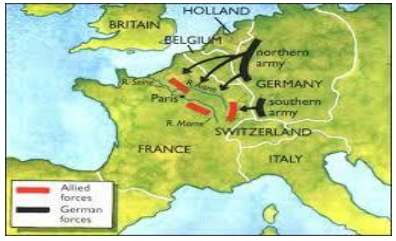
Militant – using strong or confrontational actions, sometimes including breaking the law, to achieve a goal
Protest – actions taken to show disagreement and demand change
Militarism – the build-up of armies and weapons, and the belief that a country should be ready to fight wars.
Alliances – agreements between countries
Imperialism – powerful countries competing to control land, resources and people in other parts of the world.
Nationalism – strong pride in your country, often believing it is better than others and should be more powerful.

History

Week 7

Why did the Schlieffen Plan fail?

The Schlieffen Plan was Germany's plan to avoid fighting a war on two fronts in World War One. Germany planned to defeat France quickly by invading through neutral Belgium, then turn east to fight Russia. However, the plan failed for several reasons. The German army underestimated Belgian resistance, and fighting slowed the advance. Britain joined the war to defend Belgium, adding another powerful enemy. The plan also relied on speed and precise timing, but German troops became exhausted and supply lines were stretched. At the same time, Russia mobilised more quickly than expected, forcing Germany to move troops away from the Western Front. Finally, Germany was stopped at the Battle of the Marne (1914). This ended hopes of a quick victory and led to trench warfare and a long, deadly war of attrition.



Week 8

What were conditions like in the trenches?

Life in the trenches during the First World War was harsh, dangerous and uncomfortable. Trenches were often muddy and waterlogged, especially after heavy rain. Soldiers stood in cold water for long periods, which could cause trench foot.

The trenches were dirty and overcrowded. Rats fed on food scraps and sometimes on dead bodies, while lice caused itching and spread disease. The smell was unpleasant due to rotting waste, unwashed clothes and corpses.

Soldiers faced constant danger. Enemy shellfire, snipers and gas attacks meant men were rarely safe. Even when not fighting, soldiers lived with fear and exhaustion, as loud explosions made sleep difficult.

Overall, trench conditions were physically and mentally draining, leading to illness, low morale and long-term trauma.

Week 9

Why is the Battle of the Somme so infamous?

The Battle of the Somme (1916) is infamous because of its huge loss of life and limited success. On the first day alone, nearly 60,000 British soldiers were killed or wounded, making it the bloodiest day in British military history.

The battle showed the deadly impact of modern weapons such as machine guns and heavy artillery. Many soldiers were ordered to walk across no man's land, where they were cut down by enemy fire. This highlighted poor tactics and planning by generals.

Conditions were also terrible. Soldiers fought in muddy trenches, under constant shellfire, with little protection. Despite months of fighting and huge casualties, only a small amount of land was gained.

The Somme became a symbol of the horrors of trench warfare and raised serious questions about military leadership, especially the role of General Haig.

Vocabulary

Neutrality – not taking sides in a war (Belgium was neutral)
Mobilisation – preparing an army for war
Trench warfare – fighting from long ditches dug into the ground
Trench foot – a painful condition caused by standing in wet, cold trenches
Lice – small insects that lived in clothing and spread disease
Shellfire – explosions caused by artillery shells
Casualties – soldiers killed, wounded or missing
No man's land – the dangerous area between opposing trenches
Machine gun – a rapid-firing weapon that caused heavy losses

History

Week 10

Does General Haig deserve his nickname "The Butcher of the Somme"?

Reasons why Haig *does* deserve the nickname

- Huge numbers of soldiers were killed or wounded, especially on the first day.
- Soldiers were ordered to attack across no man's land, facing machine-gun fire.
- Haig continued the battle for months despite high casualties.
- Many felt generals were out of touch with conditions in the trenches.

Reasons why Haig *does not* deserve the nickname

- Haig believed heavy losses were necessary to wear down the enemy.
- The Somme helped weaken the German army and relieve pressure on France.
- Tactics improved during the battle, including better artillery and use of tanks.
- Haig was using the best military knowledge available at the time.

Week 11

What was the role of women during World War One?

During the First World War, women played a vital role in keeping Britain running while millions of men were away fighting. Women took on many jobs that had previously been done by men, especially in factories, transport, farming, and offices. Thousands worked in munitions factories, making weapons and shells, which was dangerous work and could damage their health.

Women also contributed directly to the war effort by working as nurses near the front line, caring for injured soldiers. Others joined organisations such as the Women's Land Army, helping to produce food at home, and volunteered in roles supporting the armed forces.

The war changed attitudes towards women because it showed that they were capable of skilled, responsible and physically demanding work. However, when the war ended, many women were expected to give up their jobs and return to traditional roles in the home. Despite this, their contribution helped strengthen arguments for greater rights, including the vote, which some women gained in 1918.

Week 12

How did medicine develop throughout the war?

During the First World War, medicine developed quickly because of the huge number of injured soldiers. At the start of the war, medical care was basic and many soldiers died from infection rather than wounds. As the war continued, doctors learned from experience and improved treatments.

One major development was better treatment of wounds. Doctors realised the importance of cleaning wounds properly to prevent infection. New antiseptics were used, and surgeons became more skilled at removing damaged tissue. Blood transfusions were also developed, helping to save lives from severe blood loss.

Medicine also improved through better organisation. Casualty Clearing Stations were set up closer to the front line so soldiers could be treated more quickly. Ambulances replaced horse-drawn transport, speeding up care.

The war led to advances in plastic surgery, especially for facial injuries. Doctors like Harold Gillies developed new techniques to rebuild faces, helping injured soldiers recover physically and mentally.

Vocabulary

Key Words

Munitions – weapons, ammunition and explosives used in war
Women's Land Army – an organisation where women worked on farms to replace male workers
Suffrage – the right to vote in political elections
Infection – illness caused when germs enter a wound.
Antiseptic – a chemical used to kill germs.
Blood transfusion – giving blood to replace blood lost through injury.
Casualty Clearing Stations – medical centres set up close to the front line where injured soldiers were given emergency treatment before being moved to hospitals.

History

Week 13

How Important was DORA?

DORA (the Defence of the Realm Act) was very important during the First World War because it gave the British government strong powers to control the country and support the war effort. Introduced in 1914, DORA allowed the government to change laws quickly in an emergency.
Under DORA, the government controlled information. Newspapers were censored so they could not print stories that might lower morale or help the enemy. This helped keep public support for the war and prevented panic. The government also took control of industry and workers, directing factories to produce weapons and supplies and limiting strikes.
DORA affected everyday life. People could be punished for breaking blackout rules, speaking against the war, or spreading rumours. Pubs had shorter opening hours, and some land and buildings were taken over for military use. These controls helped Britain focus all resources on winning the war.
However, DORA was controversial. It limited freedom of speech and gave the government huge power over people's lives. Some felt these controls were unfair.

Week 14

What was the war like in the air?

During the First World War, fighting in the air was new and dangerous. At the start of the war, aircraft were mainly used for reconnaissance, meaning observing enemy positions and taking photographs. Planes were fragile, open-cockpit machines made of wood and fabric.

As the war continued, air combat developed. Planes were fitted with machine guns, leading to dogfights in the sky. Pilots became famous as fighter aces, and air battles were fast, risky and deadly. There were no parachutes for most pilots, so being shot down often meant death.

Aircraft were also used for bombing. German Zeppelin airships and later aeroplanes bombed British towns, causing fear among civilians on the Home Front. Although damage was limited, these raids showed that war could reach beyond the battlefield.

Overall, the war in the air was dangerous, experimental and constantly changing. While it did not win the war on its own, it became an important new part of modern warfare.

Week 15

Why was an armistice declared?

An armistice was declared in November 1918 because Germany could no longer continue fighting in the First World War. After four years of war, German troops were exhausted, short of food and supplies, and losing battles on the Western Front. New weapons and fresh American soldiers gave the Allies a clear advantage.
At home, Germany faced serious problems. The British naval blockade caused food shortages, leading to hunger and unrest. Many civilians were suffering, and strikes and protests broke out. German leaders feared a revolution if the war continued. Germany's allies, such as Austria-Hungary and the Ottoman Empire, had already begun to collapse. This left Germany isolated and unable to win. In autumn 1918, the Allies launched a series of successful attacks that pushed German forces back. An armistice was requested by Germany to stop the fighting while peace terms were discussed. It came into effect at 11am on 11 November 1918, ending the fighting on the Western Front.
The armistice did not end the war officially, but it stopped the violence and led to peace talks, which resulted in the Treaty of Versailles in 1919.

Vocabulary

Key Words

DORA – a law giving the government emergency powers during WW1.
Censorship – controlling what information can be shared.
Morale – people's confidence and determination.
Reconnaissance – observing the enemy to gather information.
Dogfight – a short, close air battle between planes.
Fighter ace – a pilot who shot down many enemy aircraft.
Armistice – an agreement to stop fighting.
Blockade – stopping supplies from reaching a country.
Treaty – a formal agreement to end a war.

History

Week 16

What was the impact on the Treaty of Versailles?

The armistice and the way the First World War ended had a big impact on the Treaty of Versailles. Because Germany asked to stop fighting, the Allies believed Germany had accepted defeat. This meant the Allies felt justified in setting harsh peace terms.

The war had caused huge damage and loss of life, especially in France and Belgium. As a result, the Treaty punished Germany to prevent it from becoming strong again. Germany was forced to accept blame for starting the war, lose land, limit its army and pay reparations to the Allies.

Germany was not allowed to take part in the peace talks. This made the Treaty feel unfair and humiliating to many Germans. Anger over the Treaty caused resentment and instability in Germany during the 1920s and 1930s.
Overall, the armistice and Germany's defeat led to a Treaty that was very strict. While the Allies believed it would secure peace, it instead created bitterness and tension that later helped cause the Second World War.

Week 17

"The most lasting impact of the First World War was felt at home, not on the battlefield."

Reasons to agree (impact felt at home):

- **Social change** – The war changed everyday life. Women took on new jobs and gained more independence, leading to greater rights, including the vote in 1918.
- **Government control** – The state became more involved in people's lives through rationing, propaganda and laws like **DORA**, setting a pattern for future wars.
- **Economic impact** – Britain faced debt, unemployment and poverty after the war, which affected families and communities for years.

Reasons to disagree (impact felt on the battlefield):

- **Loss of life** – Millions of soldiers were killed or injured. Many survivors lived with physical disabilities or mental trauma for the rest of their lives.
- **Military change** – The war changed warfare forever, introducing tanks, aircraft and modern weapons that shaped future conflicts.
- **International consequences** – Fighting led directly to the **Treaty of Versailles**, which created tensions and helped cause the Second World War.

Week 18

Key Historical Terminology for extended writing

Significance Why something is important

Change Making something different

Continuity Something that stays the same

Describe Outline the key facts or ideas

Explain Give reasons for details, using words and phrases like "Because" or "This was important because"

Assess Break an event down into parts and decide what makes it important- "This was a bigger change than ___ because…"

Key Historical terminology for source work

Provenance Where a source comes from, who wrote it, details about the source?

Nature What a source is, such as a diary entry, a photograph?

Origin Who made it, when it was made?

Purpose Why was it made?

Reliability Can we trust the information given or should we question it?

Vocabulary

Key Words

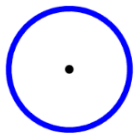
Reparations – money Germany was forced to pay to the Allies to cover damage caused by the war, especially to buildings, land and industry.
War guilt – a clause in the Treaty that forced Germany to accept full blame for starting the war, which many Germans felt was unfair.
Humiliation – a feeling of deep shame and loss of pride caused by being treated unfairly or publicly blamed.
Home Front – the everyday lives of civilians during the war, including work, rationing and government control.
Battlefield – areas where fighting took place between soldiers during the war.

Maths

Week 1

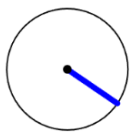
Circles

Circumference



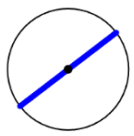
The curve all the way round the circle

Radius



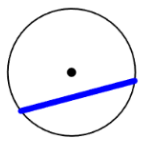
A straight line from the centre to the circumference *(plural: radii)*

Diameter



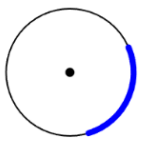
A straight line all the way across a circle, passing through the centre

Chord



A straight line from one point on the circumference to another

Arc



A curved part of the circumference

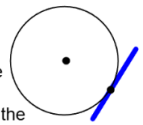
Sector

A 2D shape formed from an arc of a circle and two radii.

Segment

A 2D shape formed from an arc of a circle and a chord.

Tangent



A straight line outside the circle that meets the circumference at a point, but does not cross it.

Week 2

Area of Circles

Area of a circle = $\pi \times \text{radius}^2$

$$A = \pi r^2$$

The area of a sector is $\frac{\theta}{360} \times \pi r^2$

Circumference of Circles

Circumference = $\pi \times$ diameter

$$C = \pi d$$

Circumference = $2 \times \pi \times$ radius

$$C = 2\pi r$$

Week 3

Percentage of an Amount (non-calculator)

To find 50%: *divide by 2*

To find 10%: *divide by 10*

To find 1%: *divide by 100*

To find 20%: *find 10%, multiply by 2*

To find 3%: *find 1%, multiply by 3*

Percentage of an Amount (calculator)

Convert the **percentage** to a decimal, then multiply the amount by the decimal.

Calculate 42% of 60

$= 0.42 \times 60$

$= 25.2$

Calculate 142.3% of 60

$= 1.423 \times 60$

$= 85.38$

Vocabulary

Area: the amount of space inside a 2D shape

Circumference: the length around the outside of a circle

Percentage: Out of 100

Maths

Week 4

Percentage Increase

For a **percentage** increase, add the **percentage** to 100%, then convert to a decimal. Multiply the amount by this decimal.

Increase 38 by 1.3%

$= 38 \times (100 + 1.3)\%$
$= 38 \times 101.3\%$
$= 38 \times 1.013$
$= 38.494$

Percentage Decrease

For a **percentage** decrease, subtract the **percentage** from 100%, then convert to a decimal. Multiply the amount by this decimal.

Decrease 38 by 0.9%

$= 38 \times (100 - 0.9)\%$
$= 38 \times 99.1\%$
$= 38 \times 0.991$
$= 37.658$

Week 5

Ratios and Fractions

The ratio of apples to pears is 3 : 5.
What fraction are apples? $= \frac{3}{8}$

A bag contains blue and red marbles.
$\frac{2}{7}$ of the marbles are red.
What is the ratio of blue : red marbles? $= 5 : 2$

If $\frac{2}{7}$ are red, then 2 out of 7 are red, meaning 5 are not.

Three-part **Ratios**

A fruit bowl contains apples, bananas and pears.

The ratio of apples to bananas is 3 : 4
The ratio of bananas to pears is 6 : 1

Work out the ratio **apples : bananas : pears** in the simplest form.

apples : bananas
3 : 4
9 : 12

bananas : pears
6 : 1
12 : 2

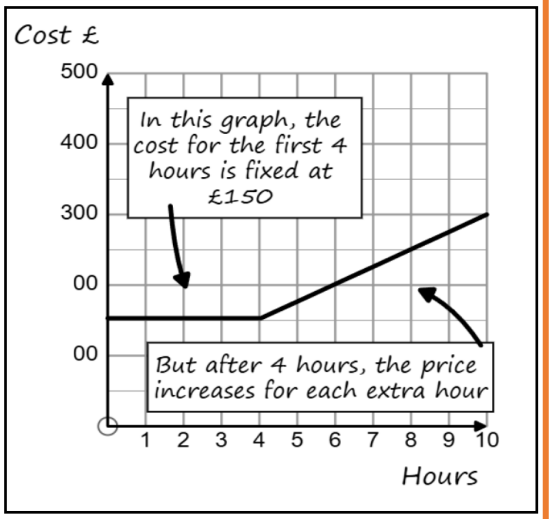
apples : bananas : pears
9 : 12 : 2

Week 6

Conversion Graphs

We can use graphs to display real life relationships between variables.

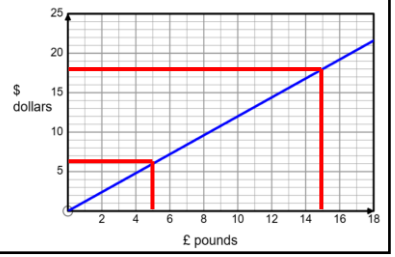
The gradient of the graph may tell us about a rate and the y-intercept may show us an initial value.



The graph shows the relationship between pounds and dollars.
Use the graph to:

a) Convert £5 to dollars.
$6

b) Convert $18 into pounds
£15



Vocabulary

Percentage: Out of 100

Ratio: tells us the relationship between two or more values. The relationship is written with a colon " : "

Conversion: changing one quantity or unit into another.

Gradient: steepness of a line or curve. Found by dividing the change in y-coordinates by the change in x-coordinates.

Maths

Week 7

Time

To convert minutes to hours, divide by 60.

Convert 150 minutes to hours

1 hour = 60 minutes,

150 ÷ 60 = 2.5

To convert hours to minutes, multiply by 60.

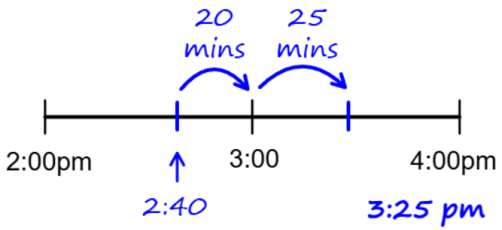
Convert 3.2 hours to minutes

1 hour = 60 minutes,

3.2 × 60 = 192 minutes

Calculating with time

Work out the time 45 minutes after 2:40 pm



Week 8

Speed

Common units:

m/s	km/h
metres per second	kilometres per hour

mph
miles per hour

Calculating with **speed**

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

Ruby walks 20 metres in 4 seconds

Work out Ruby's speed.

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{20}{4} = 5 \text{ m/s}$$

$$\text{Distance} = \text{Speed} \times \text{Time}$$

Stewart cycles at an average speed of 12 km/h

Work out how far Stewart cycles in 2 hours.

Distance = Speed × Time

= 12 × 2

= 24 km

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

Tina drives at an average speed of 50 mph

How long will it take for Tina to drive 150 miles?

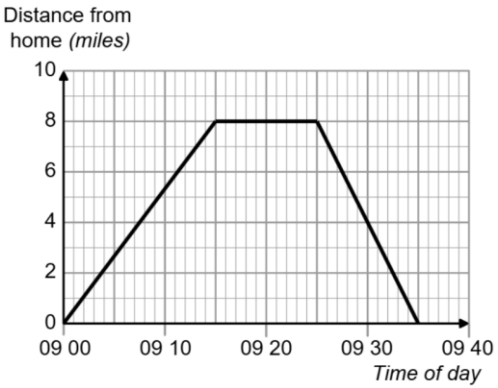
$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{150}{50} = 3 \text{ hours}$$

Week 9

Distance-Time Graphs

A distance-time graph shows how an object travelled over time.

The **gradient** of the line is the speed. Where the line is **horizontal** (and the **gradient** is 0), the object is not moving.



a) For how many minutes was Lucy at the supermarket?

09 15 → 09 25

10 minutes

Look for the horizontal part of the graph

b) How far is Lucy from her home at 09 30 ?

4 miles

Read up from 09 30 and across to 4

c) Work out Lucy's speed, in mph, for the first 15 minutes of her journey.

15 mins = $\frac{1}{4}$ hour

Speed = $8 \div \frac{1}{4}$ = 32 mph

Vocabulary

Speed: a measure of the distance something travels over time.

Gradient: steepness of a line or curve. Found by dividing the change in y-coordinates by the change in x-coordinates.

Horizontal: a line that goes from left to right or right to left.

Maths

Week 10

Factorising Single Brackets

To fully **factorise** means to rewrite the expression using brackets, with the **HCF** (highest common **factor**) outside the bracket.

$5b - 25$

hcf is 5

$5b - 25 = 5(b - 5)$

$12a + 8$

hcf is 4

$12a + 8 = 4(3a + 2)$

$2n^2 + 6n$

hcf is 2n

$2n^2 + 6n = 2n(n + 3)$

Week 11

Factorising Double Brackets

The general form of a **quadratic expression** is $ax^2 + bx + c$.

To factorise a **quadratic expression** means to rewrite the expression as a **product** of two brackets. To do this, find two numbers that multiply to make the c value, and add to make the b value.

Factorise $x^2 + 2x - 15$

	x	
x	x^2	
		-15

The numbers here need to **multiply to make -15** *and* **add up to +2**

	x	$+5$
x	x^2	$+5x$
-3	$-3x$	-15

$(x + 5)(x - 3)$

Factorise $x^2 - 7x + 10$

	x	
x	x^2	
		$+10$

The numbers here need to **multiply to make +10** *and* **add up to -7**

	x	-2
x	x^2	$-2x$
-5	$-5x$	$+10$

$(x - 2)(x - 5)$

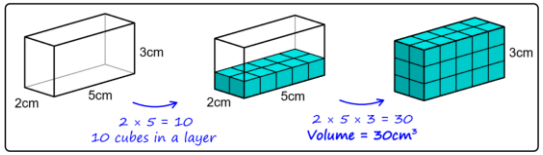
Week 12

Volume

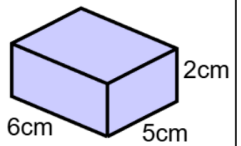
Volume is measured in cubes, e.g. cm^3 (cubic centimetres or centimetres cubed)

Volume of Cubes and Cuboids

Volume of a cube or cuboid = length x width x height



What is the volume of the cuboid?



$5 \times 2 \times 6 = 60cm^3$

Vocabulary

Factorise: to write an expression as the product of its factors

Factors: numbers or expressions that multiply together to make the **product**.

HCF: the highest common factor – the largest factor shared by two or more terms.

Quadratic expression: an expression where the highest power of x is 2.

Product: the result of multiplying numbers together.

Volume: the amount of space inside a 3D shape

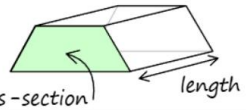
Maths

Week 13

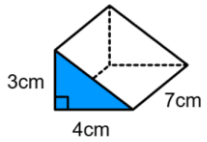
Volume of **Prisms**

To work out the **volume** of a **prism**, calculate the area of the **cross-section** then multiply by the height.

The volume of a prism is
cross-section area × length



Work out the volume:



Triangle area = $\frac{1}{2} \times 4 \times 3$
= 6

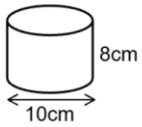
Volume = 6 × 7
= **42cm³**

Volume of Cylinders

To work out the **volume** of a cylinder, calculate the area of the **cross-section** (circle) then multiply by the height.

The volume of a cylinder is $\pi r^2 h$

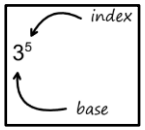
Work out the volume of this cylinder, correct to 3 significant figures.



Base area = $\pi \times 5^2$
Volume = $\pi \times 5^2 \times 8 = 628\text{cm}^3$

Week 14

Indices



Multiplication Law of **Indices**

When multiplying with the same bases, add the **indices**.

Write $5^6 \times 5$ as a power of 5
$= 5^{6+1} = 5^7$

Write $7^{-2} \times 7^{-4}$ as a power of 7
$= 7^{-2+-4} = 7^{-6}$

Division Law of **Indices**

When dividing with the same bases, subtract the **indices.**

Write $5^8 \div 5^2$ as a power of 5
$= 5^{8-2} = 5^6$

Write $\frac{2^4}{2^{-3}}$ as a single power
$= 2^{4--3} = 2^7$

Power Law of **Indices**

When a base is raised to more than one **index**, multiply the **indices**

$(2^3)^5 = 2^{15}$

Week 15

Reciprocals

The **reciprocal** of 3 is $\frac{1}{3}$ as $3 \times \frac{1}{3} = 1$

The **reciprocal** of $\frac{2}{3}$ is $\frac{3}{2}$ as $\frac{2}{3} \times \frac{3}{2} = 1$

Negative Indices

Any base with the **index** of 0 equals 1

Evaluate 7^0
$= 1$

A negative **index** is the **reciprocal** of a positive **index.**

Evaluate $(5)^{-2}$
$= \left(\frac{1}{5}\right)^2 = \frac{1}{25}$

Evaluate $(3)^{-3}$
$3^3 = 27$, so $3^{-3} = \frac{1}{27}$

Fractional Indices

An index of $\frac{1}{n}$ is equal to taking the nth **root**.

$a^{\frac{1}{n}} = \sqrt[n]{a}$

Evaluate $64^{\frac{1}{2}}$
$= \sqrt{64}$
$= 8$

Vocabulary

Volume: the amount of space inside a 3D shape.

Prism: a 3D shape that has a constant cross-section.

Cross-section: the same shape which goes all the way through the 3D shape.

Index/Indices: tells us how many times to multiply the base by itself.

Reciprocals: pairs of numbers that multiply to make 1.

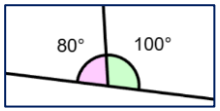
Root: The root of a number is another number, which when multiplied by itself a given number of times, equals the original number.

Maths

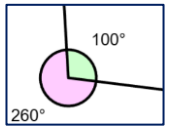
Week 16

Angle Rules

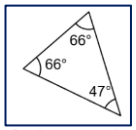
Angles on a straight line add to 180°.



Angles around a point add to 360°.



Angles in a triangle add to 180°.



the dashes on the sides show equal lengths

Isosceles Triangle
2 equal angles and 2 equal sides

Equilateral Triangle
3 equal angles and 3 equal sides

the base is the side without the dash

Scalene Triangle
No equal angles or sides

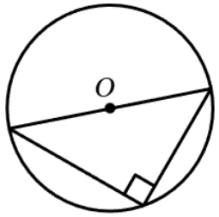
Angles in a **quadrilateral** add to 360°.

Vertically Opposite Angles: When two straight lines cross, the angles that are opposite each other are equal

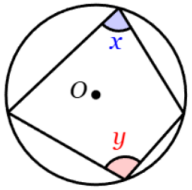
Week 17

Circle Theorems

The angle in a semicircle is a right angle.



Opposite angles of a cyclic quadrilateral sum to 180°.

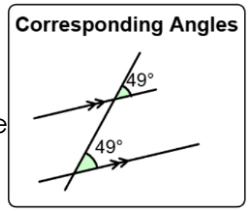


$x + y = 180°$

Week 18

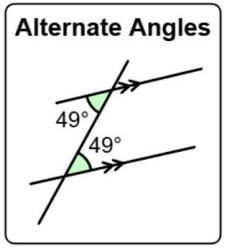
Corresponding Angles on **Parallel** Lines

Corresponding angles are on the same side of a **transversal**,line in the same position relative to the parallel lines. Corresponding angles on parallel lines are equal.



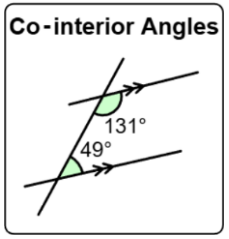
Alternate Angles on **Parallel** Lines

Alternate angles are on the opposite sides of a transversal line between the parallel lines.
Alternate angles on parallel lines are equal.



Co-interior angles on **Parallel** Lines

Co-interior angles are on the same side of a **transversal** line and between the parallel lines.
Co-interior angles add up to 180°.



Vocabulary

Quadrilateral: A 4-sided shape with straight edges.

Transversal line : A straight line that intersects two or more parallel lines

Parallel: two lines which stay the same distance apart (they never meet).

Co-interior: two angles inside two **parallel** lines, on the same side as the **transversal** line, and they add up to 180°.

Music

Weeks 1 & 2

Characteristics of Rock 'n' Roll
Strong beat: A steady, driving rhythm you can tap your foot to.
Electric guitars: Often loud and played with energy or distortion.
Catchy melodies: Easy to remember and sing along with.
Simple chords: Usually uses just a few chords repeated throughout.
Fast tempo: Songs are often upbeat and lively.
12-bar blues: Many songs follow this classic chord pattern.
Call and response: A musical conversation between instruments or voice parts.
Influence from blues and country: Rock 'n' Roll grew out of these older styles.

Weeks 3 & 4

Why Primary Chords Are Important in Rock 'n' Roll

- Rock 'n' Roll songs are built on simple, repetitive progressions, usually using only I, IV and V.
- These chords create strong harmonic movement that feels familiar, energetic, and catchy.
- Many classic songs use the 12-bar blues structure, which is based entirely on I, IV and V.

12-Bar Blues
This pattern is used in countless Rock 'n' Roll songs, including music by Elvis Presley, Chuck Berry, Little Richard, and later The Beatles and The Rolling Stones.

Weeks 5 & 6

What is an Arpeggio?

- An arpeggio is when the notes of a chord are played one at a time, rather than all together.
- Also known as a broken chord.

Why Arpeggios Are Important

- They help musicians understand chord structure.
- Common in many genres including Rock 'n' Roll, pop, classical, and British Invasion music.
- Used to create smoother, more melodic basslines and riffs.
- Provide shape and movement in a piece of music.

Vocabulary

Rock 'n' Roll – A lively 1950s style blending blues, country and rhythm & blues, using strong backbeats and energetic vocals.

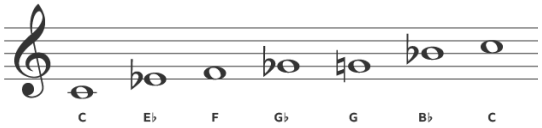
12-Bar Blues – A repeating 12-bar chord pattern using primary chords (I, IV, V).

Chord – Two or more notes played together.

Chord Progression – A sequence of chords played in a set order.

Weeks 7 & 8

The Blues Scale in C



Identities of a blues melody consisted of the following:

- many of the melodies move within the blues scale
- it was common to include bent notes usually the flattened third, fifth or seventh note of the scale
- the performer often improvises over a chord progression
- Melismas are heard in many blues vocal melodies

Weeks 9 & 10

Composing with Chord Progressions
Chord progressions are patterns: A chord progression is a sequence of chords played in a certain order – like a musical sentence.
Start simple: Many songs use just 3 or 4 chords, like C–G–Am–F. These can still sound great!
The key matters: Your chord progression should match the key of your song (e.g. if your song is in C major, use chords from that key).
Create mood and emotion: Different progressions can sound happy, sad, tense, or calm.
Repeat and vary: Repeating a progression helps the song feel familiar, but small changes keep it interesting.

Weeks 11 & 12

Chords – The Harmonic Foundation
Chords provide the underlying harmony of a piece. In styles like Rock 'n' Roll, Blues, and British Invasion, chords often follow simple patterns. These chord patterns create a structure for the bassline and improvisation to follow. Guitarists and keyboard players use strumming or comping patterns to outline these chords.

Walking Bass – Connecting the Harmony
A walking bassline moves smoothly between chord roots, usually in stepwise motion (moving by tones or semitones).

Music

Weeks 13 & 14	Weeks 15 & 16	Weeks 17 & 18	Vocabulary
Assessment – Focus on: • Components of a song • Song structure • Features of a good song • Four chord trick • Characteristics of Rock n Roll • Composing with Chord Progression • 12 Bar Blues • The Blues Scale	**Improvement:** • Keep It Simple and Catchy • Use **repetition** to make your music memorable. • Try **call and response**: play one phrase, then answer it with another. • Leave **space** between phrases – silence is part of the music! • Write lyrics that tell a story or express a feeling. Blues often talks about real-life problems or emotions. • Add a **hook** – a catchy line or phrase that repeats.	**Learning to follow an individual part as part of an ensemble** • Developing the skill to play your own musical part accurately while performing with others. • Requires listening carefully to the group to stay in time and in balance. • Involves watching for cues (visual or musical) to start, stop, or change section. • Means keeping steady tempo, correct entries, and confident rhythmic accuracy. • Helps the ensemble sound tight, coordinated, and musically unified.	

PSHE

Week 1 and 2

How can we manage peer pressure?

- **Say "no" confidently**: It's okay to say no if someone is asking you to do something you don't want to. You can say, "No, thanks" or "I'm not interested."
- **Have a reason**: Sometimes it helps to explain why you don't want to do something, like "I don't like it" or "It's not good for me."
- **Find friends who support you**: Spend time with friends who respect your choices and don't pressure you to do things that make you uncomfortable.

Week 3 and 4

What are the Protected Characteristics?

What are protected characteristics?
Protected characteristics are characteristics safeguarded against discrimination under the Equality Act 2010.
These include

- age,
- disability,
- gender reassignment,
- marriage and civil partnership,
- pregnancy and maternity,
- race,
- religion or belief,
- sex
- and sexual orientation.

Week 5 and 6

Top Tips for being a good listener

- **Pay attention**: Look at the person speaking and focus on what they're saying. Put away distractions like your phone.
- **Show you're listening**: Nod your head, smile, or make eye contact to show that you care about what they're saying.
- **Don't interrupt**: Let the person finish talking before you respond.
- **Ask questions**: If you're not sure about something, ask questions to understand better. This shows you care about what they're saying.

Week 7 and 8

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.
- **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-** you will see unrealistic body standards. Take breaks and remember that not everything online is real or healthy.

Week 9 and 10

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.

Week 11 and 12

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.
- **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.

Vocabulary

Assertive – Being confident and calm when saying what you think or feel, without being rude or aggressive.
Protected characteristics – Personal features that are protected by law from discrimination under the Equality Act 2010.
Discrimination – Treating someone unfairly because of who they are or a characteristic they have.
Active listening – Fully focusing on what someone is saying and showing you understand and care.
Body image – How someone feels and thinks about their own body and appearance.
Influencer – A person online who can affect people's opinions, choices, or behaviour through social media.

PSHE

Week 13 and 14

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.

Week 15 and 16

How do you send an email?

- **Use a clear subject line** – briefly say what the email is about (e.g. *Homework question* or *Missed lesson work*).
- **Start politely** – use a greeting like *Dear Miss Smith* or *Hello Mr Jones*.
- **Be clear and polite** – explain what you need calmly and respectfully, using full sentences.
- **Check spelling and tone** – avoid slang, emojis, or capital letters (which can look like shouting).
- **End properly** – thank the reader and sign off with *Kind regards* or *Thank you*, followed by your name and class.

Week 17 and 18

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.

Vocabulary

Employment – Having a paid job or work.

Full-time – Working the standard number of hours each week, usually around 35–40 hours.

Part-time – Working fewer hours than a full-time job.

Self-employment – Working for yourself rather than for an employer.

Contract – A formal agreement that explains how long a job lasts and what the work involves.

Professional communication- Sharing information in a clear, polite and respectful way, such as through emails.

Respect – Treating others fairly, kindly and politely.

Help with Vaping and Smoking

NHS Smokefree
Website: https://www.nhs.uk/smokefree
Phone: **0300 123 1044**

Talk to FRANK
Website: https://www.talktofrank.com/
Phone: **0300 123 6600**

The Mix
Website: https://www.themix.org.uk/
Phone: **0808 808 4994**

Help with bullying

National Bullying Helpline Website:
https://www.nationalbullyinghelpline.co.uk/
Phone: **0300 323 0169**

Childline Website:
https://www.childline.org.uk/
Phone: **0800 1111**

Anti-Bullying Alliance Website: https://anti-bullyingalliance.org.uk/
Phone: **0808 161 8911** (via their support line information)

Help with Mental Health

YoungMinds
Website: https://www.youngminds.org.uk/
Phone: **+44 20 7089 5050**

Kooth
Website: https://www.kooth.com/

Youth Mental Health Foundation
Website:
https://www.youthmentalhealthfoundation.org/
Phone: **+44 300 302 0285**

RE

Week 1&2	Week 3&4	Week 5&6	Vocabulary
The Gurdwara A Gurdwara is the Sikh place of worship and community gathering. It is important because it is where Sikhs come together to worship God, listen to teachings from the Guru Granth Sahib, and strengthen their faith. The Gurdwara also plays a central role in Sikh values such as equality, service, and community, particularly through the *langar*, a free communal meal shared by everyone regardless of background. For Sikhs, the Gurdwara is not only a place of worship but also a place of learning, service, and unity.	**Living as a Sikh** Living as a Sikh means following the teachings of the Gurus and putting faith into action in everyday life. Sikhs aim to live honestly (*kirat karni*), share with others (*vand chhakna*), and remember God through prayer and worship (*naam japna*). Daily life is guided by the teachings of the Guru Granth Sahib, which emphasises equality, justice, humility, and service to others. Many Sikhs also express their faith through the Five Ks, which symbolise commitment to Sikh identity and values Living as a Sikh involves combining belief, ethical behaviour, and selfless service to society.	**Sikh Worship** Sikh worship focuses on devotion to God, reflection on the Guru's teachings, and living out faith through action. Worship usually takes place in the Gurdwara, where Sikhs listen to readings from the Guru Granth Sahib, sing hymns (*kirtan*), and pray together. Worship emphasises equality, humility, and community, with no priests and everyone sitting together. Sikh worship also extends beyond the Gurdwara into daily life, as Sikhs are encouraged to remember God regularly and serve others through selfless action (*seva*).	**Waheguru** – The name Sikhs use for God, meaning "Wonderful Lord." **Guru Granth Sahib** – The sacred scripture of Sikhism, treated as the eternal Guru. **Gurdwara** – The Sikh place of worship, where Sikhs pray, read scripture, and meet as a community. **Langar** – A free communal meal served in the Gurdwara to promote equality and community. **Seva** – Selfless service to others, which is a key way Sikhs put their faith into action.
Key Quote: The central role of worship and community in Sikhism is shown in the Guru Granth Sahib: *"The Guru's word is the Gurdwara, where God's praises are sung."* (Guru Granth Sahib)	**Key Quote:** The importance of putting faith into action is taught clearly: *"Truth is high, but higher still is truthful living."* (Guru Granth Sahib)	**Key Quote:** The focus of Sikh worship on remembering and praising God is shown in the Guru Granth Sahib: *"Meditate on the Name of the Lord; this is the highest form of worship."* (Guru Granth Sahib)	

RE

Week 7&8	Week 9&10	Week 11&12	Vocabulary
The Young Prince The Buddha was born as Siddhartha Gautama, a prince in northern India. He lived a sheltered and wealthy life until he encountered suffering in the form of old age, sickness, and death. These experiences led him to leave his palace in search of spiritual truth. After years of extreme asceticism, Siddhartha realised that neither luxury nor self-denial led to enlightenment and instead followed the Middle Way. While meditating under the Bodhi tree, he attained enlightenment and became the Buddha, meaning "the Enlightened One." He spent the rest of his life teaching others how to overcome suffering through the Four Noble Truths and the Eightfold Path.	**The Suttas** The suttas are a collection of teachings and discourses attributed to the Buddha, preserved within the Sutta Pitaka. They record sermons, dialogues, and explanations given by Siddhartha Gautama to his followers. The suttas explain key Buddhist teachings such as the Four Noble Truths, the Eightfold Path, impermanence, and non-self, and are used by Buddhists as guidance for understanding the Buddha's message and applying it to everyday life.	**The Noble Eightfold Path** The Noble Eightfold Path is the Buddha's practical guide to overcoming suffering and achieving enlightenment. Taught by Siddhartha Gautama, it sets out eight interconnected practices that help Buddhists live wisely and ethically. These are grouped into wisdom (right understanding, right intention), ethical conduct (right speech, right action, right livelihood), and mental discipline (right effort, right mindfulness, right concentration). By following the Eightfold Path, Buddhists aim to reduce craving, develop compassion and wisdom, and ultimately reach enlightenment.	**Siddhartha Gautama** – The historical founder of Buddhism, who became the Buddha after gaining enlightenment. **Dukkha** – Suffering or dissatisfaction; a key idea realised by Siddhartha and explained in the Buddha's teachings. **Sutta Pitaka** – A collection of the Buddha's teachings and discourses, believed to record his spoken words. **Eightfold Path** – The Buddha's practical guide to ending suffering, focusing on wisdom, ethical conduct, and mental discipline. **Four Noble Truths** – The core teaching discovered by Siddhartha Gautama, which explains the nature of suffering.
Key Quote: *"I teach one thing and one thing only: suffering and the end of suffering."* This quote summarises the Buddha's life purpose after enlightenment, showing how his experiences led him to teach a path to overcome suffering.	**Key Quote:** The authority of the suttas as records of the Buddha's teaching is reflected in the Sutta Pitaka, which traditionally begins: *"Thus have I heard…"*	**Key Quote:** *"This is the Noble Eightfold Path, the way leading to the cessation of suffering."* This quote supports the importance of the Eightfold Path by showing it is the practical method Buddhists follow to overcome suffering and reach enlightenment.	

RE

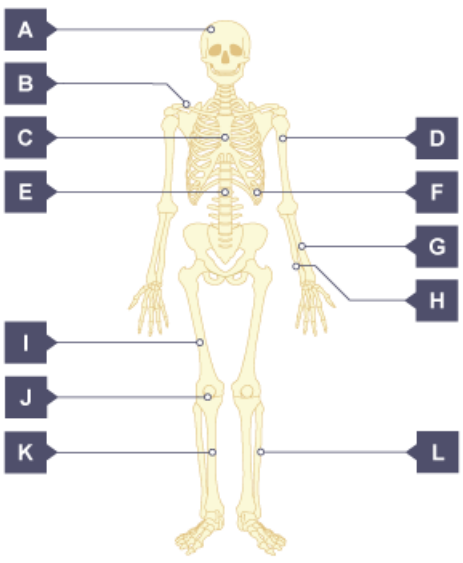
Week 13&14	Week 15&16	Week 17&18	Vocabulary
Karma and Nirvana In Buddhism, karma refers to the idea that intentional actions have consequences that shape a person's future experiences, including rebirth. Good actions lead to positive outcomes, while unwholesome actions lead to suffering. Nirvana is the ultimate goal of Buddhism and represents the end of suffering, ignorance, and the cycle of rebirth (*samsara*). By following the Buddha's teachings, especially the Eightfold Path, Buddhists aim to purify their karma and ultimately achieve nirvana, a state of complete peace and liberation.	**Meditation and Mindfulness** Meditation and mindfulness are central practices in Buddhism because they help individuals understand the mind, reduce suffering, and progress towards enlightenment. Meditation develops concentration and insight, while mindfulness involves being fully aware of thoughts, actions, and the present moment. Through these practices, Buddhists learn to let go of craving and ignorance, develop compassion and wisdom, and move closer to nirvana.	**Zen Gardens** Zen gardens are used in Buddhism, particularly within Zen traditions, as a form of meditation that encourages mindfulness, calm, and focus. The simple arrangement of rocks, gravel, and sand represents nature in an abstract way, helping practitioners clear their minds of distractions. Raking the gravel in slow, deliberate patterns is itself a meditative practice, promoting concentration, awareness of the present moment, and inner stillness. Zen gardens therefore support meditation by creating a peaceful environment that reflects key Buddhist values of simplicity and impermanence.	**Karma** – The law of cause and effect in Buddhism; intentional actions create consequences that affect future lives. **Nirvana** – The ultimate goal of Buddhism; a state of liberation from suffering and the cycle of rebirth. **Meditation (Bhavana)** – A mental practice used to develop concentration, insight, and wisdom. **Mindfulness (Sati)** – Awareness of the present moment, including thoughts, feelings, and actions. **Zen** – A school of Buddhism that emphasises meditation, simplicity, and direct experience
Key Quote: The connection between action, consequence, and liberation is taught by Siddhartha Gautama: *"It is volition, monks, that I call karma; for having willed, one acts by body, speech, and mind."*	**Key Quote:** The importance of mindfulness is emphasised in the Buddha's teaching: *"Mindfulness is the path to the deathless; heedlessness is the path to death."*	**Key Quote:** A traditional Zen teaching expresses this focus on mindful awareness: *"When walking, walk. When sitting, sit."*	

Science

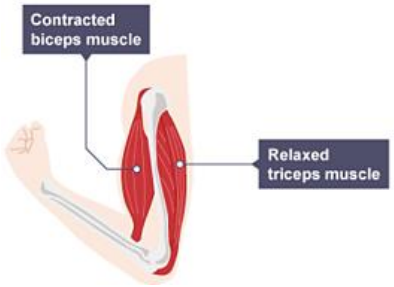
Week 1 – The human body

Muscles and the skeletal system

- The skeletal system provides **support and protection** to the body.
- It is made up of over 200 individual bones connected by **joints** which allow **movement**.



A	Skull
B	Clavicle (Collarbone)
C	Sternum (Breastbone)
D	Humerus
E	Spine
F	Ribcage
G	Radius
H	Ulna
I	Femur
J	Patella (Kneecap)
K	Tibia
L	Fibula



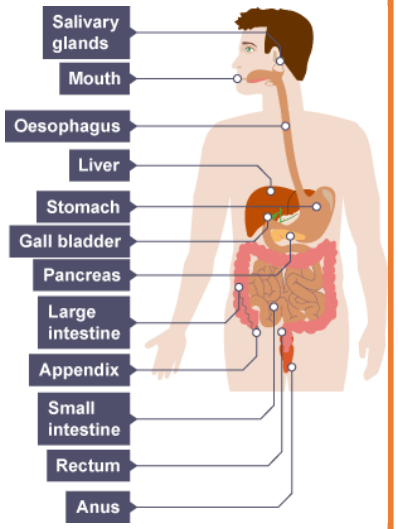
There are three main types of **joint:**

- **Hinge joints** such as the knee and elbow move **in one direction only.**
- **Ball and socket joints** such as the shoulder and hip allow movement in **several directions.**
- **Fused joints** such as the skull form when soft bones harden and fuse together as we age.

Week 2 – The human body

The digestive system

- A group of organs which work together to break **large insoluble** molecules down into **smaller, soluble** molecules.
- These smaller, soluble molecules can then be **absorbed into the bloodstream.**



- **Mechanical digestion** – food gets grinded up by the **teeth and tongue**
- **Chemical digestion** - when **enzymes** digest food into nutrients
- **Absorption** - **digested food molecules** pass through the wall of the **small intestine and into the bloodstream**
- **Villi** – **finger-like projections** in the **small intestine** that provide a **large surface area** for the absorption of food
- **Microvilli** - **Projections** from the **surface of an epithelial cell** of the **small intestine wall.**
- **Enzymes** are **biological catalysts** which **speed up reactions**
- **Substrates** - A molecule or molecules which **fit into the active site** of an enzyme.
- **Active site** - The part of an enzyme that **fits its substrate** or substrates. This changes shape when an enzyme is **denatured**.
- **Lock and key model** - An **enzyme is specific** for its substrate or substrates like a key is for its lock.
- **Denatured** – change to the active site, **will not fit its substrate**
- **Optimum** – conditions where the **enzyme is most active**

Vocabulary

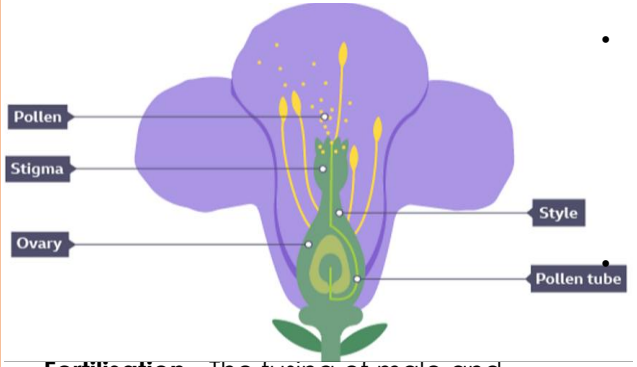
Muscles are made up of bundles of **fibres** able to **contract** or **relax.**
At **joints** muscles act in **antagonistic pairs**, meaning one **contracts** to pull a bone, whilst the other **relaxes.**
Digestion – **breaking down of food** using **mechanical and chemical** processes
Emulsification – The breakdown of **large drops of lipid into smaller droplets by bile**
Peristalsis - The rhythmical **contraction of muscles** lining the **oesophagus,** and **small and large intestines** to squeeze food through them.
Soluble – substances that dissolve in water.
Insoluble – substances that cannot dissolve in water.
Absorption - digested food molecules pass through the wall of the small intestine and into the bloodstream.

Science

Week 3 – Plants

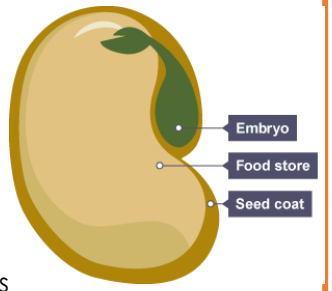
Plants and reproduction

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



- **Ovary -** the female part of the plant, where **ovules, the female gamete**, are found.
- **Stamen –** the male part, produces **pollen, the male gamete.**

- **Fertilisation** - The fusing of male and female **gametes** (pollen and ova or eggs).
- **Pollination** - The fertilisation of flowers by the transfer of **pollen** from one plant to another.
- Pollination may be carried out by **insects**, such as bees, or animals, or by the **wind**.
- Following fertilisation the ovule develops into a **seed.**
- **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.



Week 4 – Plants

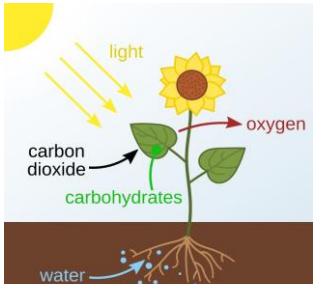
Photosynthesis

- Plants make their own glucose by combining water and carbon dioxide to make glucose and oxygen.

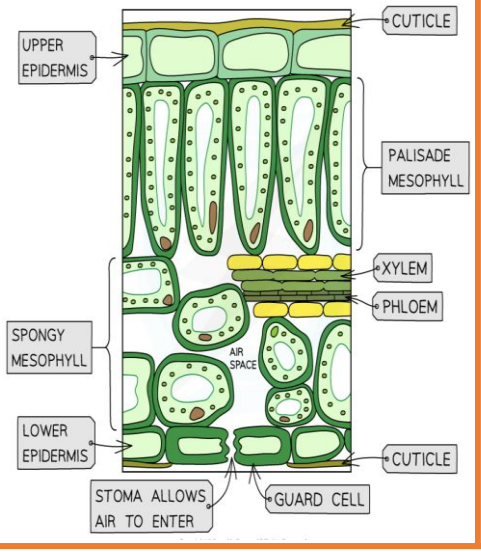
Carbon dioxide + water → glucose + oxygen

- They use some of the glucose in **aerobic respiration** to transfer **energy**, and store the rest in their cells, often in the form of **starch**.
- Plants use **light** to provide the energy required for photosynthesis.

Leaf structure



- Plants absorb the water they need through their **roots.**
- The **carbon dioxide** gas enters the leaf through **stomata.**
- The **oxygen** produced also leaves the leaf through the **stomata.**
- **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.



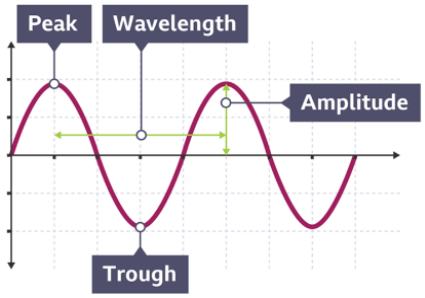
Vocabulary

Gametes are sex cells, sperm and egg in animals.
Pollen is the male gamete in plants.
Ovules are the female gamete in plants.
Seed – a tiny parcel containing everything that a new plant needs to start growing.
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 chloroplasts 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.
Guard cells - Controls the opening and closing of stomata.

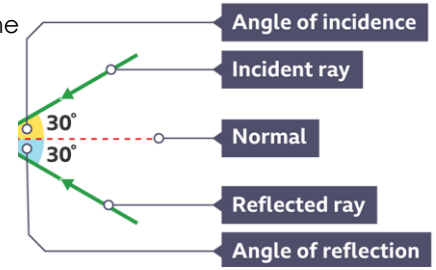
Science

Week 5 – Waves and magnets

- There are two types of wave, **transverse** (pictured) and **longitudinal.**



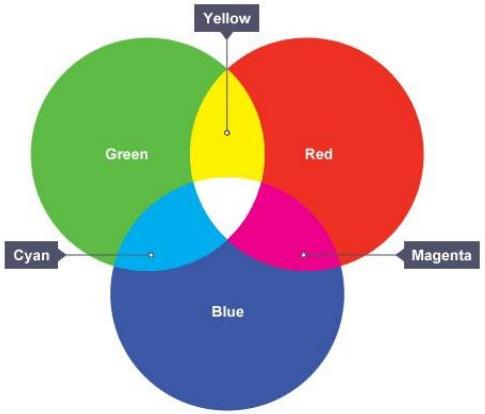
- Waves transmit **energy and information** but **not matter.**
- Light waves are **transverse waves.**
- The **wavelength** of a transverse wave is the **distance between two peaks.**
- The **frequency** of a wave is the **number of waves passing a point in 1 second.**
- **Amplitude** is the **height** from the **rest position.**

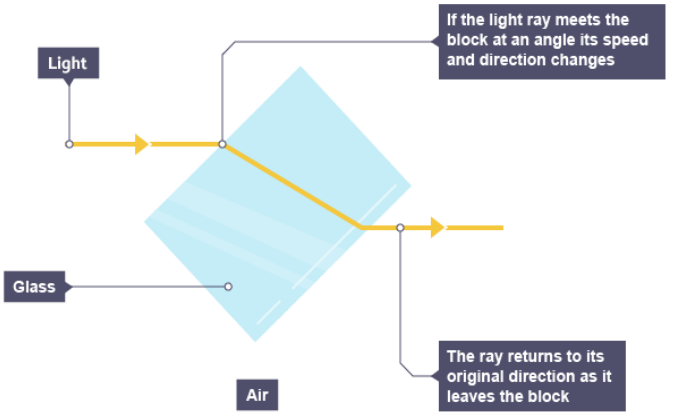


- **Absorption** - Light rays are **taken in** by a material.
- **Opaque** - Light **cannot pass** through.
- **Reflect** - Light rays **bounce off** a surface.
- **Scatter** - Parts of a light ray go off in many **different directions.**
- **Translucent** - Light can **pass through** but gets **scattered.**
- **Transmit** - To **pass through** a substance.
- **Transparent** - Light rays can **pass through without being scattered.**
- **Boundary** – where one material meets another.
- **Normal line** – Imaginary line drawn at **90° to a boundary.**
- **Angle of incidence** – Angle between the **incident ray and the normal.**
- **Angle of reflection** – Angle between the **reflected ray and the normal.**
- **Reflected ray** – A ray of light **bouncing off** a mirror.

Week 6 – Waves and magnets

- **Diffuse reflection** – Reflection from a **rough surface**, where the reflected light is **scattered in all directions.**
- **Specular reflection** - When light is reflected evenly, so that all reflected light goes off **in the same direction.**
- Light is **produced by luminous objects** and **reflected by non luminous objects.**
- There are three **primary colours, red, green and blue.**
- **Secondary colours** are formed by **mixing** primary colours.
- **Filters absorb** all colours except their own, which is **transmitted.**





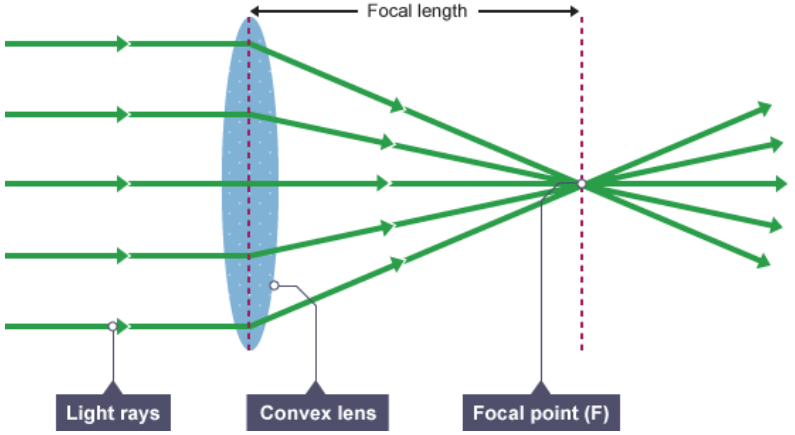
- The **normal** is a line drawn at 90° to the boundary.
- The **angle of incidence** is the angle between the incident ray and the normal.
- The **angle of refraction** is the angle between the refracted ray and the normal.

Vocabulary

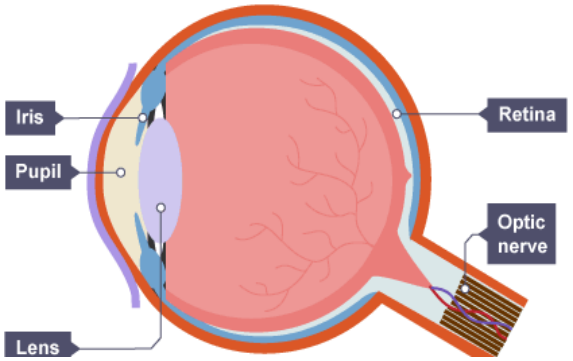
Waves transmit **energy and information** but **not matter.**
In **transverse waves** the vibrations are **perpendicular** to the direction of travel of the wave.
In
In **longitudinal waves** the vibrations are **parallel** to the direction of travel.
Compressions are regions of **high pressure** in a longitudinal wave where particles are **close together.**
Rarefactions are regions of **low pressure** where the particles are **spread out.**
Refraction is a **change in direction** of a ray of light caused by a **change in speed** as it passes from one **medium** (material) into another.
The **boundary is** the point where the **two media meet**, eg where glass and air meet.

Science

Week 7 – Waves and magnets

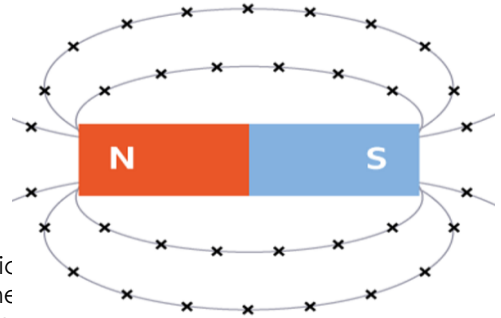


- **Lenses refract** light so that the rays meet at a **focal point.**
- **Convex lenses** are fatter in the middle and cause light to **converge.**
- **The distance** between the **lens** and the f**ocal point** is the **focal length.**
- **The eye** contains a lens, focussing light on the **retina** which detects **colour and light intensity.**
- The **pupil is a hole** which allows **light to enter the eye.**
- The **iris** controls the **size of the pupil.**
- The **optic nerve** carries **electrical impulses** to the **brain**.

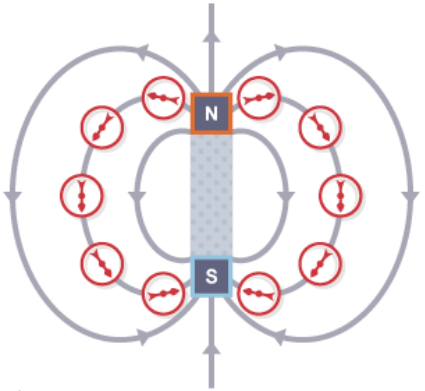


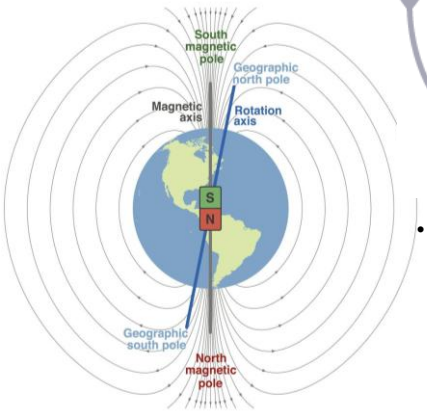
Week 8 – Waves and magnets

- There are only three magnetic metals; **iron, nickel and cobalt.**
- The alloys of these metals are also magnetic.
- **Bar magnets** (pictured) have a **North** and a **South pole.**
- The **magnetic field** flows from North to South and is strongest near the poles where the **field lines** are closest together.



- Two **like poles** (eg two North poles) will **repel** each other, whilst two **unlike poles** (North and South) will **attract.**
- **The Earth** has a magnetic field which flows from the geographical **south pole** to the north. The north pointer of a **compass** points to toward Earth's magnetic south pole!





- The **field lines** can be found using a **plotting compass.** The compass will **align** with the field lines, pointing toward the **south pole.**

Vocabulary

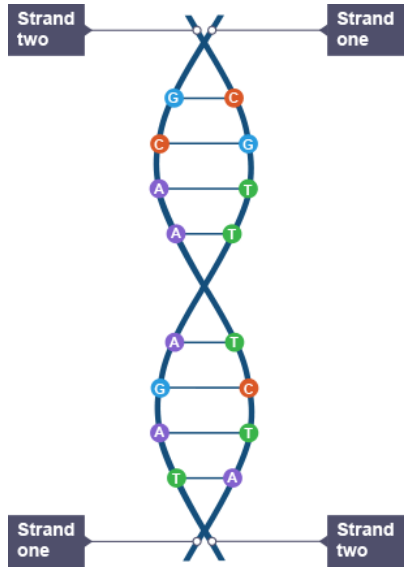
Convex lens – a lens fatter in the middle than at the edges. It causes light rays to **converge at a focal point.**
Concave lenses are thinner in the middle. They cause light to **diverge from a focal point.**
Convex lenses form **real images** that can be projected onto a screen. Concave lenses from **virtual images** that cannot be projected.
Permanent magnets produce their own **magnetic field** and are always magnetic.
Induced magnets are metals that act as magnets in a magnetic field but **lose their magnetism** when removed.
Electromagnets are made by passing **electrical current** through a **solenoid** (a coil of wire) wrapped around a **core** of a magnetic metal.

Science

Week 9 – Variation and evolution

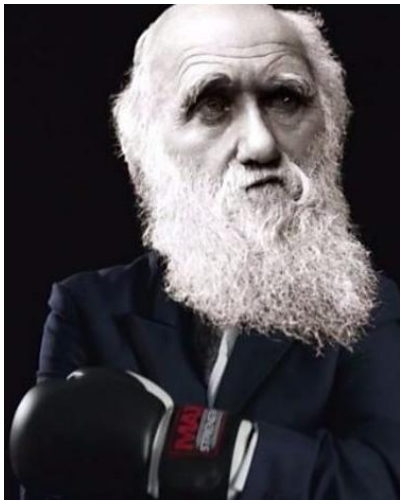
What is DNA?

- DNA (Deoxyribonucleic acid) makes up our **genes**.
- It has a **double helix shape**.
- The **chromosomes** that are found in the nucleus of the cells of living organisms are made up of **genes.**
- These genes are **inherited** from parents and give organisms their characteristics.
- **Variation** arises due to inherited genes but also due to **environmental** influences.
- Variation can be **continuous,** where a characteristic can have an infinite **range of values.** For example height or weight.
- It can also be **discontinuous**, where a characteristic can only have a **limited range of values,** for example blood group.



Charles Darwin

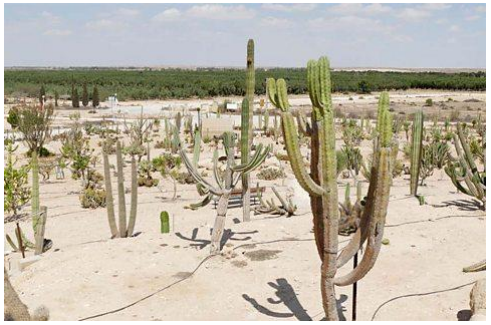
- He proposed the theory of Evolution by natural selection, published in 1859.
- This proposed that organisms are constantly changing over long periods of time until new species emerge.
- He collected samples from the Galapagos islands which provided evidence for his theory.



Week 10 – Variation and evolution

Adaptations - desert

- Cacti are well adapted to a desert environment.
- They have evolved extensive root systems to collect as much water as possible, but also have no leaves from which water could evaporate.



Adaptations - desert

- Camels are similarly adapted to the desert.
- They lose very little water by sweating and can store fat in their humps for when food is scarce.
- They also have large feet to help spread their weight on soft sand.

Adaptations – polar conditions

- Polar bears have evolved high body fat to insulate them and help them survive when food is scarce.
- They have white fur to camouflage them and make hunting prey easier.
- They have hollow hairs which help to trap air and keep them warm.
- Like camels, they have large feet to help them walk on the snow.

Vocabulary

DNA is the molecule that our **genes** are made up of.
DNA contains **bases** given the letters **A, T, C and G.**
Variation is the range of characteristics shown by different members of the same species.
Adaptations are variations that give an individual an advantage in a particular environment.
Continuous variables are characteristics that can be measured and can have an infinite number of values.
Discontinuous variables are characteristics that can only have a limited number of values.
Evolution is the emergence of new species over many generations as individuals with advantageous adaptations are more likely to **survive and reproduce**, passing on their genes to their **offspring.**

Science

Week 11 – Variation and evolution

Sir David Attenborough

- Is a well known British natural historian and presenter.
- He has promoted an interest in the natural world for many years and has played a key part in raising awareness of issues such as endangered species, habitat loss, and climate change.
- He has been making programs since 1956!
- He has made programs about plants and animals in every environment on Earth, from deserts to the poles and the oceans, creating work for thousands of people in television as cameramen, sound recorders, producers, directors etc.
- He is probably the most well known environmentalist and one of the most recognised television personalities globally.

Jane Goodall

- Was a British primatologist, studying primates such as chimpanzees over a long period.
- She was able to see how behaviour was passed on over many generations and was one of the first people to document primates using tools like humans.
- She demonstrated that chimpanzees have complex language and social structures and show a wide range of emotions.
- This shed light on the development of humans and their ancestors.

Week 12 – assessment preparation

Planning an experiment

Scientists often plan experiments to investigate the relationship between one variable and another. In other words, to see what effect changing one variable has on the other variable.

To make sure any change in the dependent variable is only caused by the change made to the independent variable, all other possible variables should be kept the same. These are the *control variables.*

Brian is planning to investigate how giving plants different amounts of water affects their growth.

What is his independent variable?

What does he need to measure? (his dependent variable)

What should he keep the same (his control variables?)

Write a detailed method for Brian to include:

- Variables
- Equipment used
- How to use the equipment
- Any repeats he may do

Vocabulary

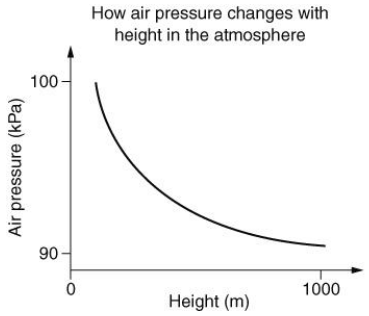
CIDERR is an acronym used to help us remember and identify the key elements of any experiment.
(C)ontrol variables are factors that could affect the outcome of an experiment and make results unreliable. They are kept the same to minimise this.
(I)ndependent variable is the variable you are investigating and therefore changing in a series of experiments.
(D)ependent variableis the variable you measure to see the effect of changing the independent variable.
(E)quipment is specific to an experiment. You should specify what you are going to use to measure your variables, for instance a balance to measure mass.
(R)epeats – experiments should be repeated and anomalies identified and removed, before calculating a mean average.

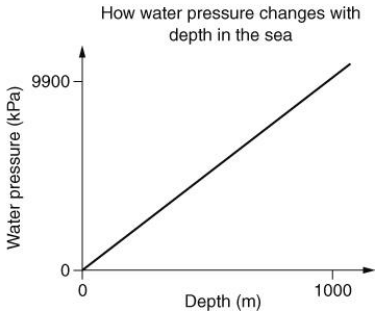
Science

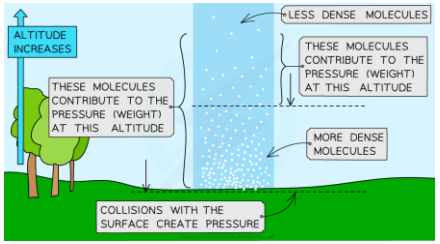
Week 13 - assessment preparation

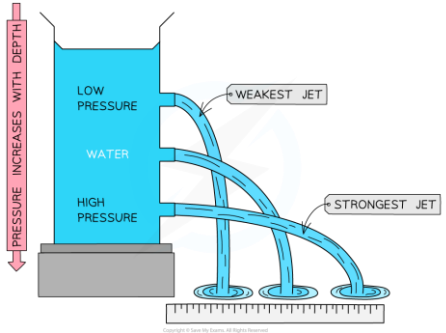
As a polar explorer, you need to plan a trip to the Antarctic, in which you will climb the highest peak, Mount Vinson, and dive deep below the surface of the ocean to study the organisms found in each environment.

Using the graphs below:
What is the relationship between height above sea level and atmospheric pressure?
What is the relationship between depth below sea level and water pressure?
Why (in terms of particles) does pressure vary with height and depth?









Week 14 - assessment week 1

Revision and assessment

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 15 – assessment week 2

Revision and assessment

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

Week 16 – Blue planet enrichment

- The oceans cover 71% of the planet and have an average depth of 3682m!
- The deepest part of the ocean is in the Mariana trench at 10984m.
- There are many different environments in the oceans, ranging from shoreline to coral reefs, river estuaries, open ocean and the very deep oceans which we know very little about.
- The oceans contain some of the smallest living organisms, plankton, the largest of which are only 0.2mm long.
- Many of them can photosynthesise and form the basis of the ocean food web.

- Plankton (left(are some of the smallest organisms on the planet.
- They are fed on by the largest animal that has ever lived, the blue whale (below) which grows to about 31m and 200 tonnes!

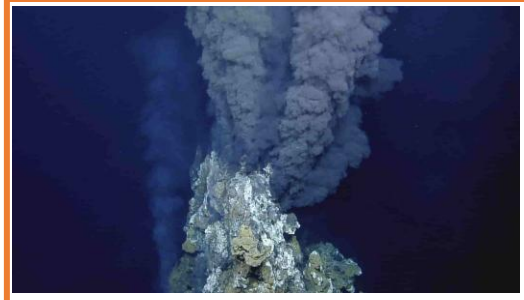
- There are thousands of documented species in the oceans.
- However, because so much has not been well investigated, it is estimated that 91% remain undiscovered, so there care many more yet to discover.

Vocabulary

Eukaryote - A type of **cell** that has a **nucleus**.
Prokaryote - A simple cell that **does not** have a **nucleus** – the DNA is free in the cytoplasm
Genus – a small group of several species
Species – a group of organisms able to breed and produce **fertile offspring**
Fungi – made up of complex eukaryotic cells like animals and plants.
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.

Science

Week 17 – Blue planet enrichment



- Deep sea hydrothermal vents are one of the possible sites where life on Earth may have originated.
- There are organisms living around them able to survive without sunlight, very little oxygen and in temperatures up to 400°c!

- Many marine animals, such as sharks, have evolved senses to cope with their environment.
- Sharks can sense tiny amounts of blood from miles away and detect the vibrations of other animals in low light conditions.
- Some are able to sense the electrical activity of other organisms.

- In shallower waters, coral reefs provide living habitats for a huge range of species.
- Coral reefs are actually colonies of creatures called polyps.
- Theay are sometimes referred to as the rainforests of the sea as about 25% of marine creatures live in them.

- Human activity is causing the pH of the seas to fall, making them more acidic.
- This leads to coral bleaching and the loss of habitat of many of the species that live there.

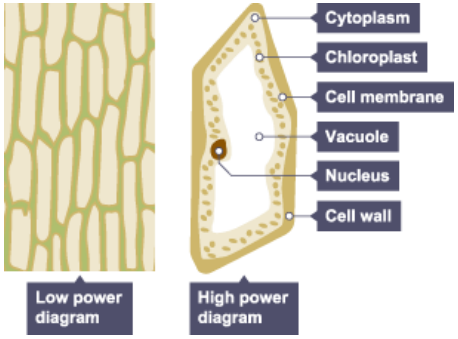
Week 18 – assessment review

Number the following steps in the correct order to describe how to use the microscope.

_____ Look into the eyepiece lens.
_____ Place the smallest objective lens over the hole in the stage.
_____ Turn the coarse focusing wheel until the objective lens and the stage are as close as possible.
_____ Place the slide on the stage.
_____ Turn the coarse focusing wheel until what you see is clear.
_____ Adjust the light source.

<u>Drawing the image</u>

When first examining cells or tissues with low power, draw an image at this stage, even if going on to examine the slide with high power.
A low power diagram is used:
•as a plan to show the arrangement of any distinct regions of the tissue, for example the tissues in a plant root
•to show the outline of individual cells that make up the tissue, if the tissue is uniform
A high power diagram is then produced – a detailed image of a part of the slide. It is usually drawn to show a single cell, eg of a single cheek cell or onion cell.



<u>Resolution-</u> The fineness of detail that can be seen in an image - the higher the resolution of an image, the more detail it holds.

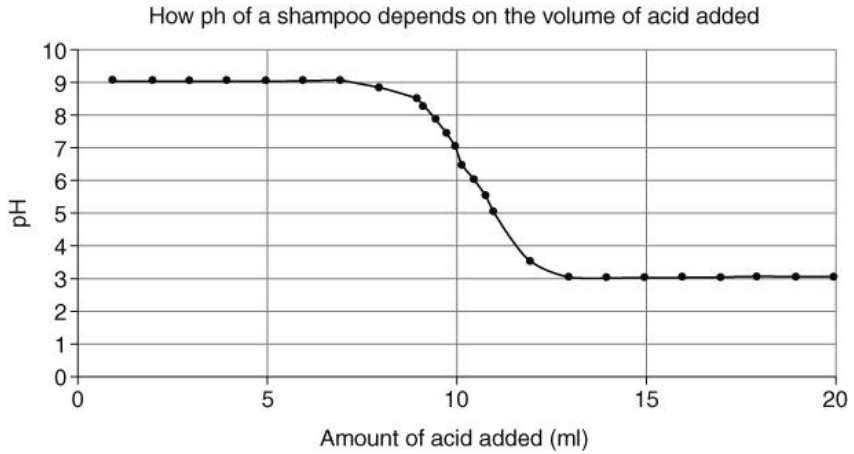
Science

Week 19 – assessment review

As a scientist working for the Gleam shampoo company, you have been asked to test the pH of a new shampoo.

You find that one shampoo has a pH of 9. You decide that the pH of the shampoo should be about the same as skin which has a pH between 5 and 7. You mix a sample of the shampoo with water and slowly add citric acid to it, measuring the pH as you does so.

The graph below shows the results.



1. Describe how the pH changes as the acid is added to the shampoo sample.
2. Describe how the experiment to gather these results might have been carried out.
3. Explain how to work out the volume of acid needed to neutralise the alkali in the sample of shampoo.
4. Explain why it is important to work our exactly how much citric acid is needed to get the pH of a batch of shampoo correct.
5. Explain why it may be safer to use citric acid to pH balance the shampoo instead of hydrochloric acid.

Spanish

The Twelve-Point Check

Make your work amazing by including as many features as possible from the Twelve-Point Check every time.

1. Time frame

last weekend – el fin de semana pasado
last week – la semana pasada
last Monday – el lunes pasado
during the holidays - durante las vacaciones
last summer - el verano pasado
two years ago – hace dos años
when I was 10 years old - cuando tenía diez años

2. 'I' form of a verb

I went – fui
I saw) – vi
I had – tenía
I travelled – viajé
I stayed – me quedé / me alojé
I played - jugué
I relaxed - descansé
I visited – visité
I rode – monté
I ate - comí
I did / made - hice
I was able – pude
I wanted – quise
I needed - necesité

3. we/ he/ she verb form

he / she went - fue
we went – fuimos

he / she travelled - viajó
we travelled - viajamos

he / she had - tenía
we had - teníamos

it was – fue
they were - fueron
he/ she ate - comió
we ate - comimos

4. Negation

not / don't – no
never ever– jamás
neither…nor - no..ni..ni..

Examples:

I **never ever** travel by plane

Jamás viajo en avión

5. Conjunctions

furthermore – además
also – también
however – sin embargo
although – aunque
above all – sobre todo
because of this – por eso
therefore – como consecuencia
because – porque
because – dado que

6. Justified opinion

I love – me mola(n)
I really like – me gusta mucho (n)
I don't like at all– no me gusta(n) nado
I hate – detesto

from my point of view – a mi modo de ver
for me – para mí
I think that – pienso que

7. Contrasting opinion

Examples:
I like to travel by plane **because** it is quicker than travelling by bus **however** my grandad prefers to go by boat.

Me gusta viajar en avión **porque** es más rápido que viajar en autobús **sin embargo** mi abuelo prefiere ir en barco.

8. Comparative

more…than – más…que
as..as – tan…como
better than – mejor que
worse than – peor que

Example:
Visiting monuments is **less exciting than** doing watersports

Visitar monumentos es **menos emocionante que** hacer deportes acuáticos.

9. Superlative phrase

the best thing – lo mejor
the worst thing – lo peor

Examples:
The best thing about the hotel was the pool – **lo mejor** del hotel fue la piscina

The worst thing about my town is that it is noisy – **lo peor** de mi pueblo es que es ruidoso.

10. Additional tense

tomorrow - mañana
next Sunday – el próximo domingo
when I am older – cuando sea mayor

I am going to + verb - Voy a + any infinitive verb
I would like to + verb - Me gustaría + any infinitive verb

11. WOW-phrase

What a pity – ¡Qué lástima!
How strange! – ¡Qué raro!
How tasty! – ¡Qué rico!
if I had lots of money – si tuviera mucho dinero + conditional (I would)
if I had time – si tuviera tiempo + conditional (I would)
if I could – si pudiera + conditional (I would)

12. Proofread for ….

- repetition
- missing accents(**sp**)
- missing words (**^**)
- spelling errors (**sp**)
- adjective agreement (**A**)
- syntax errors (**wo**)
- verb agreement (**vp**)
- tense agreement (**vt**)
- tenses match time frame (**ww**)
- vocabulary errors (**ww**)
- included 12-point check criteria

Spanish

Classroom language	
Español	**Inglés**
¿Cómo se dice…. en español/inglés?	How do you say… in Spanish/ English?
¿Cómo se escribe…?	How do you spell…?
¿Cómo se pronuncia?	How do you pronounce (it)?
¿Me das …. ?	Can you give me…?
¿Puedes repetir?	Can you repeat that?
¿Puedo ir a mi clase de música?	Can I go to my music class?
(No) entiendo	I (don't) understand
Lo siento	I'm sorry
(Casi) he terminado	I have (almost) finished
por favor	please
gracias	thank you
Objetos en la clase	**Classroom objects**
un bolígrafo	a pen
una regla	a ruler
un móvil	a mobile phone
un cuaderno	an exercise book

Describing the weather	
Hoy…	Today …
hace sol	it's sunny
hace frío	it's cold
hace calor	it's hot
hace viento	it's windy
hace buen tiempo	it's good weather
hace mal tiempo	it's bad weather
llueve	it's raining
nieva	it's snowing
hay nubes	it's cloudy

Saying what the weather is like today:
Hoy hace sol **y no** hace mal tiempo **pero** hay nubes.

Days and dates	
Hoy es…	Today is...
lunes	Monday
martes	Tuesday
miércoles	Wednesday
jueves	Thursday
viernes	Friday
sábado	Saturday
domingo	Sunday
enero	January
febrero	February
marzo	March
abril	April
mayo	May
junio	June
julio	July
agosto	August
septiembre	September
octubre	October
noviembre	November
diciembre	December

Saying the date:
Hoy es lunes, veintidós **de** septiembre **de** dos mil veinticinco.

Los números
1. uno
2. dos
3. tres
4. cuatro
5. cinco
6. seis
7. siete
8. ocho
9. nueve
10. diez
11. once
12. doce
13. trece
14. catorce
15. quince
16. dieciséis
17. diecisiete
18. dieciocho
19. diecinueve
20. veinte
21. veintiuno
22. veintidós
23. veintitrés
24. veinticuatro
25. veinticinco
26. veintiséis
27. veintisiete
28. veintiocho
29. veintinueve
30. treinta
31. treinta y uno

The alphabet	
letter	**Sounds like**
a	c**a**t
b	beh
c	theh
d	deh
e	eh like **e**gg
f	effeh
g	heh
h	atcheh
i	ee
j	hota
k	kah
l	eleh
m	emeh
n	eneh
ñ	enyeh
o	l**o**t
p	peh
q	koo
r	erreh
s	esseh
t	teh
u	oo
v	oobeh
w	oobeh dobleh
x	eh kis
y	ee gri egah
z	theta

Spanish

Weeks 1

Words I need to revise for the test	
Spanish	**English**

Week 2

jugar + al + ballsports	
jugar	to play
juego al	I play
juega al	he/she plays
jugamos al	we play
deporte	sport
baloncesto	basketball
fútbol	football
tenis	tennis
voleibol	volleyball
un partido	a match
un equipo	a team
1.	
2.	
3.	

Week 3

hacer + non-ball sport	
cada día	each day
cada sábado	each Saturday
una vez al mes	once a month
una vez a la semana	once a week
dos veces a la semana	twice a week
de vez en cuando	from time to time
hacer	to do (go + activity)
hago	I do
hace	he / she does
hacemos	we do
ciclismo	cycling
natación	swimming
gimnasia	gymnastics
baile	dance
atletismo	athletics
vela	sailing

Weeks 4

Infinitive verbs	
montar a caballo	to ride a horse
montar en bicicleta	to ride a bike
pasear	to go for a walk
ver la tele	to watch TV
escuchar música	to listen to music
tocar un instrumento	to play an instrument
jugar en mi videoconsola	to play on my console
usar el ordenador	to use a computer
ir de compras	to go shopping
mandar mensajes	to send messages
leer libros	to read books
salir con amigos	to go out with friends
ir al cine	to go to the cinema
ir al parque	to go to the park

Week 5

Past time frames and non-negotiable verbs	
la semana pasada	last week
el fin de semana pasado	last weekend
el sábado pasado	last Saturday
el domingo pasado	last Sunday
la última vez	the last time
fui	I went
vi	I saw/watched
tuve	I had
fue/era	it was
había	there was/ were
lo pasé bien/ mal	I had a good/bad time
me divertí	I had fun

Week 6

Describing a photo	
En la foto hay…	In the photo there is/are…
mucha gente	lots of people
dos personas	two people
lleva(n)…	he/she is wearing
ropa de deporte	sports clothing
está(n)…	he is/ they are
dentro	inside
fuera	outside
hablando	talking
sonriendo	smiling
jugando	playing
General conversation questions	
¿Qué haces en tu tiempo libre?	What is your school like?
¿Qué hiciste el fin de semana pasado?	What did you do last weekend

Spanish

Week 7

Future aspirations	
Me gustaría	I would like
Quiero	I want
trabajar	to work
ser	to be
como	as
al aire libre	in the open air
en equipo	in a team
un trabajo	a job
cantante	a singer
presidente	the president
policía	a police officer
médico	a doctor
el jefe / la jefa	the boss
jugador(a)	player
actor/ actriz	actor / actress
1.	
2.	

Week 8

The importance of languages	
los idiomas	languages
las lenguas	languages
el inglés	English
el español	Spanish
un segundo idioma	a second language
1.	
hablar	to speak
viajar	to travel
conocer a gente nueva	to meet new people
encontrar un trabajo	to find a job
ir a la universidad	to go to university
ayudar	to help
descubrir nuevas culturas	to discover new cultures
al extranjero	abroad

Week 9

Food and drink	
agua	water
arroz	rice
azúcar	sugar
café	coffee
carne	meat
dulces	sweets
fruta	fruit
hamburguesas	hamburgers
huevos	eggs
leche	milk
naranjas	oranges
pan	bread
pasteles	cakes
patatas fritas	chips / fries
pescado	fish
queso	cheese
verduras	vegetables

Week 10

Talking about frequency	
casi nunca	almost never
cada día	every day
cada lunes	every Monday
de vez en cuando	from time to time
dos o tres veces a la semana	two or three times a week
dos o tres veces al mes	two or three times a month
dos veces a la semana	twice a week
cuatro o cinco veces al día	four or five times a day
muy a menudo	very often
tres veces al día	three times a day
una vez a la semana	once a week
una vez al mes	once a month
todos los días	every day

Week 11

Healthy lifestyles	
me despierto	to wake up
me levanto	to get up
duermo	to sleep
me acuesto	to go to bed
salud	health
sano	healthy
cansado	tired
hasta	until
horas al día	hours a day
primero	first
luego	then
después	afterwards / after

Week 12

The near future- just add the infinitive	
el sábado que viene	next Saturday
el fin de semana que viene	next weekend
la semana que viene	next week
durante las vacaciones	during the holidays
primero	first
luego	then
después	after that
más tarde	later
finalmente	finally
voy a	I'm going to
vas a	you are going to
vamos a	we are going to
vais a	you (pl) are going to
van a	they are going to
me gustaría	I would like

Spanish

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

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

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

The advantages of technology

Las ventajas y desventajas	
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

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!

Going shopping

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