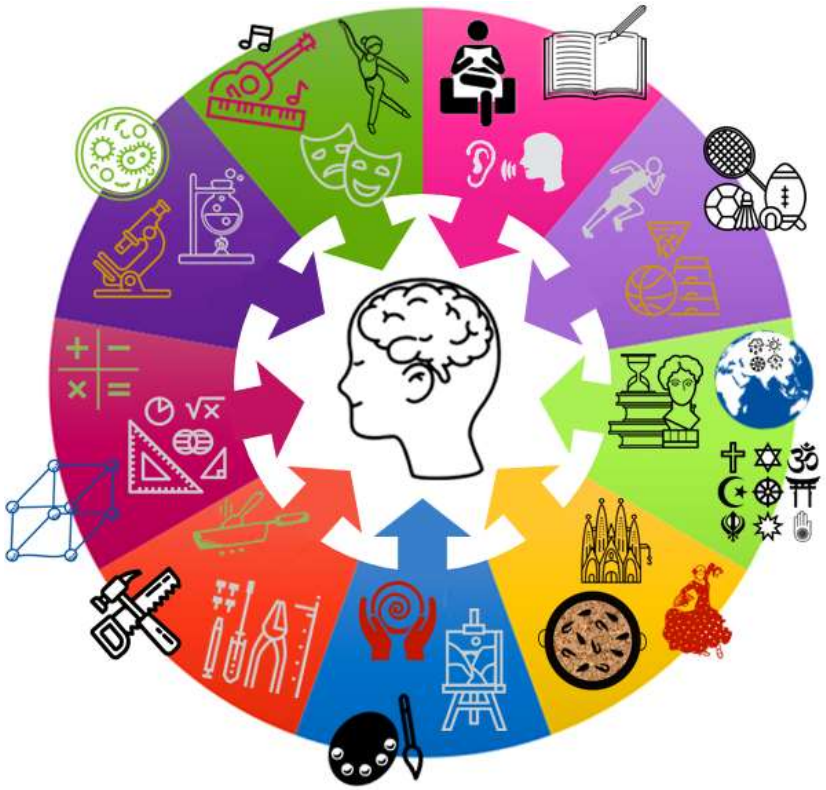
100% book –Grammar Stream

Aim to memorise 100% of the knowledge on these Knowledge Organisers.



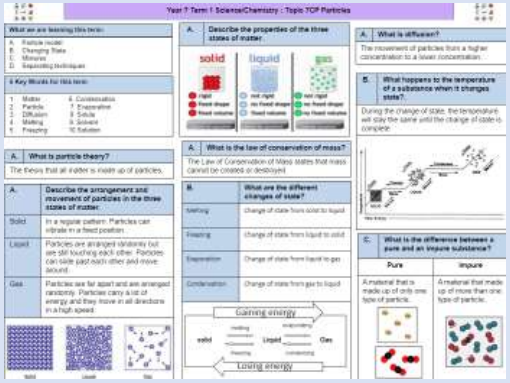
Term 6

Swindon Academy 2023-24	
Name:	
Tutor Group:	
Tutor & Room:	

"If you are not willing to learn, no one can help you.
If you are determined to learn, no one can stop you."

How to use your 100% book of Knowledge Organisers and Quizzable Organisers

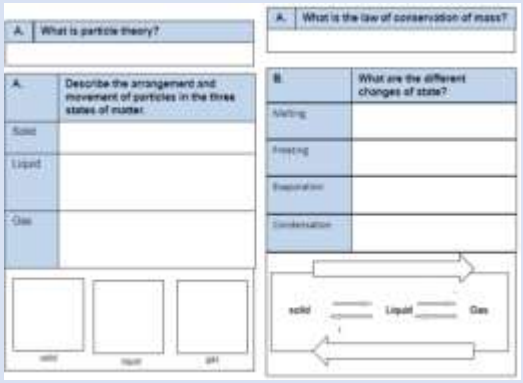
Knowledge Organisers



Knowledge Organisers contain the essential knowledge that you MUST know in order to be successful this year and in all subsequent years.

They will help you learn, revise and retain what you have learnt in lessons in order to move the knowledge from your short-term memory to long-term memory.

Quizzable Knowledge Organisers



These are designed to help you quiz yourself on the essential Knowledge.

Use them to test yourself or get someone else to test you, until you are confident you can recall the information from memory.

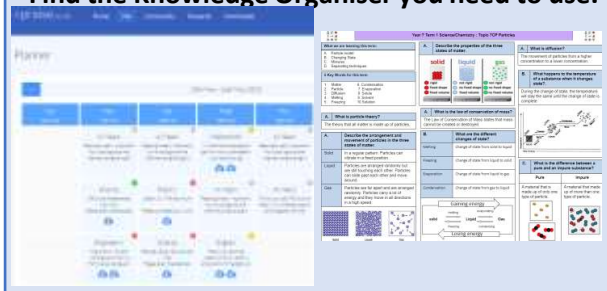
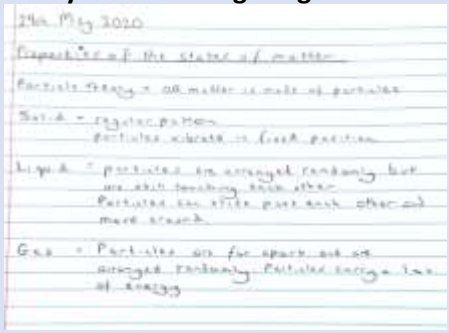
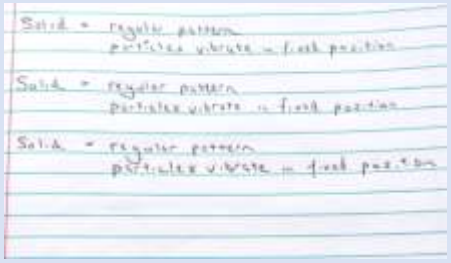
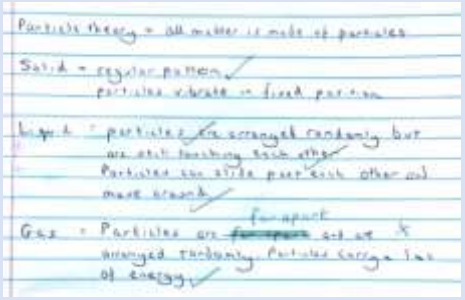
Top Tip

Don't write on your Quizzable Knowledge Organisers! Quiz yourself by writing the missing words in your prep book. That way you can quiz yourself again and again!

Expectations for Prep and for using your Knowledge Organisers

1. Complete all prep work set in your subject prep book.
2. Bring your prep book to every lesson and ensure that you have completed all work by the deadline.
3. Take pride in your prep book – keep it neat and tidy.
4. Present work in your prep book to the same standard you are expected to do in class.
5. Ensure that your use of SPAG is accurate.
6. Write in blue or black pen and sketch in pencil.
7. Ensure every piece of work has a title and date.
8. Use a ruler for straight lines.
9. If you are unsure about the prep, speak to your teacher.
10. Review your prep work in green pen using the mark scheme.

How do I complete Knowledge Organiser Prep?

Step 1	Step 2	Step 3
Check Epraise and identify what words /definitions/facts you have been asked to learn. Find the Knowledge Organiser you need to use. 	**Write today's date and the title from your Knowledge Organiser in your Prep Book.** 	**Write out the keywords/definitions/facts from your Knowledge Organiser in FULL.** 
Step 4	**Step 5**	**Step 6**
Read the keywords/definitions/facts out loud to yourself again and again and write the keywords/definitions/facts at least 3 times. 	**Open your quizzable Knowledge Organiser. Write the missing words from your quizzable Knowledge organiser in your prep book.** 	**Check your answers using your Knowledge Organiser. Repeat Steps 3 to 5 with any questions you got wrong until you are confident.** 

Make sure you bring in your completed Prep notes to demonstrate that you have completed your prep.

KS4 MACBETH Grammar

1. Context

Playwright: Shakespeare (April 23rd 1564-April 23rd1616)
Dates: written around 1606
Published: in 'the First Folio, 1623
Era: Jacobean
Genre: Tragedy = *A play ending with the suffering and death of the main character.*
Set: Scotland,
Structure: Five Act Play

Macbeth. The plot is partly based on fact. Macbeth was a real 11th Century king who reigned Scotland from 1040-1057. Shakespeare's version of the story originates from the Chronicles of Holinshed (a well known historian). The play was most likely written in 1606 – the year after the Gunpowder Plot of 1605 – and reflects the insecurities of Jacobean politics.

The Divine Right of Kings says that a monarch is not subject to earthly authority and that they have the right to rule directly from the will of God. It implies that only God can judge an unjust king and that any attempt to depose, dethrone or restrict his powers runs contrary to the will of God and may constitute a sacrilegious act. The action of killing a king is called regicide and is considered a terrible crime.

King James I of England (and VI of Scotland) came to the throne in 1603 following the death of Queen Elizabeth I. The play pays homage to the king's Scottish lineage. The witches' prophecy that Banquo will found a line of kings is a clear nod to James' family's claim to have descended from the historical Banquo. James was convinced about the reality of witchcraft and its great danger to him leading to witch trials. The play is probably not written simply to please James, but certainly looks at relevant ideas.

Shakespearean Tragedy. Macbeth is one of Shakespeare's tragedies and follows specific conventions. The climax must end in a tremendous catastrophe involving the death of the main character; the character's death is caused by their own flaw(s) (hamartia) yet the character has something the audience can identify with.

The Great Chain of Being was a belief in a strict religious hierarchy (see key vocabulary) of all things which was believed to have been decreed by God. This idea was important in Elizabethan and Jacobean beliefs. The chain starts from God and progresses downward to angels, demons (fallen/renegade angels), stars, moon, kings, princes, nobles, commoners, wild animals, domesticated animals, trees, other plants, precious stones, precious metals, and other minerals.

Conventions of a Shakespearean Tragedy

A **tragic hero** who falls from greatness through a flaw of their own character.	**Hamartia** – the flaw in the tragic hero that destroys them.	A **hero of status** – the central characters are people of importance, with power and status to lose.
External conflict – his tragedies feature conflict between characters, and always lead to death.	**Internal conflict** – there are frequent moments of self-doubt or internal torment.	**Supernatural elements –** Many of Shakespeare's tragedies feature supernatural influences.

2. Key Characters

Macbeth: The eponymous protagonist is the tragic hero of this play. He is both ambitious and ruthless. He falls from loyal and respected warrior to a paranoid, tyrannical king, before dying in battle in Act V.

Lady Macbeth: A strong, ambitious and manipulative woman who exerts pressure on Macbeth to pursue him ambition of becoming king by murdering Duncan. Unable to deal with the guilt of these actions and is driven to madness and suicide.

The Witches / Weird Sisters: Supernatural and manipulative beings who seem to be able to predict the future. They are unearthly and omniscient.

Banquo: Macbeth's close friend and ally is astute and loyal. Macbeth sees him as a threat. He is virtuous, admired by audiences, and mistrustful of the supernatural witches.

Duncan: King of Scotland at the beginning of the play. He is a virtuous, strong and respected leader, held up as the model of good kingship by others in the play. He is murdered by Macbeth in Act 2.

Macduff: A soldier who is loyal to Duncan and is suspicious of Macbeth. His family is murdered by Macbeth's soldiers and he eventually exacts revenge by killing Macbeth. He was born by caesarian section and therefore was "not of woman born".

Malcolm: Duncan's son and next in line to the throne. He is described as a good man in the play.

3. Central Themes

Ambition	The play is about the corrupting power of ambition. Both Lady Macbeth and Macbeth are urged to action by the prophecies of the witches, but they still commit their crimes themselves because they want greater power. Their ambition leads them to violence and death.
Kingship and Tyranny	The play contrasts the kind and wise rule of Duncan, who is described as a virtuous (good) king, with the brutal rule of Macbeth, who quickly becomes called a tyrant. The play shows how Macbeth has no divine right to rule and upsets the natural order by killing Duncan.
Order and Disorder	The play subverts the natural order of the world. Macbeth's actions are based on a supernatural belief in a prophecy. It depicts an anarchic world: Macbeth inverts the order of royal succession; his wife inverts the patriarchal hierarchy; the unnatural world disrupts the natural. The disruption underpins the conflict that is not only external and violent but internal as Macbeth and his wife come to terms with what they've done.
Appearance and Reality	Characters in the play are often not what they seem. Lady Macbeth and Macbeth are duplicitous towards Duncan, the witches equivocate (not say what they really mean) and cannot be trusted, Lady Macbeth seeks to manipulate Macbeth.

4. Key Vocabulary

Ambition	A desire to achieve something e.g. Macbeth and kingship
Hubris	Having excessive pride or self-confidence
Tyrant	A ruler who rules through fear and violence
Corrupt	Acting dishonestly *OR* being in a state of decay
Patriarchal	A society where power is in the hands of men
Duplicitous	Lying and being false. Two-faced. Deceitful
Façade	A false front, mask or illusion. Hiding one's true feelings
Prescient	Having knowledge of things before they happen – the witches
Nihilistic	The belief that everything is meaningless
Courageous	Being very brave
Supernatural	Things that are not a part of the natural world
Fate	Events being already decided and out of a person's control
Treachery	Betraying someone's trust
Regicide	The killing of a king

5. Key Terminology, Symbols and Devices

Motif	A recurring image or idea that has symbolic importance. The best example in Macbeth would be blood.
Soliloquy	When a character is alone on stage and speaks their thoughts aloud to themselves.
Iambic Pentameter	A line of a play or poem that has ten syllables organised into five pairs of syllables, where the second in each pair is emphasised. e.g. "When *you* durst *do* it *then* you *were* a *man*"
Foreshadowing	When a hint or warning is given about a later event.
Dramatic Irony	When a character is unaware of something that the audience is aware of, so they don't know the full significance of their words.
Symbolism	When something symbolises a set of ideas e.g. "The raven himself is hoarse" – raven symbolic of death, supernatural.
Aside	When a character pauses in a conversation to speak only to the audience or another character, unheard by the rest.

The Big Ideas	Notes	The Methods	Notes
1. Shakespeare uses the play to demonstrate the terrible consequences of disrupting the **natural order**. His rule is unnatural and brings only disorder and sickness. His death restores balance.		1. Shakespeare **uses blood as a metaphor for guilt** through the play. As the guilt increases, the volume of blood increases.	
2. Shakespeare uses the play to demonstrate the consequences of engaging with **the supernatural.**		2. Shakespeare uses **apparitions** to present the consequences of ungodly behaviour and is ambiguous about whether they are real or imagined.	
3. Shakespeare uses Macbeth's role as a tragic hero to highlight how vulnerable people are to the destructive **temptation of power.**		3. Shakespeare's **characterisation of Macbeth and Lady Macbeth** establishes the idea that ungodly deeds do not go unpunished.	

T6 Y10 Grammar Science B6 – Variation and Evolution

Genetic Engineering

- Process which involves modifying the **genome** of an organism by introduction a gene from another organism to give a **desired characteristic**.

Uses of genetic engineering:

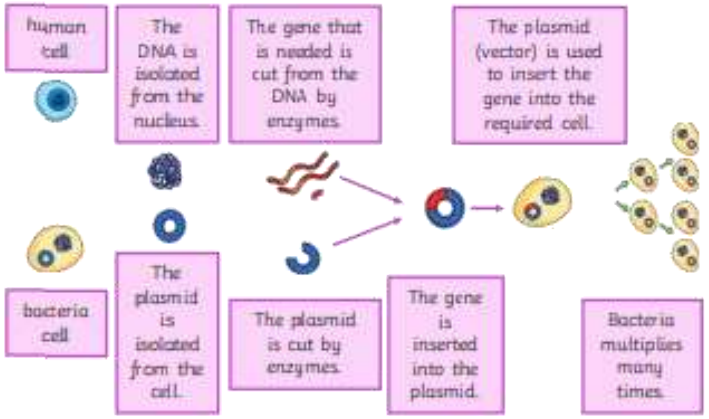
- Plant crops to be **resistant** to diseases or produce bigger, better fruits.

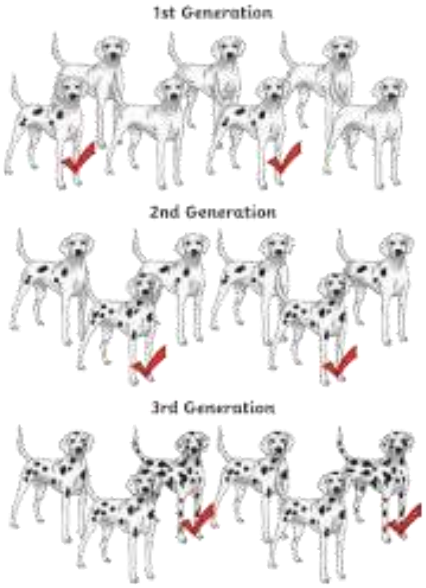
- Bacteria cells to produce useful substances, such as human insulin to treat diabetes.

Genetically modified (GM) crops

Advantages	Disadvantages
Resistant to insect attack	Not sure on long term effects when eating GM crops
Produce increased yields	Could affect populations of wild flowers and insects

Process of Genetic Engineering (HT only)





Selective Breeding

- Process which humans breed plants and animals for particular **genetic characteristics**.

Steps of selective breeding:

1. Choose a male and female with **desired characteristics.**
2. Breed together
3. Pick the offspring which have the desired characteristic and breed together.
4. Continue over many generations, selecting the best offspring each time, until all offspring show desired characteristics.

T6 Y10 Grammar Science B6 – Variation and Evolution

1. What is genetic engineering?

2. State two uses of genetic engineering.

3. What does ‘GM’ stand for?

4. State two advantages of GM crops.

5. State two disadvantages of GM crops.

6. Describe the stages of genetic engineering (HT only).

1. What is selective breeding?

2. Describe the four stages of selective breeding.

3. Why might a characteristic be chosen?

4. Give 3 examples of characteristics humans may choose.

T6 Y10 Grammar Science B6 – Genetics and Evolution

Extinction

Extinction = no remaining individuals of a species still alive on Earth.

Factors which could cause extinction:
- New disease
- Rapid change in environment (e.g. meteor/volcano eruption)
- New predators
- New competitors (often man)

Evidence for evolution

Fossils

Fossils are the **remains of plants or animals** from **millions of years ago:**
They are formed in different ways:
- Remains of an organism that has not fully decayed as one of the decay conditions was absent (e.g. too cold, not enough O_2)
- Mineralised forms of the harder parts of an organisms (such as bones)
- Traces of organisms such as footprints or burrows.

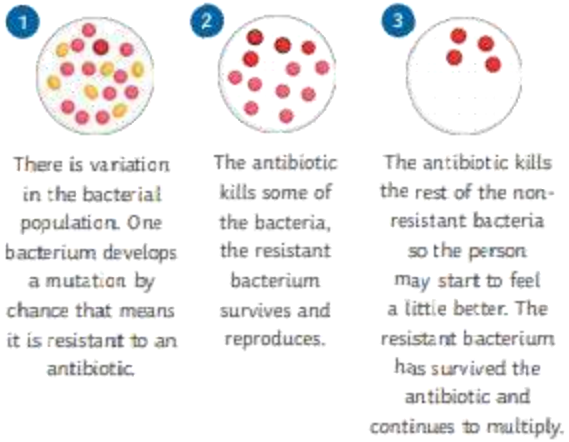
Many early life forms were **soft bodied** so have left few traces behind, as they decayed so we cannot be sure how life started on Earth. Many have been destroyed by Earth's rock cycle. Fossils help us understand how much or little organisms have changed as life developed on Earth.

Resistant Bacteria

- Bacteria **evolve** rapidly as they reproduce at a fast rate. (reproduce approx. every 20 mins)
- Mutations of bacteria can produce new strains.

- Some strains are **resistant** to antibiotics (so are not killed).
- They **survive** and **reproduce** – population of resistant strain rises.
- Resistant strain will spread because people are not **immune** and there is no effective treatment.

- **MRSA** is **resistant** to antibiotics.



How to reduce antibiotic resistant strains:

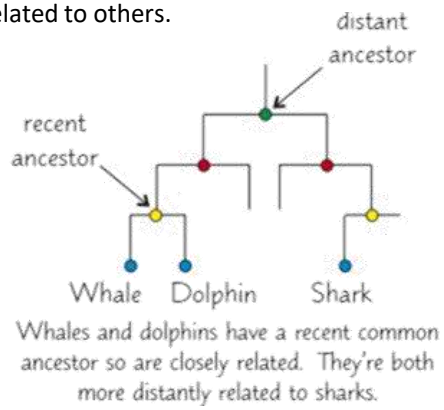
- Doctors should not prescribe antibiotics for viral infections

- Patients must complete courses of antibiotics

- Agricultural use of antibiotics should be restricted.

Evolutionary trees

Show how species have evolved from and are related to others.

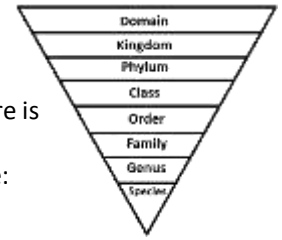


Classification

Linnaeus classified things into: Kingdom, phylum, class, order, family genus and species.

Organisms are named by the **binomial system** of genus and species. (2 names)

Due to evidence from chemical analysis, there is now a 'three-domain system' by Carl Woese:



Domain	bacteria	archaea	eukaryota			
Kingdom	eubacteria	archaebacteria	protista	fungi	plantae	animalia

T6 Y10 Grammar Science B6 – Genetics and Evolution

1. What does ‘extinct’ mean?
2. What are fossils?
3. Describe one way fossils can form
4. What do fossils show us?
5. Why is the fossil record incomplete?
6. What factors can cause extinction?

1. Why do bacteria evolve rapidly?
2. What can cause new strains of bacteria?
3. Name a bacteria which is resistant to antibiotics.
4. What are the three ways to reduce antibiotic resistance strains?

1. What do evolutionary trees show?

1. How did Linnaeus classify organisms?
2. What are Carl Woese’s three domains?
3. What does ‘binomial’ mean?

Metal hydroxides

Sodium hydroxide solution can be used to identify some metal ions (cations).
Solutions of aluminium, calcium and magnesium ions form white precipitates when sodium hydroxide solution is added but only the aluminium hydroxide precipitate dissolves in excess sodium hydroxide solution.

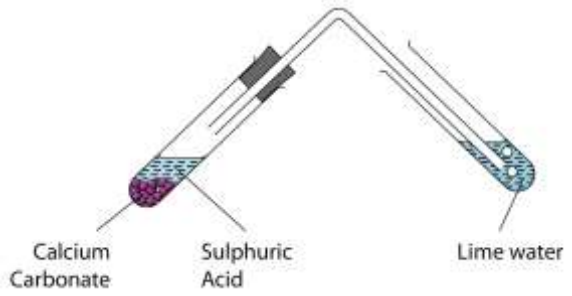
Solutions of copper(II), iron(II) and iron(III) ions form coloured precipitates when sodium hydroxide solution is added.

Copper(II) forms a blue precipitate, iron(II) a green precipitate and iron(III) a brown precipitate.

$CuSO_4 + 2NaOH \rightarrow Cu(OH)_2 + Na_2SO_4$

Carbonates

Carbonates react with dilute acids to form carbon dioxide gas.
Carbon dioxide can be identified with limewater, it will go cloudy.



T6 Y10 Grammar Science C8 – Chemical Analysis

1. What test do we do to test for some metal ions (cations)?
2. What is seen when this test reacts with these aluminium ions?
3. What is seen when this test reacts with these calcium ions?
4. What is seen when this test reacts with these magnesium ions?
5. What is seen when this test reacts with these copper (II) ions?
6. What is seen when this test reacts with these iron (II) ions?
7. What is seen when this test reacts with these iron (III) ions?

1. What is the tets for carbonates?
2. How can you test sthat carbon dioxide has been produced?

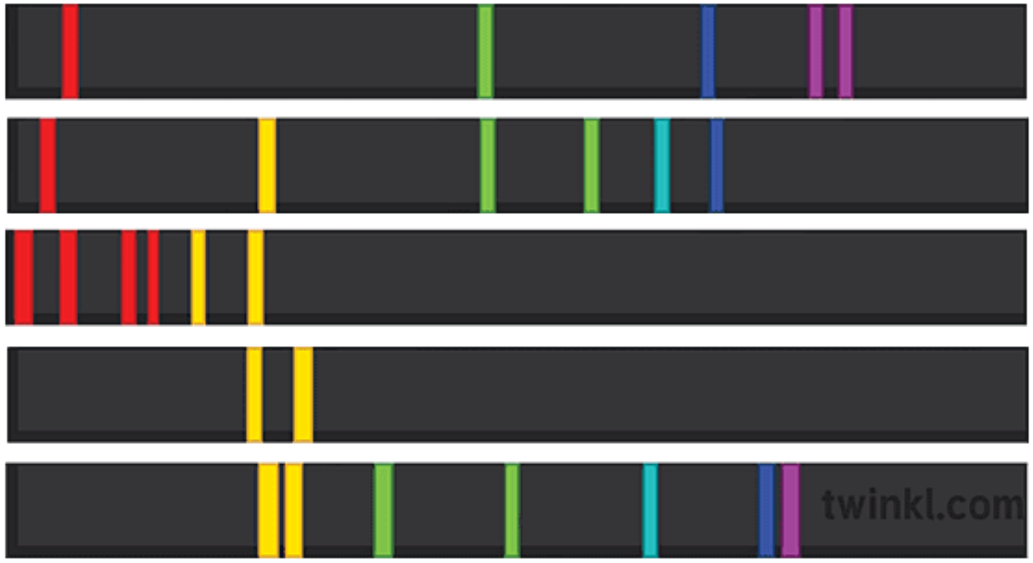
T6 Y10 Grammar Science C8 – Chemical Analysis

Instrumental methods

Elements and compounds can be detected and identified using instrumental methods. Instrumental methods are accurate, sensitive and rapid. Students should be able to state advantages of instrumental methods compared with the chemical tests in this specification.

Flame emission spectroscopy

Flame emission spectroscopy is an example of an instrumental method used to analyse metal ions in solutions. The sample is put into a flame and the light given out is passed through a spectroscope. The output is a line spectrum that can be analysed to identify the metal ions in the solution and measure their concentrations.



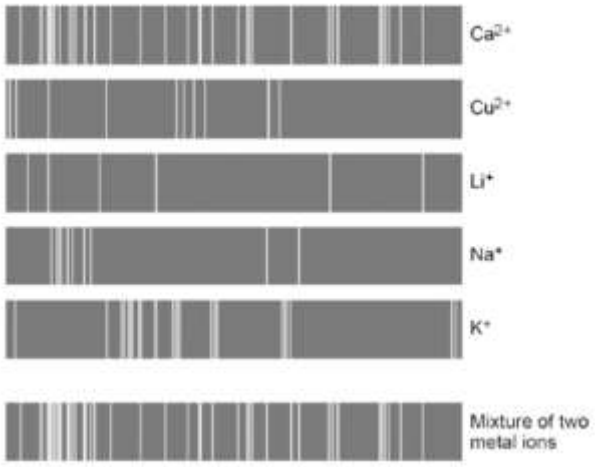
C4.12 – Chemical Analysis

1. What are the 3 things that are advantageous about instrumental techniques?

1. Name 3 metal ions that are in the sample from the picture

2. What is the reason to do flame emission spectroscopy?

Figure 3



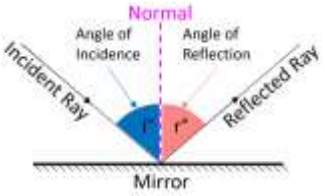
T6 Y10 Grammar Science P6 Light

Reflection

Definition: The change of direction of a light ray or wave at a boundary when the incident ray stays within the medium.

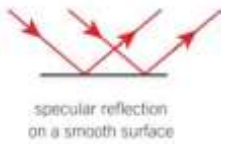
Law of reflection

The angle of incidence = angle of reflection



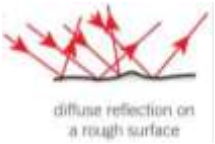
Specular reflection

Definition: Reflection from a smooth surface. Each light ray is reflected in a single ray.



Diffuse reflection

Definition: Reflection from a rough surface. The light rays are scattered in different directions



Ray diagrams

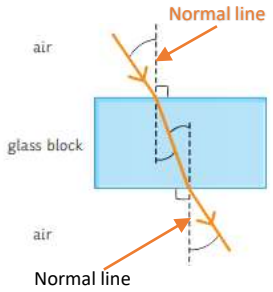
- You need to construct **ray diagrams** to show how a wave is **refracted** at the boundary of a different medium.

Less dense → More dense (e.g. air to glass)

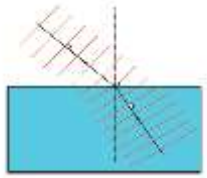
- Ray **slows down** and bends **towards the normal** line.

More dense → Less dense (e.g. glass to air)

- Ray **speeds up** and bends **away from the normal** line.



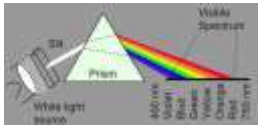
The ray bends because different parts of the wavefront cross the boundary at slightly different times –



If wave hits medium at an angle of 90° then the ray will slow down but will not be refracted.

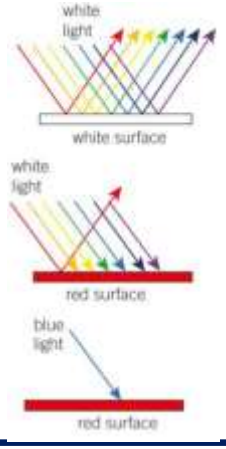
Colour

White light can be split into the colours of the rainbow, each with a different wavelength



Primary and secondary colours

Red + yellow = green
Green + blue = cyan
Blue + red = magenta
Green + blue+ red = white



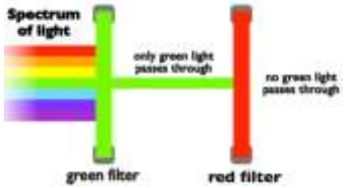
A white object looks white because it **reflects** all the wavelengths of visible light that reach it.

A red object looks red because it **absorbs** all the wavelengths of light except red. Only red light is **reflected**.

If only blue light is shone on a red surface it is **absorbed**, and no light is **reflected**, so the surface looks black

Filters

Filters change the colour objects appear as the only let certain wavelengths of light through. A green **filter absorbs** all colours except green, and **transmits** only green light



T6 Y10 Grammar Science P6 Light

1. What is reflection?

2. Draw a labelled diagram to show reflection of a ray of light by a mirror.

3. What is specular reflection?

4. What is diffuse reflection?

1. What happens when a ray goes from a less dense → more dense medium?

2. What happens when a ray moves from a more dense → less dense medium?

3. What is the line at 90^{o} to a surface called?

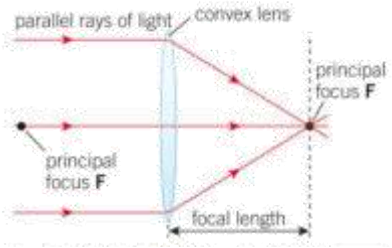
4. 4. What happens if a ray hits a medium at 90^{o}?

1. What are the primary colours of light?

2. Why does a red object look red?

3. Why does a blue filter make everything appear blue?

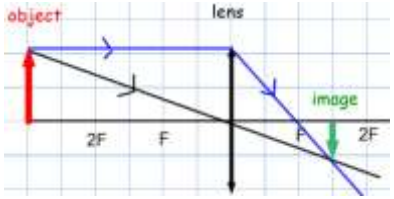
T6 Y10 Grammar Science P6 Light



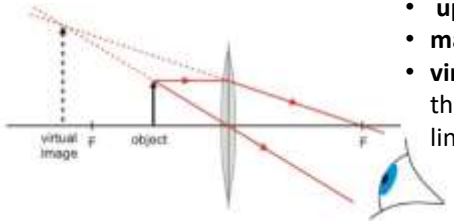
Convex (Converging) Lenses make parallel rays of light converge to meet at the principal focus. Focal length = distance from centre of lens to principal focus

To draw a ray diagram:
Draw two rays from the top of the object

1. A ray parallel to the principal axis, which is refracted through the principal focus.
2. A ray through the centre of the lens, which does not change direction.
3. To create the image, draw an arrow from the principal axis to the point where the rays meet.



The image above is **inverted** (upside down), **diminished** (smaller than the object) and **real** (the rays of light pass through it).

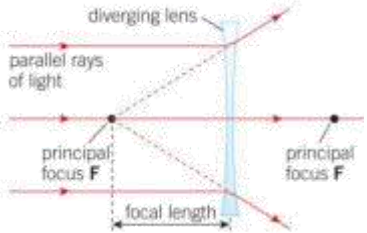


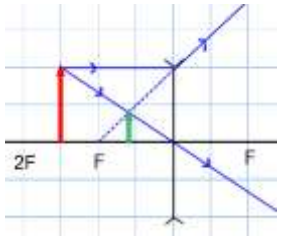
This image is

- **upright** (right way up),
- **magnified** (larger than the object)
- **virtual** (rays of light don't pass through it); represented by dotted lines

Convex lenses can produce **real** or **virtual** images.

Concave (Diverging) Lenses make parallel rays of light diverge (spread out), as if they have come from the principal focus of the lens





To draw a ray diagram:
Draw two rays from the top of the object

1. A ray parallel to the principal axis, which is refracted as if it came from the principal focus on the same side of the lens.
2. A ray through the centre of the lens, which does not change direction
3. To create the image, draw an arrow from the principal axis to the point where these rays appear to meet.

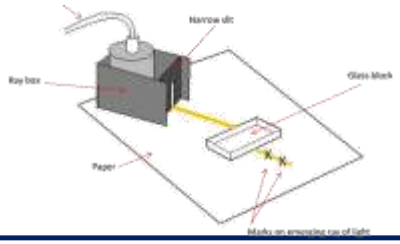
Concave lenses always produce **virtual** images.

Magnification: If the image is bigger than the object the magnification is greater than 1. If the image is smaller than the object, the magnification is less than 1.

Magnification is a ratio and so does not have units.

$$\text{Magnification} = \frac{\text{Image size}}{\text{Actual size}}$$

Required Practical: use different substances and surfaces to investigate refraction and reflection of light



T6 Y10 Grammar Science P6 Light

1. What does a convex lenses do to parallel rays of light?

2. How do you draw a ray diagram for a convex lens?

3. What is a real image?

4. What is a virtual image?

5. What type of does a concave lens produce?

1. What does a concave lenses do to parallel rays of light?

2. How do you draw a ray diagram for a concave lens?

3. What type of does a concave lens produce?

1. What is the formula to calculate magnification?

2. What does a magnification of less than 1 mean?

1. What equipment would you use to investigate the refraction of light through a glass block.

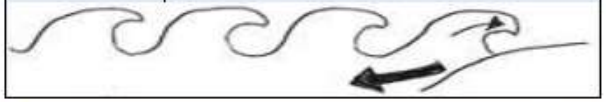
1. The UK's diverse landscapes

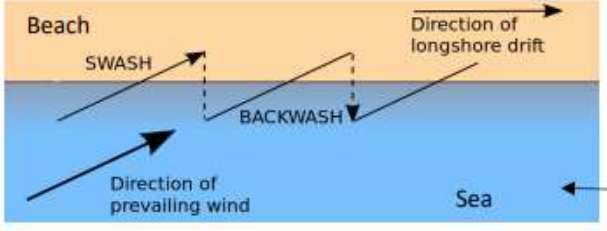
Term	Definition
Relief	Shape of the land.
Upland areas	Land over 200m. Highlands. Steep.
Lowland areas	Land below 100m. Flat or rolling hills

2. Waves

Term	Definition
Swash ↗	Movement of the water UP the beach in the direction of the prevailing wind.
Backwash ↓	Movement of water DOWN the beach at right angles (90°) due to gravity.
Constructive waves	Build up the beach. Strong swash. Weak backwash. Low height, long wave length. Low frequency.

Destructive waves	Erode the coast. Weak swash. Strong backwash. Tall height, short wave length. High frequency.



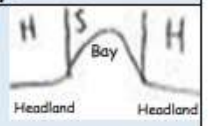


3. Processes

Sub-aerial processes (above the sea)	
Weathering	
Wearing away of rocks in situ. Material not removed.	
Mechanical weathering	The breaking down of rock without changing its composition. Freeze thaw.
Chemical weathering	The breaking down of rock caused by chemicals. (*e.g.* weak acid rain).
Mass movement	
The downhill movement of material under the force of gravity.	
Rockfall	Free fall of rocks under force of gravity.
Sliding	Material collapsing in a straight line.
Slumping	Downward rotation of sections of cliff along a slip plane. Worse when saturated.

Marine processes	
Erosion	
The wearing away and removal of material by a moving force such as a breaking wave.	
Hydraulic power	The sheer force of the water compressing air into cracks causes bits to break off.
Abrasion	Sediment scraping against the cliff (like sandpaper) removing small pieces.
Attrition	The 'smashing' of sediment against each other to become more rounded.
Solution	Chemical erosion caused by the dissolving of rocks by sea water.
Deposition	
Dropping of material	Occurs when there is a loss of energy. e.g.. Sheltered bays, when the wind drops.
Transportation	
Longshore drift	Zig zag movement of sediment along the coastline.

4. Erosional landforms

Headlands and bays	
Step 1	Discordant coastlines have alternating bands of more resistant (chalk) and less resistant rock (clay). 
Step 2	The less resistant rock is **eroded** faster through **abrasion,** creating bays.
Step 3	The more resistant rock **erodes** slower and is left jutting out to sea forming a headland.

Wave cut platforms	
Step 1	Waves **erode** cliff base between high+ low tide
Step 2	**Abrasion** create a wave cut notch which enlarges over time.
Step 3	The rock above the notch is unsupported so will collapse due to **gravity (mass movement).**
Step 4	Cliff **retreats**, leaving a wave cut platform (the un-eroded original cliff left behind).

Cave, arch, stack	
Step 1	**Hydraulic power** enlarges cracks in headland
Step 2	Over time they turn into a cave.
Step 3	Back of cave is deepened by **abrasion** until it **erodes** through the headland > arch.
Step 4	**Weathering** and **erosion** wear away at the arch until it eventually collapses (gravity).
Step 5	A stack is formed.

Example of a UK coastline. Dorset coastline.	
Headlands and bays	Swanage Bay, Durlston Head
Wave cut platform	Kimmeridge
Arch	Durdle Door (concordant)
Stack	Old Harry

1. The UK's diverse landscapes

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Relief	
Upland areas	
Lowland areas	

2. Waves

Term	Definition
Swash ↗	
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Constructive waves	
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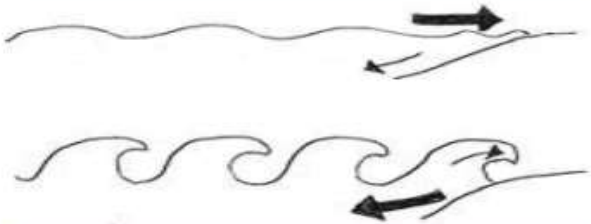
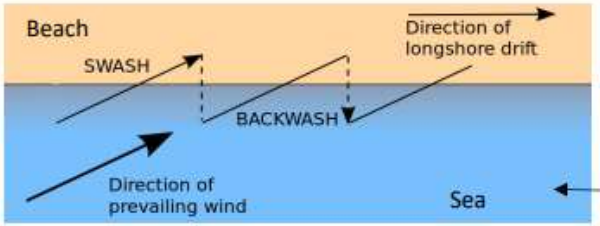




3. Processes

Sub-aerial processes (above the sea)

Weathering

Mechanical weathering	
Chemical weathering	

Mass movement

Rockfall	
Sliding	
Slumping	

Marine processes

Erosion

Hydraulic power	
Abrasion	
Attrition	
Solution	

Deposition

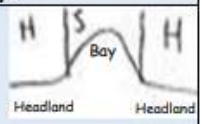
Dropping of material	

Transportation

Longshore drift	

4. Erosional landforms

Headlands and bays

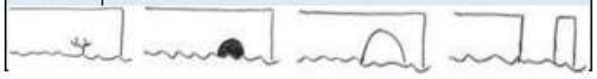
Step 1	
Step 2	
Step 3	

Wave cut platforms

Step 1	
Step 2	
Step 3	
Step 4	

Cave, arch, stack

Step 1	
Step 2	
Step 3	
Step 4	
Step 5	



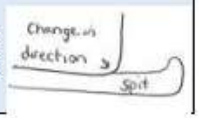
Example of a UK coastline. Dorset coastline.

5. Depositional landforms

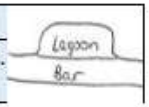
Beaches Swanage	
Step 1	Beaches form when **deposition** occurs.
Step 2	There needs to be a source of sediment nearby like soft cliffs.
Step 3	Constructive waves **deposit** material in sheltered areas like bays.

Sand dunes Studland	
Step 1	Wind blows sand up the beach (**saltation**).
Step 2	Obstacles such as seaweed cause the wind speed to decrease resulting in **deposition**.
Step 3	Over time sand dunes build up and are colonised by marram and lyme grass.
Step 4	This vegetation stabilises the sand dunes.

Spits Sandbanks	
Step 1	Longshore drift transports sediment along the coast in the direction of the prevailing wind (**swash** and **backwash**).
Step 2	Where the coastline changes direction...
Step 3	Sediment is **deposited** in calm weather out to sea.
Step 4	Can form a hooked end and a salt marsh behind the spit where it is sheltered.



Bar	
Step 1	When a spit joins two headlands.
Step 2	A lagoon forms behind the bar.



6. Coastal management

Hard engineering

Man made structures built to control the sea. Reduces flooding and erosion.

Strategy	Explanation	Costs	Benefits
Sea walls	A hard wall made out of concrete that reflects waves back out to sea	Expensive (£2000 per/m). Life span 75 years.	Prevents erosion / flooding. Often protects tourist resorts.
Rock armour	Boulders piled up along the coast. These erode rather than the coast.	Boulders can be moved by waves and need replacing.	Gaps allow water through, reducing wave energy. Cheap
Gabions	Wire cages filled with rocks at the base of cliffs. Absorb wave energy.	Ugly to look at. £100 per/m Metal corrodes over time.	Cheap and easy to build. Reduce erosion.
Groynes	Wooden fences at right angles to the coast, preventing sand moving by longshore drift = wider beach.	Starve beaches further along the coast = more erosion there. Life span only 25 years	Stops longshore drift removing beaches. Fairly cheap.

Soft engineering

Schemes set up using a natural approach to managing the coast.

Strategy	Explanation	Costs	Benefits
Beach nourishment	Sand and shingle from elsewhere is added to beaches. Wider beaches stop erosion and flooding	Needs redoing every 5 years. Sand has to be brought from elsewhere. Expensive.	Blends with existing beach. Larger beaches = tourists.
Reprofiling	Sediment is redistributed from the lower part to the upper part of the beach. Increases gradient.	Only works if wave energy is low. Needs to be redone lots.	Cheap and simple. Reduces energy of the waves.
Dune regeneration	Creating or restoring sand dunes by nourishment or planting marram grass to stabilise the sand	Protects only a small area. Areas zoned off from public which is unpopular.	Sand dunes create a barrier between the sea and land. Stabilisation is cheap.
Managed retreat Coastal realignment	Remove current defences, allow sea to flood the land behind. Over time land becomes a marshland.	Land is lost = conflict (farmers) Salt water can negatively impact existing ecosystems.	Cheap and easy. Doesn't need maintenance. New habitats created.

7. An example of a coastal management scheme

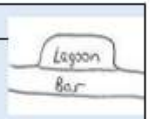
What?	Reasons for management	Management strategy	Effects and conflicts
Bournemouth Beach Management Scheme. Aim: Hold the line and protect tourism.	Coastline would erode at a metre a year. Beach important for tourism (£413million). 3114 homes at risk from collapsing cliffs.	3 phases costing £50 million. HARD: Replaced or added 53 groynes. SOFT: 3 lots of replenishment, every 5 yrs	✓ Beaches = More tourists = 9000 jobs ✗ Barton on Sea at risk from erosion. ✗ Conflict: locals vs construction.

5. Depositional landforms

Beaches Swanage	
Step 1 Step 2 Step 3	

Sand dunes Studland	
Step 1 Step 2 Step 3 Step 4	

Spits Sandbanks	
Step 1 Step 2 Step 3 Step 4	

Bar	
Step 1 Step 2	

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Dune regeneration			
Managed retreat Coastal realignment			

7. An example of a coastal management scheme

What?	Reasons for management	Management strategy	Effects and conflicts

Year 9 Term 4 History Knowledge Organiser. Topic = Nazi Dictatorship, 1933-39

What we are learning this term:

A. Why was Hitler able to increase his control over Germany from 1933?
B. What was the Night of the Long Knives?
C. How did Hitler create a Nazi police state?
D. How did Hitler control the church and the people of Germany?
E. What opposition was there to the Nazis?

A.	Why was Hitler able to increase his control over Germany after 1933?
Reichstag Fire	On the 27th February 1933, the Reichstag building was set on fire and was completely destroyed
Van der Lubbe	Dutch communist was found at the scene of the fire and was arrested. He confessed and executed for the crime
Communists	The Nazis blamed the communists for the fire and used this as a chance to arrest 4,000 communists (the enemy)
Enabling Act	Hitler used the Reichstag fire as an opportunity to take more control of Germany by passing the Enabling Act. This meant that he could pass laws without the Reichstag
Trade Unions	Hitler saw the trade unions as a threat as there could be communists amongst the working men who could challenge the government so he banned them
Political Parties	Next Hitler got rid of all other political parties so that the NSDAP were the only party that people could vote for
Local Government	The last step was to make sure that Hitler had full control of the government which he did by getting rid of local government

B.	What was the Night of the Long Knives?
Ernst Rohm	Rohm was the leader of the SA and also a threat to Hitler. The men in the SA were loyal to him and not to Hitler and Rohm also disagreed with some of Hitler's policies
The SA	By 1933 there were 3 million members in the SA, which meant that there were more men in this group than in the SS which was not good for Hitler if they challenged him
Himmler and Heydrich	Heydrich and Himmler were the leaders of the SS and they did not like Rohm and the power that the SA had so they wanted to get rid of this group
Night of the Long Knives	On the night of the 30th June, Hitler arranged a meeting with Rohm and other officers of the SA. When they arrived they were arrested, imprisoned and shot

C. How did the Nazis create a police state in Germany?

1. **Police State –** This is a country where the government controls people's freedom using the police
2. **The SS –** This group was the Nazi's own private police who were loyal to Hitler. They helped to run the concentration camps
3. **The SD –** This group kept a record of anyone who was against the Nazis
4. **Gestapo –** Germany state secret police who were known for their violent actions. People did not know who the Gestapo were as they wore ordinary clothes
5. **Law courts –** Hitler controlled the law courts by making sure that people who were tried there did not get a fair trial and were usually sent to prison if they were against the Nazis
6. **Concentration camps –** This is a place where people were held as prisoners for political reasons. People sent there were groups such as Jews and communists

D.	How did the Nazis control the church and the people?
Reich Church	This was a protestant church in German that was set up by those who worked for and supported the Nazis which helped Hitler control the Protestant church
Concordat	Hitler signed a concordat (agreement) with the Pope in 1933. He promised that Catholics would have freedom of religion if they did not get involved with politics. However, Hitler went against the agreement as he did not trust Catholics
Propaganda	This means to create ideas and opinions in people about certain groups. The Nazis used propaganda to make people hate the Jews and support the Nazis
Censorship	This means to hide information from people to create opinions and thoughts about certain groups. The Nazis censored the information people heard in the news
Media	The Nazis controlled the media such as newspapers and radio stations by telling them what to write and say
Rallies	Rallies were a good form of propaganda as they were bright and showed that the Nazis were strong enough to save Germany

E.	What opposition was there to the Nazis?
Opposition	This means to actively work against something to try and remove it. There was some opposition in Germany against the Nazis from certain groups
Opposition from the church	Some members of clergy spoke out against the actions of the Nazis. Martin Niemoller set up the Pastors Emergency League which was a group of protestant pastors who were against the Nazis
Opposition from the youth	There were a few youth opposition groups, made up of teenagers who did not like the strict control of the Nazis. There was the White Rose Group, Edelweiss Pirates and the Swing Youth
Support for Nazis	Overall the Nazis had a lot of support in Germany due to propaganda, people not wanting to lose their jobs and people also being scared of the Nazis

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Political Parties	
Local Government	

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Ernst Rohm	
The SA	
Himmler and Heydrich	
Night of the Long Knives	

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1. _____ – This is a country where the government controls people's freedom using the police
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D.	How did the Nazis control the church and the people?
Reich Church	
Concordat	
Propaganda	
Censorship	
Media	
Rallies	

E.	What opposition was there to the Nazis?
Opposition	
Opposition from the church	
Opposition from the youth	
Support for Nazis	

Year 10 GCSE Religious Education KO - Islam Beliefs

Keywords	
Tawhid	The belief in Islam that there is only one God who created everything
Omnipotent	God is all powerful and "has power over everything"
Immanent	God is active in the world and involved in its' creation.
Transcendent	God is outside of time and space. God cannot age or die or be located in one place.
Beneficent	Allah is compassionate, caring and good
Sunnah	The traditions and practices of the Prophet Muhammad
Qur'an	The Islamic sacred book
Hadith	A collection of traditions and sayings of the Prophet Muhammad
6 Articles of Faith	6 basic beliefs that shape the Islamic way of life
5 Roots of Usul Ad-Din	5 rules which explain how Muslims should act in daily life
Akhirah	Belief in the afterlife
Al Qadr	Supremacy of God's will and The belief in predestination which is slightly different for Sunni and Shi'a Muslims

What we are learning in this unit

A. 6 Articles of Faith
B. 5 Roots of Usul Ad-Din
C. Sunnah and Hadith
D. Risalah
E. Torah, Psalms and Gospels
F. Nature of Allah
G. Qu'ran
H. Torah, Psalms and Gospels
I. Angels
J. Al Qadir
K. Day of Judgement, Paradise and Hell

B. *5 Roots of Usul Ad-Din*

The 5 roots of Usul ad-Din are central to the Shi'a Muslim faith.

Root	What is it?	Quote
1: Tawhid	The belief in the oneness of Allah	"He is God the One, God the eternal" Surah 112
2: Risalah	Belief in prophethood: the chain of messengers from Adam to Muhammad	"We sent messengers to every community" Surah 16
3: Adalat	Allah is just (fair) and will bring Divine Justice	"I advise you to being just towards both friend and foe" Imam Ali
4: Imamah	A term for God-given leadership	"obey God and the Messenger, and those in authority among you"
5: Mi'ad	The day of judgement and resurrection	"His is the judgement; and to Hjm you shall be returned"

A. *6 Articles of Faith*

Article of faith	What is it?
1: Belief in one God	Allah is the creator and sustainer of life. There is no God but Allah
2: Belief in Angels	Angels do the work of Allah and do not have free will like humans. They obey Allah
3: Belief in God's revealed books	The Torah, the Psalms, the Gospels, the Scrolls of Abraham and the Qur'an.
4: Belief in the messengers of God	Prophets and messengers are chosen by Allah to deliver His message to humankind
5: Belief in the Day of Judgement	There will be a day when all people stand in front of Allah and are sent to Heaven or Hell
6: Belief in pre-destination	Allah knows everything. Everything is ordered by Allah – nothing is random or by chance

C. *Sunnah and Hadith*

Sunnah	• The practices, customs and traditions of Prophet Muhammad • They give an example for Muslims to follow • The Sunnah and Hadith are sources of Wisdom and authority alongside the Qur'an
Hadith	• Reading the Hadith helps a Muslim to learn how Muhammad explained the teachings from the Qur'an • The Hadith makes the Qur'an easier to understand
What does the Sunnah tell Muslims?	• The Sunnah covers many areas of life • It provides a guideline for Muslim life • There is a Sunnah for everything

Year 10 GCSE Religious Education KO - Islam Beliefs

Keywords	
Tawhid	
Omnipotent	
Immanent	
Transcendent	
Beneficient	
Sunnah	
Qur'an	
Hadith	
6 Articles of Faith	
5 Roots of Usul Ad-Din	
Akhirah	
Al Qadr	

What we are learning in this unit

A. 6 Articles of Faith
B. 5 Roots of Usul Ad-Din
C. Sunnah and Hadith
D. Risalah
E. Muhammad
F. Nature of Allah
G. Qu'ran
H. Torah, Psalms and Gospels
I. Angels
J. Al Qadir
K. Day of Judgement, Paradise and Hell

B. *5 Roots of Usul Ad-Din*

.

Root	What is it?	Quote
1:		
2:		
3:		
4:		
5:		

A. *6 Articles of Faith*

Article of faith	What is it?
1:	
2:	
3:	
4:	
5:	
6:	

C. *Sunnah and Hadith*

Year 10 GCSE Religious Education KO - Islam Beliefs

D.	*Risalah (Prophethood)*
What is it	• Muslims believe there has been 124,000 prophets • Every Islamic prophet preached Islam and key beliefs • The first was **Adam,** the last was Muhammad (Box E)
Why are prophets important?	• Prophets are guided by Allah • Their love of Allah stops them from sinning • Some prophets are messengers who have been given revelation of news
Adam	• The first prophet • The father of all humankind • He taught about the work of Iblis and how to protect themselves • He taught life on Earth was temporary, eternal life is in the next life • He built the Ka'aba as the first place of worship
Ibrahim	• Ibrahim was told in a dream to sacrifice Isma'il as a test of faith – remembered at Hajj every year • His son **Isma'il** is the ancestor of the prophet Muhammad

E	*Torah, Psalms and Gospels*
Psalms (Zabur)	• The Psalms of Dawud are a collection of prayers to Allah • They contain lessons of guidance for the people
Gospel (Injil)	• This is the good news about Isa (Jesus) • Muslims highly respect Isa because there are revelations in the Qur'an about him • Muslims believe he was the Masih, he was not the son of Allah, he was not crucified, he did not die to save sins • The gospels contain some mistakes because they were written many years after Isa died
Torah (Tawrat)	• The Tawrat is the Arabic word for the Torah • These are the revelations given to Moses by Allah on Mt Sinai • The Qur'an refers to the Tawrat as "guidance and light"
Scrolls of Ibrahim	• Revelations received by Ibrahim on the first day of Ramadan • Contained stories about worship and reflection • Not a book, individual revelations

F.	*The Nature of Allah*
Tawhid	• There is only one God and this God has no equal. • He created everything. • Only He should be worshipped: worshipping other Gods is a sin called **shirk.** • ***"There is no God but Allah, and Muhammad is his messenger".*** • ***"Allah witnesses that there is no deity except Him"*** • ***"Do they not see that Allah, who created the heavens and the Earth and was not wearied by their creation, has the power to raise the dead to life?"***
2: Omnipotent	Allah is all powerful and has power over everything
3: Immanence	Allah is active in the world and able to control events
4: Transcendent	• Allah is outside of the universe • Not limited by time or space
5: Beneficience	God has love and good will
6: Mercy	• ***"In the name of Allah, the most compassionate, the most merciful"*** • God is forgiving and caring
7: Fairness and justice	• Allah is fair to all people • ***Allah has sent the same message to all prophets to allow humans numerous opportunities to submit to the will of Allah*** • Allah will ensure that judgement is fair and punishments are suitable

Year 10 GCSE Religious Education KO - Islam Beliefs

D.	*Risalah (Prophethood)*
What is it	
Why are prophets important?	
Adam	
Ibrahim	

E	*Torah, Psalms and Gospels*
Psalms (Zabur)	
Gospel (Injil)	
Torah (Tawrat)	
Scrolls of Ibrahim	

F.	*The Nature of Allah*
Tawhid	
2: Omnipotent	
3: Immanence	
4: Transcendent	
5: Beneficience	
6: Mercy	
7: Fairness and justice	

Year 10 GCSE Religious Education KO - Islam Beliefs

G.	*Qur'an*
Revelation	• Chapters of the Qur'an were revealed to Prophet Muhammad over 13 years in Makkah • While Muhammad received the revelations, he was not able to change them because it was the will of Allah • After Muhammad received them, he recited them, and somebody wrote them down.
Authority	• It is the direct word of Allah so it has His authrotiy • It is without error and remains in its' original form • A written book was needed to formalise the religion
What does it contain?	• It covered every aspect of life • It influences a person throughout their lives • The basics of worship which Muhammad developed • Shari'ah law and social systems • It explains creations and other ultimate questions
Supreme authority	• The Qur'an is believed to have supreme authority • It is a timeless book – it is only the word of Allah if it is not translated from Arabic

I.	*Angels*
What are they?	• Angels are made from light and have wings which can move at the speed of light • They have no gender and are in the unseen world • They always complete what Allah asks and they always obey Allah as they have no free will
What do they do?	• Watch over humans • Bring peace to believers and instill fear in non-believers • Angel of Death takes the soul at death • Greet people entering paradise or throw people into the pits of hell • Signify the end of the world by blowing a horn
Jibril	• Most important angel in Islam • Always brings good news • Helped Ibrahim when he was thrown in to a fire, opened up the Zamzam well for Hajar • Told Maryam she would have a son (Isa) • Dictated the Qur'an directly from Allah
Mika'il	• Assisted Muhammad with his spiritual mission • Giver of rain and sustenance – in charge of plants and rain • Helped Muhammad to fight for Makkah • Will help to weigh peoples' actions on Judgement Day • Mika'il prepared Muhammad by providing Jibril with purifying water

K.	*Day of Judgement, paradise and Hell*
What will happen?	• Muslims believe Judgement day will come on a Friday (Adam was created on a Friday) • It will be announced by Israfils' trumpet • Allah will refer us to the book of deeds to justify damnation or salvation • Humans will go to paradise or Hell
Jannah	• Paradise • No growing ill, old or dying – it is a reward and gift from Allah • A person must live religiously and ask Allah for forgiveness • Good beliefs and actions • It is beyond human imagination
Entry to Jannah	• ***"enter among my servants! Enter my paradise!"*** • People will arrive over the As-Sirat bridge • There are 8 gates and you go through the one which represents your best action • Two angels welcome people saying ***"peace be upon you"***
Jahannam	• Hell • People wail in misery, 70x hotter than any flame on earth, boiling water poured on their heads, pain, dragged in chains • Punishment for a life full of evil or rejecting the teachings of the Qur'an

J.	*Al Qadir*
• Everything happens as a result of Allah's will and nothing is ever random or without reason • Allah is in charge of everything • Everything is a part of Allah's plan • ***"never will we be struck except by what Allah has decreed for us"***	

E.	*Muhammad*
Why was he chosen?	• Muhammad had characteristics such as responsibility, determination, patience, courage and honesty • He was highly respected in his community • He was extremely devoted to Allah – he prayed and fasted for long periods of time
What did he do as a prophet?	• He became the ruler of Madinah and set up the first Islamic community • He converted the people of Makkah to Islam
Why is Muhammad important?	• He is seen as the perfect role model as he is trustworthy and obedient to Allah • His influence can still be seen in the Hadith and Sunnah • The night of power in Ramadan is to remember Muhammad's first revelation from the angel Jibril

Year 10 GCSE Religious Education KO - Islam Beliefs

G.	*Qur'an*
Revelation	
Authority	
What does it contain?	
Supreme authority	

I.	*Angels*
What are they?	
What do they do?	
Jibril	
Mika'il	

K.	*Day of Judgement, paradise and Hell*
What will happen?	
Jannah	
Entry to Jannah	
Jahannam	

J.	*Al Qadir*

E.	*Muhammad*
Why was he chosen?	
What did he do as a prophet?	
Why is Muhammad important?	

Year 10 GCSE Religious Education KO - Islam Practices

Keywords	
Tawalla	Showing love for God and for those who follow Him
Tabarra	Disassociation with God's enemies
Khums	The obligation to pay one-fifth of acquired wealth
Lesser jihad	The physical struggle or holy war in defence of Islam
Greater jihad	The **daily** struggle and inner spiritual striving to live as a Muslim
Sunni	Muslims who believe in the successorship of Abu Bakr, Umar, Uthman and Ali as leaders after the Prophet Muhammad
Shi'a	Muslims who believe in the Imamah, leadership of Ali and his descendants
Niyyah	Intention during prayer - having the right intention to worship God
Du'a	A personal prayer that is done in addition to Salah e.g. asking Allah for help

What we are learning in this unit

A. The 5 Pillars and 10 Obligatory Acts
B. Salah
C. Sawm
D. Zakah
E. Hajj
F. Jihad
G. Id-ul-Adha
H. Id-ul-Fitr

A.	*5 Pillars of Islam and 10 obligatory acts*
What are the 5 pillars	• 5 key practices or duties for Muslims • Both Sunni and Shi'a keep these (Shi'a have them as part of the 10 obligations) • They are seen as pillars "holding up the religion" and are all of equal importance
What are the 10 obligatory acts	• There are 10 obligations for a Muslim according to the Shi'a branch of Islam. • These include prayer, fasting, almsgiving, pilgrimage, jihad, khums, directing others towards good, forbidding evil, tawalla and tabarra
Shahadah	• Shahadah is the first of the 5 pillars • It is the Muslim declaration of faith • ***"there is no God but Allah, and Muhammad is His messenger"*** • This is a statement that Muslims reject anything but Allah as their focus of belief • It also recognises that Muhammad has an important role and his life is an example to follow

	Jihad

Lesser Jihad	• Originated when Prophet Muhammad and early Muslims were being attacked and oppressed by the Meccans and had no choice but to engage
	• ***"Fight in the way of God those who fight against you but do not transgress"***
	• Conditions for declaration
	  • self-defense
	  • proportionate
	  • legitimate authority
	  • no harm to civilians

Greater Jihad	• A struggle within oneself to follow the teachings of Islam and be a better person • e.g. perform the Five Pillars, follow Sunnah and avoid temptation • ***"encourage what is right and forbid what is wrong"***

B.	*The 5 Pillars - Salah*
What is it?	• ***"Salah is a prescribed duty that has to be performed at the given time by the Qur'an"*** • ***Muslims pray 5 times per day and this allows them to communicate with Allah.*** • The prayers are done at dawn (fajr), afternoon • (zuhr), late afternoon (asr), dusk (maghrib) and night (isha) • Muslims face the holy city of Makkah when paying.
Wuzu	• The washing process to purify the mind and body for prayer • Muhammad said the key to Salah is cleanliness • Hands, arms, nose, mouth, head, neck and ears are cleaned as well as both feet up to the ankle.
Rak'ahs and recitations	• These are the movements that Muslims make during prayer • Takbir – raise hands to ears and say 'Allahu Akbar' • Qiyam – Standing, Muslims recite Surah • Then bow to the waist saying ***"Glory be to my Great Lord and praise be to Him"*** • Then sink to their knees saying ***"Glory be to my Lord, The Most Supreme...".***
Salah at home	• Salah is a big part of family life • Meals and other activities are usually scheduled to fit around prayer times • Families pray all together and might have a room set aside for prayer
Salah in the mosque	• All mosques have a qiblah wall which is to show where to face Makkah • Men and women pray in separate rooms at the Mosque
Jummah	• Jummah is congregational prayer held on a Friday at the mosque where the imam leads the prayer • Praying together as a community develops the feeling of unity amongst Muslims • Men are obliged to attend unless they are sick or too old • Women do not have to go – they may pray at home instead
Differences between Sunni and Shi'a	• Shi;a Muslims combine some prayers so they may only pray 3x a day • Shi'a use natural elements e.g. clay where their head rests

Year 10 GCSE Religious Education KO - Islam Practices

Keywords	
Tawalla	
Tabarra	
Khums	
Lesser jihad	
Greater jihad	
Sunni	
Shi'a	
Niyyah	
Du'a	

What we are learning in this unit

A. The 5 Pillars and 10 Obligatory Acts
B. Salah
C. Sawm
D. Zakah
E. Hajj
F. Jihad
G. Id-ul-Adha
H. Id-ul-Fitr

A.	*5 Pillars of Islam and 10 obligatory acts*
What are the 5 pillars	
What are the 10 obligatory acts	
Shahadah	

	Jihad
Lesser Jihad	
Greater Jihad	

B.	*The 5 Pillars - Salah*
What is it?	
Wuzu	
Rak'ahs and recitations	
Salah at home	
Salah in the mosque	
Jummah	
Differences between Sunni and Shi'a	

Year 10 GCSE Religious Education KO - Islam Practices

	The 5 Pillars - Zakah
The role of giving alms	• ***Muslims believe it is their duty to ensure Allah's wealth has been distributed equally as everyone is the same*** • The Qur'an commands to give to those in need
The significance of giving alms	• Giving 2.5% of savings/wealth to charity • Wealth can cause greed which is evil, so Zakah purifies wealth – wealth is given by God and must be shared • The Prophet Muhammad practiced Zakah as a practice in Medina • Given to the poor, needy and travellers • ***Sadaqah*** is giving from the heart out of generosity and compassion
Khums	• Shi'a Islam – one of the 10 obligatory acts • 20% of any profit earned by Shi'a Muslims paid as a tax • Split between charities that support Islamic education and anyone who is in need • ***"know that whatever of a thing you acquire, a fifth of it is for Allah, for the Messenger, for the near relative, and the orphans, the needy, and the wayfarer"***

	The 5 Pillars - Hajj
The role of pilgrimage	• A pilgrimage to Makkah which is compulsory for Muslims to take at least once as long as they can afford it and are healthy
The significance of pilgrimage	• God told Ibrahim to take his wife and son on a journey and leave them without food or water • Hajira ran up and down two hills in search of water, could not find any and prayed to God. Then water sprung from the ground. This is the Zamzam well • When Ibrahim returned he was commanded to build the Ka'ba as a shrine dedicated to Allah • Hajj is performed in the month of Dhu'l-Hijja
Actions	• Ihram – dressing in two pieces of white cloth • Circling the Ka'aba 7 times (tawaf) • Drinking water from the Zamzam well like Hajar • walking between Al-Safa and Al-Marwa hills seven times • Throwing stones at 3 pillars (jamarat) to represent casting out the devil and remembering Ibrahim throwing stones at the devil to drive him away • Asking Allah for forgiveness at Mt Arafat • Collecting pebbles at Muzdalifah

	The 5 Pillars - Sawm
The role of fasting	• Fasting during Ramadan (9th month in Muslim calendar) • Muslims give up food, drink, smoking and sexual activity in daylight hours • Pregnant people, children under 12, travellers and elderly people are exempt from fasting.
The significance of fasting	• Ramadan is believed to be the month that Prophet Muhammad began to receive revelations of the Qur'an • Helps Muslims to become spiritually stronger
Reasons for fasting	• Obeying God and exercising self-discipline • Develops empathy for the poor • Appreciation of God's gifts • Giving thanks for the Qur'an • Sharing fellowship and community with other Muslims
Night of power	• The night when the Angel Jibril first appeared to Muhammad and began revealing the Qur'an. • The most important event in history – ***"better than a thousand months" (Surah 97:3)*** • Laylat Al-Qadr is the holiest night of the year. Muslims try to stay awake for the whole night to pray and study for the Qur'an

	Id-ul-Adha, Id-ul-Fitr, Ashura
Id-ul-Adha Not an official holiday in UK	• ***Festival of sacrifice*** • Marks the end of Hajj and is a chance for whole Ummah to celebrate • ***Origins*** – Ibrahim's commitment to God in being willing to sacrifice his son, Ishmael. God was testing Ibrahim • ***Key events –*** new clothes, sacrificing an animal, visiting the Mosque. • People ask a butcher to slaughter a sheep for them and share the meat with the community
Id-ul-Fitr Public holiday in Muslim majority countries, not UK	• ***Festival of fast-breaking*** • Marks the end of Ramadan • ***Key events –*** Decorate homes with colourful light and banners, dress in new clothes, gather in Mosques, give gifts and money, give to the poor • ***Zakah ul-Fitr –*** donation to the poor so that everyone can eat a generous meal at the end of Ramadan.
Ashura	• Sunni celebration – many fast on this day which was established by Prophet Muhammad • Shi'a mourning – Husayn was murdered and beheaded. Muslims remember his death and betrayal • ***Key events –*** public displays of grief, day of sorrow, wear black, re-enactments of martyrdom, not a public holiday in Britain but Muslims may have day off school

Year 10 GCSE Religious Education KO - Islam Practices

	The 5 Pillars - Zakah
The role of giving alms	
The significance of giving alms	
Khums	

	The 5 Pillars - Sawm
The role of fasting	
The significance of fasting	
Reasons for fasting	
Night of power	

	The 5 Pillars - Hajj
The role of pilgrimage	
The significance of pilgrimage	
Actions	

	Id-ul-Adha, Id-ul-Fitr, Ashura
Id-ul-Adha Not an official holiday in UK	
Id-ul-Fitr Public holiday in Muslim majority countries, not UK	
Ashura	

39. Stakeholder

Stakeholders are the people or groups with an interest in the success or failure of an organisation.

Types of stakeholders & their typical objectives:

Business owners & shareholders
Interested in the business being successful and making a profit.

Staff/managers
Interested in having job security, career development, fair wages etc.

Customers
Interested in getting an honest and fair deal from a business.

Local Community
Interested in honest and fair dealing/co-operation with the organisation with regards to local employment and environment.

Local Government
Interested in employment plans, location plans and business ability to pay tax.

Pressure Groups
Interested in fair and ethically correct business practices.

40. Types of technology used in business

Technology is used in different aspects of business:

E-commerce: Allows businesses to sell their products online and reach a wider audience of potential customers with lower costs.

Social Media: Allows a business to communicate and interact directly with customers.

Digital Communication: E-mail allows customers to contact a business personally and directly.

Payment Systems: Online payment systems (eg. Paypal) allow all types of businesses to access their payments fast and easily.

41. How does technology influence business activity?

Sales can increase as a result of e-commerce because customers can access products or services 24 hours a day, 7 days a week. New technology drives innovation to create new products or services and this can increase sales of new products.

Costs can be reduced through advertising online through websites, e-mail newsletters, and via social media. Costs can also be reduced through manufacturing efficiency and being able to find the best deal on raw materials online.

The 4 P's are affected by different types of technology.
Product = New technologically advanced product or a new method of production.
Promotion = Digital marketing can improve the effectiveness of marketing and is cheap.
Place = Products can be sold online and can be accessed by customers worldwide.

42. Retail Legislation

Legislation	Law's passed by acts of parliament. Too many rules that impact on a business from operating as the owner would like are known as "**Red Tape**".
Consumer Rights Act 2015	• Goods must be fit for purpose and free from defects. • The buyer has the right to get their money back or have their product repaired at the seller's expense. • Any issues are to be dealt with by the seller and not the manufacturer.
Trade Descriptions Act	• Trader's can not use false or misleading statements. • Labels must not be misleading.
Other acts of legislation:	Consumer credit act 1974, The weights and measures act 1985, The food safety act 1990.

43. Recruitment Legislation

Employees are protected from being exploited in the work place.

Equality Act 2010	Organisations must consider all job applicants equally in regards to gender, age, skin colour etc.
Equal Pay Act 1970	Organisations must pay workers fairly and can not discriminate in regards to gender, age or skin colour etc.

44. The Economy

The economy is the collection of business transactions that take place throughout the country, throughout the year.

Interest rates.	The amount that a lender charges per year to someone who has borrowed money. This is measured as a percentage.
Exchange rates	The value of the pound (£) measured by how much foreign currency can be bought per pound (£).
Recession	A downturn in sales and output throughout the economy, often leading to rising unemployment.
Inflation	The rate in which prices are rising from the same time last year.

39. Stakeholder
Types of stakeholders & their typical objectives:
Business owners & shareholders
Staff/managers
Customers
Local Community
Local Government
Pressure Groups

40. Types of technology used in business
Technology is used in different aspects of business:
E-commerce:
Social Media:
Digital Communication:
Payment Systems:

41. How does technology influence business activity?

42. Retail Legislation	
Legislation	
Consumer Rights Act 2015	
Trade Descriptions Act	
Other acts of legislation:	

43. Recruitment Legislation	
Employees are protected from being exploited in the work place.	
Equality Act 2010	
Equal Pay Act 1970	

44. The Economy	
The economy is the collection of business transactions that take place throughout the country, throughout the year.	
Interest rates.	
Exchange rates	
Recession	
Inflation	

Hardware and Software

Hardware:
The physical, electrical/mechanical parts of a computer. This consists of internal components such as the CPU and graphics card, and additional hardware which allows the users to communicate with the system through input and output devices, such as a monitor and a keyboard.

Externally attached hardware are known as peripherals.

Software:
The programs, data and applications in a computer system. Any parts of a computer system that aren't physical.

Software can be classified as either application or system software.
Application – Programs which perform specific end-user tasks. E.g. web browser, spreadsheet, games.
System – Programs which help to run or maintain the computer system.

System Software:

Operating Systems -
Manages processes.
Manages memory.
Manages I/O (input/output) devices.
Manages applications.
Manages security (access levels, user accounts)
Controls hardware components.
Provides a platform for software to run on.
Provides a user interface.

Utility Programs -
Programs which help to maintain or manage the computer system. E.g. Disk Defragmenters, Antivirus, Compression, Encryption, Registry Cleaners, Driver Updaters,

Translators -
Translate source code from a high-level language or assembly code into machine code (binary). There are three types, Compilers, Interpreters and Assemblers.

Compilers – Does the translation all at once and creates an exe file containing the machine code.
Interpreters – Does the translation line by line.
Assembler – Converts assembly code.

Boolean Logic Gates

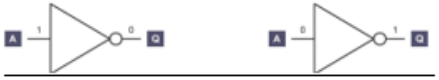
AND Gate.
Both inputs need to be true for the output to be true.

Input A	Input B	Output Q
0	0	0
0	1	0
1	0	0
1	1	1

OR Gate.
Either of the two inputs needs to be true for the output to be true.

Input A	Input B	Output Q
0	0	0
0	1	1
1	0	1
1	1	1

NOT Gate.
Inverts the input.



Input A	Output Q
1	0
0	1

Y10 COMPUTER SCIENCE – TERM 5 & 6 COMPUTER SYSTEMS

CPU Components

Control Unit (CU) – fetches, decodes and executes instructions. Sends control signals to the system and peripherals. Moves data around the system.

Arithmetic Logic Unit (ALU) – performs arithmetic and logical operations. Acts as a gateway between primary memory and secondary storage.

Cache – Small amount of high speed memory to store frequently used data and instructions.

Clock – Synchronises all computer's components by sending out regular electrical pulses. The more pulses per second, the more calculations and operations can be performed. This is measured in Hz.

Buses – Collections of parallel wires for high speed internal communication within the CPU.

Address Bus – Carries memory addresses.
Data Bus – Carries data between components.
Control Bus – Carries control signals.

Registers – Small amounts of high speed memory within the CPU. Special purpose ones listed below.

Program Counter – Holds the memory address of the next instruction.
Memory Address Register – Holds the address of the current instruction.
Memory Buffer/Data Register – Holds the data that is either being retrieved or stored.
Current Instruction Register – Holds the current instruction which needs to be decoded and executed.
Accumulator – Holds the result of calculations from the ALU.

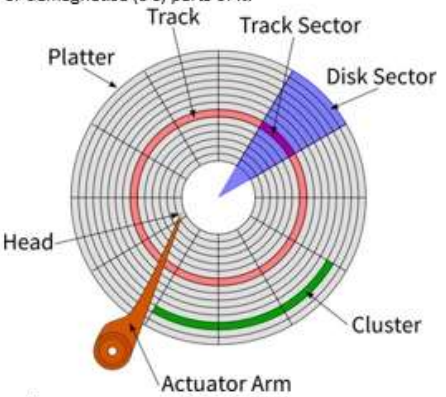
Fetch-Decode-Execute Cycle

1. The memory address held in the program counter is copied into the MAR.
2. The address in the program counter is then incremented (increased by 1) so it now holds the address of the next instruction to be fetched.
3. The processor sends a signal along the address bus to the memory address held in the MAR.
4. The instruction/data in that memory address is carried by the data bus to the MBR/MDR.
5. The instruction/data in the MBR/MDR is copied to the CIR.
6. The instruction/data in the CIR is decoded and executed. Results of processing are stored in the ACC.
7. The cycle then returns to step one.

Secondary Storage

Secondary Storage is long-term, non-volatile storage. Without secondary storage, all programs and data would be lost when the computer is turned off.

Magnetic
Hard disks spin.
Actuator arm moves a read/write head over the disk to access parts of it. The head can detect the magnetisation of the disk and either magnetise (1's) or demagnetise (0's) parts of it.



Optical
Optical disk spins and has a spiral track.
Laser head is moved over the disk and shines the laser down onto it.
Disk has pits (scatters light 0's) and lands (reflects light 1's).
Writeable disks have photosensitive dye which is burned to represent 1's and 0's.

Solid State
A collection of semiconductor chips which can be accessed and written to extremely quickly.
No moving parts, so they are more reliable than disks.

GCSE Unit 3 SPANISH Knowledge organiser.
Topic Free Time Activities

What we are learning this term:

A. Talking about free time
B. Talking about your plans for the weekend
C. Talking about eating out
D. Talking about special occasion meals
E. Extending what you can say about sport
F. Talking about sport in the world

6 Key Words for this term

1. disfrutar
2. jugar
3. los deportes
4. campeones
5. formentar
6. a selección

3.1G ¿Qué te gusta hacer?

aburrido/a	boring
bailar	to dance
cantar	to sing
el cine	cinema
de vez en cuando	from time to time,occasionally
entretenido/a	entertaining
estimulante	challenging
jugar	to play (game, sport)
leer	to read
libre	free
odiar	to hate
la película	film
practicar	to practise
salir	to go out
la tarde	afternoon, evening
el teclado	keyboard
tocar	to touch, to play(an instrument)
ver	to see, watch

3.3G ¿Haces deporte?

activo/a	active
al aire libre	in the open air, outdoors
ayudar	to help
el baloncesto	basketball
el campo	countryside, playing field
la cancha	court
los deberes	homework
la equitación	horse riding
el estadio	stadium
montar a caballo	to ride a horse
montar en bicicleta	to ride a bike

3.1F ¿Qué haces en tu tiempo libre?

a veces	sometimes
bastante	quite
cada	each, every
cenar	to have an evening meal
charlar	to chat
el coro	choir
descansar	to rest
los dibujos animados	cartoons
el documental	documentary
el fin de semana	weekend
genial	great
las noticias	news
nunca	never
ocupado/a	occupied, busy
policíaco/a (adj.)	police, detective, crime
poner	to put
por lo general	in general
siempre	always
el teatro	theatre
la telenovela	soap opera
terminar	to finish
el tiempo	time
todo/a/os/as	all, every
tonto/a	silly, stupid
la vez	time, occasion

3.2G Comer y Beber

el (fem.) agua (mineral)	(mineral) water
beber	to drink
el bocadillo	sandwich
la carne	meat
la cena	evening meal
cenar	to have supper / to have an evening meal
comer	to eat
la comida	lunch, food, meal
desayunar	to have breakfast
el desayuno	breakfast
después	afterwards
el helado	ice cream
el huevo	egg
el jamón	ham
la leche	milk
las legumbres	pulses
la mantequilla	butter
la manzana	apple
la mermelada	jam, marmalade
las patatas fritas	chips, fries

Key Verbs

Salir To go out	Ir To go	Jugar To play	Hacer – to do/make	Tocar To play (ins)
Salgo I go out	Voy I go	Juego I play	Hago I do	Toco I play
Sales You go out	Vas You go	Juegas You play	Haces You do	Tocas You play
Sale He/she goes out	Va s/he goes	Juega He/she plays	Hace s/he does	Toca He/she plays
Salimos We go out	Vamos They go	Jugamos We play	Hacemos We do	Tocamos We play
Salen They go out	Van They go	Juegan They play	Hacen They do	Tocan They play

3.2G Comer y Beber

el perrito caliente	hot dog
el pescado	fish
el pollo	chicken
el postre	dessert, pudding
el queso	cheese
la sopa	soup
el té	tea
tomar	to take, to have (food, drink)
la tortilla	omelette
la tostada	toast
el vaso	glass
las verduras	vegetables

3.2F Vamos a comer fuera

el atún	tuna
el bacalao	cod
la barra	loaf
el bistec	steak
los calamares	squid
la cebolla	onion
el cerdo	pork
la cerveza	beer
los champiñones	mushrooms
el chorizo	chorizo
la chuleta	chop
el cordero	lamb
el filete	fillet
la fresa	strawberry
las gambas	prawns
el gazpacho	chilled tomato soup
los guisantes	peas
el jamón serrano	cured ham
las judías verdes	green beans

3.1H Hablando del tiempo libre y de los planes

aburrido/a	boring
agradable	pleasant
al aire libre	in the open air, outdoors
la batería	drums
la canción	song
dar un paseo	to go for a walk
de vez en cuando	from time to time, occasionally
desafiante	challenging
divertido/a	fun
emocionante	exciting

3.3F ¿Qué deportes harás?

el alpinismo	rock climbing
cansado/a	tired
la carrera	race
el concurso (contest)	competition
contestar	to answer
durante	during
el ejercicio	exercise
el entrenamiento	training
entrenar	to train
el equipo	team
el esquí	skiing
este, esta	this
ganar	to win
el jugador	player
mañana	tomorrow
el miembro	member
el partido	match
probar	to try, to test

GCSE Unit 3 SPANISH Knowledge organiser.
Topic Free Time Activities

What we are learning this term:

A. Talking about free time
B. Talking about your plans for the weekend
C. Talking about eating out
D. Talking about special occasion meals
E. Extending what you can say about sport
F. Talking about sport in the world

6 Key Words for this term

1. disfrutar
2. jugar
3. los deportes
4. campeones
5. formentar
6. a selección

3.1G ¿Qué te gusta hacer?

aburrido/a
bailar
_____
_____
de vez en cuando
entretenido/a
_____
_____
leer
libre
odiar
la película
_____
salir
_____
el teclado
_____
ver

_____
_____
to sing
cinema
_____
_____
challenging
to play (game, sport)
_____
_____
_____
_____
to practise
_____
afternoon, evening
_____
to touch, to play(an instrument)
_____

3.3G ¿Haces deporte?

activo/a
_____
outdoors
ayudar
el baloncesto
_____
field
la cancha
_____
la equitación
el estadio
_____
_____

_____
in the open air,
_____
_____
countryside, playing
_____
homework
_____
_____
to ride a horse
to ride a bike

3.1F ¿Qué haces en tu tiempo libre?

a veces
bastante
cada
_____
_____
_____
descansar
los dibujos animados
el documental
_____
_____
las noticias
nunca
ocupado/a
policíaco/a
_____
_____
_____
el teatro
la telenovela
_____
el tiempo
todo/a/os/as
_____
_____

_____
_____
_____
to have an evening meal
to chat
choir
_____
_____
_____
weekend
great
_____
_____
_____
_____
to put
in general
always
_____
_____
to finish
_____
_____
silly, stupid
time, occasion

3.2G Comer y Beber

el (fem.) agua (mineral) _____
beber
_____
la carne
_____
_____
an evening meal
comer
la comida
desayunar
_____
_____
_____
el huevo
el jamón
la leche
las legumbres
_____
_____
la mermelada
_____

_____
sandwich
_____
evening meal
to have supper / to have
_____
_____
_____
breakfast
afterwards
ice cream
_____
_____
_____
_____
butter
apple
_____
chips, fries

Key Verbs

Salir _____	Ir _____	_____ To play	Hacer – to do/make	Tocar _____
_____ I go out	Voy _____	Juego I play	Hago _____	_____ I play
_____ You go out	_____ You go	Juegas _____	Haces You do	Tocas You play
Sale He/she goes out	Va s/he goes	Juega He/she plays	_____ s/he does	_____ He/she plays
Salimos _____	_____ They go	Jugamos We play	Hacemos _____	Tocamos _____
Salen _____	Van They go	_____ They play	Hacen They do	_____ They play

3.2G Comer y Beber

el perrito caliente
el pescado
el pollo
_____
_____
_____
el té
_____
drink)
la tortilla
la tostada
el vaso
_____

_____
_____
_____
dessert, pudding
cheese
soup
_____
to take, to have (food,
_____
_____
_____
vegetables

3.2F Vamos a comer fuera

el atún
el bacalao
_____
_____
los calamares
la cebolla
el cerdo
_____
_____
el chorizo
la chuleta
_____
el filete
_____
_____
el gazpacho
los guisantes
_____
_____

_____
_____
loaf
steak
_____
_____
_____
beer
mushrooms
_____
_____
lamb
_____
strawberry
prawns
_____
_____
cured ham
green beans

3.1H Hablando del tiempo libre y de los planes

aburrido/a
agradable
al aire libre
outdoors
la batería
la canción
_____
de vez en cuando
occasionally
desafiante
divertido/a
_____

_____
_____
in the open air,
_____
_____
to go for a walk
from time to time,
_____
_____
exciting

3.3F ¿Qué deportes harás?

el alpinismo
cansado/a
la carrera
el concurso
contestar
_____
_____
_____
entrenar
el equipo
el esquí
este, esta
_____
_____
_____
el miembro
el partido
_____

_____
_____
_____
_____ (contest)
_____
during
exercise
training
_____
_____
_____
_____
to win
player
tomorrow
_____
_____
to try, to test

GCSE Unit 3 SPANISH Knowledge organiser. Topic Free Time Activities

Translation Practice. G – blue F – orange H - Green	
No me gusta _____	I don't like **going shopping**
Me encanta _____ con mis amgos	I love **going out** with my friends
Me _____ escuchar música	I **love** listening to music
No me gusta _____	I don't like **dancing**
Si tengo _____	If I have **the time**
Hago _____ de música	**I do** music classes
De vez en cuando _____ una novela	From time to time, **I read** a novel
Siempre _____ la guitarra con la banda	I always **play** the guitar with the group
A veces ____ a algún concierto	Sometimes **I go** to some concert
El fin de semana _____ juego al fútbol	On the weekend I **always** play football
Siempre _____ muy preocupada	**I am** always busy
Generalmente _____ música por las tardes	Generally **I listen** to music in the evenings
Me _____ jugar a los videojuegos	Playing video games **interests me**
Ella quiere patina en la pista de _____	She wants to skate on the **ice rink**
_____ al gimnasio	**I will come** to the gym
_____ if there is a match?	**Will you know** if there's a match?
_____ el ciclismo	**I will try** cycling
Fue una buena ____	It was a good **party**
No quiero _____	I don't want **to participate**

Key Questions: Answer the following in your own words. Use these model answers	
¿Qué haces en tu tiempo libre? Frecuencia? Opiniones?	-Normalmente juego al futbol todos los días después del colegio. Lo que me encanta es jugar al futbol con mis amigos porque es bueno para la salud y es emocionante y relajante jugar contra tus amigos. De vez en cuando juego con videojuegos pero ayer hice ciclismo, hice mis deberes y toque mi guitarra. Ayer, fui al colegio durante el día. Después del colegio fui al polideportivo con mis amigos y jugué/jugamos al baloncesto juntos. Ayer por la mañana fui de compras en el centro de la cuidad con mi madre y fuimos a las tiendas de ropa. Lo que me encantó/gustó fue que ví una película entretenido por la noche/ fue que jugué mi deporte favorito y podía entrenarme.Todos los días juego al futbol y al baloncesto, que son mis deportes favoritos. De vez en cuando hago ciclismo y practico el atletismo pero son muy estresantes, duros y no son relajantes. Lo que me encanta es jugar al fútbol en mi equipo los fines de semana.
¿Te gusta ver la televisión? Qué has visto en la televisión recientemente?Tienes unprograma favorito?	Si, me gusta ver la televisión, me gustan los programas de horror, de tele-realidad, los documentales y de deporte. Lo que me encanta es ver los dibujos-animados porque son más entretenidos que las noticias. Ayer ví las noticias con mis padres. Mi programa favorito es … porque es ….
¿Qué es tu película favorita? Qué película has visto recientemente en el cine?	Mi película favorita es … porque me encantan las películas de acción/tiene mucha violencia/tiene buenos actores/es muy romántica/me encanta la historia/tiene buenos efectos especiales.
¿Cuando se cena en Inglaterra y en España? ¿Cuándo prefieres cenar o almorzar?	Normalmente se cena en Inglaterra a las seis, como mi almuerzo a las dos, como mi desayuno a las ocho.
Describe una cena especial	Recientemente fui a un restaurante con mi familia para celebrar el cumpleaños de mi abuelo. Fuimos a un restaurante chino porque es la comida favorita de mi abuela. Primero, comí .. y bebí. Para el postre comí y bebí . Lo que me gustó fue la buena comida/ver a y hablar con toda mi familia. Fue muy emocionante.

Key Grammar	
Forming the preterite (past tense). Always remove the –AR, -ER, -IR endings first	Remember the preterite (past) tense endings for –AR, -ER, -IR verbs. They are: -AR: -é, -aste,-ó, -amos, -astéis, -aron -ER: -í, -íste, -ió, -imos, -istéis, - ieron -IR : -í, -iste, -ió, -imos, -istéis, - ieron
Forming the future tense ('will')	**Future Tense ('will…')** **All verb groups:** -é, -ás, -á, -emos, -éis, -án
Imperfect Tense *(Past, ongoing actions, descriptions, 'used to' or 'was doing')*	**-ar** -aba, -abas, -aba, -ábamos, - abais, -aban **-er and –ir** -ía, -ías, -ía, -íamos, - íais, -ían

39. Stakeholder

Stakeholders are the people or groups with an interest in the success or failure of an organisation.

Types of stakeholders & their typical objectives:

Business owners & shareholders
Interested in the business being successful and making a profit.

Staff/managers
Interested in having job security, career development, fair wages etc.

Customers
Interested in getting an honest and fair deal from a business.

Local Community
Interested in honest and fair dealing/co-operation with the organisation with regards to local employment and environment.

Local Government
Interested in employment plans, location plans and business ability to pay tax.

Pressure Groups
Interested in fair and ethically correct business practices.

40. Types of technology used in business

Technology is used in different aspects of business:

E-commerce: Allows businesses to sell their products online and reach a wider audience of potential customers with lower costs.

Social Media: Allows a business to communicate and interact directly with customers.

Digital Communication: E-mail allows customers to contact a business personally and directly.

Payment Systems: Online payment systems (eg. Paypal) allow all types of businesses to access their payments fast and easily.

41. How does technology influence business activity?

Sales can increase as a result of e-commerce because customers can access products or services 24 hours a day, 7 days a week. New technology drives innovation to create new products or services and this can increase sales of new products.

Costs can be reduced through advertising online through websites, e-mail newsletters, and via social media. Costs can also be reduced through manufacturing efficiency and being able to find the best deal on raw materials online.

The 4 P's are affected by different types of technology.
Product = New technologically advanced product or a new method of production.
Promotion = Digital marketing can improve the effectiveness of marketing and is cheap.
Place = Products can be sold online and can be accessed by customers worldwide.

42. Retail Legislation

Legislation	Law's passed by acts of parliament. Too many rules that impact on a business from operating as the owner would like are known as "**Red Tape**".
Consumer Rights Act 2015	• Goods must be fit for purpose and free from defects. • The buyer has the right to get their money back or have their product repaired at the seller's expense. • Any issues are to be dealt with by the seller and not the manufacturer.
Trade Descriptions Act	• Trader's can not use false or misleading statements. • Labels must not be misleading.
Other acts of legislation:	Consumer credit act 1974, The weights and measures act 1985, The food safety act 1990.

43. Recruitment Legislation

Employees are protected from being exploited in the work place.

Equality Act 2010	Organisations must consider all job applicants equally in regards to gender, age, skin colour etc.
Equal Pay Act 1970	Organisations must pay workers fairly and can not discriminate in regards to gender, age or skin colour etc.

44. The Economy

The economy is the collection of business transactions that take place throughout the country, throughout the year.

Interest rates.	The amount that a lender charges per year to someone who has borrowed money. This is measured as a percentage.
Exchange rates	The value of the pound (£) measured by how much foreign currency can be bought per pound (£).
Recession	A downturn in sales and output throughout the economy, often leading to rising unemployment.
Inflation	The rate in which prices are rising from the same time last year.

39. Stakeholder
Types of stakeholders & their typical objectives:
Business owners & shareholders
Staff/managers
Customers
Local Community
Local Government
Pressure Groups

40. Types of technology used in business
Technology is used in different aspects of business:
E-commerce:
Social Media:
Digital Communication:
Payment Systems:

41. How does technology influence business activity?

42. Retail Legislation	
Legislation	
Consumer Rights Act 2015	
Trade Descriptions Act	
Other acts of legislation:	

43. Recruitment Legislation	
Employees are protected from being exploited in the work place.	
Equality Act 2010	
Equal Pay Act 1970	

44. The Economy	
The economy is the collection of business transactions that take place throughout the country, throughout the year.	
Interest rates.	
Exchange rates	
Recession	
Inflation	

Y10 COMPUTER SCIENCE – TERM 5 & 6 COMPUTER SYSTEMS

Hardware and Software

Hardware:
The physical, electrical/mechanical parts of a computer. This consists of internal components such as the CPU and graphics card, and additional hardware which allows the users to communicate with the system through input and output devices, such as a monitor and a keyboard.

Externally attached hardware are known as peripherals.

Software:
The programs, data and applications in a computer system. Any parts of a computer system that aren't physical.

Software can be classified as either application or system software.
Application – Programs which perform specific end-user tasks. E.g. web browser, spreadsheet, games.
System – Programs which help to run or maintain the computer system.

System Software:

Operating Systems -
Manages processes.
Manages memory.
Manages I/O (input/output) devices.
Manages applications.
Manages security (access levels, user accounts)
Controls hardware components.
Provides a platform for software to run on.
Provides a user interface.

Utility Programs -
Programs which help to maintain or manage the computer system. E.g. Disk Defragmenters, Antivirus, Compression, Encryption, Registry Cleaners, Driver Updaters,

Translators -
Translate source code from a high-level language or assembly code into machine code (binary). There are three types, Compilers, Interpreters and Assemblers.

Compilers – Does the translation all at once and creates an exe file containing the machine code.

Interpreters – Does the translation line by line.
Assembler – Converts assembly code.

Boolean Logic Gates

AND Gate.
Both inputs need to be true for the output to be true.

Input A	Input B	Output Q
0	0	0
0	1	0
1	0	0
1	1	1

OR Gate.
Either of the two inputs needs to be true for the output to be true.

Input A	Input B	Output Q
0	0	0
0	1	1
1	0	1
1	1	1

NOT Gate.
Inverts the input.

Input A	Output Q
1	0
0	1

Y10 COMPUTER SCIENCE – TERM 5 & 6 COMPUTER SYSTEMS

CPU Components

Control Unit (CU) – fetches, decodes and executes instructions. Sends control signals to the system and peripherals. Moves data around the system.

Arithmetic Logic Unit (ALU) – performs arithmetic and logical operations. Acts as a gateway between primary memory and secondary storage.

Cache – Small amount of high-speed memory to store frequently used data and instructions.

Clock – Synchronises all computer's components by sending out regular electrical pulses. The more pulses per second, the more calculations and operations can be performed. This is measured in Hz.

Buses – Collections of parallel wires for high speed internal communication within the CPU.

Address Bus – Carries memory addresses.
Data Bus – Carries data between components.
Control Bus – Carries control signals.

Registers – Small amounts of high-speed memory within the CPU. Special purpose ones listed below.

Program Counter – Holds the memory address of the next instruction.
Memory Address Register – Holds the address of the current instruction.
Memory Buffer/Data Register – Holds the data that is either being retrieved or stored.
Current Instruction Register – Holds the current instruction which needs to be decoded and executed.
Accumulator – Holds the result of calculations from the ALU.

Fetch-Decode-Execute Cycle

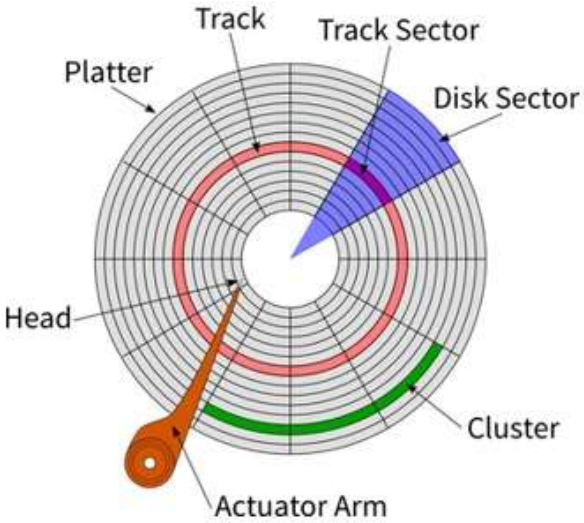
1. The memory address held in the program counter is copied into the MAR.
2. The address in the program counter is then incremented (increased by 1) so it now holds the address of the next instruction to be fetched.
3. The processor sends a signal along the address bus to the memory address held in the MAR.
4. The instruction/data in that memory address is carried by the data bus to the MBR/MDR.
5. The instruction/data in the MBR/MDR is copied to the CIR.
6. The instruction/data in the CIR is decoded and executed. Results of processing are stored in the ACC.
7. The cycle then returns to step one.

Secondary Storage

Secondary Storage is long-term, non-volatile storage. Without secondary storage, all programs and data would be lost when the computer is turned off.

Magnetic

Hard disks spin.
Actuator arm moves a read/write head over the disk to access parts of it. The head can detect the magnetisation of the disk and either magnetise (1's) or demagnetise (0's) parts of it.



Optical

Optical disk spins and has a spiral track.
Laser head is moved over the disk and shines the laser down onto it.
Disk has pits (scatters light 0's) and lands (reflects light 1's).
Writeable disks have photosensitive dye which is burned to represent 1's and 0's.

Solid State

A collection of semiconductor chips which can be accessed and written to extremely quickly.
No moving parts, so they are more reliable than disks.

Macronutrients, fibre and water- Term 6

Alcohol
Alcohol is not considered a nutrient, but is a source of energy in the diet.
The government recommends no more than 14 units of alcohol per week for both men and women.

Macronutrients
Macronutrients provide energy. The macronutrients are:
•carbohydrate;
•protein;
•fat.
Macronutrients are measured in grams (g).

Energy from food
- Energy intake is measured in joules (J) or kilojoules (kJ), but many people are more familiar with Calories (kcal).
- Different macronutrients, and alcohol, provide different amounts of energy.

Protein complementation
Different food contains different amounts and combinations of amino acids.
Vegans and vegetarians can get all the amino acids they need by combining different protein types at the same meal. This is known as protein complementation.
Examples are:
•rice and peas;
•beans on toast;
•hummus and pitta bread;
•bean chilli served with rice.

Fibre
•Dietary fibre is a type of carbohydrate found in plant foods.
•Food examples include wholegrain cereals and cereal products; oats; beans; lentils; fruit; vegetables; nuts; and, seeds.
Dietary fibre helps to:
•reduce the risk of heart disease, diabetes and some cancers;
•help weight control;
•bulk up stools;
•prevent constipation;
•improve gut health.

Protein
•Made up of building blocks called amino acids.
•There are 20 amino acids found in protein.
•Eight amino acids have to be provided by the diet (called essential amino acids).
The essential amino acids (EAAs) are isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.
In young children, additional amino acids, e.g. histidine and tyrosine, are sometimes considered to be essential (or 'conditionally essential') because they may be unable to make enough to meet their needs.
Recommendations
•0.75g/kg bodyweight/day in adults.
Sources:
Animal sources: meat; poultry; fish; eggs; milk; dairy food.
Plant sources: soya; nuts; seeds; pulses, e.g. beans, lentils; mycoprotein.
In young children, additional amino acids, e.g. histidine and tyrosine, are sometimes considered to be essential (or 'conditionally essential') because they may be unable to make enough to meet their needs.

Dietary reference values (DRVs) are a series of estimates of the energy and nutritional requirements of different groups of healthy people in the UK population. They are not recommendations or goals for individuals.
Reference Intakes are guidelines for the maximum amount of energy (calories), fat, saturated fat, sugars and salt consumed in a day (based on a healthy adult female).

Fat
Sources of fat include:
•saturated fat;
•monounsaturated fat;
•polyunsaturated fat.
Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.
Recommendations
•<35% energy, Saturated fat <11% energy.
A high saturated fat intake is linked with high blood cholesterol levels.
Sources:
Saturated fat: fatty cuts of meat; skin of poultry; butter; hard cheese; biscuits, cakes and pastries; chocolate.
Monounsaturated fat: edible oils especially olive oil; avocados; nuts.
Polyunsaturated fatty acids: edible oils especially sunflower oil; seeds; margarine; spreadable fats made from vegetable oils and oily fish.

Carbohydrate
All types of carbohydrate are compounds of carbon, hydrogen and oxygen. They can be divided into three main groups according to the size of the molecule. These three types are:
•monosaccharides (e.g. glucose);
•disaccharides (e.g. lactose);
•polysaccharide (e.g. sucrose).
The two types main of carbohydrate that provide dietary energy are starch and sugars. Dietary fibre is also a type of carbohydrate.
Starchy carbohydrate is an important source of energy.
Starchy foods - we should be choosing wholegrain versions of starchy foods where possible.
Recommendations
•Total carbohydrate - around 50% of daily food energy.
•Free sugars include all sugars added to foods plus sugars naturally present in honey, syrups and unsweetened fruit juice (<5% daily food energy).
•Fibre is a term used for plant-based carbohydrates that are not digested in the small intestine (30g/day for adults).

Key terms
Dietary reference values: Estimated dietary requirements for particular groups of the population.
Essential amino acids: 8 of the different amino acids found in proteins from plants and animals that have to be provided by the diet.
Macronutrients: Nutrients needed to provide energy and as the building blocks for growth and maintenance of the body.
Protein complementation: Combining different protein types at the same meal to ensure all EAAs are ingested.
Reference Intakes: Guidelines for the maximum amount of nutrients consumed.

Hydration
•Aim to drink 6-8 glasses of fluid every day.
•Water, lower fat milk and sugar-free drinks including tea and coffee all count.
•Fruit juice and smoothies also count but should be limited to no more than a combined total of 150ml per day.
20% of water is provided by food such as soups, yogurts, fruit and vegetables.
The other 80% is provided by drinks such as water, milk and juice.
Drinking too much water can lead to 'water intoxication' with potentially life threatening hyponatraemia.
This is caused when the concentration of sodium in the blood gets too low.

Macronutrients, fibre and water- Term 6

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Macronutrients provide energy. The macronutrients are:
•……;
•protein;
•F……..
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Different food contains different amounts and combinations of ……. acids.
V…… and vegetarians can get all the amino acids they need by combining different protein types at the same meal. This is known as protein ……..
Examples are:
•rice and peas;
•beans on toast;
•hummus and pitta bread;
•bean chilli served with rice.

Fibre
•Dietary …… is a type of carbohydrate found in plant foods.
•Food examples include w……cereals and cereal products; oats; beans; lentils; fruit; vegetables; nuts; and, seeds.
Dietary fibre helps to:
•reduce the risk of heart d……, diabetes and some cancers;
•help weight control;
•bulk up stools;
•prevent c……..;
•improve gut health.

Protein
•Made up of building blocks called ……. acids.
•There are ……. amino acids found in protein.
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In young children, additional amino acids, e.g. histidine and tyrosine, are sometimes considered to be essential (or 'conditionally essential') because they may be unable to make enough to meet their needs.
Recommendations
•0.75g/kg bodyweight/day in adults.
Sources:
Animal sources: meat; poultry; fish; eggs; milk; dairy food.
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•monounsaturated fat;
•Poly…… fat.
Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.
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•<35% energy, Saturated fat <11% energy.
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Sources:
Saturated fat: fatty cuts of m……..; skin of poultry; butter; hard cheese; biscuits, cakes and pastries; ch……..
Monounsaturated fat: edible oils especially olive ……; avocados; nuts.
Polyunsaturated fatty acids: edible oils especially sunflower oil; seeds; margarine; spreadable fats made from vegetable oils and oily fish.

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•……..(e.g. lactose);
•…… (e.g. sucrose).
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Starchy carbohydrate is an important source of energy.
Starchy foods - we should be choosing wholegrain versions of starchy foods where possible.
Recommendations
•Total c…… - around 50% of daily food energy.
•Free sugars include all sugars added to foods plus sugars naturally present in honey, syrups and unsweetened fruit juice (<5% daily food energy).
•Fibre is a term used for plant-based carbohydrates that are not digested in the small intestine (30g/day for adults).

Key terms
Dietary reference values: Estimated dietary requirements for particular groups of the population.
Essential amino acids: 8 of the different amino acids found in proteins from …… and …….. that have to be provided by the diet.
Macronutrients: Nutrients needed to provide energy and as the building blocks for …….. and maintenance of the body.
Protein complementation: Combining different protein types at the same meal to ensure all EAAs are ingested.
Reference Intakes: Guidelines for the maximum amount of nutrients consumed.

Hydration
•Aim to drink 6-8 glasses of fluid every day.
•Water, lower fat milk and sugar-free drinks including tea and coffee all count.
•Fruit juice and smoothies also count but should be limited to no more than a combined total of 150ml per day.
20% of water is provided by food such as soups, yogurts, fruit and vegetables.
The other 80% is provided by drinks such as water, milk and juice.
Drinking too much water can lead to 'water intoxication' with potentially life threatening hyponatraemia.
This is caused when the concentration of sodium in the blood gets too low.

Name: Date:

Good food hygiene and safety practices

Good food hygiene practices are necessary in order to produce, make and supply food that is safe to eat. This involves more than just being clean. A simple way to remember is the **4Cs**:

- cleaning;
- cooking;
- chilling;
- cross-contamination.

Cleaning

Cleaning the kitchen is important to keep food safe and prevent bacteria from spreading.

'Clean as you go' means people make sure that they clean the area and utensils they have been working in or with, as they prepare food. This avoids build-up of mess and leads to better hygienic conditions. Areas which need particular attention are:

- surfaces that come into contact with food, e.g. chopping boards, utensils;
- surfaces that come into contact with hands, e.g. cupboard and fridge doors.

Cleaning – personal hygiene and getting ready to cook

Good personal hygiene is essential to reduce the risk of food poisoning.

- **Hands**: Thoroughly wash and dry hands before and after touching food and regularly throughout cooking.
- **Clothing**: Clean clothing should be worn. Long sleeves should be rolled up and a clean apron or chef's jacket worn over outside clothes. Enclosed, non-slip, shoes should be worn in the kitchen.
- **Jewellery**: All jewellery, including a watch, should be removed (piercings should be covered if they cannot be removed).
- **Skin**: Cuts and wounds should be covered with a coloured, waterproof dressing. The plasters are often blue in colour so they can be easily identified if they fall into food.
- **Face**: Do not cough or spit near or over food, taste food with fingers, bite nails, eat, chew or smoke, touch nose, or remove earrings.

For more information, go to: https://bit.ly/3nE9fpE

Cooking

To reduce the risk of food poisoning, hot food must be served steaming hot, that is above **63ºC**.

- Bacteria will begin to die when the temperature rises above **60ºC**.
- Some foods change colour when they are cooked.
- Cooking food thoroughly to a minimum core temperature of **75°C** will ensure most bacteria is destroyed.
- When cooking burgers, sausages, portions of pork and chicken, there should be no pink meat. They should also be steaming hot inside and the juices should run clear when cooked.
- Steak or other cuts of beef or lamb can be eaten less well done as long as they have been properly sealed. Sealing the meat will kill any bacteria on the outside.
- Leftovers should be cooled as quickly as possible within two hours and then stored in the fridge below **5ºC**. When leftovers are re-heated, they need to be steaming hot. Leftovers should not be re-heated more than once and should be used within 48 hours from when it was made (24 hours for rice dishes).

Chilling

The temperature between **5ºC– 63ºC** is known as the 'danger-zone'. Bacteria will multiply most rapidly within this temperature range. Reducing the temperature below **5ºC** slows the reproduction of microorganisms. Cold temperatures do not kill bacteria.

High-risk food, such as such as meat, fish and dairy products plus opened bottles, jars or tubes, should be stored below 5°C. Eggs should be stored in a cool, dry place. Ideally, eggs should be stored in the fridge.

Cross-contamination

The process by which bacteria are transferred from one area to another is known as **cross-contamination**. The main carriers of bacteria and causes of cross contamination are:

- humans;
- rubbish;
- pests and other animals;
- food, e.g. raw meat or poultry.

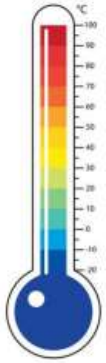
Cross contamination – raw meat

- Keep raw meat separate from ready-to-eat food.
- Do not let raw meat drip onto other food.
- Never use the same chopping board for raw meat and ready-to-eat food without washing the board (and knife) thoroughly in between. Ideally use a red board.
- Do not wash meat before cooking it.

Temperatures to remember

To reduce the risk of food poisoning, good temperature control is vital:

- 5-63°C – the danger zone where bacteria grow most readily.
- 37°C – body temperature, optimum temperature for bacterial growth.
- 8°C – maximum legal temperature for cold food, i.e. your fridge.
- 5°C (or below) – the ideal temperature your fridge should be.
- 75°C – if cooking food, the core temperature, middle or thickest part should reach at least this temperature.
- 75°C – if reheating food, it should reach at least this temperature. In Scotland food should reach at least 82°C.



Safe use of a food probe

Digital probes can be used to check the temperature of food. To use a food probe:

- clean with a disinfectant wipe before and after use;
- insert the probe into the core (centre) or the thickest part of the food;
- do not touch the bottom of the pan or cooking dish.

Food labelling

Food labels help consumers make healthier choices. Some information also helps to reduce the risk of food poisoning or other adverse reactions to food:

- date marks;
- list of ingredients with allergens in **bold**, highlighted, underlined or in *italics*;
- storage and preparation conditions.

Key terms

Best-before-date: Relates to the quality of the food. Food may still be eaten beyond this date.

Cross-contamination: The transfer of bacteria from one source to another. Usually raw food to ready-to-eat food but can also be the transfer of bacteria from unclean hands, equipment, cloths or pests. Can also relate to allergens.

Danger zone: Bacteria will multiply most rapidly between 5-63°C.

Optimum temperature: Bacteria that cause food poisoning reproduce around body temperature (37°C).

The 4Cs: Cleaning, cooking, chilling and cross-contamination.

Use-by-date: Relates to the safety of the food. Food must be eaten by this date.

Use-by-date

You have until the end of this date to use or freeze the food before it comes too risky to eat.

USE BY:
25/08/20
KEEP REFRIGERATED

Best-before-date

You can eat food past this date but it might not be at its best quality.

BEST BEFORE:
25/08/21
STORE IN A COOL DRY PLACE

Tasks

1. Write a detailed explanation of the 4Cs, demonstrating how they can help to reduce the risk of food poisoning.
2. Explain, giving detailed reasons, the food hygiene controls when buying, preparing, cooking and serving fresh poultry.

This resource meets the *Guidelines for producers and users of school education resources*

Year 10 Cambridge National- Leadership- Term 6

What we are learning this term:

A. Different leadership roles
B. Role-related responsibilities
C. Personal qualities
D. Leadership styles
E. Key considerations when planning sports activity

Main assessment objectives

Learning outcome: Know the personal qualities, styles, roles and responsibilities associated with effective sports leadership.
Be able to plan sports activity sessions.

Can you give examples of managers from different sports?

Gareth Southgate
Eddie Jones

Role models

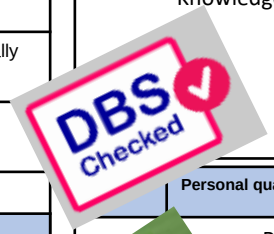
Positive	Negative
Mo Farah	Luis Suarez
Nicole Adams	Nick Kyrigos

A. The different leadership roles within sport

Role	Definition
Coach	A person involved in the direction, instruction and training of the operations of a sports team
Manager	Responsible for handling the business matters of athletes and sports teams
Captain	The leader of the team who is usually also a player
Teacher	A person who teaches, especially in a school
Expedition leader	Someone who leads groups on adventurous activities
Role model	A person looked to by others as an example

A. Role related responsibilities

Knowledge of activity
Enthusiasm for activity
Knowledge of safety
Knowledge of child protection issues
Knowledge of basic first aid



Personal qualities

Reliability
Punctuality
Confidence
Communication
Creativity

G. Considerations when planning sports activities

Session content	Objectives for the session appropriate venue Equipment needs Supervision needs Timing of activities Introduction/conclusion of session Basic warm up/cool down Skills and technique development Engaging Organisation
Safety	Risk assessments- facilities, equipment/clothing checks, activity-specific risks Corrective action- wiping up puddles, removing litter, reporting faulty equipment Emergency procedures- procedures in the event of an accident, procedures in the event of other emergencies, summoning qualified help, completion of relevant documents

A. Leadership styles

Autocratic- Relating to a ruler who has absolute power

Democratic- Members of the group take a more participative role in the decision-making process

Laissez-Faire- Leaders are hands-off and allow group members to make the decisions

Key sections

Different leadership roles and opportunities

Captain Coach Expedition leader	Manager Teacher Role model

Role related responsibilities

Knowledge of; Activity Safety Child protection Basic first aid	Enthusiasm for activity

Personal qualities

Reliability
Punctuality
Communication
Confidence
Creativity

Leadership styles

Autocratic
Democratic
Laissez-faire

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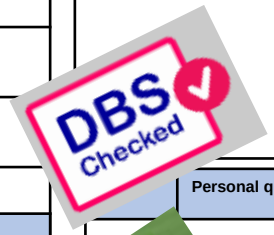
Manager	
Captain	
Teacher	
Expedition leader	
Role model	

A. Leadership styles

A. Role related responsibilities



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Personal qualities

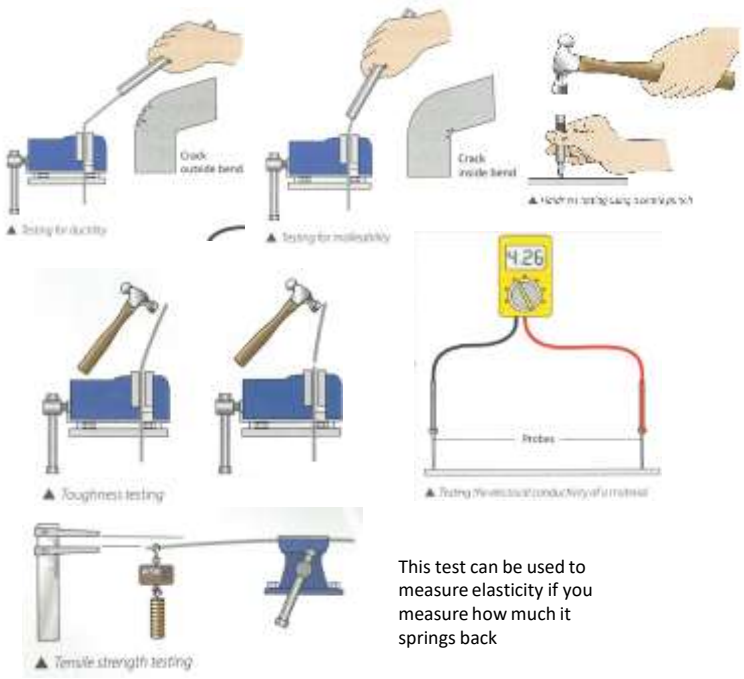
Reliability
Punctuality
Communication
Confidence
Creativity

Leadership styles

Autocratic
Democratic
Laissez-faire

Year 10 Engineering Term 6 EXAM REVISION

E.	Materials and properties
Strength	Ability of a material to withstand compression, tension, torsion, bending, and shear.
Hardness	Ability to withstand abrasion and wear and tear.
Toughness	Materials that can withstand impact, or are hard to break or snap are tough & can absorb shock.
Malleability	Being able to bend or shape easily would make a material easily malleable
Ductility	Materials that can be stretched along their length are ductile
Elasticity	Ability to be stretched and then return to its original shape

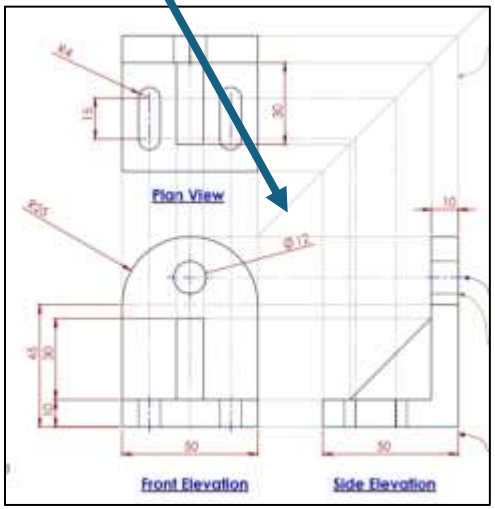


This test can be used to measure elasticity if you measure how much it springs back

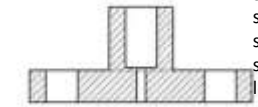
Technical drawing questions

Always use pencil and ruler.
Always draw faint guide lines first.
If you are asked to draw isometric, they will give you isometric grid paper. Follow the lines on the grid paper.

Use a 45 degree line to bounce the guidelines from the top view to the side view



	Common exam question types
Identify which tool/ process/ property is needed	Consider the context of the question and underline the key information. If you are stuck on a tool/process question, think back to what we have used in the workshop. State your answer in a few words.
Analyze / evaluate products	Read the context, is it asking you for the pros and cons of the product or to explain how it is constructed? Underline the key words. Key areas to analyse are; structural features, mechanical features, electrical features, material choices, mechanical properties.
Compare / contrast products	Read the context, are they asking you to talk about just the pros and cons or are they talking about how one product is a **development** of the other? Key points: engineers now have a better range of materials to choose from, electronic components are now smaller and more powerful, modern products can be less durable and recyclable, modern designers can use CAD/CAM.
"Describe using notes and sketches" question	Read the question and underline what process they are asking you to describe. What would be reasonable for an engineer to do in that situation? 1.Break your process down into stages – 1.2.3 etc. For example, Stage 1. Place metal in vice 2 Draw quick diagrams of each step with annotations to show meaning 3. Make a list of the equipment needed for the process



Section lines and letters are used to show what the product looks like sliced into by the section line. The section view is labeled with the two letters and solid parts are hatched.

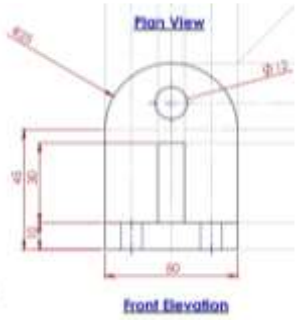
Year 10 Engineering Term 6 EXAM REVISION

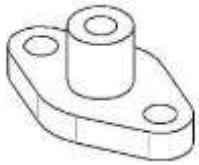
E.	Materials and properties
Strength	
Hardness	
Toughness	
Malleability	
Ductility	
Elasticity	

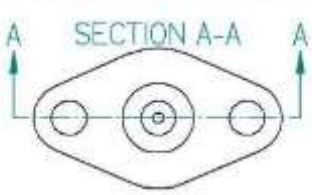
Describe using **notes and sketches** the process of testing a tennis racket for elasticity in a school workshop. [6]

Technical drawing questions

1. Complete the orthographic drawing, showing how you used guidelines.
2. Draw the section view







Practice question	Answer
Identify which material properties are most needed for a car tire.	
Developments in technology over recent years have had an impact on society. Discuss the **advantages and disadvantages** of using an electric car	
Below are images of a modern cordless drill and an older mains operated drill. Describe how **modern technology** has made the modern cordless drill **safer** to use. 	

Year 10 PRODUCT DESIGN Term 6

What we are learning this term:

A. Modern Materials
B. Smart Materials
C. Polymers
D. Composite Materials
E. Technical Textiles
F. Textiles

A. Modern Materials

A modern material is a material that has been engineered to have improved properties.

Type	Properties	Common Uses
Graphene	Transparent. Very strong and light	Protective equipment and clothing
Metal Foams	Lightweight. Strong under compression. Absorbs energy well.	Prosthetics. Soundproofing and crash protection.
Titanium	High strength-to-weight ratio. Corrosion resistant.	Prosthetics. Aircraft and spacecraft.

B. Smart Materials

Materials that exhibit a physical change in response to some external stimuli and change back once that stimuli has been removed.

Shape-memory alloys (SMA) – spectacle frames	Thermochromic pigments – colour changing spoons
Photochromic pigments - colour changing lenses and windows	Self-healing materials – metals that resist corrosion, concrete that can heal cracks
Ferrofluids formed by magnetic field – hydraulic suspension pistons	Polymorph –modelling and ergonomic handles

C. Polymers – come from crude oil

Thermoforming can be heated and formed repeatedly, thermosetting can only be formed once

Thermoforming (pliable, recyclable)	Thermosetting (good insulators)
Acrylic (PMMA)	Epoxy resin (ER)
High impact polystyrene (HIPS)	Melamine formaldehyde (MF)
High density polythene (HDPE)	Phenol formaldehyde (PF)
Polypropylene (PP)	Polyester resin (PR)
Polyvinyl chloride (PVC)	Urea formaldehyde (UF)
Polyethylene terephthalate (PET)	These are resistant to heat and chemicals

D. Composite Materials

A composite material is a mixture of two or more materials to enhance properties.

Fibre-based	Materials	Common Uses
Glass-reinforced plastic (GRP)	Glass fibres and resin	Boats, instrument cases
Carbon-reinforced plastic (CRP)	Carbon fibres and resin	Formula 1 car bodies, crash helmets, sports equipment
Glass-reinforced concrete (GRC)	Glass fibres and concrete	Street furniture, urban features.
Particle-based	**Materials**	**Common Uses**
Concrete	Cement, sand and aggregate	Buildings, street furniture
Cement	Ceramic and metal	Electronic components

Sheet-based composite materials – look back to Term 4 – Manufactured Boards

Medium Density Fibreboard (MDF)	Plywood	Chipboard

E. Technical Textiles

Modern textiles can be engineered to have numerous properties.

Conductive Fabrics – touch screen gloves	Fire-retardant fabrics – furniture, furnishings, firefighter clothing.	
Kevlar – racing tyres and bullet proof vests	Microfibres – winter clothes and cleaning cloths	Microencapsulation – sports clothing and scratch and sniff perfume samples

F. Textiles

Textile materials can be found natural or can be formed synthetically

Natural – come from plants or animals	Synthetic – come from coal or oil
Cotton (plant)	Polyester
Wool (animal)	Polyamide (nylon)
Silk (animal)	Elastane

Blended – a mixture of fibres that combines and improves properties

Polycotton	Kevlar	Sympatex

Year 10 PRODUCT DESIGN Term 6

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Type	Properties	Common Uses
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Titanium		

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Thermoforming (pliable, recyclable)	Thermosetting (good insulators)

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Fibre-based	Materials	Common Uses
Particle-based	**Materials**	**Common Uses**

Sheet-based composite materials – look back to Term 4 – Manufactured Boards

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Textile materials can be found natural or can be formed synthetically

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Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

A. Key words
B. What are the main life stages
C. What are the 4 areas of growth and development (PIES)?
D. How do Humans develop physically (P)?

A.	Key words for this Unit
Characteristics	Something that is typical of people at a particular life stage.
Life stages	Distinct phases of life that each person passes through.
Growth	Increased body size such as height, weight.
Development	Involves gaining new skills and abilities such as riding a bike.
Gross motor development (**G**)	Refers to the development of large muscles in the body e.g. Legs
Fine motor development **(F)**	Refers to the development of small muscles in the body e.g. Fingers
Language development	Think through and express ideas
Contentment	An emotional state when people feel happy in their environment, are cared for and well loved
Self-image	How individuals see themselves or how they think others see them
Self-esteem	How good or bad an individual feels about themselves and how much they values their abilities.
Informal relationships	Relationships formed between family members
Friendships	Relationships formed with people we meet in the home or in situations such as schools, work or clubs
Formal relationships	relationships formed with non-family/friends – such as teachers and doctors.
Intimate relationships	romantic relationships.

B	What are the main life stages?	
Age Group	**Life Stage**	**Developmental Characteristics and Progress**
0-2 years	Infancy	Sill dependent on parents but growing quickly and developing physical skills.
3-8 years	Early Childhood	Becoming increasingly independent, improving thought processes and learning how to develop friendships.
9-18 years	Adolescence	Experiencing puberty, which bring physical and emotional changes.
19-45 years	Early Adulthood	Leaving home, making own choices about a career and may start a family.
46-65 years	Middle Adulthood	Having more time to travel and take up hobbies as children may be leaving home; beginning of the aging process.
65+ years	Later Adulthood	The aging process continues, which may affect memory and mobility.

C	What are the 4 areas of growth and development (PIES)?
Physical Development (P) 	P = growth patterns and changes in the mobility of the large and small muscles in the body that happen throughout life.
Intellectual Development (I) 	I = how people develop their thinking skills, memory and language.
Emotional Development (E) 	E = how people develop their identity and cope with feelings.
Social Development (S) 	S = describes how people develop friendships and relationships.

D.	How do humans develop physically (P)?
0-2	• Gross Motor Development (G) = life head, roll over, sit unaided, walk holding onto something, walk unaided, climb stairs, kick and throw, walk upstairs, jump. • Fine Motor Development (F) = hold a rattle for short time, reach for an item, pass item from one hand to other, hold between finger and thumb, scribble, build a tower, use a spoon, draw lines and circles, turn page of a book.
3-8	• G = ride a tricycle, catch a ball with two hands, walk backwards and step to the side, bounce a ball, run on tiptoes, ride a bike, catch a ball with one hand, balance along a thin line. • F = hold a crayon to make circles and lines, thread small beads, copy letters and shapes with a pencil, make detailed models with construction bricks, joined up writing, use a needle to sew.
9-18	• Girls = puberty starts at 10-13 years, breasts grow, hips widen, menstruation begins, uterus and vagina grow. • Boys = voice deepens, muscles and strength increase, erections, facial hair, produce sperm. • Both = pubic and underarm hair, growth spurts.
19-45	• Physically mature, sexual characteristics are fully formed, peak of physical fitness, full height, women at most fertile. • Later in the life stage people may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down
46-65	• People may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down. • Women go through the menopause – when menstruation ends and they can no longer become pregnant. • Men may continue to be fertile throughout life but decrease in sperm production in this life stage.
65+	• Women's hair becomes thinner, men may lose most of their hair, skin loses elasticity and wrinkles appear, nails hard and brittle, bones weaken, higher risk of contracting infections disease and illness. • Stamina, reaction time, muscle and senses (hearing, sight, taste) all reduce.

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

A. Key words
B. What are the main life stages
C. What are the 4 areas of growth and development (PIES)?
D. How do Humans develop physically (P)?

A.	**Key words for this Unit**
Characteristics	
Life stages	
Growth	
Development	
Gross motor development (**G**)	
Fine motor development **(F)**	
Language development	
Contentment	
Self-image	
Self-esteem	
Informal relationships	
Friendships	
Formal relationships	
Intimate relationships	

B	**What are the main life stages?**	
Age Group	**Life Stage**	**Developmental Characteristics and Progress**
0-2 years		
3-8 years		
9-18 years		
19-45 years		
46-65 years		
65+ years		

C	**What are the 4 areas of growth and development (PIES)? Explain them.**
Physical Development (P) 	
Intellectual Development (I) 	
Emotional Development (E) 	
Social Development (S) 	

D.	**How do humans develop physically (P)?**
0-2	
3-8	
9-18	
19-45	
46-65	
65+	

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

E. How do humans develop intellectually (I)?
F. How do humans develop emotionally (E)?
G. How do humans develop socially (S)?

E. *How do humans develop intellectually (I)?*

Infancy 	At birth brains are already well developed. Infants use all of their senses to learn about the world around them. Infancy is a time of rapid intellectual development. At 3 months infants can remember routines. At 9-12 months infants are developing their memory. At 12 months to 2 years infants understand processes and how things work. Language begins to develop during this stage.
Early childhood 	At 3-4 years of age children become more inquisitive and enjoy exploring objects and materials. They ask lots of questions and enjoy solving simple problems. At 5-6 years old children's memory is becoming well developed. This helps them to talk about the past and anticipate the future.
Adolescence 	During this time abstract thought is developed – thinking logically and solving complex problems are possible by the end of this life stage. Adolescents may find it difficult to understand the consequences of their actions but they are developing empathy – seeing things from another's point of view.
Early and Middle Adulthood 	By these life stages most adults have a good range of general knowledge. They use this knowledge and experience to solve problems that they come across in their personal and work lives.
Later adulthood 	During this life stage people continue to learn and develop intellectually, however, their speed of thinking and memory may decline. This may affect their ability to think through problems and make logical decisions.

F. How do humans develop emotionally (E)?

Infancy and Early Childhood	Adolescence and adulthood
Bonding and Attachment Bonding and attachment describe the emotional ties an individual forms with others. It starts in the first year of life between infants and their main carer because that person fulfils the infants needs which makes them feel safe and secure.	**Self-image and Self-esteem** Self-image is heightened during adolescence because of the physical changes we experience. Our self-esteem can change from day to day based on a variety of factors including employment and health status.
Security For infants and young children, security is mainly the feeling of being cared for, being safe and loved – it is closely linked with attachment.	**Security** Adolescence may feel insecure because of puberty. Adults may feel insecure about relationships, job security of income. Later in life adults may feel insecure about staying in their own home or going into a care home. Feeling secure helps us cope better with everyday situations.
Contentment Infants and young children are content if they have had enough food, love, are clean and dry and all other needs are met.	**Contentment** When people feel discontented with aspects of their life – for example, relationships or work – their emotions can be negatively affected.
Independence Independence is to care for yourself and make your own decisions. Infants are completely dependent on their carer. As children enter early childhood they develop more independence – feed self and get dressed. However, children still need a lot of help from their carer.	**Independence** Adolescence are dependent on their parents but are beginning to enjoy more independence and freedom to make their own choices. Adults enjoy living independently and controlling their own lifestyle and environment. Later in adulthood people become more dependent on others again.

G. How do humans develop socially (S)?

Life Stage	Types of relationships and social development
Infancy	• Solitary Play - From birth to 2 years, infants tend to play alone although they like to be close to their parent or carer; they may be aware of other children but not play with them.
Early childhood	• Parallel Play - From 2 to 3 years, children enjoy playing next to other children but are absorbed in their own game; they are not socialising or playing with other children. • Cooperative or social play – from 3 years upwards, children start to play with other children; they have developed social skills that help them to share and talk together; they often make up games together, such as being a shopkeeper and customer.
Adolescence	• People become more independent and build more informal and formal relationships. • Social development closely linked to emotions. • Often strongly influenced by peers – 'peer group pressure'.
Early adulthood	• Increased independence means greater control of decisions about informal relationships. • People may be developing emotional and social ties with partners and their own children. • Social life often centred on the family but social skills are required to build and maintain formal relationships.
Middle adulthood	• Children have often left home, but there are likely to still be strong family relationships. • Social circles may expand through travel, spending more time on hobbies or joining new groups.
Later adulthood	• Retired by this stage and so may enjoy more social time with family and friends or join new groups. • However, later in the life stage people may begin to feel isolated if they struggle to get out or if partners and friends pass away.

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

E. How do humans develop intellectually (I)?
F. How do humans develop emotionally (E)?
G. How do humans develop socially (S)?

E.	***How do humans develop intellectually (I)?***
Infancy 	
Early childhood 	
Adolescence 	
Early and Middle Adulthood 	
Later adulthood 	

F.	**How do humans develop emotionally (E)? Explain each.**
Infancy and Early Childhood	**Adolescence and adulthood**
Bonding and Attachment	**Self-image and Self-esteem**
Security	**Security**
Contentment	**Contentment**
Independence	**Independence**

G.	**How do humans develop socially (S)?**
Life Stage	Types of relationships and social development
Infancy	
Early childhood	
Adolescence	
Early adulthood	
Middle adulthood	
Later adulthood	

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

H. Key words
I. How do physical factors affect development?
J. How does lifestyle affect development?
K. How do social and cultural factors affect development?
L. How do relationships and isolation affect development?
M. How do economic factors affect development?

H	Key words:
Genetic inheritance	Genes the person inherits from their parents
Genetic disorders	Health conditions that are passed on from parent to child through their genes. e.g. cystic fibrosis
Lifestyle Choices	Include the food you eat and how much exercise you do. They also include whether you smoke, drink alcohol or take illegal drugs.
Appearance	The way that someone or something looks
Factor	A circumstance, fact, or influence that contributes to a result
Gender role	The role and responsibilities determined by a person's gender.
Culture	ideas, customs, and social behaviour.
Role models	Someone a person admires and strives to be like.
Social Isolation	Lack of contact with other people
Material possessions	Things that are owned by an individual
Economic	To do with person's wealth and income.

I. How do physical factors affect development?

	Genetic Disorders	Disease and Illness
Physical Development	A person's physical build can affect physical abilities. Inherited diseases may affect strength and stamina needed to take part in exercise.	May affect the rate of growth in infancy and childhood. Could affect the process of puberty. Could cause tiredness and/or mobility problems. Could limit of prevent participation in physical activity.
Intellectual Development	Some genetically inherited diseases may result in missed schooling, or have a direct impact on learning – conditions such as Edward's syndrome impact learning.	School, college, university, work or training could be missed. Memory and concentration could be affected.
Emotional Development	Physical appearance affects how individuals see themselves (self-image), and how others respond to them impacts on their confidence and wellbeing.	May cause worry and/or stress. Individuals may develop negative self-esteem. Could lead to feelings of isolation.
Social Development	Physical characteristics or disease may affect opportunities or confidence in building friendships and becoming independent.	May cause difficulty in having opportunities to socialize with other and build wider relationships.

J. How does lifestyle affect development?

Lifestyle choices include**;** diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance.

Positive lifestyle choices lead to:
- Healthy hair, skin, nails and teeth
- Positive self-image
- Energy and stamina
- Good health
- Emotional security

Negative lifestyle choices lead to:
- Being overweight or underweight
- Lack of energy
- Ill health
- Negative self-image
- Sexually transmitted diseases (STDs)
- Unplanned pregnancy

Our **appearance** includes: body shape, facial features, hair and nails, personal hygiene and our clothing.
Our appearance can affect the way we view ourselves- self-image

Positive self-image:
- Feel good about yourself.
- Healthy hair, skin, nails and teeth
- Big social circle.
- High self-esteem.
- High self-confidence.

Negative self-image
- Low self-esteem
- Low self-confidence
- Can lead to eating disorders e.g. anorexia
- Can lead to anxiety or depression
- Can lead to self-harm
- Negative impact on building relationships- social circle decreases.

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

H. Key words
I. How do physical factors affect development?
J. How does lifestyle affect development?
K. How do social and cultural factors affect development?
L. How do relationships and isolation affect development?
M. How do economic factors affect development?

H	Key words:
Genetic inheritance	
Genetic disorders	
Lifestyle Choices	
Appearance	
Factor	
Gender role	
Culture	
Role models	
Social Isolation	
Material possessions	
Economic	

I. How do physical factors affect development?

	Genetic Disorders	Disease and Illness
Physical Development		
Intellectual Development		
Emotional Development		
Social Development		

J. How does lifestyle affect development?

Lifestyle choices include**;** diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance.

Positive lifestyle choices lead to:

-
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-

Negative lifestyle choices lead to:

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Our **appearance** includes: body shape, facial features, hair and nails, personal hygiene and our clothing.
Our appearance can affect the way we view ourselves- self-image

Positive self-image:

-
-
-
-
-
-

Negative self-image

-
-
-
-
-
-

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

K How do social and cultural factors affect development

Development can be influenced by the persons **culture or religion** because it affected their:
- **Values**: how they behave
- **Lifestyle choices**: diet, appearance

Positive affects of a persons culture/religion:	Negative affects of a persons culture/religion:
• A sense of security and belonging from sharing the same values and beliefs with others. • Good self-esteem through being accepted and valued by others	• Feeing discriminated against by people who do not share their religion/culture which leads to low self-image • Feeing excluded and isolated because their needs like diet, are not catered for.

Community refers to: local area where people live, school, religious group or hobby clubs. They have common values and goals.

Belonging to a community:	Not belonging to a community:
• Brings sense of belonging essential for emotional development. • Building and maintaining relationships- social development • Feeling of security. • Increases self-image and self-confidence	• Minimal contact with others- isolation • Anxiety leading to depression • Making negative lifestyle choices • Feeling less secure • Difficulty in building relationships • Slow self-image and self-confidence

Traditionally, men and women had distinctive responsibilities and expectations which for their gender called **gender roles**. However, nowadays UK equality legislation stops people being discriminated against because of their gender.

What happens when people face discrimination because of gender:
- They might be excluded from a group
- They may be refused promotion at work
- They may be expected to carry out a particular role
- They may be paid less.

What we are learning this term:

K. How do social and cultural factors affect development?
L. How do relationships and isolation affect development?
M. How do economic factors affect development?

L How do relationships and isolation affect development?

1	In adolescence, young people often argue with parents because they want more independence- negative affect on family relationships- can lead to isolation from them.
2	In later life, older people might need to rely on their children for support. This then has a positive affect on their development because all their need are catered for.
3	Relationships are important because they provide emotional security, contentment and positive self- esteem.
4	The breakdown of personal relationships can have a negative effect on persons PIES development: Low self-esteem, loss of confidence, stress.
5	Isolation can happen when individuals do not have the opportunity of regular contact with others. They have no one to share their feelings, thoughts and worries with resulting in feeling insecure and anxious.
6	Isolation can happen because they live alone, are unemployed or retired, are discriminated against or have an illness or a disability.
7	People have role models- infants learn by copying others, and adolescence base their identity on their role models. Role models can influence how people see themselves compared to others and their lifestyle chices0 can be positive or negative.

M How do economic factors affect development

Having enough money gives individuals and their families feeling of content and security →	Not having enough money causes stress and anxiety.
Having enough money means that the whole family is eating healthy. →	Not having enough money can mean that the family is not about to eat well balanced diet, and this has a negative effect on their physical development

Elderly people rely on state pension to live which is not enough and have to cut down on travel, shopping, bills, therefore it speeds their aging process and lead to health decline.

Living in good housing with open spaces:	Living in a poor housing with cramped and damp conditions:
• Feeling good about themselves • Be more likely to stay healthy, • Space to take exercise • Feel safe ad secure • Warmth	• Have low self-esteem and self-image • Be more likely to experience ill health • Be lesson likely to exercise • Anxious and stressed.

Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image. →	Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAA

What we are learning this term:

K. How do social and cultural factors affect development?
L. How do relationships and isolation affect development?
M. How do economic factors affect development?

K How do social and cultural factors affect development

Development can be influenced by the persons **culture or religion** because it affected their:
- **Values**: how they behave
- **Lifestyle choices**: diet, appearance

Positive affects of a persons culture/religion:	Negative affects of a persons culture/religion:
• •	• •

Community refers to:

Belonging to a community:	Not belonging to a community:
• • • •	• • • • •

Traditionally, men and women had distinctive responsibilities and expectations which for their gender called **gender roles**. However, nowadays UK equality legislation stops people being discriminated against because of their gender.

What happens when people face discrimination because of gender:
-
-
-
-

L How do relationships and isolation affect development?

1	
2	
3	
4	
5	
6	
7	

M How do economic factors affect development

Having enough money….	Not having enough money ……
• •	• •
Having enough money means that….	**Not having enough money can mean that…**
• •	• •

Elderly people rely on state pension to live which is not enough and have to cut down on travel, shopping, bills, therefore it speeds their aging process and lead to health decline.

Living in good housing with open spaces:	Living in a poor housing with cramped and damp conditions:
• • • • •	• • • • •
Material possession like a new phone or coat has a positive effect on the persons development because…..	Not having a phone or the newest trainers can have a negative affect on…. Because….
• • •	• • • •

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAB

What we are learning this term:

N. What are life events?
O. How do people deal with life events?
P. How is dealing with life events supported?

N.	What are life events?
Life Events	Life events are expected or unexpected events that can affect development. Examples include starting nursery, getting married or becoming ill.
Expected Life Events	Expected life events are life events that are likely to happen. Examples include starting primary school aged four and secondary school aged 11.
Unexpected Life Events	Unexpected life events are events which are not predictable or likely to happen. Examples could include divorce and bereavement (the death of a loved one).
Physical Events	Physical events are events that make changes to your body, physical health and mobility. Examples include illnesses such as diabetes and injuries and accidents such as car accidents.
Relationship Changes	Relationship changes could be new relationships such as the birth of a sibling, a new friendship or romantic relationship. Relationship changes can also be changes to existing relationships such as divorce.
Life Circumstances	Life circumstances are different situations that arise in our life that we must deal with. Examples include redundancy (losing a job), moving house or retirement (finishing work in later adulthood).

O.	How do people deal with life events?
Individual	• The effects of life events vary from person to person based on how they deal with their new situation. • Some people react to able to react to life events positively, others find it more difficult due to a range of factors.
Factors	• Factors that may affect how people cope with life events: age, other life events happening at the same time, the support they have, their disposition (their mood, attitude and general nature), their self-esteem, their resilience (how quickly they recover).
Adapting	• Adapt – to adjust to new conditions or circumstances. • Expected on unexpected life events can often force people to make changes to their lives. Individuals must find their own way to adapt to the changes that life throws at them.
Resilience	• Resilience – a person's ability to come to terms with, and adapt to, events that happen in life. • Resilience is stronger in people who have a positive outlook on life, accept that change happens, has supportive family and friends and plans for expected life events.
Time	• Sometimes people need a long time to adapt to unexpected life events. • It can take time for people to move on from and accept difficult changes in their life.

P.	How is dealing with life events supported?
Types of Support	**How this helps individuals deal with life events**
Emotional Support	Emotional support is needed to help individuals deal with all life events – expected and unexpected. Having someone to talk to helps people feel secure and adapt to change. Sometimes individuals can find this support in family and friends or professionals to process difficult life events – such as bereavement.
Information and Advice	Life events, particularly unexpected ones, can cause people to feel like they do not know what to do. Information and advice can help people to have a better understanding of their situation, which allows them to deal with it more successfully. Information and advice help them know where to go for help, the choices than are available to them and how to make healthy choices.
Practical Help	• Financial help – an individual may need money to help them adapt to a life change i.e. money to pay for a stair lift if their mobility has been effected. • Childcare – an individual may need support looking after their children i.e. a lone parent after a divorce that needs to go to work. • Transport – an individual may need support with transport if they have mobility problems i.e. a car could be adapted to support a person who has had an accident and can no longer walk.
Informal Support	Informal support is the support an individual receives from partners, family and friends. It is usually the first form of support an individual experiences after and expected or unexpected life event. Informal support can provide reassurance, encouragement, advice, a sense of security, someone to talk through options with and practical help.
Professional Support	Formal support may be provided by statutory care services (the state), private care services and charitable organizations. Professional support may include counsellors, teachers, careers advisers, occupational therapists, social workers and health specialists. Professional support may be needed to help people with a health condition, regain mobility, deal with life changes and emotions, get advice and information or change their lifestyle.
Voluntary Support	Organizations offering voluntary support are charities, community groups and religious groups. At voluntary support services, many staff are volunteers (they work for free), but they also employ qualified people who are paid by donations. Community groups work at a local level to meet the needs of people living in a specific neighbourhood i.e. foodbanks. Religious groups are formed by people who share the same religious or spiritual beliefs but they help all people in need regardless of their beliefs and background i.e. a church run soup kitchen for the homeless.

Year 10 BTEC Health and Social Care- Component 1: Human Lifespan Development. LAB

What we are learning this term:
N. What are life events?
O. How do people deal with life events?
P. How is dealing with life events supported?

N.	What are life events?
Life Events	
Expected Life Events	
Unexpected Life Events	
Physical Events	
Relationship Changes	
Life Circumstances	

O.	How do people deal with life events?
Individual	
Factors	
Adapting	
Resilience	
Time	

P.	How is dealing with life events supported?
Types of Support	**How this helps individuals deal with life events**
Emotional Support	
Information and Advice	
Practical Help	
Informal Support	
Professional Support	
Voluntary Support	

Music terms and signs

Glossary - Eduqas GCSE Music

Dynamics

pp	*p*	*mp*	*mf*	*f*	*ff*
PIANISSIMO	**PIANO**	**MEZZO PIANO**	**MEZZO FORTE**	**FORTE**	**FORTISSIMO**
very soft (v.quiet)	soft (quiet)	moderately soft	moderately loud	loud	very loud

crescendo (cresc.)
gradually getting louder

diminuendo (dim.)
gradually getting quieter

Tempo

LARGO	LENTO/ ADAGIO	ANDANTE/ MODERATO	ALLGRETTO	ALLEGRO/ VIVACE	PRESTO
v.slow	slow	walking pace/ moderate	quite fast	quick/lively	very quick

- **Accelerando:** gradually getting faster
- **Rallentando/ritardando:** gradually getting slower
- **A tempo:** return to the original speed
- **Ritenuto:** in slower time
- **Rubato:** rhythms are played in a more free/flexible way ('robbed time').

Time values

NOTE	NAME	LENGTH (duration)	REST
	**Semibreve**	4 beats	
	**Minim**	2 beats	
	**Crotchet**	1 beats	
	**Quaver**	½ beats	
	**Semiquaver**	¼ beats	

A dot after the note increases its length by half:

	Dotted minim	
	Dotted crotchet	

Groups of quavers/semiquavers are usually beamed together:

Terms and signs

#	**Sharp**	Raises a note by a semitone.
	**Flat**	Lowers a note by a semitone.
	**Natural**	Cancels a previous sharp or flat for a note.
	**Staccato**	Detached.
	**Slur**	Play smoothly.
	**Tie**	Hold the notes for the full value of the tied notes.
	**Accent**	Emphasize the note (play forcefully).
	**Pause**	Hold the note longer.
sfz	**Sforzando**	Sudden stress/ accent.

Music terms and signs

Glossary - Eduqas GCSE Music

Complete the missing key words and symbols

Dynamics

pp		*mp*	*mf*		
		moderately soft	moderately loud		

Tempo

	LENTO/ ADAGIO		ALLGRETTO		
			quite fast		

Complete the missing key words and symbols

Complete the missing key words and symbols

Time values

NOTE	NAME	LENGTH (duration)	REST

A dot after the note increases its length by half:

Groups of quavers/semiquavers are usually beamed together:

Terms and signs

#	
♭	
♮	
sfz	

Popular Music

Area of study 4 - Eduqas GCSE Music

Popular music includes:

- **POP**
- **ROCK**
- **RAP**
- **HIP HOP**
- **REGGAE**

Plus many other genres, e.g. soul, ska, heavy metal, R&B, country, rock'n'roll.

FUSION: when two different styles are mixed together. This can be two styles of popular music e.g. 'rap metal', or could combine a popular music genre with other styles, folk-rock, gospel, world music, classical to create a new and interesting sound. **Jazz fusion** (jazz and pop) is a popular genre.

Instruments

ELECTRIC GUITAR:

- Lead guitar: plays the melody/ solos/riffs
- Rhythm guitar: plays the chords/ accompaniment.

BASS GUITAR: plays the bass line.
DRUM KIT: provides the beat.
LEAD SINGER: the main vocalist.
BACKING VOCALS: singers who provide harmony.

Pop/rock groups may also include **acoustic** (not electric) instruments e.g. trumpet, trombone, saxophone and/or electronic keyboards/synthesizers.

Features and techniques found in popular music

Riff	A short, repeated pattern.
Hammer on	Finger brought sharply down onto the string.
Pitch bend	Altering (bending) the pitch slightly.
Power chords	A guitar chord using the root and 5th note (no 3rd).
Distortion	An effect which distorts the sound (creates a 'grungy' sound).
Slap bass	A percussive sound on the bass guitar made by bouncing the strings on the fret board.
Fill	A short, improvised drum solo.
Rim shot	Rim and head of drum hit at same time.
Belt	A bright, powerful vocal sound, high in the chest voice.
Falsetto	Male voice in a higher than usual range.
Syllabic	One note sung per syllable.
Melismatic	Each syllable sung to a number of different notes.
A cappella	Voices singing without instrumental accompaniment.

The structure of a pop/rock song may include:

INTRO: short opening section, usually instrumental.
VERSE: same music but different lyrics each time.
CHORUS: repeated with the same lyrics each time (refrain).
MIDDLE EIGHT: a link section, often eight bars, with different musical ideas.
BRIDGE: a link/transition between two sections.
OUTRO: an ending to finish the song (coda).
*You may also hear a pre-chorus, instrumental interlude or instrumental solo.

***Strophic songs, 32 bar songs (AABA) and 12 bar blues are also found in popular music.**

A typical rock ballad in verse-chorus form could follow the pattern:

- Intro
- Verse 1
- Chorus
- Verse 2
- Chorus
- MiddleEight
- Chorus
- Outro

Technology

Amplified	Made louder (with an **amplifier**).
Synthesized	Sounds created electronically.
Panning	Moving the sound between left and right speakers.
Phasing	A delay effect.
Sample	A short section of music that is reused (e.g. looped, layered).
Reverb	An electronic **echo** effect.

Popular Music

Area of study 4 - Eduqas GCSE Music

Write about the instruments, in detail

Draw a ruler line then write the definition of each key word

Popular music includes:

-
-
-
-
-

Plus many other genres, e.g. soul, ska, heavy metal, R&B, country, rock'n'roll.

FUSION:

Instruments

Features and techniques found in popular music

Riff	
Hammer on	
Pitch bend	
Power chords	
Distortion	
Slap bass	
Fill	
Rim shot	
Belt	
Falsetto	
Syllabic	
Melismatic	
A cappella	

The structure of a pop/rock song may include:

Intro =
Verse =
Chorus –
Middle Eight =
Bridge =
Outro =

**strophic songs …

A typical rock ballad in verse-chorus form could follow the pattern:

-
-
-
-
-
-
-
-

Technology

Amplified	
Synthesized	
Panning	
Phasing	
Sample	
Reverb	

Complete the missing key words and symbols/Definitions!

KS4 Drama Knowledge Organiser – Component 1 Devising

Key words

Abstract	Parody
Blocking	Plot
Catharsis	Realism
Character	Resolution
Chorus	Role
Climax	Satire
Comedy	Scene
Contrast	Setting
Development	Staging
Dynamic	Style
Ensemble	Stock characters
Epic Theatre	Stimulus
Exposition	Storyline
Farce	Structure
Flashback	Suspense
Form	Tempo
Forum theatre	Tension
Fourth wall	Theatre maker
Genre	Theatre of Cruelty
Irony	Theatre of the Oppressed
Melodrama	Tragedy
Mood	Turning point
Monologue	
Naturalism	

What is a stimulus?

A stimulus is a starting point to generate ideas. It may be a picture, song, poem, short story, object, or even just a word! It is meant to be explored, discussed and used to create an original piece of drama.
The final piece of drama does NOT need to resemble any starting stimulus – the stimulus is simply the starting point in order to generate ideas to explore.

Portfolio questions:

- What was your initial response to the stimuli and what were the intentions of the piece?
- What work did your group do in order to explore the stimuli and start to create ideas for performance?
- What were some of the significant moments during the development process and when rehearsing and refining your work?
- How did you consider genre, structure, character, form, style, and language throughout the process?
- How effective was your contribution to the final performance?
- Were you successful in what you set out to achieve?

(Make sure you keep your notebook up to date! Spend a few minutes each lesson)

Assessment Objectives – In this component, you will be assessed on your ability to…

AO1 – Create and develop ideas to communicate meaning for theatrical performance.
AO2 – Apply theatrical skills to realise artistic intentions in live performance.
AO4 – Analyse and evaluate your own work and the work of others.

Explorative Strategies for devising:

Still image/Tableau Thought track Hot seating Flashbacks/Flashforwards Cross-cutting Marking the moment
Soundscape/Sound collage Narration Conscious alley Role on the Wall Mirroring Chair duet Forum theatre

Practitioners – Which

If you are doing LIGHTING for this component, ask your teacher for a lighting sheet

Constantin Stanislavski

1863 - 1938

'The actor must use his imagination to be able to answer all questions (when, where, why, how).'

Believed that the audience should emotionally connect with the characters.

Actors should use their own experience to make their characters as believable as possible.

Terminology and techniques:

- The fourth wall
- Emotional memory
- The magic 'if'
- Sense memory
- Objectives
- Given circumstances
- Subtext
- Method of physical actions

Naturalism

Bertolt Brecht

1898 – 1956

'Art is not a mirror to reflect reality, but a hammer with which to shape it.'

Believed that theatre should be used to spread a message and comment on society.

The audience should always be aware they are watching a play and constantly questioning what they see.

Terminology and techniques:

- Breaking the fourth wall
- Alienation (Verfremdungseffekt)
- Gestus
- Use of placards
- Narration
- Multi-role
- Minimal set/costume/props
- Masks

Epic theatre

Augusto Boal

1931 – 2009

'The theatre is a weapon, and it is the people who should wield it.'

Believed that theatre gave people the ability to take control and make changes.

Well known for Forum Theatre, in which the audience can stop a piece of drama and step in to change the outcome.

Terminology and techniques:

- Forum theatre
- Improvisation
- Public theatre
- Audience participation
- 'Spect-actor'
- Exploring social issues

Theatre of the Oppressed

Jacques Lecoq

1921 - 1999

'The body knows things about which the mind is ignorant.'

Believed theatre was about using the body to tell stories.

Focus on physical theatre, movement and mime.

Movement generates the emotion (muscle memory)

Levels:

1. Catatonic (jellyfish)
2. Relaxed (Californian)
3. Neutral (no story)
4. Curious/alert (Mr Bean)
5. Reactive/Suspense (melodrama)
6. Passionate (opera)
7. Tragic (petrified)

Seven levels of Tension

Frantic Assembly

1994 – Present

FRANTIC ASSEMBLY

'We began with little more than a fierce work ethic and a desire to do something different and to do it differently.'

World-renowned theatre company who use physical theatre to devise performance.

Wanted to create non-realistic pieces of theatre through the use of movement and music.

Terminology and techniques:

- Chair duet
- Hymn hands
- Lifts
- Walk the grid
- Mirroring
- Round-By-Through

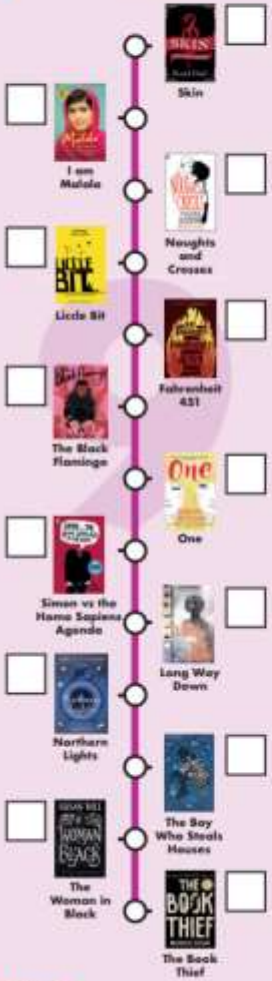
Physical theatre

SWINDON ACADEMY READING CANON

Year 7

Year 8

Year 9



Year 10

#ReadingisPower