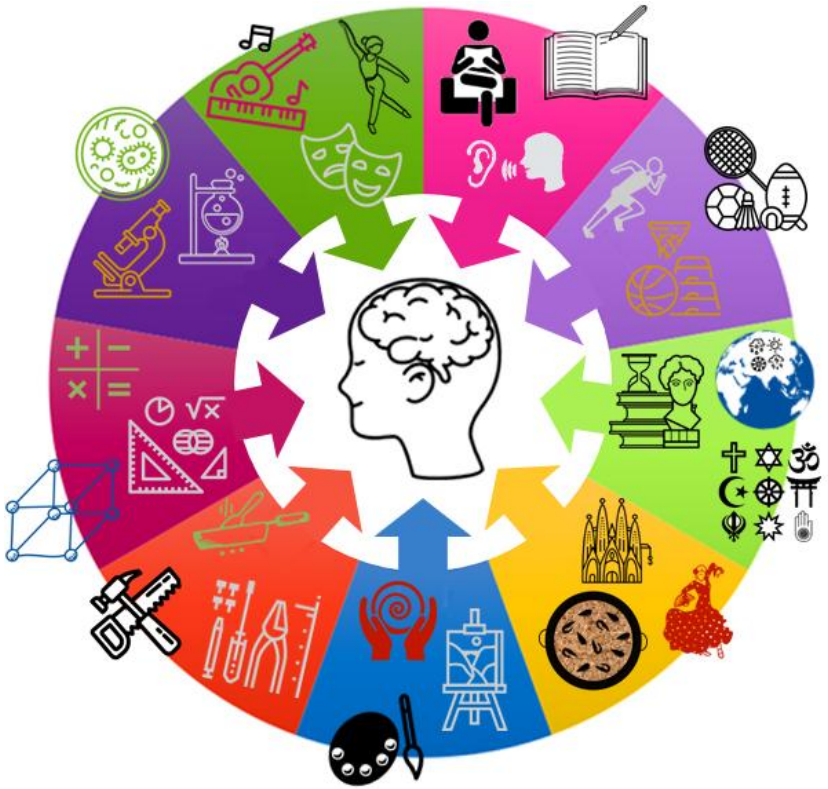
100% book – Year 10 Grammar

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



Term 6

Swindon Academy 2025-26	
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."

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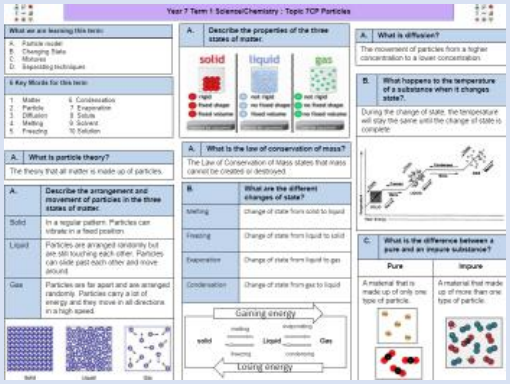
How to use your 100% book of Knowledge Organisers and Quizzable Organisers

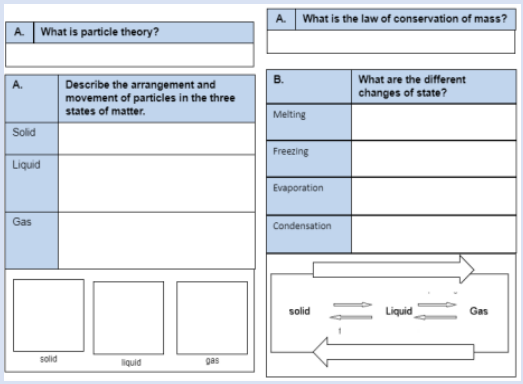
Knowledge Organisers



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!

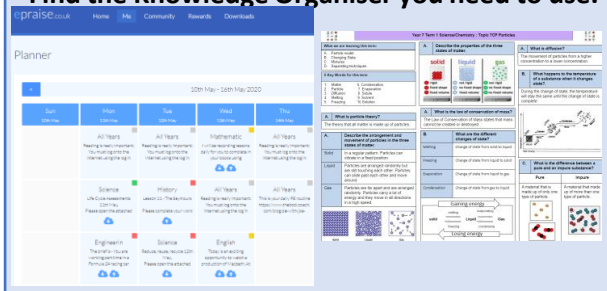
Expectations for Prep and for using your Knowledge Organisers

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?

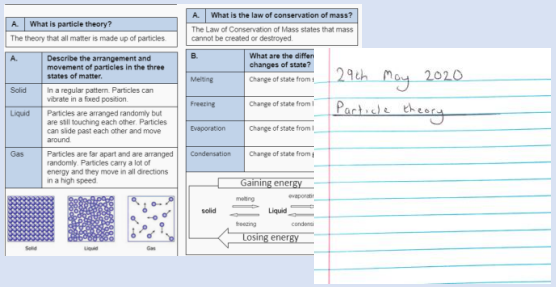
Step 1

Check Epraise and identify what words /definitions/facts you have been asked to learn. Find the Knowledge Organiser you need to use.



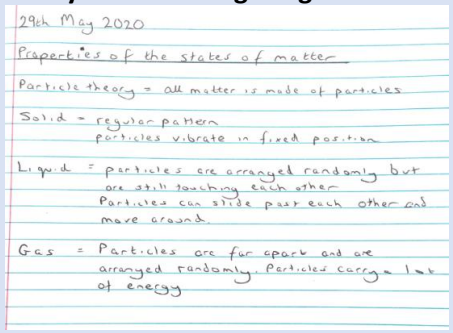
Step 2

Write today's date and the title from your Knowledge Organiser in your Prep Book.



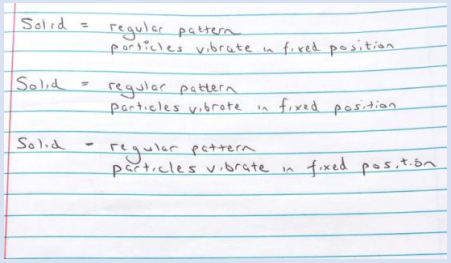
Step 3

Write out the keywords/definitions/facts from your Knowledge Organiser in FULL.



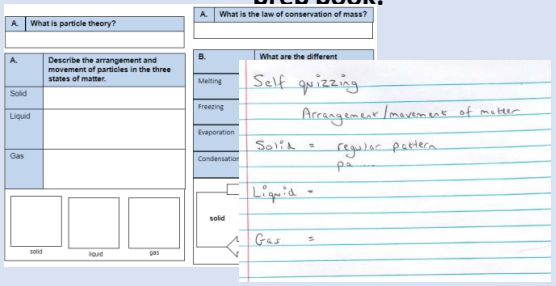
Step 4

Read the keywords/definitions/facts out loud to yourself again and again and write the keywords/definitions/facts at least 3 times.



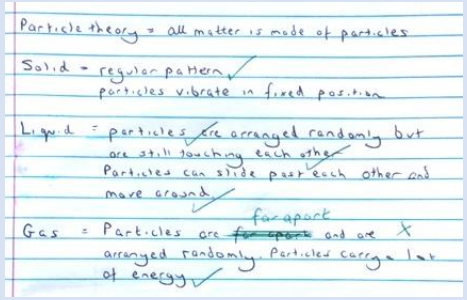
Step 5

Open your quizzable Knowledge Organiser. Write the missing words from your quizzable Knowledge organiser in your prep book.



Step 6

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

tyrant	cruel leader
duplicitous	deliberatly dishonest
equivocation	a half truth
regicide	the act of killing a king
sceptical	someone who is unconvinced or doubtful
conflict	a serious disagreement or argument
valiant	great courage in the face of danger
ephemeral	lasting a very short time
transient	something that lasts for a short amount of time
androgyny	of indistinct gender
melancholy	deep sadness
emasculate	to deprive a man of his stereotypical role
catalyst	speeds up a reaction
sacrilege	destruction of something holy
motif	repeated image

5. Key Terminology, Symbols and Devices

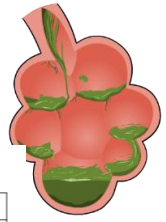
Motif	A recurring image or idea that has symbolic importance. The best example in Macbeth would be blood.
Soliloquy	When a character is alone on stage and speaks their thoughts aloud to themselves.
Iambic Pentameter	A line of a play or poem that has ten syllables organised into five pairs of syllables, 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.	

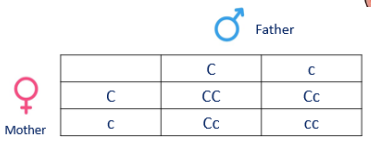
T6 10aSc1 Biology B6 – Inheritance, Variation and Evolution

Inherited disorders

Cystic fibrosis
Disorder of cell membranes
Caused by a recessive allele
Causes thick mucus to form in membranes
Main organs affected are lungs, digestive & reproductive organs – pancreas and intestines.



Alveoli get blocked with mucus
Increases diffusion path so less O_2 gets into the blood



Polydactyly
Disorder of the hands and feet
Caused by a dominant allele
Causes extra digits, fingers and toes.

Embryo screening
Parents that have inherited disorders may opt for embryo screening

1. Multiple embryos are made in IVF
2. One cell is removed from each embryo
3. The cells are screened for faulty genes
4. Only embryos without the genes for disorders are transferred to the womb of the mother.

\+ Babies born free of that inherited disorder
- no guarantee child will be free of other health issues
- Many embryos are destroyed, which are potential human lives

Variation

May be due to differences in:
- Genes that have been inherited(genetic causes)
- Conditions which they have lived in (environmental causes)

- Combination of genes and the environment.

Mutation = a change in the DNA during copying (randomly). Often has no effect on the gene, but sometimes leads to new proteins being made and a new characteristic being seen

Evolution

Evolution = a change in inherited characteristics of a population over time through natural selection – could lead to a new species.
A **species** is a group of organisms that can successfully breed.
Theory of evolution states that all species have evolved from a simple life forms more than 3 billion years ago.

Natural Selection

Described by Darwin
1. **Variation** within a species – different genes. (due to **mutation**)

2. One gene may give characteristics that are better **adapted** for survival in the environment.

3. Those with **advantageous genes** will survive and reproduce – passing genes to **offspring**.

4. Over long periods of time, all members of that species have the characteristic, may even lead to a new **species**.

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

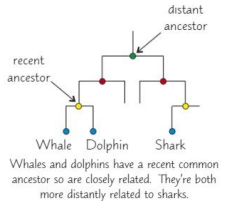
Fossils

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.

Evolutionary trees

Show how species have volved from and are related to others



T6 10aSc1 Biology B6 – Inheritance, Variation and Evolution

1. What is cystic fibrosis a disorder of?
2. Is the allele for cystic fibrosis dominant or recessive?
3. Why do cystic fibrosis sufferers struggle to get oxygen into the body?
4. What is polydactyly?
5. Is the allele for polydactyly dominant or recessive?
6. Give one advantage of embryo screening
7. Give one disadvantage of embryo screening

1. What are the two causes of variation?
2. What is a mutation?
3. Which scientist proposed the theory of evolution by natural selection?
4. What is the theory of evolution?
5. What is a species?
6. Why do mutations sometimes lead to new characteristics being seen?

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?

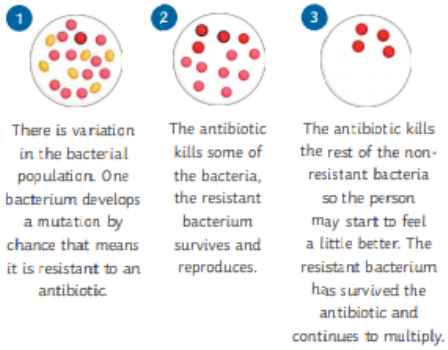
T6 10aSc1 Biology B6 – Inheritance, Variation and Evolution

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.

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:

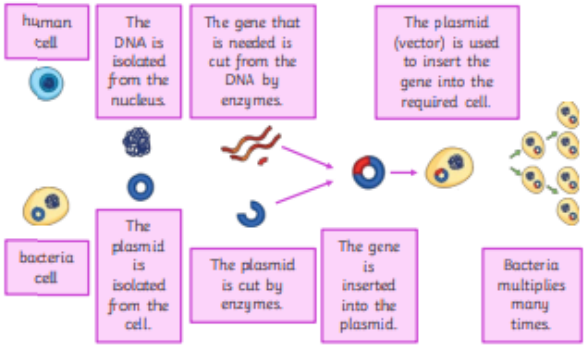
- Plant crops to be **resistant** to diseases or produce bigger, better fruits.

- 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)

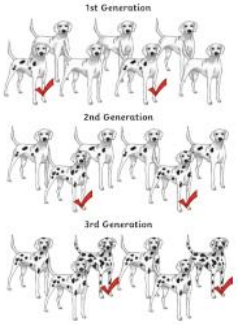


Selective Breeding

- 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.

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 10aSc1 Biology B6 – Inheritance, Variation and Evolution

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 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. 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.

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

T6 10aSc1 Chemistry C7 – Organic Chemistry

Crude oil

Crude oil = a mixture of **hydrocarbons.**

- It is a **non-renewable resource (fossil fuel)**
- Made from remains of dead sea creatures **compressed** over millions of years

Hydrocarbons - molecules containing **hydrogen** and **carbon only**.

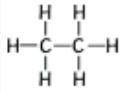
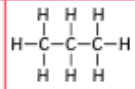
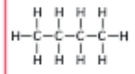
Two types of hydrocarbons are **alkanes** and **alkenes**.

The hydrocarbons in crude oil are mostly alkanes.

Alkanes

- Alkanes = **saturated** hydrocarbons.
- Held together by **single covalent bonds**.
- General formula = C_nH_{2n+2}
- Have different boiling points – longer the chain, higher the boiling point

You need to remember the names, and formulas of the first 4 alkanes.

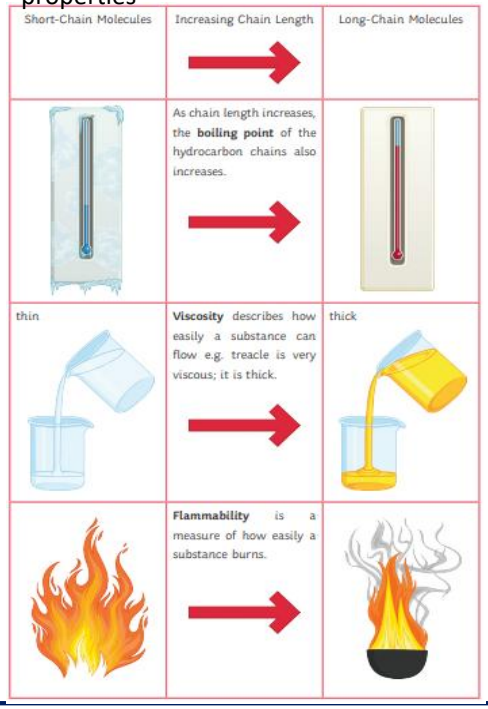
Name of Alkane	Structural Formula	Molecular Formula
methane		CH_4
ethane		C_2H_6
propane		C_3H_8
butane		C_4H_{10}

Fractional Distillation

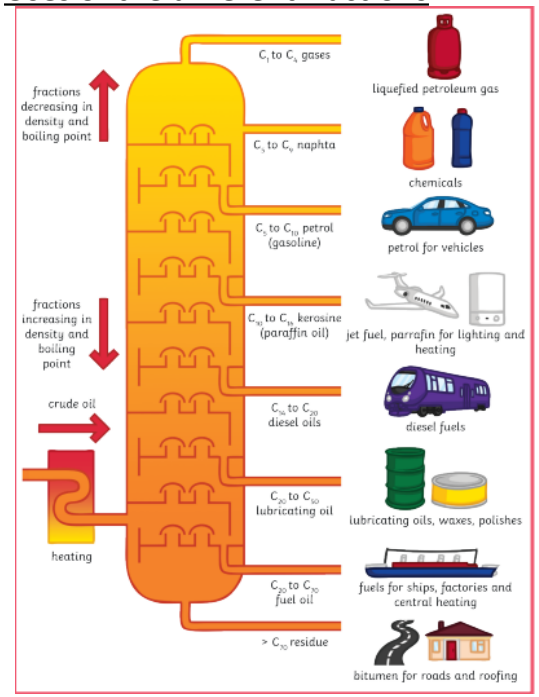
- Used to **separate** the mixtures of hydrocarbons in **crude oil**.

Steps in Fractional Distillation

1. Crude oil enters **fractioning column** and is heated to boiling point so the hydrocarbons evaporate.
2. It is **cooler** at the **top** of the fractionating column and **hotter** at the **bottom**.
3. Vapours rise up the column and, as they rise, they cool
4. The different hydrocarbons condense at different **boiling points**
5. The different 'fractions' have different properties



Uses of the different fractions



Supply and demand

Product	Supply in tonnes	Demand in tonnes
petrol	100	300
diesel	200	100
heating oil	250	50

After fractional distillation, we find:

- we have more of the long chain hydrocarbons than we need
- There are not enough short chain hydrocarbons.
- Short chain are more useful as they are more flammable so can be used as fuels.

T6 10aSc1 Chemistry C7 – Organic Chemistry

1. What is crude oil?
2. What is a hydrocarbon?
3. What type of hydrocarbons are alkanes?
4. State the general formula for alkanes.
5. Name the first four alkanes.
6. What sort of bonding is found in hydrocarbons?

1. What is the name for the process that results in the separation of the fractions of crude oil?
2. What happens to the boiling point of hydrocarbons as the chain length **increases**?
3. What happens to the viscosity of hydrocarbons as the chain length **increases**?
4. What does flammable mean?
5. What are the two changes of state that occur during fractional distillation?
6. Which physical property is used to separate the fractions?

1. What is one use for the hydrocarbons that are between 14 and 20 carbons long?
2. What is the range of lengths of hydrocarbons in fuel oil?
3. What are the smallest hydrocarbons used for?
4. What happens to the flammability of hydrocarbons as the chain length **increases**
5. What is the range of hydrocarbon lengths found in petrol?
6. What is the problem with supply and demand of the different hydrocarbon chains?

T6 10aSc1 Chemistry C7 – Organic Chemistry

Cracking

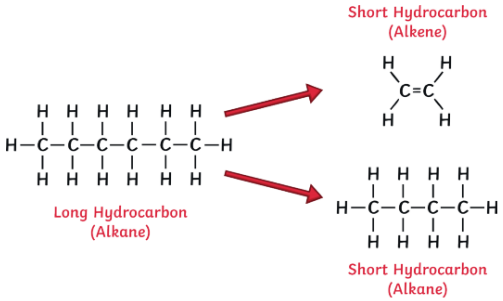
- This is done to solve the problem of having too many long chain hydrocarbons and not enough short ones
- Long hydrocarbons are **broken down** into smaller, more useful hydrocarbons.
- Short chain hydrocarbons are more useful as they are more flammable

Two types of cracking: catalytic and steam cracking.

Catalytic cracking – needs a **high temperature** and a **catalyst.**

Steam cracking – high temperature and steam

- Cracking produces a **short-chain alkane** and an **alkene.**



Cracking equations

Same number of carbon and hydrogen atoms on both sides of the equation:

$C_{20}H_{42} \rightarrow C_{14}H_{30} + C_6H_{12}$

long chain hydrocarbon | shorter, more useful alkane | alkene

Alkenes

- Alkenes are **unsaturated** hydrocarbons.
- Contain carbon-carbon **double bonds.**

Test for Alkenes

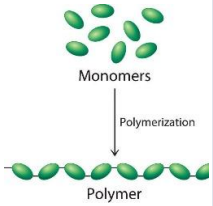
Use bromine water to test for alkenes.
If an alkene is present, the bromine water turns from orange/brown to colourless.
Alkanes do not react with bromine water.

Uses for alkenes:

- Can be used as fuels
- Can be used as a starting material for other chemicals
- Can be used to make polymers (e.g. plastic)

Polymers

- Polymers are large molecules made of many repeating units (monomers)
- Alkenes (small molecules) are joined together to make polymers



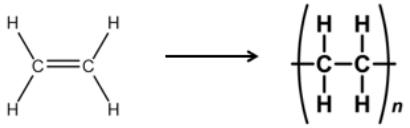
Poly(ethene) – plastic bags/drinks bottles

Poly(propene) – strong tough plastics

Drawing and naming polymers

1. Redraw the **monomer given**, but without the double bond. Make sure to copy all other elements exactly.
2. Put brackets around the monomer and extend joining bonds out through the brackets on both sides
3. Add an 'n' at the bottom right of the bracket
4. To name the polymer, you put **poly** in front of the monomer name

E.g.:
Draw and name the polymer made from the monomer ethene:



Combustion of Hydrocarbons

Combustion means burning.

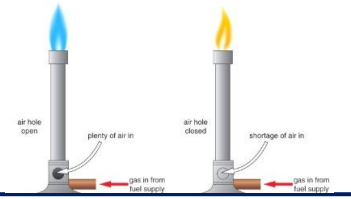
Complete combustion - when there is a good supply of **oxygen** for a fuel to burn.

Fuel + oxygen → carbon dioxide + water

Incomplete combustion - not enough oxygen

Products are **carbon monoxide** and water.

Carbon monoxide = poisonous gas



T6 10aSc1 Chemistry C7 – Organic Chemistry

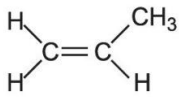
1. What is cracking?
2. Why is cracking done?
3. What are the two types of cracking?
4. What conditions are needed for catalytic cracking?
5. Complete this cracking equation by putting numbers in the boxes:

$C_{30}H_{62} \rightarrow C_{22}H\square + C\square H\square$

6. What two types of hydrocarbons are formed during cracking?

1. Why are alkanes called 'unsaturated'?
2. Which chemical is used to test for alkenes?
3. What is the colour change for a positive alkene test?
4. Give two uses for alkenes
5. What are polymers?
6. What is the name for the small molecules that make up polymers?

1. What is the name of the polymer formed from the monomer butene?
2. Draw the polymer made from the monomer propene given below:



3. Name the polymer made in question 2
4. What is combustion?
5. When does incomplete combustion happen?
6. What are the waste products of complete combustion?
7. Which toxic gas is formed during incomplete combustion?

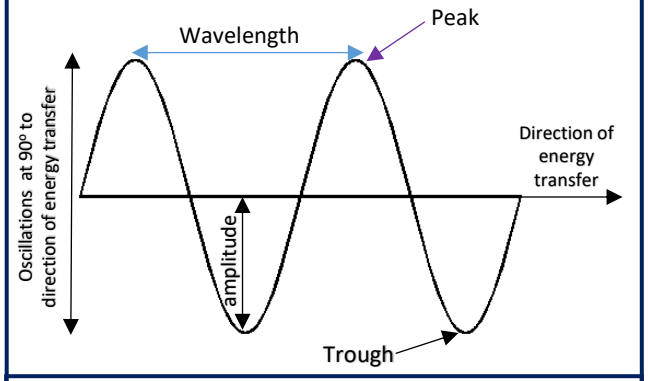
T6 10aSc1 Physics P6 Waves

Transverse Waves

- Oscillations (vibrations) **perpendicular** to direction of energy transfer.

Examples:

- Electromagnetic waves
- Ripples on water.

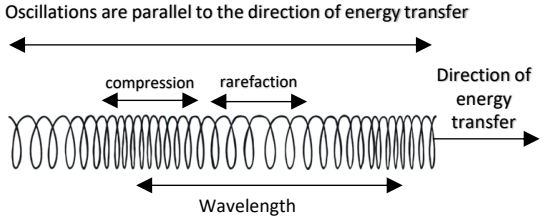


Longitudinal Waves

- Oscillations (vibrations) are **parallel** to direction of energy transfer.

Examples:

- Sound waves



Sound waves have areas of compression and rarefaction.

Compression = particles pushed closer together

Rarefaction = particles are further apart

Properties of Waves

Amplitude – maximum displacement from undisturbed position.

Wavelength – distance from a point on one wave to the equivalent point on the next wave.

Frequency – number of waves passing a point each second.

Frequency is measured in Hertz (Hz)

1Hz = 1 wave per second.

Wave speed – the speed at which energy is transferred through a medium.

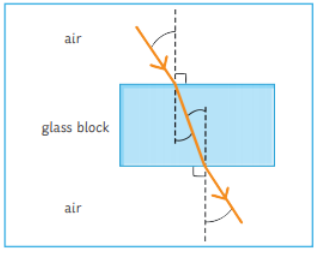
$v = f \times \lambda$ You need to memorise

wave speed (m/s) — frequency (Hz) — wavelength (m)

Refraction

Refraction occurs at the boundary between two mediums because the speed an wavelength of the wave changes at the boundary.

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



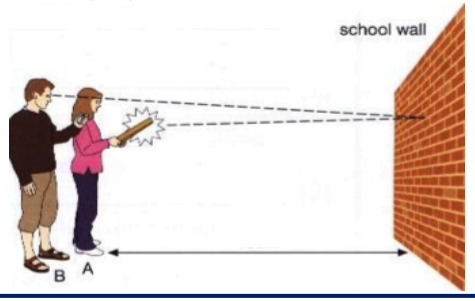
Measuring speed of sound waves in air

- Stand 50m from a large flat wall.
- One person claps/bangs bricks
- Measure time taken to hear the echo.
- Calculate speed of sound using:

Speed = distance x time

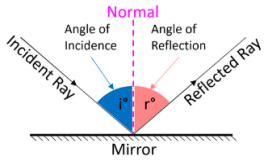
- Remember distance is double (in this case, 100m) as it travels to the wall and back.
- Take several measurements and calculate the mean to reduce error.

This is unlikely to produce an accurate value for sound in air (330 m/s) as the reaction time of the person operating the stopwatch is likely to be a significant proportion of the time measurement.



Reflection

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



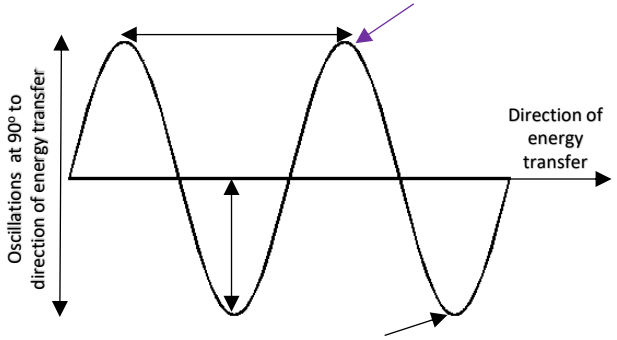
Law of reflection

The angle of incidence = angle of reflection

T6 10aSc1 Physics P6 Waves

1. How are transverse waves produced?

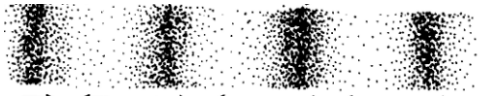
2. Label the wave features below.



1. Describe a longitudinal wave

2. Give an example of a longitudinal wave.

3. Label an area of compression and rarefaction in the diagram below



1. Define the following:

Amplitude

Wavelength

Frequency

2. What are the units for frequency?

3. What is the equation linking frequency, speed and wavelength?

1. When does refraction occur?

2. What happens to the speed, wavelength and frequency of a wave when it is refracted?

1. Describe a method to investigate the speed of sound waves in air.

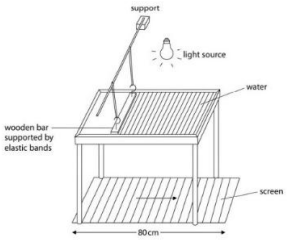
2. What is the biggest source of error in this investigation?

3. What is the speed of sound in air?

1. What is the law of reflection?

P6 Waves Required Practical – investigating wave in a solid and a ripple tank

Measuring waves in a liquid



Equipment

- Ripple tank
- Measuring ruler
- Stop watch

Method

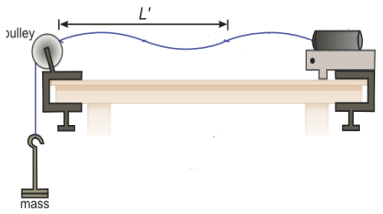
1. Set up the equipment as shown and turn on the motor to produce low frequency waves so that they are able to be counted.
2. Adjust the lamp until pattern is seen clearly on white screen underneath
3. Use a ruler to measure the length of a number of waves (e.g 10) and divide the length by the number of waves to give wavelength. This improves the accuracy of the measurement.
4. Record the waves using a camera or mobile phone. Count the number of waves passing a point in 10 seconds using a stopwatch and slowing the recording down.
5. Divide the number of waves counted by the time to give frequency.
6. Use $v = f \times \lambda$ to calculate the wave speed. Repeat for different frequencies of the motor.

Exp	Length of 10 waves (cm)	Wavelength of 1 wave (cm)	Number of waves in 10 s	Frequency (Hz)	Speed (cm/s)
1	65	0.65	121	12.1	7.9
2	50	0.5	155	15.5	7.9
3	42	0.42	187	18.7	7.9

Measuring waves in a solid

Equipment

- string, vibration generator, hanging mass set and pulley



Method

1. Set up the equipment as shown.
2. Turn on the vibration generator
3. Adjust the length of the string until a standing wave is achieved
4. The frequency can be read from the vibration generator
5. Measure as many complete waves as possible using a ruler
6. Divide the length by the number of waves to give wavelength
7. Calculate speed using $v = f \times \lambda$

Conclusion:

In both experiments, when you increase the frequency, the wavelength decreases – the speed remains the same in the same medium

P6 Waves – Required Practical – Ripple Tank

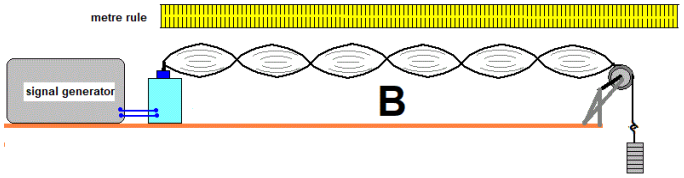
1. Complete the table below to explain the method in calculating the speed of waves in a ripple tank.

Step	Reason
Fill the ripple tank with water, switch on a lamp and place white card underneath the tank.	
Switch on the motor and adjust it to give low frequency waves	
Place a stopwatch next to the card and record the waves, with the stopwatch in view for 10 seconds	
Play the recording in slow motion, count the number of waves passing a certain point and divide this by 10	
Measure the length of 10 waves by taking a picture of the card with a ruler on it.	
Divide the length by 10	

2. If the length of 10 waves is 55cm, what is the wavelength of 1 wave?

3. If there are 210 waves in 10 seconds, what is the frequency?

1. When investigating waves produced by a vibration generator on a string, how do we know the frequency?



2. How many complete waves are shown in the image above?

3. If the length from the generator to the pulley was measured at 66 cm, what is the wavelength?

4. Why is it better to measure multiple waves and divide to find wavelength rather than measure one single wave?

5. What happens to wavelength when frequency increases?

6. What happens to wavelength when frequency decreases?

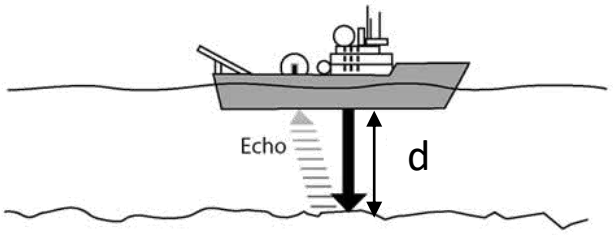
T6 10aSc1 Physics P6 Waves

Sound Waves

- The pitch of a note increases if the frequency of the sound wave increases.
- The loudness of a note increases if the amplitude of the sound wave increases.
- Sound waves cause the eardrum to vibrate, these vibrations send signals to the brain.
- The conversion of sound waves to vibrations of solids only works over a limited frequency rage, limiting the range of frequencies a human can hear. (20-20000 Hz)

Echo sounding

- Uses pulses of high frequency sound waves to measure the depth of objects in deep water.



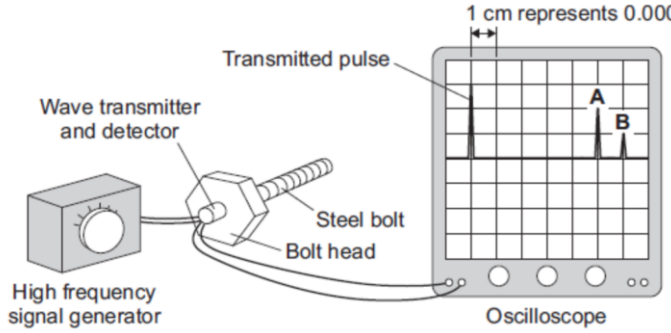
$$d = \frac{1}{2}vt$$

v = speed of the sound wave
t = time between transmitting the signal and receiving the echo.
d = distance to the object

Ultrasound

- Ultrasound waves are sound waves with a frequency above 20 00 Hz.
- Ultrasound waves are partly reflected at a boundary between two different types pf body tissue.
- Ultrasound waves reflected at boundaries are timed, and the timings are used to calculate distances.
- Ultrasound scans are non ionising so are safer than x-rays.

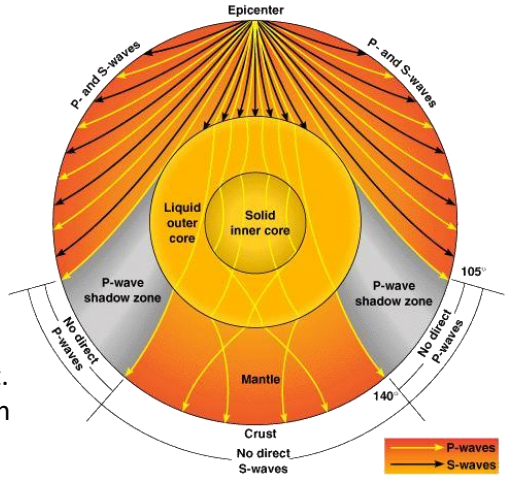
The diagram shows how a very high frequency sound wave can be used to check for internal cracks in a large steel bolt. The oscilloscope trace shows that the bolt does have an internal crack.



- Ultrasound is not only used in medicine, it can also be used to look for flaws or cracks in objects.

Seismic Waves

- Seismic waves are waves that travel through the Earth.
- Seismic waves are produced in an earthquake and spread out from the epicentre.
- Primary seismic waves (P-waves) are longitudinal
- Secondary waves (S-waves) are transverse waves.
- The movement of seismic waves through the Earth following an earthquake provide information on the inner structure of the Earth.
- P waves can movve through solids, but S waves cannot.
- Only P waves are detected opposite the epicentre of an earthquake, suggesting that the centre of the Earth is solid.



T6 10aSc1 Physics P6 Waves

Sound Waves

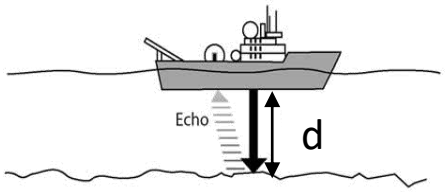
1. What part of a sound wave is related to the pitch of the note?

2. What part of a sound wave is related to the loudness of a note?

3. What is hearing range of a human?

Echo sounding

1. What is echo sounding?



2. What is the equation used to find the depth of the ocean floor (d) under the boat?

Ultrasound

1. What frequency are ultrasound waves?Ultrasound waves are sound waves with a frequency above 20 00 Hz.

2. What happens to ultrasound waves when they hit a boundary between two mediums?

3. Why are ultrasound scans safer than x-rays?

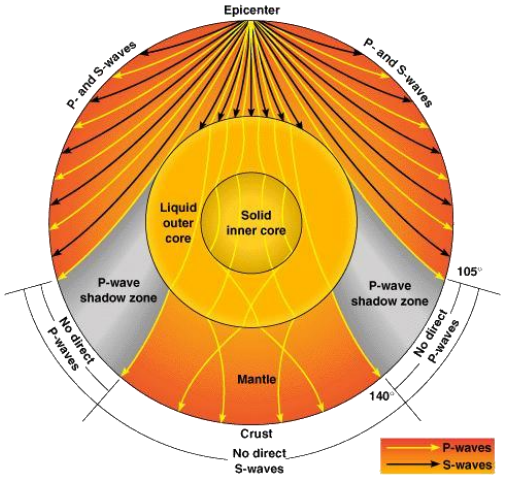
4. Give a non-medical use of ultrasound waves.

Seismic Waves

1. What are seismic waves?

2. What is the difference between a P-wave and an S-wave?

3. What do seismic waves tell us about the structure of the Earth.



T6 10aSc1 Physics P6 Waves

The Electromagnetic Spectrum

- All **transverse waves**
- Transfer energy from the source of waves to an absorber.
- All travel at the same **velocity** through a vacuum or air – **speed of light**.
- Speed of light = 300,000,000 m/s

You must remember all the electromagnetic waves in order!

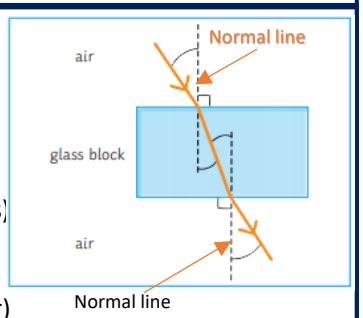
Long wavelength → Short wavelength

Radio waves	Microwaves	Infrared	Visible light	Ultraviolet	X-rays	Gamma rays

Low frequency → High frequency

Wave	Use	Other information
Radio waves	Television and radio	Easily transmitted through the air. Harmless if absorbed by the body.
Microwaves	Satellite communications and cooking food	Can be harmful when internal body cells become heated by over exposure.
Infrared	Electrical heaters, cooking food and infrared cameras	Can cause burns to skin
Visible light	Fibre optic communications	Only EM wave detectable by human eye.
Ultraviolet	Energy efficient lamps, sun tanning	Causes skin tanning and can lead to burns or **skin cancer**.
X-rays	Medical imaging and airport security scanners.	Very little energy is absorbed by body tissues. Passes through the body. They can lead to gene mutation and cancer.
Gamma rays	Sterilising medical equipment or food and treatment for some cancers.	

Ray diagrams

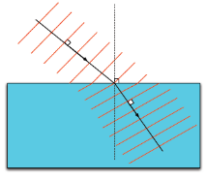


- You need to construct **ray diagrams** to show how a wave is **refracted** at the boundary of a different medium.

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.

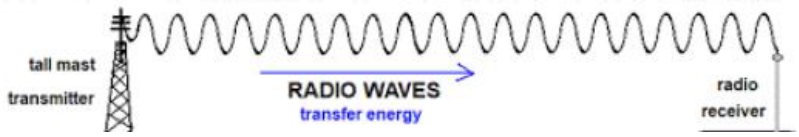
The ray bends because different parts of the wavefront cross the boundary at slightly different times –



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

Radio waves (HT only)

- Radio waves can be produced by **oscillations** in **electrical circuits**.
- Those radio waves can travel for long distances to receivers.
  - When absorbed by the receiver, the radio wave creates an **alternating current** with same **frequency** as the wave itself.
  - This is how TV and radio are broadcast.



T6 10aSc1 Physics P6 Waves

1. State two properties of electromagnetic waves.

2. Write the EM spectrum in order of **increasing** wavelength

3. Write the EM spectrum in order of **increasing** frequency

4. How fast do electromagnetic waves travel?

5. State the uses of:

a) radio waves

b) microwaves

c) infrared

d) visible light

e) ultraviolet

f) x-rays

g) gamma rays

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 type of current do radio waves create when absorbed?

2. What is the frequency of the current produced by a radio wave of frequency 250Hz?

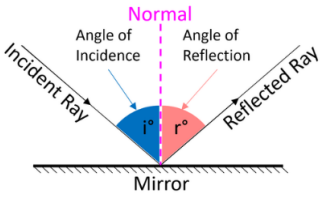
T6 10aSc1 Physics P6 Waves

Reflection

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

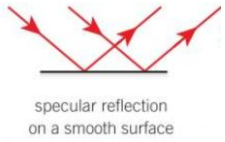
Law of reflection

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

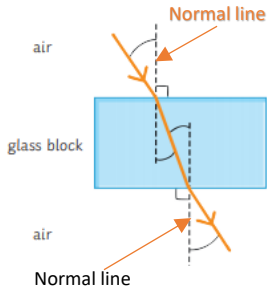
- You need to construct **ray diagrams** to show how a wave is **refracted** at the boundary of a different medium.

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

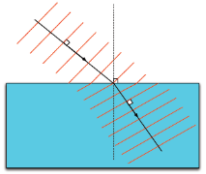
- Ray **slows down** and bends **towards the normal** line.

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

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



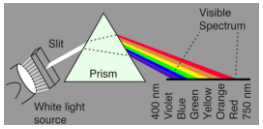
The ray bends because different parts of the wavefront cross the boundary at slightly different times –



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

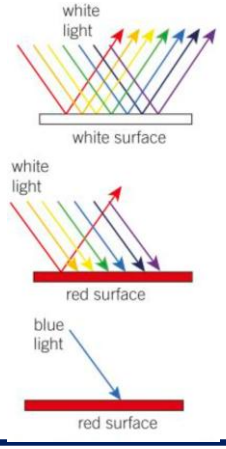
Colour

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



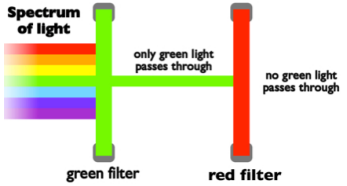
A white object looks white because it **reflects** all the wavelengths of visible light that reach it.

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 10aSc1 Physics P6 Waves

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?

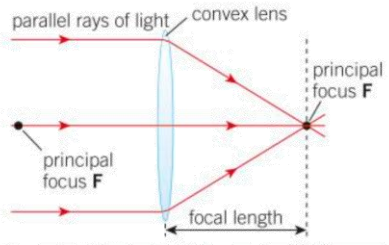
4. 4. What happens if a ray hits a medium at 90^{o}?

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?

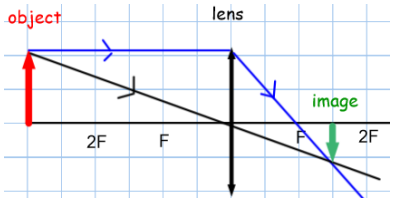
T6 10aSc1 Physics P6 Waves



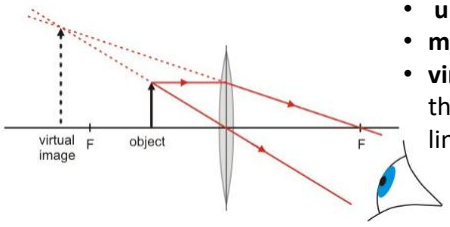
Convex (Converging) Lenses make parallel rays of light converge to meet at the principal focus. Focal length = distance from centre of lens to principal focus

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).

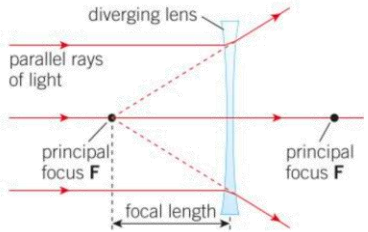


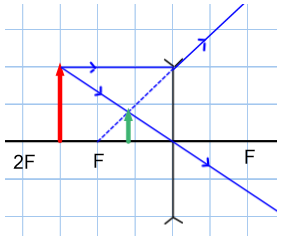
This image is

- **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.

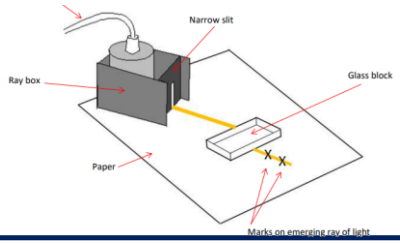
Concave lenses always produce **virtual** images.

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 10aSc1 Physics P6 Waves

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.

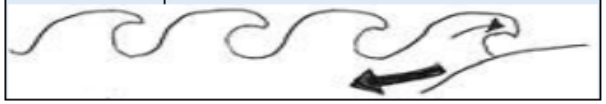
1. The UK's diverse landscapes

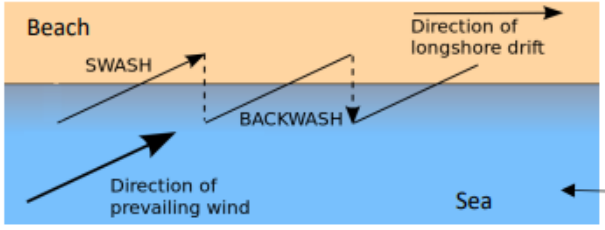
Term	Definition
Relief	Shape of the land.
Upland areas	Land over 200m. Highlands. Steep.
Lowland areas	Land below 100m. Flat or rolling hills

2. Waves

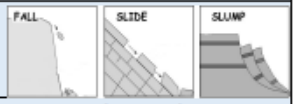
Term	Definition
Swash ↗	Movement of the water UP the beach in the direction of the prevailing wind.
Backwash ↓	Movement of water DOWN the beach at right angles (90°) due to gravity.
Constructive waves	Build up the beach. Strong swash. Weak backwash. Low height, long wave length. Low frequency.

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



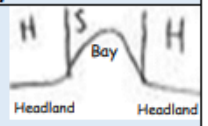


3. Processes

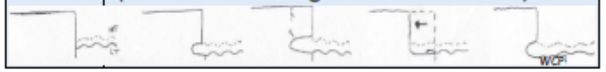
Sub-aerial processes (above the sea)	
Weathering	
Wearing away of rocks in situ. Material not removed.	
Mechanical weathering	The breaking down of rock without changing its composition. Freeze thaw.
Chemical weathering	The breaking down of rock caused by chemicals. (*e.g.* weak acid rain).
Mass movement	
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.

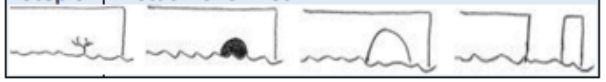
4. Erosional landforms

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).

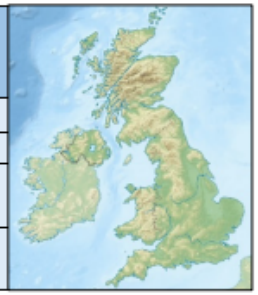


Cave, arch, stack	
Step 1	**Hydraulic power** enlarges cracks in headland
Step 2	Over time they turn into a cave.
Step 3	Back of cave is deepened by **abrasion** until it **erodes** through the headland > arch.
Step 4	**Weathering** and **erosion** wear away at the arch until it eventually collapses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



Term	Definition
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Term	Definition
Swash ↗	
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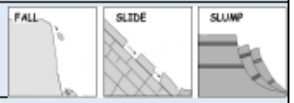
3. Processes

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	

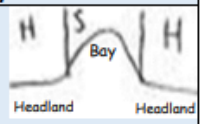
Transportation

Longshore drift	

4. Erosional landforms

Headlands and bays

Step 1



Step 2

Step 3

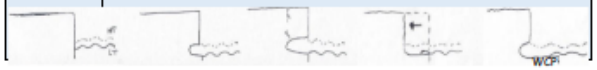
Wave cut platforms

Step 1

Step 2

Step 3

Step 4



Cave, arch, stack

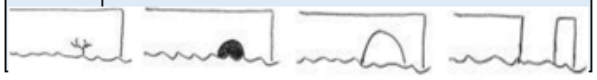
Step 1

Step 2

Step 3

Step 4

Step 5



Example of a UK coastline. Dorset coastline.

GCSE Geography. Paper 1.

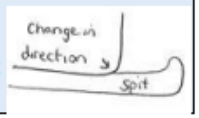
Physical landscapes. 3. Coasts

5. Depositional landforms

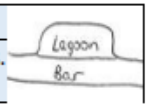
Beaches Swanage	
Step 1	Beaches form when **deposition** occurs.
Step 2	There needs to be a source of sediment nearby like soft cliffs.
Step 3	Constructive waves **deposit** material in sheltered areas like bays.

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.

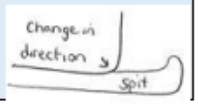
7. An example of a coastal management scheme

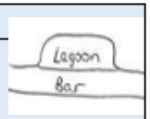
What?	**Reasons for management**	**Management strategy**	**Effects and conflicts**
Bournemouth Beach Management Scheme. Aim: Hold the line and protect tourism.	Coastline would erode at a metre a year. Beach important for tourism (£413million). 3114 homes at risk from collapsing cliffs.	3 phases costing £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	

6. Coastal management

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Strategy	**Explanation**	**Costs**	**Benefits**
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Schemes set up using a natural approach to managing the coast.			
Strategy	**Explanation**	**Costs**	**Benefits**
Beach nourishment			
Reprofiling			
Dune regeneration			
Managed retreat Coastal realignment			

7. An example of a coastal management scheme

What?	**Reasons for management**	**Management strategy**	**Effects and conflicts**

1. What is development?

Term	Definition
Development	The progress of a country in terms of economic growth, the use of technology and human welfare.
Uneven development	Development takes place at different rates in different places.
Development gap	The difference in standards of living and wellbeing between the world's richest and poorest countries.
Quality of life	General wellbeing (includes health, happiness, social belonging…)
Standard of living	Level of wealth and material goods available to people. $
Economic development	Progress in an economy. New technology can lead to a move from agriculture to industry.

Ways to classify the world

LIC	Low income countries. GNI per capita of under $1,045. (Poor) e.g. Haiti.
NEE	Newly Emerging Economies. Countries that have begun to experience high rates of economic development, with rapid industrialisation. e.g. Nigeria
HIC	High Income Countries. GNI per capita of over $12,746. (Rich) e.g. UK.
Brandt line	An outdated line from the 1980's that split the world into rich north and poor south.

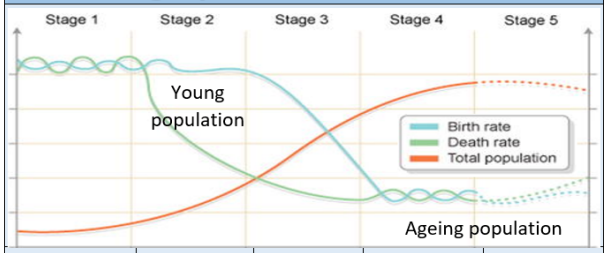
5. Consequences of uneven development

Disparities in wealth	Most developed countries> most wealth Africa owns just 1% of global wealth.
Disparities in health	Health care in LICs poor = ↓ life expect UK LE is 81 years. Nigeria LE is 52 years
International migration	Poor try to migrate to HICs. Mexico into USA. Syrians into Europe. Economic migration also occurs.

2. Measuring development

Term	Cat.	Definition
Arrows show how the indicator changes with development.		
GNI per capita	💰 ↗	Gross National Income per person. Total income divided by the size of the population. - Doesn't show inequality within a country. It's just an average.
Birth rate	🧍 ↘	The number of babies born in a year per 1000 of the population. +Reliable- infers female equality.
Death rate	🧍 ↘	The number of people that die in a year per 1000 of the population. - Less reliable. HICs now have an ageing population- > DR
Infant mortality rate	🧍 ↘	The average number of deaths of infants under the age of 1, per 1000 live births per year.
Life expectancy	🧍 ↗	The average number of years a person might be expected to live. - Less reliable for a LIC due to IMR making it look lower
People per doctor	🧍 ↘	The number of people who depend on a single doctor for their health care needs
Literacy rate	🧍 ↗	The percentage of people who have basic reading / writing skills.
Access to safe water	🧍 ↗	The percentage of people who have access to water that does not carry a health risk such as cholera
HDI	💰 🧍 ↗	Human Development Index. A combined measure that includes GNI per capita, life expectancy and adult literacy rate. Out of 1. + Best indicator as it includes 💰 and 🧍 data. Removes anomalies
Generic limitations		Data can be out of date or unreliable. Inequalities exist within countries.

3. Demographic Transition Model



-	LIC	NEE	HIC	HIC
High BR	High BR	Falling BR	Low BR	Low BR
High DR	Falling DR	Low DR	Low DR	Low DR
Lack of clean water and reliable food = ← DR High IMR = ← BR	Farming = ← BR Medical care improves = → DR	Rural / urban migration. Factories not farming = → BR	Women have careers, marry later, contraception = → BR Very good health care, healthy diets = → DR	

4. Causes of uneven development

Cat	Factor	Explanation
Physical	Natural disasters	Government has to spend money rebuilding rather than education. eg Haiti has had EQs and TS
	Land-locked	No coastline. This hindered trade keeping the GNI low. E.g. Nepal.
	Extreme climates	If it's too hot or cold agriculture is difficult. E.g. Thar Desert
Economic	Debt	A country's money will go to repaying debt rather than education.
	Selling primary products	These are low value goods so the government has restricted income to invest in health care.
Historical	Colon-ialism	European countries controlled much of Africa and Asia. After regaining power they were poor and civil wars often occurred. eg Nigeria- UK colony
	War	Money spent on arms. E.g. Sudan

1. What is development?

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Development	
Uneven development	
Development gap	
Quality of life	
Standard of living	
Economic development	

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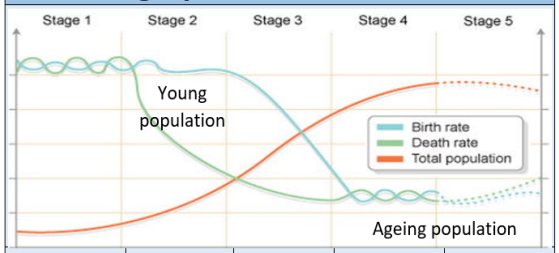
Life expectancy	🧍 ↗	
People per doctor	🧍 ↘	
Literacy rate	🧍 ↗	
Access to safe water	🧍 ↗	
HDI	💰 🧍 ↗	
Generic limitations		

3. Demographic Transition Model



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High BR	High BR	Falling BR	Low BR	Low BR
High DR	Falling DR	Low DR	Low DR	Low DR
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4. Causes of uneven development

Cat	Factor	Explanation
Physical	Natural disasters	
	Land-locked	.
	Extreme climates	
Economic	Debt	
	Selling primary products	
Historical	Colon-ialism	
	War	

6. Strategies to reduce uneven development FAT MIDII

Strategy	Explanation	Evaluation
Fairtrade	When producers in LICs are guaranteed a fair price for the goods they produce ie cocoa, coffee. The better price improves income, aids community projects and protects the environment.	+ Improves quality of life - Poorest can't afford certification
Aid	When a country or non-governmental organisation donates resources or money to another country to improve people's lives. Short term emergency aid or long-term aid. Nigeria- NETS4Life.	+ Improves quality of life - Aid may be tied - Corruption of aid
Tourism	Visitors spend money in a country and infrastructure is improved.	- Can be unreliable
Microfinance loans	Very small loans which are given to people in the LICs to help them start a small business. Often to women.	+ Makes women more equal - Can lead to debt
Investment	Countries or TNCs can invest in a country. Might include the development of infrastructure, building dams or industry. Shell.	+ Triggers multiplier effect - Economic leakage can occur
Debt relief	36/39 of the poorest countries have had their debt cancelled if they could guarantee no corruption and they agreed to spend the money on education/ reducing poverty. Nigeria's cancelled 2005.	+ Improves quality of life - They may go into debt again - Corrupt governments…
Intermediate technology	Sustainable technology that is appropriate to the needs, skills, knowledge and wealth of local people. Small scale projects.	+ Affordable - Small scale
Industrial development	Developing the secondary sector. This brings jobs, higher income and infrastructure improvements.	+ Triggers multiplier effect - Environmental damage

7. Tourism to reduce uneven development

Nepal	LIC. GNI per capital of US$1,090. Suffered civil war and earthquakes. Trek (Mount Everest), jungles, culture.
Advantages	+ $445 million in 2015. + 8% GNI. + 500,000 jobs. 7% employment.
Dis-advantages	- Locals are poorly paid. - Economic leakage. - EQ in 2015 reduced tourism by 1/3. Some out of work for 7 months. - Environmental damage (ie O_2 tanks).
Summary	Has been successful but it is unreliable. Need to find a more sustainable method for the long run.

6. Strategies to reduce uneven development FAT MIDII

Strategy	Explanation	Evaluation
Fairtrade		-
Aid		-
Tourism		-
Microfinance loans		-
Investment		-
Debt relief		-
Intermediate technology		-
Industrial development		-

7. Tourism to reduce uneven development

Nepal	
Advantages	
Dis-advantages	
Summary	

Knowledge Organiser: Early Elizabethan England
KT3: Elizabethan Society in the Age of Exploration 1558-88

Elizabethan Society in the Age of Exploration 1558-88	
1	Elizabeth's I's reign was a time of expansion with growth in many different areas of society and life.
Key events	
2	1563 Statute of Artificers
3	**1570** Norwich Survey
4	**1572** Vagabonds Act
5	**1576** Poor Relief Act
6	**1580** Drake returns from circumnavigating the globe with spices, treasure and tales of Nova Albion.
7	**1584** Raleigh begins planning new colonisation attempt by sending a fact finding mission to Virginia.
8	**1585** Colonists set sail for North America and begin the English colonisation of Virginia.
9	**1586** Surviving colonists abandon Virginia and return to England
10	**1587** New group of colonists arrive in Virginia and establish colony at Roanoke
11	**1590** English sailors arrive at Roanoke only to find it abandoned
Key Concepts	
12	**Education –** Expanded during Elizabeth's reign but it was expensive and mostly for boys. The large majority of people were illiterate.
13	**Pastimes –** Theatre thrived. Elizabethan leisure was similar to modern day but sport was much more violent.
14	**Population Growth –** During the reign of Elizabeth, population grew by as much as 35%. Food prices rose, wages fell and enclosure brought problems. The urban poor grew and poverty was a real problem.
15	**Exploration** by Drake led to conflict with Spain over the New World.
16	**Attitudes** – Unemployment was recognised as a genuine issue.
17	Poverty was an issue that Elizabeth wanted to address.

Key Words		
18	**Social mobility**	Being able to change your position in society.
19	**Humanists**	Believed that learning was important in its own right and not for just practical reasons.
20	**Grammar schools**	Private schools set up for boys considered bright who largely came from well off families in towns.
21	**Corporal punishment**	Punishment which causes physical pain.
22	**Apprentice**	Someone learning a trade or a skill.
23	**Petty schools**	Set up in a teacher's home. For boys.
24	**Dame schools**	Set up in a teacher's home. For girls.
25	**Pastimes**	Activities for leisure.
26	**Mystery plays**	Plays base on the Bible and saints' stories.
27	**Globe**	Shakespeare's theatre.
28	**Alms**	Charity
29	**Poor relief**	Financial help.
30	**Itinerants**	People who had moved from their home parishes looking for work.
31	**Enclosure**	The process of replacing large, open fields that were farmed by villages with individual fields belonging to one person.
32	**Rural depopulation**	When the population of the countryside falls as people move away in search of a better life.
33	**Subsistence farming**	Growing just enough to feed the family bit not to sell.
34	**Vagabonds**	Homeless people without jobs who roamed the countryside begging for money or perhaps committing crimes in order to survive.
35	**Economic recession**	When a fall in demand leads to falling prices and businesses losing money.

Knowledge Organiser: Early Elizabethan England
KT3: Elizabethan Society in the Age of Exploration 1558-88

Key Words		
36	**Deserving poor**	People unable to work because of illness or old age.
37	**Idle poor**	People who were fit to work but didn't.
38	**Triangular trade**	Route from Europe to Africa to the Americas.
39	**Quadrant/ Astrolobe**	Used by sailors to help with navigation at sea.
40	**Cartographer**	Map maker.
41	**Galleons**	Ships that were much larger than traditional trading ships.
42	**Colonies**	Land under the control or influence of another country.
43	**Monopoly**	When one person or company controls the supply of something.
44	**Nova Albion**	Region named by Drake, probably north of modern day San Francisco.
45	**Walter Raleigh**	Explorer who encouraged colonists to Virginia.
46	**Barter**	To exchange goods for other goods.
47	**Manteo and Wanchese**	Two native American Indians who came back to England.
48	**Native Americans**	People who lived in the New World before the colonists.

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	

45. Changes in interest rates

Interest rates change depending on how confident a lender is on the state of the economy. If the economy is strong the % rates are low, if the economy is weak then % rates are high.

Effects of lower interest rates:

Increased customer spending:
Customers are happy to spend money more confidently because they will pay less in interest and are more likely to have an excess in disposable income.

More favourable borrowing:
Businesses can borrow money from lenders at a lower rate of interest.

Effects of higher interest rates:

Reduced customer spending:
Customers are unlikely to spend money confidently because they will pay more in interest on loans and mortgages. Customers are more likely to have a lack of disposable income.

Less favourable borrowing:
Businesses will be charged higher interest rates on any money they have borrowed.

46. Changes in exchange rates

Exchange rates change depend on the supply and demand for different currencies. This is based on how well a country's economy is performing.

Effects of a strong pound (£):

Imported goods become cheaper to buy, Products being exported become more expensive abroad.

Effects of a weak pound (£):

Imported goods become more expensive to buy, products being exported become cheaper abroad.

47. External Influences

External influences can impact a business significantly. Business owners are often powerless to control how and when these influences can impact on business.

Typical external influences

- **Technology –** Technology changes all the time and it can affect how customers buy from a business, how products are made or even how a business is expected to communicate with customers.
- **Legislation –** New laws are created by government to protect consumers, employees and business activities from unethical, unsafe or undesirable working practices. Some legislation can be perceived as being a barrier to easy business and is known as "Red Tape".
- **Economic Climate –** Businesses need to be able to react to changes in the economy. If customers are feeling unconfident in their ability to spend money because of a weak economy, then this could affect a business's ability to generate sales. If exchange rates change, a business will need to deal with the consequences of higher costs or lower demand abroad.

45. Changes in interest rates

Interest rates change depending on how confident a lender is on the state of the economy. If the economy is strong the % rates are low, if the economy is weak then % rates are high.

Effects of lower interest rates:

Increased customer spending:

More favourable borrowing:

Effects of higher interest rates:

Reduced customer spending:

Less favourable borrowing:

46. Changes in exchange rates

Exchange rates change depend on the supply and demand for different currencies. This is based on how well a country's economy is performing.

Effects of a strong pound (£):

Effects of a weak pound (£):

47. External Influences

External influences can impact a business significantly. Business owners are often powerless to control how and when these influences can impact on business.

Typical external influences

- **Technology –**
- **Legislation –**
- **Economic Climate –**

1. Methods of growth	
When a market is growing, it is important for a business to grow in order to retain market share.	
Method of growth	**Explanation**
Internal/organic growth	A business can grow by creating new products, entering new markets, increasing their advertising and opening new premises.
External/inorganic growth	A business can grow by merging with another company or by winning a takeover of another company.

2. Finance for growth	
A business must find sources of capital to pay for growth.	
Term:	**Definition:**
Internal sources of financing.	A business can use 'retained profit' (capital they have saved from profit) or they could 'sell assets' (selling old or unused machinery/equipment). Internal sources of funding are from an internal sources such as an existing business owner or the business itself rather than from someone or an organisation outside of the business.
External Sources of financing.	A business could take out a loan (loan capital), or sell shares (share capital). External sources of funding are from an external sources such as a bank or an investor rather than from the business owners or the business itself.

3. Why do aims & objectives change?	
As businesses evolve, they need to adapt their aims and objectives to changing circumstances.	
Changing market conditions	Controlled by customer behaviour, what do customers want?
Changing technology	As technology changes, business needs to adapt to how customers use technology.
Changes in performance	If costs increase, the chances are the profit margin of the business will decrease. A business needs to be clear on whether they are aiming for quality or price.
Changes in legislation	If the law changes, this can bring uncertainty as the business may have to stop manufacturing/selling a certain product or be unable to predict future trends.
Internal Reasons	Changes in management or changes to the culture of the company.

3. Why do aims & objectives change?	
How objectives change as business evolve	
Objective	**Explanation:**
Focus on survival	If a business is experiencing cash-flow difficulties or if a business fails to adapt to changes in customer trends, they may focus on survival.
Entering or leaving markets	If the business is not finding their time in a market successful, they may alter their objectives to leave a particular market and join another, or they may choose just to enter another market in order to grow.
Workforce size	If an increase in productivity is required, it may be beneficial to hire more workers. Equally, if costs are too high the business may find themselves with the objective to reduce a workforce.

4. Globalisation	
The increasing tendency for countries to trade with each other and to buy global goods such as Coca-Cola or services such as Costa Coffee.	
Imports	Goods brought into one country from another.
Exports	Goods sold to one country from another

4. Globalisation	
Barriers to trade	**Definition: Measures put in place by a government to control the numbers of goods imported into a country.**
Tariffs	Import taxes – taxes on imported goods.
Trade blocs	An agreement between some countries to trade freely without any tariffs, but countries not within the agreement will be charged tariffs.

5. Ethics & business	
How the behaviour of a business is judged against human morals.	
Term	**Definition**
Fair Trade	A global scheme that states that farmers or producers are paid a fair price for their goods. Business costs are higher, but customers will pay more for Fair Trade products.
Environmental	Businesses are constantly monitored for their environmental impact. Behaving in an environmentally ethically manner means to not pollute or damage the local/national/global environment – sea, land or sky.
Labour	Human morals dictate that a business should pay its workers fairly and that working conditions should be safe and clean. If a business sub-contracts work to international manufacturers in Asia, human morals dictate that those workers of the contractor are paid fairly and work in safe, clean conditions also.

Pressure Group	An organisation or organised group of workers who seek to influence government policy, legislation or business behaviour.

Sustainability	Whether or not a resource will run out in the future. A sustainable resource will not. Human morals dictate that a business operates in a sustainable way – using sustainable raw materials.

GCSE Unit 8 SPANISH Knowledge organiser.
Topic Holidays and Travel

What we are learning this term:

A. Talking about travelling to holiday destinations
B. Talking about the weather
C. Talking about holiday accommodation
D. Talking about the regions of Spain
E. Understanding tourist leaflets and websites

6 Key Words for this term

1. alojarse
2. veranear
3. la pensión
4. vacaciones
5. un folleto
6. el AVE

8.1G ¡Me voy de vacaciones!

el aire acondicionado air conditioning
el andén platform
el asiento seat
el autocar coach
el AVE (tren de alta velocidad) high-speed train
el avión plane
barato/a cheap
el barco boat
la bici(cleta) bike, bicycle
el coche car
la consigna left-luggage office
el crucero cruise
desde luego of course
echar de menos to miss
Escocia Scotland
estrecho/a narrow
el equipaje luggage
el ferrocarril railway
el invierno winter
la maleta suitcase
el metro underground
no fumador non smoking
el otoño autumn
la primavera spring
la sala de espera waiting room
Sudamérica South America
el tranvía tram
las vacaciones holidays
el verano summer
viajar to travel
el viaje journey

8.1F ¿Dónde te alojas?

el abrebotellas bottle-opener
el abrelatas tin-opener
el aeropuerto airport
a la derecha on the right
a la izquierda on the left
el albergue juvenil youth hostel
Alojarse to stay (in a hotel)
el bañador swimming costume
la cama de matrimonio double bed
camping campsite, camping
la estación de servicio petrol station
la estrella star
fatal awful, terrible
el folleto leaflet
la gasolina (sin plomo) (unleaded) petrol
el guía / la guía guide (person)
la guía guidebook
la habitación (doble/ (double/single) room individual)
la llave key
mojarse to get wet
la oficina de turismo tourist office
el papel higiénico toilet paper
el parador state-owned hotel (in Spain)
el pasaporte passport
la pensión boarding house, B & B
ponerse en camino to set off
por desgracia unfortunately
la recepción reception
la reserva reservation
el saco de dormir sleeping bag
los servicios toilets
la tarjeta de embarque boarding card
la tienda (de campaña) tent
la taquilla ticket office

8.2G ¿En qué región vives?

el desempleo unemployment
la diversión entertainment
muy poblado crowded
nacer to be born
Nací I was born
nació he/she was born
el país country
Pescar to fish
el río river
la sierra mountain range
tanto so much, so many

Key Verbs

Quedarse To stay	Ir To go	Veranear To summer holiday	Hacer – to do/make	Volar To fly
Me quedo I stay	Voy I go	Veraneo I summer holiday	Hago I do	Vuelo I fly
Te quedas You stay	Vas You go	Veraneas You summer hol	Haces You do	Vuelas You fly
Se queda He/she/it stays	Va s/he goes	Veranea He/she summer hol	Hace s/he does	Vuela He/she/ it flys
Nos quedamos We stay	Vamos They go	Veraneamos We summer hol	Hacemos We do	Volamos We fly
Se quedan They stay	Van They go	Veranean They summer hol	Hacen They do	Vuelan They fly

8.2F Un folleto turístico

abrir to open
abierto/a open
callado/a quiet, reserved
cargar to load
cerrar to close, shut
la cocina cuisine, cooking
conocer to know (a person /a place)
el cultivo crop
entero/a entire, whole
gruñón/oña grumpy
ir de paseo to go for a walk
la mina mine
el monasterio monastery
el monte hill, mountain
la oveja sheep
Pintoresco picturesque
recomendar to recommend
el recuerdo memory, reminder,souvenir
la refinería (de petróleo) (oil) refinery
la sombrilla sunshade, parasol
el taller workshop
tranquilo/a peaceful
la vaca cow
el valle valley
el/la visitante visitor

8.2H Describiendo tu región

acostumbrado/a accustomed to, used (adj) to
la barca pesquera fishing boat
casero/a home-made
la cita amorosa date (with someone)
el clima climate

8.1H ¿Qué hiciste y qué te gustaría hacer durante las vacaciones?

aburrirse to get bored
acabar de (+ infinitive) to have just (done something)
broncearse to get a tan
coger to catch, to take
el crucero cruise
descansar to rest
el esquí acuático water skiing
extranjero/a foreign
el extranjero (en el __, abroad al__)
Francia France
genial brilliant, great
Grecia Greece
la insolación sunstroke
la isla island
las Islas Canarias Canary Islands
a mediados de in the middle of (time)
el Mediterráneo Mediterranean
ocupado/a busy, engaged
el oro gold
la plata silver
regresar to return
relajarse to relax
la sombrilla sunshade, parasol
el vestuario changing room, cloakroom
la vida nocturna night life
volver to return
el vuelo flight
colocar to place, to put
la empresa company, firm
la época era, age, time

GCSE Unit 8 SPANISH Knowledge organiser.
Topic Holidays and Travel

What we are learning this term:

A. Talking about travelling to holiday destinations
B. Talking about the weather
C. Talking about holiday accommodation
D. Talking about the regions of Spain
E. Understanding tourist leaflets and websites

6 Key Words for this term

1. alojarse
2. veranear
3. la pensión
4. vacaciones
5. un folleto
6. el AVE

8.1G ¡Me voy de vacaciones!

el aire acondicionado _____
el andén _____
el asiento _____
el autocar _____
el AVE (tren de alta velocidad) _____
_____ plane
_____ cheap
_____ boat
_____ bike, bicycle
_____ car
_____ left-luggage office
_____ cruise
desde luego _____
echar de menos _____
_____ Scotland
_____ narrow
_____ luggage
_____ railway
el invierno _____
la maleta _____
_____ underground
_____ non smoking
el otoño _____
_____ spring
la sala de espera _____
_____ South America
_____ tram
las vacaciones _____
_____ summer
viajar _____
el viaje _____

8.1F ¿Dónde te alojas?

el abrebotellas _____
_____ tin-opener
el aeropuerto _____
_____ on the right
a la izquierda _____
el albergue juvenil _____
Alojarse _____
_____ swimming costume
la cama de matrimonio _____
camping campsite, camping
la estación de servicio _____
la estrella _____
_____ awful, terrible
el folleto _____
la gasolina (sin plomo) _____
el guía / la guía _____
la guía _____
_____ (doble/ (double/single) room individual)
la llave _____
_____ to get wet
la oficina de turismo _____
el papel higiénico _____
_____ state-owned hotel (in Spain)
el pasaporte _____
_____ boarding house, B & B
ponerse en camino _____
_____ unfortunately
la recepción _____
_____ reservation
el saco de dormir _____
los servicios _____
la tarjeta de embarque _____
la tienda (de campaña) _____
la taquilla ticket _____

8.2G ¿En qué región vives?

_____ unemployment
_____ entertainment
_____ crowded
nacer _____
Nací _____
_____ he/she was born
el país _____
pescar _____
_____ river
la sierra _____
_____ so much, so many

Key Verbs

Quedarse To stay	____ To go	_____ To summer holiday	Hacer – to do/make	Volar _____
Me quedo _____	Voy I go	_____ I summer holiday	Hago _____	_____ I fly
Te _____ You stay	Vas _____	Veraneas _____	_____- You do	Vuelas _____
____ queda He/she/it stays	_____ s/he goes	_____ He/she summer hol	Hace s/he does	Vuela He/she/ it flys
Nos quedamos We stay	Vamos They go	Veraneamos We summer hol	_____ We do	_____ We fly
Se _____ They stay	_____ They go	_____ They summer hol	Hacen They do	_____ They fly

8.2F Un folleto turístico

abrir to _____
_____ open
_____ quiet, reserved
cargar _____
_____ to close, shut
_____ cuisine, cooking
_____ to know (a person /a place)
el cultivo _____
_____ entire, whole
gruñón/oña _____
_____ to go for a walk
la mina _____
_____ monastery
el monte _____
_____ sheep
pintoresco _____
_____ to recommend
_____ memory, reminder,souvenir
_____ (de petróleo) (oil) refinery
_____ sunshade, parasol
el taller _____
tranquilo/a _____
_____ cow
_____ valley
el/la visitante _____

8.2H Describiendo tu región

_____ accustomed to, used (adj) to
la barca pesquera _____
_____ home-made
_____ date (with someone)
_____ climate

8.1H ¿Qué hiciste y qué te gustaría hacer durante las vacaciones?

aburrirse _____
_____ (+ infinitive) to have just (done something)
broncearse _____
_____ to catch, to take
_____ cruise
descansar _____
el esquí acuático _____
_____ foreign
el extranjero (en el __, abroad al__)
Francia _____
_____ brilliant, great
Grecia _____
la insolación _____
_____ island
las Islas Canarias _____
a mediados de _____
_____ Mediterranean
_____ busy, engaged
el oro _____
la plata _____
_____ to return
relajarse _____
_____ sunshade, parasol
_____ changing room, cloakroom
la vida nocturna _____
volver _____
el vuelo _____
colocar to place, _____
la empresa _____
la época _____

GCSE Unit 9 SPANISH Knowledge organiser.
Topic My Studies

What we are learning this term:

A. Giving your opinion about different subjects
B. Talking about your studies
C. Talking about your school life and daily routine
D. Talking about school rules and uniform
E. Translating into English

6 Key Words for this term

1. asignaturas
2. notas
3. aprobar
4. suspender
5. licienciatura
6. elegir

9.1G El instituto y las asignaturas

el arte dramático drama
la asignatura subject
la carrera career, university course
las ciencias science
la clase class
la cocina cooking, food technology
continuar to continue, carry on
los deberes homework
dejar to drop
el dibujo art
difícil difficult, hard
divertido/a fun
la educación física PE
Escoger to choose
el español Spanish
estudiar to study
fácil easy
el francés French
la geografía geography
la historia history
el inglés English
las matemáticas maths
práctico/a practical
próximo/a next
la selección choice
Útil useful

9.1F ¿Cómo ser buen estudiante?

abrir to open
Afectar to affect
el apoyo support
aprender to learn
los apuntes notes
asistir a to attend
la biblioteca library
el/la compañero/a classmate
completar to complete
Consultar to consult
el debate discussion
los deberes homework
el diccionario dictionary
la duda doubt, query
el ejercicio exercise
entender to understand
la escuela school
Esperar to hope, to wait, to expect
el examen, exámenes exam, exams
la excursión trip
faltar a clase to miss lessons
la frase sentence
Intentar to try
interrumpir to interrupt
el instituto school
levantar la mano to raise your hand
la literatura literature
llevar to take, to carry, to wear
mejorar to improve
mirar to look at
el mundo world
necesitar to need
la nota grade
ofrecer to offer
el ordenador computer
organizar to organise
la palabra word
la pantalla screen
participar to take part
pedir to ask for, to request
pegado/a a glued to
perder to lose, miss
la pizarra blackboard
la pizarra interactiva smartboard
Preguntar to ask
el/la profesor(a) teacher
el progreso progress
la prueba test
Repasar to revise

Key Verbs

Aprobar To pass	Elegir To choose	Suspender To fail	Estudiar To study	Pensar To think
Apruebo I pass	Eligo I choose	Suspendo I fail	Estudio I study	Pienso I think
Apruebas You pass	Eliges You choose	Suspendes You fail	Estudias You study	Piensas You think
Aprueba He/she/it passes	Elige He/she/it chooses	Suspende He/she/it fails	Estudia He/she/it studies	Piensa He/she/it thinks
Aprobamos We pass	Elegimos We choose	Suspendemos We fail	Estudiamos We study	Pensamos We think
Aprueban They pass	Eligen They choose	Suspenden They fail	Estudian They study	Piensan They think

9.1F ¿Cómo ser buen estudiante?

el repaso revision
responsable responsible
resultar en to end up with, to lead to
saber to know
sacar buenas / malas notas to get good / bad grades
serio/a serious
las tareas homework
el trabajo work, piece of work
la tutoría tutorial
Usar to use
el vocabulario vocabulary

9.1H ¿Qué tal el instituto?

preocupar to worry
la sala de informática IT room
sencillo/a simple
Sentirse to feel
usar to use
el viaje journey
la zona área

9.1H ¿Qué tal el instituto?

el/la alumno/a pupil
antiguo/a old
asustado/a frightened
asustar to frighten
el atasco traffic jam, blockage
atento/a attentive
el aula (fem.) classroom
ayudar to help
buscar to look for
cambiar to change
cansado/a tired
conocer to meet, to get to know
contento/a glad, happy
contestar to answer
el curso school year, course
los deberes homework
deteriorado/a dilapidated, shabby
distinto/a different
la emoción excitement
emocionante exciting
encima on top
encontrar to find
explicar to explain
feo/a ugly
el gimnasio sports hall, gym
hambriento/a hungry
el idioma language
inmenso/a immense
el laboratorio laboratory
largo/a long
mejor better
nervioso/a anxious, nervous
el patio del recreo the school yard, playground
la pregunta question

GCSE Unit 9 SPANISH Knowledge organiser. Topic My studies

Translation Practice. G – blue F – orange H - Green	
Me _____ el francés	I **like** French
La historia es ____ divertida que el inglés	History is **more** fun than English
____ a estudiar las matemáticas	**I am** going to study maths
La literatura es más _____ que el francés	Literature is more **fun** that French
Me encanta dibujo. Voy a _____ en Septiembre	I love art. I'm going to **study it** in September.
No, no _____ elegir esa opción	No, **I don't want** to pick that option
Pienso que las ciencias son muy _____	I think that science is really **useful**
No creo que voy a _____	I don't believe that I'm going to **fail**
_____ informática en la escuela primaria	**I used to study** ICT in primary school
Ayer _____ mis deberes	Yesterday **I did** my homework
La semana pasada _____ con mi profesora	Last week **I spoke** with my teacher
Voy a _____ estudiando tecnología	I'm going to **continue** studying technology
Si necesitas algo, _____ al profesor.	If you need anything **ask** the teacher
_____ mucho estudiar ciencias	**I enjoy** studying science a lot
Ya ____ hablado con el profesor	**I have** already spoken with the teacher
Va a ____ muy interesante	It's going to **be** very interesting
He _____ esta opción	I have **chosen** this option
Quiero _____ mucho	I really want to **do it** a lot
No sé _____ hacer	I don't know **what** to do

Key Questions: Answer the following in your own words. Use these model answers	
¿Qué estudias ahora, que te gustaría estudiar en el futuro, que vas a dejar?	Ahora en el colegio, estudio unas asignaturas obligatorias. Las asignaturas obligatorias son las matemáticas, las ciencias y el ingles. También he elegido estudiar el español, la geografía, la historia, la tecnología, el arte, el dibujo …. La asignatura que me interesa más es …… porque …. La asignatura que me molesta/irrita más es …. porque …
¿Cómo es tu colegio, las reglas, los edificios, las instalaciones?	Mi colegio es un colegio grande que tiene circa ochocientos alumnos. Está en las afueras de Swindon en los barrios de Pinehurst y Penhill. Tenemos una biblioteca nueva, una cantina acogedora, un patio grande … En el colegio no debes comer chicle, no debes acosar, no tienes que gritar, no deberías comportarse mal… En el colegio tienes que comportarse bien, llevar el uniforme, ir al baño solo durante el recreo, llegar al colegio a hora ….
¿Describe tu primer día en tu colegio?	El primer día, estaba un poco nervioso porque me preocupaban los profesores, los otros alumnos, las clases, .. me preocupaba que los profesores serian estrictos, me preocupaban los exámenes, me preocupaba que el colegio sería tan inmenso
Es obligatorio estudiar matemáticas. ¿Crees que es una buena idea? … ¿Por qué (no)?	Si, en mi opinión me parece una buena idea porque … las matemáticas son muy importantes en el futuro/para un buen trabajo bien pagado/para mi futuro/para ir a una buena universidad/porque las matemáticas se usan en todos los trabajos
En tu opinión, ¿cuáles son las características más importantes de un buen profesor?	En mi opinión, un buen profesor es siempre simpático, nunca malhumorado, es de vez en cuando gracioso, es comprensivo y cariñoso, es siempre alegre y no es nunca antipático
¿Qué cambiarías de tu colegio si tuvieras la oportunidad?	Si tuviera la oportunidad, cambiaría/me gustaría cambiar las reglas. Me gustaría cambiar el uniforme porque me parece que es tan feo, me gustaría cambiar las reglas porque son demasiadas estrictas, me gustaría cambiar unos profesores porque son tan antipáticos

Key Grammar	
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
Forming the conditional ('would like to' tense). Always remove the –AR, -ER, -IR endings first	Remember the conditional ('would') tense endings for –AR, -ER, -IR verbs. They are: -AR, -ER, -IR: -ía, -ías, -ía, -íamos, -íais, -ían
Future Tense ('will…')	**All verb groups:** -é, -ás, -á, -emos, -éis, -án *With this tense, do NOT take the verb ending away but ADD it on to the infinitive.*

Year 10 Food & Nutrition Term 6

What we are learning this term:

A. Food Spoilage B. Enzymes C. Critical Temperatures D. Preparing Food Safely E. Date Marks F. Food Poisoning G. Ambient Foods

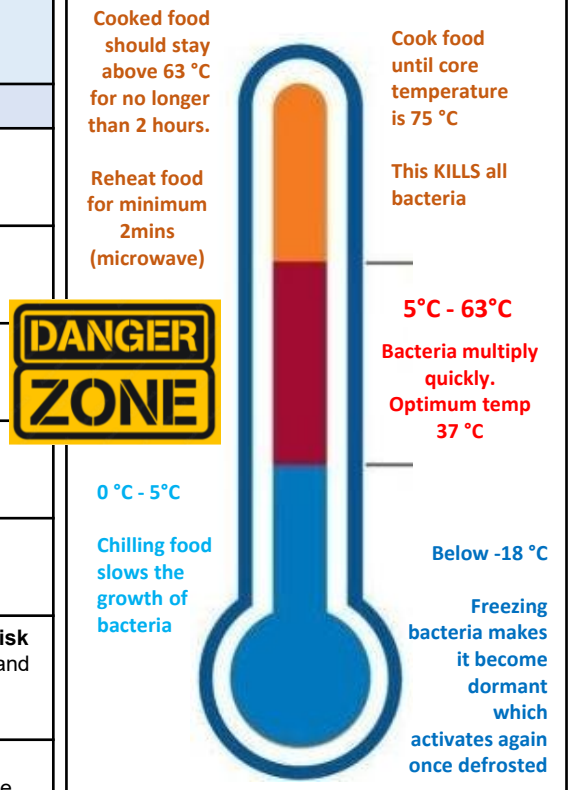
A. Food Spoilage

Most microorganisms are harmless, but **pathogenic** microorganisms **spoil** food and cause **food poisoning**

Microorganisms need <u>five</u> things to grow:

	**Warm** temperature
	Lost of **moisture**
	Lots of **food**
	Right **pH**
	Plenty of **time**
Bacteria:	**Ready-to-eat foods are at high risk** of bacteria (moist, high in protein and short shelf life) e.g. cooked foods, dairy products…
Moulds:	Can **spoil bread, cheese & fruit**. Make food look **'fuzzy'** and change the smell and taste.
Yeasts:	Can **spoil fruit by fermenting sugars** into alcohol & CO_2

C. Critical Temperatures



Defrost meat completely in the fridge 24hours

Keep leftovers covered and tinned foods transferred to separate container.

D. Preparing Food Safely

Avoid **cross-contamination** by following **safety & hygiene procedures**:

Preparing	Have good personal hygiene, separate raw & cooked foods, wash veg, clean equipment, santise work surfaces, defrost food fully
Cooking	Cook at right temperatures for right amount of time, cook all the way through, use a temperature probes - 75°C
Serving	Serve hot food straight away or keep it above 63°C for up to 2 hours, cool food down within 90mins, keep food covered & dated

E. Date Marks – printed on food packaging

Use By	**Best Before**
- Short shelf life - Food may not be safe to eat after this date has past	- Longer shelf life - Food may not taste as nice after this date has past

Eggs has a best before date BUT should be treated like a use by date

F. Food Poisoning – from eating contaminated food

Symptoms include: sickness, diarrhoea, stomach cramps, fever *(even death)*

Campylobacter	2-5 days	Raw or undercooked poultry
E. Coli 0157	1-3 days	Raw beef, unwashed veg
Staphylococcus aureus	1-6 hours	Animals / people e.g. skin, hair
Salmonella	6-72 hours	Raw poultry, eggs
Listeria	Up to 70 days	Soft cheese, pate, shellfish

- Milk is **pasteurized** (heat treated to 72°C) to kill bacteria
- Chickens are **vaccinated** against salmonella to avoid contaminating eggs

B. Enzymes – proteins that act as a biological catalysts (which speed up chemical reactions)

- Make fruit ripen e.g. bananas become soft and sweet

- Cause food to turn brown e.g. sliced apples or potatoes

Slow enzymes by **adding an acid** (to stop browning) or destroy them by **blanching** (before freezing)

E. Ambient Foods – safely stored at room temperature

Should be stored in a sealed container in a cool, dry place. Preservation =

Freeze-drying	Vacuum Packing
Canning	Using Chemicals

Year 10 Engineering Term 6

Understanding the effects of engineering achievements

Types of engineering developments

Structural design – the development of components designed to resist or apply **forces**, for example a roller coaster.

Developments include – the use of frames, triangulation and shell structures, the use of CAD to test the structural integrity of a product before manufacture.

Mechanical design – the development of components designed to perform a physical function.

Developments include - Suspension systems, gears and pulleys, chain drives, the use of mechanical advantage.

Electronic design – The development and use of electronic components within products i.e home security systems.

Developments include – smart home devices with connectivity to user's mobile phones, touch screen controls, miniaturization of transistors (smaller and more powerful circuits).

Effects of engineering developments

Frame and shell structures: The introduction of cheap and strong materials led to high-rise buildings, fast construction methods and a broad range of shell-frame products (cars, airplanes).

Development of new materials:

- Some alloys give improved strength and reduced weight
- Smart materials and new alloys increase the range of products that can be designed due to unique properties i.e nitinol is a shape memory alloy
- Complex synthetic materials are difficult or impossible to recycle.

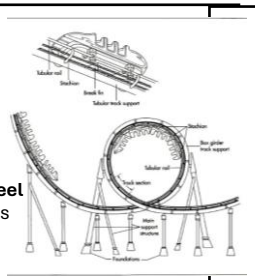
Smart technology:

- Smart home products in the home leads to designers focusing on linking more products to Bluetooth/wifi.
- Smart tech can be difficult to repair and become obsolete quickly.

Electronic components:

- Miniaturization of circuits makes for smaller and faster products with increased data storage, making them more efficient and reliable.
- The minerals used in complex circuits are finite and difficult to mine, leading to land destruction and pollution. These products are also hard to recycle.

Roller coasters make use of **triangulation** as well as **tubular steel** for high strength. Old roller coasters were made from wooden frame structures.



Common design choices in structural engineering

Frame structures

A frame structure is made up of multiple parts joined together.

Most large buildings are built this way using structural steel joists.

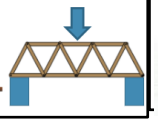
Shell structures

A shell structure is one surface, and gains strength from its form.

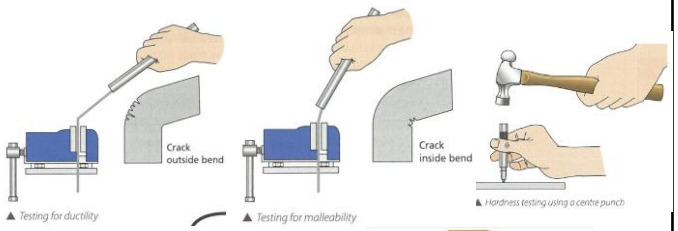
This structure is often found in nature, but also in a number of man-made products, the Sydney opera house and coke cans are good examples.

Triangulation

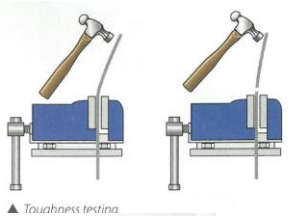
Triangulation involves the use of triangular shapes to give stability to structures. Triangles are particularly good at resisting force applied to compress them.



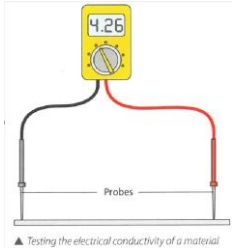
Performing material property tests



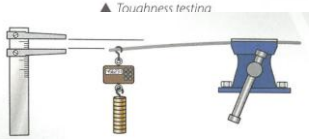
▲ Testing for ductility ▲ Testing for malleability ▲ Hardness testing using a centre punch



▲ Toughness testing

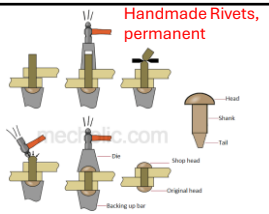


▲ Testing the electrical conductivity of a material

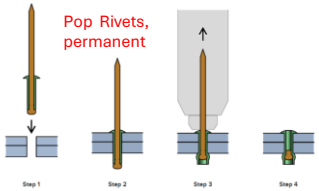


▲ Tensile strength testing

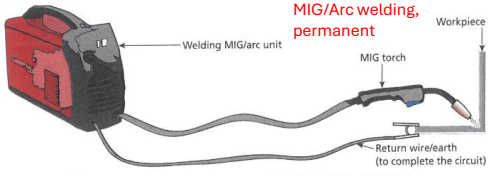
This test can be used to measure elasticity if you measure how much it springs back



Handmade Rivets, permanent

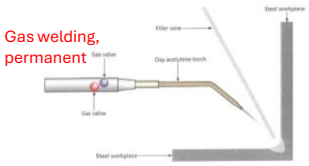


Pop Rivets, permanent

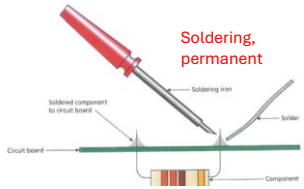


MIG/Arc welding, permanent

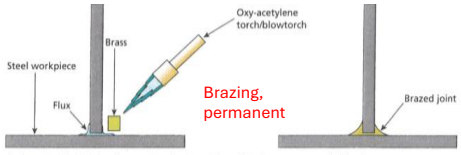
▲ An example of a MIG welding unit (left) and two pieces of steel being MIG welded (right).



Gas welding, permanent



Soldering, permanent



Brazing, permanent

Common joining methods

Nuts, bolts, screws, temporary

Year 10 Engineering Term 6

Materials and properties	
Strength	Ability of a material to withstand c_____, t_____, t_____, b_____, and s_____.
Hardness	Ability to withstand ab_____ and wear and tear.
Toughness	Materials that can withstand _____, or are hard to break or snap. They can absorb s_____.
Malleability	Being able to _____ easily would make a material easily malleable
Ductility	Materials that can be stretched along their _____ are ductile
Elasticity	Ability to be stretched and then _____ to its original shape

Describe using **notes and sketches** the process of testing a rope for tensile strength in a school workshop. [6]

1. Always draw in pencil
2. Draw 3 drawings showing the setup, action and result.
3. Write notes next to each one describing what is happening i.e how does the tester **measure** the result?

Draw a phillips screw head here

Draw an allan bolt head here

Annotate this E-bike to show what joining processes have been used and where:

Smart technology:

Smart products in the home leads to designers focusing on linking more products to _____. A benefit of this is _____

_____

Smart tech can be difficult to repair and become _____ quickly. This is bad because

_____

_____

Electronic components:

_____ of circuits makes for smaller and _____ products with increased data storage, making them more efficient and reliable. This is **useful to engineers because**

_____

_____

_____

- The minerals used in complex circuits are _____ and difficult to mine, leading to _____ and pollution. These products are also hard to recycle. Recycling is important because

  _____

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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B. Smart Materials
C. Polymers
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E. Technical Textiles
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Type	Properties	Common Uses
Graphene		
Metal Foams		
Titanium		

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

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

Thermoforming (pliable, recyclable)	Thermosetting (good insulators)

D. Composite Materials

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

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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Blended – a mixture of fibres that combines and improves properties

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:

A. Key words
B. What are the different types of health care services?
C. What are the different types of social care services?
D. What barriers are there to accessing care services?

A.	Key words for this Unit
Primary care	First point of contact when seeking health care
NHS	National Health Service – Tax funded health care in the UK.
Secondary care	Specialist health treatment and/or care
Tertiary care	Advanced specialist health treatment and/or care.
Allied health professionals	Professionals who are involved in patient care from diagnosis to recover
Clinical support staff	Support allied health professionals with the treatment and care of patients.
Foster care	A stable family home where care is provided on either a short or long-term basis.
Residential care	Accommodation and care for a number of children, young people or adults living together in one building.
Respite care	Short-term care which provides relief for family member who are carers.
Domiciliary care	Care received in the person's own home.
Sensory impairment	Difficulties with senses, most commonly vision and hearing.
Braille	Raised lettering to help visually impaired.
Occupational therapist	Offers support to develop independence for daily living activities.

B	What are the different types of health care services?
Primary Care	• Primary care is the first point of contact a patient is likely to have with the NHS – you can refer yourself to primary care providers. • Primary care providers include pharmacists, Registered GPs/doctors, walk-in centres, accident and emergency departments (A&E), dentists and Opticians.
Secondary Care	• Secondary care is specialist treatment or care. A primary care provider will refer a patient for secondary care if they feel it is necessary for the patient to receive further advice, tests or treatment. • Secondary care providers include cardiologists (heart), gynaecologists (female reproduction), paediatrics (children), obstetrics (childbirth and midwifery), psychiatry (mental health) and dermatology (skin).
Tertiary Care	• Tertiary Care is advanced specialist treatment or care. A secondary care provider will refer a patient for tertiary care for long-term treatment and/or care. • Tertiary care areas include spinal, cardiac (heart), cancer care, chronic pain, burns and neonatal (premature and ill new born babies).
Allied Health Professionals	• Allied health professionals work in a range of specialities They support patients through all stages of care – from diagnosis to recovery. To work with the public they must register with the Health and Care Professions Council (HCPC). • Allied health professionals include art therapists, dieticians, paramedics, physiotherapists, speech and language therapists and radiographers.
Clinical Support Staff	• Clinical support staff work within a range of departments under the guidance of allied health professionals. They are trained in their roles but are not required to register with the HCPC. • Clinical support staff include theatre support workers, prosthetic technicians, dietetic assistant, phlebotomist (collects blood samples), hearing aid dispensers and maternity support workers.

C.	What are the different types of social care services?
Children and young people	• Children and young people may need support on a temporary or permanent basis because their parent of carer is ill; they have family problems, they have behavioural issues or additional needs. • Types of support for children and young people include foster care, residential care and youth work.
Children or adults with specific needs	• Children and adults may need support with specific needs including learning disabilities, sensory impairments and long-term health issues. • Types of support for children and adults with specific needs include residential care, respite care and domiciliary care.
Older Adults	• Older adults may need support with a range needs including arthritis, cardiovascular disease, dementia and depression. • Types of support for older adults include residential care, carers and personal assistants.
Informal Social Care	• Not all carers get paid for what they do – they are known as informal carers and social services would really struggle without them. • Informal carers include a spouse or partner, children, friends and neighbours. • Informal carers do practical household duties, shopping, laundry, walk the dog and help with personal care.

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:

A. Key words
B. What are the different types of health care services?
C. What are the different types of social care services?
D. What barriers are there to accessing care services?

A.	Key words for this Unit
Primary care	
NHS	
Secondary care	
Tertiary care	
Allied health professionals	
Clinical support staff	
Foster care	
Residential care	
Respite care	
Domiciliary care	
Sensory impairment	
Braille	
Occupational therapist	

B	What are the different types of health care services?
Primary Care	• Primary care is….. • Primary care providers include….
Secondary Care	• Secondary care is…. • Secondary care providers include…..
Tertiary Care	• Tertiary Care is…… • Tertiary care areas include……
Allied Health Professionals	• Allied health professionals…. • Allied health professionals include….
Clinical Support Staff	• Clinical support staff…. • Clinical support staff include….

C.	What are the different types of social care services? Explain them.
Children and young people	
Children or adults with specific needs	
Older Adults	
Informal Social Care	

D.	What barriers are there to accessing care services?
Physical Barriers 	• Difficulty accessing care due to mobility and/or disability. • Obstacles include uneven and rough pavements and services, narrow doorways, no lift and transport. • Access could be improved by planning journeys in advance and reporting any problems to the council.
Sensory Barriers 	• Sensory impairments can be a barrier to accessing care. • A person with poor vision may need glasses or documents in large print. Profound sight problems may benefit from Braille. • A person with a hearing impairment may benefit from a hearing aid or sign language interpreter.
Social, Cultural and Psychological Barriers 	• Social, cultural and psychological barriers may leave people feeling nervous about accessing support. • These can include: religion/cultural barriers, negative experience, self-diagnosis, substance misuse, opening hours. • Care services can give individuals opportunities to share their concerns, offer different gender practitioners, facilities to worship and show respect and understanding.
Language Barriers 	• Language can be a barrier to accessing care services because individuals and care providers may struggle to understand each other. • Support for individuals could include translated documents, translators and interpreters and support from family members.
Geographical Barriers 	• Individuals may struggle to reach care services because public transport may not run regularly, specialist treatments may require long distance travel and travel can be expensive. • Support could include being provided with direct travel or having travel costs reimbursed.
Intellectual Barriers 	• If an individual has a learning disability is can cause difficulty in them accessing care services. • Support might include a learning disability nurse, speech and language therapist or occupational therapist.
Resource Barriers 	• As the population ages and more disorders are being successfully treated, there is a huge strain on health and social care resources – at times it might seem that not everyone can access what they need. • There are huge staff shortages which puts strain on people that work in the health and social care sector.
Financial Barriers 	• Seeing a GP or using emergency services are free but some services, such as optical and dental care, often involve some payment. • This can be difficult for people if they are from a low-income household as they may not feel they can afford to access the care they need.

D.	What barriers are there to accessing care services? Explain them in detail.
Physical Barriers 	
Sensory Barriers 	
Social, Cultural and Psychological Barriers 	
Language Barriers 	
Geographical Barriers 	
Intellectual Barriers 	
Resource Barriers 	
Financial Barriers 	

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:

E. Define the key words
F. What are the care values and how can they be implemented?

E.	Define the key words
Self-respect	Valuing yourself
Person centred approach	Planning care around the wants and needs of a service user
Empowerment	Supporting people to take control of their lives and futures by involving them decisions on their care and treatment
Confidentiality	Not passing on information or discussing a private conversation to anyone
Dignity	Being respected and treated with care
Safeguarding	Policies to ensure children and vulnerable adults are protected from harm, abuse and neglect
Discrimination	Treating a person or group of people unfairly or less well than others
Compassionate	Feeling or showing sympathy and concern for others
Competence	The ability to do something successfully and efficiently
Consequences	A result or effect, typically one that is unwelcome or unpleasant
Review	Involves assessing or inspecting something with the intention of making change if necessary
Empathy	Being able to understand and share feelings and views of another person.
Insomnia	Difficulties in sleeping

F.	What are the care values and how can they be implemented?
Empowering and promoting independence 	• Empowerment is when an individual feels in control of their own life and have a say in what happens to them. • Some people might need help with empowerment because of their age, circumstances or confidence e.g. elderly people, children, adult with learning disabilities. • You can promote empowerment and independence by involving individuals, where possible, in making choices about their treatment.
Respect for others 	• You can show respect for the individual by respecting their privacy, needs, beliefs and identity. • Show respect by being patient when someone takes longer to perform simple tasks due to their age, disability or injury. • Do not leave personal files around for others to see or discuss your patients' case with friends. • Gain permission before entering a room, provide private place for personal conversations.
Maintaining confidentiality 	• It is a person's right by law to have information about them kept confidential. • Care workers and not allowed to talk about one service user to another, or someone who is not involved in helping them get better. This involves not having those private conversations in public places where other can overhear. • Paper and electronic files are to be kept confidential and only shared with care workers which are involved in the treatment of the patient.
Preserving dignity 	• Preserving the dignity of individuals to help them maintain self-worth, privacy and self-respect. • You do this by involving the person in their own care; helping them go to the bathroom; giving the person time they need, checking what they would like to be called; closing door or curtain when they are changing; making sure their clothes are clean; dealing with embarrassing situations sensitively and professionally.
Effective communication 	• In health and social care it is important to communicate effectively with service used in order to build trusting relationships. These can be lost of the care worker appears not to care or listen. • Recognising different communication needs and trying to overcome them shows that cares respect the individual e.g. when visually impaired providing a leaflet in braille; if can't speak English well, have a translator organised beforehand. • Show you value the person through showing empathy, asking questions, not judging, smiling, using their name, giving appropriate eye contact, open body language, giving time to process.
Safeguarding and duty of care 	• Health and social care workers have a legal duty to protect service users from harm, neglect or abuse. They must recognise the signs and symptoms of abuse so they can protect people. • Signs of abuse include low self-esteem, STDs, unexplained injuries or bruises, insomnia, change in appetite, change of personality, self-harming, fear of being alone etc. • What to do: report the abuse, never promise to keep the abuse secret, make it clear that you will have to tell someone e.g. your supervisor or the police. DUTY OF CARE • Care workers must work in ways that never put individuals at any risk or harms. They need to know their responsibilities, procedures, deliver care as the care plan states and always report and record any concerns about the service user even if they appear minor.
Promoting anti-discriminatory practice 	• Discrimination can be obvious but sometimes it can be subtle and hidden, and The Equality Act 2010 makes it illegal to discriminate against people because of their e.g. age, gender, race, disability, religion, sexual orientation, marital status etc. • You can promote anti-discriminatory practice by: having patience with someone who doesn't speak English well; communicating in a way that the person will understand; showing tolerance towards people who have different beliefs and values from you; challenging unkind behaviour.

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:
E. Define the key words F. What are the care values and how can they be implemented?

E.	Define the key words
Self-respect	
Person centred approach	
Empowerment	
Confidentiality	
Dignity	
Safeguarding	
Discrimination	
Compassionate	
Competence	
Consequences	
Review	
Empathy	
Insomnia	

F.	What are the care values and how can they be implemented? Explain in detail.
Empowering and promoting independence 	
Respect for others 	
Maintaining confidentiality 	
Preserving dignity 	
Effective communication 	
Safeguarding and duty of care 	
Promoting anti-discriminatory practice 	

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:
G. How to apply care values in a compassionate way. H. Identifying own strengths and areas for improvement against the care values

G	How to apply care values in a compassionate way?
Show empathy and care by:	• Being patient • Showing sensitivity • Understanding • Actively listening • Having a positive outlook • Being encouraging • Having genuine concern for other people.
Care workers can check themselves against the '**Six C's of Compassionate Care**' checklist to make sure they are applying care values with compassion.	
Care	Helps to improve an individual's health and wellbeing. Care should be tailored to each person's needs and circumstances
Compassion	Shows the care worker understands what the individual is experiencing. Being empathetic to their situation shows care and value to the individual
Competence	Shows that care workers can safeguard and protect individuals from harm
Communication	How to adapt to individuals and their circumstances to ensure important information is given and shared- keeping the individual at the heart of everything that is done
Courage	Protecting individuals by speaking up if you think something is wrong; being brave enough to own up if you have made a mistake.
Commitment	Carrying out your duties to care for others to the best of your ability.

H	Identifying own strengths and areas for improvement against the care values
Working together	• All care works have the responsibility to uphold care values. If everyone works together, doing their 'bit', service users and colleagues alike will all be able to have positive experiences. • Put any feelings aside, some clients can show anger or aggressions towards you, continues to work in a way that respects each of the care values. Staff training: • Staff training keeps everyone updated. Even if they also ready had care values training it is important to have it again and remind them of their importance.

Making mistakes	• Everyone sometimes make mistakes. It is crucial that staff own up to mistakes that they have made, not matter how small. This is part of the duty of care to safeguard individuals, it demonstrates respect.
	• You need to be honest about your mistake, do not pretend it never happened and do not blame someone else.
	• You can:
	  • Tell your supervisor, admit it and apologise
	  • Be honest and accurate about what happened,
	  • Suggest ways to avoid it happening again
	  • Earn back the trust of the person involved
	  • Prove you can do the job
	  • Do no be too hard on yourself; seek help and guidance from others.

Reviewing own applications of care values	• One way to improve skills is to look carefully at the areas you are good at, what you are able to do well and things that you find difficult. • Knowing your strengths will allow you to take on task with ease and make you feel confident that you are doing a good job. • Knowing your weaknesses and what needs improving will help you work on them and develop. It is important to be open with yourself and others in order to progress further and be better at your job. • Regularly review your strengths and weaknesses because they change overtime
Receiving feedback	• The purpose of feedback is to let you know what you are doing well and the areas you need to improve. • This can be formal- like reports and following an observation at work and Informal- like chatting to colleagues at break time. • Both types encourage you to feel pleased with what you have done well and motivate you to improve in weaker areas, perhaps even provide a way forward. • Remember: when giving and receiving feedback, positives must be noted so that you know what you are doing well and continue to do so. Negatives are hard to uncomfortable to hear, but do not take them personally, you need them to get better at your job and feel more confident.
Using feedback	• Create yourself a SMART action plan to set yourself Specific, Measurable, Achievable, Realistic and Time-related targets or goals to help plan for your improvements

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:
G. How to apply care values in a compassionate way. H. Identifying own strengths and areas for improvement against the care values

G	How to apply care values in a compassionate way?
Show empathy and care by:	• • • • • • • •

Care workers can check themselves against the '**Six C's of Compassionate Care**' checklist to make sure they are applying care values with compassion. **EXPLAIN THEM:**

Care	
Compassion	
Competence	
Communication	
Courage	
Commitment	

H	Identifying own strengths and areas for improvement against the care values. EXPLAIN WHAT THEY ALL MEAN AND INVOLVE.
Working together	
Making mistakes	
Reviewing own applications of care values	
Receiving feedback	
Using feedback	

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.

Question	Answer	Question	Answer
Give the term used for a **short, repeated pattern**		Which instrument provides the **main beat of a song**	
Give the term used when **one note is sung per syllable**		Give the definition of **Reverb**	
Which feature creates an effect which **distorts the sound (creates a 'grungy' sound).**		Circle the genre that **IS NOT** a form of popular music.	**Rock** **Pop** **Romantic** **Hip Hop**
Give the definition of **Backing Vocals**		Which technique is used when **each syllable is sung to a number of different notes?**	**Falsetto** **A cappella** **Melismatic**
Circle the part of a song which is a **link/transition between two sections**	**Chorus** **Outro** **Bridge** **Middle-Eight**	List **4 instruments** used in a pop/rock group	
Give is the term given when **two genres of music are mixed together e.g. Rap Metal.**		What role does a Rhythm Guitar have in a pop/rock group?	
Give the definition of **Sample**		Give the term used when a **Male voice is in a higher than usual range**	
Circle the correct term used when a **short improvised drum solo is used**	**Rim shot** **Belt** **Hammer on** **Fill**	Give the definition of **Verse**	

SWINDON ACADEMY READING CANON

Year 7


The Canterbury Tales


War Horse


Adventures of a Young Naturalist


A Monster Calls


The Pearl


Number the Stars


The Hunger Games


Chinese Cinderella


Sir Gawain and the Green Knight

Year 8


The Dark Lady


Trash


The Diary of a Young Girl


Ghost Boys


The Amazing Maurice


The Bone Sparrow


Salt to the Sea


The Giver


Witch Child

Year 9


Skin


I am Malala


Noughts and Crosses


Liccle Bit


Fahrenheit 451


The Black Flamingo


One


Simon vs the Homo Sapiens Agenda


Long Way Down


Northern Lights


The Boy Who Steals Houses


The Woman in Black


The Book Thief

Year 10


The Underground Railroad


The Curious Incident of the Dog in the Night-Time


The Hate U Give


Rani and Sukh


Pigeon English


The Boxer


1984


Orangeboy


The Outsiders


The Art of Being Normal


A Selection of Short Stories


To Kill a Mockingbird

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