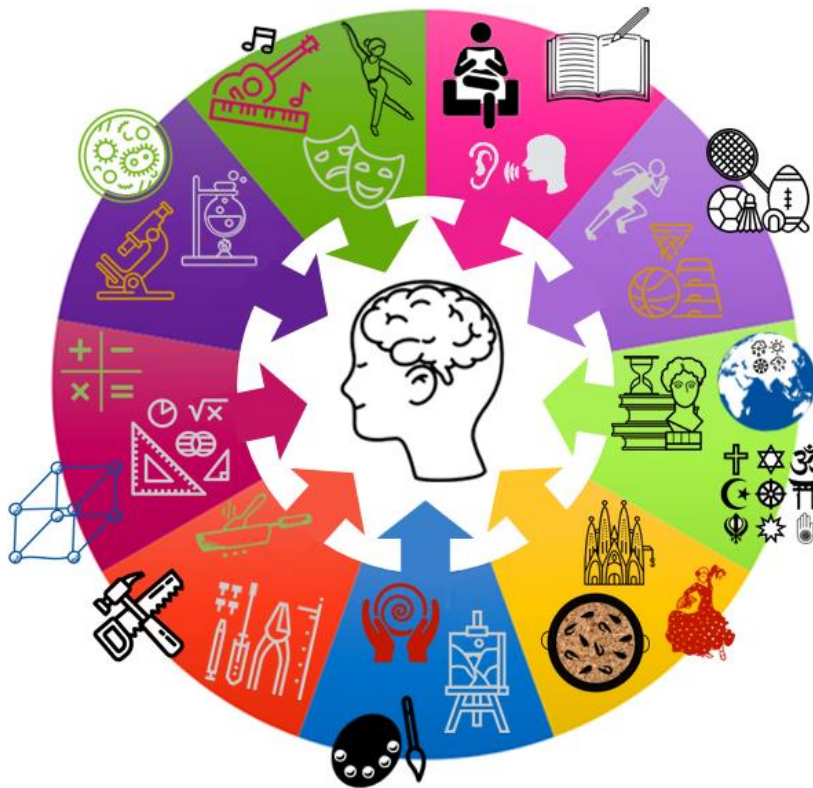


100% book - Year 10 Grammar

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

Term 4



Swindon Academy 2024-25

Name:

Tutor Group:

Tutor & Room:

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

If you are determined to learn, no one can stop you."

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

Knowledge Organisers

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

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

Quizzable Knowledge Organisers

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

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

Top Tip

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

Expectations for Prep and for using your Knowledge Organisers

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

How do I complete Knowledge Organiser Prep?

Step 1

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

The image shows the Epraise website interface. On the left is a 'Planner' for the week of 20th May to 26th May 2020, with columns for Sun, Mon, Tue, Wed, Thu, and Fri. On the right is a 'Knowledge Organiser' for 'Year 7 Term 1 Science/Physics: Topic 10: Particles'. It contains various sections: 'What is particle theory?', 'Describe the arrangement and movement of particles in the three states of matter', 'What is the law of conservation of mass?', 'What are the different changes of state?', and 'What are the differences between the three states of matter?'. Each section includes diagrams and text.

Step 2

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

This image shows a printed page from the knowledge organiser with handwritten notes. At the top, '29th May 2020' and 'Particle theory' are written. The page includes sections: 'A. What is particle theory?' (The theory that all matter is made up of particles), 'A. Describe the arrangement and movement of particles in the three states of matter.' (Solid: regular pattern, vibrate; Liquid: random, slide past; Gas: far apart, random movement), 'A. What is the law of conservation of mass?' (The Law of Conservation of Mass states that mass cannot be created or destroyed), and 'B. What are the different changes of state?' (Melting, Freezing, Evaporation, Condensation). A diagram shows energy changes: 'Gaining energy' (melting, evaporation) and 'Losing energy' (freezing, condensation).

Step 3

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

Handwritten notes on lined paper: '29th May 2020', 'Properties of the states of matter', 'Particle theory = all matter is made of particles', 'Solid = regular pattern particles vibrate in fixed position', 'Liquid = particles are arranged randomly but are still touching each other Particles can slide past each other and move around.', 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy.'

Step 4

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

Handwritten notes on lined paper showing the definition of solid written three times: 'Solid = regular pattern particles vibrate in fixed position'.

Step 5

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

This image shows a printed page from the quizzable knowledge organiser with handwritten answers. The questions are: 'A. What is particle theory?' (Self quizzing), 'A. Describe the arrangement and movement of particles in the three states of matter.' (Arrangement/Movement of matter), 'A. What is the law of conservation of mass?' (Solid = regular pattern, Liquid = pa, Gas =), and 'B. What are the different changes of state?' (Melting, Freezing, Evaporation, Condensation).

Step 6

Check your answers using your Knowledge Organiser. Repeat Steps 3 to 5 with any questions you got wrong until you are confident.

Handwritten notes on lined paper showing corrections: 'Particle theory = all matter is made of particles', 'Solid = regular pattern particles vibrate in fixed position', 'Liquid = particles are arranged randomly but are still touching each other Particles can slide past each other and move around', 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy'.

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

KS4 MACBETH Grammar

1. Context		
<p>Playwright: Shakespeare (April 23rd 1564- April 23rd1616) Dates: written around 1606 Published: in 'the First Folio, 1623 Era: Jacobean Genre: Tragedy = <i>A play ending with the suffering and death of the main character.</i> Set: Scotland, Structure: Five Act Play</p>		
<p>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.</p>		
<p>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.</p>		
<p>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.</p>		
<p>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.</p>		
<p>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/renege angels), stars, moon, kings, princes, nobles, commoners, wild animals, domesticated animals, trees, other plants, precious stones, precious metals, and other minerals.</p>		
Conventions of a Shakespearean Tragedy		
<p>A tragic hero who falls from greatness through a flaw of their own character.</p>	<p>Hamartia – the flaw in the tragic hero that destroys them.</p>	<p>A hero of status – the central characters are people of importance, with power and status to lose.</p>
<p>External conflict – his tragedies feature conflict between characters, and always lead to death.</p>	<p>Internal conflict – there are frequent moments of self-doubt or internal torment.</p>	<p>Supernatural elements – Many of Shakespeare's tragedies feature supernatural influences.</p>

2. Key Characters	
<p>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.</p>	
<p>Lady Macbeth: A strong, ambitious and manipulative woman who exerts pressure on Macbeth to pursue his ambition of becoming king by murdering Duncan. Unable to deal with the guilt of these actions and is driven to madness and suicide.</p>	
<p>The Witches / Weird Sisters: Supernatural and manipulative beings who seem to be able to predict the future. They are unearthly and omniscient.</p>	
<p>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.</p>	
<p>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.</p>	
<p>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".</p>	
<p>Malcolm: Duncan's son and next in line to the throne. He is described as a good man in the play.</p>	

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

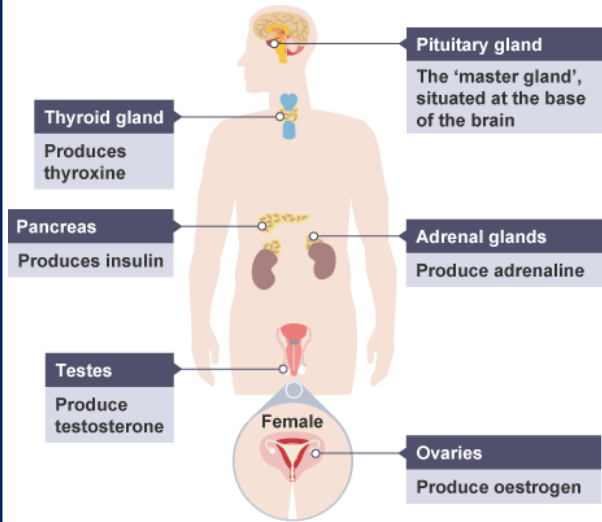
5. Key Terminology, Symbols and Devices	
Motif	A recurring image or idea that has symbolic importance. The best example in Macbeth would be blood.
Soliloquy	When a character is alone on stage and speaks their thoughts aloud to themselves.
Iambic Pentameter	A line of a play or poem that has ten syllables 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
<p>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.</p>		<p>1. Shakespeare uses blood as a metaphor for guilt through the play. As the guilt increases, the volume of blood increases.</p>	
<p>2. Shakespeare uses the play to demonstrate the consequences of engaging with the supernatural.</p>		<p>2. Shakespeare uses apparitions to present the consequences of ungodly behaviour and is ambiguous about whether they are real or imagined.</p>	
<p>3. Shakespeare uses Macbeth's role as a tragic hero to highlight how vulnerable people are to the destructive temptation of power.</p>		<p>3. Shakespeare's characterisation of Macbeth and Lady Macbeth establishes the idea that ungodly deeds do not go unpunished.</p>	

Year 10GS – B5

Hormonal responses

Hormones are chemicals released by glands
They are carried in the bloodstream.
Hormonal responses are slower than nervous responses but they last longer.



Homeostasis

This means keeping internal conditions (of the body or a cell) constant to ensure optimum functioning.

In humans, this includes regulating:

- temperature
- water levels
- blood glucose concentration

Homeostasis can involve nervous or hormonal responses.

Receptors detect changes in the body

Coordination centres (brain, pancreas, spinal cord etc) receive and process information

Effectors carry out responses to return to normal

Blood glucose concentration

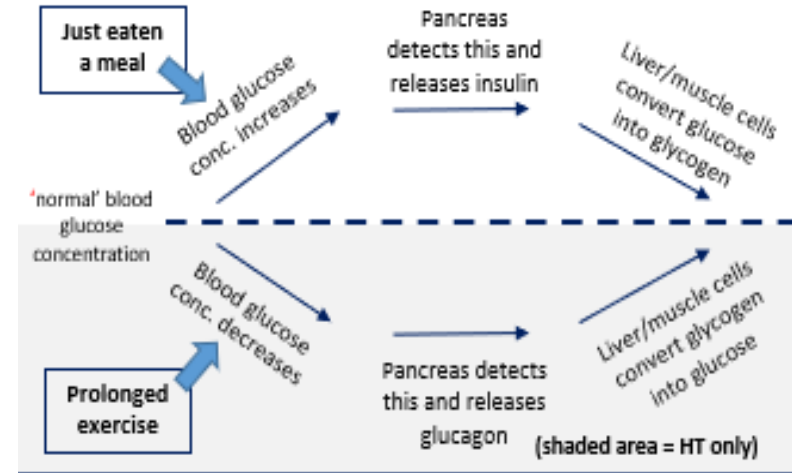
Blood glucose is monitored by the **pancreas**.

If glucose levels rise, the pancreas releases **insulin** into the blood.

This is a message to the liver to remove glucose and store it as **glycogen**.

If blood glucose is too low, **glucagon** is released.

The liver responds by breaking down glycogen into glucose and releasing it into the blood.



Diabetes

There are two types – Type 1 and Type 2

Both result in a lack of control over blood glucose levels

	Type 1	Type 2
Cause	No insulin is made by the pancreas	Insulin is made, but the liver and muscle cells do not respond
Treatment	Injections of insulin Pancreatic transplant	Controlling carbohydrate intake Losing weight

HT only

Negative feedback is when the release of something brings the levels back towards acceptable levels, it maintains a steady state.

E.g. if blood glucose increases, insulin is released to bring blood glucose back towards the normal range.

Year 10GS – B5

Adrenaline and thyroxine (HT only)

Adrenaline is produced by the **adrenal glands**.

It is produced in times of fear or stress.

It **increases heart rate** to ensure **more oxygen and glucose** to the cells to prepare for the 'fight or flight' response.

Thyroxine is produced by the **thyroid gland**.

It is involved in regulating **metabolic rate** and growth and development.

Puberty

Females – **Oestrogen** is the main female reproductive hormone produced in the ovary. At puberty, eggs begin to mature, and one is released approximately every 28 days. This is called ovulation.

Males – **Testosterone** is the main male reproductive hormone produced by the testes and it stimulates sperm production.

Name of contraception	Description	+	-
Condoms/diaphragm	Barrier	Very effective, condom protects against STIs	Unreliable if not used properly
Oral Contraception (pill)	Hormonal (oestrogen or progesterone, stops FSH so no eggs mature)	Very effective	Must remember to take everyday, can have side effects
Injection/implant/skin patch	Slow-releasing hormone	Long lasting	Side effects such as heavy periods
Intrauterine Device (IUD or Coil)	Barrier method. Can also contain hormones	Long lasting (up to 5 years)	Side effects such as heavy periods
Surgical Sterilisation	Tying or cutting of sperm ducts/ oviducts.	Almost 100% effective	Difficult or impossible to reverse

Menstrual Cycle

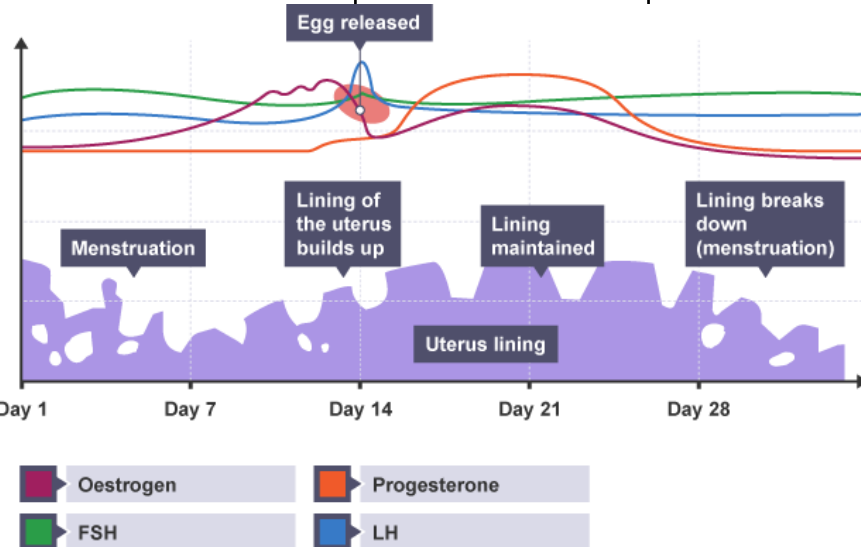
The menstrual cycle is controlled by several hormones:

FSH – from the pituitary. Causes an egg to mature in the ovary

LH – from the pituitary. Causes ovulation

Oestrogen and progesterone are involved in maintaining the lining of the womb.

HT – Oestrogen also feeds back to the pituitary to stop producing FSH.



Infertility (HT only)

Fertility drugs LH and FSH can be given to increase the number of eggs released and increase the chance of fertilisation.

IVF

- Woman takes a dose of FSH and LH - stimulates the maturation of several eggs.
- Eggs are collected and fertilised by sperm from the male
- Fertilised eggs develop into embryos.
- One or two embryos inserted into the female's uterus.

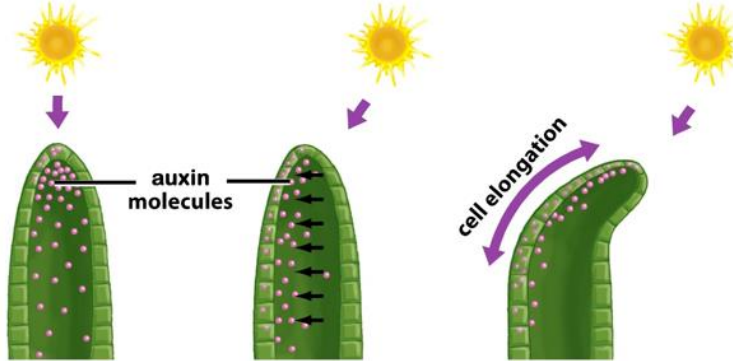
Negatives;

- very emotionally/ physically stressful
- success rates are not high
- can lead to multiple births (twins, etc.)
- Many embryos are not used & destroyed

Plant hormones

Plants produce hormones to coordinate and control growth and responses to light (phototropism) and gravity (gravitropism or geotropism).

Unequal distributions of auxin cause unequal growth rates in plant roots and shoots.



The auxin collect on the side of the plant in the shade.

Gibberellins are important in initiating seed germination.

Ethene controls cell division and ripening of fruits.

The uses of plant hormones

Plant growth hormones are used in agriculture and horticulture.

Auxins are used:

- as weed killers
- as rooting powders
- for promoting growth in tissue culture.

Ethene is used in the food industry to control ripening of fruit during storage and transport.

Gibberellins can be used to:

- end seed dormancy
- promote flowering
- increase fruit size.



Year 10GS – B5

The nervous system

Job is to **detect** stimuli (changes in environment) and **respond** if needed.
Consists of:

Receptors



Specialised cells that detect stimuli, found in sense organs and internally

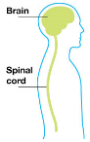
Neurons

3 types – sensory, relay and motor

Carry **impulses** joining all parts of the nervous system

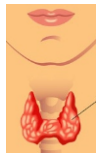


Co-ordination Centres



Brain, spinal cord, pancreas.
Coordinates the response

Effectors



Organs that bring about a response

muscle or gland

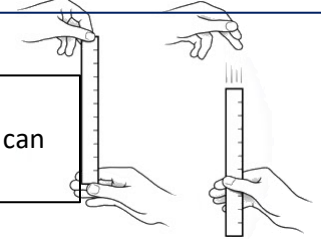
RP 6 - Investigation into the effect of a factor on human reaction time.

1. Person A holds out hand with a gap between thumb and finger.
2. Person B holds ruler with the zero at the top of person A's thumb.
3. Person B drops ruler without telling Person A and Person A must catch it.
4. The distance on the ruler level with the top of person A's thumb is recorded
5. Repeat this ten times.
6. Repeat steps 1-5 after a factor has been changed
7. Use conversion table to convert ruler measurements into reaction time.

The 'factor' could be...

- Caffeine consumption
- Hours of sleep
- Alcohol consumption
- Amount of practice

A computer reaction test can also be used.



Control variables : distance above the hand, distance between finger and thumb, hand used (dominant or non-dominant, all other factors listed in the box above except the one being changed.

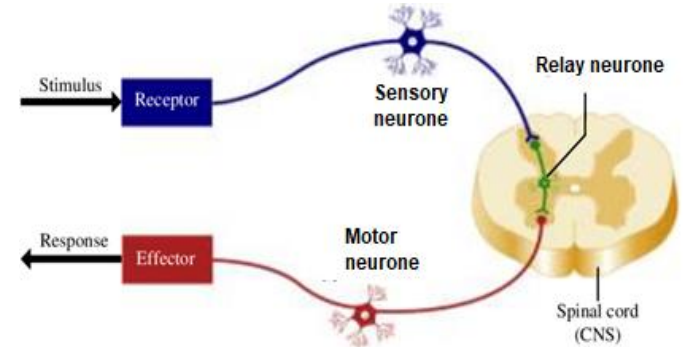
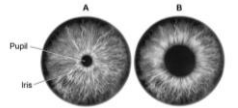
Reflexes

A reflex is an automatic, rapid response

Reflexes do not involve the conscious part of the brain, so cannot be overridden

The response might be brought about by:

- muscle - e.g. pupil being constricted with bright light or knee jerk response
- gland – e.g. mouth watering or tears being released when something gets in your eye



Reflex Arc

stimulus → receptor → **sensory neurone** → **relay neurone** → **motor neurone** → effector → response

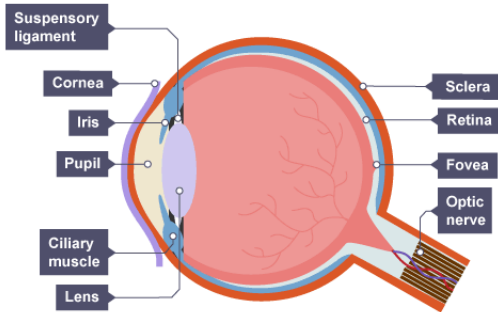
Example

Hot pan → pain receptors → **sensory neurone** → **relay neurone** → **motor neurone** → hand muscles → release pan

Year 10GS – B5

The eye

The eye is a sense organ containing **receptors** sensitive to light intensity and colour.



Structure	Function
Cornea	Refracts light - bends it as it enters the eye
Iris	Controls how much light enters the pupil
Lens	Further refracts light to focus it onto the retina
Retina	Contains the light receptors
Optic nerve	Carries impulses between the eye and the brain
Sclera	Tough white outer layer of the eye. It helps protect the eye from injury

To focus on a near object – the lens becomes thicker, this allows the light rays to refract (bend) more strongly.

To focus on a distant object – the lens is pulled thin, this allows the light rays to refract slightly.

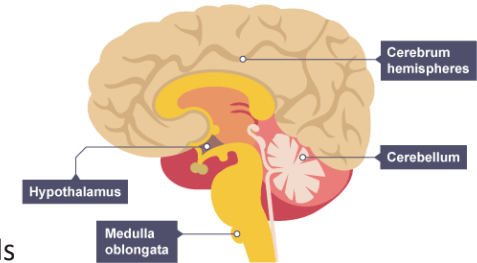
The amount of light entering the eye is controlled by a reflex action. The size of the pupil changes in response to bright or dim light. This is controlled by the muscles of the iris.

The brain

The brain controls complex behaviour. It is made of billions of interconnected neurones and has different regions that carry out different functions.

There are four main areas in the brain:

- The **cerebrum** (the outer layer is called the cerebral cortex). It controls thought and high-level functions, such as language and verbal memory.
- The **cerebellum**, which controls balance, co-ordination of movement and muscular activity.
- The **medulla**, which controls unconscious activities such as heart rate and breathing rate,
- The **hypothalamus**, which is the regulating centre for temperature and water balance within the body.



Neuroscientists have been able to map various regions of the brain to particular functions by studying patients with brain damage, electrically stimulating different parts of the brain and using **MRI**. They use strong magnetic fields and radio waves to show details of brain structure and function.

Scientists have stimulated different parts of the brain with a weak electrical current and asked patients to describe what they experienced. If the motor area is stimulated, the patient makes an involuntary movement.

Year 10GS – B5

Controlling body temperature

- Body temperature is monitored and controlled by the thermoregulatory centre of the brain.
- The thermoregulatory centre contains receptors sensitive to the temperature of the blood.
- Human body temperature is 37°C
- The skin also contains temperature receptors that feedback to the thermoregulatory centre in the brain.

Response when body temperature too high

Energy transfer from the skin to the surroundings is increased by:

- Vasodilation (the blood vessels dilate – get wider).
- Sweat is produced.

Response when body temperature too low

Energy transfer from the skin to the surroundings is reduced by:

- Vasoconstriction (the blood vessels constrict – get narrower).
- Sweat production stopped.
- Muscles contract (shiver), this requires the exothermic reaction respiration which increases the temperature of the muscles.

The human kidney

- The kidneys are important for excretion and homeostasis.
- The kidneys produce urine by filtering the blood. It then reabsorbs all of the glucose and any mineral ions and water needed by the body by selective reabsorption.
- **ADH**
- The water balance of the blood is controlled by the hormone ADH.
- ADH changes the amount of water reabsorbed by the kidney tubules.
- ADH is secreted by the pituitary gland in the brain.

Low water concentration in the blood	High water concentration in the blood
More ADH released	Less ADH released
More water reabsorbed	Less water reabsorbed
Small amount of concentrated urine produced	Large amount of diluted urine produced

Removing waste

- carbon dioxide produced during respiration can produce an acidic solution.
- carbon dioxide is removed via the lungs.
- Urea is produced during the breakdown of proteins.
- Proteins are broken down to amino acids which cannot be stored by the body.
- The liver removes the amino group from amino acids via a process called deamination to produce ammonia which is very toxic.
- Ammonia is converted to urea.

- If cells lose or gain too much water by osmosis, they do not function efficiently.

Uncontrolled loss of water and mineral ions

- Water loss via the lungs during exhalation.
- Water, mineral ion and urea loss through sweat in the skin.

Controlled loss of water and mineral ions

- Water, mineral ion and urea loss via the kidneys in the urine.

Treating kidney failure

Dialysis

- A dialysis machine carries out the function of the kidneys.
- The level of useful substances in the blood are maintained while urea and excess mineral ions pass from the blood into the dialysis fluid.

Disadvantages:

- A strict diet needs to be followed.
- You need to send regular long sessions connected to the dialysis machine.
- The blood levels are in balance for only a short time so you can feel tired and unwell between treatments.
- It can become harder to balance substance in the blood if you have dialysis for a long period of time.

Transplant

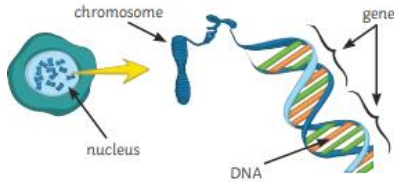
- A kidneys from a donor replaces the diseased or damaged kidney.
- To prevent reject the tissue types of the recipient and donor are matched closely.

Disadvantages:

- Immunosuppressant drugs need to be taken to reduce the chance of rejection.
- There is a shortage of donor kidneys.

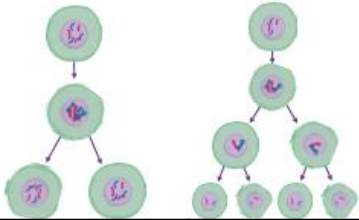
Year 10GS – B5

Cells and cell division



The chromosomes are in the nucleus of cells
Humans have 46 chromosomes.
Chromosomes contain genes, which code for proteins.
In body cells, chromosomes are in pairs – one from each parent.
In sex cells (gametes) they are not in pairs and there is half the number of chromosomes (e.g. 23 in humans)

Cell division – two types:



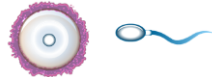
Mitosis (in all body cells)	Meiosis (in testes and ovaries)
2 daughter cells	4 daughter cells
Daughter cells = genetically identical	Daughter cells = not genetically identical
Cell divides once	Two divisions
Daughter cells have same number of chromosomes as original cell	Daughter cells have half the chromosomes as original cell
Used for growth and repair.	Produces gametes for sexual reproduction

Reproduction

Two types of reproduction – sexual and asexual.

	Sexual	Asexual
Number of parents	2	1
gametes used?	Yes	no
Variation in the offspring	lots	None (unless mutations occur) Offspring are clones

Sexual reproduction

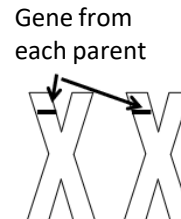


The sperm and egg have half of the genes for the offspring. (in humans 23 chromosomes)
At fertilisation, the sperm and egg nuclei join. (23 + 23 = 46 chromosomes)

There are two genes for any one characteristic – one on the chromosome from mum and one from Dad
Different forms of the same gene are called **alleles**
If the alleles are the same, the person is **homozygous**
If the alleles are different the person is **heterozygous**

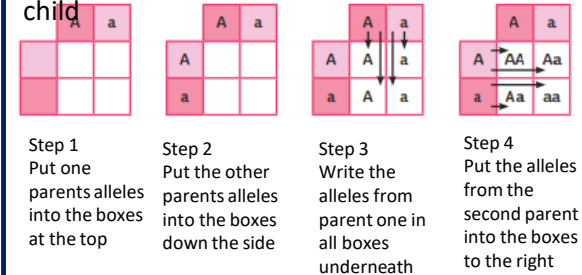
E.g.:
B = brown hair (dominant)
b = red hair

BB = homozygous, brown hair
Bb = heterozygous, brown hair
bb = homozygous, red hair



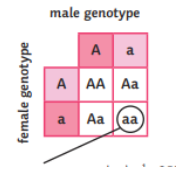
How to complete a punnet square

If A = blue eyes, a = green eyes
Calculate the probability of two heterozygous people having a green eyed child



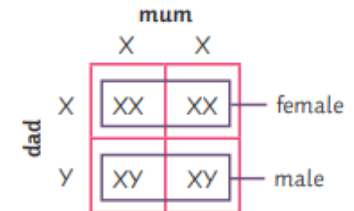
Probability

A green eyed child would have aa genotype.



One of these four has the type aa – that's 1/4, 25% or 0.25.

Sex Determination



Females carry two X chromosomes (XX)
Males carry one X and one Y chromosome (XY)
50% chance of male and female.

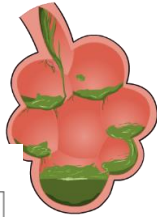
Year 10GS – B5

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



		♂ Father	
		C	c
♀ Mother	C	CC	Cc
	c	Cc	cc

Polydactyly

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



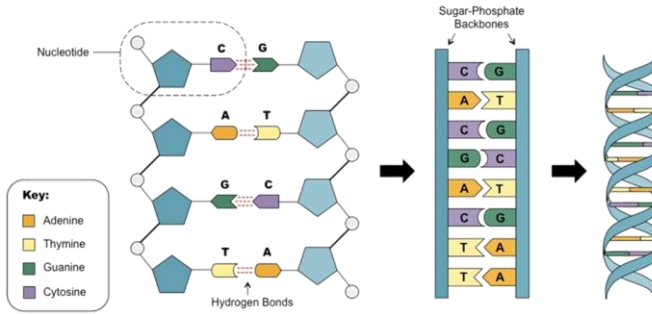
Embryo screening

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

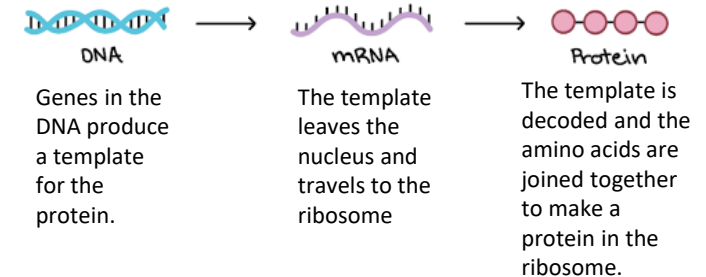
DNA Structure



A strand of DNA consists of alternating sugar and phosphate sections with a base pair attached to each sugar.
 There are four base pairs A, C, T & G
 A nucleotide consist of a sugar, phosphate and base pair.
 In a complimentary strand of DNA C is always linked with G and A is always linked with T.

Protein Synthesis

A sequence of three bases codes for an amino acid.
 The order of bases controls the order in which the amino acids are joined to produce a particular protein.
 Proteins are synthesised according to a template. Carrier molecules bring specific amino acids to add to the growing protein chain.



When the protein chain is complete it folds up to form a unique shape that enables the protein to carry out its function in the cell.

Gene expression

Not all parts of the DNA code for proteins. These non-coding parts switch genes on and off.
 Variations within these non-coding regions can affect how a gene is expressed in the organism.
 Variations in gene expression can affect the phenotype or biochemistry of an organism.

Mutation

Mutations are tiny changes in the sequence of bases in a strand of DNA.
 Mutations occur continuously. A change in the structure of DNA may result in a change in the protein that is synthesised.
 Most mutations do not alter the protein or they alter it in such a small way that the function of the protein is not affected.
 A few mutations code for an altered protein with a different shape. This affects its function.
 Mutations may cause an advantage, disadvantage or have no effect at all.

C5 – Energy Changes

Exothermic Reactions

- Energy transferred to the surroundings
- Temperature of the reaction mixture **increases**
- This energy is transferred **to** the surroundings

Examples include:

- Hand warmers
- Combustion reactions
- Respiration
- Neutralisation reactions
- Self-heating cans.



Exothermic

Endothermic Reactions

- Energy absorbed from the surroundings
- Temperature of reaction mixture often **decreases**
- Energy is transferred **from** the surroundings

Examples include:



- Ice packs (injuries)
- Reaction of citric acid and sodium hydrogen carbonate
- Thermal decomposition of calcium carbonate



Endothermic

Energy change of reactions (HT)

During a reaction:

- Energy is **absorbed** in order to **break** bonds in the reactants 
- Energy is **released** when bonds are **made** in the products. 

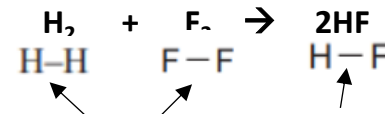
Bond energy = the amount of energy that is released when a bond is made or that is needed to break a bond

Calculating energy changes (HT)

Overall energy change = difference between energy needed to break bonds and the energy released when bonds formed.

To calculate energy change :

Energy change = bonds broken – bonds formed



bonds broken bonds formed

Bond	Bond Energy / kJ mol ⁻¹
F—F	158
H—H	436
H—F	568

Bonds broken = 436 + 158 593	Bonds formed 2 x 568 1136
------------------------------------	---------------------------------

**Overall energy change = 593 – 1136
= -543 kJ/mol Exothermic**

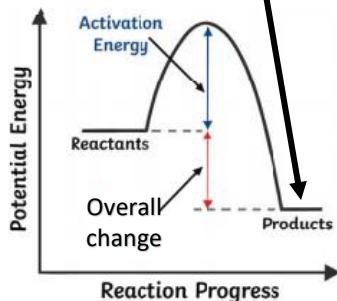
More energy is released in bond making than is required for bond breaking.

Reaction Profiles – Exothermic

- Energy level diagrams show **difference in energy** between reactants and products.
- Exothermic = Energy of products is **lower than** reactants (energy is released)

- **Activation Energy** = minimum amount of energy needed to start the reaction.

- **Energy change** = the difference in energy between reactants and products.



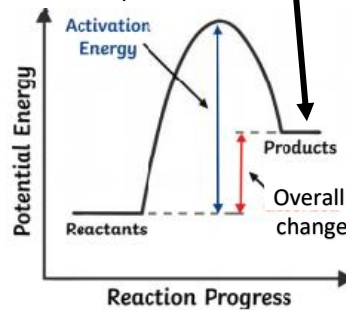
You may need to draw and label this in the exam!

Reaction Profiles – Endothermic

- Energy level diagrams show **difference in energy** between reactants and products.
- Endothermic = Energy of products is **higher than** reactants (energy is absorbed)

- **Activation Energy** = minimum amount of energy needed to start the reaction

- **Energy change** = the difference in energy between reactants and products.



You may need to draw and label this in the exam!

C5 – Energy Changes

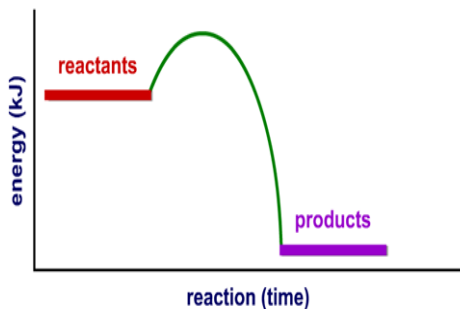
1. Which way is energy transferred in an exothermic reaction?
2. What happens to the temperature of the reaction mixture in an exothermic reaction?
3. State two examples of exothermic reactions.

1. Which way is energy transferred in an endothermic reaction?
2. What generally happens to the temperature of the reaction mixture of an endothermic reaction?
3. State two examples of endothermic reactions.

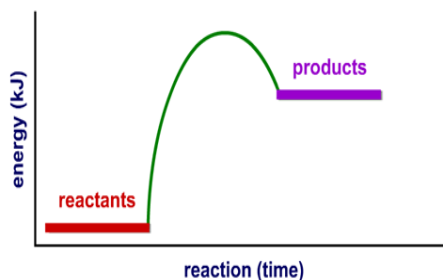
Higher Tier only

1. In terms of energy, what happens for bonds to be broken?
2. In terms of energy, what happens when bonds are formed?

1. Define activation energy.
2. On the graph below, draw and label the :
 - overall energy change
 - activation energy



1. What does an energy level diagram show?
2. On the graph below, draw and label the :
 - overall energy change
 - activation energy



Higher Tier only

1. Define overall energy change.
2. How do you calculate energy change?
3. Why, in terms of bond breaking and making, is a reaction exothermic?
4. Why, in terms of bond making and breaking, is a reaction endothermic?

C5 – Energy Changes – Required Practical – Temperature Changes

Hypothesis

The energy change in the reaction between acid and alkali depends on the volume of alkali added.

Equipment

- Polystyrene cup and lid
- Thermometer
- 250cm³ beaker
- Measuring cylinder
- Liquid reactants



Method (example for hydrochloric acid and sodium hydroxide)

1. Using measuring cylinder to measure 30cm³ hydrochloric acid and put in polystyrene cup
2. Stand cup inside beaker to make stable.
3. Use a thermometer to measure the temperature of acid and record.
4. Using measuring cylinder – 5cm³ sodium hydroxide → polystyrene cup
5. Fit the lid and gently stir with thermometer through hole.
6. When reading stops on thermometer, record temperature in table.
7. Repeat, each time adding 5cm³ more sodium hydroxide up to a maximum of 40cm³.
8. Calculate the temperature change on each attempt.
9. Repeat the experiment 3 times and calculate a mean temperature change for each volume of sodium hydroxide.

Variables

Independent – Volume of sodium hydroxide

Dependent – Temperature change

Control – Volume of hydrochloric acid, concentration of acid, concentration of sodium hydroxide

Common questions

Q1) Why do you use a polystyrene cup and lid?

A1) Because polystyrene cups are insulators, which reduces heat loss in the experiment, making the results more accurate.

Q2) Why should you calculate the temperature change, instead of just using the final temperature?

A2) Because the initial (starting) temperature of the acid may have been different.

Q3) Why is it important to stir the mixture?

A3) To make sure all of the reactants have reacted and to get a uniform temperature.

Q4) Why is the experiment conducted 3 times?

A4) So that anomalies can be seen and removed and a mean calculated

Energy changes could also be investigated using:

1. Changing the **mass of metal** added to acid and measuring the **temperature increase**
2. Changing the **type of metal** added to acid and measuring the **temperature increase**
3. Dissolving different **masses of potassium nitrate** into water and observing the **temperature decrease**.

C5 – Energy Changes

Required Practical – Temperature Changes

1. Write a method to investigate how the volume of sodium hydroxide affects the change in temperature when reacting with hydrochloric acid (6 marks)

2. For the investigation above, name the :
Independent variable :
Dependent variable :
2 control variables :

3. Why do you use a polystyrene cup and lid instead of a beaker?

4. Why should you calculate the temperature change, instead of just using the final temperature?

5. Why is it important to stir the mixture?

6. Why do we do repeat readings?

C5 – Energy Changes (chemistry only)

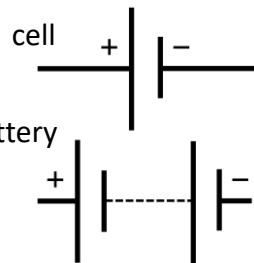
Cells and batteries

Cells contain chemicals which react to produce electricity.

The voltage produced by a cell is dependent upon a number of factors including the type of electrode and electrolyte.

A simple cell can be made by connecting two different metals in contact with an electrolyte.

Batteries consist of two or more cells connected together in series to provide a greater voltage.



Non-rechargeable cells and batteries

The chemical reactions stop when one of the reactants has been used up. Alkaline batteries are non-rechargeable.

Rechargeable cells and batteries

Rechargeable cells and batteries can be recharged because the chemical reactions are reversed when an external electrical current is supplied.

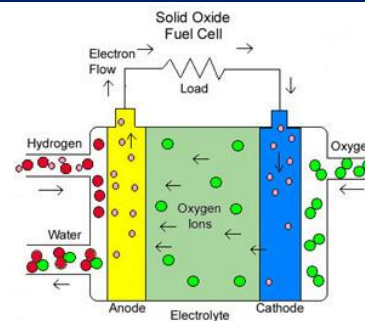
Fuel cells

Fuel cells are supplied by an external source of fuel (eg hydrogen) and oxygen or air.

The fuel is oxidised electrochemically within the fuel cell to produce a potential difference.

The overall reaction in a hydrogen fuel cell involves the oxidation of hydrogen to produce water.

Hydrogen fuel cells offer a potential alternative to rechargeable cells and batteries.



Half equation for electrode reactions in hydrogen fuel cells

At the negative electrode: $2\text{H}_2 + 4\text{OH}^- \rightarrow 4\text{H}_2\text{O} + 4\text{e}^-$

At the positive electrode: $\text{O}_2 + 2\text{H}_2\text{O} + 4\text{e}^- \rightarrow 4\text{OH}^-$

When you add these two half equations together, you get the following overall equation:

$2\text{H}_2 + 4\text{OH}^- + \text{O}_2 + 2\text{H}_2\text{O} + 4\text{e}^- \rightarrow 4\text{H}_2\text{O} + 4\text{e}^- + 4\text{OH}^-$

The hydroxide ions, electrons and two H_2O molecules will now cancel because they are on both sides, leaving the overall equation:

$2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$

Fuel cells vs rechargeable cells and batteries

Fuel cells can provide electrical energy for a much longer duration, whereas rechargeable batteries can only provide energy in an intermittent schedule. ... Fuel cells are able to generate a large amount of electrical energy, much greater than that produced by rechargeable batteries

C5 – Energy Changes**Chemistry only**

1. What is the difference between a cell and a battery?

2. What is a cell?

3. What is a non-rechargeable battery?

4. Why are rechargeable batteries rechargeable?

4. What is a fuel cell?

5. How does a fuel cells compare to rechargeable cells and batteries?

6. What is the half equation for electrode reactions in hydrogen fuel cells?

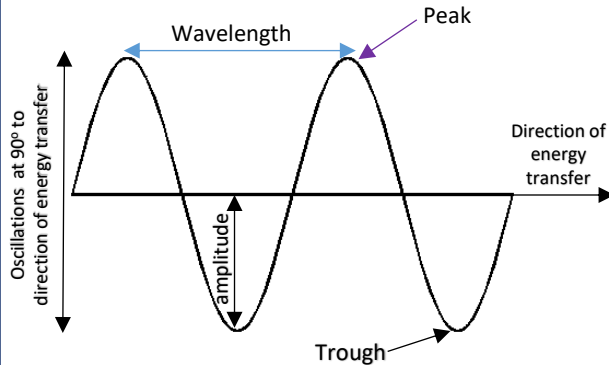
Year 11 Term 1 Science/Physics P6 Waves

Transverse Waves

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

Examples:

- Electromagnetic waves
- Ripples on water.

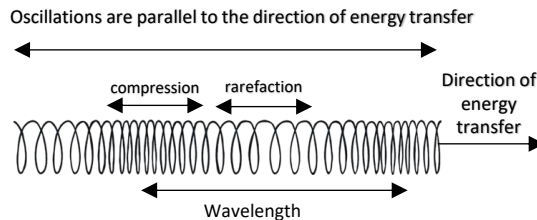


Longitudinal Waves

- 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)

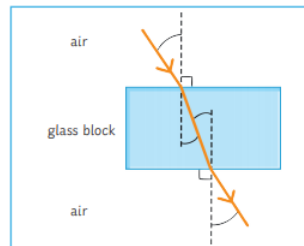
↘

wavelength
(m)

Refraction

Refraction occurs at the boundary between two mediums because the speed and 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.

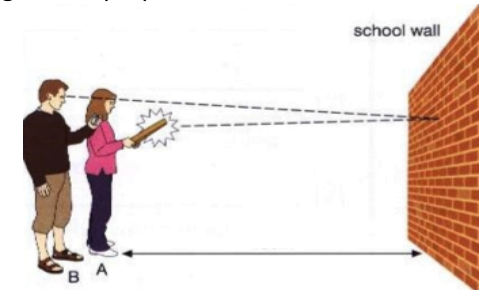


Measuring speed of sound waves in air

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

$$\text{Speed} = \text{distance} \times \text{time}$$

- 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.

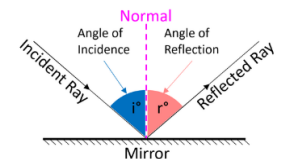


Reflection

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

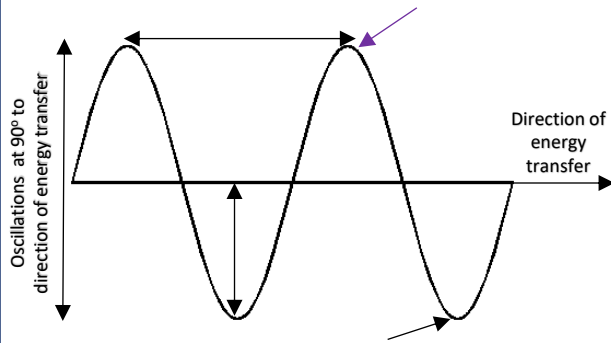
Law of reflection

The angle of incidence = angle of reflection



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?

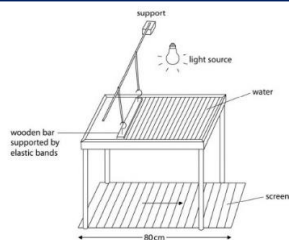
1. What is the law of reflection?

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

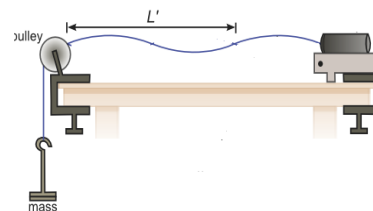
1. Set up the equipment as shown and turn on the motor to produce low frequency waves so that they are able to be counted.
2. Adjust the lamp until pattern is seen clearly on white screen underneath
3. Use a ruler to measure the length of a number of waves (e.g 10) and divide the length by the number 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

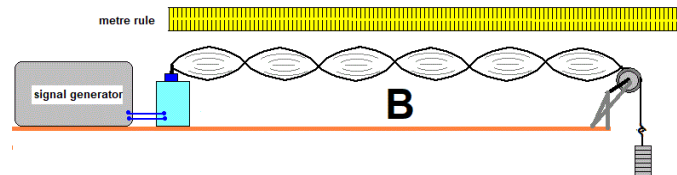
P6 Waves – Required Practical – Ripple Tank

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?

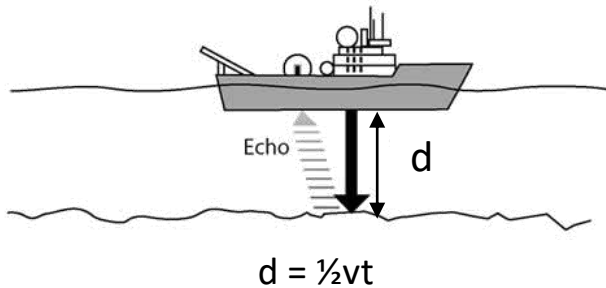
P6 Waves

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 range, 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.

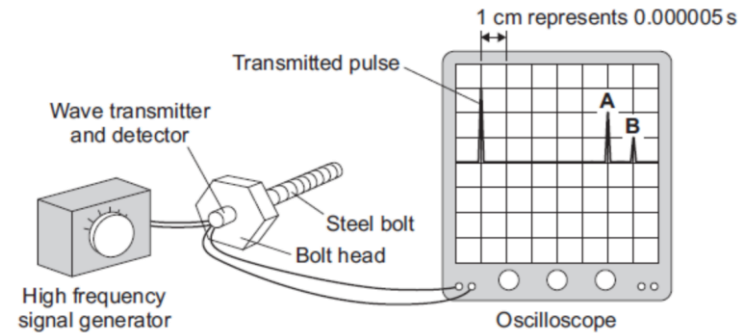


- v = speed of the sound wave
- t = time between transmitting the signal and receiving the echo.
- d = distance to the object

Ultrasound

- Ultrasound waves are sound waves with a frequency above 20 000 Hz.
- Ultrasound waves are partly reflected at a boundary between two different types of 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.

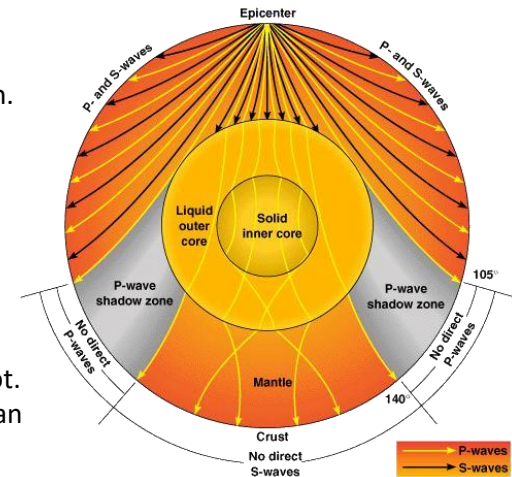
The diagram shows how a very high frequency sound wave can be used to check for internal cracks in a large steel bolt. The oscilloscope trace shows that the bolt does have an internal crack.



- 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 move 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.



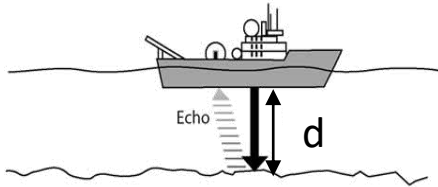
P6 Waves

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?



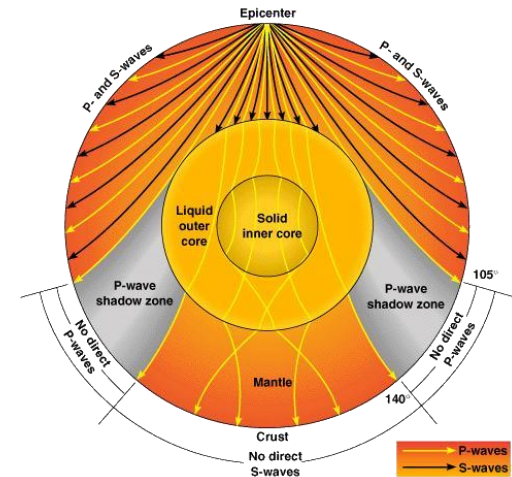
2. What is the equation used to find the depth of the ocean floor (d) under the boat?

Ultrasound

1. What frequency are ultrasound waves? Ultrasound waves are sound waves with a frequency above 20 000 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

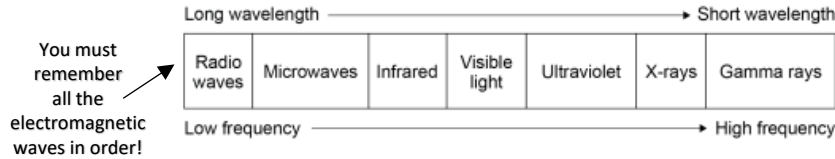
1. What are seismic waves?
2. What is the difference between a P-wave and an S-wave?
3. What do seismic waves tell us about the structure of the Earth.



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

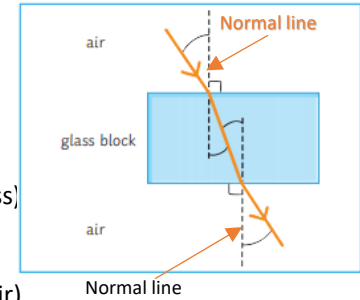


Wave	Use	Other information
Radio waves	Television and radio	Easily transmitted through the air. Harmless if absorbed by the body.
Microwaves	Satellite communications and cooking food	Can be harmful when internal body cells become heated by over exposure.
Infrared	Electrical heaters, cooking food and 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.
Gamma rays	Sterilising medical equipment or food and treatment for some cancers.	They can lead to gene mutation and cancer.

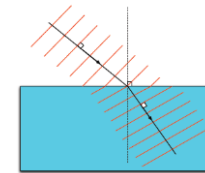
Ray diagrams

- 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**.



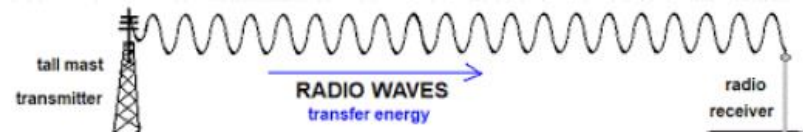
The ray bends because different parts of the wavefront cross the boundary at slightly different times –



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.



P6 Waves

- | | |
|---|--|
| <ol style="list-style-type: none">1. State two properties of electromagnetic waves.2. Write the EM spectrum in order of increasing wavelength3. Write the EM spectrum in order of increasing frequency4. How fast do electromagnetic waves travel?5. State the uses of:<ol style="list-style-type: none">a) radio wavesb) microwavesc) infraredd) visible lighte) ultravioletf) x-raysg) gamma rays | <ol style="list-style-type: none">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° to a surface called?4. 4. What happens if a ray hits a medium at 90°? |
| | <ol style="list-style-type: none">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? |

P6 Waves – Required Practical – Infrared radiation

Aim

Investigate how the amount of infrared radiation **emitted** (given out) by a surface depends on the nature of that surface.

In this investigation you are finding out which type of surface emits the most infrared radiation:

- **Dark and matt**
- **Dark and shiny**
- **Light and matt**
- **Light and shiny**

Method

1. Place **Leslie cube** on a heat proof mat.
2. Once the kettle has boiled, fill the Leslie cube with water.
3. Hold the infrared thermometer 5cm from the first surface
4. Record the temperature
5. Repeat the experiment three times on each surface and calculate mean for each surface.

Independent variable: surface

Dependent variable: temperature of the air (infrared radiation emitted)

Control variables: Temperature of the water inside, the distance between the cube surface and the infrared thermometer



In this investigation you are finding out which type of surface absorbs the most infrared radiation:



Method

1. Fill a black and a silver can with water from the tap.
2. Take the temperature of the water in each can
3. Place the infrared thermometer 5cm from the cans
4. Leave for at least 10 minutes
5. Record the temperature of the water in each can and calculate the rise in temperature

Independent variable: surface of the can

Dependent variable: Temperature increase of the water (infrared radiation absorbed)

Control variables: Temperature of the water inside, the distance between the cube surface and the infrared thermometer

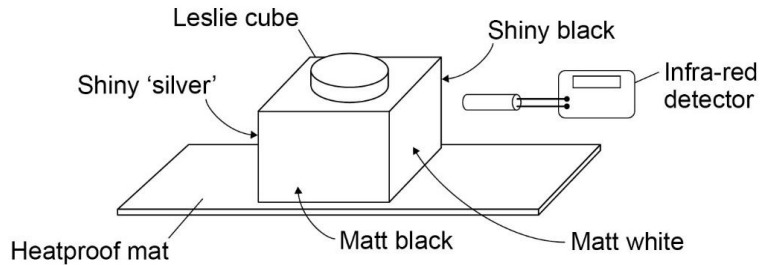
Conclusion

Black matt surfaces absorb and emit the most infrared radiation.

White/silver and shiny surfaces are poor emitters and poor absorbers of infrared radiation

P6 Waves – Required Practical – Infrared radiation

1. Describe how you could use the equipment below to investigate the emission of infrared by different surfaces.



1. A student was investigating the amount of infrared radiation absorbed by water in cans with different surfaces.



Name the...

Independent variable:

Dependent variable :

Control variables :

2. What kind of surfaces are the best emitters of infrared radiation?
3. Why does the water in the silver can heat up less than the black can?

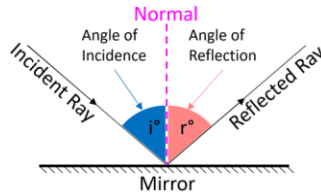
P6 Waves

Reflection

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

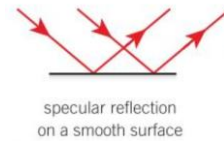
Law of reflection

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

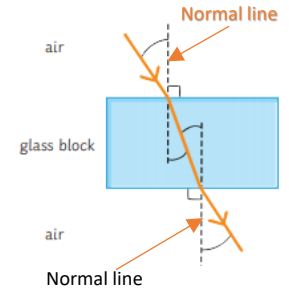
- You need to construct **ray diagrams** to show how a wave is **refracted** at the boundary of a different medium.

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

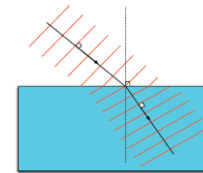
- Ray **slows down** and bends **towards the normal line**.

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

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



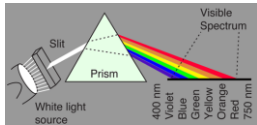
The ray bends because different parts of the wavefront cross the boundary at slightly different times –



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



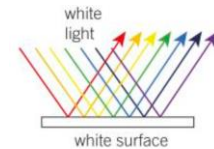
Primary and secondary colours

Red + yellow = green

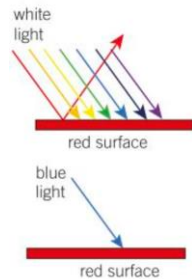
Green + blue = cyan

Blue + red = magenta

Green + blue + red = white



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

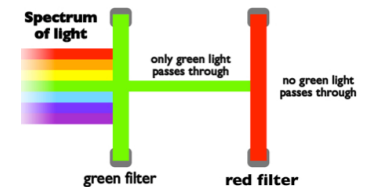


A red object looks red because it **absorbs** all the wavelengths of light except red. Only red light is **reflected**.

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

Filters

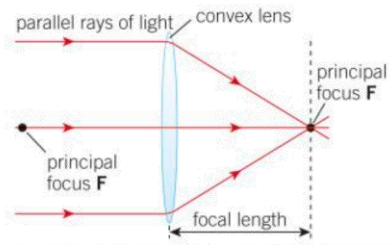
Filters change the colour objects appear as the only let certain wavelengths of light through. A green filter absorbs all colours except green, and **transmits** only green light



P6 Waves

- | | |
|--|--|
| <ol style="list-style-type: none">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? | <ol style="list-style-type: none">1. What happens when a ray goes from a less dense \rightarrow more dense medium?2. What happens when a ray moves from a more dense \rightarrow less dense medium?3. What is the line at 90° to a surface called?4. 4. What happens if a ray hits a medium at 90°? |
| <ol style="list-style-type: none">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? | |

P6 Waves

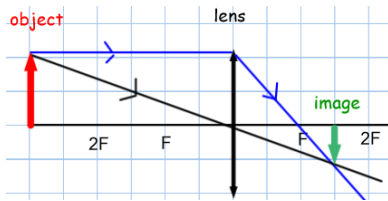


Convex (Converging) Lenses make parallel rays of light converge to meet at the principal focus. Focal length = distance from centre of lens to principal focus

To draw a ray diagram:

Draw two rays from the top of the object

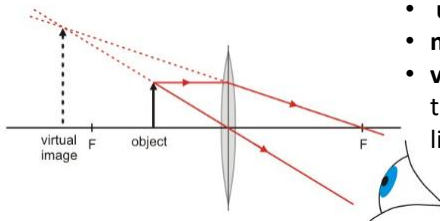
1. A ray parallel to the principal axis, which is refracted through the principal focus.
2. A ray through the centre of the lens, which does not change direction.
3. To create the image, draw an arrow from the principal axis to the point where the rays meet.



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

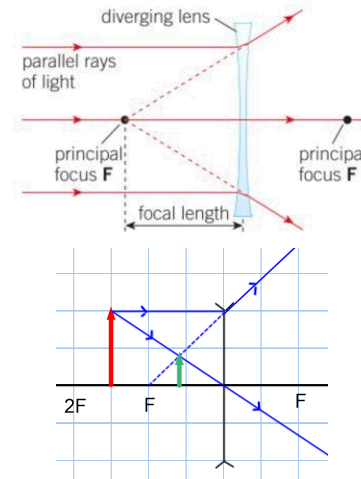
This image is

- **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.

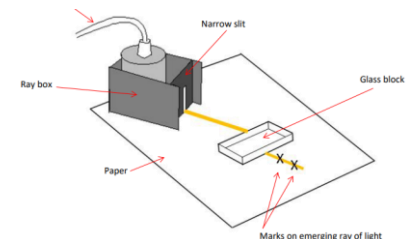
Concave lenses always produce **virtual** images.

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



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.



A. Classification of ecosystem (4)	
Ecosystem	A community of things linked together in an environment.
Biome	An ecosystem on a large scale that covers parts of continents and whole countries.
Habitat	A place where plants and animals live. Example: a pond, or hedgerow.
Biodiversity	The amount of variety of life there is in a place.

B. Features of an ecosystem (3)	
Biotic	The living parts of an ecosystem. Examples: plants, animals, humans.
Abiotic	The non-living parts of an ecosystem. Examples: soil, climate, river.
Food chain	A diagram that shows what is eating what in an ecosystem.

C.	Major global biomes (5)
Tundra (2)	<ol style="list-style-type: none"> 1. Found between 60- and 70-degrees N and S of the equator 2. A cold ecosystem, little rainfall.
Hot desert (2)	<ol style="list-style-type: none"> 1. Found along the Tropic of Cancer and the Tropic of Capricorn. 2. Hot environments with little rain.
Tropical rainforest (2)	<ol style="list-style-type: none"> 1. Found in places along the Equator. 2. Hot and humid environments with huge amounts of rainfall.
Temperate forest (2)	<ol style="list-style-type: none"> 1. The main biome of the UK and other places along the same lines of latitude. 2. Warm summers, mild winters. No extremes of temperature, rainfall.
Coral Reefs (2)	<ol style="list-style-type: none"> 1. Located in the tropics between 30 degrees north and 30 degrees south. 2. Ocean temperature must be over 20 degrees.

D. The balance between components in an ecosystems (7)	
Nutrient Cycle	The cycling of nutrients throughout a system to keep everything alive.
Water Cycle	The cycling of water throughout a system to keep everything alive.
Interdependence	When different parts of an ecosystem rely on each other to maintain balance
Producers	Organisms that use sunlight to produce their own nutrients. Often green plants. They provide food for consumers.
Consumers	They cannot make their own energy, and instead rely producers for energy.
Decomposers	Organisms that are responsible for breaking down dead matter. They return nutrients to the soil. Eg. Funghi, Worms
Biomass	Living material within an ecosystem. E.g. Plants and animals.

E.	Rainforest features (4)
Rainforest layers	Forest floor, understory, canopy, emergent layer.
Nutrient cycle	Nutrients move from living things to litter and the soil in a continuous cycle, keeping both plants and soil healthy.
Drip tip leaves	A plant adaptation that lets excess water drip off leaves quickly.
Nutrient Cycle / Water Cycle	

F.	Hot Desert characteristics (6)
Diurnal range	Differences between the highest day and lowest night time temperature.
Nocturnal	Animals only come out at night.
Cactus	Long root systems to get as much water as possible from dry ground.
Camel	Webbed feet to help walk in sand.
Soil erosion	Lack of vegetation leads to less decomposition. Soil is loosely packed and eroded easily by wind.
Salination	Hot temperatures draw water to the surface. It evaporates and leaves salt deposits on the soil.



A. Classification of ecosystem (4)	
Ecosystem	
Biome	
Habitat	
Biodiversity	

B. Features of an ecosystem (3)	
Biotic	
Abiotic	
Food chain	

C. Major global biomes (5)	
Tundra (2)	
Hot desert (2)	
Tropical rainforest (2)	
Temperate forest (2)	
Coral Reefs (2)	

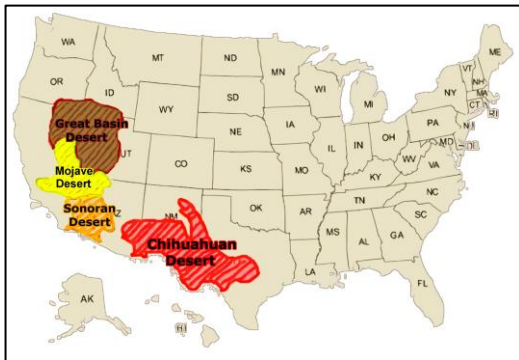
D. The balance between components in an ecosystems (7)	
Nutrient Cycle	
Water Cycle	
Interdependence	
Producers	
Consumers	
Decomposers	
Biomass	

E. Rainforest features (4)	
Rainforest layers	
Nutrient cycle	
Drip tip leaves	
Nutrient Cycle / Water Cycle	

F. Hot Desert characteristics (6)	
Diurnal range	
Nocturnal	
Cactus	
Camel	
Soil erosion	
Salination	



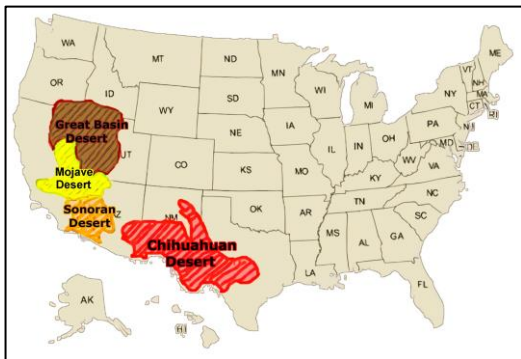
G. CASE STUDY: One tropical rainforest- Malaysia	
Background	60% of Malaysia is covered by rainforest. It is an Newly Emerging Economy
Causes of deforestation/ Opportunities in the rainforest	Sustainable management
<ol style="list-style-type: none"> 1. Subsistence farming: Farming on a small scale. Uses slash and burn practices which can get out of control. 2. Commercial Farming: Large areas of land cleared for rearing cattle or food production. 3. Road building: Forest cleared to make way for industrial vehicles. Breaks up migration patterns and reduces biodiversity. 4. Mineral Extraction: Mainly tin mining. Pollutes water sources. Roads needed for vehicles. 5. Palm oil: Malaysia is world's largest producer. Is a monoculture so less biodiversity 6. Energy Development: Bakum dam – built in 2011. Powers factories in Malaysia. 700km of forest destroyed. 7. Logging: in 1980s Malaysia were the largest exporter of tropical wood. Clear felling used to clear entire areas of forest. 	<ol style="list-style-type: none"> 1. Selective management system. Does not clear large areas of forest. Gives small trees room to grow. BUT 30% of trees are still removed and it is not well monitored. 2. Ecotourism. Provides a source of income for locals BUT hotels and transport can cause damage. 3. Forest Stewardship Council. Reduces deforestation BUT membership can be bought. 4. International agreements: COP26 agreed to stop deforestation by 2030. 5. Debt relief: LIC countries have their debts removed if they reduce damage to the rainforest.



H. CASE STUDY: One hot desert – The Western Desert, USA	
Opportunities	Valuable minerals (Copper and Uranium), Hydroelectric power from the Hoover Dam/ Sonoran Solar Project (energy for 100,000 homes), tourists visit the grand canyon and Vegas.
Challenges	Population is very spread out (sharing resources is difficult)/ High evaporation causes difficulties for agriculture/ water supplies are limited/ heat exhaustion for works/ Access through the desert is difficult (hot roads melt)
Causes of desertification	Sustainable management
<ol style="list-style-type: none"> 1. Climate change: Reduced rainfall and rising temperatures have meant less water for plants. 2. Fuel Wood: People rely on wood for fuel. This removal of trees causes the soil to be exposed to erosion. 3. Over cultivation: If crops are grown in the same areas too often, nutrients in the soil will be used up causing soil erosion. 4. Overgrazing: Too many animals mean plants are eaten faster than they can grow back causing soil erosion. 5. Population growth: A growing population puts pressure on the land leading to more deforestation, overgrazing and over-cultivation. 	<ol style="list-style-type: none"> 1. Water management - growing crops that don't need much water. 2. Tree Planting - trees can act as windbreakers to protect the soil from wind and soil erosion. 3. Soil Management - leaving areas of land to rest and recover lost nutrients. 4. Technology – using less expensive, sustainable materials for people to maintain. i.e. sand fences, terraces to stabilise soil and solar cookers to reduce deforestation.



H.	CASE STUDY: One tropical rainforest- Malaysia	
Background		
	Causes of deforestation/ Opportunities in the rainforest	Sustainable management (3)



H.	CASE STUDY: One hot desert – The Western Desert, USA	
Opportunities		
Challenges		
	Causes of desertification	Sustainable management (3)



Year 10 History : 1. Spain reaches the New World, c1490-1512

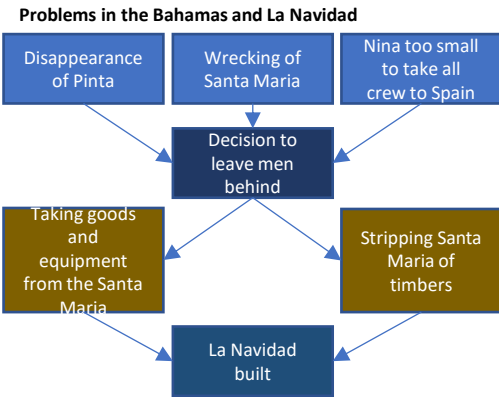


Spain c1490: exploration, religion and ambition
<ul style="list-style-type: none"> Most people knew the world was round Most of Europe was mapped The Spice Trade with the East Indies was well established Portugal and Spain were rivals – both wanted to find a sea route to the East Indies The Catholic Church had 2 concerns in the 2nd half of the 15th Century: <ul style="list-style-type: none"> Defend Christendom Spread Christianity to new lands



Why did Spain agree to sponsor Columbus?	
Christianity	Isabella was keen to continue spreading Christianity to the East Indies.
Priest	Juan Perez, a priest and friend to Isabella, helped Columbus while he made his case.
Status	Finding the sea route to the East Indies before Portugal would give Spain international status.
Wealth	A successful voyage would bring riches to the Spanish treasure and wealth to Spanish merchants.

Columbus' First Voyage 1492	
Finding ships and crew	Martin and Vicente Pinzon helped Columbus get ships and crew. 2 caravels – the Nina and the Pinta 1 carrack – the Santa Maria (flagship)
Rivalry at sea	Columbus had to change routes to avoid Portuguese caravels.
Sailors' fears	Columbus kept 2 different logs to stop sailors getting worried: -1 was accurate and he kept secret -The other log recorded shorter distances
Possible Mutiny	As the sailors had not spotted land for so long, they came close to mutiny. They allowed Columbus 2 more weeks.
Quarrels	Columbus and Martin Pinzon disagreed on the route.
Land	On the 10 th October, after 6 weeks at sea, the crew spotted land.



Columbus' return to Spain 1493	
4 th March 1493 Columbus lands in Portugal and meets King John. Columbus is sent congratulatory letters and is cheered by crowds in his way to Barcelona.	The role of the pope The Pope gives Isabella and Ferdinand his support for the new 'Spanish Indies'. He is excited by Columbus' discoveries and wanted Christianity to spread to these lands.
Rivalry with Portugal King John believed he had claim to the lands Columbus had discovered. This led to talks with Spain to determine who had rights over what lands as Spain were getting ready to send Columbus back to govern.	Columbus' Rewards Isabella and Ferdinand encouraged Columbus to carry out another voyage. Columbus was given new titles, a new coat of arms and issued a pension for life. He was also given powers to govern lands in the New World.

Effects of Spanish Settlements	
1	Gold mines set up in Haiti – most of the work done by natives.
2	Tainos and Carib societies destroyed in order to provide work for the Spanish.
3	Columbus had captured natives to sell as slaves – Isabella not pleased and sent slaves back to Haiti.
4	Encomienda system set up. Nicolas de Ovando set this up in 1502.
5	Diseases like smallpox killed many natives. 1492 around 500,000 natives. By 1507 only 60,000.

Impact of contact with the Natives		
Gold, cotton and tobacco	Tainos and Caribs	Incident at Samana
Natives wore gold but would not tell the Spaniards where it came from. Kapock was used by the natives – it could be spin into thread and woven into cloth. Spaniards sailing with Columbus quickly picked up the habit of smoking tobacco.	Tainos – considered friendly and peaceful, allowed Columbus to build La Navidad, found at San Salvador. Caribs – mainly found east of the Bahamas, raided the Tainos taking women, rumours that they were cannibals.	On way back to Spain – Samana, Haiti. Men went ashore and found dried human heads and large canoes. An exchange went wrong and erupted in violence. They learnt that the natives could be hostile.

The Treaty of Tordesillas 1494
On 7 th June an agreement was reached between Spain and Portugal. An imaginary line was drawn from the North to the South pole. All lands to the west were for Spain. Lands to the east were for Portugal.

Columbus as governor	
La Navidad and Isabela	Santo Domingo
La Navidad found burned to the ground on 28 th Nov 1493. A new settlement was named Isabela. It failed as Spaniards wanted adventure and gold. Columbus went exploring and found Jamaica. He returned to Haiti in September 1494.	Bartholomew left in charge when Columbus returned to Spain. He built Santo Domingo. Columbus returned in 1498 to problems – Tainos and Spaniards not cooperating. Order restored by giving Spanish rebels land and providing native labourers to work the land. Rebellions kept breaking out so Columbus carried out executions on both natives and Spaniards. September 1500 – Bobadilla sent to take over from Columbus, Columbus arrested and sent back to Spain in chains.

Imperial Policy towards the Caribbean	
Importance of Santo Domingo It became the centre of Spanish administration in the Caribbean. -Wide roads and squares surrounded impressive stone buildings -The building housed administration offices were rules were issued and taxes collected. -Courts were established to control the laws	Establishment of a monopoly In 1503, the Casa de Contractacion (House of Trade) was established in Seville, Spain. The aim was to control all trade from the Caribbean. Powers included: -Approve all voyages to the Caribbean. -Collect up to date trade routes. -Collect taxes. -Control who travels to the Indies. However, there was smuggling and people worked out ways to avoid paying the taxes.
Catholic Missionaries In 1503, Ferdinand and Isabella issued a series of rules about educating the Indians: -Indians were to live in towns and pay taxes. -Taught about Christianity and expected to live as Christians. -Taught how to read, write and dress. Reports reached Spain about the abuses of Indians. Dominicans were sent to stop the mistreatment. Spaniards shocked at the mistreatment of natives.	Regulation of Exploration Ferdinand and Isabella needed to establish Spanish control over exploration and discovery in the New World. -Every ship sailing to the Caribbean had to leave from Cadiz, Spain and had to register with the Spanish. -Anyone could live in the Indies freely. If the discovered gold, 2/3 had to go to the Spanish government, 1/3 could be kept by the discoverer. 1/10 of all other products had to be sent to Spain. -1/10 if all cargo carried by ship sailing to the New World had to be Spanish.



Year 10 History : 1. Spain reaches the New World, c1490-1512



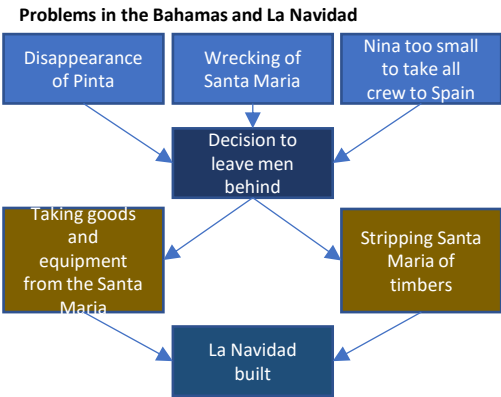
Spain c1490: exploration, religion and ambition

- Most people knew the world was round
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- Portugal and Spain were rivals – both wanted to find a sea route to the East Indies
- The Catholic Church had 2 concerns in the 2nd half of the 15th Century:
 - Defend Christendom
 - Spread Christianity to new lands



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Priest	
Status	
Wealth	

Columbus' First Voyage 1492	
Finding ships and crew	
Rivalry at sea	
Sailors' fears	
Possible Mutiny	
Quarrels	
Land	



Columbus' return to Spain 1493	
4 th March 1493 Columbus lands in Portugal and meets King John. Columbus is sent _____.	The role of the pope The Pope gives Isabella and Ferdinand his support for _____.
Rivalry with Portugal King John believed he had _____ This led to _____.	Columbus' Rewards Isabella and Ferdinand encouraged _____ Columbus was given _____.

Effects of Spanish Settlements	
1	
2	
3	
4	
5	

Impact of contact with the Natives		
Gold, cotton and tobacco	Tainos and Caribs	Incident at Samana
Natives wore _____ but would not tell the _____ where it _____ was used by the natives – it could be spun into _____ Spaniards sailing with Columbus quickly picked up the habit of _____	Tainos – considered _____, allowed Columbus to build La Navidad, found at San Salvador. Caribs – mainly found east of the Bahamas, _____ the Tainos _____	On way back to Spain – Samana, Haiti. Men went ashore and found _____ heads and _____. An exchange went wrong and _____. They learnt that the natives _____.

The Treaty of Tordesillas 1494
On 7th June an agreement was reached between _____ to the _____ to the _____. All lands to the west were for Spain. Lands to the east were for Portugal.

Columbus as governor	
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Imperial Policy towards the Caribbean	
Importance of Santo Domingo It became _____ of Spanish administration in the C_____. -Wide roads and squares surrounded impressive stone buildings -The building housed _____ where rules were issued and taxes collected. -Courts were established to _____	Establishment of a monopoly In 1503, the Casa de Contractacion (House of Trade) was established in Seville, Spain. The aim was to control all trade from the Caribbean. Powers included: -Approve all voyages to the Caribbean. -Collect up to date trade routes. -Collect taxes. -Control who travels to the Indies. However, there was smuggling and people worked out ways to avoid paying the taxes.

Catholic Missionaries In 1503, F_____ and I_____ a issued a series of _____: -Indians were to _____ to live as Christians. -Taught how to _____ Reports reached Spain about the a_____. Dominicans were sent to stop the _____. Spaniards shocked at the mistreatment of natives.	Regulation of Exploration Ferdinand and Isabella needed to _____. -Every ship sailing to the Caribbean had to leave from Cadiz, Spain and had to register with the Spanish. -Anyone could live in the _____. If the discovered gold, 2/3 had to go to the Spanish government, 1/3 could be kept by the discoverer. 1/10 of all other products had to be sent to Spain. -1/10 if all cargo carried by ship sailing to the New World had to be Spanish.
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Year 10 GCSE Religious Education KO - Christianity Practices

Keywords	
Worship	Act of religious honour or devotion
Liturgical worship	Service which follows a set pattern
Non-liturgical worship	Service which does not follow a fixed or set pattern
Sacrament	Rites and rituals through which the believer receives a special gift of grace
Holy communion	A service of thanks giving where bread and wine are consumed to remember Jesus' death and resurrection
Festival	Celebration of Jesus' death and resurrection
Christmas	Celebration of Jesus' birth
Church	The holy people of God, the body of Christ or a building where Christians worship
Agape	Unconditional, unselfish love
Mission	A calling where an individual or group go out and spread the word of God
Missionary	A person sent on a religious mission to promote Christianity in a different country through preaching or charity work
Alpha course	An example of evangelism – trying to tell others about Christianity
Persecution	Hostility or ill-treatment, because of race or religious or political beliefs
Poverty	Restoring of harmony after relationships have broken down

What we are learning in this unit	
A. Worship	G. Christmas
B. Prayer	H. Easter
C. The Sacraments	I Role of the church
D. Eucharist	J. Mission and evangelism
E. Baptism	K. Persecution
F. Pilgrimage	L. Reconciliation

C.	Sacraments
What is it	<ul style="list-style-type: none"> A specific rite or practice which is given to Christians as a symbol of God's grace The Catholic Church recognises 7 sacraments: baptism, confession, the Eucharist, confirmation, marriage, holy orders, anointing of the sick More on baptism and eucharist in box D and E

A.	Worship
What is it	<ul style="list-style-type: none"> A way for Christians to show love and respect for God It shows Christians how important God is to them They worship in different ways
Liturgical worship	<ul style="list-style-type: none"> Worship with a set order or pattern E.g. Roman Catholic Mass Often takes place in a Church but can be elsewhere
Non-liturgical worship	<ul style="list-style-type: none"> Tends to be Bible-based Often follows a structure but there is free choice in the structure May choose a relevant theme for the community Prayer is often in a personal style
Informal worship	<p><i>Charismatic worship</i></p> <ul style="list-style-type: none"> Service has characteristics such as hymns, sermon and prayer but is free-flowing Can be anywhere, not just the Church Resembles worship practiced by early Christians Focus on the Holy Spirit
Private worship	<ul style="list-style-type: none"> Takes place individually Forms a personal relationship with God

B.	Prayer
What is it / Significance of prayer	<ul style="list-style-type: none"> A means of communicating with God Purpose is to praise God, confess sins, give thanks to God
The Lord's Prayer	<ul style="list-style-type: none"> "Our Father, who art in Heaven" Gives a model for how to pray Involves adoration of God, confession of sins, and petition (asking God for something) Asking God for food "give us this day our daily bread" Asking for forgiveness "forgive us our trespasses as we forgive those who trespass against us"
Set prayers	<ul style="list-style-type: none"> Written down and said more than once/regularly Allows collective nature e.g. Lord's Prayer
Informal prayer	<ul style="list-style-type: none"> Use day-to-day language Often private and focus on reflection Pentecostal Church are moved by the Holy Spirit so speak in tongues

Year 10 GCSE Religious Education KO - Christianity Practices

Keywords	
Worship	
Liturgical worship	
Non-liturgical worship	
Sacrament	
Holy communion	
Festival	
Christmas	
Church	
Agape	
Mission	
Missionary	
Alpha course	
Persecution	
Poverty	

What we are learning in this unit	
A. Worship	G. Christmas
B. Prayer	H. Easter
C. The Sacraments	I Role of the church
D. Eucharist	J. Mission and evangelism
E. Baptism	K. Persecution
F. Pilgrimage	L. Reconciliation

C.	Sacraments
What is it	

A.	Worship
What is it	
Liturgical worship	
Non-liturgical worship	
Informal worship	
Private worship	

B.	Prayer
What is it / Significance of prayer	
The Lord's Prayer	
Set prayers	
Informal prayer	

Year 10 GCSE Religious Education KO - Christianity Practices

D.	<i>Eucharist/Holy Communion</i>
What is it	<ul style="list-style-type: none"> Based on the words and actions of Jesus at the Last Supper "Jesus took bread, and when he had given thanks, he broke it and gave it to his disciples, saying, "Take and eat; this is my body". Commemoration of the sacrifice Jesus made on the cross Deepens faith in Jesus Christians share bread and wine in Church which represents the body and blood of Christ
Significance	<ul style="list-style-type: none"> Some celebrate it weekly Gives them strength to live every day to God's glory
How is it celebrated	<ul style="list-style-type: none"> Sharing bread and wine during a service at the church Some use grape juice instead of wine
Different interpretations	<ul style="list-style-type: none"> Roman Catholics believe in transubstantiation – the bread and wine is actually the body and blood of Christ transformed Protestants – expression of faith and obedience Catholic, Orthodox, Anglican – a way to receive God's grace

E.	<i>Baptism</i>
What is it	<ul style="list-style-type: none"> Involves the candidate being immersed in water or having water poured on them Symbolises cleansing of sin and initiation into the Church Lots regard it as necessary to being saved Jesus told his disciples to "go and make disciples of all nations, baptising them in the name of the Father, the Son and The Holy Spirit"
Significance	<ul style="list-style-type: none"> Initiation into the Christian community Cleansed from sin Reborn into eternal life United with Christ as a child of God Receive the gift of the Holy Spirit
Infant baptism	<ul style="list-style-type: none"> When a child/baby is baptised Holy water is poured over their heads x3 Washes away original sin, starts life on the right track with God, shows commitment, welcomes to the Church
Believer's baptism	<ul style="list-style-type: none"> When an adult is baptised Whole body is immersed in the water Follows Jesus' example, start a new life with God, wash away sin, making their own decision to be baptised

F.	<i>Pilgrimage</i>
What is it	<ul style="list-style-type: none"> A visit to a place regarded as holy for the believer Places of pilgrimage have a special meaning and can make people feel closer to God
Importance	<ul style="list-style-type: none"> Lets people take time out from their every day lives Offers an opportunity for spiritual growth Encourage them to lead lives that reflect the values of God Physical or spiritual healing Deepens their faith – meeting people from different cultures
Lourdes	<ul style="list-style-type: none"> Virgin Mary appeared to Bernadette in the 19th century Believed that the spring water can cleanse pilgrims of sin and cure illnesses People walk in processions, touch the walls of the grotto, take home Lourdes water There is a focus on helping and supporting the sick and disabled People feel healed spiritually, if not physically
Iona	<ul style="list-style-type: none"> Island off the west coast of Scotland Services and tours for pilgrims MONASTIC experience = a simple way of living, i.e. like a monk Share practical tasks e.g., washing up, discussions, studying the Bible People do not go here for miracles

G.	<i>Christmas</i>
What is it	<ul style="list-style-type: none"> Celebrated to commemorate the birth of Jesus Churches are decorated with the scene of the nativity Carols are sung about the events of Jesus' birth Communion takes place at midnight on Christmas Eve
Importance	<ul style="list-style-type: none"> Remembering the incarnation Celebrates the birth of a saviour – his birth lead to people being saved from their sins
In GB today	<ul style="list-style-type: none"> Christians thank God for the incarnation A time of giving and receiving from loved ones Time to remember those in difficult circumstances – should give and support those in need Highlights meaning of Christmas to non-believers

H.	<i>Easter</i>
What is it	<ul style="list-style-type: none"> Remembering Jesus' death and resurrection
Importance	<ul style="list-style-type: none"> Remembers the resurrection of Jesus Power of good over evil Reminds Christians of the omnipotence of God Shows Christians there is an afterlife
Lent	<ul style="list-style-type: none"> Time of preparation for Easter – reminds Christians of the temptations of Jesus
Maundy Thursday	<ul style="list-style-type: none"> Last Supper Observed today by Eucharist
Good Friday	<ul style="list-style-type: none"> Remembering crucifixion of Jesus Observed today by worshipping together
Easter Sunday	<ul style="list-style-type: none"> Celebrates Jesus rising from the dead Shows there is an afterlife and death is not the end

Year 10 GCSE Religious Education KO - Christianity Practices

D.	<i>Eucharist/Holy Communion</i>
What is it	
Significance	
How is it celebrated	
Different interpretations	

F.	<i>Pilgrimage</i>
What is it	
Importance	
Lourdes	
Iona	

E.	<i>Baptism</i>
What is it	
Significance	
Infant baptism	
Believer's baptism	

G.	<i>Christmas</i>
What is it	
Importance	
In GB today	

H.	<i>Easter</i>
What is it	
Importance	
Lent	
Maundy Thursday	
Good Friday	
Easter Sunday	

GCSE Religious Education KO - Christianity Practices

I.	<i>Role of the Church: Local community</i>
Local community	<ul style="list-style-type: none"> Churches help in the local community in a number of ways: food banks, day centres for the elderly, helping refugees, food banks, soup kitchens, helping people with taxes Parable of the sheep and the goats: Jesus told his disciples that they should help others "If anyone has material possessions and sees his brother in need but has no pity on him, how can the love of God be in him?" Jesus deliberately sought out people in society who needed help
Food banks	<ul style="list-style-type: none"> People volunteer to collect, sort and distribute food People in need are identified and are provided with vouchers to exchange The salvation army - soup kitchens and hostels, give emergency assistance, provide community vegetable gardens
Street pastors	<ul style="list-style-type: none"> Christians who go out on the streets of cities to help care for the needs of young people NOT there to spread Christianity, just to help E.g. St. Vincent de Paul Society – help anybody who needs it – give training to get jobs, run community shops, run hostels, soup kitchens

I.	<i>Role of the Church: Worldwide</i>
Working for reconciliation	<ul style="list-style-type: none"> Christians need to be reconciled with God but also with one another Christians believe that Jesus' death was an act of reconciliation Worldwide church has a role to restore people's relationship with God and with one another Working for reconciliation is necessary for all Christians
Persecution	<ul style="list-style-type: none"> Hostility and ill-treatment, especially because of race, or political or religious beliefs Jesus told Christians to expect persecution because if they persecuted Jesus, they would also persecute his followers Those who suffer for their beliefs share in the suffering of Jesus "to know the power of his resurrection and participation in his sufferings" Persecution helps the church grow because people witness the hope that Christians have "if one part suffers, every part suffers with it" – all Christians suffer together so need to be supported Church supports people by smuggling in Bibles, giving legal and financial support, provide spiritual support, raise awareness of those being persecuted
CAFOD	<ul style="list-style-type: none"> Catholic agency for Overseas Development (CAFOD) Works to bring hope and compassion to people of all faiths and in poor communities Action needs to be taken to remedy the injustice of people suffering Helps to increase access to clean water, education and healthcare, lobbies employers to adopt fair working conditions.

J.	<i>Mission and evangelism</i>
Mission	<ul style="list-style-type: none"> Vocation or calling of a religious organisation or individual to go out into the world and spread their faith "go and make disciples of all nations... teaching them to obey everything I have commanded you" Christians have the responsibility, according to the Great Commission, to tell others of their faith Spreading the word to people in everyday life, organised events, preaching, becoming missionaries, humanitarian work
Evangelism	<ul style="list-style-type: none"> Spreading the message of Christianity and teachings of Jesus in order to make disciples of all nations Bring reconciliation between people and God Show the love of God through their own actions Preaching, teaching, performing missions and good works openly, move to foreign lands to spread the word, set up churches and church communities
The Alpha Course	<ul style="list-style-type: none"> Aims to help church members understand the basics of the Christian faith Many major Christian organisations use it Take place in church premises but also in homes, universities, workplaces, prisons and other venues Courses include topics such as relationship and marriage for adults and study programmes for young people

K	<i>Persecution</i>
	<ul style="list-style-type: none"> Hostility and ill-treatment of a group of people Jesus told Christians to spread the word of Christianity – may put them in danger – "he who endures to the end will be saved" Open Doors and Christian Freedom Internation help persecuted Christians Support them through trauma, provide advice and support, speak on behalf of persecuted Christians to raise awareness, send/smuggle in Bibles, lobby the governments for political power, organise the offer of aid to persecuted, offer rooms to asylum seekers, ask god to forgive the persecuters Turn the other cheek

L	<i>Reconciliation</i>
How the church works for reconciliation	<ul style="list-style-type: none"> Set up initiatives to bring people together, working in prisons to lead people back to God and bring the victim and perpetrator back together, leading sermons, asking congregation to forgive each other
WHY they work for reconciliation	<ul style="list-style-type: none"> Jesus' sacrifice, parable of the forgiving father, "love thy neighbour", he who sees his brother in need and does nothing, how can the love of God be in him?

GCSE Religious Education KO - Christianity Practices

I.	<i>Role of the Church: Local community</i>
Local community	
Food banks	
Street pastors	

I.	<i>Role of the Church: Worldwide</i>
Working for reconciliation	
Persecution	
CAFOD	

J.	<i>Mission and evangelism</i>
Mission	
Evangelism	
The Alpha Course	

K	<i>Persecution</i>

L	<i>Reconciliation</i>
How the church works for reconciliation	
WHY they work for reconciliation	



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: Nubuwwah	Belief in prophethood: the chain of messengers from Adam to Muhammad	"We sent messengers to every community" Surah 16
3: Adl	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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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?	<ul style="list-style-type: none"> The Sunnah covers many areas of life It provides a guideline for Muslim life There is a Sunnah for everything



Keywords	
Tawhid	
Omnipotent	
Immanent	
Transcendent	
Beneficent	
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	



D.	<i>Risalah (Prophethood)</i>	E	<i>Torah, Psalms and Gospels</i>
What is it	<ul style="list-style-type: none"> • 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) 	Psalms (Zabur)	<ul style="list-style-type: none"> • The Psalms of Dawud are a collection of prayers to Allah • They contain lessons of guidance for the people
Why are prophets important?	<ul style="list-style-type: none"> • Prophets are guided by Allah • Their love of Allah stops them from sinning • Some prophets are messengers who have been given revelation of news 	Gospel (Injil)	<ul style="list-style-type: none"> • 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
Adam	<ul style="list-style-type: none"> • 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 	Torah (Tawrat)	<ul style="list-style-type: none"> • 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"
Ibrahim	<ul style="list-style-type: none"> • 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 	Scrolls of Ibrahim	<ul style="list-style-type: none"> • Revelations received by Ibrahim on the first day of Ramadan • Contained stories about worship and reflection • Not a book, individual revelations

F.	<i>The Nature of Allah</i>
Tawhid	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Allah is outside of the universe • Not limited by time or space
5: Beneficence	God has love and good will
6: Mercy	<ul style="list-style-type: none"> • "In the name of Allah, the most compassionate, the most merciful" • God is forgiving and caring
7: Fairness and justice	<ul style="list-style-type: none"> • 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



D.	<i>Risalah (Prophethood)</i>	E	<i>Torah, Psalms and Gospels</i>
What is it		Psalms (Zabur)	
Why are prophets important?		Gospel (Injil)	
Adam		Torah (Tawrat)	
Ibrahim		Scrolls of Ibrahim	

F.	<i>The Nature of Allah</i>
Tawhid	
2: Omnipotent	
3: Immanence	
4: Transcendent	
5: Beneficence	
6: Mercy	
7: Fairness and justice	



Year 10 GCSE Religious Education KO - Islam Beliefs



G.	Qur'an	I.	Angels
Revelation	<ul style="list-style-type: none"> 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. 	What are they?	<ul style="list-style-type: none"> 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
Authority	<ul style="list-style-type: none"> It is the direct word of Allah so it has His authority It is without error and remains in its' original form A written book was needed to formalise the religion 	What do they do?	<ul style="list-style-type: none"> 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
What does it contain?	<ul style="list-style-type: none"> 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 	Jibril	<ul style="list-style-type: none"> 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
Supreme authority	<ul style="list-style-type: none"> 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 	Mika'il	<ul style="list-style-type: none"> 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	J.	Al Qadir
What will happen?	<ul style="list-style-type: none"> Muslims believe Judgement day will come on a Friday (Adam was created on a Friday) It will be announced by Israfil's trumpet Allah will refer us to the book of deeds to justify damnation or salvation Humans will go to paradise or Hell 	E.	<ul style="list-style-type: none"> 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"
Jannah	<ul style="list-style-type: none"> 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 	Muhammad	<ul style="list-style-type: none"> 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
Entry to Jannah	<ul style="list-style-type: none"> "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" 	Why was he chosen?	<ul style="list-style-type: none"> He became the ruler of Madinah and set up the first Islamic community He converted the people of Makkah to Islam
Jahannam	<ul style="list-style-type: none"> 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 	Why is Muhammad important?	<ul style="list-style-type: none"> 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



G.	<i>Qur'an</i>	I.	<i>Angels</i>
Revelation		What are they?	
Authority		What do they do?	
What does it contain?		Jibril	
Supreme authority		Mika'il	

K.	<i>Day of Judgement, paradise and Hell</i>		J.	<i>Al Qadir</i>	
What will happen?					
Jannah			E.	<i>Muhammad</i>	
Entry to Jannah			Why was he chosen?		
Jahannam			What did he do as a prophet?		
			Why is Muhammad important?		

Year 10 GCSE Religious Education KO - Christianity Beliefs

Keywords	
Ascension	Jesus returning to be with God in Heaven after the crucifixion
Atonement	Making things better after sinning, asking for forgiveness from God
Benevolent	God's nature as all-loving
Crucifixion	Jesus' execution by the Romans on the cross
Incarnation	God becoming flesh in the form of Jesus Christ
Just	God's nature as fair
Omnipotent	God's nature as all-powerful
Original sin	The built-in tendency to do wrong which comes from Eve's disobedience
Resurrection	Jesus returning from the dead after he was crucified
Salvation	Being saved from sin and given eternal life in heaven by God
Sin	Any thought or action which goes against God's will
Trinity	God's nature as three-parts-in-one, the Father, Son and Holy Spirit.

What we are learning in this unit		
A. Nature of God B. Evil and suffering C. The Holy Trinity D. Creation E. Resurrection, judgement, Heaven and Hell		F. Incarnation G. Crucifixion H. Christ in Salvation I. Ascension and resurrection J. Sin and salvation
A.	<i>The Nature of God</i>	<i>How is it shown in The Bible?</i>
One God	<ul style="list-style-type: none"> Christians believe in one God who is the creator and sustainer of all that exists 	<ul style="list-style-type: none"> "the Lord he is God; there is none else beside him"
Omnipotent	<ul style="list-style-type: none"> God is almighty and has unlimited power Nothing can defeat the power of God 	<ul style="list-style-type: none"> "For nothing is impossible with God" The creation of the universe miracles performed by Jesus Sending the 10 plagues to Egypt to help the Hebrews be free
Benevolent	<ul style="list-style-type: none"> God is all-loving and all-good "agape" refers to a self-giving, sacrificial love 	<ul style="list-style-type: none"> "For God so loved the world, he gave his One and Only Son" Jesus' death on the cross is an example of that love The Parable of the Prodigal Son – the father forgave his son because he loved him how God is also loving
Just	<ul style="list-style-type: none"> God is perfect and a fair judge 	<ul style="list-style-type: none"> "he is faithful and righteous to forgive us our sins"
Problem of suffering	<ul style="list-style-type: none"> If God is benevolent, why would he allow bad things and suffering to happen to innocent people? Some Christians argue that if God is fair and just, why does he allow suffering? 	
B.	<i>Evil and suffering</i>	
What is the problem of evil	<ul style="list-style-type: none"> There is evil and suffering going on in the world suffering is physical or emotional pain a person goes through for any reason Christians may find it difficult to make sense of God allowing suffering to happen 	
How do Christians solve the problem of evil and suffering?	<ul style="list-style-type: none"> Human beings have free will and have the ability to choose their own actions - God doesn't cause it, humans do Jesus Christ suffered on the cross and Christians believe they can learn from suffering too Christians believe they get rewarded for suffering in Heaven "God works in mysterious ways" – we cannot understand God Job – there is sin in the world, we need to keep faith 	
C.	<i>The Holy Trinity</i>	
What is it?	<ul style="list-style-type: none"> The concept of the three persons of God Each person of the Trinity is fully God, but they are not the same "we believe in one God, Father, Son and Holy Spirit" 	
God The Father	<ul style="list-style-type: none"> God of the Old Testament – creator, ruler, judge The creator of all life 	
God The Son	<ul style="list-style-type: none"> Jesus Christ – both fully human and fully God God became incarnate through Jesus 	
The Holy Spirit	<ul style="list-style-type: none"> The unseen power of God at work in the world e.g. answering prayers, guides and comforts Christians 	
Why is the trinity important?	<ul style="list-style-type: none"> It expresses who God is It expresses how humans can interact with God It allows humans to come face to face with God Helps to make the best sense of what Christians read in the Bible When Jesus was baptised, the Holy Spirit descended like a dove and said "you are my Son..." 	

Year 10 GCSE Religious Education KO - Christianity Beliefs

Keywords	
Ascension	
Atonement	
Benevolent	
Crucifixion	
Incarnation	
Just	
Omnipotent	
Original sin	
Resurrection	
Salvation	
Sin	
Trinity	

What we are learning in this unit			
A. Nature of God B. Evil and suffering C. The Holy Trinity D. Creation E. Resurrection, judgement, Heaven and Hell		F. Incarnation G. Crucifixion H. Christ in Salvation I. Ascension and resurrection J. Sin and salvation	
A.	The Nature of God	How is it shown in The Bible?	B. Evil and suffering
One God			What is the problem of evil
Omnipotent			How do Christians solve the problem of evil and suffering?
Benevolent			C. The Holy Trinity
Just			What is it?
Problem of suffering			God The Father
			God The Son
			The Holy Spirit
			Why is the trinity important?

Year 10 GCSE Religious Education KO - Christianity Beliefs

D.	<i>Creation</i>
Beliefs about creation	<ul style="list-style-type: none"> The trinity must have existed before creation The trinity is the way in which the world was created
Genesis 1:1-3	<ul style="list-style-type: none"> "In the beginning, God created the Heavens and Earth" God created Earth and all living things Christians believe that everything created "was good" Most Christians interpret the story as a way of describing the creation of the world Not all believe it was in literally 6 days "now the Earth was formless and empty, darkness was over the face of the deep and the Spirit of God was hovering over the face of the waters"
John 1:1-3	<ul style="list-style-type: none"> "In the beginning was the Word, and the Word was with God" 'The Word' refers to God the Son. This shows the Son (Jesus) was involved in creation
Messages from the story	<ul style="list-style-type: none"> God is the omnipotent creator Every aspect of God's creation is good The world is sacred Humans have stewardship and dominion – they have authority over the rest of the world Humans are made in the image of God

E.	<i>Resurrection, judgement, Heaven and Hell</i>
What is Resurrection	<ul style="list-style-type: none"> Jesus overcame death through resurrection If Jesus lived after death, then so will they Makes Christians treat their body as a "temple of the Holy Spirit"
What do Christians mean by resurrection	<ul style="list-style-type: none"> Some Christians believe that God will raise them back to life before Judgement Day Catholics believe in purgatory – where the soul goes after death to be purified.
Judgement	<ul style="list-style-type: none"> There will be a Judgement Day at the end of time and will be judged by Jesus according to how they behaved Jesus "will come again in glory to judge the living and the dead" After judgement, they will wait to be rewarded with Heaven or punished with Hell The Parable of the rich man and Lazarus – ignoring the needs of others has eternal consequences The Parable of the sheep and the goats – on Judgement Day, some will be rewarded with Heaven for helping others and others are sent to Hell
Heaven	<ul style="list-style-type: none"> Heaven is being with God outside time and space Eternal happiness with no suffering Heaven is a state of being
Hell	<ul style="list-style-type: none"> Hell is eternal separation from God "God predestines no one go to hell; for this, a wilful turning away from God... is necessary and persistence in it until the end" Some Christians reject any idea of hell because they think it would mean God's love would not triumph over evil

F.	<i>Incarnation</i>
What is it	<ul style="list-style-type: none"> God took on human form as Jesus Christ "The Word became flesh and lived for a while among us" Jesus was fully divine and fully human
Jesus as the Son of God	<ul style="list-style-type: none"> Mary was impregnated by the Holy Spirit and gave birth as a virgin – proof that Jesus is the son of God
Belief in incarnation	<ul style="list-style-type: none"> The incarnation is important to teach Christians how to live

Year 10 GCSE Religious Education KO - Christianity Beliefs

D.	<i>Creation</i>
Beliefs about creation	
Genesis 1:1-3	
John 1:1-3	
Messages from the story	

E.	<i>Resurrection, judgement, Heaven and Hell</i>
What is Resurrection	
What do Christians mean by resurrection	
Judgement	
Heaven	
Hell	
F.	<i>Incarnation</i>
What is it	
Jesus as the Son of God	
Belief in incarnation	

Year 10 GCSE Religious Education KO - Christianity Beliefs

I.	<i>Ascension and resurrection</i>
Resurrection	<ul style="list-style-type: none"> Jesus was buried in a rock tomb and left there due to the Sabbath When the women returned for the burial, Jesus' body was gone Jesus appeared for the next 40 days to his disciples and other believers
Ascension	<ul style="list-style-type: none"> Jesus appeared to his disciples and told them to spread the word of him The time between resurrection and ascension reminds Christians that God will forgive sins and they can become closer to God The ascension happened 40 days after the resurrection It assures Christians they will rise again after death and live in the afterlife
Why is Jesus' resurrection important	<ul style="list-style-type: none"> Christians interpret the resurrection as proof that he is the Son of God Shows God's triumph over evil and death

G.	<i>Crucifixion</i>
Why was Jesus crucified	<ul style="list-style-type: none"> Jesus was arrested and convicted of blasphemy He was sentenced to death by Pilate Crucifixion was a humiliating method which is slow and agonising
How does it influence a Christian	<ul style="list-style-type: none"> By accepting Jesus' sacrifice, their sins will be forgiven and they will go to Heaven Suffering is a part of life
Why did Jesus have to die?	<ul style="list-style-type: none"> Blasphemy – some of the things he said and did were considered blasphemy and threatened authority Pilate – Pilate was going to pardon him but was afraid of the consequences from Rome God – Jesus had to die to fulfil God's commands for him – this way, humans could be reunited with God

I.	<i>Sin and salvation</i>
Original sin	<ul style="list-style-type: none"> Christians believe humans are separated from God due to original sin which they have due to Adam and Eve (Genesis) God in Christ offered salvation
Salvation through law	<ul style="list-style-type: none"> Jews thought they needed to obey the law to be accepted by God Some Christian groups claim salvation depends on keeping to all the rules that are put in place However some say that the thoughts in our mind and love in our hearts for God is more important
Grace and spirit	<ul style="list-style-type: none"> Grace = unconditional love that God shows to everyone, even when it seems undeserved God loves humans despite what we do or do not do Parable of the Prodigal Son = the son did not deserve the forgiveness, but that is how God treats humanity Jesus' actions made forgiveness for the sins of the world and reconciliation possible Christians believe they receive God's grace through the presence of the Holy Spirit

H.	<i>Christ in salvation</i>
Atonement	<ul style="list-style-type: none"> Christians see Jesus' death as atonement
Reconciliation	<ul style="list-style-type: none"> Reconciliation is the restoration of relationships The relationship between God and human beings was damaged Human beings need to be reconciled with God to get to Heaven God sacrificed his Son to allow this to happen

Year 10 GCSE Religious Education KO - Christianity Beliefs

I.	<i>Ascension and resurrection</i>
Resurrection	
Ascension	
Why is Jesus' resurrection important	

G.	<i>Crucifixion</i>
Why was Jesus crucified	
How does it influence a Christian	
Why did Jesus have to die?	

I.	<i>Sin and salvation</i>
Original sin	
Salvation through law	
Grace and spirit	

H.	<i>Christ in salvation</i>
Atonement	
Reconciliation	



Keywords		What we are learning in this unit		B.	The 5 Pillars - Salah		
Tawalla	Showing love for God and for those who follow Him	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		What is it?	<ul style="list-style-type: none"> “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. 		
Tabarra	Disassociation with God’s enemies			A.	5 Pillars of Islam and 10 obligatory acts	Wuzu	<ul style="list-style-type: none"> 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.
Khums	The obligation to pay one-fifth of acquired wealth			What are the 5 pillars	<ul style="list-style-type: none"> 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 	Rak’ahs and recitations	<ul style="list-style-type: none"> 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...”
Lesser jihad	The physical struggle or holy war in defence of Islam			What are the 10 obligatory acts	<ul style="list-style-type: none"> 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 	Salah at home	<ul style="list-style-type: none"> 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
Greater jihad	The daily struggle and inner spiritual striving to live as a Muslim			Shahadah	<ul style="list-style-type: none"> 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 	Salah in the mosque	<ul style="list-style-type: none"> All mosques have a qiblah wall which is to show where to face Makkah Men and women pray in separate rooms at the Mosque
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						
Niyah	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						
		Jihad		Jumma	<ul style="list-style-type: none"> Jumma 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 		
Lesser Jihad	<ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> self-defense proportionate legitimate authority no harm to civilians 			Differences between Sunni and Shi’a	<ul style="list-style-type: none"> 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 		
Greater Jihad	<ul style="list-style-type: none"> 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” 						



Keywords		What we are learning in this unit		B.	The 5 Pillars - Salah		
Tawalla		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		What is it?			
Tabarra				A.	5 Pillars of Islam and 10 obligatory acts	Wuzu	
Khums				What are the 5 pillars		Rak'ahs and recitations	
Lesser jihad				What are the 10 obligatory acts		Salah at home	
Greater jihad				Shahadah		Salah in the mosque	
Sunni				<i>Jihad</i>		Jummah	
Shi'a						Lesser Jihad	
Niyah						Greater Jihad	
Du'a			Differences between Sunni and Shi'a				



The 5 Pillars - Zakah	
The role of giving alms	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 - Sawm	
The role of fasting	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

The 5 Pillars - Hajj	
The role of pilgrimage	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

Id-ul-Adha, Id-ul-Fitr, Ashura	
Id-ul-Adha Not an official holiday in UK	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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



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	

Year 10 Spanish Knowledge Organiser Term 4

ESPAÑOL 

This is some of the vocabulary that you will learn / come across in **Term 4**. Use this knowledge organiser to revise / go over vocabulary. These words have been added in by the exam board (Edexcel) so the more you learn, the better your grade!



Techniques for learning vocab:

- Look / cover / write / check – ask your teacher for a sheet and to show you how.
- Mind maps
- Post it notes / flash cards
- Record yourself saying them
- Get a family member to quiz you – they say the English, you say the Spanish
- Write the word in a sentence – put it into context

Spare copies of this kept in class. Just ask your teacher if you need one.

Lesson 1 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills	
	Vocabulary	Grammar	Phonics			
La lista de la compra Learning about food items and buying in a market. Zona cultura: Spanish food markets.	• en efectivo (m)*	by cash	Relative pronouns: <i>cuanto/a/os/as</i> . Using "usted" as the formal form of "you". Revision of numbers and types of measurements.	SSC /r/ in the following positions /-r- vs -rr/ (e.g. temporada, verdura vs arroz, churros).	Recall and use language in different situations Produce sequences of speech.	Speaking exam skill: role play shopping for food.
	• pescado (m)*	fish				
	• temporada (f)*	season				
	• usted*	you sg formal				
	• agua (f)	• water				
	• arroz (m)	• rice				
	• azúcar (m)	sugar				
	• bocadillo (m)	sandwich				
	• bolsa (f)	shopping bag				
	• botella (f)	bottle				
	• caja (f)	checkout, till, box				
	• carne (f)	meat				
	• churros (m pl)	churros (fried dough sticks)				
	• comida (f)	food, meal				
	• compra(s) (f)	shopping, purchase				
	• fruta (f)	fruit				
	• huevo (m)	egg				
	• leche (m)	milk				
	• pan (m)	bread				
	• queso (m)	cheese				
	• verdura	vegetable				
• tarjeta (f)	card, credit card					
• costar	to cost					
• pagar	to pay					
• pedir	to ask for, order, request					
• ¿cuánto(s)?, ¿cuánta(s)?	How much? How many?					



Lesson 2 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
Gramática: Stem Changing Verbs Learning about radical changing verbs.	<ul style="list-style-type: none"> • atender* (to assist (customer), serve) • conseguir* (to acquire, obtain, get) • contar; contar con* (to count, tell) • empezar* (to begin, start) • probar* (to try, taste, try on) • seguir; seguir + present participle* (to follow, continue, still be + -ing) • cerrar (to close, shut) • comenzar (to start, begin) • costar (to cost) • dormir; dormirse (to sleep, fall asleep) • encontrar; encontrarse (to find; (to) run into, be located, feel) • jugar (a) (to) play • pedir (to) ask for, order, request • pensar (to) think • perder; perderse (to) lose, waste, miss • poder (to) be able to, can • querer (to) want, love • repetir (to) repeat • tener; tener que (to) have ; (to) have to, must 	Radical changing verbs: e>ie and e>i in present tense verbs. e.g. <i>querer, pensar, repetir</i> ..		Recall and use language in different situations Accuracy in verbal conjugation in the present tense..	Writing skills: knowledge and understanding of verbal conjugation in the present tense. Gaining accuracy in complex structures.



Lesson 3 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
<p>La revolución de la cocina latina Learning about types of meals in the modern world. Zona cultura: cocina mejicana y peruana.</p>	<ul style="list-style-type: none"> • estrella (f)* star • plato (m)* dish • acompañar* to accompany, go with • quemar(se) * to burn (oneself) • ambos/as* both • dulce* sweet • fresco* fresh, cool, chilly • chocolate (m) chocolate • frío (m) cold • (a) gusto (m) (to) taste, pleasure • país (m) country • experiencia (f) experience • identidad (f) identity • historia (f) history • cocinar to cook • cortar(se) to cut (oneself) • dejar, dejar de + inf. to leave, allow, to let • poner, ponerse to put (on), to get, to become • servir to serve • caliente hot • frío cold • mexicano, mejicano mexican • peruano peruvian • rico tasty, rich, wealthy • sano healthy, wholesome • único unique, only 	HT: Passive voice using se + 3 rd person singular or plural, e.g. se <i>sirve frío</i> .	SSC revision: /; -rr-; r/; /ch/, /ll/ in Reading aloud.	Identify and respond to key points, details and opinions. Tips to tackle multiple choice reading questions and true statement questions.	Reading skills: how to use cognates, similar words we know and our grammar knowledge to understand a text. Reading exam tasks: multiple choice questions and identifying T/F statements or mentioned statements. Speaking: read aloud practice. Picture description: FT Writing.



Lesson 4 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
<p>¿Tiene mesa para dos, por favor?</p> <p>Ordering food in a restaurant</p> <p>Zona cultura: menú de día</p>	<p>Key words to be taught:</p> <ul style="list-style-type: none"> • cliente (mf)* customer • efectivo (m)* cash • pasta (f)* pasta • vaso (m)* glass • bebida (f) drink, beverage • café (m) coffee • copa (f) cup, glass • cuchara (f) spoon • cuchillo (m) knife • cuenta (f) bill, account • gusto (m) taste, pleasure • hamburguesa (f) hamburger • helado (m) ice-cream • mesa (f) table, board • paella (f) paella • pastel (m) cake • patatas fritas (fpl) chips • postre (m) dessert • tapas (fpl) tapas (small dish) • tenedor (m) fork • tortilla (f) omelette, corn pancake • pagar (to) pay • recomendar (to) recommend • tomar (to) take, have (food, drink) • limpio clean • vegetariano vegetarian • roto broken • sucio dirty • ¡buen provecho! enjoy your meal! 	<p>Revisit:</p> <p>The immediate future (near future) .</p> <p>Use of “usted” and verbs in the 3rd person in formal contexts..</p>	<p>Revision of: Intonation of questions</p>	<p>Creating dialogues in Spanish.</p> <p>Understanding different ways to address people in different contexts (formal vs informal).</p>	<p>Speaking skills: being able to take part in a role play.</p>



Lesson 5 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
<p>¿Somos lo que comemos?</p> <p>Talking about healthy and unhealthy diets.</p> <p>Zona cultura: la dieta mediterranea</p>	<p>Key words to be taught:</p> <ul style="list-style-type: none"> • alimento (m)* food, nourishment • basura (f)* rubbish, litter, junk • falta (de) (f)* lack (of), shortage • producto (m)* product • evitar * (to) avoid avoiding • probar* (to) try, taste, try on trying, tasting, trying on • seguir; seguir + pres. participle* (to) follow, continue; (to) continue to, still be + -ing • equilibrado* balanced • almuerzo (m) lunch • animal (m) animal • cena (f) dinner • comida (f) food, meal • desayuno (m) breakfast • dieta (f) diet • (tener) hambre (f) to be hungry; hunger, famine • merienda (f) afternoon snack • salud (f) health • (tener) sed (f) to be thirsty; thirst • cocinar (to) cook • dormir; dormirse (to) sleep, fall asleep • malsano unhealthy • sano healthy, wholesome • vegano vegan • vegetariano vegetarian • ahora now • antes; antes de (+ infinitive) before, beforehand before (+ -ing) • desde hace (+ present) to have been+ing +for+time • ya no no longer, no more • como resultado as a result 	<p>Revisit:</p> <p>Imperfect tense to describe past habits.</p> <p>Present tense.</p> <p><i>Desde hace</i> + present tense.</p> <p>Using <i>ya no</i>.</p>		<p>Extending sentences in your descriptions using two different tenses.</p>	<p>Reading skills: recognizing present and past actions.</p> <p>Speaking skills: using two tenses in your speech to describe present and past habits.</p>



Lesson 6 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
Escribimos sobre nuestra dieta Writing skill lesson	Key words to be taught:		Revisit:	Narrating using different time frames. Using QuACNOTsand complex structures in your descriptions.	Writing skills: using a wide range of tenses in your narration. Using complex structures in your descriptions. General Conversation booklet: Questions 5, 5b.
	• después (de + infinitive)	after (+ ing verb)			
	• colegio (m)	school, high school	Present tense		
	• por ejemplo (m)	for example	Preterite tense		
	• fin de semana (m)	weekend	Imperfect tense		
	• piscina (f)	swimming pool			
	• semana (f)	week			
	• verdad (f)	truth			
	• muy	very			
	• como	like, as			
	• ahora	now			
	• ayer	yesterday			
	• esta semana	this week			
	• este fin de semana	this weekend			
	• el fin de semana que viene	next weekend			
	• la verdad es que	the truth is that			
	• diría que	I would say that			
	• por eso	that is why			



Lesson 7 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
El cuerpo humano Describing the parts of the body. Saying what hurts.	• dolor (m)*	pain, ache	Expressions with tener + noun. Revisit: preterite tense. Radical changing verbs (o-ue) in verbs such as <i>doler</i> , <i>mover</i> , <i>contar</i> in the present tense.	Recalling key vocabulary Transfer meaning accurately into Spanish.	Writing skills: translations from English to Spanish. Listening exam skills: cloud questions.
	• boca (f)	mouth			
	• brazo (m)	arm			
	• cabeza (f)	head			
	• rodilla (f)	knee			
	• cabeza (f)	head			
	• cara (f)	face			
	• corazón (m)	heart			
	• cuerpo (m)	body			
	• dedo (m)	finger			
	• diente (m)	tooth			
	• espalda (f)	back (body part)			
	• estómago (m)	stomach			
	• garganta (f)	throat			
	• nariz (f)	nose			
	• oído (m)	ear, hearing			
	• pie (m)	foot			
	• pierna (f)	leg			
	• doler (o>ue)	to hurt			
	• me duele(n)	something hurts me			
	• me siento bien/fatal	I feel well / awful			
• humano	human				
• enfermo	sick, ill				
• tener cuidado	To be careful				
• Tener miedo	To be scared				
• Tener calor/frío	To be hot/cold				
• Tener sueño	To be sleepy				



Lesson 8 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
¿Qué debo hacer, doctora? Revisit parts of the body and types of illnesses.	<ul style="list-style-type: none"> • cuidado (m)* care, carefulness • doctor/a (m, f)* doctor • emergencia (f)* emergency • herida (f)* Injury, wound • médico/a (m, f)* doctor • grave* <ul style="list-style-type: none"> • serious, grave • accidente (m) accident • cama (f) bed • dificultad (f) difficulty, obstacle • farmacia (f) pharmacy, chemist's • hospital (m) hospital • medicina (f) medicine, medication • miedo (m) fear • servicio (m) service, toilet • ¿qué (le/te) pasa? what's wrong? what is wrong • algo something • deber to have to, must • descansar To rest • dormir to sleep • llamar To call • poder to be able to, can • poner, ponerse to put (on), get, become • quemar(se) To burn (oneself) • tener que To have to • alérgico allergic • cansado tired 	Use of modal verbs: <i>deber</i> , <i>poder</i> , <i>tener que</i> + infinitive. Revisit: Use of <i>estar</i> for temporal states (estoy enfermo, estoy malo). Revisit: Using "usted" as the formal form of "you".	Revisit: intonation in questions.	Recall and use language in different situations. Improve intonation in questions. Produce sequence of speech.	Speaking skills: role play at the doctor's surgery / hospital / pharmacy.



Lesson 9 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
Describimos una foto. Speaking skill lesson.	Key words to be taught: <ul style="list-style-type: none"> • sufrir* to suffer, be in pain • en primer plano in the foreground • al fondo in the background • a la derecha to the right • a la izquierda to left • cerca de close to • se puede ver one can see • la foto muestra the photo shows • diría que I would say that • supongo que.. I presume that • me parece que.. It seems to me that.. • hombre (m) man • mujer (f) woman • niña girl, child (f) • niño boy, child (m) • al aire libre outdoors • alegre lively, cheeful, • contento happy, content • preocupado worried • pues.. so, well, well then • para mí for me • bueno.. so, well, 	Revisit: Present tense. Present continuous. Impersonal verb: hay. Adjective and verb agreement.	Pronunciation of "h" at the beginning and in between words. The difference between the letter of "h" and the letter pair "ch".	Describing an image using a wide variety of vocabulary. Using fillers at the beginning of your utterance when speaking (<i>bueno, pues, para mí..</i>)	Speaking skills: photo description and followed up questions. Writing skills: FT question 1 Writing exam: picture description.



Lesson 11 Knowledge and Skills to be Taught



Topic	Knowledge			Skills	Exam Skills
	Vocabulary	Grammar	Phonics		
Mi rutina Learning about daily routine verbs	<ul style="list-style-type: none"> • atletismo (m)* athletics • acordarse (de)* to remember • acostarse* to go to bed • asegurarse de* to ensure • equivocarse* to be wrong, make a mistake • mantener(se)* to maintain, keep • permitir(se)* to allow (oneself) • relajarse* to relax • sentir(se)* to feel, to regret, to sense • después (de+infint)* after (+ing), afterwards • un montón de* a lot of.., a pile of.. • copa (f) cup • forma (f), en forma way, form; fit, in shape • riesgo (m) risk • siesta (f) afternoon nap • vez (f) (veces) time (once, twice) • bañar(se) to bathe • caer(se) to fall • cambiar(se) to change, get changed. • despertar(se) to wake up • Divertir(se) to enjoy oneself, to have fun • fumar to smoke • lavar (se) to wash • vestir (se) to wear, dress, get dressed. • antes (de + infinitive) before (+ inf), beforehand • tarde late • temprano early 	Reflexive verbs in present and imperfect tenses (Imperfect tense HT: 1st, 2nd and 3rd person singular and plural) Word order in singular reflexive pronouns (me, te, se) in one and two verb constructions (<i>me acuesto, debo acostarme</i>). HT: reflexive use of plural forms of pronouns (nos acostamos, os equivocasteis). Revisit: time expressions and how to say the time.	Revisit: /v/: levantarse	Use a variety of vocabulary and grammatical structures.	Reading and listening skills: responding in short sentences. Looking for distractors in reading and listening tasks.



GCSE Business. Paper 1. Making the Business Effective

27. A private limited company (Limited Liability)
When a business fails, a company that has limited liability restricts the losses suffered by the business owners (shareholders) to the sum of money that they invested in the business.
Benefits of limited companies.
A company can have share capital, which makes it easier to divide up the ownership between different investors.
If the business needs to raise more capital, it is quite easy to issue more shares for sale to other investors
The business continues to exist even if the founder dies. The company develops a life of its own
Due to limited liability, the owners/shareholders can be bold about investing in the future of the business. If a bold move goes wrong, the business may suffer but individual shareholders are not liable for debts
28. Sole Trader (Unlimited Liability)
Treating the business and the individual owner as the same entity, therefore making the business owner responsible for all the debts in a business.
Why ignore Limited Liability?
The only logical reason for ignoring limited liability is if there is no realistic possibility of debts building up. For example, if the business is a market stall, where goods are bought for cash. In this scenario debts would be hard to build up and firms will be reluctant to pay the related costs and fill out the required paperwork.
33. Business Locations
Location is key to the success of any business
Factors influencing business location:
Proximity to Market: For many businesses this is the most important factor. For a physical service such as a shop, restaurant or hotel, customer convenience will be critical revenue. Shops must be located in areas of high footfall.
Proximity to Materials: For manufacturing businesses, nearness to materials may be more important than nearness to customers. Being close to materials can cut costs for firms in manufacturing.
Proximity to Labour: Labour is key to any business; therefore businesses must be located in areas where the labour force is equipped with the necessary skills to allow the business to thrive.
Proximity to Competitors: Many businesses want at location far away from competitors – effectively being the only supplier to customers in a local area. However, some businesses will want to be closer to their competitors as location is key to their business. For example; location is key for restaurants and more important than proximity to competitors.
34. How has the internet impacted business location:
Due to the impact of e-commerce, business location matters less. Firms can locate their head office anywhere they choose provided the local labour force are equipped with the skills to run the administration effectively. Internet based firms will have a more extensive stock range in all sizes and can cater more extensively for consumers needs than retail outlets.
35. Business Location: Key terms:
Fixed Premises:
Real life buildings such as shops, offices and warehouses.
Proximity:
Nearness: Whether or not a business wants to be closer to a factor such as its customers.

29. Key Words: Making your business effective	
Term	Definition
Bankrupt	When an individual is unable to pay their debts, even after all personal assets have been sold for cash
Private Limited Company	A small family business in which shareholders enjoyed limited liability
Sole Trader	A business run by one person; that person has unlimited liability for any business debts.
30. Franchising	
Paying a franchise owner for the right to use an established business name, branding and business methods	
Why do Businesses expand by selling franchises?	
A firm can expand its sales quickly; this helps fill gaps that other businesses will fill if they don't	
Franchise owners not only sell a franchise but will receive a share of all future sales. Subway receives 8% of the sales revenue of all 45,000 stores.	
The Franchise owner can concentrate on developing new products and services, and on high quality advertising.	
31. What are the benefits of Franchising for a entrepreneur?	
When you franchise you buy the companies images, products and methods. Starting a business requires a wide range of skills, by franchising you are giving your business a stronger starting point.	
An individual outlet/business could never afford image building TV advertising, franchising enables business to benefit from major marketing campaigns.	
32. What are Royalties?	
The percentage of sales revenue to be paid to the overall franchise owners	
36. Marketing Mix	
The four factors that make up the marketing mix, usually referred to as the marketing mix. Usually referred to as the four ps.	
Product	Targeting customers with a product that has the right blend of functional aesthetic benefits without being too expensive to produce
Price	Setting the price that retailers must pay which in turn affects the consumers price
Promotion	Includes all the methods that a business uses to persuade customers to buy, for example branding, packaging, advertising to boost long term image of the product and short-term offers
Place	How and where the supplier is going to get the product or service to the consumer; it includes selling products to retailers and getting the products displayed in prominent positions.
37. What is a business plan?	
A detailed document setting out the marketing and financial thinking behind a proposed new business.	
38. What should a good business plan contain?	
1.	The business idea; Why, who & how?
2.	Business Aims & Objectives; What is business setting out to do?
3.	Target Market; Who will you be your target consumer?
4.	Marketing Plan; How will you market your product to consumers?
5.	Forecast revenue, costs and profits; Working out the break-even point
6.	Cash Flow Forecast; Cash is key to any business
7.	Sources of Finance; How will the business fund itself?
8.	Location; Where should the business be based?
9.	Marketing Mix: How will the company market their product?

GCSE Business. Paper 1. Making the Business Effective

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Food choice

Food choice

Food choices for a balanced diet depend on many factors, such as: advertising and other point of sale information; cost and economic considerations; cultural or religious practices; environmental and ethical considerations; food availability; food preferences; food provenance; health concerns; individual energy and nutrient needs; portion size; social considerations.

Consumer information

Information can help consumers make informed choices, including: advertising and marketing; media, online blogs/forums; packaging, nutrition and health claims; point of purchase information and product placement; recipe ideas.

Cost and economic considerations

The cost of food and money available will influence people's food choices. If money is limited, people may choose to buy more basic items. Luxury items might then be selected for special occasions.

Food prices

Food prices can and do change throughout the year and over time. This may be due to a variety of reasons, including:

- climate and weather patterns;
- crop failure;
- crop disease;
- seasonality;
- consumer demand;
- agricultural costs increase;
- fuel prices go up;
- increased use of biofuels.

Budgeting

There are many things that we can do to spend money wisely on food. Examples can include: eating the seasons; stocking up on food with a long shelf-life; taking time to plan meals and write a shopping list; cooking using one pot; making fake-away's rather than buying takeaways; using leftovers; replacing branded items with cheaper items; comparing prices and shop around to find the cheapest items; growing your own food.

Environmental and ethical considerations

Some considerations when buying food might be:

- fair trade;
- local food;
- genetically modified (GM) food;
- organic food;
- free range.

Food availability

Buying food when it is in season will often mean that the price is lower. Technology and the importation of food has allowed food to be available all year round.

Personal preferences

A few factors can influence personal preferences, including:

- colour, size and shape of crockery and cutlery used;
- portion size;
- serving style;
- taste, aroma, texture, appearance, shape and colour of food.

Food provenance

Food provenance is about where food is grown, caught or reared, and how it was produced. Food certification and assurance schemes guarantee defined standards of food safety or animal welfare. There are many in the UK, including:



Health concerns

People may choose their food based on their own or their family's health and wellbeing:

- allergy and intolerance, e.g. lactose intolerance, coeliac disease, wheat allergy, dairy allergy;
- body image;
- health issues, e.g. coronary heart disease, type 2 diabetes, inflammatory bowel disease, over or under malnutrition;
- mental health.

Individual energy and nutrient needs

The amount of energy and nutrients needed differs between different age groups and between males and females. Energy needs also depend on activity levels. For example, athletes will have much higher energy requirements due to their high level of physical activity.

Key terms

Advertising: Advertising is a form of communication for marketing and used to encourage, persuade, or manipulate an audience to continue or take some new action.

Ethical: Relating to personal beliefs about what is morally right and wrong.

Food certification and assurance schemes: Defined standards of food safety, quality or animal welfare.

Food provenance: Knowing where food was grown, caught or raised and how it was produced.

Marketing: Promoting and selling products or services, including market research and advertising.

Religion: A particular system of faith and worship.

Seasonal food: Food grown at a particular time of year.

Portion size

Having a healthy, balanced diet is about getting the right types of foods and drinks in the right amounts.



Social considerations

- Body image and peer pressure.
- Development of ready meals and a wider range of convenience foods.
- Development of labour saving devices.
- Lack of competence and confidence in the kitchen.
- Lack of time.
- Living arrangement (e.g. living alone).

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Year 10 PRODUCT DESIGN Term 4



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What we are learning this term:																																																																																																																			
A. Finite Resources B. CAD C. Renewable D. Electronic Systems E. Metals & Alloys F. Surface Treatments																																																																																																																			
C. Renewable Resources																																																																																																																			
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Biomass																																																																																																																			
Advantages																																																																																																																			
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<ul style="list-style-type: none"> CO2 released used by plants Replacements can be grown 																																																																																																																			
D. Electronic Systems																																																																																																																			
Input / Sensor																																																																																																																			
Light-dependent resistor (LDR) <i>changes with light</i>																																																																																																																			
Thermistor <i>changes with temperature</i>																																																																																																																			
Piezoelectric Sensor <i>changes with sound / electric energy</i>																																																																																																																			
Process / Control Device																																																																																																																			
Switch <i>turn on and off power</i>																																																																																																																			
Resistor <i>to limit flow of current</i>																																																																																																																			
Microcontroller <i>programmable decisions</i>																																																																																																																			
Output																																																																																																																			
Speaker <i>releases sound</i>																																																																																																																			
Motor <i>releases movement</i>																																																																																																																			
Light-emitting diode (LED) <i>releases light</i>																																																																																																																			
E. Metals & Alloys																																																																																																																			
Metals are extracted from natural ore.																																																																																																																			
Ferrous	Non-ferrous																																																																																																																		
Low-carbon steel (mild steel)	Aluminium																																																																																																																		
Cast Iron	Copper																																																																																																																		
High-carbon steel (tool steel)	Tin																																																																																																																		
	Zinc																																																																																																																		
Contain iron and are magnetic, prone to rust.	Do not contain iron, not magnetic. Do not rust.																																																																																																																		
Alloys																																																																																																																			
Alloys are mixtures of two or more metals to improve its properties or aesthetic.																																																																																																																			
Brass	Stainless steel																																																																																																																		
	High-speed steel																																																																																																																		
F. Surface Treatments of Timber																																																																																																																			
Used to improve their appearance and to enhance certain properties such as durability																																																																																																																			
Paint																																																																																																																			
	Oil or Wax																																																																																																																		
Wood Stain																																																																																																																			
	Varnish																																																																																																																		
Tanalising / Pressure-treated																																																																																																																			
Preservatives can be added to extend the lifespan of the timber, protecting it from rot, decay and insects.																																																																																																																			
<p style="text-align: right;">Pressure-treated timber will have no need to paint, stain or coat it.</p>																																																																																																																			



Year 10 PRODUCT DESIGN Term 4



A. Finite Resources	
Finite resources will _____	
Coal	
Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____
Natural Gas	
Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____
Oil	
Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____
Nuclear	
Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

B. CAD	
CAD stands for _____	
Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

What we are learning this term:
 A. Finite Resources B. CAD
 C. Renewable D. Electronic Systems E.
 Metals & Alloys F. Surface Treatments

C. Renewable Resources

Renewable resources are _____

Wind

Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

Solar

Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

Tidal

Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

Hydro Electricity

Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

Biomass

Advantages	Disadvantages
• _____ • _____ • _____	• _____ • _____ • _____

D. Electronic Systems

Input / Sensor

= _____

= _____

= _____

Process / Control Device

= _____

= _____

= _____

= _____

Output

= _____

= _____

= _____

= _____



E. Metals & Alloys

Metals are extracted from _____

Ferrous	Non-ferrous
_____	_____
_____	_____
_____	_____

Contain iron and are magnetic, prone to rust.

Do not contain iron, not magnetic. Do not rust.

Alloys

Alloys are _____ to improve its _____ or _____.

F. Surface Treatments of Timber

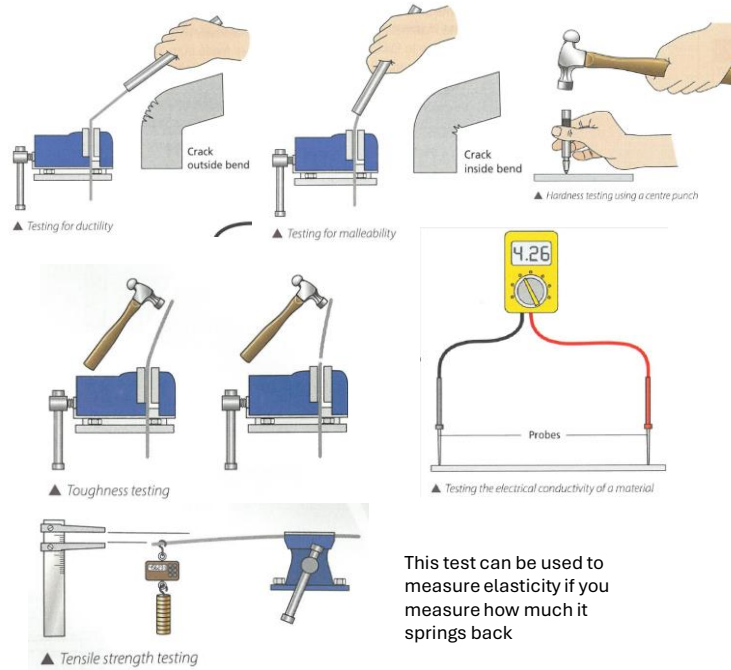
Used to _____ and to _____ such as _____

Tanalisng / Pressure-treated

Preservatives can be added to _____ of the timber, protecting it from _____, _____ and _____.

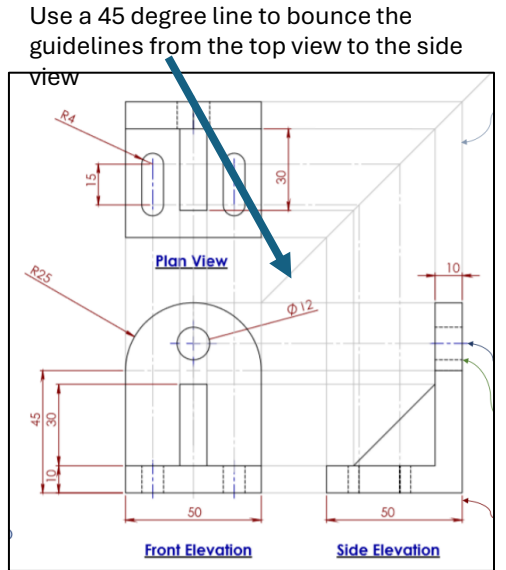


Materials and properties	
Strength	Ability of a material to withstand compression, tension, torsion, bending, and shear.
Hardness	Ability to withstand abrasion and wear and tear.
Toughness	Materials that can withstand impact, or are hard to break or snap are tough & can absorb shock.
Malleability	Being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

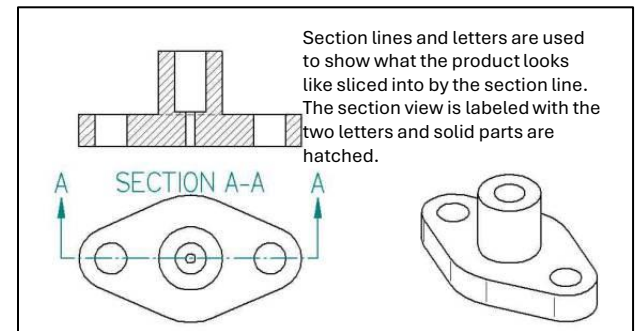


This test can be used to measure elasticity if you measure how much it springs back


Technical drawing questions
<p>Always use pencil and ruler.</p> <p>Always draw faint guide lines first.</p> <p>If you are asked to draw isometric, they will give you isometric grid paper. Follow the lines on the grid paper.</p>



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



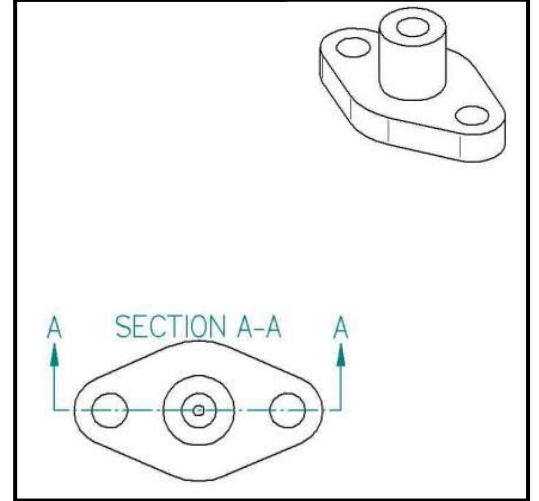
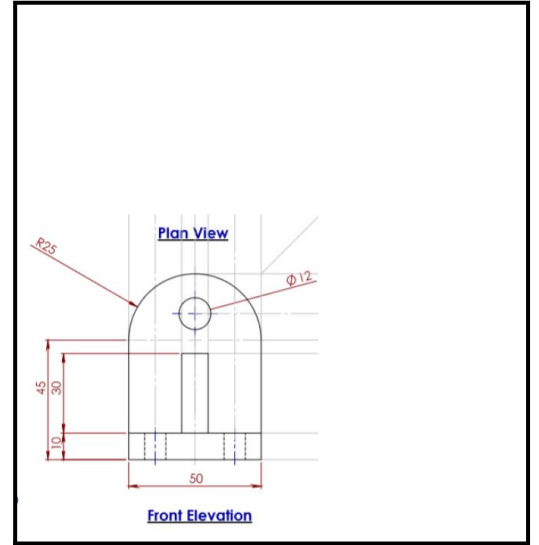


E Materials and properties 	
Strength	
Hardness	
Toughness	
Malleability	
Ductility	
Elasticity	

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

Technical drawing questions

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



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





What we are learning this term:	
A.	Understanding professional works
B.	What is a professional work
C.	What is a practitioner
D.	How do we analyse a performance
E.	What are physical skills
F.	What are interpretive skills
G.	Three different performance styles / genres

6 Key Words for this term	
1 Practitioners	4 Performance material
2 Physical skills	5 Analyse
3 Interpretive skill	6 Intentions

A.	Key question – What is the artistic purpose of a performance work?
<p>When watching a professional performance, the key questions you need to think about are the following...</p> <p>How do we Explore artistic purpose?</p> <p>Explore artistic purpose (across all three disciplines/styles) including:</p> <ul style="list-style-type: none"> to educate to inform to entertain to provoke to challenge viewpoints to raise awareness to celebrate. 	

A.	Component 1 – Key focus
<p>In this component of the qualification students will develop their understanding of drama by examining the work of existing practitioners and the processes used to create performance. Students should experience a range of work across the discipline of drama by viewing recorded and/or live work.</p> <p>While this is primarily a theoretical study of the performing arts practical investigations, students will be working at developing practical skills through workshops and links with Component 2 Developing Skills and Techniques in the Performing Arts, to engage in primary exploration of specific repertoire.</p>	

C.	Key question from Assessment objectives	
<ol style="list-style-type: none"> 1. What are physical skills 2. What are interpretive skills 3. How do we use these skills practically? 4. How do we IMPROVE on these skills? 		<ol style="list-style-type: none"> 1. What is a professional work 2. What is a practitioner 3. How do we analyse a performance 4. What are a practitioners creative intentions

G.	Key learning aims from Component 1	
<p><i>Learning aim A: Examine professional practitioners' performance work</i></p>	<p>A1: Professional practitioners' performance material, influences, creative outcomes and purpose</p> <p>Examine live and recorded performances in order to develop understanding of practitioners' work with reference to influences, outcomes and purpose.</p> <p>Focus on thematic interpretation of particular issues and how artists communicate their ideas to an audience.</p> <p>Roles and responsibilities in theatre.</p>	
	<p><i>Learning aim B: Explore the interrelationships between constituent features of existing performance material</i></p>	<p>Processes used in performance</p> <ul style="list-style-type: none"> ● Responding to stimuli to generate ideas for performance material. ● Exploring and developing ideas to develop material. ● Discussion with performers. ● Setting tasks for performers. ● Sharing ideas and intentions. ● Providing notes and/or feedback on improvements.

E.	Keywords	
Practitioners	A professional theatre maker who creates in a specific style led by a specific theatre ideology.	
Performance material	The practical work that a practitioner creates for performance.	
Creative Intentions	The ideas behind the choreography, why the choreographer choose to create the work.	
Review	Look over your current work and the work of others and be able to review and comment on your own and others practice	
Analyse/ Evaluate	Watch and then analyse your own performance and the work of others and giving comments and judgements on what you see	
Influences	How the practitioner has been influenced by others, their experiences, their training and how this has affected the work they create.	
Physical skills	The physical attributes that an actor uses, stamina, strength, flexibility, control, to dance with technical accuracy.	



What we are learning this term:	
A.	Understanding professional works
B.	What is a professional work
C.	What is a practitioner
D.	How do we analyse a performance
E.	What are physical skills
F.	What are interpretive skills
G.	Three different performance styles / genres

6 Key Words for this term	
1 Practitioners	4 Performance material
2 Physical skills	5 Analyse
3 Interpretive skill	6 Intentions

A.	Key question – What is the artistic purpose of a performance work?
<p>When watching a professional performance, the key questions you need to think about are the following... How do _____? (across all three disciplines/styles) including: to _____ to _____ to _____ to _____ to _____ to _____</p>	

A.	Component 1 – Key focus
<p>In this component of the qualification students will develop their understanding of drama by examining the work of _____s and the _____ used to _____.</p> <p>Students should experience a range of work across the discipline of drama by viewing recorded and/or live work.</p> <p>While this is primarily a theoretical study of the performing arts practical investigations, students will be working at developing practical skills through _____s and links with Component 2 _____ and Te_____s in the Performing Arts, to engage in primary exploration of specific repertoire.</p>	

C.	Key question from Assessment objectives
<ol style="list-style-type: none"> 1. What are physical skills 2. What are interpretive skills 3. How do we use these skills practically? 4. How do we IMPROVE on these skills? 	<ol style="list-style-type: none"> 1. What is a professional work 2. What is a practitioner 3. How do we analyse a performance 4. What are a practitioners creative intentions

G.	Key learning aims from Component 1
<p><i>Learning aim A: Examine professional practitioners' performance work</i></p>	<p>A1: Professional practitioners' performance material, influences, creative outcomes and purpose</p> <p>Examine _____ and _____ performances in order to develop _____ of practitioners' work with reference to _____s, o_____s and p_____se. Focus on _____ i_____ of particular i_____ and how artists c_____te their ideas to an _____e. Roles and responsibilities in theatre.</p>
	<p><i>Learning aim B: Explore the interrelationships between constituent features of existing performance material</i></p> <p>Processes used in performance</p> <ul style="list-style-type: none"> • Responding to _____ to generate id_____s for performance material. • Exploring and developing ideas to develop material. • D_____on with performers. • Setting _____ for performers. • S_____ng ideas and intentions. • Providing _____ and/or fe_____ck on imp_____nts.

E.	Keywords
Practitioners	
Performance material	
Creative Intentions	
Review	
Analyse/ Evaluate	
Influences	
Physical skills	

BUILDING BRICKS:

Exploring the Elements of Music and the Functions of a Keyboard
Why? – To excel in listening, analysis, composition & performance

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A. MELODY

Melody is a succession of pitches in rhythm. The melody is usually the most memorable aspect of a song, the one the listener remembers and is able to perform.

KEYWORD	MEANING
Pitch	How high or low a sound is
Octave	A series of 8 notes e.g., C-C, D-D
Pentatonic	A musical scale with 5 notes
Range	The distance between the lowest and highest pitched note in a melody
Motif	A repeated theme that is memorable
Hook/Riff	A very catchy melodic phrase
Imitation	Repeated melody in a different instrument or voice

B. ARTICULATION

Articulation refers to the way that notes should be performed. There are many types of articulation, with each having a different effect on how the note is played.

KEYWORD	MEANING
Staccato	Short and detached notes
Legato	Smooth and slurred notes
Accent	Emphasis placed on a particular note/beat
Pizzicato	Plucked strings
Arco	Bowed strings
Col Legno	Hitting strings with the wood of the bow
Glissando	Sweeping notes (think of the harp)
Vibrato	Subtly vibrating the sound by alternating the pitch between two notes

C. DYNAMICS

The dynamics of a piece is the variation in loudness between notes or phrases. Musicians use a variety of dynamics to add excitement and emotion to songs.

KEYWORD	MEANING	SYMBOL
Pianissimo	Very quiet	<i>pp</i>
Mezzo Piano	Moderately quiet	<i>mp</i>
Piano	Quiet	<i>p</i>
Mezzo Forte	Moderately loud	<i>mf</i>
Forte	Loud	<i>f</i>
Fortissimo	Very loud	<i>ff</i>
Crescendo	Gradually louder	
Diminuendo	Gradually quieter	

D. TEXTURE

Texture describes how layers of sound within a piece of music interact. Texture is determined by how many instruments are playing and how many different parts there are.

KEYWORD	MEANING
Unison	All playing or singing the same note
Thick/Thin	Number of layers of instruments/voices
Monophonic	A single line of musical notes
Homophonic	Moving together in chordal fashion
Polyphonic	Multiple layers, weaving melodic lines
Tutti	Meaning 'everyone' or 'all together'
Call & Response	Like question and answer – two parts having a musical conversation
Countermelody	A tune that complements the main melody

E. STRUCTURE






Structure is the order that different parts of the song are played in. The basic structure of a song can include an intro, verse, pre-chorus, chorus, and bridge.

KEYWORD	MEANING
Binary	Two main sections, AB
Ternary	Three distinct sections, ABA
Rondo	Initial section that recurs, ABACADA
Theme & Variations	A melody is stated and is then repeated several times with changes
Verse	Tells the main story of a song
Chorus	A catchy part that is repeated in a song
Bridge	A contrasting section that prepares the listener for the return of the chorus

F. HARMONY

Harmony is the blending of simultaneous sounds of different pitch. A harmony differs from a melody in the way that it stacks multiple notes on top of one another to create a sound.

KEYWORD	MEANING
Chord	Three or more notes played together
Triad	Three notes: root, third, fifth
Arpeggio	Broken chord: notes are sounded individually
Perfect Cadence	Two chords at the end of a passage that sound as though the music has come to an end
Imperfect Cadence	Two chords at the end of a passage that make the music sound unfinished
Modulation	The change from one tonality to another
Dissonance	Two or more clashing notes

Question	Answer	Question	Answer
Identify this musical symbol 		What is a Motif ?	
What does this symbol mean? 		What does pizzicato mean?	
What does Homophonic mean?		What does Fortissimo mean?	
How many sections are there in a Binary form piece of music?	1 2 3 4	Draw the symbol for Fortissimo	
What sections are in a Ternary Form piece of music?	AB ABA ABACA	Identify this musical symbol 	
Identify this musical symbol 		What does the above symbol mean?	
What does this symbol mean? 		Put these dynamic markings in order from quietest to loudest: p ff f mp pp mf	
What is the definition for a hook/riff ?		What is an accent ? The symbol is >	
How many beats is this note worth?		What's the musical term for notes that are played short and detached ?	
What is the musical term for notes that are played smooth and slurred ?		What does Pentatonic mean?	
What is an Octave ?		What texture has multiple layers and weaving melodic lines?	

G. INSTRUMENTS

KEYWORD	MEANING
Strings	Violin, Viola, Cello, Double Bass, Harp
Brass	Trumpet, French Horn, Trombone, Tuba
Woodwind	Piccolo, Flute, Clarinet, Oboe, Bassoon
Percussion	Timpani, Xylophone, Glockenspiel, Maracas
Soprano	Highest female singing voice
Alto	A lower female singing voice
Tenor	Standard male singing voice
Bass	Low male singing voice

H. RHYTHM

Rhythm involves time—the duration of musical sounds. Rhythm can exist without melody, as in the drumbeats of music, but melody cannot exist without rhythm.

KEYWORD	MEANING	SYMBOL
Semiquaver	¼ beat	
Quaver	½ beat	
Pair of Quavers	1 beat	
Crotchet	1 beat	
Minim	2 beats	
Dotted Minim	3 beats	
Semibreve	4 beats	
Breve	8 beats	

I. TIMBRE

Timbre refers to the quality of a sound made by a particular voice or musical instrument. It is what makes a musical note sound different from another one.

ADJECTIVE	INSTRUMENT	ADJECTIVE	INSTRUMENT
Sweet	Flute	Hollow	Xylophone
Nasal	Oboe	Booming	Bass Drum
Tinkly	Glockenspiel	Muted	French Horn
Pounding	Timpani	Dull	Viola
Brassy	Trumpet	Breathy	Saxophone
Mellow	Clarinet	Shrill	Piccolo
Rich	Cello	Pure	Violin
Crashing	Cymbals	Rattly	Maracas
Dark	Double Bass	Reedy	Bassoon

J. TEMPO

Tempo means the speed at which a piece of music should be played. As with many other musical terms, Italian words are used to describe different tempos of music.




KEYWORD	MEANING	SYMBOL
Presto	Very fast	168-200bpm
Allegro	Fast	120-168bpm
Moderato	Moderate	108-120bpm
Andante	Walking pace	76-108bpm
Adagio	Slow	66-76bpm
Largo	Very slow	40-66bpm
Accelerando	Gradually faster	accel.
Rallentando	Gradually slower	rall.

K. LAYOUT AND FUNCTIONS OF A KEYBOARD

1. Power Button (on/off)
2. Volume
3. Accompaniment
4. Intro/Ending
5. Sync. Start
6. Start/Stop Button
7. Tempo Button
8. Screen
9. Song
10. Voice
11. Style
12. Go left on options
13. Go right on options
14. Dual





L. DRILL TERMS

KEYWORD	MEANING	KEYWORD	MEANING	KEYWORD	MEANING
Treble Clef	Also known as the G Clef as it starts on the G line	Quaver	A note that lasts for ½ beat	Dotted Minim	A note that lasts for 3 beats
Bass Clef	Also known as the F Clef as it starts on the F line	Crotchet	A note that lasts for 1 beat	Semibreve	A note that lasts for 4 beats
Stave	5 lines, 4 spaces that music notes are written on	Minim	A note that lasts for 2 beats	Sharp/Flat	Higher/Lower by 1 semitone

Question	Answer	Question	Answer
How many Semi-quavers are in a Crochet ?		What Instrument has a Dark Timbre ?	
What does Accelerando mean?		What is the definition of Allegro ?	
Give the names of 4 Brass instruments ...		How many Quavers are in a Minim ?	
How many Beats is this note? 		What does Alto mean?	
What is the name the note? 		What Clef is also know as the F Clef ?	
What does the word Presto mean?		Identify this musical symbol 	
List 3 instruments found in the Brass section of an orchestra		How many beats is this symbol? 	
Solve this problem: 		List 3 instruments found in the Woodwind section of an orchestra	
What note lasts for 4 beats ?		What musical term is used for the highest female singing voice ?	
What does Sharp/Flat mean?		What Timbre does the Violin have?	
What does the key word Andante mean?		List 3 instruments that can be found in the string section	





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

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






B	What are the main life stages?		C	What are the 4 areas of growth and development (PIES)?
Age Group	Life Stage	Developmental Characteristics and Progress	 Physical Development (P)  Intellectual Development (I)  Emotional Development (E)  Social Development (S)	P = growth patterns and changes in the mobility of the large and small muscles in the body that happen throughout life. I = how people develop their thinking skills, memory and language. E = how people develop their identity and cope with feelings. S = describes how people develop friendships and relationships.
0-2 years	Infancy	Sill dependent on parents but growing quickly and developing physical skills.		
3-8 years	Early Childhood	Becoming increasingly independent, improving thought processes and learning how to develop friendships.		
9-18 years	Adolescence	Experiencing puberty, which bring physical and emotional changes.		
19-45 years	Early Adulthood	Leaving home, making own choices about a career and may start a family.		
46-65 years	Middle Adulthood	Having more time to travel and take up hobbies as children may be leaving home; beginning of the aging process.		
65+ years	Later Adulthood	The aging process continues, which may affect memory and mobility.		






D.	How do humans develop physically (P)?
0-2	<ul style="list-style-type: none"> Gross Motor Development (G) = life head, roll over, sit unaided, walk holding onto something, walk unaided, climb stairs, kick and throw, walk upstairs, jump. Fine Motor Development (F) = hold a rattle for short time, reach for an item, pass item from one hand to other, hold between finger and thumb, scribble, build a tower, use a spoon, draw lines and circles, turn page of a book.
3-8	<ul style="list-style-type: none"> G = ride a tricycle, catch a ball with two hands, walk backwards and step to the side, bounce a ball, run on tiptoes, ride a bike, catch a ball with one hand, balance along a thin line. F = hold a crayon to make circles and lines, thread small beads, copy letters and shapes with a pencil, make detailed models with construction bricks, joined up writing, use a needle to sew.
9-18	<ul style="list-style-type: none"> Girls = puberty starts at 10-13 years, breasts grow, hips widen, menstruation begins, uterus and vagina grow. Boys = voice deepens, muscles and strength increase, erections, facial hair, produce sperm. Both = pubic and underarm hair, growth spurts.
19-45	<ul style="list-style-type: none"> Physically mature, sexual characteristics are fully formed, peak of physical fitness, full height, women at most fertile. Later in the life stage people may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down
46-65	<ul style="list-style-type: none"> People may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down. Women go through the menopause – when menstruation ends and they can no longer become pregnant. Men may continue to be fertile throughout life but decrease in sperm production in this life stage.
65+	<ul style="list-style-type: none"> Women's hair becomes thinner, men may lose most of their hair, skin loses elasticity and wrinkles appear, nails hard and brittle, bones weaken, higher risk of contracting infections disease and illness. Stamina, reaction time, muscle and senses (hearing, sight, taste) all reduce.

What we are learning this term:	
A. Key words	
B. What are the main life stages	
C. What are the 4 areas of growth and development (PIES)?	
D. How do Humans develop physically (P)?	
A.	Key words for this Unit
Characteristics	
Life stages	
Growth	
Development	
Gross motor development (G)	
Fine motor development (F)	
Language development	
Contentment	
Self-image	
Self-esteem	
Informal relationships	
Friendships	
Formal relationships	
Intimate relationships	

B	What are the main life stages?		C	What are the 4 areas of growth and development (PIES)? Explain them.
Age Group	Life Stage	Developmental Characteristics and Progress		
0-2 years			Physical Development (P) 	
3-8 years				
9-18 years			Intellectual Development (I) 	
19-45 years			Emotional Development (E) 	
46-65 years				
65+ years			Social Development (S) 	

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





What we are learning this term:		F. How do humans develop emotionally (E)?	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?			
E. How do humans develop intellectually (I)?			
Infancy 	At birth brains are already well developed. Infants use all of their senses to learn about the world around them. Infancy is a time of rapid intellectual development. At 3 months infants can remember routines. At 9-12 months infants are developing their memory. At 12 months to 2 years infants understand processes and how things work. Language begins to develop during this stage.	<u>Bonding and Attachment</u> Bonding and attachment describe the emotional ties an individual forms with others. It starts in the first year of life between infants and their main carer because that person fulfils the infants needs which makes them feel safe and secure.	<u>Adolescence and adulthood</u> <u>Self-image and Self-esteem</u> Self-image is heightened during adolescence because of the physical changes we experience. Our self-esteem can change from day to day based on a variety of factors including employment and health status.
		<u>Security</u> For infants and young children, security is mainly the feeling of being cared for, being safe and loved – it is closely linked with attachment.	<u>Security</u> Adolescence may feel insecure because of puberty. Adults may feel insecure about relationships, job security of income. Later in life adults may feel insecure about staying in their own home or going into a care home. Feeling secure helps us cope better with everyday situations.
		<u>Contentment</u> Infants and young children are content if they have had enough food, love, are clean and dry and all other needs are met.	<u>Contentment</u> When people feel discontented with aspects of their life – for example, relationships or work – their emotions can be negatively affected.
Early childhood 	At 3-4 years of age children become more inquisitive and enjoy exploring objects and materials. They ask lots of questions and enjoy solving simple problems. At 5-6 years old children’s memory is becoming well developed. This helps them to talk about the past and anticipate the future.	<u>Independence</u> Independence is to care for yourself and make your own decisions. Infants are completely dependent on their carer. As children enter early childhood they develop more independence – feed self and get dressed. However, children still need a lot of help from their carer.	<u>Independence</u> Adolescence are dependent on their parents but are beginning to enjoy more independence and freedom to make their own choices. Adults enjoy living independently and controlling their own lifestyle and environment. Later in adulthood people become more dependent on others again.
G. How do humans develop socially (S)?			
Life Stage		Types of relationships and social development	
Adolescence 		Infancy	<ul style="list-style-type: none"> • Solitary Play - From birth to 2 years, infants tend to play alone although they like to be close to their parent or carer; they may be aware of other children but not play with them.
		Early childhood	<ul style="list-style-type: none"> • Parallel Play - From 2 to 3 years, children enjoy playing next to other children but are absorbed in their own game; they are not socialising or playing with other children. • Cooperative or social play – from 3 years upwards, children start to play with other children; they have developed social skills that help them to share and talk together; they often make up games together, such as being a shopkeeper and customer.
		Adolescence	<ul style="list-style-type: none"> • People become more independent and build more informal and formal relationships. • Social development closely linked to emotions. • Often strongly influenced by peers – ‘peer group pressure’.
Early and Middle Adulthood 	By these life stages most adults have a good range of general knowledge. They use this knowledge and experience to solve problems that they come across in their personal and work lives.	Early adulthood	<ul style="list-style-type: none"> • Increased independence means greater control of decisions about informal relationships. • People may be developing emotional and social ties with partners and their own children. • Social life often centred on the family but social skills are required to build and maintain formal relationships.
Later adulthood 	During this life stage people continue to learn and develop intellectually, however, their speed of thinking and memory may decline. This may affect their ability to think through problems and make logical decisions.	Middle adulthood	<ul style="list-style-type: none"> • Children have often left home, but there are likely to still be strong family relationships. • Social circles may expand through travel, spending more time on hobbies or joining new groups.
		Later adulthood	<ul style="list-style-type: none"> • Retired by this stage and so may enjoy more social time with family and friends or join new groups. • However, later in the life stage people may begin to feel isolated if they struggle to get out or if partners and friends pass away.

What we are learning this term:		F. How do humans develop emotionally (E)? Explain each.	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?			
E. <i>How do humans develop intellectually (I)?</i>			
Infancy			
			
Early childhood			
			
Adolescence			
			
Early and Middle Adulthood			
			
Later adulthood			
			
		G. How do humans develop socially (S)?	
		Life Stage Types of relationships and social development	
		Infancy	
		Early childhood	
		Adolescence	
		Early adulthood	
		Middle adulthood	
		Later adulthood	
		Infancy and Early Childhood	
		Adolescence and adulthood	
		Bonding and Attachment	Self-image and Self-esteem
		Security	Security
		Contentment	Contentment
		Independence	Independence

What we are learning this term:	
H.	Key words
I.	How do physical factors affect development?
J.	How does lifestyle affect development?
K.	How do social and cultural factors affect development?
L.	How do relationships and isolation affect development?
M.	How do economic factors affect development?

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



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

J.	How does lifestyle affect development?	
Lifestyle choices include; diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance.		
Positive lifestyle choices lead to: <ul style="list-style-type: none"> • Healthy hair, skin, nails and teeth • Positive self-image • Energy and stamina • Good health • Emotional security 		Negative lifestyle choices lead to: <ul style="list-style-type: none"> • Being overweight or underweight • Lack of energy • Ill health • Negative self-image • Sexually transmitted diseases (STDs) • Unplanned pregnancy 
Our appearance includes: body shape, facial features, hair and nails, personal hygiene and our clothing. Our appearance can affect the way we view ourselves- self-image		
Positive self-image: <ul style="list-style-type: none"> • Feel good about yourself. • Healthy hair, skin, nails and teeth • Big social circle. • High self-esteem. • High self-confidence. 		Negative self-image <ul style="list-style-type: none"> • Low self-esteem • Low self-confidence • Can lead to eating disorders e.g. anorexia • Can lead to anxiety or depression • Can lead to self-harm • Negative impact on building relationships- social circle decreases. 

What we are learning this term:	
H.	Key words
I.	How do physical factors affect development?
J.	How does lifestyle affect development?
K.	How do social and cultural factors affect development?
L.	How do relationships and isolation affect development?
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H	Key words:
Genetic inheritance	
Genetic disorders	
Lifestyle Choices	
Appearance	
Factor	
Gender role	
Culture	
Role models	
Social Isolation	
Material possessions	
Economic	

I.	How do physical factors affect development?	
	<u>Genetic Disorders</u>	<u>Disease and Illness</u>
Physical Development		
Intellectual Development		
Emotional Development		
Social Development		

J.	How does lifestyle affect development?	
Lifestyle choices include; diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance.		
<u>Positive lifestyle choices lead to:</u>		<u>Negative lifestyle choices lead to:</u>
<ul style="list-style-type: none"> • • • • • 		<ul style="list-style-type: none"> • • • • •
Our appearance includes: body shape, facial features, hair and nails, personal hygiene and our clothing. Our appearance can affect the way we view ourselves- self-image		
<u>Positive self-image:</u>		<u>Negative self-image</u>
<ul style="list-style-type: none"> • • • • • 		<ul style="list-style-type: none"> • • • • •



K How do social and cultural factors affect development

Development can be influenced by the persons **culture or religion** because it affected their:

- **Values:** how they behave
- **Lifestyle choices:** diet, appearance

Positive affects of a persons culture/religion:

- A sense of security and belonging from sharing the same values and beliefs with others.
- Good self-esteem through being accepted and valued by others

Negative affects of a persons culture/religion:

- Feeling discriminated against by people who do not share their religion/culture which leads to low self-image
- Feeling excluded and isolated because their needs like diet, are not catered for.

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

Belonging to a community:

- Brings sense of belonging essential for emotional development.
- Building and maintaining relationships- social development
- Feeling of security.
- Increases self-image and self-confidence

Not belonging to a community:

- Minimal contact with others- isolation
- Anxiety leading to depression
- Making negative lifestyle choices
- Feeling less secure
- Difficulty in building relationships
- Slow self-image and self-confidence

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

What happens when people face discrimination because of gender:

- They might be excluded from a group
- They may be refused promotion at work
- They may be expected to carry out a particular role
- They may be paid less.

What we are learning this term:

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

L How do relationships and isolation affect development?

1 In adolescence, young people often argue with parents because they want more independence- negative affect on family relationships- can lead to isolation from them.

2 In later life, older people might need to rely on their children for support. This then has a positive affect on their development because all their need are catered for.

3 Relationships are important because they provide emotional security, contentment and positive self- esteem.

4 The breakdown of personal relationships can have a negative effect on persons PIES development:
Low self-esteem, loss of confidence, stress.

5 Isolation can happen when individuals do not have the opportunity of regular contact with others. They have no one to share their feelings, thoughts and worries with resulting in feeling insecure and anxious.

6 Isolation can happen because they live alone, are unemployed or retired, are discriminated against or have an illness or a disability.

7 People have role models- infants learn by copying others, and adolescence base their identity on their role models. Role models can influence how people see themselves compared to others and their lifestyle choices can be positive or negative.

M How do economic factors affect development

Having enough money gives individuals and their families feeling of content and security

Not having enough money causes stress and anxiety.

Having enough money means that the whole family is eating healthy.

Not having enough money can mean that the family is not about to eat well balanced diet, and this has a negative effect on their physical development

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

Living in good housing with open spaces:

- Feeling good about themselves
- Be more likely to stay healthy,
- Space to take exercise
- Feel safe ad secure
- Warmth

Living in a poor housing with cramped and damp conditions:

- Have low self-esteem and self-image
- Be more likely to experience ill health
- Be lessson likely to exercise
- Anxious and stressed.

Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image.

Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.



What we are learning this term:

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

K How do social and cultural factors affect development

Development can be influenced by the persons **culture or religion** because it affected their:

- **Values:** how they behave
- **Lifestyle choices:** diet, appearance

<u>Positive affects of a persons culture/religion:</u>	<u>Negative affects of a persons culture/religion:</u>
•	•
•	•

Community refers to:

<u>Belonging to a community:</u>	<u>Not belonging to a community:</u>
•	•
•	•
•	•
•	•
•	•

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

What happens when people face discrimination because of gender:

-
-
-
-

L How do relationships and isolation affect development?

1	
2	
3	
4	
5	
6	
7	

M How do economic factors affect development

Having enough money....	Not having enough money
•	•
•	•
→	
Having enough money means that....	Not having enough money can mean that...
•	•
•	•
→	
Elderly people rely on state pension to live which is not enough and have to cut down on travel, shopping, bills, therefore it speeds their aging process and lead to health decline.	
<u>Living in good housing with open spaces:</u>	<u>Living in a poor housing with cramped and damp conditions:</u>
•	•
•	•
•	•
•	•
•	•
Material possession like a new phone or coat has a positive effect on the persons development because.....	Not having a phone or the newest trainers can have a negative affect on.... Because....
•	•
•	•
•	•
•	•
→	

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

O.	How do people deal with life events?
Individual	<ul style="list-style-type: none"> The effects of life events vary from person to person based on how they deal with their new situation. Some people react to able to react to life events positively, others find it more difficult due to a range of factors.
Factors	<ul style="list-style-type: none"> Factors that may affect how people cope with life events: age, other life events happening at the same time, the support they have, their disposition (their mood, attitude and general nature), their self-esteem, their resilience (how quickly they recover).
Adapting	<ul style="list-style-type: none"> Adapt – to adjust to new conditions or circumstances. Expected on unexpected life events can often force people to make changes to their lives. Individuals must find their own way to adapt to the changes that life throws at them.
Resilience	<ul style="list-style-type: none"> Resilience – a person's ability to come to terms with, and adapt to, events that happen in life. Resilience is stronger in people who have a positive outlook on life, accept that change happens, has supportive family and friends and plans for expected life events.
Time	<ul style="list-style-type: none"> Sometimes people need a long time to adapt to unexpected life events. It can take time for people to move on from and accept difficult changes in their life.

P.	How is dealing with life events supported?
Types of Support	How this helps individuals deal with life events
Emotional Support	Emotional support is needed to help individuals deal with all life events – expected and unexpected. Having someone to talk to helps people feel secure and adapt to change. Sometimes individuals can find this support in family and friends or professionals to process difficult life events – such as bereavement.
Information and Advice	Life events, particularly unexpected ones, can cause people to feel like they do not know what to do. Information and advice can help people to have a better understanding of their situation, which allows them to deal with it more successfully. Information and advice help them know where to go for help, the choices than are available to them and how to make healthy choices.
Practical Help	<ul style="list-style-type: none"> Financial help – an individual may need money to help them adapt to a life change i.e. money to pay for a stair lift if their mobility has been effected. Childcare – an individual may need support looking after their children i.e. a lone parent after a divorce that needs to go to work. Transport – an individual may need support with transport if they have mobility problems i.e. a car could be adapted to support a person who has had an accident and can no longer walk.
Informal Support	Informal support is the support an individual receives from partners, family and friends. It is usually the first form of support an individual experiences after and expected or unexpected life event. Informal support can provide reassurance, encouragement, advice, a sense of security, someone to talk through options with and practical help.
Professional Support	Formal support may be provided by statutory care services (the state), private care services and charitable organizations. Professional support may include counsellors, teachers, careers advisers, occupational therapists, social workers and health specialists. Professional support may be needed to help people with a health condition, regain mobility, deal with life changes and emotions, get advice and information or change their lifestyle.
Voluntary Support	Organizations offering voluntary support are charities, community groups and religious groups. At voluntary support services, many staff are volunteers (they work for free), but they also employ qualified people who are paid by donations. Community groups work at a local level to meet the needs of people living in a specific neighbourhood i.e. foodbanks. Religious groups are formed by people who share the same religious or spiritual beliefs but they help all people in need regardless of their beliefs and background i.e. a church run soup kitchen for the homeless.

What we are learning this term:	
N. What are life events? O. How do people deal with life events? P. How is dealing with life events supported?	
N.	What are life events?
Life Events	
Expected Life Events	
Unexpected Life Events	
Physical Events	
Relationship Changes	
Life Circumstances	

O.	How do people deal with life events?
Individual	
Factors	
Adapting	
Resilience	
Time	
P.	How is dealing with life events supported?
Types of Support	How this helps individuals deal with life events
Emotional Support	
Information and Advice	
Practical Help	
Informal Support	
Professional Support	
Voluntary Support	

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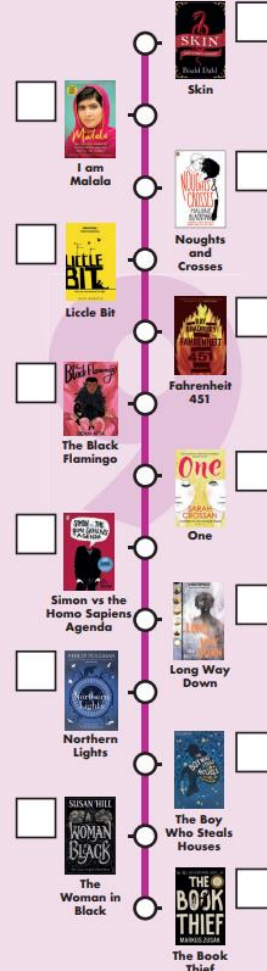
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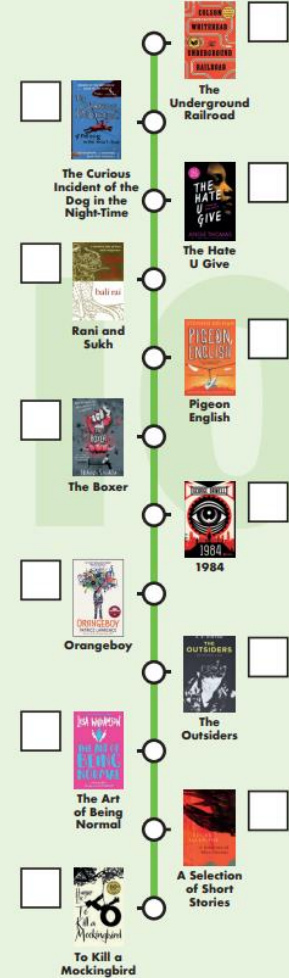
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Year 9



Year 10



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