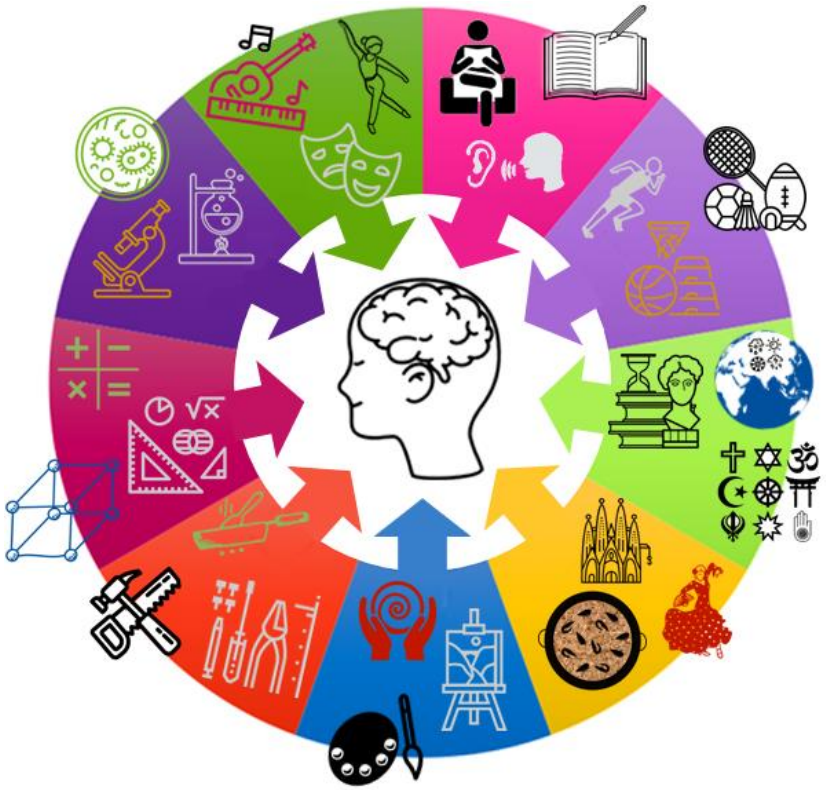
100% book - Year 10 GS

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



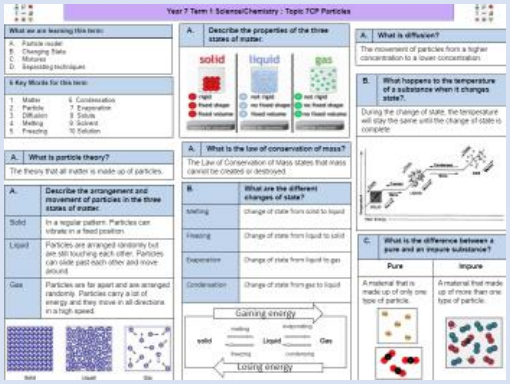
Term 1

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

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

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

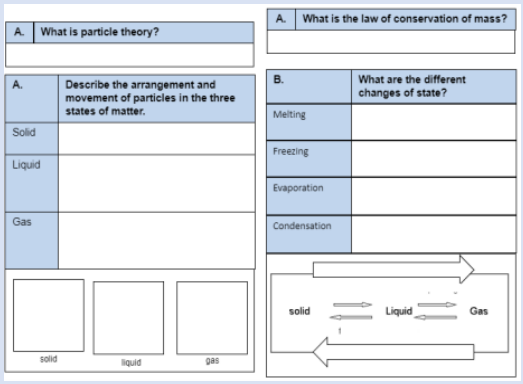
Knowledge Organisers



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

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

Quizzable Knowledge Organisers



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

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

Top Tip

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

Expectations for Prep and for using your Knowledge Organisers

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

Year 10 - ENGLISH – Poetry cluster 1: The Romantics- Grammar

Key Vocabulary	
Tyrant	A cruel and unfair ruler
Transient	Lasting for only a short time
Hubris	Having extreme pride or self-confidence
Oppression	When leaders treat people in a cruel or unfair way over a long period of time.
Patriarchy	A society where men have the most power and control
Egocentric	Thinking only of oneself
Awe	A feeling of deep respect mixed with fear or wonder
Radical	Wanting to see extreme changes in politics and society
Ephemeral	Lasting a very short time
Autocratic	A ruler who has complete power and makes decisions without asking anyone else's advice
Sinister	Something that seems evil or harmful
Revolution	A large group of people using force to change the political system of their country
Exploit	Treating someone unfairly in order to benefit from them.
Anti-establish-ment	Disagreeing with the people who have power and make decisions

Romanticism:

- A movement in literature and the arts
- From around 1800-1890
- During this time, major transitions took place in society, as dissatisfied intellectuals and artists challenged the Establishment (the church and the monarchy).
- The Romantics valued freedom, imagination, emotion and nature
- They were critical of power that institutions (such as the church and monarchy) had as they believed that they exploited the poor and restricted people's freedoms

Poem	Context	Events in the poem	Message	Form/ structure
The Prelude- William Wordsworh 	• Born in in 1770, Wordsworth was orphaned at 13 and sent to a grammar school. • Whilst he was there, he was influenced by the countryside surrounding him. • The poem you study is just a section of an epic poem and was originally going to be called 'The Recluse'. • The poem is mostly autobiographical.	• An autobiographical account of Wordsworth as a boy. • The poem focusses on a boy stealing a boat and rowing it into the middle of a lake. • Whilst there he feels as though nature is judging him and feels guilt for his theft. • He returns the boat, but the memory stays with him	• Nature has the power to inspire and destroy and so should be respected. • Nature can be overwhelming and render us feeling small and insignificant. It can remind us of our flaws and inspire us to do better. • Imagination and memories are powerful. They can cause us to permanently change our outlook.	• The poem is written in blank verse and uses iambic pentameter to mimic the conversational flow of speech. It is not split into separate stanzas but flows continuously- much like the power of nature over us. • It is an epic poem (poems that
My Last Duchess- Robert Browning 	• Browning was inspired by the writing of radical poets such as Shelley • Written in 1834, it is inspired by the actions of an Italian duke who married a young girl, who died in suspicious circumstances. • Browning moved to Italy to marry his wife because of her overprotective father. As a result, he was familiar with over-controlling patriarchs.	• The speaker of the poem (the Duke) shows a visitor through his palace. He stops before a portrait of the late Duchess who has died. • The Duke reminisces about the portrait sessions and about the Duchess. His musings give way to a rant about her disgraceful behaviour: he claims she flirted with everyone and did not appreciate his "gift of a nine-hundred-years- old name." • As his monologue continues, the reader realises that the Duke caused the Duchess's early death: when her behaviour escalated, "[he] gave commands; / Then all smiles stopped together." • Having made this admission, the Duke returns to the business at hand: arranging another marriage, with another young girl.	• Browning makes us question whether the expectations of society are too oppressive, especially for women; strict rules should not be imposed on others and there should be equality of power in society. • The power of humans is exposed as having potential dangers and Browning warns us that evil can take many forms – we should not be deceived by the outward appearance of someone; anyone can be cruel. • Furthermore, Browning shows how unattractive arrogance is; it can lead to the abuse of power. He warns us of the consuming nature of pride and jealousy: they can take over	• Dramatic monologue- reflective of the Duke's egocentricity • The regular meter and rhyme scheme (rhyming couplets) demonstrate the Duke's control over the narrative and how he has carefully constructed his argument. • However, some of the rhyming couplets are subdued by enjambment so are hidden when listening to the poem. This is reflective of the Duke's true nature. Beneath his wealth and status, he is no more than a murderous villain. • There are no breaks in the poem to split it into stanzas. This could symbolize the lack of gaps in his fortress. In a patriarchal society, a man of such a high status is protected from the repercussions of his actions.
Ozymandias- Percy Shelley 	• Shelley was considered to be a radical due to his atheism and his opposition of the church and monarchy • The poem is inspired by an Egyptian pharaoh, Ramesses II. • Rameses II was remembered for leading armies into many battles and building a huge empire. However, to do this he used slave labour and allowed his people to struggle whilst he invested huge sums of money into expanding his kingdom.	• The poem imagines a traveler describing the broken statue of Ozymandias in the vast expanse of the empty desert. • In the poem, the tyrannical Ramesses II believed himself to be 'king of kings' and that his power would be eternal. • However, where a great empire once stood, now only sand and ruins remain. • Shelley uses the poem to demonstrate the transient nature of political power and as a metaphor for his opposition of the Establishment's power.	• Shelley wanted to communicate how all power is transient – even powerful individuals are no match against nature and time. • Shelley warns tyrants that they are vulnerable; they should not be arrogant, but instead be humble and accept their own limitations and the ephemeral nature of their power. • The poem offers hope to ordinary people as they are reminded that no one's power can last forever. Shelley reminds us that the power of art and artists endures over the power of kings – particularly tyrants.	• Sonnet- Sonnets are typically love poems written in iambic pentameter. They are 14 lines long and have a strict rhyme scheme. The use of the sonnet form is reflective of Ramesses' love of power whilst the rigid structure is symbolic of both Ozymandias' oppressive rulership. It could also reflect the poet's lasting power and control over the way we remember Ozymandias – far outlasting the power of Ramesses II. • Shelley also breaks the conventional sonnet form which could symbolise how the power of tyrants is ephemeral.
London- William Blake 	• Born in London in 1757, Blake was anti-establishment and opposed many of the things he saw in London. He believed that the government, the church and the monarchy were to blame for the widespread suffering he saw on London's streets. • During this era, life was difficult for the poor. There was much sickness, disease and the children of poor parents would have had to work hard and dangerous jobs, such as chimney sweeping.	• Walking through through London's streets, the speaker notices how the course of the Thames seems to be dictated as it flows through the city. • The speaker sees sadness in the faces of every person he passes and hears pain in every voice in the city. Every law and restriction oppresses the people of London. • He hears the cry of young chimney-sweeps, whose misery brings shame on the Church authorities. Thinking of British soldiers dying in vain, the speaker imagines their blood running down the walls of a palace. • He also hears the cries of young prostitutes, who curse at their situation. This miserable sound brings misery to their tearful new-born children. The speaker also imagines this sound plaguing what the speaker calls "the Marriage hearse"—a surreal imagined vehicle that carries love and death together.	• Blake wanted to highlight the desperate suffering of the poor in 19th century Britain. • Blake believed people should be supported and cared for by institutions of power such as the church, the government and the education system. • Blake was appalled that people endured such difficulties and wanted them to break free from the oppressive control. • It could be said to be his call to revolution as he subtly hints at the French revolution in which people stood up against oppressive rulership.	• Blake uses regular stanzas and a regular rhyme scheme which reflects the monotony of the pain and suffering that the people of London face. The controlled structure is also symbolic of the control that the Establishment has over society.

Year 10 - ENGLISH – Poetry cluster 1: The Romantics- Grammar

Poem	Context	Events in the poem	Message	Form/ structure
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My Last Duchess- Robert Browning 				
Ozymandias- Percy Shelley 				
London- William Blake 				

T1 Y10 Biology 2.6– Preventing and treating diseases

Vocabulary: Clinical Placebo

Antibiotics & Painkillers

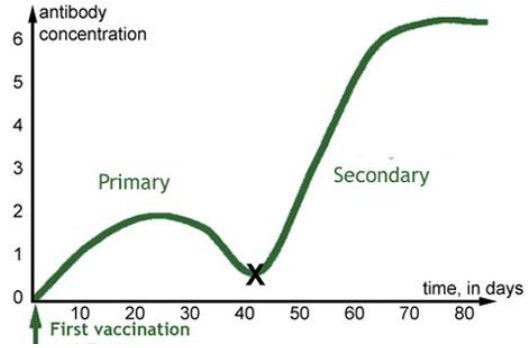
Antibiotics = kill bacteria (specific antibiotic for specific bacteria)
THEY DO NOT KILL VIRUSES
e.g. penicillin

Antibiotics cannot kill viruses because viruses live inside cells

Painkillers = stop pain (don't kill microbes, just help with symptoms)
e.g. paracetamol

Vaccination

- Introducing small quantities of dead or inactive forms of pathogen into the body.
- Stimulates WBCs to produce antibodies.



- If same pathogen returns (X), WBCs remember how to make the right antibodies.
- They make MORE antibodies, MORE QUICKLY, and they stay in body for LONGER.

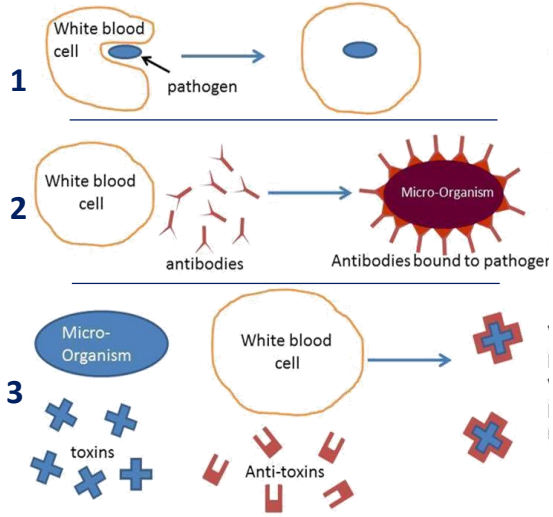
Development of Drugs

Testing for:
- Safety
- Efficacy (does it work)
- Dosage (how much is needed)

Stage		Description
1	pre-clinical	Tested on cells and tissues. Side effects? Efficacy?
2	pre-clinical	Tested on animals. Side effects?
3	clinical	Clinical trials = tested on humans. 1st health volunteers, 2nd patients with the illness. Dosage gradually increased to optimum.

White Blood Cells (WBCs)

1. Phagocytosis – engulfing the pathogen
2. Producing antibodies – specific to the antigen
3. Producing antitoxins – to neutralise toxins

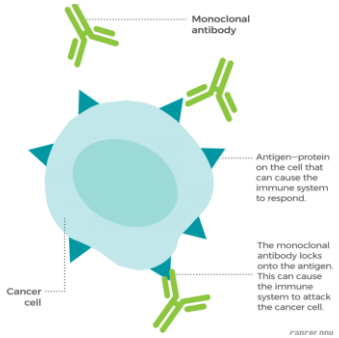


1. What is the only type of pathogen antibiotics can kill?
2. What do painkillers do?
3. Why can antibiotics NOT kill viruses?
4. What is in a vaccination?
5. Why do the white blood cells respond more quickly the second time they come into contact with a pathogen?
6. How does vaccination prevent us from becoming infected with the same pathogen in the future?
7. What are clinical trials?
8. What are the three things we test for before a drug can be used by the public?
9. What is the first stage of drug testing?
10. What are drugs tested on in preclinical trials?
11. What is phagocytosis?
12. What do antibodies attach to?
13. How to antitoxins make us feel better?

T1 Y10 Biology 2.6 – Preventing and treating

Monoclonal antibodies

An antibody produced by a single clone of cells or cell line and consisting of identical antibody molecules.



Monoclonal antibodies are produced from a single clone of cells. The antibodies are specific to one binding site on one protein antigen and so are able to target a specific chemical or specific cells in the body.

Uses of monoclonal antibodies

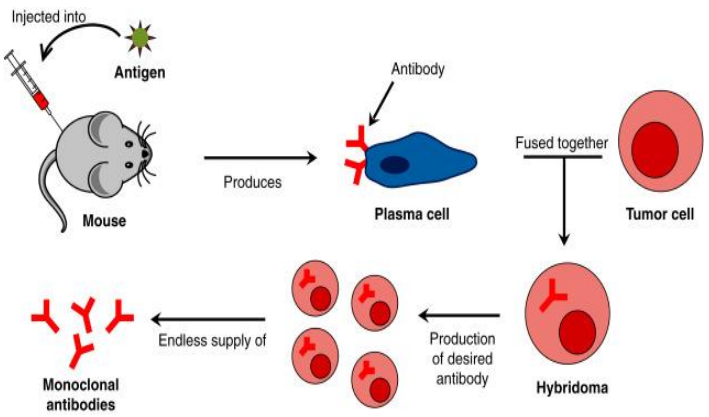
• For diagnosis such as in pregnancy tests

• In laboratories to measure the levels of hormones and other chemicals in blood, or to detect pathogens

• In research to locate or identify specific molecules in a cell or tissue by binding to them with a fluorescent dye

• To treat some diseases: for cancer the monoclonal antibody can be bound to a radioactive substance, a toxic drug or a chemical which stops cells growing and dividing. It delivers the substance to the cancer cells without harming other cells in the body

Production of monoclonal antibodies



1. They are produced by stimulating mouse lymphocytes to make a particular antibody.
2. The lymphocytes are combined with a particular kind of tumour cell to make a cell called a hybridoma cell.
3. The lymphocytes are combined with a particular kind of tumour cell to make a cell called a hybridoma cell.
4. Single hybridoma cells are cloned to produce many identical cells that all produce the same antibody.
5. A large amount of the antibody can be collected and purified.

What is a monoclonal antibody?

What are monoclonal antibodies made from?

Why are monoclonal antibodies able to target specific cells in the body?

What are the uses of monoclonal antibodies?

•

•

•

•

Describe the steps in the production of monoclonal antibodies.

1.

2.

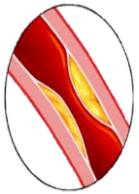
3.

4. .

5. .

T1 Y10 Biology 2.7 - Non-communicable diseases

Coronary Heart Disease (CHD)



- Coronary arteries supply heart muscle with blood (containing glucose and oxygen for respiration)
- Can become narrowed/blocked by fatty deposits if cholesterol high, reducing blood flow.
- Reduced muscle contraction in heart

Faulty Valves

- Valves in veins and the heart prevent backflow of blood
- Faulty valves = don't open or close fully
- Can be replaced with man-made valves or transplants from donors

faulty

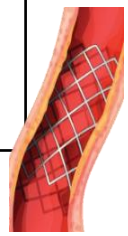
healthy

Interaction of Diseases

- Defects in the immune system - individual is more likely to suffer from infectious diseases.
- Viruses can trigger cancers, e.g. HPV can trigger cervical cancer.
- Immune reactions caused by pathogens can trigger allergies such as asthma or rashes
- Severe physical ill health can lead to depression and other mental illness.

Heart Disease Treatment – Statins vs Stents

Statins	Stents
• Medication to be taken everyday • Lowers blood cholesterol • Does not work immediately	• Mesh tube to be inserted into artery to hold it open • Surgery required • Works immediately



Risk Factors

Lifestyle factors can have be risk factors for certain diseases. E.g. obesity is a risk factor for type 2 diabetes, or drinking and smoking while pregnant affects the development of the foetus.

Cancer

Uncontrolled cell growth
Benign tumours = abnormal cells, contained in one area, in a membrane, do not invade other parts of body.
Malignant tumours = cancer cells, not in a capsule, invade neighbouring tissue, and spread into blood and form secondary tumours.

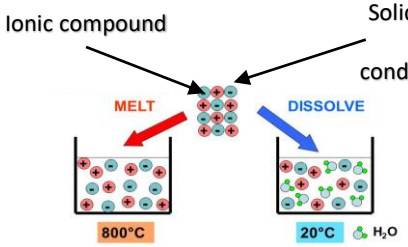
1. What do coronary arteries do?
2. What can block coronary arteries?
3. What will happen to the heart if they become blocked?
4. What is the job of a valve?
5. How can faulty valves be treated?
6. Give and example of when cancer can be triggered by a virus.
7. Give an example of an immune reaction that can be triggered by a pathogen
8. How do stents treat CHD?
9. How do statins treat CHD?
10. Give an advantage of using stents rather than statins to treat CHD
11. Name a disease linked with obesity
12. What is a benign tumour?
13. Why do benign tumours not spread?
14. How can malignant tumours spread?

T1 Y10 Chemistry C2.6 - Electrolysis

Vocabulary: Electrolysis, Electrolyte

Electrolysis

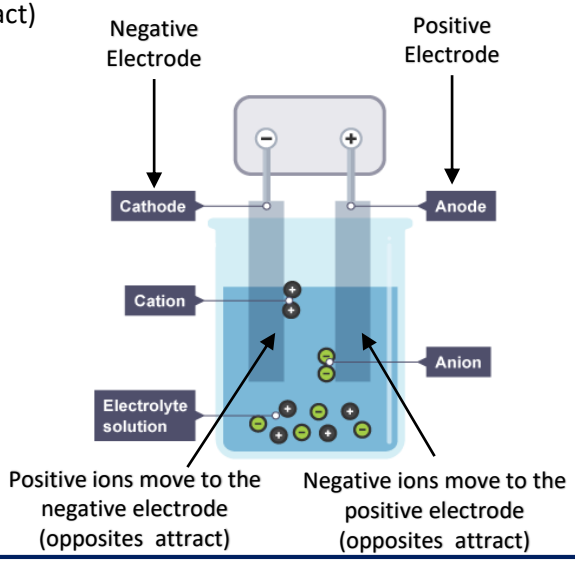
- **Splitting** up a **compound** using electricity.
- Used to extract metals from compound**s,** purify metals (eg copper)



- Must be **molten** or **aqueous** (dissolved in water) to allow **ions** to **move** to the electrodes

The Process of Electrolysis

Two **electrodes –** made of **inert** material (doesn't react)



Half-Equations at Electrodes (HT only)

During electrolysis:

Cathode – positive ions **gain** electrons (**reduction**)

Anode – negative ions **lose** electrons (**oxidation**)

- Ions become **discharged** (lose their charge) at the electrodes to form the atoms again.

- Reactions at electrodes can be represented by half equations.

Examples

Cathode – $2H^+ + 2e^- \rightarrow H_2$

Gained 2 electrons (reduction)

molecules of hydrogen gas produced

Anode – $4OH^- \rightarrow O_2 + 2H_2O + 4e^-$

molecules of oxygen produced

Lost electrons (oxidation)

Cathode – $Cu^{2+} + 2e^- \rightarrow Cu$

Gained electrons (reduction)

Copper atoms are formed at the cathode

Anode – $2Cl^- \rightarrow Cl_2 + 2e^-$

chlorine molecules are formed

Lost electrons (oxidation)

1. What is meant by the term electrolysis?
2. What is electrolysis used for?
3. What must the compound be for electrolysis to take place?
4. Why can solid ionic compounds not conduct electricity?
5. What does inert mean?
6. Name the positive electrode.
7. Name the negative electrode.
8. Why do positive ions move to the negative electrode?
9. In terms of electrons, what happens at the positive electrode?
10. In terms of electrons, what happens at the negative electrode?
11. Write the half equation for the production of hydrogen.
12. Write the half equation for the production of oxygen from hydroxide ions.
13. Write the half equation for the production of copper from copper ions.
14. Write the half equation for the production of chlorine from chloride ions.

T1 Y10 Chemistry C2.6 - Electrolysis

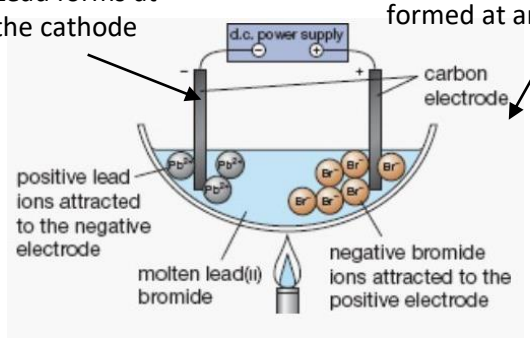
Electrolysis of Molten Ionic Compounds

Molten = melted **so ions** can move.
- Metal = produced at **anode**
- Non-metal = produced at **cathode**

Example: Lead Bromide - $PbBr_2$

Lead forms at the cathode

Bromine gas is formed at anode



Using Electrolysis to Extract Metals

- Used if metal is **too reactive** to be extracted by reduction with carbon.

- Requires **large amount of energy** to melt the compound and produce electrical current. **(expensive)**

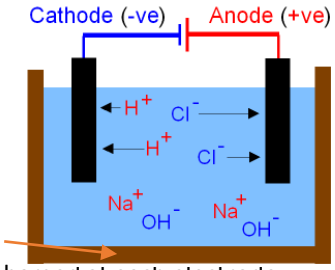
Example: Aluminium Oxide
- **Cryolite** is added – reduces the melting point (less energy needed – less expensive)

- **Carbon** used as positive electrode – needs to be replaced constantly as **oxygen** will react with it to produce CO_2 – it will degrade.

Electrolysis of Aqueous Solutions

- Compound is dissolved in water so ions can move.

When aqueous – H^+ and OH^- (from H_2O) are also present along with the two ions from the compound.



- Only **one** ion is discharged at each electrode.

Anode – Non-metal or oxygen
Cathode – Metal or hydrogen

Rules

+ ANODE Attracts – ions ('Anions')	**- CATHODE** Attracts + ions ('Cations')
If – ions are group 7 i.e. **chloride Cl^-** **bromide Br^-** **iodide I^-** Then the groups 7 element is produced as a gas	If + ions (metals) are MORE REACTIVE than hydrogen **K, Na, Ca, Mg, Zn, Fe** Then **HYDROGEN** is produced
If – ions are NOT Group 7 Eg sulphate SO_4^{2-} nitrate NO_3^- carbonate CO_3^{2-} OXYGEN is produced.	If + ions (metals) are LESS REACTIVE than hydrogen **Cu, Ag, Au** Then the METAL is produced

Examples

Solution	Product at cathode	Product at anode
Potassium chloride	Hydrogen – because K is more reactive than H	Chlorine – as it is a halogen
Copper sulfate	Copper – as copper is less reactive than H	Oxygen – as there is no halogen

1. Why is an ionic compound melted before electrolysis takes place?
2. Metals are produced at the..
3. Non-metals are produced at the.
4. When is electrolysis used to extract a metal?
5. Why is electrolysis expensive?
6. Why is cryolite added to aluminium oxide before electrolysis?
7. Why does the positive anode need constantly replacing when electrolysing aluminium oxide?
8. Why is the compound dissolved in water before electrolysing?
9. What two ions are also present in aqueous solutions (along with the compound)?
10. Which two substances can be produced at the anode?
11. Which two substances can be produced at the cathode?
12. When would a metal be produced at the cathode?
13. When would oxygen be produced at the anode?

T1 Y10 Chemistry C2.6 – Electrolysis Required Practical – Electrolysis of Aqueous Solutions

Aim

To investigate the electrolysis of an aqueous solution using inert (unreactive) **electrodes**.

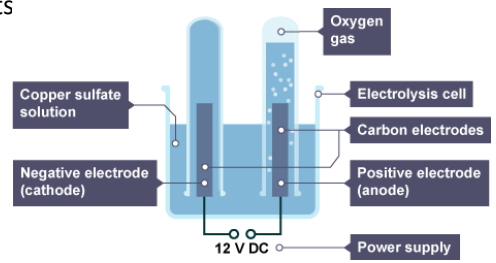
Equipment

- Beaker
- Two test tubes (or measuring cylinders)
- Graphite electrodes
- Two splints
- Aqueous solution
- DC powerpack

Change method depending on the question.

Method (example copper sulphate solution.)

1. Pour some copper sulphate solution into a beaker.
2. Place two graphite rods into the copper sulphate solution. Attach one electrode to the negative terminal of a dc supply, and the other electrode to the positive terminal.
3. Completely fill two small test tubes with copper sulphate solution and position a test tube over each electrode as shown in the diagram. **(use measuring cylinders if measuring volume of gas produced)**
4. Turn on the power supply and observe what happens at each electrode.
5. Test any gas produced with a glowing splint and a burning splint.
6. Record observations and the results of your tests



Common questions

Q1) How do you test for hydrogen gas?

A1) Lit splint will make a squeaky pop.

Q2) How do you test for oxygen gas?

A2) Glowing splint – will relight.

Q3) Explain why copper is produced at the cathode.

A3) Copper ions are **positive**, so are attracted to the negative electrode (opposites attract). Copper is less reactive than hydrogen so is discharged. The copper ions **gain electrons** and are **reduced** to form **copper atoms**.

Q4) Why do hydrogen ions move to the cathode?

A4) Hydrogen ions are **positive** so move to the negative electrode as **opposites attract**.

Q5) Why are measuring cylinders better to collect the gas?

A5) Because they are more accurate when measuring the volume of gas produced.

Q1. Draw a labelled diagram to show the equipment needed to electrolyse copper chloride.

Q2. Write a method for the electrolysis of aqueous copper chloride solution.

Q2) How do you test for hydrogen gas?

Q3) How do you test for oxygen gas?

Q4) Explain why copper is produced at the cathode.

Q5) Why do hydrogen ions move to the cathode?

Q6) Why are measuring cylinders better to collect the gas?

T1 Y10 Chemistry C2.7 – 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.

Endothermic Reactions

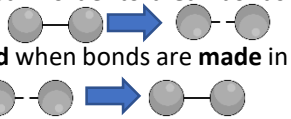
- Energy absorbed from the surroundings
- Temperature of reaction mixture often **decreases**
- Energy is transferred **from** the surroundings

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

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.

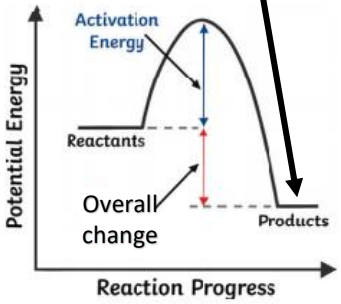


Bond energy = the amount of energy that is released when a bond is made or that is needed to break a bond

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.

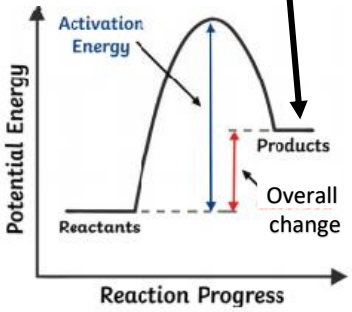
You may need to draw and label this in the exam!



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!

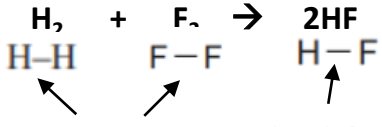


Calculating energy changes (HT)

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



Bond	Bond Energy / kJ mol^{-1}
F—F	158
H—H	436
H—F	568

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

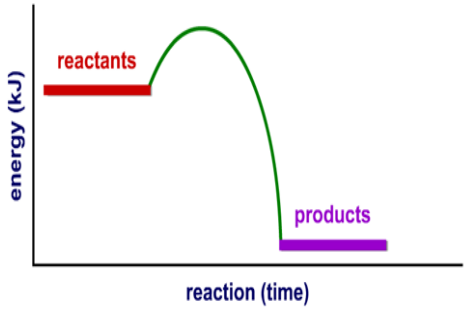
Overall energy change = 593 – 1136
= -543 kJ/mol Exothermic

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

T1 Y10 Chemistry C2.7 – Energy Changes

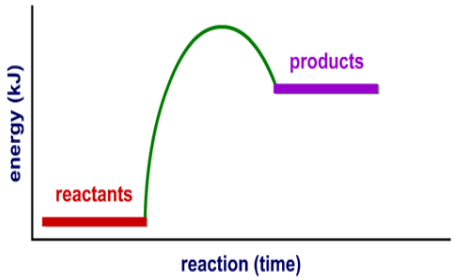
1. Which way is energy transferred in an exothermic reaction?
2. What happens to the temperature of the reaction mixture in an exothermic reaction?
3. State two examples of exothermic reactions.

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



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.

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

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?

T1 Y10 Chemistry C2.7 – 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
- 250cm^3 beaker
- Measuring cylinder
- Liquid reactants

Method (example for hydrochloric acid and sodium hydroxide)

1. Using measuring cylinder to measure 30cm^3 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 – 5cm^3 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 5cm^3 more sodium hydroxide up to a maximum of 40cm^3.
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.**

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?

T1 Y10 Chemistry C2.7 – Energy Changes

Cells and batteries

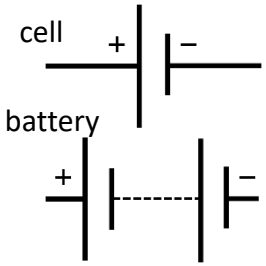

This is a cell.


This is a battery ...

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.

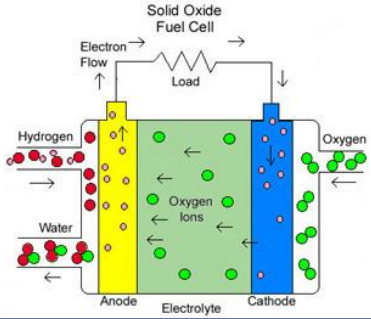
Fuel cells

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: $2H_2 + 4OH^- \rightarrow 4H_2O + 4e^-$
At the positive electrode: $O_2 + 2H_2O + 4e^- \rightarrow 4OH^-$
When you add these two half equations together, you get the following overall equation:
$2H_2 + 4OH^- + O_2 + 2H_2O + 4e^- \rightarrow 4H_2O + 4e^- + 4OH^-$
The hydroxide ions, electrons and two H_2O molecules will now cancel because they are on both sides, leaving the overall equation:
$2H_2 + O_2 \rightarrow 2H_2O$

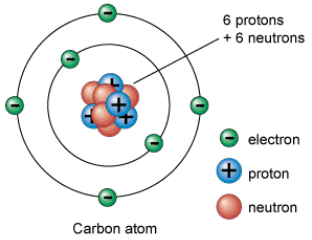
Fuel cells vs rechargeable cells and batteries

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.

1. What is the difference between a cell and a battery?
2. What is a cell?
3. 3. What is a non-rechargeable battery?
4. Why are rechargeable batteries rechargeable?
5. What is a fuel cell?
6. How does a fuel cells compare to rechargeable cells and batteries?
7. What is the half equation for electrode reactions in hydrogen fuel cells?

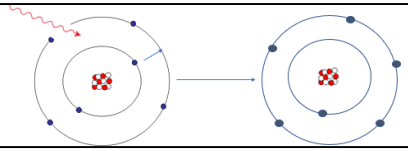
T1 Y10 Physics P2.7 Grammar - Radioactivity

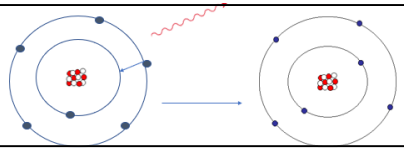
Atoms



- Atoms are tiny – around 10^{-10}m
- There is a positive nucleus made of protons and neutrons
- Electrons orbit in shells or energy levels
- The nucleus is 10,000 x smaller than the atom (4 orders of magnitude) so around 10^{-14} m

Electrons can move further away or closer to the nucleus





If EM waves (eg UV /light) are **absorbed** electrons can move up energy levels

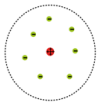
If EM waves are **emitted** by the atom, then electrons move closer to the nucleus

How the atomic model developed:

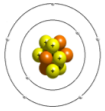
The atomic model has developed over time, when new evidence was discovered.

Atoms were first thought to be tiny spheres that could not be divided

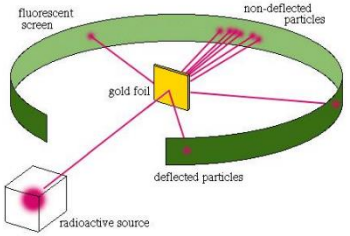
JJ Thomson then discovered the electron
Led to the plum pudding model
Atoms a cloud of positive charge with electrons randomly scattered



Rutherford discovered the positive charge is very small and in the nucleus
This discovery was from the Gold leaf experiment



Chadwick discovered neutrons
Bohr discovered the electrons orbit in shells



Rutherford's experiment:

Alpha particles fired at gold leaf
Most went straight through
Some deflected to the side
Some came straight back
This told him that most of the atom was empty space and that the positive charge was in a tiny nucleus

- Atoms of the same element have the same number of protons.
- This is the atomic (proton number)
- In an atom, the number of electrons is equal to the number of protons.
- The total number of protons and neutrons is called the mass number

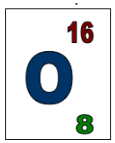
(Mass number) 23
(Atomic number) 11
Na

Sodium has :
11 protons
11 electrons
12 neutrons (23-11)

Isotopes

Isotopes are atoms with same number of **protons**, but different numbers of **neutrons** (different mass number)

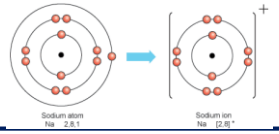
E.g.



These two isotopes both have 8 protons
One has 8 neutrons (16-8)
One has 10 neutrons (18 – 8)

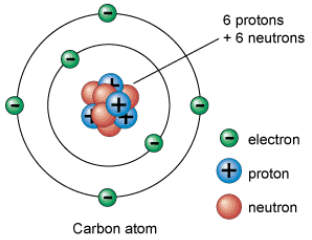
Ions

If atoms lose one or more outer electrons, they turn into positive ions

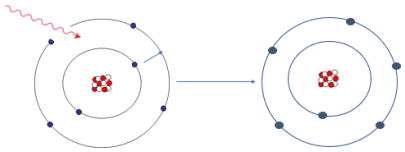


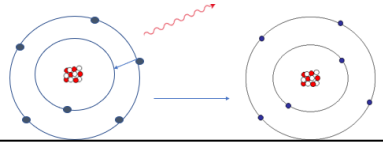
T1 Y10 Physics P2.7 Grammar - Radioactivity

Atoms



1. What is the size of an atom?
2. What is in the nucleus?
3. What is the size of the nucleus?
4. How many orders of magnitude smaller than the atom is nucleus?





4. What can cause electrons to move further from the nucleus?

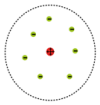
5. What can cause electrons to move closer to the nucleus?

1. What causes scientific ideas to change and develop?

2. What was the thinking about atoms initially?

3. Which particle was discovered by JJ Thomson?

4. Where is the positive charge in this model?



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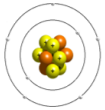
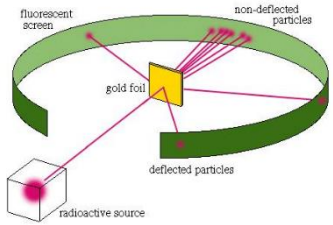


6. Who discovered neutrons?

7. What was the discovery that Bohr made?

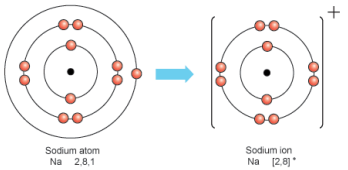


Rutherford's experiment:

1. What did Rutherford fire at gold leaf?
2. What happened to most of them?
3. What two conclusions did he come to?

1. What do all atoms of the same element have in common?
2. What does the bottom number on the elements in the periodic table represent?
3. What does the mass number show?
4. What is the number of electrons in an atom equal to?
5. What is an isotope?
6. What is an ion?

1. What type of ions are formed when atoms lose electrons?



T1 Y10 Physics P2.7 Grammar - Radioactivity

Nuclear radiation
If an isotope is **unstable**, then **particles** and **energy** are emitted from the nucleus.
There are 3 main types :

Radiation	What is it?	How far does it travel?	Ionising power	Penetrating power
Alpha α	2 protons and 2 neutrons	A few cm	Strong	Stopped by paper
Beta β	A fast moving electron	Metres	Medium	Stopped by aluminium
Gamma γ	An electromagnetic wave	kilometres	Weak	Takes thick concrete or lead to stop it

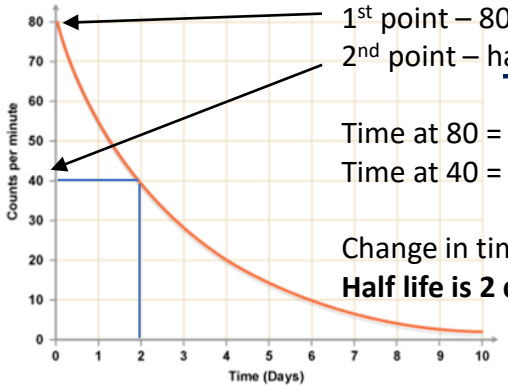
Neutrons can also be emitted from the nucleus.

Half life

Radioactive decay is random.
The half life of an isotope is the time it takes for half of the atoms in the sample to decay OR for the count rate to fall by half

Half life is calculated from a graph by reading two points off the y axis – one value being half the other.
Read the corresponding change in time.

Isotopes are selected for use depending on their properties and half life – e.g. a medical tracer needs to have a short half life so it isn't in the body for very long



1st point – 80
2nd point – half of that, so 40

Time at 80 = 0
Time at 40 = 2 days

Change in time = 2 days
Half life is 2 days

QUESTIONS
Nuclear radiation
1. Why do atoms give out particles or energy from the nucleus?
2. Which radiation is the most strongly ionising?
3. What is an alpha particle made of?
4. Which radiation is the most difficult to stop?
5. Which radiation is a fast moving electron?
6. Which radiation can only travel a few cm?

Alpha decay: How is an alpha particle written?
1. What happens to the proton number of an atom when alpha decay happens?
2. What happens to the mass number when alpha decay happens?

Alpha decay:
An unstable nucleus gives out 2 protons and 2 neutrons
An alpha particle is written as : ${}^{4}_{2}\alpha$

So when a particle gives out alpha radiation, it loses 2 from the proton number and 4 from the mass number
E.g

$${}^{226}_{88}Ra \rightarrow {}^{222}_{86}Rn + {}^{4}_{2}\alpha$$

Beta decay:
In an unstable nucleus, a neutron changes into a proton and an electron.
The electron is fired out as the beta particle
Beta particles are written as ${}^{0}_{-1}\beta$ or ${}^{0}_{-1}e$

The proton number increases
The mass number stays the same
E.g.

$${}^{14}_{6}\text{carbon} \longrightarrow {}^{14}_{7}\text{nitrogen} + {}^{0}_{-1}e$$

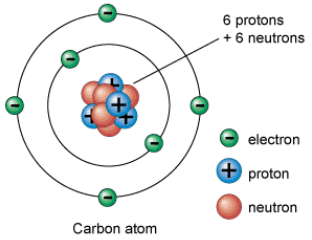
The emission of a gamma ray **does not change the nucleus**

Irradiation is the exposure to alpha, beta or gamma radiation

Contamination is the presence of radioactive atoms on materials.

T1 Y10 Physics P2.7 Grammar - Radioactivity

Atoms



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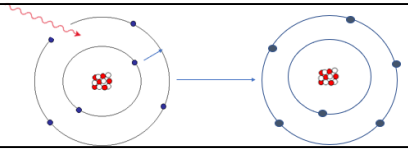

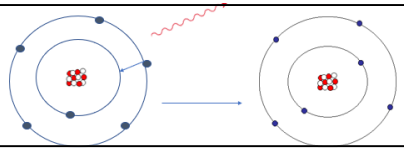

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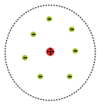

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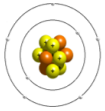

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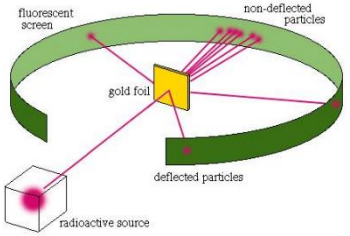

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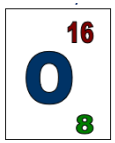

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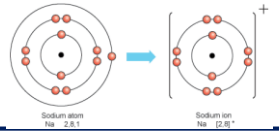


T1 Y10 Physics P2.7 Grammar - Radioactivity

Background radiation
Background radiation is around us all of the time.

Sources of background radiation are:
• Natural sources such as rocks and cosmic rays from space
• Man-made sources such as the fallout from nuclear weapons testing and nuclear accidents

Background radiation levels
The level of background radiation and radiation dose may be affected by occupation and/or location

Radiation dose: measured in Sieverts (Sv)

Risks
Exposure to large amounts of radioactivity can cause:

- nausea
- Vomiting
- hair loss
- Diarrhoea
- Haemorrhage
- destruction of the intestinal lining
- central nervous system damage
- DNA damage which may raise the risk of cancer, particularly in young children and foetuses.
- Death

If the half-life chosen is too long, the damaging effects of the radiation would last for too long and the dose received would continue to rise

1. What is background radiation
2. What are the sources of background radiation?
3. What can affect the levels of background radiation that you are exposed to?
4. What units is radiation dose measured in?

1. Give three symptoms caused by exposure to radiation?

2. Why are radioactive isotopes with a long half life more of a risk than those with a short half life?

How is nuclear radiation used in medicine?
• Exploration of internal organs
• Control or destruction of unwanted tissue

How are internal organs explored in medicine?
Certain radioactive chemicals concentrate in different damaged or diseased parts of the body, and the radiation concentrates with it.

Radiation detectors placed outside the body detect the radiation emitted and, with the aid of computers, build up an image of the inside of the body.

What are risks associated with this?
When radiation collides with molecules in living cells it can damage them. This can cause a mutation. If the DNA in the nucleus of a cell is damaged, the cell may become cancerous.

How is unwanted tissue destroyed and controlled using nuclear radiation?
• Although ionising radiation can cause cancer, high doses can be directed at cancerous cells to kill them. This is called radiotherapy.

Describe the two ways this can be done
This is done one of two ways:
- From outside the body using X-rays or the radiation from radioactive cobalt
- From inside the body by putting radioactive materials into the tumour, or close to it

1. How is nuclear radiation used in medicine?

2. Why can nuclear radiation be used to look at internal organs?

3. What are the risks associated with using nuclear medicine?

What is radiotherapy?

T1 Y10 Physics P2.7 Grammar - Radioactivity

Nuclear Fission

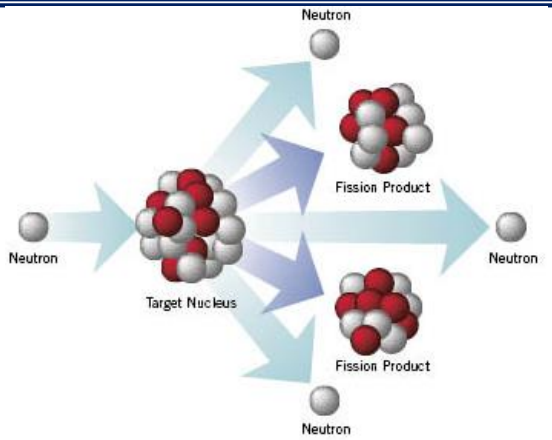
Nuclear fission is the splitting of a large and unstable nucleus (e.g. uranium or plutonium), into two smaller nuclei.

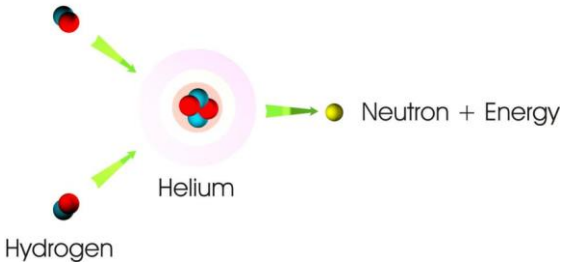
The process of nuclear fission

1. The large unstable nucleus absorbs a neutron.
2. The unstable nucleus splits into two smaller nuclei of roughly equal size.
3. Two or three also released
4. Energy and gamma rays are also released during this process.

Uncontrolled fission

If the fission reaction is not controlled the neutrons that are released will cause a chain reaction, releasing large amount of energy. This happens in nuclear weapons.
Fission reactions can be controlled by absorbing the neutrons emitted during the process.





Nuclear Fusion

The joining of two light nuclei to form a heavier nucleus.
Energy is released during this process.

1. What is nuclear fission?

2. Describe the main events in nuclear fission

1.

2.

3.

4.

3. What happens if nuclear fission is not controlled?

1. What is nuclear fusion

GCSE Geography. Paper 2 : 1. Urban issues and challenges

1. Global pattern of urban change

The world's population is growing rapidly; currently 50% of us live in urban areas.	
Urbanisation	An increasing percentage of a country's population living in towns and cities.
HICs	Very slow rate of urbanisation. Already have high urban populations. Urbanisation happened earlier (during the industrial revolution).
NEEs	Fast rate of urbanisation due to industrialisation. Urban population is increasing rapidly.
LICs	Fast rate of urbanisation. Urban population is low as many still work in farming.

2. Factors affecting urbanisation

Rural-Urban migration	The movement of people from a rural area (countryside) to an urban area (towns and cities).
Push factors	Negative factors that make people leave an area *e.g.* drought, famine, war, few services.
Pull factors	Positive factors that attract people to an area *e.g.* better access to services, better paid jobs, access to electricity.
Natural Increase	When the birth rate is higher than death rate; the population grows. High in NEE cities as migrants are often young and health care is improving.

3. Megacities

Megacity	A city of more than 10 million people living there.
How many?	There are now 34. Rapidly increasing.
Where?	Most are in Africa and Asia.

4. Key terms

Social deprivation	The extent an individual or an area lacks services, decent housing, adequate income and employment.
Dereliction	Abandoned buildings and wasteland.
Urban Greening	Process of increasing and preserving open space in urban areas *i.e.* parks.
Urban sprawl	Unplanned growth of urban areas into surrounding rural areas.
Integrated Transport System	Different forms of transport are linked together to make it easy to transfer from one to another.
Brownfield	Land that has been used, abandoned and now awaits reuse; they are often found in urban areas.
Greenfield	A plot of land, often in rural areas or on the edges of urban areas that has not been built on before.
Commuter settlements	A place where people live but travel elsewhere for work *e.g.* Yate → Bristol.

5. Sustainable urban living

Sustainable urban living	Where people living, now, have the things they need, without reducing the ability of people in future to meet their needs.
Water conservation	Recycling grey water. ½ flush toilets. Rainwater harvesting on roofs. Permeable pavements- filters pollutants.
Energy conservation	Energy efficient appliances. Energy saving (south facing windows). Use of renewable energy sources.
Waste recycling	Recycling boxes in houses. Recycling facilities nearby. Encourage websites like 'Freecycle'.
Creating green space	Maintain green spaces around towns-Cools area, encourage exercise, happy.

6. Urban transport strategies used to reduce traffic congestion

Problems with congestion	↗ air pollution (global warming). Late for work, deliveries delayed. ↗ accidents, stress, asthma. In Bristol, 200 people die as a result of air pollution each year.
Beryl Bikes	Shared bikes in Bournemouth + Poole.
Oyster Cards	Quick and easy to pay for more than one type of public transport (London).
Park and ride	Car parks on the outskirts of a town, with buses into the city centre.
Congestion charge	Charge for entering the city centre at peak times.
Bus lanes	Stop buses being held in traffic.

GCSE Geography. Paper 2 : 1. Urban issues and challenges

7. Distribution of population and major cities in the UK

Population	66 million. Distribution is very uneven. 82% live in urban areas. Upland areas are sparsely populated.
Cities	Most in lowland areas and on coasts. London is the biggest city and the capital. It has 10% of the population. Cities reflect our industrial past (near raw materials *e.g.* Leeds near coal). Counter-urbanisation is a recent trend.

8. Location and importance of Bristol

Location	South west of the UK, on Bristol Channel. Near to junction of M4 & M5.
Importance within the UK	Largest city in the southwest. 8th most popular city for foreign tourists. 2 universities and 2 cathedrals.
Importance to wider world	Largest concentration of silicon chip manufacturing outside of California. International airport (links to Europe). Many TNCs located there (AirBus, BMW)

9. Impacts of migration on the growth and character of the city

National migration	1851 - 1891 population doubled as people arrived looking for work.
International migration	Now,international migration accounts for half of its growth. 50 countries. Many from Europe (Poland, Spain).
Impact on	Many cultural opportunities. Afro-Caribbean- strong community

10. Urban change in Bristol

- Population is growing rapidly.
- Population is more ethnically diverse.
- More under 16-year olds than of pensionable age.
- Electrification of railway to London (<70 minutes).
- Become more accessible (road, rail, air).

11. Opportunities created by urban change

Cultural mix	50 countries represented (food, art). St Paul's Carnival (attracts 40,000).
Recreation and entertainment	Underground music scene -Colston Hall. Entertainment (The Bristol Old Vic). 2 football teams (City, Rovers). Shopping Cribbs Causeway, Cabot Circus.
Employment	Highly tech. industries = jobs. 50 silicon businesses. Many TNCs. £100 million improved broadband.
Integrated transport system	Links different types of public transport Reduces congestion in the city. ↗ % people walking and cycling (57%).
Urban greening	> 90% live within 350m of park/water. 300 parks. 1/3 Bristol is open space. 2015 European Green Capital status.

12. An example of an urban regeneration project

Example	Why did it need regeneration?	What are the main features?	Successful?
Temple Quarter, Bristol	• Bristol surrounded by a green belt. • Brownfield site- rundown, ugly. • By Bristol Temple Meads Station- poor impression for new visitors. • Previously an industrial area.	• Enterprise Zone *e.g.* low rents. • Improve access *e.g.* ITS. • New bridge across River Avon (access to planned Bristol Arena). • Maintain historical features, cobbled streets- gives character • Brunel's Engine Shed £1.7mill.	✓ 4,000 new jobs by 2020 (17,000 by 2037) ✓ Attracts tourists. ✓ Redeveloped brownfield site ✗ Arena still not built

13. Challenges created by urban change

Urban deprivation	Some areas face social deprivation. 1/3 of people in Filwood are in very-low income households. Problems of crime, drug use, low quality housing, lack of transport.
Inequality in housing	Filwood- 50% in council housing. Stoke Bishop- millionaires (large villas)
Inequality in education	Filwood- 36% get top GCSE grades. Stoke Bishop- 94%.
Inequality in health	Filwood- Life expectancy 78 years. Stoke Bishop- 83 years.
Employment	Filwood- 1/3 16-24-year olds. Stoke Bishop- Just 3%.
Dereliction	Industrial buildings derelict (inner-city). Stokes Croft (many squatters).
Building on brown and greenfield	2006-13 94% housing on brownfield. Plan for 30,000 homes on brownfield. Temple Meads built on brownfield.
Waste disposal	>1/2 million tonnes of waste/year. (23% lower per head than UK average) ↗ recycling by 50%. Teach it in schools.
Urban sprawl	Greenbelt to prevent merge with Bath City extended to NW (Bradley Stoke). Led to destruction of greenfield sites. Yate- Commuter settlement.

GCSE Geography. Paper 2 : 1. Urban issues and challenges

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Urbanisation	
HICs	
NEEs	
LICs	

2. Factors affecting urbanisation

Rural-Urban migration	
Push factors	
Pull factors	
Natural Increase	

3. Megacities

Megacity	
How many?	
Where?	

4. Key terms

Social deprivation	
Dereliction	
Urban Greening	
Urban sprawl	
Integrated Transport System	
Brownfield	
Greenfield	
Commuter settlements	

5. Sustainable urban living

Sustainable urban living	
Water conservation	
Energy conservation	
Waste recycling	
Creating green space	

6. Urban transport strategies used to reduce traffic congestion

Problems with congestion	
Beryl Bikes	
Oyster Cards	
Park and ride	
Congestion charge	
Bus lanes	

GCSE Geography. Paper 2 : 1. Urban issues and challenges

7. Distribution of population and major cities in the UK

Population	
Cities	

8. Location and importance of Bristol

Location	
Importance within the UK	
Importance to wider world	

9. Impacts of migration on the growth and character of the city

National migration	
International migration	
Impact on character	

10. Urban change in Bristol

11. Opportunities created by urban change

Cultural mix	
Recreation and entertainment	
Employment	
Integrated transport system	
Urban greening	

12. An example of an urban regeneration project

Example	Why did it need regeneration?	What are the main features?	Successful?
Temple Quarter, Bristol			

13. Challenges created by urban change

Urban deprivation	
Inequality in housing	
Inequality in education	
Inequality in health	
Employment	
Dereliction	
Building on brown and greenfield	
Waste disposal	
Urban sprawl	

Year 10 History : Medicine in Medieval England c1250-1500

What we are learning this term:
1.1 Ideas about the cause of disease and illness 1.2 Approaches to treatment and prevention 1.3 Dealing with the Black Death 1348-49

D.	Dealing with the Black Death
What is the Black Death?	• Bubonic plague – outbreak in 1348-9 – 1/3rd to 1 / 2 of the population died in England. Caused by bacteria Yersinia pestis that was thought to have originated in China and came to Britain on fleas, on rats on ships.
Causes	Miasma – bad air from the filthy conditions making you ill. Astrology – there was a weird alinement of Jupiter, mars and Saturn the previous year which was blamed for the plague Punishment from God- = People thought that society had become wicked so God had sent the plague to punish them.
Treatments	Confesses sins and pray, bleeding and purging (but seemed to make worse), sweet herbs or fire to clean air.
Prevention	Pray and fast, leave the area, carry sweet herbs, quarantine (new people stay away for 40 days), clean streets (or don't, maybe bad smell will drive out miasma)

A.	Can you define these key words?
Miasma	Bad air that was believed to be filled with harmful fumes.
Quarantine	Separating the sick from the healthy to stop the spread of a disease.
Humours	The humours were four fluids that were thought to spread throughout the body and influence its health.
Purging	To get rid of anything unwanted.
Phlebotomey	The drawing of blood by opening a vein.
Leprosy	a painful skin disease
Prevention	To stop something from happening
Treatment	giving medicine or using other means to help a person get better when sick or hurt
Apothecary	A person who mixes herbal remedies and treated patients as an alternative to a doctor as they were cheaper.
Barber surgeon	barbers and surgeons who also performed minor operations such as removal of warts .

C. Key People			
Hippocrates	**Galen**	**Physicians, apothecaries and surgeons**	**Hospitals**
'Father of Medicine' – 4 humours, clinical observation (watch and record details, use this to help with future cases), importance of exercise, Hippocratic Oath for doctors (to preserve life)	Built on Hippocrates' ideas – theory of opposites (if cold, give something hot), also dissected animals to find out about anatomy (structure of body). Proved brain, not the heart, controls the body	• **Physicians** – diagnosed + recommended treatment, trained at university for around 7 years. Did not get to see dissections so new little about body. Learned everything from Galen's books. Only for super rich • **Apothecaries** – mixed herbal remedies (joined a guild, worked for master to train). • **Surgeons** – least qualified, also cut hair. Learned on job and only performed minor, on-invasive surgeries • **Monks and nuns –** worked in hospitals mostly prayed for patients and gave comfort. Not allowed to cut or bleed patients so could not do surgery • **Housewives and mothers** – treated most people. Mixed herbal remedies and treated minor wounds	• Ran by monks and nuns • Offered patients shelter, beds, food and very limited treatment. • Treatments mostly religious based – praying • Patients would offer share beds which led to allot of diseases spreading around the hospitals

B. What were the causes of disease in Medieval England?		
Causes	**Prevention**	**Treatments**
Religious – Punishment from God God has sent an illness as punishment for sins. Especially true at times of panic such as the Black Death.	**Religious - Church** – Lead a life free of sin. Regular prayers and confessions. Offering tithes to the church to make sure sins were forgiven quickly.	**Religious – Healing prayers and incantations** Paying for a special mass to be said Fasting Pilgrimages
Rational - Miasma – You had breathed in bad air. This was thought to come from swamps or rubbish. During this period there was allot of animal much in towns and often open sewers in the streets meaning the whole place stank. In these filthy places disease was more common seemingly proving this theory	**Rational and religious - Regimen Sanitatis** – A set of instructions provided by physicians to maintain good health. Bathing was also used to prevent miasma.	**Supernatural - Astrology** – Treatments varied according the the horoscope of the patient. The alignment of the planets was checked at every stage of the treatment prescribed eg herb gathering.
Rational - The Theory of the Four Humors – The 4 liquids in your body (blood, yellow bile, black bile, phlegm) were seen to be out of balance making you ill. Recovery came from getting them back in to balance through the theory of opposites Created in ancient Greece by Hippocrates.	**Rational - Diet** – Eating to much was strongly discouraged. What and when you ate were considered to be important in preventing a humoural imbalance.	**Rational - Humoral** Treatments – Blood letting – Bad humours could be removed from the body by removing some of the blood. Purging – Purging the digestive system to remove any leftover food. Eg using a laxative.
Supernatural - Astrology – Impact of the stars and planets on health. Physicians would use star charts to examine a patient and work out what was wrong with them.	**Rational - Purifying the air** –This was achieved by spreading sweet herbs.	**Rational - Herbal remedies** – Using herbal infusions to drink, sniff or bathe in.

Year 10 History : Medicine in Medieval England c1250-1500

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C.	Dealing with the Black Death
What is the Black Death?	
Causes	
Treatments	
Prevention	

A.	Can you define these key words?
Miasma	
Quarantine	
Humours	
Purging	
Phlebotmey	
Leprosy	
Prevention	
Treatment	
Apothecary	
Barber surgeon	

Key People			
Hippocrates	Galen	Physicians, apothecaries and surgeons	Hospitals

What were the causes of disease in Medieval England?		
Causes	**Prevention**	**Treatments**

Year 10 GCSE Religious Education KO - Islam Beliefs

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

What we are learning in this unit

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

B. *5 Roots of Usul Ad-Din*

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

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

A. *6 Articles of Faith*

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

C. *Sunnah and Hadith*

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

Year 10 GCSE Religious Education KO - Islam Beliefs

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

What we are learning in this unit

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

B. *5 Roots of Usul Ad-Din*

.

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

A. *6 Articles of Faith*

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

C.	*Sunnah and Hadith*

Year 10 GCSE Religious Education KO - Islam Beliefs

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

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

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

Year 10 GCSE Religious Education KO - Islam Beliefs

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

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

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

Year 10 GCSE Religious Education KO - Islam Beliefs

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

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

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

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

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

Year 10 GCSE Religious Education KO - Islam Beliefs

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

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

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

J.	*Al Qadir*

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

GCSE Unit 5 SPANISH Knowledge organiser.
Topic Home, Town, Neighbourhood and Region

What we are learning this term:

A. Saying what your house is like
B. Describing your house and where it is
C. Talking about the amenities in your area
D. Discussing the advantages and disadvantages of living in the town and country

6 Key Words for this term

1. vivir
2. alojamiento
3. alquilar
4. el hogar
5. la casa
6. las afueras

5.1G Mi casa

la alfombra	carpet, rug
el armario	cupboard, wardrobe
el ascensor	lift
la butaca	armchair
la cocina	kitchen, cooker, cuisine
cómodo	comfortable, convenient, handy
compartir	to share
el cuarto de baño	bathroom
el dormitorio	bedroom
los electrodomésticos	(electrical) appliances
la escalera	stairs
el espejo	mirror
la estantería	shelves, shelving unit
el fregadero	kitchen sink
la habitación	room
el lavabo	washbasin
la lavadora	washing machine
el lavaplatos	dishwasher
el microondas	microwave oven
la nevera	fridge
la pared	wall
el salón	lounge, living room
el sillón	armchair
el suelo	ground, floor

5.2G ¿Qué se puede hacer donde vives?

el barrio	neighbourhood, area
la biblioteca	library
la bolera	bowling alley
el bolso	handbag
la carnicería	butcher's
el césped	lawn
el collar	necklace
descansar	to rest
el dinero	money
divertirse	to enjoy oneself, to have a good time
el estanco	tobacconist's (also sells stamps)
los grandes almacenes	department stores
la joyería	jeweller's
la juguetería	toy shop
el mercado	market
la muñeca	doll
el museo	museum
la panadería	baker's
el parque	infantil park, playground
la pastelería	cake shop
los pendientes	earrings
la plaza de toros	bull ring
la ropa (de marca)	(designer) clothes
la tienda de comestibles	grocery store, food

5.2F Mi ciudad

la avenida	avenue
el ayuntamiento	Town Hall
bienvenido/a	welcome
el centro comercial	shopping centre
la ciudad	city, large town
el club de jóvenes	youth club
Correos	Post Office
construir	to build
convertirse en (+ noun)	to become
los espacios verdes	open spaces
la fábrica	factory
fundar	to found
el/la habitante	inhabitant
la iglesia	church
ir de compras	to go shopping
el país	country
la plaza	square (in a town)
el polideportivo	sports centre
el pueblo (small)	town, village, people
el puente	bridge
el puerto	port, harbour
el siglo	century

Key Verbs

Vivir To live	alquilar To rent	Comprar To buy	Hacer – to do/make	Mudarse To move
Vivo I live	Alquilo I rent	Compro I buy	Hago I do	Me mudo I move
Vives You live	Alquilas You rent	Compras You buy	Haces You do	Te mudas You move
Vive He/she lives	Alquila He/she rents	Compra He/she buys	Hace s/he does	Se muda He/she moves
Vivimos We live	Alquilamos We rent	Compramos We buy	Hacemos We do	Nos mudamos We move
Viven They live	Alquilan They rent	Compran They buy	Hacen They do	Se mudan They move

5.1H Mi casa y mi barrio

abajo	under, downstairs
amplio/a	spacious, roomy
arriba	above, upstairs, up
el balcón	balcony
la calefacción	heating
la cocina amueblada	fitted kitchen
el comedor	dining room
el comercio	business, shop
imprescindible	essential, indispensable
inferior	lower
el jardín	garden
lujoso/a	luxurious
la mascota	pet
la piscina	swimming pool
la planta	floor (of a building), plant
la planta baja	ground floor
superior	upper, higher
la tienda	shop
la torre	tower, tower block
la vista	view, sight

5.1F ¿Cómo es tu casa?

las afueras	outskirts
antiguo	old
el árbol	tree
el campo	countryside, field,sports ground
el chalet / chalé	bungalow, detached house, villa
la costa	coast
el estante	shelf
encontrar	to find
encontrarse	to be situated
encontrarse con	to meet up with
la granja	farm
guardar	to keep, to put away,to save
la librería	bookcase, bookshop
la montaña	mountain
el mueble	piece of furniture
los muebles	furniture
peor	worse

GCSE Unit 5 SPANISH Knowledge organiser.
Topic Home, Town, Neighbourhood and Region

What we are learning this term:

A. Saying what your house is like
B. Describing your house and where it is
C. Talking about the amenities in your area
D. Discussing the advantages and disadvantages of living in the town and country

6 Key Words for this term

1. vivir
2. alojamiento
3. alquilar
4. el hogar
5. la casa
6. las afueras

5.1G Mi casa

la alfombra	_____
el armario	_____
el ascensor	_____
_____	armchair
la _____	kitchen, cooker, cuisine
_____	comfortable, convenient, handy
compartir	_____
el cuarto de baño	_____
el dormitorio	_____
los _____	(electrical) appliances
la _____	stairs
el espejo	_____
la _____	shelves, shelving unit
el fregadero	_____
la habitación	_____
_____	washbasin
_____	washing machine
el lavaplatos	_____
el microondas	_____
la _____	fridge
la pared	_____
el salón	_____
el _____	armchair
el _____	ground, floor

5.2G ¿Qué se puede hacer donde vives?

el _____	neighbourhood, area
la biblioteca	_____
la _____	bowling alley
el _____	handbag
la carnicería	_____
el _____	lawn
_____	necklace
descansar	_____
_____	money
_____	to enjoy oneself, to have a good time
el _____	tobacconist's (also sells stamps)
los grandes almacenes	_____
la joyería	_____
la _____	toy shop
el mercado	_____
_____	doll
el _____	museum
la panadería	_____
_____	infantil park, playground
la _____	cake shop
los pendientes	_____
la plaza de toros	_____
la ropa (de marca)	_____
la tienda de comestibles	_____

5.2F Mi ciudad

la avenida	_____
el ayuntamiento	_____
bienvenido/a	_____
_____	shopping centre
_____	city, large town
el club de jóvenes	_____
Correos	_____
construir	_____
convertirse en (+ noun)	_____
los _____	open spaces
la _____	factory
_____	to found
el/la habitante	_____
la iglesia	_____
_____	to go shopping
_____	country
la _____	square (in a town)
el _____	sports centre
el pueblo (small)	_____
el puente	_____
_____	port, harbour
el siglo	_____

Key Verbs

_____ To live	alquilar _____	Comprar To _____	Hacer – _____	Mudarse To
Vivo _____	Alquilo _____	Compro _____	Hago I do	Me mudo _____
_____ You live	_____ You rent	Compras _____	_____ You do	_____ You move
Vive _____	Alquila _____	Compra He/she buys	Hace _____	Se muda _____
_____ We live	_____ We rent	Compramos _____	Hacemos _____	Nos mudamos _____
_____ They live	_____ They rent	_____ They buy	_____ They do	_____ They move

5.1H Mi casa y mi barrio

_____	under, downstairs
_____	spacious, roomy
_____	above, upstairs, up
el balcón	_____
la calefacción	_____
la cocina amueblada	_____
el _____	dining room
el _____	business, shop
_____	essential, indispensable
inferior	_____
el jardín	_____
lujoso/a	_____
_____	pet
_____	swimming pool
_____	floor (of a building), plant
la planta baja	_____
superior	_____
la _____	shop
la _____	tower, tower block
la _____	view, sight

5.1F ¿Cómo es tu casa?

_____	outskirts
antiguo	_____
el _____	tree
el campo	countryside
field,sports ground	
el chalet / chalé	_____ house, villa
la costa	_____
el _____	shelf
_____	to find
_____	to be situated
_____	to meet up with
la granja	_____
_____	to keep, to put away,to save
la _____	bookcase, bookshop
la _____	mountain
el mueble	_____
los _____	furniture
peor	_____

GCSE Unit 6 SPANISH Knowledge organiser.
Topic Social Issues

What we are learning this term:

A. Talking about different ways of volunteering
B. Talking about charities and voluntary work
C. Talking about healthy eating
D. Talking about healthy and unhealthy lifestyles
E. Listening for different tenses

6 Key Words for this term

1. un voluntario/a
2. ecologista
3. los sin techo
4. comedor social
5. banco de alimentos
6. quiero

6.1G ¿Quieres ser voluntario/a?

arreglar	to tidy, to fix, to arrange
ayudar (a)	to help (to)
el banco de alimentos	food bank
charlar	to chat
el comedor social	soup kitchen
el concurso	competition
cultivar	to grow, cultivate
disfrutar	to enjoy
ecologista	environmental
la gente mayor	old people
hogar	home
limpiar	to clean
marcar (un gol)	to score (a goal)
necesitado	needed, required
los necesitados	the needy
la organización benéfica	charitable organisation, charity
participar (en)	to take part (in)
pasarlo bien	to have a good time
proteger	to protect
la residencia de ancianos	old people's home
los "sin techo"	the homeless
el Tercer Mundo	the Third World
la tienda con fines benéficos /tienda solidaria	charity shop
el/la voluntario/a	volunteer

6.1F Me gustaría ayudar

agradecer	to thank
aprender	to learn
el asombro	amazement, surprise
contar (que)	to tell, to relate
el curso	school year, course
los/las demás	the others, the rest
esperar	to wait for, to hope, to expect
formar parte	to be part (of)
hacer la cama	to make the bed
el centro de menores tutelados	children's home
el idioma	language
inútil	uselessel
propósito	aim, purpose, objective
repartir	to deliver, to hand out
tener sueño	to be sleepy
la tienda solidaria	charity shop
útil	useful

6.2G ¿Comes bien?

acostarse	to go to bed
las bebidas alcohólicas	alcoholic drinks
las bebidas azucaradas	sugary drinks
borracho/a	drunk
el dolor	pain, ache
emborracharse	to get drunk
evitar	to avoid
glotón	greedy
la grasa	fat
grasiento/a	fatty, greasy
intentar (+ infinitive)	to try to
el ladrón	thief, robber
malsano	unhealthy
musulmán	Muslim
poco sano	not healthy
la ración	portion
saludable	healthy
sano	healthy

Key Verbs

Ayudar To help	Ir To go	Soportar To stand	Hacer – to do/make	Limpiar To clean
Ayudo I help	Voy I go	Soporto I can stand	Hago I do	Limpio I clean
Ayudas You help	Vas You go	Soportas You can stand	Haces You do	Limpias You clean
Ayuda He/she helps	Va s/he goes	Soporta He/she can stand	Hace s/he does	Limpia He/she cleans
Ayudamos We help	Vamos They go	Soportamos W can stand	Hacemos We do	Limpiamos We clean
Ayudan They help	Van They go	Soportan They can stand	Hacen They do	Limpian They clean

6.1H La importancia de obras benéficas

andar	to walk
el bolsillo	pocket
contribuir	to contribute
dar asco	to nauseate
el dibujo	drawing
donar	to donate
en vías de extinción	threatened (threatened with extinction)
escaso/a	scarce
la exposición	exhibition
el ganador	winner
ganar	to win
gastar	to spend
las instalaciones	facilities
el medio ambiente	environment
las obras benéficas	charity, charitable works
la pérdida	loss
perteneciente a	belonging to
el/la político/a	politician
los recursos	resources
seropositivo/a	HIV positive
el sida	AIDS
temer	to fear

6.2H ¿Qué opinas?

aguantar	to put up with, to bear
asqueroso/a	disgusting
ataque cardíaco	heart attack
aumentar	to increase
el botellón	drinking party in the street
cada vez más	more and more
el cerebro	brain
el consumo	consumption
el corazón	heart
cuanto antes	as soon as possible
el/la drogadicto/a	drug addict
la edad	age
la encuesta	survey
enfrentar	to face
grave	serious
hacer daño a	to injure, to harm
el hígado	liver
nocivo/a	harmful
participar (en)	to take part (in)
pedir	to ask (for), to ask (someone to do something)
los primeros auxilios	first aid
prohibir	to prohibit, to forbid
provocar	to cause, to provoke
el pulmón	lung
reducir	to reduce
síndrome de abstinencia	withdrawal symptoms
el sobrepeso	excess weight, obesity
subir	to go up
el tabaquismo	addiction to tobacco
la venta	sale

GCSE Unit 6 SPANISH Knowledge organiser.
Topic Social Issues

What we are learning this term:

A. Talking about different ways of volunteering
B. Talking about charities and voluntary work
C. Talking about healthy eating
D. Talking about healthy and unhealthy lifestyles
E. Listening for different tenses

6 Key Words for this term

1. un voluntario/a	4. comedor social
2. ecologista	5. banco de alimentos
3. los sin techo	6. quiero

6.1G ¿Quieres ser voluntario/a?

_____	to tidy, to fix, to arrange
_____	to help (to)
el banco de alimentos	_____
charlar	_____
el comedor social	_____
_____	competition
_____	to grow, cultivate
disfrutar	_____
ecologista	_____
_____	old people
_____	home
limpiar	_____
marcar (un gol)	_____
_____	needed, required
los necesitados	_____
la organización benéfica	_____
participar (en)	_____
_____	to have a good time
proteger	_____
la residencia de ancianos	_____
_____	_____
el Tercer Mundo	_____
la tienda con fines benéficos /tienda solidaria	_____
el/la voluntario/a	_____

6.1F Me gustaría ayudar

agradecer	_____
_____	to learn
el asombro	_____
_____	to tell, to relate
_____	school year, course
los/las demás	_____
_____	to wait for, to hope, to expect
formar parte	_____
hacer la cama	_____
el centro de menores tutelados	_____
_____	language
_____	useless
_____	aim, purpose, objective
repartir	_____
_____	to be sleepy
la tienda solidaria	_____
útil	_____

6.2G ¿Comes bien?

acostarse	_____
las bebidas alcohólicas	_____
las bebidas azucaradas	_____
_____	drunk
_____	pain, ache
_____	to get drunk
evitar	_____
glotón	_____
la grasa	_____
_____	fatty, greasy
intentar (+ infinitive)	_____
el ladrón	_____
_____	unhealthy
musulmán	_____
_____	not healthy
la _____	portion
saludable	_____
_____	healthy

Key Verbs

_____ To help	Ir _____	Soportar To stand	Hacer –	Limpiar To clean
Ayudo I _____	Voy I go	_____ I can stand	Hago _____	_____ I clean
_____ You help	Vas _____	Soportas _____	Haces You do	Limpias _____
Ayuda _____	_____ s/he goes	Soporta He/she can stand	_____ s/he does	_____ He/she cleans
Ayudamos We help	Vamos _____	Soportamos W can stand	Hacemos _____	Limpiamos _____
_____ They help	_____ They go	_____ They can stand	_____ They do	Limpian They clean

6.1H La importancia de hacer obras benéficas

andar	to _____
el _____	pocket
contribuir	to _____
_____	to nauseate
el dibujo	_____
donar	to _____
en _____	threatened (threatened with extinction)
escaso/a	_____
la _____	exhibition
el _____	winner
ganar	to _____
gastar	to _____
las _____	facilities
el medio ambiente	_____
las _____	charity, charitable works
la pérdida	_____
perteneciente a	_____
_____	politician
_____	resources
seropositivo/a	_____
_____	AIDS
temer	_____

6.2H ¿Qué opinas?

_____	to put up with, to bear
asqueroso/a	_____
ataque cardíaco	_____
aumentar	to _____
el _____	drinking party in the street
cada vez más	_____
el _____	brain
el _____	consumption
el corazón	_____
_____	as soon as possible
el/la drogadicto/a	_____
la _____	age
la _____	survey
enfrentar	to _____
_____	serious
_____	to injure, to harm
el hígado	_____
nocivo/a	_____
_____	to take part (in)
_____	to ask (for), to ask (someone to do something)
los primeros auxilios	_____
_____	to prohibit, to forbid
_____	to cause, to provoke
el pulmón	_____
reducir	to _____
síndrome de abstinencia	withdrawal symptoms
el _____	excess weight, obesity
subir	_____
el _____	addiction to tobacco
la venta	_____

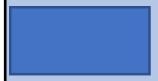
Year 10 Computer Science – Term 1

A.	Terms
Abstraction	
Algorithm	
Assignment	
Data	
Decomposition	
Flowchart	
Input	
Output	
Process	
Pseudocode	
Variable	

What we are learning this term:

A. Terms
B. Common Algorithms
C. Flowcharts
D. Data Types

B.	Common Algorithms	Worked Example
Binary Search		2,5,6 searching for 6
Bubble Sort		5,1,3
Linear Search		2,6,5 searching for 6
Merge Sort		5,1,3

C.	Flowchart Symbol	
Symbol	Usage	Symbol Name
		
		
		
		

D.	Data Types	Example
Boolean		
Character		
Integer		
String		
Real/Float		

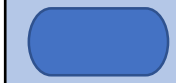
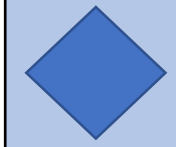
Year 10 Computer Science – Term 1 Answers

A.	Terms
Abstraction	The process of removing all unnecessary details from a problem.
Algorithm	The sequence of steps required to carry out a specific task.
Assignment	Setting the value of a variable in a computer program.
Data	Units of information which are acted upon by instructions.
Decomposition	Breaking down a problem into smaller steps that are easier to work with and solve.
Flowchart	A diagram which shows the step-by-step flow of an algorithm.
Input	Data which is inserted into a system to be processed or stored.
Output	Data which is sent out of a system.
Process	An action taken by the program without input from the user.
Pseudocode	A method of writing an algorithm using plain English.
Variable	A memory location within a computer where values are stored.

What we are learning this term:

A. Terms
B. Common Algorithms
C. Flowcharts
D. Data Types

B.	Common Algorithms	Worked Example
Binary Search	Compares the search object to the middle point of a sorted list. If they are not equal, the half in which the target cannot lie is eliminated and the search continues on the remaining half, again taking the middle point to compare to the search object, and repeating this until the target value is found or the end is reached.	2,5,6 searching for 6 Midpoint 5 5 < 6, remove left side of list ~~2,5,~~6 Midpoint 6 6 == 6 Item found
Bubble Sort	Sorts a list by continuously stepping through a list, swapping items until they appear in the correct order.	5,1,3 1,5,3 1,3,5 1st pass complete 1,3,5 1,3,5 2nd pass complete - sorted
Linear Search	Compares the search object with each item in the list in order from the beginning until it is found or the end is reached.	2,6,5 searching for 6 2 != 6 ~~2~~,6,5 6==6 Item found
Merge Sort	Sorts a list by repeatedly dividing a list into two until all the elements are separated individually. Pairs of elements are then compared, placed into order and combined. The process is then repeated until the list is recompiled in the correct order as a whole.	5,1,3 5,1 3 Break list into sublists 5 1 3 Until sublists contain 1 # 1,5 3 Merge pairs 1,3,5 Until all sublists merged

C.	Flowchart Symbol	
Symbol	Usage	Symbol Name
	The start or end of the algorithm.	Terminator
	An action which occurs during the algorithm.	Process
	Data is either inputted to or outputted from the algorithm.	Input/ Output
	A Yes/No, True/False decision.	Decision

D.	Data Types	Example
Boolean	TRUE/FALSE or 1/0	**TRUE or 1**
Character	A single, alphanumeric character.	**1 or A or !**
Integer	Whole numbers	**15**
String	One or more alphanumeric characters.	**1A!**
Real/Float	Decimal numbers	**15.5**

GCSE Business. Paper 1 1. Enterprise and Entrepreneurship

1. The Dynamic Nature of Business	
Term	**Definition**
Dynamic Nature of Business	The idea that Business is ever-changing because external factors such as technology and legislation are always changing.
Venture Capital	Capital provided by an investor willing to take a risk in return for profit in the future

2. Why start a Business?	
Starting a Business	**Explanation**
Why?	• A desire to succeed • Financial Reward • Independence and a desire to be your own boss
Who?	A successful start-up requires a huge list of qualities and skills, especially if starting up on your own. Among these are: **Personal Qualities:** Determination, resilience, enthusiasm, hard-working, decisive and willing to take risks **Skills:** Can listen as well as speak, can plan and organise, can influence and manage others. **Resources:** Can find help when needed, may have unique skills.
How?	When people need to raise capital to help them start a business, they write a business plan. This sets out the aims, objectives, the strategies to be used, the financial forecasts and requirements.

3. Why new business ideas come about:	
Why?	**Explanation**
Changes in what consumers want	Consumers desires and tastes change all the time. These changes create markets for entrepreneurs to invest in.
Products and services becoming obsolete	Products can become obsolete due to changes in technology and consumer wants.
Changes in Technology	Changes in technology can lead to improvements in existing products, the creation of new ones and help in making business more efficient.
Key Terms and Definitions	
Demand	The number of units that customers want and can afford to buy
Entrepreneurs	Businesspeople who see opportunities and are willing to take risks in making them happen.
Obsolete	A product or a service with sales that have declined or come to an end as customers find something new.

4. How new business ideas come about:	
Term	**Definition**
Adapting existing products	Developing new products based on existing products.
Competitive Advantage	A feature of business that helps it to succeed against rivals.
Original Ideas	Ideas that have not been done before.

4. Risks and Rewards of starting a new Business	
Risks	**Rewards**
Business Failure 50% of new Businesses fail within the first five years. One of the biggest risks of starting a new business is that may not be viable.	**Success** Success and a sense of achievement are an integral part of business. When a business is successful this comes with a huge sense of pride and satisfaction for the entrepreneur
Financial Loss If a business gets into financial trouble this can lead to bankruptcy and considerable debts that cannot be repaid.	**Profit and Wealth** If the business is successful it can generate huge returns. Income and wealth are a huge motivator for a potential entrepreneur.
Lack of Security When starting a new business there are many uncertainties. Will the Business be successful? Will the Business provide a income? The lack of certainty and financial security is a major risk when starting a business.	**Independence** By becoming independent, entrepreneurs make their own decisions and if necessary, their own compromises. Being your own boss and making decisions without external influence can be a powerful motivator when starting your own business.

5. Risk and Rewards of Business	
Term	**Definition**
Business Failure	The collapse of a business, probably leading to its closure.
Independence	The need by many business owners to make their own decisions and be their own boss.
Lack of Financial Security	Uncertainty for the business owner about day to day family income and assets
Risk and Reward	The balance between the worst that can happen and the best that can happen

6. The Role of Business Enterprise - Definitions	
Term	Definition
Customer Needs	The products or services people need in order to live.
Customer Wants	The products or services people need in order to make life more comfortable.
Goods	Products that may be fresh, such as apples, or manufactured, such as Heinz baked beans. Items you can actually touch.
Services	Providing useful ways to help people with their lives, for examples mechanics, hairdressers and hospitals. Intangible _products._

7. Adding Value	
Term	Definition
Branding	Giving a product or service 'personality' with a name and logo that makes it stand out.
Unique Selling Point	An original feature of a product that rivals aren't offering.
Value Added	The difference between the selling price and the cost of bought in goods and services (the difference that creates the possibility of profit).

8. Role of Entrepreneurship	
Qualities needed	Explanation
Ability to take risks	Entrepreneurs are willing to take risks and seize new opportunities
Making decisions	Making the right decisions given the information is available is crucial to the success of any entrepreneur
Showing Leadership	Leadership is crucial displaying qualities such as decisiveness, initiative and the ability to think ahead
Organising Resources	Being able to organise resources such as human, physical or daily resources are crucial to the smooth running of any start-up

GCSE Business. Paper 1 1. Enterprise and Entrepreneurship

1. The Dynamic Nature of Business	
Term	**Definition**
Dynamic Nature of Business	
Venture Capital	

2. Why start a Business?	
Starting a Business	**Explanation**
Why?	
Who?	
How?	

3. Why new business ideas come about:	
Why?	**Explanation**
Changes in what consumers want	
Products and services becoming obsolete	
Changes in Technology	
Key Terms and Definitions	
Demand	
Entrepreneurs	
Obsolete	

4. How new business ideas come about:	
Term	**Definition**
Adapting existing products	
Competitive Advantage	
Original Ideas	

4. Risks and Rewards of starting a new Business	
Risks	**Rewards**
Business Failure	**Success**
Financial Loss	**Profit and Wealth**
Lack of Security	**Independence**

5. Risk and Rewards of Business	
Term	**Definition**
Business Failure	
Independence	
Lack of Financial Security	
Risk and Reward	

6. The Role of Business Enterprise - Definitions	
Term	Definition
Customer Needs	
Customer Wants	
Goods	
Services	

7. Adding Value	
Term	Definition
Branding	
Unique Selling Point	
Value Added	

8. Role of Entrepreneurship	
Qualities needed	Explanation
Ability to take risks	
Making decisions	
Showing Leadership	
Organising Resources	

Year 10 Cambridge National- Media and Sport- Term 1

What we are learning this term:
A. *How sport is covered across the media*
A. *Examples of how sport is broadcast across different media platforms*

Main assessment objectives
Learning outcome: Know how sport is covered across the media

A.	Key question from Assessment objectives?
Key word	**Key definition**
1. Terrestrial TV	Free to air TV
2. Satellite TV	Requires a monthly payment to watch
3. Fanzines	Magazines written and published by fans
4. Blog	An informal or discussion posted online
5. Podcasts	A digital audio file available online for downloading
6. P2P Sharing	The distribution and sharing of digital media
7. Pay-per-view	One off paid for TV events
8. Fan sites	Websites produced by sports fans

C.	What are the different forms of social media?
	Facebook, Twitter, Snapchat and Instagram

What sports are shown on Pay-per-view channels?	What satellite channels show sport?
1. Boxing 2. UFC 3. WWE	1. Sky 2. BT 3. Virgin

A.	What is the difference between terrestrial, satellite and pay-per-view TV?
Terrestrial- This TV is free to air, and you must only pay your TV licence to watch this Satellite- This type of TV requires a monthly subscription to watch [illegible]is type of TV requires a one [illegible]tch a live event	

A.	What is the difference between a tabloid and broadsheet newspapers?
Tabloid- A paper that focus on celebrity gossip and news about famous people Broadsheet- A paper that focus on more serious news such as politics and finance	

A.	What sports are predominantly shown on TV?
BBC- Wimbledon/Olympics/Snooker/Inter[illegible] football ITV- International football/Darts/Hors[illegible] Sky- Premier league football/Cricket/Golf BT- Champions league football/NBA	

G.	*What sport information are radios likely to broadcast?*
National radio (4)	1. Premier league 2. FIFA World cup 3. Wimbledon 4. Cricket World cup Examples of national radio 1. Radio 1 2. Radio 2 3. Capital 4. XFM
Local radio *(4)*	1. STFC results 2. Local rugby results 3. Southern League 4. Bristol football results Examples of local radio 1. BBC Wiltshire 2. BBC Berkshire 3. Heart Wiltshire 4. STFC Radio

	Key information
Newspapers	The Sun The daily Mail The Guardian The Daily express
Satellite	BT Sky Virgin
Books	Autobiographies Tactics/Plays Sport history
Fanzines	Red issue- Man Utd The Gooner- Arsenal
Blogs	F1 Fanatic Caughtoffside The5krunner
Video-sharing sites	Vimeo Twitch Dailymotion
Live streams	Youtube Facebook Instagram
Magazines	Total carp Runners world Cycling Plus
Terrestrial	BBC ITV Channel 4
Pay-per-view	ITV Box Office Sky Box Office
Dedicates sports radio	Talk sport Radio 5 live
Fan sites	Over the bar

Year 10 Cambridge National- Media and Sport- Term 1

What we are learning this term:
A. ***How sport is covered across the media***
A. ***Examples of how sport is broadcast across different media platforms***

Main assessment objectives
Learning outcome: Know how sport is covered across the media

A.	Key question from Assessment objectives?

Key word	Key definition
1. Terrestrial TV	
2. Satellite TV	
3. Fanzines	
4. Blog	
5. Podcasts	
6. P2P Sharing	
7. Pay-per-view	
8. Fan sites	

C.	What are the different forms of social media?

What sports are shown on Pay-per-view channels?	What satellite channels show sport?

A.	What is the difference between terrestrial, satellite and pay-per-view TV?

G.	*What sport information are radios likely to broadcast?*
National radio (4)	
Local radio *(4)*	

A.	What is the difference between a tabloid and broadsheet newspapers?

A.	What sports are predominantly shown on TV?

	Key information
Newspapers	
Satellite	
Books	
Fanzines	
Blogs	
Video-sharing sites	
Live streams	
Magazines	
Terrestrial	
Pay-per-view	
Dedicates sports radio	
Fan sites	

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER T1

Name: Date:

Macronutrients, fibre and water

Macronutrients
Macronutrients provide energy. The macronutrients are:
- carbohydrate;
- protein;
- fat.

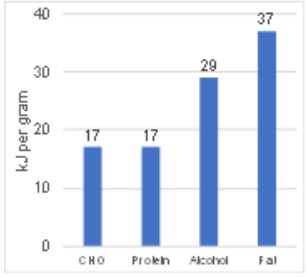
Macronutrients are measured in grams (g).

Alcohol
Alcohol is not considered a nutrient, but is a source of energy in the diet.

The government recommends no more than 14 units of alcohol per week for both men and women.

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

	Energy per gram
Carbohydrate	16kJ (3.75 kcals)
Protein	17kJ (4 kcals)
Alcohol	29kJ (7kcals)
Fat	37kJ (9 kcals)



Protein
- Made up of building blocks called amino acids.
- There are 20 amino acids found in protein.
- Eight amino acids have to be provided by the diet (called essential amino acids).

The essential amino acids are isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.
In young children, additional amino acids, e.g. histidine and tyrosine, are sometimes considered to be essential (or 'conditionally essential') because they may be unable to make enough to meet their needs.

Recommendations
- 0.75g/kg bodyweight/day in adults.

Sources:
Animal sources: meat; poultry; fish; eggs; milk; dairy food.

Plant sources: soya; nuts; seeds; pulses, e.g. beans, lentils; mycoprotein.

Protein complementation
Different food contains different amounts and combinations of amino acids.

Vegans and vegetarians can get all the amino acids they need by combining different protein types at the same meal. This is known as protein complementation.

Examples are:
- rice and peas;
- beans on toast;
- hummus and pitta bread;
- bean chilli served with rice.

Carbohydrate
All types of carbohydrate are compounds of carbon, hydrogen and oxygen. They can be divided into three main groups according to the size of the molecule.

These three types are:
- monosaccharides (e.g. glucose);
- disaccharides (e.g. lactose);
- polysaccharide (e.g. sucrose).

The two types main of carbohydrate that provide dietary energy are starch and sugars. Dietary fibre is also a type of carbohydrate.

Starchy carbohydrate is an important source of energy.

Starchy foods - we should be choosing wholegrain versions of starchy foods where possible.

Recommendations
- Total carbohydrate - around 50% of daily food energy.
- Free sugars include all sugars added to foods plus sugars naturally present in honey, syrups and unsweetened fruit juice (<5% daily food energy).
- Fibre is a term used for plant-based carbohydrates that are not digested in the small intestine (30g/day for adults).

Fibre
- Dietary fibre is a type of carbohydrate found in plant foods.
- Food examples include wholegrain cereals and cereal products; oats; beans; lentils; fruit; vegetables; nuts; and, seeds.

Dietary fibre helps to:
- reduce the risk of heart disease, diabetes and some cancers;
- help weight control;
- bulk up stools;
- prevent constipation;
- improve gut health.

Fat
Sources of fat include:
- saturated fat;
- monounsaturated fat;
- polyunsaturated fat.

Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.

Recommendations
- <35% energy, Saturated fat <11% energy.

A high saturated fat intake is linked with high blood cholesterol levels.

Sources:
Saturated fat: fatty cuts of meat; skin of poultry; butter; hard cheese; biscuits, cakes and pastries; chocolate.
Monounsaturated fat: edible oils especially olive oil; avocados; nuts.
Polyunsaturated fatty acids: edible oils especially sunflower oil; seeds; margarine; spreadable fats made from vegetable oils and oily fish.

Dietary reference values (DRVs) are a series of estimates of the energy and nutritional requirements of different groups of healthy people in the UK population. They are not recommendations or goals for individuals.

Reference Intakes are guidelines for the maximum amount of energy (calories), fat, saturated fat, sugars and salt consumed in a day (based on a healthy adult female).

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

Hydration
- Aim to drink 6-8 glasses of fluid every day.
- Water, lower fat milk and sugar-free drinks including tea and coffee all count.
- Fruit juice and smoothies also count but should be limited to no more than a combined total of 150ml per day.

20% of water is provided by food such as soups, yogurts, fruit and vegetables.

The other 80% is provided by drinks such as water, milk and juice.

Drinking too much water can lead to 'water intoxication' with potentially life threatening hyponatraemia.

This is caused when the concentration of sodium in the blood gets too low.

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER T1

Micronutrients

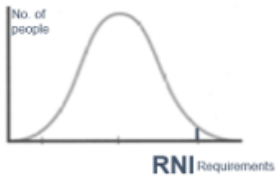
Micronutrients are needed in the body in tiny amounts. They do not provide energy, but are required for a number of important processes in the body.

There are two main groups of micronutrients:
- vitamins;
- minerals and trace elements.

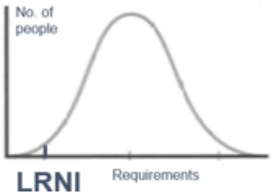
Micronutrients are measured in milligrams (mg) and micrograms (µg) with 1mg = 0.001g and 1µg = 0.001mg.

Micronutrient recommendations

The recommendations for vitamins and minerals are based on the **Reference Nutrient Intake (RNI).**



When looking at low intakes of micronutrients, the Lower Reference Nutrient Intake (LRNI) is used.



For more information, go to: https://bit.ly/36KUnji

Micronutrient recommendations

People have different requirements for each micronutrient, according to their:
- age;
- gender;
- physiological state (e.g. pregnancy).

Vitamins

Vitamins are nutrients required by the body in small amounts, for a variety of essential processes.

Most vitamins cannot be made by the body, so need to be provided in the diet.

Vitamins are grouped into:
- fat-soluble vitamins (vitamins A, D, E and K);
- water-soluble vitamins (B vitamins and vitamin C).

Minerals

Minerals are inorganic substances required by the body in small amounts for a variety of different functions.

The body requires different amounts for each mineral.

Some minerals are required in larger amounts, while others are needed in very small amounts and are called 'trace elements'.

Vitamins

Nutrient	Function	Sources
Vitamin A	Helps the immune system to work as it should and with vision.	Liver, cheese, eggs, dark green leafy vegetables and orange-coloured fruits and vegetables.
B vitamins	Thiamin, riboflavin, niacin, folate, and vitamin B12 have a range of functions within the body.	Different for each B Vitamin.
Vitamin C	Helps to protect cells from damage and with the formation of collagen.	Fruit (especially citrus fruits), green vegetables, peppers and tomatoes.
Vitamin D	Helps the body to absorb calcium & helps to keep bones strong.	Oily fish, eggs, fortified breakfast cereals and fat spreads.
Vitamin E	Helps to protect the cells in our bodies against damage.	Vegetable and seed oils, nuts and seeds, avocados and olives.
Vitamin K	Needed for the normal clotting of blood and is required for normal bone structure.	Green vegetables and some oils (rapeseed, olive and soya oil).

Minerals

Nutrient	Function	Sources
Calcium	Helps to build and maintain strong bones and teeth.	Dairy, calcium-fortified dairy-alternatives, canned fish (where soft bones are eaten) and bread.
Iron	Helps to make red blood cells, which carry oxygen around the body.	Offal, red meat, beans, pulses, nuts and seeds, fish, quinoa, wholemeal bread and dried fruit.
Phosphorus	Helps to build strong bones and teeth and helps to release energy from food.	Red meat, poultry, fish, milk, cheese, yogurt, eggs, bread and wholegrains.
Sodium	Helps regulate the water content in the body.	Very small amounts found in foods. Often added as salt.
Fluoride	Helps with the formation of strong teeth and reduce the risk of tooth decay.	Tap water, tea (and toothpaste).
Potassium	Helps regulate the water content in the body and maintain a normal blood pressure.	Some fruit and vegetables, dried fruit, poultry, red meat, fish, milk and wholegrain breakfast cereals.
Iodine	Helps to make thyroid hormones. It also helps the brain to function normally.	Milk, yogurt, cheese, fish, shellfish and eggs.

Key terms

Micronutrients: Nutrients needed in the diet in very small amounts.
Lower Reference Nutrient Intake (LRNI): is the amount of a nutrient that is enough for only the small number of people who have low requirements (2.5%). The majority of people need more.
Reference Nutrient Intake (RNI): the amount of a nutrient that is enough to ensure that the needs of nearly all the group (97.5%) are being met. The RNI is used for recommendations on protein, vitamins and minerals.

Vitamin D

Vitamin D is a pro-hormone in the body. It can be obtained in two forms:
- ergocalciferol (vitamin D_2);
- cholecalciferol (vitamin D_3).

Vitamin D_3 is also formed by the action of sunlight. Different to most vitamins, the main source of vitamin D is synthesis in the skin following exposure to sunlight. The wavelength of UVB during the winter months in the UK does not support vitamin D synthesis.

Frayer Model Key Words	
Protein	A macronutrient that is essential to building muscle mass.
Fat	A macronutrient which supplies the body with energy.
Carbohydrates	A macronutrient that is required by all animals. It is made in plants by the process of photosynthesis.
Vitamin	Vitamins are split into two categories, water soluble and fat soluble. Fat soluble vitamins (A, D E, and K) dissolve in fat. Water soluble vitamins (the B group and vitamin C) dissolve in water.
Nutritional	Providing or obtaining the food necessary for health and growth.
Energy	The strength and vitality required for sustained physical or mental activity.

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER T1

QUIZ

Macronutrients
Macronutrients provide energy. The macronutrients are:
- .
- .
- .

Macronutrients are measured in…… ( ).

Micronutrients are needed in the body in …….amounts. They do not provide……., but are required for a number of important……in the body.

There are two main groups of micronutrients:
- .
- .

Micronutrients are measured in …… (mg) and …… (µg) with 1mg = 0.001g and 1µg = 0.001mg.

Key terms
Dietary reference values:

Essential amino acids:

Macronutrients:

Protein complementation:

Reference Intakes:

Protein
Made up of building blocks called ……..
There are ….. amino acids found in protein.
Eight amino acids have to be provided by the diet (called…….. amino acids).

Sources:
Animal sources:

Plant sources:

Vitamins
Vitamins are nutrients required by the body in small amounts, for a variety of essential processes.

Most vitamins cannot be made by the body, so need to be provided in the diet.

Vitamins are grouped into:
-

-

Protein complementation
Different food…

Vegans and vegetarians can get all the amino acids they need by combining different protein types at the same meal. This is known as protein complementation.

Examples are:
- .
- .
- .
- .
- .

Carbohydrate
All types of carbohydrate are compounds of carbon, hydrogen and oxygen. They can be divided into three main groups according to the size of the molecule.

These three types are:
-
-
-

The two types main of carbohydrate that provide dietary energy are starch and sugars. Dietary fibre is also a type of carbohydrate.

Starchy carbohydrate is an important source of energy.

Starchy foods –

Recommendations
- Total carbohydrate – around……..of daily food energy.
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Sources of fat include:
saturated fat;
monounsaturated fat;
polyunsaturated fat.

Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.

Recommendations
<35% energy, Saturated fat <11% energy.
A high saturated fat intake is linked with high blood cholesterol levels.

Sources:

Key terms
Micronutrients:
.

Lower Reference Nutrient Intake (LRNI):

Reference Nutrient Intake (RNI):

Year 10 PRODUCT DESIGN Term 1

What we are learning this term:

A. Scales of Production
B. Production Methods
C. Impact on Enterprise
D. Anthropometric Data
E. Impact on People
F. Impact on Design
G. Ergonomics

A. Scales of Production

Type	How Many?	Examples
One-off Production	**1**	• Towers /bridges • Bespoke house • Custom made clothes
Batch Production	**10s-1000s**	• Baked Foods • Limited Edition • Socks • Chairs
Mass Production	**10,000s – 100,000s**	• Cars • Bottles • Microchips • Plain shirts
Continuous Production	**100,00s+**	• Energy • Water • Paper • Plastic

B. Production Methods

Flexible Manufacturing Systems (FMS)

This is where **automated** machines are adaptable and can produce different products if needed.

Lean Manufacturing

This is where waste and energy is kept to a minimum. This saves money and resources in production, as well as helping minimise the **environmental impact** of producing products.

Just-in-Time (JIT) Manufacturing

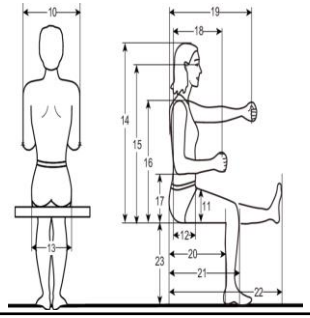
This is where manufacturers only order materials, parts, etc, when needed. This can be used in any **scale of production** but its particularly useful for one-off production.

C. Impact on Enterprise

Crowdfunding	A way of raising money from large numbers of people to launch a new product through websites.
Virtual marketing and retail	Promotion of products online and sharing experiences, reviews and recommendations.
Cooperatives	A business that is owned and managed by it's workers, all working towards a common goal.
Fair trade	An organisation that helps workers have fair trading and working conditions in developing countries

D. Anthropometric Data

The study of human measurements to ensure the products and environments are the correct size for the intended user.



E. Impact on People

Technology Push	When technological discoveries are used to drive the development or creation of a product
Market Pull	When products are developed or created to meet the needs of society or a gap in the market.
Universal Design	When designs are focused on serving the broadest range of users possible, rather than trying to address individual accessibility or inclusion objectives.
Inclusive Design	When the designer focuses on exploring ways of serving a full spectrum of people, regardless of age, gender, and disability.
User Centred Design (USD)	When designers focus on the end-user's wants and needs in each phase of the design process.

F. Impact on Design

Planned obsolescence	Designing products that will have a limited life and that will become obsolete and require to be replaced, such as disposable razors.
Design for Maintenance	Designing products that are more durable and have spare parts available to mend and maintain them, such as a push bike.
Design for Disassembly	When a product has reached the end of its life it can be taken apart and parts reused or recycled, such as a school seat.
Environmental Design	Designing products to be more sustainable and improving the overall environmental impact of a product, such as paper straws.

G. Ergonomics

This is the consideration that leads to a product being designed in a way that makes it easy to use. Such as a person sitting at their computer desk or the type of water bottle they use.

Year 10 PRODUCT DESIGN Term 1

What we are learning this term:

A. Scales of Production
B. Production Methods
C. Impact on Enterprise
D. Anthropometric Data
E. Impact on People
F. Impact on Design
G. Ergonomics

A. Scales of Production

Type	How Many?	Examples
One-off Production		
Batch Production		
Mass Production		
Continuous Production		

B. Production Methods

Flexible Manufacturing Systems (FMS)

.

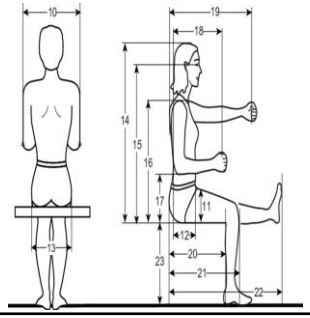
Lean Manufacturing

Just-in-Time (JIT) Manufacturing

C. Impact on Enterprise

Crowdfunding	
Virtual marketing and retail	
Cooperatives	
Fair trade	

D. Anthropometric Data



E. Impact on People

Technology Push	
Market Pull	
Universal Design	
Inclusive Design	
User Centred Design (USD)	

F. Impact on Design

Planned obsolescence	
Design for Maintenance	
Design for Disassembly	
Environmental Design	

G. Ergonomics

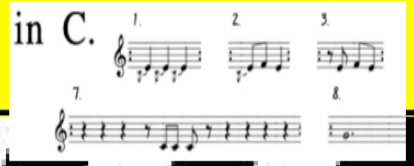
MINIMALISM

Context:

- Minimalism is a branch of modern classical music developed in New York in the early 1960s by composers such as Steve Reich, Philip Glass, Terry Riley and La Monte Young. As the name suggests, it involves stripping down music to its bare essentials (and beyond) to focus on its pure sonic power rather than anything it might evoke or represent.
- Initially, minimal music was characterised as droney and hypnotic.
- Perhaps the most successful UK composer associated with minimalism is Michael Nyman, sometimes billed as the best-selling classical composer in Britain. His 1993 soundtrack for Jane Campion's film The Piano has become a much-imitated modern classic.

Melody:

- Minimalist music uses **cells/motifs** - small snippets of melody using only a few notes
  Example: In C (Terry Riley)
- **Addition and Diminution** techniques used to develop/change melodies over time
- **Ostinatos** used



Harmony:

- **simple, repetitive** harmonies - 'static', slow changes that are sometimes unrecognizable, creating a **drone like** hypnotic harmony. Example: Trio for String (La Monte Young)
- A **consonant/diatonic harmony** (no clashing sounds)

Tonality:

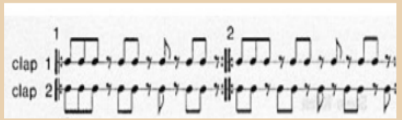
- Tonality in minimalism is CLEAR - either major or minor. Example: Steve Reich Piano Phase is Minor (sad sounding)

Significant Artists and Recordings:

- **Steve Reich** - Clapping music, Piano phase, Music for 18 musicians, Electric Counterpoint
- **Terry Riley** - In C
- **Phillip Glass** - Einstein on the beach, Glassworks, Music in the shape of a square
- **John Adams** - Phrygian Gates
- **Brian Eno** - Music for airports
- **La Monte Young** - Trio for Strings, Well Tuned Piano

Rhythm:

- Repetition of **rhythmic cells**
- minimalist composers use phase shifting (**two or more versions of a sound or musical motif are played simultaneously but slightly out of sync)** Example: Clapping Music - Steve Reich



- Sometimes, unusual time signatures used due to shifting rhythm patterns, e.g. 5/4. Example: Tubular Bells (Oldfield)
- Creation of complex **polyrhythms** (multiple rhythms at once)

Structure:

- **Through-composed** pieces (continuous, non-sectional, and non-repetitive. In letters, it would look like **ABCD)**
- **Development** occurs in minimalism **slowly and gradually**, instead of being in sections like popular music structures (verse/chorus etc)
  Example: Glassworks (Phillip Glass)

MINIMALISM

Context:

1. **Where and when is minimalism from?**

_____

2. **What kind of music is minimalism?**

New classical or new pop (circle)

3. **Who are the main composers?**

_____

_____

_____

4. **What are the main characteristics of minimalism?**

_____

_____

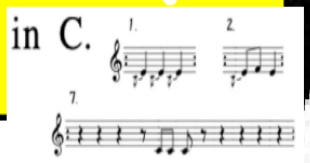
_____

Melody:

- Minimalist music uses _____ **which means** _____

Example: In C (Terry Riley)

- _____ techniques used to develop/change melodies over time
- _____ used - which are _____



Harmony:

- _____, _____ harmonies - 'static', _____ that are sometimes unrecognizable, creating a _____ **like** hypnotic harmony. Example: Trio for String (La Monte Young)
- A _____/_____ (no clashing sounds)

Tonality:

- Tonality in minimalism is CLEAR - either _____.

Example: Steve Reich Piano Phase is Minor (sad sounding)

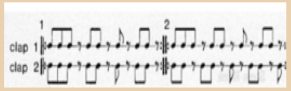
Significant Artists and Recordings:

- _____ - Clapping music, Piano phase, Music for 18 musicians, Electric Counterpoint
- _____ - In C
- _____ - Einstein on the beach, Glassworks, Music in the shape of a square
- _____ - Phrygian Gates
- _____ - Music for airports
- _____ - Trio for Strings, Well Tuned Piano

Rhythm:

- _____
- minimalist composers use _____ **(two or more versions of a sound or musical motif are played simultaneously but slightly out of _____)**

Example: Clapping Music - Steve Reich



- Sometimes, _____ due to shifting rhythm patterns, e.g. 5/4. Example: Tubular Bells (Oldfield)
- Creation of complex _____ (multiple rhythms at once)

Structure:

- _____ pieces (continuous, non-sectional, and non-repetitive. In letters, it would look like _ _ _ _ _)
- **Development** occurs in minimalism **how?**

_____

Example: Glassworks (Phillip Glass)

YEAR 10 BTEC DRAMA KNOWELDGE ORGANISER – COMPONENT ONE

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
2 Physical skills
3 Interpretive skill
4 Performance material
5 Analyse
6 Intentions

A. Key question – What is the artistic purpose of a performance work?

When watching a professional performance, the key questions you need to think about are the following…
How do we Explore artistic purpose?
Explore artistic purpose (across all three disciplines/styles) including:
to educate
to inform
to entertain
to provoke
to challenge viewpoints
to raise awareness
to celebrate.

A. *Component 1 – Key focus*

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.
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.

C. Key question from Assessment objectives

1. What are physical skills	1. What is a professional work
2. What are interpretive skills	2. What is a practitioner
3. How do we use these skills practically?	3. How do we analyse a performance
4. How do we IMPROVE on these skills?	4. What are a practitioners creative intentions

G. Key learning aims from Component 1

Learning aim A: Examine professional practitioners' performance work	**A1: Professional practitioners' performance material, influences, creative outcomes and purpose** Examine live and recorded performances in order to develop understanding of practitioners' work with reference to influences, outcomes and purpose. Focus on thematic interpretation of particular issues and how artists communicate their ideas to an audience. Roles and responsibilities in theatre.
Learning aim B: Explore the interrelationships between constituent features of existing performance material	Processes used in performance ●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.

YEAR 10 BTEC DRAMA KNOWELDGE ORGANISER – COMPONENT ONE

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
2 Physical skills
3 Interpretive skill
4 Performance material
5 Analyse
6 Intentions

A. Key question – What is the artistic purpose of a performance work?

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 _____
to _____

A. *Component 1 – Key focus*

In this component of the qualification students will develop their understanding of drama by examining the work of _____ _____ s and the _____ used to _____ _____.
Students should experience a range of work across the discipline of drama by viewing recorded and/or live work.
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.

C. Key question from Assessment objectives

1. What are physical skills	1. What is a professional work
2. What are interpretive skills	2. What is a practitioner
3. How do we use these skills practically?	3. How do we analyse a performance
4. How do we IMPROVE on these skills?	4. What are a practitioners creative intentions

G. Key learning aims from Component 1

Learning aim A: Examine professional practitioners' performance work	**A1: Professional practitioners' performance material, influences, creative outcomes and purpose** 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.
Learning aim B: Explore the interrelationships between constituent features of existing performance material	Processes used in performance ●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	

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

What we are learning this term:

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

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

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

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

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

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

What we are learning this term:

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

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

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

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

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

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

What we are learning this term:

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

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

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

F. How do humans develop emotionally (E)?

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

G. How do humans develop socially (S)?

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

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

What we are learning this term:

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

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

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

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

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

What we are learning this term:

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

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

I. How do physical factors affect development?

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

J. How does lifestyle affect development?

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

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

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

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

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

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

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

What we are learning this term:

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

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

I. How do physical factors affect development?

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

J. How does lifestyle affect development?

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

Positive lifestyle choices lead to:

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Negative lifestyle choices lead to:

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

Positive self-image:

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-
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Negative self-image

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

What we are learning this term:

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

K How do social and cultural factors affect development

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

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

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

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

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

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

L How do relationships and isolation affect development?

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

M How do economic factors affect development

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

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

Living in good housing with open spaces:	Living in a poor housing with cramped and damp conditions:
• Feeling good about themselves • Be more likely to stay healthy, • Space to take exercise • Feel safe ad secure • Warmth	• Have low self-esteem and self-image • Be more likely to experience ill health • Be lesson likely to exercise • Anxious and stressed.
Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image. →	Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.

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

K How do social and cultural factors affect development

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

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

Community refers to:

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

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

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

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	
2	
3	
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7	

M How do economic factors affect development

Having enough money….	Not having enough money ……
•	•
•	•

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

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

Living in good housing with open spaces:	Living in a poor housing with cramped and damp conditions:
•	•
•	•
•	•
•	•
•	•

Material possession like a new phone or coat has a positive effect on the persons development because…..	Not having a phone or the newest trainers can have a negative affect on…. Because….
•	•
•	•
•	•

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

What we are learning this term:

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

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

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

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

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

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

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

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

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

SWINDON ACADEMY READING CANON

Year 7

- The Canterbury Tales
- War Horse
- Adventures of a Young Naturalist
- A Monster Calls
- The Pearl
- Number the Stars
- The Hunger Games
- Chinese Cinderella
- Sir Gawain and the Green Knight

Year 8

- The Dark Lady
- Trash
- The Diary of a Young Girl
- Ghost Boys
- The Amazing Maurice
- The Bone Sparrow
- Salt to the Sea
- The Giver
- Witch Child

Year 9

- Skin
- I am Malala
- Noughts and Crosses
- Liccle Bit
- Fahrenheit 451
- The Black Flamingo
- One
- Simon vs the Homo Sapiens Agenda
- Long Way Down
- Northern Lights
- The Boy Who Steals Houses
- The Woman in Black
- The Book Thief

Year 10

- The Underground Railroad
- The Curious Incident of the Dog in the Night-Time
- The Hate U Give
- Rani and Sukh
- Pigeon English
- The Boxer
- 1984
- Orangeboy
- The Outsiders
- The Art of Being Normal
- A Selection of Short Stories
- To Kill a Mockingbird

#ReadingisPower