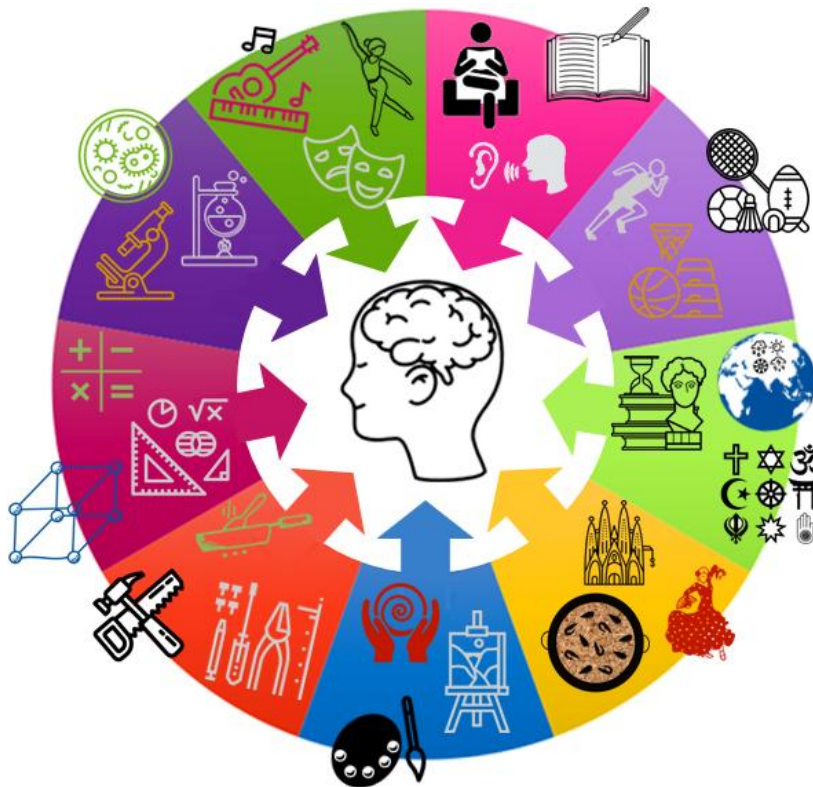


100% book - Year 10 Foundation

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



Term 1

Swindon Academy 2026-27

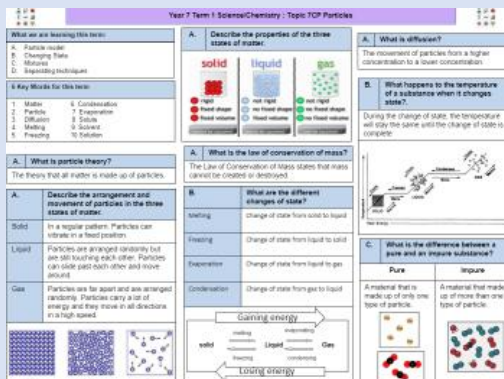
Name:	
Tutor Group:	
Tutor & Room:	

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

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

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

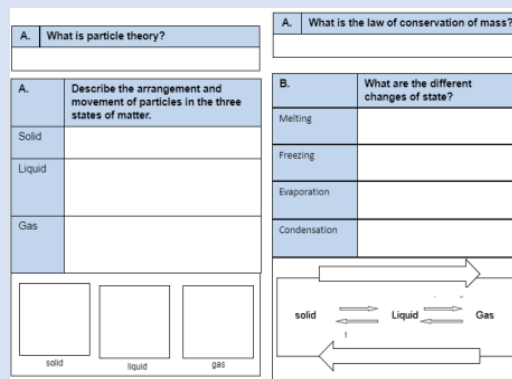
Knowledge Organisers



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

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

Quizzable Knowledge Organisers



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

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

Top Tip

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

Expectations for Prep and for using your Knowledge Organisers

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

How do I complete Knowledge Organiser Prep?

Step 1

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

Step 2

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

What is particle theory?
The theory that all matter is made up of particles.

What are the different states of matter?
Solid, Liquid, Gas.

What is the law of conservation of mass?
The Law of Conservation of Mass states that mass cannot be created or destroyed.

What are the different changes of state?
Melting, Freezing, Evaporation, Condensation.

What are the different types of energy?
Kinetic energy, Potential energy.

Step 3

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

29th May 2020

Properties of the states of matter

Particle theory = all matter is made of particles

Solid = regular pattern
particles vibrate in fixed position

Liquid = particles are arranged randomly but are still touching each other
Particles can slide past each other and move around.

Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy

Step 4

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

Solid = regular pattern
particles vibrate in fixed position

Solid = regular pattern
particles vibrate in fixed position

Solid = regular pattern
particles vibrate in fixed position

Step 5

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

What is particle theory?
The theory that all matter is made up of particles.

What are the different states of matter?
Solid, Liquid, Gas.

What is the law of conservation of mass?
The Law of Conservation of Mass states that mass cannot be created or destroyed.

What are the different changes of state?
Melting, Freezing, Evaporation, Condensation.

What are the different types of energy?
Kinetic energy, Potential energy.

Step 6

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

Particle theory = all matter is made of particles

Solid = regular pattern
particles vibrate in fixed position

Liquid = particles are arranged randomly but are still touching each other
Particles can slide past each other and move around.

Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy

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

ENGLISH –Poetry cluster 1:

The Romantics- Foundation

Romanticism:

- A movement in literature and the arts
- From around 1800-1890
- During this time, major changes took place in society, as people challenged the power of the church and the monarchy.
- The Romantics valued freedom, imagination, emotion and nature
- They were against the power that the church and monarchy had because they believed that they exploited the poor and restricted people's freedoms.

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-establishment	Disagreeing with the people who have power and make decisions

ENGLISH –Poetry cluster 1: The Romantics- Foundation

Romanticism:

- A movement in
- From around
- During this time,...
- The Romantics valued
- They were against

because...

Key Vocabulary

Tyrant

Transient

Hubris

Oppression

Patriarchy

Egocentric

Awe

Radical

Ephemeral

Autocratic

Sinister

Revolution

Exploit

**Anti-
establishment**

Poem	Context	Events in the poem	Message	Form/ structure
The Prelude- William Wordsworth 	- Born 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 can make us feel 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 views.	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.
My Last Duchess- Robert Browning 	- Browning was inspired by the writing of radical poets such as Percy 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 talks about the painting and about the Duchess. He starts to 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 probably had the Duchess's killed: 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 questions how oppressive society is for women. He suggests strict rules should not be forced on others and there should be equality of power in society. - 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 being too arrogant can lead to the abuse of power. He warns us that pride and jealousy can take over all other emotions.	Dramatic monologue- reflective of the Duke's arrogance. The regular meter and rhyme scheme (rhyming couplets) demonstrate the Duke's control over the narrative and how he has carefully constructed his argument.
Ozymandias- Percy Shelley 	- Shelley was considered to be a radical due to his dislike of the church and monarchy - The poem is inspired by an Egyptian pharaoh, Ramesses II. - Ramesses II led armies into many battles and built a huge empire. However, to do this he used slave labour and allowed his people to struggle whilst he spent a lot of money 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, in the poem, his empire is gone and only sand and ruins remain.	- 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 that their power is ephemeral. - 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 lasts longer than 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 The rigid structure is symbolic of Ozymandias' oppressive rulership.
London- William Blake 	- Born in London in 1757, Blake was a radical and was against 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 London's streets, the speaker notices how the River Thames seems to be controlled 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, and feels that the Church is to blame. - 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 sound brings misery to their tearful new-born children. The speaker also imagines this sound plaguing what the speaker calls "the Marriage hearse"—an 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 repetitiveness of the pain and suffering that the people of London face. The controlled structure is also symbolic of the control that the church and monarchy have over society.

Poem	Context Notes	Events in the poem	Message	Form/ structure
The Prelude- William Wordsworth 	- Born in in _____, Wordsworth was... - Whilst he was there, he was influenced by ... - The poem you study is... - The poem is mostly...	- An _____ account of... - The poem focusses on... - Whilst there he feels... - He...	- Nature has the power to... - Nature can be ... - Imagination and memories are...	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.
My Last Duchess- Robert Browning 	- Browning was inspired by... - Written in _____, it is inspired by	- The speaker of the poem (the Duke) shows... - The Duke talks about... - As his monologue continues, the reader realises that... - Having made this admission, the Duke...	- Browning questions... - Browning warns us that... - Furthermore, Browning shows how...	Dramatic monologue- The regular meter and rhyme scheme (rhyming couplets) demonstrate
Ozymandias- Percy Shelley 	- Shelley was considered to be... - The poem is inspired by... - He...	- The poem imagines... - In the poem,... - However...	- Shelley wanted to... - Shelley warns tyrants that... - The poem offers...	Sonnet- The use of the sonnet form is reflective of The rigid structure is symbolic of
London- William Blake 	- Born in London in _____, Blake was... - He believed... - During this era,...	- Walking through through... - The speaker sees... - He hears... - Thinking of... - He also hears...	- Blake wanted to... - Blake believed... - Blake was... - It could be said to be...	Blake uses regular stanzas and a regular rhyme scheme which reflects The controlled structure is also symbolic of

T1 Y10 Mainstream Science/Biology B2 – Organisation

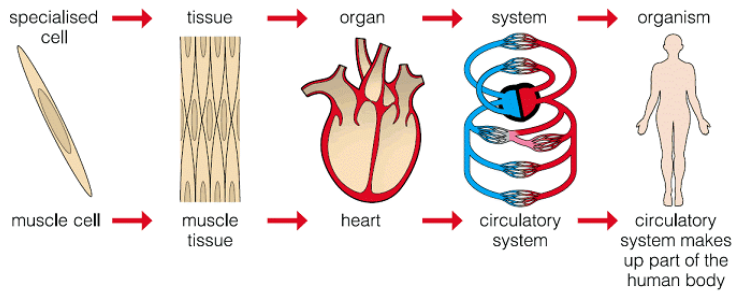
Levels of Organisation

Cells = basic building blocks of all living organisms.

A tissue = group of cells with a similar structure and function.

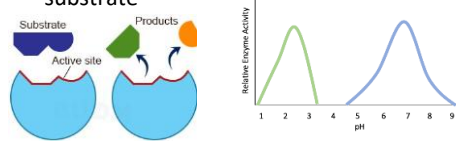
Organs = aggregations of tissues performing specific functions.

Organ systems = organs organised to form organisms.



Enzymes

- Biological catalysts
- Digestive enzymes speed up the break down of insoluble food molecules
- Specific shape active site that matches substrate



Enzymes work best at certain temperatures or pH depending on their role.

Bile

The liver makes an **alkaline** solution called bile. Stored by the gall bladder.

Has two jobs:

- Emulsifies fats
- Neutralises stomach acid.



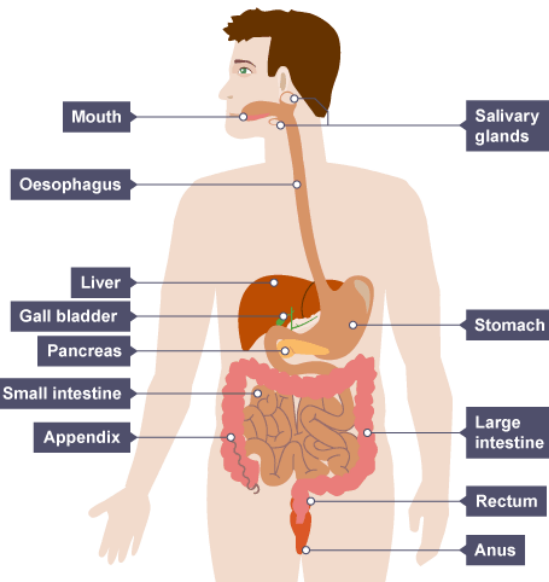
Digestive Enzymes

Starch $\xrightarrow[\text{e}]{\text{amylase}}$ Glucose

Protein $\xrightarrow{\text{protease}}$ Amino Acids

Fats $\xrightarrow{\text{lipase}}$ Fatty acids + Glycerol

Digestive System



Organ	Function
Mouth	Teeth and tongue to chew food.
Salivary Glands	Releases saliva containing enzymes.
Oesophagus	Muscle tube to squeeze food along.
Stomach	Contains enzymes and hydrochloric acid. Is made of muscle to churn food. Hydrochloric acid kills bacteria in food
Small Intestine	Where digestion is completed and soluble food particles (glucose, amino acids, fatty acids, glycerol). are absorbed
Large Intestine	Absorbs water.
Liver	Produces bile.
Gall Bladder	Stores bile.
Pancreas	Releases enzymes.

Where are the enzymes?

Enzyme	Salivary glands	Stomach	Pancreas	Small intestine
Amylase	X		X	X
Protease		X	X	X
Lipase			X	X

RP3 – Food Tests

Summaries of the four food tests.

Protein Add Biuret's reagent Positive test; Blue solution turns Purple	Starch Add Iodine Positive test; solution turns from orange to Black
Fats Add Ethanol and water Positive test – solution turns Cloudy	Glucose Add Benedict's and heat Positive test blue solution turns Brick red

Water Bath

T1 Y10 Mainstream Science/Biology B2 – Organisation

1. What is an organ system?
2. What are group of cells with a similar structure and function?
3. Give an example of an organ.
4. Put these into order, starting with the smallest:
tissue cell organ system organ

1. What is an enzyme?
2. What is the name of the part of the enzyme that the substrate fits into?
3. Give two factors that affect how enzymes work

1. Where is bile made?
 2. Where is bile stored?
 3. What are the two jobs of bile?
1. Which enzyme breaks down starch?
 2. What are the products of fat digestion?
 3. What are proteins made of?

1. Where are the salivary glands found?
2. What is the job of the oesophagus?
3. What is the job of the pancreas (in digestion)?
4. What is the job of the small intestine?
5. What is the function of the hydrochloric acid in the stomach?

1. Where is lipase released from?
2. Which enzyme is released in the stomach?
3. Which enzyme is found in the mouth?

1. Which two chemicals are added to test for fats?
2. What is the colour change when Biuret is added to a food containing protein?
3. Which test needs to be placed in a water bath?

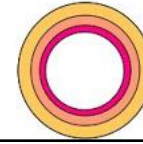
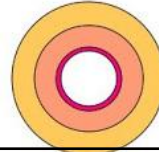
T1 Y10 Mainstream Science/Biology B2 – Organisation

The effect of pH on the rate of reaction of amylase

1. Add 2cm³ amylase solution, 2cm³ of starch solution and 2cm³ of pH2 buffer to a water bath (37°) in separate test tubes. Wait 10 minutes.
2. While waiting, add 2 drops of iodine solution to each well on the spotting tile.
3. Once the solutions in the water bath have reached 37° pour the amylase and pH2 buffer into the starch solution.
4. Immediately take a sample with a pipette and add to the first well of the spotting tile.
5. Repeat step 4 every 30 seconds until there is no colour change when testing with iodine solution.
6. Repeat steps 1-5 with pH4, pH6, pH8 and pH10 buffers.



Blood Vessels



Arteries

- Blood carried away from heart
- Thick muscular and elastic walls = withstands high pressure
- Small lumen = maintains high pressure

Capillaries

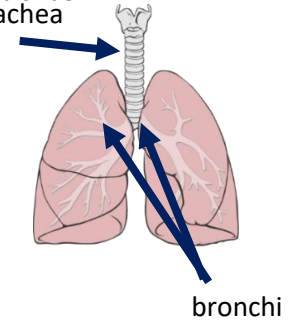
- Walls only one cells thick = shorter diffusion pathway
- Lumen just bigger than red blood cell
- Blood flows very slowly
- Diffusion takes place here

Veins

- Blood carried back to heart
- Thin walls as blood is low pressure
- Large lumen – lower resistance for blood passing through
- Valves prevent back flow

Respiratory System

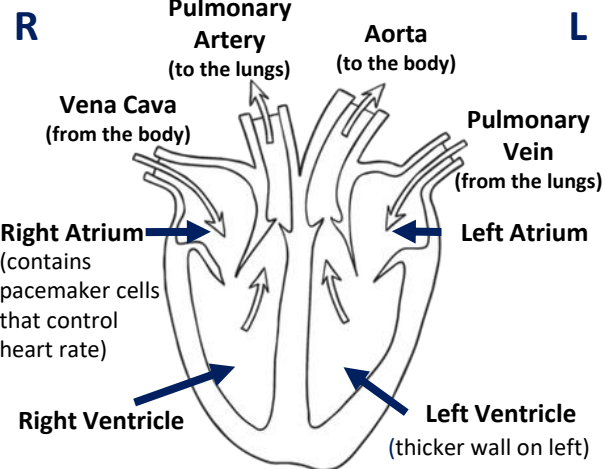
The lungs have two jobs – to get oxygen into the blood and remove carbon dioxide



Structures that cannot be seen on this diagram are the **alveoli** and **capillary network** – see 'unit 1 - diffusion'.

The Human Heart

Double pump because - left side pumps to whole body, right side pumps to the lungs.



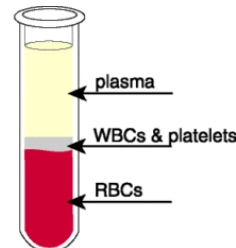
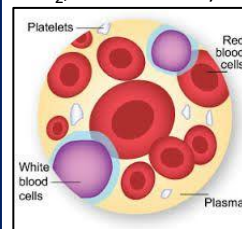
Blood – 4 components

Red blood cells – contain haemoglobin to carry oxygen. More detail...

White blood cells – fight pathogens (see unit 3 – infection and response).

Platelets – cell fragments that clot blood.

Plasma – liquid part that transports cells, cell fragments and dissolved substances (salts, urea, CO₂, hormones...)

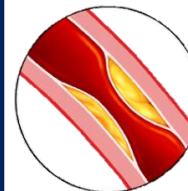


Red Blood Cells (RBCs)

- Contain chemical 'haemoglobin'.
- This reacts/ binds with oxygen to be carried around the body.
- RBCs are ~8µm (relative small animal cell) allows them to fit through capillaries
- Bi-concave disc shape for large SA:V



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

T1 Y10 Mainstream Science/Biology B2 – Organisation

The effect of pH on the rate of reaction of amylase

1. What temperature should the water bath be set at for the affect of pH on amylase practical?
2. What is the name of the chemical used to test for the presence of starch?
3. What is the independent variable in the investigation?

1. Which blood vessels contain valves?
2. Which vessels carry blood under very high pressure?
3. In which blood vessels does diffusion take place?
4. Which blood vessels have thick muscular walls?
5. Which vessels have a wide lumen?

1. What is the name of the tube that connects the throat to the lungs?
2. What is the name of the tubes that enter each lung?
3. What are the two jobs of the lungs?

1. Which blood vessel returns blood to the heart from the lungs?
2. Which blood vessel carries blood away from the heart towards the body?
3. Which ventricle wall is thicker?
4. Where are pacemaker cells found?
5. Why is the heart known as a double pump?

1. Name the two types of cells in blood.
2. What are platelets?
3. What do platelets do?
4. Name 3 substances plasma might have dissolved in it?

1. What chemical is found inside red blood cells?
2. What is the 3D shape of RBCs called? What is the advantage of this shape?

1. What do coronary arteries do?
2. What can block coronary arteries?
3. What will happen to the heart if they become blocked?

T1 Y10 Mainstream Science/Biology B2 – Organisation

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



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

Cancer

Uncontrolled cell growth

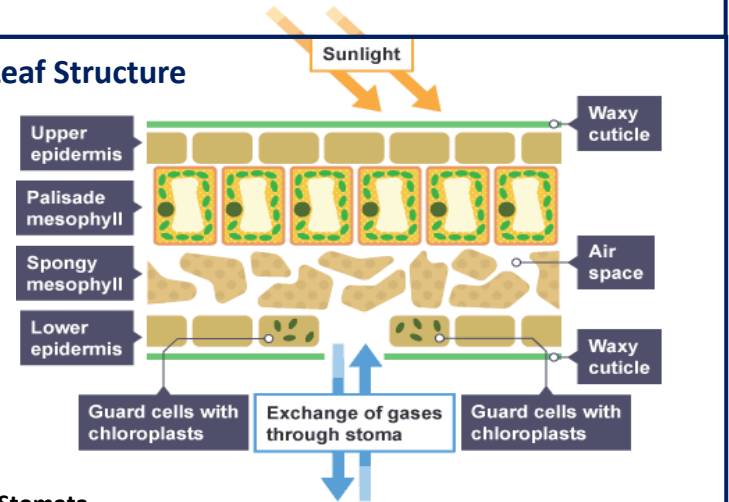
Benign tumours = abnormal cells, contained in one area, in a membrane, do not invade other parts of body.

Malignant tumours = cancer cells, not in a capsule, invade neighbouring tissue, and spread into blood and form secondary tumours.

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.

Leaf Structure

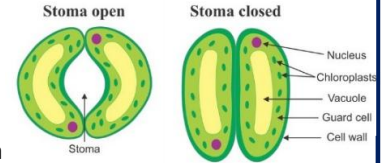


Stomata

Tiny pores on the underside of the leaf.

Allow oxygen and CO₂ to diffuse in and out

Guard cells surround the stomata and can open and close the pore

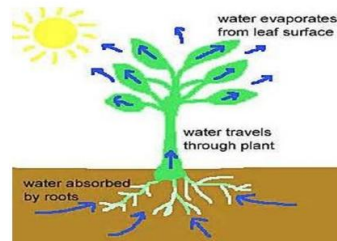


Interaction of Diseases

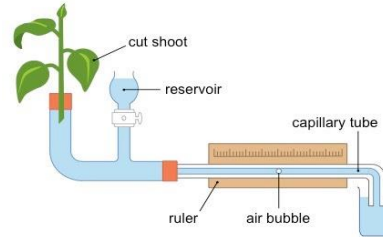
- Defects in the immune system - individual is more likely to suffer from infectious diseases.
- Viruses can trigger cancers, e.g. HPV can trigger cervical cancer.
- Immune reactions caused by pathogens can trigger allergies such as asthma or rashes
- Severe physical ill health can lead to depression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

Transpiration

Movement of water through plant from roots to leaves, driven by evaporation through the stomata



Measuring transpiration



Record the distance the bubble of air moves along the scale during set amount of time to calculate volume of water uptake per minute.

Transpiration	Translocation
Movement of water from roots to leaves	Movement of dissolved sugars from leaves all round the plant
Xylem - hollow tubes strengthened by lignin.	Phloem – tubes of elongated cells.
One way system – roots to leaves.	Two way system – sugars taken to wherever they are needed.

Increasing the rate of transpiration

- Higher temperature
- Lower humidity
- Higher light intensity
- Higher air movement

T1 Y10 Mainstream Science/Biology B2 – Organisation

1. How do stents treat CHD?

2. How do statins treat CHD?

3. Give an advantage of using stents rather than statins to treat CHD

1. What is the job of a valve?

2. How can faulty valves be treated?

1. What is a benign tumour?

2. Why do benign tumours not spread?

3. How can malignant tumours spread?

4. Name a disease linked with obesity

1. What are the cells called that surround the stomata?

2. What is the job of the stomata?

3. What the top layer of a leaf called?

4. Which tissue in a leaf has air spaces?

5. Which layer in the leaf contains cells with lots of chloroplasts?

1. Give an example of when cancer can be triggered by a virus.

2. Give an example of an immune reaction that can be triggered by a pathogen

1. What is transpiration?

2. What is translocation?

3. Which tissue carries out translocation?

4. Name 2 conditions that affect the rate of transpiration.

5. Describe how to investigate the rate of transpiration.

T1 Y10 Mainstream Science/Physics P2 – Electricity

Current, resistance and potential difference

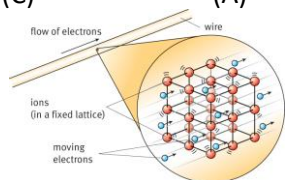
Electrical current is the flow of electrical charge.

Current is measured in amps (A), charge is measured in Coulombs (C).

The size of the current depends on the rate of the flow of charge – ie how many coulombs of charge per second.

$$Q = I t$$

Charge = Current x time
(C) (A)



Ohms Law

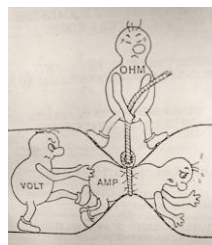
The current through a component depends on the potential difference and the resistance of the component.

If a component has high resistance, the current will be smaller for a given potential difference

potential difference = current x resistance

$$V = I R$$

pd is measured in volts (V), resistance in Ohms (Ω)



Hypothesis 'the length of the wire affects resistance'

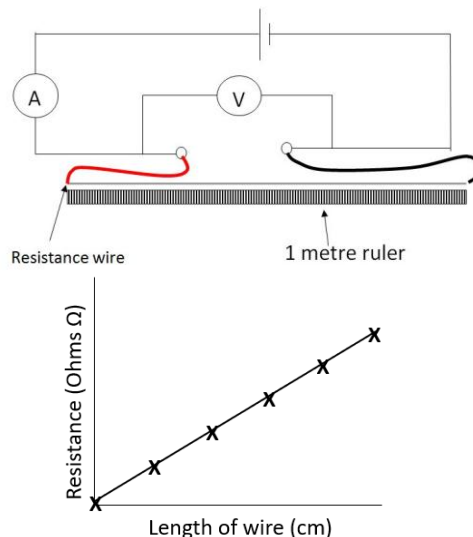
Independent variable – length of wire

Dependent variable – resistance

Control variables – type of wire, temperature of the wire, diameter of the wire

1. Set up the circuit as shown, with an ammeter in the circuit and a voltmeter connected across the wire
2. Use crocodile clips to change the length of the wire in the circuit
3. Make the wire 10cm long and read the current and pd. Switch off the current between readings or the wire will get hot, increasing the resistance.
4. Repeat for 20, 30, 40, 50 cm. (5 minimum)
5. Calculate resistance using Ohms Law $R = V/I$

Plot length of wire (IV) against resistance (DV)

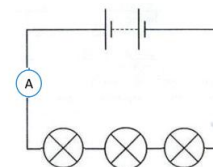


The relationship is directly proportional

Series and parallel circuits

Series circuits:

A series circuit is one single loop

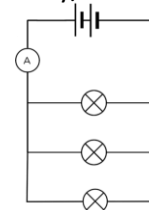


In a series circuit:

- the current is the same at all points in the circuit.
- potential difference is shared between components (equally if components are identical resistance)
- total resistance = sum of all resistors

Parallel circuits

A parallel circuit consists of more than one loop from the battery/cell.



In a parallel circuit:

- The current is shared amongst the branches
- The potential difference is the same across all components
- Resistance in the whole circuit is LESS than that of the smallest resistor

T1 Y10 Mainstream Science/Physics P2 – Electricity

Current, resistance and potential difference

1. What is current?
2. What is the unit for charge?
3. What is the unit for current?
4. What is the equation linking charge, current and time?
5. What is the equation linking current, potential difference and voltage?
6. If a component's resistance increases, what happens to current through that component?
7. What is the unit for resistance?

Hypothesis 'the length of the wire affects resistance'

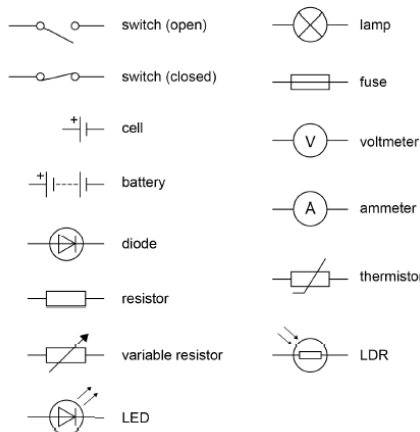
1. What is the independent variable in this investigation?
2. What is the dependent variable?
3. What is the minimum number of readings needed for a line graph?
4. What two readings are taken?
5. How is resistance calculated?
6. What sort of relationship is seen?
7. Why is it important to turn off the power in between readings?

Series and parallel circuits

1. What is a series circuit?
2. In a series circuit, the current is.....
3. How do you find total resistance in a series circuit?
4. The potential difference is shared equally among components as long as.....
5. What is a parallel circuit?
6. What is true about potential difference across all of the components in a parallel circuit?
7. How is total current calculated in parallel?
8. What is true for total resistance in a parallel circuit?

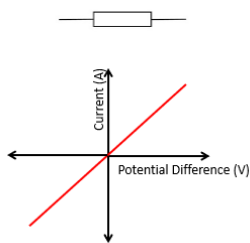
T1 Y10 Mainstream Science/Physics P2 – Electricity

Components

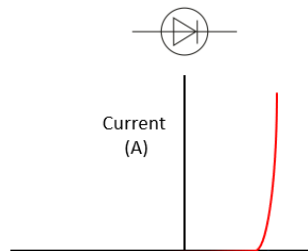


- A **diode** only allows current to flow one way in a circuit
- A **resistor** is a component that provides a fixed resistance in the circuit – e.g a $5\ \Omega$ resistor
- A **variable resistor** is a component whose resistance can be changed (e.g a dimmer switch)
- A **thermistor** is a resistor whose resistance changes with temperature – the higher the temperature the lower the resistance
- An **LDR** (light dependent resistor) has resistance that changes
- An **LED** (light emitting diode) is a light that only allows the flow of current one way

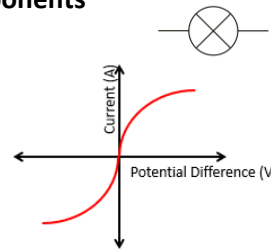
Current, potential difference and resistance for different components



A fixed (ohmic) resistor has fixed resistance current is directly proportional to potential difference Resistance remains constant (at constant temp)

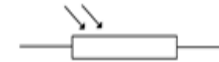


A diode very high resistance in one direction. Only when the potential difference is positive does current flow

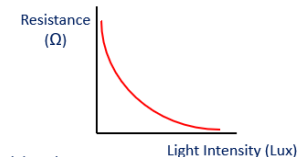


A filament bulb contains a thin wire that glows as current flows. As the pd increases, the current initially increases. However, at higher pd, the wire gets hot The ions in the wire move faster and collide with the moving charges Resistance increases, so current stops increasing

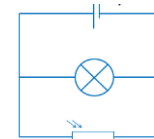
LDR



A light dependent resistor has varying resistance. As the light intensity increases, the resistance decreases



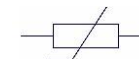
LDRs can be used to switch on lights at night time.



In this circuit, when it is day time, the resistance in the LDR is low, so all current flows through the LDR.

As light levels fall, resistance increases, until eventually there is less resistance in the bulb than the LDR, so current flows through the bulb – switching it on.

Thermistor



As the temperature increases, the resistance in a thermistor decreases.

T1 Y10 Mainstream Science/Physics P2 – Electricity

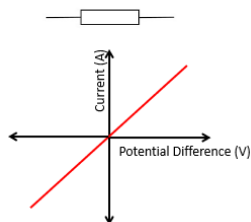
Components

Symbol	Name
	Cell
	
	fuse
	
	Voltmeter

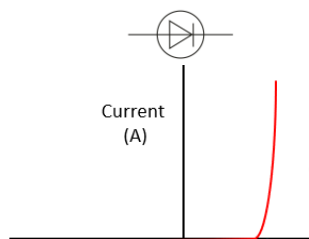
1. Complete the table opposite
2. Which component has a resistance that decreases as light intensity increases?
3. Which component only allows current to flow one way?
4. What is a fixed resistor?

Current, potential difference and resistance for different components

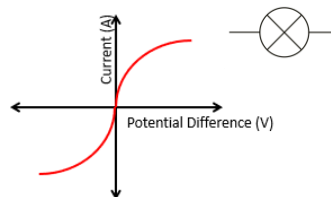
1. What readings would you need to take from a circuit to calculate resistance?



2. Describe the relationship shown



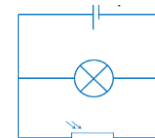
3. Why is there no current on one side of the graph?



4. What happens to current when the pd rises at first ?
5. What happens to the current as the pd gets higher?
6. Why does the resistance increase at higher pd?

LDR

1. Draw the symbol for an LDR
2. Draw the pattern you would expect for resistance as the light intensity increases.
3. The circuit below is for a night light. What is resistance in the LDR like during the day time? (high light levels)



4. Why does the light switch on when it goes dark?
5. Draw the symbol for a thermistor
6. Describe the relationship between temperature and resistance in a thermistor

**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.

**1. Global pattern of urban change**

The world's population is growing rapidly; currently 50% of us live in urban areas.

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	
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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	

8. Introduction to Nigeria

Located just north of the equator, in west Africa.

Importance of Nigeria

Global importance	🌐 NEE in 2014 > 21st largest economy. 🕊️ 5th largest contributor to UN peace keeping.
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Local importance	📈 Fastest growing economy in Africa. 🏆 In 2014 they had the highest GDP.
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Nigeria's context

Political	🇳🇬 Boko Haram have killed 17,000 people since 2002.
Environment	🌳 Rainforest- south > savanna- north.
Social	👥 500 ethnic groups 📖 Literacy 61%, life expectancy 52 years
Cultural	🎬 Nollywood (2 nd largest film industry).

9. Nigeria's changing industrial structure

Term	Definition
Industrial structure	The relative proportion of the workforce employed in different sectors of the economy (p, s, t, q).
Primary sector	Jobs that extract/collect natural resources. ↓ Decreasing due to mechanisation and industrialisation. This started rural to urban migration.
Secondary sector	Jobs making things. ↑ Increasing (industrialisation).
Tertiary	Jobs that provide a service. ↑ Increasing as people start to have more disposable income.

How does manufacturing stimulate economic development?

- Factories provide jobs > people have more disposable income > home market enlarges.
- Companies pay tax > government invests in infrastructure like roads > attracts more companies to invest. **Positive multiplier effect.**

10. Transnational corporations

Term	Definition
Transnational Corporation	Companies that operate in more than one country. (40 TNCs in Nigeria)
Host country	Country the TNC places its factories.
Footloose	Industries not tied to a certain location

Shell in Nigeria

Advantages	+ 65,000 jobs = > disposable income. + 91% contracts to Nigerian companies (reduces economic leakage)
Dis-advantages	- Bodo oil spill 08/09. 11 million gallons of oil spilt over 20km².
Summary	National economic benefits vs local environmental costs in Bodo.

12. Impacts of economic development

Impact on the environment	🌲 70-80% forests destroyed. 🛢️ Bodo Oil spill (Shell 08/09). 🏭 10,000 illegal industries = air pollution. 🦒 Loss of species (giraffes, 500 plants).
Impact on quality of life	📈 Life expectancy ↑ from 46-52 years 📈 HDI from 0.47 to 0.53. ⚖️ BUT inequality has widened due to oil wealth and corruption.

13. Unilever in Nigeria

Advantages:	Disadvantages:
Unilever employs around 1500 people in Nigeria	Unilever is a British-Dutch company so some of the profit leaves Nigeria
40% of Unilever's profits go to Nigeria in Tax	Workers in factories earn very low wages and have poor working conditions
Unilever works with local communities to improve education and healthcare	Manufacturing cause environmental problems such as water and air pollution

11. Nigeria's changing relationships

Political relationships	- Gained independence (UK in 1960). - Member of British Commonwealth.
Trading relationships	- Member of OPEC (oil). - Member of ECOWAS (Western Africa trading group). - Has strong links with China and USA.

International aid in Nigeria

Term	Definition
International aid	Money, goods and services given to help the QoL of another country.
Emergency aid	Usually follows a natural disaster or war. e.g. Food, water, shelter.
Developmental aid	Long term support by charities or governments to improve QoL. E.g. infrastructure, education, clean water

Aid in Nigeria

What?	4% of aid given to Africa. UK gave £360 million in 2014.
Nets for life	- Nets to prevent malaria. 82,500 given out in Abuja. ✓ Successful as community based.
Problems with aid	- Sometimes it isn't sustainable. - Corruption. - Can be tied (strings attached).

13. Shell in Nigeria

Advantages:	Disadvantages:
Employs 65,000 people in Nigeria	260,000 barrels of oil spilt a year in the Niger Delta
Social investment programs (e.g., 10 postgraduate scholarship)	Bodo oil spills in 2008 and 2009, 600,000 barrels of oil spilt
Brought in \$17 billion in taxes	Oil bandits: 4.5 trillion barrels of oil lost

9. Introduction to Nigeria

Importance of Nigeria	
Global importance	
Local importance	
Political	
Environment	
Social	
Cultural	

10. Transnational corporations

Term	Definition
Transnational Corporation	
Host country	
Footloose	
Shell in Nigeria	
Advantages	
Dis-advantages	-
Summary	

10. Nigeria's changing industrial structure

Term	Definition
Industrial structure	
Primary sector	
Secondary sector	
Tertiary	
How does manufacturing stimulate economic development?	

12. Impacts of economic development

Impact on the environment	
Impact on quality of life	

13. Unilever in Nigeria

Advantages:	Disadvantages:

11. Nigeria's changing relationships

Political relationships	-
Trading relationships	-
International aid in Nigeria	
Term	Definition
International aid	
Emergency aid	
Developmental aid	
Aid in Nigeria	
What?	
Nets for life	
Problems with aid	

13. Shell in Nigeria

Advantages:	Disadvantages:

GCSE History : The Medical Renaissance in England c1500-1750		B. Change and continuity in ideas about disease and illness in the Medical Renaissance.			
A.	Can you define these key words?	Causes	Prevention		Treatments
apothecary	A person who mixes herbal remedies and treated patients as an alternative to a doctor as they were cheaper.	The Theory of the Four Humours – Although many physicians were starting to challenge Galen's ideas, most people continued to believe that illness was caused by an imbalance of humours.	Lifestyle advice – Physicians still gave advice from the Regimen Sanitatis. People were advised to practice moderation in all things – that meant avoiding too much exhaustion, fatty foods, strong alcohol and laziness. Bathing became less fashionable because people thought syphilis was caught from bathing in public bathhouses.		Transference – a popular new theory that disease could be transferred to something else. E.g. rubbing warts with an onion to 'transfer' the warts to the onion. People also tried to transfer illness to live animals, such as sheep or chickens.
barber surgeon	Barbers and surgeons who also performed minor operations such as the removal of warts				
Dissection	Criminals sentenced to death had their bodies cut open (dissected) by physicians and medical students.				
iatrochemistry	Chemical cures for a disease.	Miasma – Most people still believed that miasmata caused disease (spread by bad smells/air) – especially popular during epidemics.	Purifying the air –Miasma was still widely believed so people continues to clan the air. Sewage and rubbish were picked up from streets and bonfires were lit in public to ward off foul smells.		Hospitals – greater emphasis on curing not caring (unlike in medieval). Number of hospitals decreased significantly due to the Dissolution of the Monasteries. Pest houses were a new type of hospital that cared only for plague or pox victims – limits risk of infecting others.
humanism	A belief that humans could make up their own minds when it came to discovering the truth around them.	Astrology – although not as popular as in the Medieval period, people still believed that astrology influenced disease. Some blamed the 1665 plague on unusual planet alignments.	Role of the government – Took a more active role in preventing disease. Homeowners were fined for not cleaning the street outside their house, criminals would pick up rubbish as a punishment.		Chemical cures – alchemy led to the new science of medial chemistry. This involved looking for chemical cures rather than relying on herbs or humoural theory. New remedies such as mercury and antimony were used to purge the body and they encouraged sweating and vomiting.
transference	The idea that an illness or disease could be transferred to something else.				
quack doctor	Somebody who did not have any medical qualifications but sold their services as a doctor or apothecary.	Religion – Most people now realised that God did not send disease. Although, in desperate times (epidemics) they still turned to religion.			Herbal remedies – Continued to be used but were now chosen because of their colour or shape e.g. yellow herbs were used to treat jaundice (yellowing of the skin). New herbs appeared from the New World and were used to treat disease
E.	Improved Communications (2.1)	D. Key People			C.
Printing Press	In 1440 Johannes Gutenberg created the world's first printing press. By 1500, there were hundreds of presses in Europe. This new printing press enabled information to be spread accurately and quickly. Text no longer had to be copied by hand, meaning there were fewer mistakes and inconsistencies. It also meant that scientists could publish their work and share it across Europe much faster than when the work had to be copied by hand. The printing press also took book copying out of the hands of the Church. This meant that a much wider variety of subjects were written about, whereas before most books were about religious topics. The Church was no longer able to prevent ideas they disapproved of being published. For example, physicians could now publish works criticising Galen.	Sydenham	Vesalius	Harvey	Great Plague
		Known as the 'English Hippocrates' he refused to rely on medical books and instead believed that physicians should closely observe and record their patient's symptoms. Using this method, he was able to prove that measles and scarlet fever were separate diseases, even though he couldn't identify the microbes that caused each. This laid the foundations for future individuals to take a more scientific approach to medicine.	His 1543 book On the Fabric of the Human Body included many detailed drawings of the human body. He carried out dissections on executed criminals and found approximately 300 mistakes in Galen's work. Vesalius encouraged other doctors to carry out dissections rather than relying on old books, laying the foundation for others to investigate the human body in more detail.	Discovered the circulation of the blood. Stated that the heart acted as a pump, pumping blood around the boy in a one-way system. This disproved Galen's theory that blood was made in the liver and burned up by the body. However, his discovery had a limited impact on medicine at the time as it offered no practical use in the treatment of disease.	Causes
					Treatment
					Prevention
Royal Society	Scientists wanted to talk to each other about their new discoveries and share new ideas. This led to the founding of the Royal Society. The Royal Society met for the first time at Gresham College in London in 1660. Its aim was to promote the sharing of scientific knowledge and encourage argument over new theories and ideas. In 1662, the society received its royal charter from Charles II, who has a keen interest in science. The support of the king gave the society credibility: if the king approved if and supported them, clearly they were doing something right. It also raised their profile. More people sent their work in to be published or were willing to donate money to support the scientific work of the Royal Society. In 1665 the Society began publishing their scientific journal, <i>Philosophical Transactions</i> . It was the world's first scientific journal , and it continues to be published today. The society also offered funding for translations of European scientific texts. It encouraged its member to write their report sin English instead of Latin to make it more accessible. The Royal Society made it possible for physicians and scientists to access and study each other's research. It was therefore very important in the development of new medical ideas.				Sent by God, unusual planet alignments, Miasma (sewage and rubbish in cities, people thought the foul fumes were held in the soil and escaped during warmer weather- seemed logical as the plague was worse in the summer months)
					Sweating out the disease – sit in thick woollen clothes by the fire. Transference was tried (strap chicken to buboes). Quack doctors mixed herbal remedies.
					Pray and repent sins, carry a pomander, chew/smoke tobacco, light fires, wear masks (plague doctors), fasting, quarantining, banning of large crowds, searchers appointed, streets cleaned, stray animals killed, plague water (apothecaries),
F.		Care in the community and in hospitals (2.2)			
Hospitals		Hospitals – greater emphasis on curing not caring (unlike in medieval). As a patient in a hospital you could expect a good diet, a visit from a physician and medication (own apothecary usually on site) Number of hospitals decreased significantly due to the Dissolution of the Monasteries. This dramatically changed the availability of hospital care in England as the vast majority of hospitals were connected to the Church and so few were able to stay open following the dissolution. Some smaller hospitals opened up to fill the gaps left by the dissolution of the monasteries, funded by charities, but there was a big change in the amount of medical treatment provided by hospitals. Many hospitals reopened without their religious sponsors. However, it took a long time for the amount of hospitals to return to what it had been before the dissolution of the monasteries.			
Pest Houses (plague houses, poxhouses)		Pest houses were a new type of hospital that cared only for plague or pox victims – limits risk of infecting others. These hospitals specialized in one particular disease. Versions of these had existed in the Middle Ages e.g. lazar houses for people suffering with leprosy. There was a growing understanding that disease could be transmitted from person to person so these new hospitals began to crop up. They provided a much-needed service. Traditional hospitals would not admit patients who were contagious, but people suffering from serious, contagious diseases had to go somewhere or risk infecting their families.			
Community Care		In spite of changes to hospitals, most sick people continued to be cared for at home. Local communities were very close-knit which meant that there were plenty of people around to give advice and share remedies. Women continued to play an important role in the care of the sick. We don't know a great deal about these women, but we know that a lot of them were prosecuted by the London College of Physicians for practicing medicine without a licence. They usually mixed old and simple herbal remedies. Reports suggest they were very popular largely because they were cheaper than going to a licensed			

D. Key People (2.3)		
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Known as the 'English Hippocrates' he refused to rely on medical books and instead believed that physicians should closely observe and record their patient's symptoms. Using this method, he was able to prove that measles and scarlet fever were separate diseases, even though he couldn't identify the microbes that caused each. This laid the foundations for future individuals to take a more scientific approach to medicine.	His 1543 book On the Fabric of the Human Body included many detailed drawings of the human body. He carried out dissections on executed criminals and found approximately 300 mistakes in Galen's work. Vesalius encouraged other doctors to carry out dissections rather than relying on old books, laying the foundation for others to investigate the human body in more detail.	Discovered the circulation of the blood. Stated that the heart acted as a pump, pumping blood around the body in a one-way system. This disproved Galen's theory that blood was made in the liver and burned up by the body. However, his discovery had a limited impact on medicine at the time as it offered no practical use in the treatment of disease.

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GCSE History : The Medical Renaissance in England c1500-1750

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 Key Individuals and dealing with the Great Plague in London (1665)

A.	Can you define these key words?
apothecary	
barber surgeon	
Dissection	
iatrochemistry	
humanism	
transference	
quack doctor	

C.	The Great Plague (1.3)
What is the Great Plague?	
Causes	
Treatments	
Prevention	

B. Change and continuity in ideas about disease and illness in the Medical Renaissance. (1.1-1.2)

<u>Causes</u>	<u>Prevention</u>	<u>Treatments</u>

D. Key People (2.3)		
Sydenham	Vesalius	Harvey
E.	Improved Communications (2.1)	
Printing Press		
Royal Society		
F.	Care in the community and in hospitals (2.2)	
Hospitals		
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Community Care		

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Dissection	
iatrochemistry	
humanism	
transference	
quack doctor	

C.	The Great Plague (1.3)
What is the Great Plague?	Bubonic plague – outbreak in 1665 from June to November. One in _____ people died. _____ serious outbreak of the disease in England.
Causes	Sent by God, unusual planet _____, Miasma (sewage and rubbish in cities, people thought the foul fumes were held in the soil and _____ during warmer weather- seemed logical as the plague was worse in the _____ months)
Treatments	_____ out the disease – sit in thick woollen clothes by the fire. _____ was tried (strap _____ to buboes). Quack doctors mixed herbal remedies.
Prevention	Pray and repent sins, carry a _____, chew/ smoke _____, light fires, wear _____ (plague doctors), fasting, _____, banning of large crowds, searchers appointed, streets _____, stray animals killed, plague _____ (apothecaries),

B. Change and continuity in ideas about disease and illness in the Medical Renaissance. (1.1-1.2)		
Causes	Prevention	Treatments
The Theory of the Four _____ – Although many physicians were starting to challenge _____ ideas, most people continued to believe that illness was caused by an _____ of humours.	Lifestyle advice – Physicians still gave advice from the _____. People were advised to practice moderation in all things – that meant avoiding too much _____, fatty foods, strong alcohol and laziness. _____ became less fashionable because people thought _____ was caught from bathing in public bathhouses.	_____ – a popular new theory that disease could be transferred to something else. E.g. rubbing warts with an _____ to 'transfer' the warts to the onion. People also tried to transfer illness to live animals, such as sheep or chickens.
Miasma – Most people still believed that miasmata caused disease (spread by bad _____/_____) – especially popular during _____	_____ the air –Miasma was still widely believed so people continues to clan the air. Sewage and _____ were picked up from streets and _____ were lit in public to ward off foul smells.	Hospitals – greater emphasis on _____ not caring (unlike in medieval). Number of hospitals _____ significantly due to the Dissolution of the Monasteries. Pest houses were a new type of hospital that cared only for _____ or pox victims – limits risk of _____ others.
_____ – although not as popular as in the Medieval period, people still believed that astrology influenced disease. Some blamed the _____ plague on unusual _____ alignments.	Role of the _____ – Took a more active role in preventing disease. Homeowners were _____ for not cleaning the street outside their house, _____ would pick up rubbish as a punishment.	_____ cures – alchemy led to the new science of medial _____. This involved looking for chemical cures rather than relying on herbs or humoural theory. New remedies such as _____ and antimony were used to purge the body and they encouraged sweating and vomiting.
Religion – Most people now realised that _____ did not send disease. Although, in _____ times (epidemics) they still turned to religion.		_____ remedies – Continued to be used but were now chosen because of their _____ or shape e.g. yellow herbs were used to treat jaundice (yellowing of the skin). New herbs appeared from the _____ and were used to treat disease e.g. Ipecac (dysentery) and cinchona bark (malaria).
		Humoural Treatments – Despite new approaches many people still believed in humoural treatments like _____ and _____.

D. Key People (2.3)		
Sydenham	Vesalius	Harvey
Known as the 'English _____' he refused to rely on _____ books and instead believed that physicians should closely observe and record their patient's _____. Using this method, he was able to prove that measles and _____ fever were separate diseases, even though he couldn't identify the _____ that caused each. This laid the foundations for future individuals to take a more _____ approach to _____.	His 1543 book On the Fabric of the _____ Body included many detailed _____ of the human body. He carried out _____ on executed _____ and found approximately _____ mistakes in Galen's work. Vesalius encouraged other doctors to carry out dissections rather than relying on old _____, laying the _____ for others to _____ the human body in more detail.	Discovered the _____ of the _____. Stated that the heart acted as a _____, pumping blood around the body in a one-way system. This _____ Galen's theory that blood was made in the _____ and burned up by the body. However, his discovery had a _____ impact on medicine at the time as it offered no _____ use in the treatment of disease.

E.	Improved Communications (2.1)
Printing Press	In _____ Johannes Gutenberg created the world's first _____. By 1500, there were hundreds of presses in _____. This new printing press enabled information to be spread _____ and quickly. Text no longer had to be copied by hand, meaning there were fewer mistakes and _____. It also meant that scientists could publish their work and share it across Europe much _____ than when the work had to be copied by hand. The printing press also took book copying out of the hands of the _____. This meant that a much wider variety of _____ were written about, whereas before most books were about religious topics. The Church was no longer able to _____ ideas they disapproved of being published. For example, physicians could now publish works _____ Galen.
Royal Society	Scientists wanted to talk to each other about their new discoveries and share new ideas. This led to the founding of the Royal Society. The Royal Society met for the first time at Gresham College in London in _____. Its aim was to promote the _____ of scientific knowledge and encourage argument over new theories and ideas. In 1662, the society received its royal _____ from Charles II, who has a keen interest in science. The support of the king gave the society _____: if the king approved if and supported them, clearly they were doing something right. It also _____ their profile. More people sent their work in to be published or were willing to donate money to support the scientific work of the Royal Society. In 1665 the Society began publishing their scientific _____, <i>Philosophical Transactions</i> . It was the world's first scientific journal, and it continues to be published today. The society also offered funding for translations of European scientific texts. It encouraged its member to write their reports in English instead of Latin to make it more _____. The Royal Society made it possible for physicians and scientists to access and study each other's research. It was therefore very important in the _____ of new medical ideas.

F.	Care in the community and in hospitals (2.2)
Hospitals	Hospitals – greater emphasis on curing not _____ (unlike in medieval). As a patient in a hospital you could expect a good diet, a visit from a _____ and medication (own _____ usually on site) Number of hospitals _____ significantly due to the Dissolution of the _____. This dramatically changed the availability of hospital care in England as the vast majority of hospitals were connected to the _____ and so few were able to stay open following the dissolution. Some smaller hospitals opened up to fill the gaps left by the dissolution of the monasteries, funded by _____, but there was a big change in the amount of medical _____ provided by hospitals. Many hospitals reopened without their religious _____. However, it took a long time for the amount of hospitals to return to what it had been before the dissolution of the monasteries.
Pest Houses (plague houses, poxhouses)	Pest houses were a new type of hospital that cared only for plague or pox victims – limits risk of _____ others. These hospitals _____ in one particular disease. Versions of these had existed in the Middle Ages e.g. _____ houses for people suffering with _____. There was a growing understanding that disease could be _____ from person to person so these new hospitals began to crop up. They provided a much-needed service. Traditional hospitals would not admit patients who were _____, but people suffering from serious, contagious diseases had to go somewhere or risk infecting their families.
Community Care	In spite of changes to hospitals, most sick people continued to be cared for at home. Local _____ were very close-knit which meant that there were plenty of people around to give advice and share _____. _____ continued to play an _____ role in the care of the sick. We don't know a great deal about these women, but we know that a lot of them were prosecuted by the London College of Physicians for practicing medicine without a _____. They usually mixed and sold simple _____ remedies. Reports suggest they were very popular likely because they were _____ than going to a licensed physician or apothecary.

1. Methods of growth

When a market is growing, it is important for a business to grow in order to retain market share.

Method of growth	Explanation
Internal/organic growth	A business can grow by creating new products, entering new markets, increasing their advertising and opening new premises.
External/inorganic growth	A business can grow by merging with another company or by winning a takeover of another company.

2. Finance for growth

A business must find sources of capital to pay for growth.

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

3. Why do aims & objectives change?

As businesses evolve, they need to adapt their aims and objectives to changing circumstances.

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

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Changing technology	
Changes in performance	
Changes in legislation	
Internal Reasons	

4. Globalisation

The increasing tendency for countries to trade with each other and to buy global goods such as Coca-Cola or services such as Costa Coffee.

Imports	Goods brought into one country from another.
Exports	Goods sold to one country from another

4. Globalisation

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

5. Ethics & business

How the behaviour of a business is judged against human morals.

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

6. Ways to extend the Product Life Cycle of a Product

Idea:	Explanation
Find new uses for the product	If a product can be used for multiple purposes, ensure that your target audience is aware of this
Change the appearance, format or packaging	Changing the appearance of a product can give it a new lease of life and allow the customer is perceive it as new again.
Encourage use of the product on more occasions	If a product can be used for multiples different occasions make sure the customer base is aware of this
Adapt the Product	Continue to make small adaptations to products to improve the quality of the product on offer.

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Imports

Exports

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Barriers to trade

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Term

Fair Trade

Environmental

Labour

6. Ways to extend the Product Life Cycle of a Product

Idea:

Explanation

Find new uses for the product

Change the appearance, format or packaging

Encourage use of the product on more occasions

Adapt the Product

1. Product (Part of the Marketing Mix)

When designing a new product, the key is to design a product that matches the needs or wants of your chosen target market.

Every product needs the right balance between:

Product strategy	Explanation
Economic Manufacture	Making sure that the design of the product to be made cost effectively. A complex or expensive design can lead to increased costs.
Function	The design of the product is crucial. The product must work/function effectively
Aesthetics	How much does the design of the product appeal to the senses. When designing a product it is crucial to consider the way it looks

2. Product (Key Terms)

At the heart of the marketing mix is the product

Term:	Definition:
Product Differentiation	The extent to which consumers see your product as being different from its rivals
Product Life Cycle	The theory that every product goes through the same four stages of introduction, growth, maturity and design

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3. Stages of the Product Life Cycle

Term:	Explanation:
Introduction	First a company needs to spend time researching the product and the marketplace. The product will be developed, tested, and launched.
Growth	At this stage the product becomes known in the market. At this stage customer awareness increases, prices will still be high.
Maturity	At this point the market may become saturated as 'me too' products are launched into the market. Advertising is increasing to remind consumers about the quality of the product. Brand image needs reinforcing with its customers. The market is highly competitive, and prices are lower as a result
Decline	The product's sales and profit's start to fall. The product is no longer offering what customers want or new technology has made the product obsolete.

5. Promotional Strategy (Part of the marketing mix)

Promotional strategy is the plan for how to communicate effectively with customers in order to meet sales revenue targets.

Promotional Strategy:	Explanation:
Advertising	Advertising is how a business promotes its products and communicates with its customers.
Sponsorship	Sponsorship is where a business pays to have a brand or company name attached to an activity that has credibility with its customers.
Branding	Branding is a way that businesses can give their products an identity that appeals to its target audience.
Product Trials	A product trial means giving potential customers a free taste of a new product. This may entice new customers.
Special Offers	Businesses can use special offers such as 'buy one get one free' to entice customers to purchase their products.
Using Technology	In recent years, online advertising through social media and other platform such as websites and e-newsletters has become commonplace for firms.

6. Pricing Strategy

Pricing strategy is vital for any business – pricing your products can be the difference between business success and business failure.

Market Segment:	Pricing Strategy
Mass Market	In mass markets where both competition and customer consumption are high. These markets are generally characterised by low prices and very similar products.
Niche Markets	A niche market is based on a type of customer needs or wants something different to the majority. Generally these markets have few competitors but high prices.

Pricing at each stage of the Product Life Cycle

Introduction	Pricing at the introduction phase of the product life cycle in some cases will be low to entice new customers to sample the product.
Growth	Once a product is established within a market and has a customer base, businesses will sometimes increase prices to increase revenue.
Maturity	When product growth is at an end, new pricing decisions may be needed. Business will ensure that pricing is competitive to ensure continuous revenue, other firms may decide that the brand may be in irreversible decline and will keep prices high to make a short-term profit.
Decline	When sales have made a decisive step downwards, firms tend to lower prices to ensure a steady stream of revenue. However some firms with a loyal customer base may decide to increase prices in an attempt to gain short term profits.

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7. Placing Strategy

This element of the marketing mix is about how to get the product from the producer to the customer. There are three main distribution channels – traditional, modern and direct.

Type of Distribution	Explanation:
Direct Distribution	This is where a product is distributed directly from the producer to the consumers. An example of this is buying things directly from firms on the internet.
Modern Distribution	This method is common in the grocery sector, where producers will deliver to distribution depots and then the products will be taken to stores to be sold. This method became popular when supermarkets became common place in the 1980s
Traditional Distribution	This method, in the first instance involves a wholesaler buying goods directly from the producers. From there the wholesaler will sell the products directly to firms who will then sell onto the consumers.

8. Placing Strategy – Key Terms

Term	Definition
Distribution	How ownership changes as a product goes from producer to customer
E-Tailer	An electronic retailer; in other words selling products electronically, either by e-commerce or, more likely these days, mobile commerce.
Retailer	A shop or chain of shops, usually selling from a building in a high street or shopping centre

9. Marketing mix and Business Decisions – Key Terms

Business decisions are always about the future. So, when the marketing mix is being used to inform and carry out business decisions.

Term	Definition
Budget	A ceiling on the amount of money that can be spent; a marketing budget of £1 million means the marketing manager can spend up to that figure, but no more.
Informed Decisions	Evidence that can be used to make a better decision; a company can gain a better understanding of its customers through the 4p's, which helps in decision making



Year 10 Food & Nutrition Term 1



What we are learning this term:

A. Proteins B. Carbohydrates C. Fibre & Water D. Fats E. Minerals F. Vitamins

A. Proteins – contain amino acids		B. Carbohydrates – used for energy		D. Fats		F. Vitamins	
	Used for growth, repair and maintenance of the body.		Sugars – digested quickly & energy released quickly. Monosaccharides or Disaccharides		Needed for energy, vitamins, insulation (warmth) and protecting your bones & organs, making cholesterol.		Micronutrients which help the body to function.
Source 	Seeds, meat, fish, dairy, nuts and beans. Alternative: soya, mycoprotein, TVP & tofu.	Source 	Fruit or added to food.	Saturated Fats	Unsaturated Fats	Fat Soluble Vitamins	
Excess 	Strain on liver and kidneys. These organs process the proteins consumed.		Starch – digested slowly & slow released of energy. Polysaccharides.	Usually come from animal sources	Mostly from vegetable sources.	Found in fatty food. Stored in fat tissue if not used up.	
Deficiency 	Slows growth, weak immune system, oedema, kwashiorkor, poor hair /skin / nails.	Source 	Potatoes, cereals. Have a lot of nutrients & fibre.	Excess 	Obesity, Type 2 Diabetes, higher Cholesterol (increased risk Coronary Heart Disease).	A	For good eyesight, healthy immune system / skin
High Biological Value Proteins 	These contain ALL the essential amino acids. These come from mainly animals sources (as well as soya and quinoa).	Excess 	Gets converted into fat (may lead to obesity), tooth decay, type 2 diabetes.	Deficiency 	Vitamin deficiency, weight loss, less insulation / bone & organ protection.	D	Helps absorb minerals (especially calcium)
Low Biological Value Proteins 	These are missing <u>one or more</u> of the essential amino acids. These come from plant sources.	Deficiency 	Low blood sugar (hunger, dizziness, tiredness), body starts to use up fat & protein (weight & muscle loss).	E. Minerals		E	For healthy skin, eyes & immune system
Protein Completion: when you combine LBV proteins to get all the essential amino acids.		Glycaemic Index (GI): show how quickly carbohydrates affect blood sugar levels.		Calcium	Strong bones & teeth, healthy nerves & muscles, blood clotting	K	Helps heal wounds, keeps immune system / bones healthy
C. Fibre & Water				Iron	Forms part of haemoglobin in red blood cells	Water Soluble Vitamins	
Fibre		Water		Sodium	Controls body's water content, helps nerves / muscle function	Vitamins that dissolve in water & lost through urine – need to take daily! They are also lost when fruit and vegetables are exposed to air.	
- Helps with digestion - Prevents constipation - Found in fruit, pulses, nuts, veg, wholegrain foods		- Helps get rid of waste & digest food - Controls body temperature 6-8 glasses of water a day - More during a hot day or exercising		Phosphorus	Healthy bones & teeth	B	Keep the nervous system healthy
				Fluoride	Helps strengthen teeth & prevent tooth decay	B1, B2 & B3	Help with energy release
				Iodine	Helps make some hormones	B9 & B12	Help make red bloody cells.
						C	Protects body from infection, heals wounds
						Antioxidants	
						Vitamins A, C & E are antioxidants which may protect cells from free radicals - chemicals you encounter every day.	



Year 10 Food & Nutrition Term 1



What we are learning this term:

A. Proteins B. Carbohydrates C. Fibre & Water D. Fats E. Minerals F. Vitamins

A.	Proteins – contain amino acids
Source 	
Excess 	
Deficiency 	
High Biological Value Proteins 	
Low Biological Value Proteins 	
Protein Completion:	

B.	Carbohydrates – used for energy
	Sugars
Source 	
	Starch
Source 	
Excess 	
Deficiency 	
Glycaemic Index (GI):	

D.	Fats
Saturated Fats	Unsaturated Fats
Excess 	
Deficiency 	

E.	Minerals
Calcium	
Iron	
Sodium	
Phosphorus	
Fluoride	
Iodine	

F.	Vitamins
Fat Soluble Vitamins	
A	
D	
E	
K	
Water Soluble Vitamins	
B	
B1, B2 & B3	
B9 & B12	
C	
Antioxidants	

C.	Fibre & Water
Fibre	Water
• -	• -
• -	• -
• -	• -



Year 10 PRODUCT DESIGN Term 1



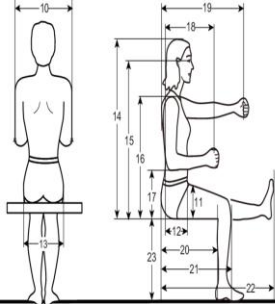
What we are learning this term:

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

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

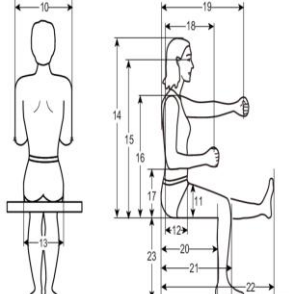


What we are learning this term:

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

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 	



Year 10 Engineering Term 1



What we are learning this term:

- A. Types of hazard B. dimensions and scale C. material properties D. Tools and equipment
E. Categories of materials

A. Health & Safety

Risk Assessment

A risk assessment is the analysis of the risks involved when using equipment or performing a process.

Hazard – something that may harm someone.

Risk – how likely a hazard is to happen.

Control measure – actions taken to reduce the risk of harm

Ejection hazard – material being thrown out of the machine toward the user

Entrapment hazard – the user being caught and pulled into the moving parts of the machine

Inhalation hazard – people in the vicinity of the hazard breathe in harmful dust or chemicals

Sharp force hazard – the user is cut, stabbed or scraped by the sharp material.

Slip, trip and fall hazards – common hazards caused by unclean or cluttered workspaces.

Blunt force hazard – a victim is crushed, hit or bruised by the blunt object. Major blunt trauma can cause fractures or internal bleeding.

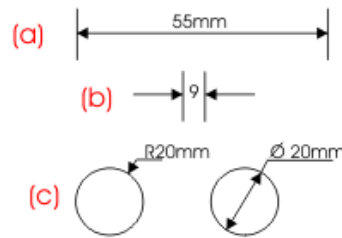
B. Dimensions and scale

Dimensions are the measurements of the object being shown. Engineers use certain lines for certain types of dimensions.

Scale is the size of the drawing relative to the size of the real life object. This is shown as a ratio.

(Drawing size): (Real life size)

1:2 = the drawing is half the size of the real thing.



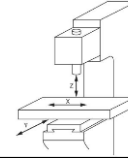
Rules for dimensions:

- Use extension lines and arrows from the measurement you are showing
- Measurements less than 10mm should have the arrows on the outside of the extension lines
- The symbol for radius is R while diameter is Ø. Radius is usually used for arcs.

C. Material properties

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

D. Tools & machines



vertical mill – this machine allows you to remove material in an X, Y and Z axis with a milling bit.



Dividers are used to scribe arcs and circles onto materials.



Scribes are used to scratch markings on metal while marking out. The tip is brittle, so never use it like a centre punch.



The **centre punch** is made from mild steel, with the point hardened and tempered, so that it withstands impact with the material it is marking. It is used to mark the centre of a hole to be drilled



A **Vernier caliper**. Can take internal, external and depth measurements.



E. Material categories

Polymers (Plastics)	Thermofforming – melt when reheated Thermoset – burn when reheated
Metals	Ferrous – contain iron, rust and can be magnetic Non-ferrous – corrode instead of rusting, no iron
Timbers (wood)	Hardwoods – from trees that drop leaves in winter, slow growing and expensive Softwoods – from trees that keep their leaves in winter, fast growing and soft
Composites (combined materials)	Sheet-based – sheets of material glued together plywood, chipboard. Cheap and easy to manufacture with. Fibre-based – glass reinforced plastic, carbon fibre. Very strong and light
Smart materials	Materials that change their properties when given a stimulus. Thermochromic – changes colour in heat Photochromic – changes colour in light Shape memory alloy – can return to its original shape when heated

Year 10 Engineering Term 1

What we are learning this term:

A. Types of hazard B. dimensions and scale C. material properties D. Tools and equipment
E. Categories of materials

A. Health & Safety

Risk Assessment A risk assessment is the analysis of the risks involved when?

Hazard –
Risk –
Control measure –

Give an example of an
Ejection hazard –

Give an example of an
Entrapment hazard –

Give an example of an
Inhalation hazard –

Give an example of a Sharp
force hazard –

Give an example of Slip, trip
and fall hazards –

Give an example of a Blunt
force hazard –

B. Dimensions and scale

Scale is (Drawing size): (Real life size)

1:2 = the drawing is _____ the size of the real thing.

5:1 = the drawing is _____ the size of the real thing.

1:3 = the drawing is _____ the size of the real thing.

Add dimensions onto this drawing of a dog tag. Use extension lines, dimension lines, and radius measurements. Work in mm.

○ JKING 2025

C. Material properties

Strength Ability of a material to withstand _____, tension, _____, bending, and shear.

Ability to withstand abrasion and wear and tear.

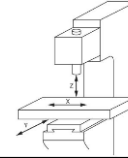
Materials that can withstand impact or are hard to break or snap are _____ & can absorb shock.

Malleability Being able to _____ easily would make a material easily malleable

Ductility Materials that can be _____ are ductile

Elasticity Ability to be stretched and then _____

D. Tools & machines



_____ – this machine allows you to remove material in an X, Y and Z axis with a milling bit.



_____ are used to scribe _____ and circles onto materials.



Scribes are used to scratch markings on metal while marking out. The tip is _____, so never use it like a center punch.



The **centre punch** is made from mild steel, with the point _____ and tempered, so that it withstands _____ with the material it is marking. It is used to mark the centre of a hole to be drilled



A _____ **caliper**. Can take internal, external and depth measurements.



E. Material categories

Polymers (Plastics)

Thermofforming – _____ when reheated
Thermoset – _____ when reheated

Metals

_____ – contain iron, rust and can be magnetic
Non _____ – corrode instead of rusting, no iron

Timbers (wood)

Hardwoods – from trees that _____ in winter, slow growing and expensive
Softwoods – from trees that keep their leaves in winter, _____ growing and _____

Sheet-based – sheets of material glued together plywood, chipboard. Cheap and easy to manufacture with.

Fibre-based – glass reinforced plastic, carbon fibre. Very strong and light

Smart materials

Materials that change their _____ when given a stimulus.

Thermochromic – changes colour in _____

Photochromic – changes colour in _____

Shape memory _____ – can return to its original shape when heated

Music terms and signs

Glossary - Eduqas GCSE Music

Dynamics

<i>pp</i>	<i>p</i>	<i>mp</i>	<i>mf</i>	<i>f</i>	<i>ff</i>
PIANISSIMO	PIANO	MEZZO PIANO	MEZZO FORTE	FORTE	FORTISSIMO
very soft (v.quiet)	soft (quiet)	moderately soft	moderately loud	loud	very loud
crescendo (cresc.)			diminuendo (dim.)		
gradually getting louder			gradually getting quieter		

Tempo

LARGO	LENTO/ ADAGIO	ANDANTE/ MODERATO	ALLGRETTO	ALLEGRO/ VIVACE	PRESTO
v.slow	slow	walking pace/ moderate	quite fast	quick/lively	very quick
Accelerando: gradually getting faster Rallentando/ritardando: gradually getting slower A tempo: return to the original speed Ritenuto: in slower time Rubato: rhythms are played in a more free/flexible way ('robbed time').					

Time values

NOTE	NAME	LENGTH (duration)	REST
	Semibreve	4 beats	
	Minim	2 beats	
	Crotchet	1 beats	
	Quaver	½ beats	
	Semiquaver	¼ beats	
A dot after the note increases its length by half:			
	Dotted minim		
	Dotted crotchet		

Groups of quavers/semiquavers are usually beamed together:



Terms and signs

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

Glossary - Eduqas GCSE Music



Complete the missing key words and symbols

Time values

Terms and signs

Terms and signs

#	
b	
	
	
	
	
V	
	
sf/z	

A dot after the note increases its length by half:

Groups of quavers/semiquavers are usually beamed together:

Complete the missing key words and symbols



**FRANTIC
ASSEMBLY**

YEAR 10 BTEC DRAMA KNOWLEDGE ORAGNISER – COMPONENT ONE

What we are learning this term:		E.	Keywords
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		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
G.		Analyse/ Evaluate	Watch and then analyse your own performance and the work of others and giving comments and judgements on what you see
Key learning aims from Component 1		Influences	How the practitioner has been influenced by others, their experiences, their training and how this has affected the work they create.
Learning aim A: Examine professional practitioners' performance work		Physical skills	The physical attributes that an actor uses, stamina, strength, flexibility, control, to dance with technical accuracy.
A1: Professional practitioners' performance material, influences, creative outcomes and purpose		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.	
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.			
How do the different roles and responsibilities in theatre collaborate to produce shows?			
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.			
a professional work			
a practitioner			
we analyse a performance			
e a practitioner's creative intentions			



**FRANTIC
ASSEMBLY**

YEAR 10 BTEC DRAMA KNOWLEDGE ORAGNISER – COMPONENT ONE

What we are learning this term:		E.	Keywords
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		Practitioners	
		Performance material	
		Creative Intentions	
		Review	
		Analyse/ Evaluate	
G.		Influences	
Key learning aims from Component 1		Physical skills	
Learning aim A: <i>Examine professional practitioners' performance work</i>		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. How do the different roles and responsibilities in theatre collaborate to produce shows?	
Learning aim B: <i>Explore the interrelationships between constituent features of existing performance material</i>		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.	
A.		Key question – What is the artistic purpose of a performance work?	
Component 1 – Key focus		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.	
C.		Key question from Assessment objectives	
1. What are physical skills 2. What are interpretive skills 3. How do we use these skills practically? 4. How do we IMPROVE on these skills?		1. What is a professional work 2. What is a practitioner 3. How do we analyse a performance 4. What are a practitioner's creative intentions	



What we are learning this term:	
A. Key words B. What are the main life stages C. What are the 4 areas of growth and development (PIES)? D. How do Humans develop physically (P)?	
A.	Key words for this Unit
Characteristics	Something that is typical of people at a particular life stage.
Life stages	Distinct phases of life that each person passes through.
Growth	Increased body size such as height, weight.
Development	Involves gaining new skills and abilities such as riding a bike.
Gross motor development (G)	Refers to the development of large muscles in the body e.g. Legs
Fine motor development (F)	Refers to the development of small muscles in the body e.g. Fingers
Language development	Think through and express ideas
Contentment	An emotional state when people feel happy in their environment, are cared for and well loved
Self-image	How individuals see themselves or how they think others see them
Self-esteem	How good or bad an individual feels about themselves and how much they value their abilities.
Informal relationships	Relationships formed between family members
Friendships	Relationships formed with people we meet in the home or in situations such as schools, work or clubs
Formal relationships	relationships formed with non-family/friends – such as teachers and doctors.
Intimate relationships	romantic relationships.

B	What are the main life stages?		C	What are the 4 areas of growth and development (PIES)?
Age Group	Life Stage	Developmental Characteristics and Progress		
0-2 years	Infancy	Sill dependent on parents but growing quickly and developing physical skills.	Physical Development (P) 	P = growth patterns and changes in the mobility of the large and small muscles in the body that happen throughout life.
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.	Intellectual Development (I) 	I = how people develop their thinking skills, memory and language.
19-45 years	Early Adulthood	Leaving home, making own choices about a career and may start a family.	Emotional Development (E) 	E = how people develop their identity and cope with feelings.
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.	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.

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

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

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

What we are learning this term:		F.	How do humans develop emotionally (E)?	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?			<u>Infancy and Early Childhood</u>	<u>Adolescence and adulthood</u>
E. <u>How do humans develop intellectually (I)?</u>			<u>Bonding and Attachment</u> Bonding and attachment describe the emotional ties an individual forms with others. It starts in the first year of life between infants and their main carer because that person fulfils the infants needs which makes them feel safe and secure.	<u>Self-image and Self-esteem</u> Self-image is heightened during adolescence because of the physical changes we experience. Our self-esteem can change from day to day based on a variety of factors including employment and health status.
Infancy 	At birth brains are already well developed. Infants use all of their senses to learn about the world around them. Infancy is a time of rapid intellectual development. At 3 months infants can remember routines. At 9-12 months infants are developing their memory. At 12 months to 2 years infants understand processes and how things work. Language begins to develop during this stage.		<u>Security</u> For infants and young children, security is mainly the feeling of being cared for, being safe and loved – it is closely linked with attachment.	<u>Security</u> Adolescence may feel insecure because of puberty. Adults may feel insecure about relationships, job security of income. Later in life adults may feel insecure about staying in their own home or going into a care home. Feeling secure helps us cope better with everyday situations.
Early childhood 	At 3-4 years of age children become more inquisitive and enjoy exploring objects and materials. They ask lots of questions and enjoy solving simple problems. At 5-6 years old children's memory is becoming well developed. This helps them to talk about the past and anticipate the future.		<u>Contentment</u> Infants and young children are content if they have had enough food, love, are clean and dry and all other needs are met.	<u>Contentment</u> When people feel discontented with aspects of their life – for example, relationships or work – their emotions can be negatively affected.
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.		<u>Independence</u> Independence is to care for yourself and make your own decisions. Infants are completely dependent on their carer. As children enter early childhood they develop more independence – feed self and get dressed. However, children still need a lot of help from their carer.	<u>Independence</u> Adolescence are dependent on their parents but are beginning to enjoy more independence and freedom to make their own choices. Adults enjoy living independently and controlling their own lifestyle and environment. Later in adulthood people become more dependent on others again.
		G.	How do humans develop socially (S)?	
		Life Stage	Types of relationships and social development	
		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.	
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.			

What we are learning this term:		F.	How do humans develop emotionally (E)?	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?		<u>Infancy and Early Childhood</u>		<u>Adolescence and adulthood</u>
E.	<i>How do humans develop intellectually (I)?</i>			
Infancy 				
Early childhood 				
Adolescence 		G.	How do humans develop socially (S)?	
		Life Stage	Types of relationships and social development	
		Infancy		
Early and Middle Adulthood 		Early childhood		
		Adolescence		
		Early adulthood		
Later adulthood 		Middle adulthood		
		Later adulthood		

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 or 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 others 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. 

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?	
	<u>Genetic Disorders</u>	<u>Disease and Illness</u>
Physical Development		
Intellectual Development		
Emotional Development		
Social Development		

J.	How does lifestyle affect development?	
Lifestyle choices include; diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance.		
		
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		
		



K	How do social and cultural factors affect development
Development can be influenced by the persons culture or religion because it affected their: Values: how they behave Lifestyle choices: diet, appearance	
<u>Positive affects of a persons culture/religion:</u> - 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	<u>Negative affects of a persons culture/religion:</u> - Feeling discriminated against by people who do not share their religion/culture which leads to low self-image - Feeling excluded and isolated because their needs like diet, are not catered for.
Community refers to: local area where people live, school, religious group or hobby clubs. They have common values and goals.	
<u>Belonging to a community:</u> - Brings sense of belonging essential for emotional development. - Building and maintaining relationships- social development - Feeling of security. - Increases self-image and self-confidence	<u>Not belonging to a community:</u> - Minimal contact with others- isolation - Anxiety leading to depression - Making negative lifestyle choices - Feeling less secure - Difficulty in building relationships - Slow self-image and self-confidence
Traditionally, men and women had distinctive responsibilities and expectations which for their gender called gender roles . However, nowadays UK equality legislation stops people being discriminated against because of their gender.	
What happens when people face discrimination because of gender: - They might be excluded from a group - They may be refused promotion at work - They may be expected to carry out a particular role - They may be paid less.	

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

M	How do economic factors affect development	
	Having enough money gives individuals and their families feeling of content and security	Not having enough money causes stress and anxiety.
	Having enough money means that the whole family is eating healthy.	Not having enough money can mean that the family is not about to eat well balanced diet, and this has a negative effect on their physical development
Elderly people rely on state pension to live which is not enough and have to cut down on travel, shopping, bills, therefore it speeds their aging process and lead to health decline.		
	<u>Living in good housing with open spaces:</u> - Feeling good about themselves - Be more likely to stay healthy, - Space to take exercise - Feel safe and secure - Warmth	<u>Living in a poor housing with cramped and damp conditions:</u> - Have low self-esteem and self-image - Be more likely to experience ill health - Be less likely to exercise - Anxious and stressed.
	Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image.	Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.



What we are learning this term:

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

K How do social and cultural factors affect development

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

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

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

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.

L How do relationships and isolation affect development?

1

2

3

4

5

6

7

M How do economic factors affect development



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.

What we are learning this term:		O.	How do people deal with life events?
N. What are life events? O. How do people deal with life events? P. How is dealing with life events supported?		Individual	
		Factors	
		Adapting	
		Resilience	
		Time	
N.	What are life events?	P.	How is dealing with life events supported?
Life Events		Types of Support	How this helps individuals deal with life events
Expected Life Events		Emotional Support	
Unexpected Life Events		Information and Advice	
Physical Events		Practical Help	
Relationship Changes		Informal Support	
Life Circumstances		Professional Support	
		Voluntary Support	

SWINDON ACADEMY READING CANON

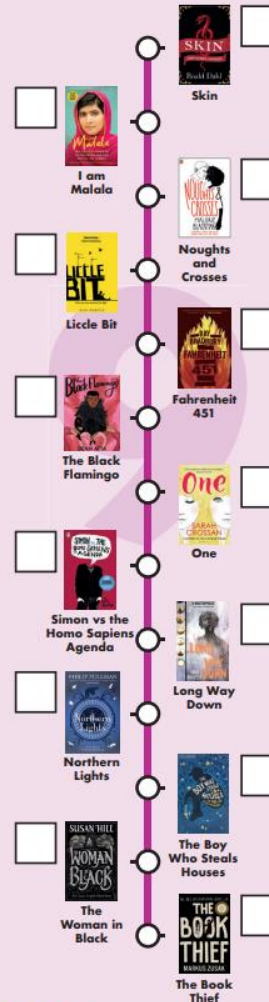
Year 7



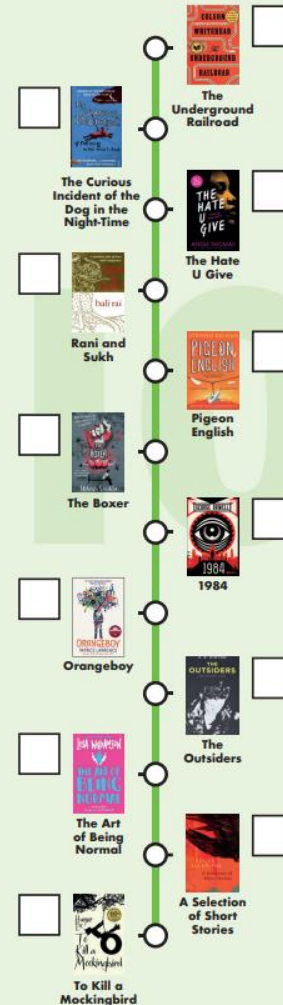
Year 8



Year 9



Year 10



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