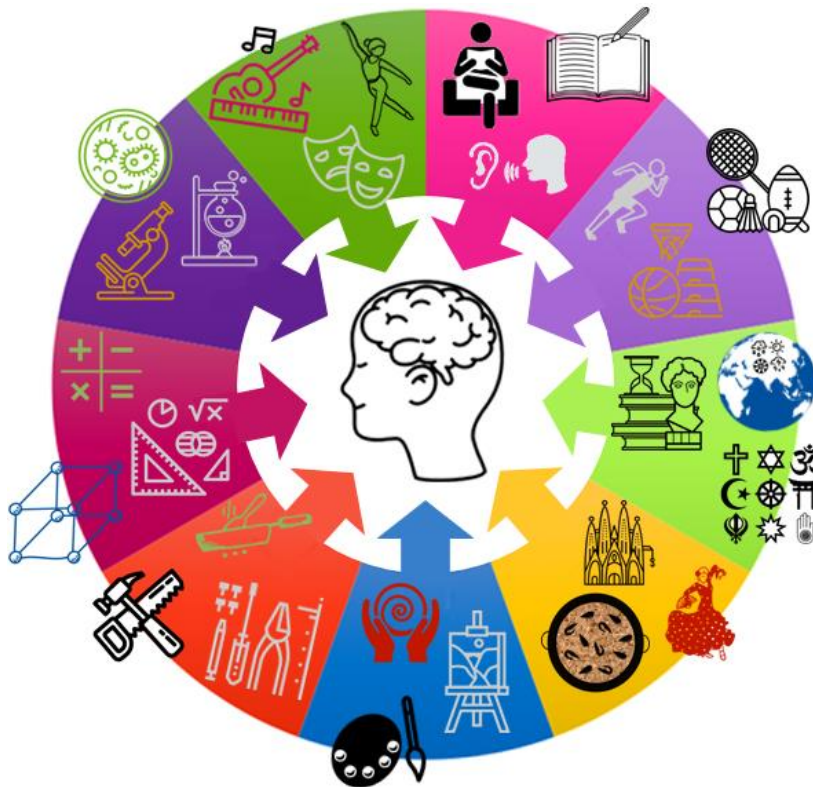


# 100% book - Year 10 Mainstream sets 1/2

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

## Term 2



### Swindon Academy 2023-24

Name:

Tutor Group:

Tutor & Room:

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

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

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

## Knowledge Organisers

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

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

## Quizzable Knowledge Organisers

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

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

### Top Tip

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

## Expectations for Prep and for using your Knowledge Organisers

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

# How do I complete Knowledge Organiser Prep?

## Step 1

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

The image shows the Epraise website interface. On the left is a 'Planner' for the week of 20th May to 26th May 2020, with columns for Sun, Mon, Tue, Wed, Thu, and Fri. On the right is a 'Knowledge Organiser' for 'Particle Theory'. It contains several sections: 'What is particle theory?', 'What is the law of conservation of mass?', 'What are the different states of matter?', and 'What are the differences between the states of matter?'. Each section includes a question and a detailed answer with diagrams of particle arrangements for solid, liquid, and gas states.

## Step 2

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

This image shows a printed page from the knowledge organiser. Handwritten in blue ink at the top right is the date '29th May 2020' and the title 'Particle theory'. The page content includes:
 

- A. What is particle theory?** The theory that all matter is made up of particles.
- A. Describe the arrangement and movement of particles in the three states of matter.**
  - Solid:** In a regular pattern. Particles can vibrate in a 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 and they move in all directions in a high speed.
- B. What are the different changes of state?**
  - Melting: Change of state from solid to liquid.
  - Freezing: Change of state from liquid to solid.
  - Evaporation: Change of state from liquid to gas.
  - Condensation: Change of state from gas to liquid.
- Energy changes:**
  - Gaining energy: melting, evaporation, boiling.
  - Losing energy: freezing, condensation.

 Diagrams show particle arrangements for solid, liquid, and gas states.

## Step 3

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

Handwritten notes on lined paper:
 

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

## Step 4

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

Handwritten notes on lined paper showing the definition of solid written three times:
 

- Solid = regular pattern particles vibrate in fixed position
- 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.

This image shows a printed page from the quizzable knowledge organiser. Handwritten answers in blue ink are provided for several questions:
 

- A. What is particle theory?** (Blank)
- A. Describe the arrangement and movement of particles in the three states of matter.** (Blank)
- B. What are the differences between the states of matter?**
  - Melting: Self quizzing
  - Freezing: Arrangement/movement of matter
  - Evaporation: Solid = regular pattern
  - Condensation: pa
  - Liquid =
  - Gas =

 Diagrams for solid, liquid, and gas states are visible at the bottom.

## Step 6

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

Handwritten notes on lined paper showing corrections to the definitions from Step 3:
 

- 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 –A Christmas Carol- Traditional

1. Context	
<p><b>Writer:</b> Charles Dickens (1812-1870)  <b>Dates:</b> First published in 1843  <b>Genre:</b> Allegorical; a ghost story.  <b>Era:</b> Victorian  <b>Set:</b> Victorian London  <b>Structure:</b> The novella is divided into 5 staves (chapters).</p>	<p><b>Biography of Dickens</b></p> <ul style="list-style-type: none"> <li>Born in Portsmouth in 1812</li> <li>When Dickens was 12, his father was sent to debtors' prison as he was unable to pay his bills.</li> <li>His mother and youngest siblings were sent with him, whilst Dickens stayed with a family friend. In order to help his family, Dickens had to leave school and work in a factory sticking labels on bottles.</li> <li>Dickens dedicated his life to writing works that revealed the horrors of life in Victorian London for those living in poverty.</li> </ul>
<p><b>Christmas:</b> Dickens grew concerned that, due to capitalism, society had lost sight of traditional values (Christian morals, forgiveness, charity). He felt that Christmas was the perfect time to reconnect with these values and used his novella to do this. He also knew that Christmas would be a popular topic so it would sell well – therefore enabling his message to reach a wider audience.</p>	<p><b>London and inequality:</b> Dickens juxtaposes scenes of middle-class comfort and poverty to emphasise the close proximity and contrast of the different classes. It highlights the Christian concept of 'love thy neighbour'. The urban setting allows Dickens to exercise his fondness for hyperbole, with the exaggerated extremes of poverty adding to the effect of the 'plight of the poor'.</p>
<p><b>The Poor Law, 1834</b>            In order to deter poor people from claiming financial help, the government made claimants live in workhouses: essentially, prisons for the poor. Dickens hated this law. He spent 1843 touring factories and mines in England and wished to highlight the situation facing poor people. A Christmas Carol was published soon after – in December 1843.</p>	<p><b>Malthusian Theory</b>            The reformation of The Poor Law was partially informed by the writings of Thomas Malthus. Malthus argued that if living standards increased, population would increase and eventually the number of people would be too great for the food that could be produced. As a result, Malthus argued it was important not to support the poor or improve their standards of living, but to allow them to die if they couldn't support themselves because charity would only prolong their suffering.</p>
<p><b>The Supernatural:</b> Victorian society was fascinated by the supernatural, including mediums, ghosts, and spiritualism. However, this belief in the supernatural was also heavily influenced by the church, with the belief that ghosts were souls who were trapped in purgatory (a place of suffering where the souls of sinners were trapped).</p>	

2. Key Characters
<p><b>Ebenezer Scrooge:</b> The protagonist is initially established as an archetypal villain who dismisses the goodwill and generosity associated with Christmas. After being forced to transform, he feels remorse for his avarice and becomes a symbol of Christmas spirit. Scrooge embodies the relentless capitalist spirit of the time, but also demonstrates that everyone has the capacity to reform.</p>
<p><b>Bob Cratchit:</b> Bob is Scrooge's downtrodden but loyal employee. His family are a symbol of Victorian poverty, cheerfulness in adversity, togetherness and Christmas Spirit. Bob shows pity for Scrooge, and provides a contrast to Scrooge's isolation and meanness. His son, Tiny Tim, is an emblem for noble poverty; he accepts his disability without complaint.</p>
<p><b>Fred:</b> Fred juxtaposes the character of Scrooge and epitomises the concept of goodwill and forgiveness, refusing to be discouraged by his uncle's misery. People speak highly of Fred and his generosity, in contrast to how they speak of Scrooge. Fred shows that Scrooge has chosen isolation and shows forgiveness to Scrooge, welcoming him in Stave Five.</p>
<p><b>Marley's Ghost:</b> Marley's ghost is the spiritual representation of Scrooge's potential fate. The chains that drag him down symbolize the guilt caused by his failure to help people in need. Marley's ghost warns Scrooge that he too will experience the same guilt if he continues to deny people help.</p>
<p><b>The ghosts:</b> The Ghost of Christmas Past is a symbol of childhood, truth and enlightenment. The Ghost of Christmas Present represents goodwill, plenty and the festival of Christmas. The Ghost of Christmas Yet to Come symbolises a catastrophic future for mankind.</p>
<p><b>Belle:</b> The woman that Scrooge was engaged to when he was a young man. Belle's role is crucial in Scrooge's transformation, as the scenes show Scrooge what he might have had in his life if he had not been so avaricious. Through the character of Belle, Dickens sets emotional love directly against Scrooge's love of money and suggests that avarice can lead to a deprivation of kindness, love and empathy.</p>

3. Central Themes	
<p><b>Social injustice</b></p>	<p>Dickens highlights the unfairness within society through the juxtaposition of the poor and wealthy. Through Scrooge's refusal to give to charity and his exclamation that the poor should be in workhouses or die, Dickens illustrates the selfishness of the higher classes and the injustice of wealth distribution in Victorian society. The children, Ignorance and Want, personify the dangerous consequences of allowing poverty to continue.</p>
<p><b>Transformation and redemption</b></p>	<p>By establishing Scrooge as an archetypal villain, Dickens is able to emphasise the idea that everyone is capable of transformation and redemption. From starting as a greedy, avaricious miser, Scrooge is able to reflect upon his actions and to understand that he must live his life helping others to avoid Marley's fate.</p>
<p><b>Social responsibility</b></p>	<p>Dickens felt that every individual had a responsibility for those around them. Marley's Ghost conveys the message of the novella when he cries, 'Mankind was my business' demonstrating that the proper 'business' of life is not about seeking financial reward but having concern for others. Dickens highlights the importance of trying to make a difference- whether that be large financial contributions (Scrooge), smaller contributions (Fezziwig) or simply showing compassion and kindness to one another.</p>

4. Key Vocabulary	
<b>Avarice</b>	Extreme greed of possessions or money
<b>Salvation</b>	Saving someone from harm or destruction
<b>Miserly</b>	someone who is greedy and does not like spending money
<b>Callous</b>	Mean or cruel
<b>Antithesis</b>	The exact opposite of something
<b>Epiphany</b>	A moment of sudden understanding
<b>Redemption</b>	The act of being saved or freed from sin or error
<b>Benevolence</b>	Kind and helpful towards others
<b>Philanthropic</b>	Showing concern for others by being charitable
<b>Misanthropic</b>	Someone who has a hatred for other people
<b>Penitence</b>	sincere regret for wrong or evil things that you have done
<b>Remorse</b>	a strong feeling of sadness and regret about something wrong that you have done
<b>Deprivation</b>	When someone is unable to have the things they need or want
<b>Despotism</b>	exercising power in a cruel and controlling way
<b>Capitalism</b>	A political system in which property, business, and industry are owned by private individuals and not by the government

5. Key Terminology, Symbols and Devices	
<p><b>Stave</b></p>	<p>Chapters in the novella, but we normally associate staves with music, as if the <b>book</b> is a Christmas carol, and each chapter is part of the song. As Christmas carols are repetitive and easy to remember, it links to how Dicken's wishes his message to be remembered.</p>
<p><b>Intrusive Narrator</b></p>	<p>A narrator who interrupts the story to provide a commentary to the reader on some aspect of the story or on a more general topic. In 'A Christmas Carol' the narrator helps to shape our impressions of Scrooge.</p>
<p><b>Circular structure</b></p>	<p>Circular narratives cycle through the story one event at a time to end back where the story originated.</p>
<p><b>Allegory</b></p>	<p>A story that can be interpreted to reveal a hidden meaning, typically a moral or political one.</p>
<p><b>Allegorical figures</b></p>	<p>An <b>allegorical</b> figure is a <b>character</b> that serves two purposes: first, they are an important person in the story in their own right, and, second, they represent abstract meanings or ideas.</p>
<p><b>Foreshadowing</b></p>	<p>Foreshadowing is a literary device in which a writer gives an advance hint of what is to come later in the story.</p>
<p><b>Didactic</b></p>	<p>A type of literature that is written to inform or instruct the reader, especially in moral or political lessons.</p>
<p><b>Semantic Field</b></p>	<p>A set of words that are related in meaning. Dickens frequently uses semantic fields of warmth and coldness that are associated with the characters.</p>

## ENGLISH –A Christmas Carol- Traditional

### 1. Context

Writer: Dates: Genre: Era: Set: Structure:	<u>Biography of Dickens</u> •  •  •  •
Christmas:	London and inequality:
The Poor Law, 1834	Malthusian Theory
The Supernatural:	

### 2. Key Characters

Ebenezer Scrooge:
Bob Cratchit:
Fred:
Marley's Ghost:
The ghosts:
Belle:

### 3. Central Themes

Social injustice	
Transformation and redemption	
Social responsibility	




### 4. Key Vocabulary

Avarice	
Salvation	
Miserly	
Callous	
Antithesis	
Epiphany	
Redemption	
Benevolence	
Philanthropic	
Misanthropic	
Penitence	
Remorse	
Deprivation	
Despotism	
Capitalism	

### 5. Key Terminology, Symbols and Devices

Stave	
Intrusive Narrator	
Circular structure	
Allegory	
Allegorical figures	
Foreshadowing	
Didactic	
Semantic Field	

## T2 Y10 P3 – Mainstream – Particles

State	Pattern	Energy and movement	Forces between particles
Solid 	Ordered and all touching	Vibrate around fixed positions	Strong forces between particles
Liquid 	Random and touching	Move around randomly	Weaker than in a solid
Gas 	Random and far apart	Move around randomly	Weak forces of attraction

Models	+	-
Particle diagrams	Easy to see/draw arrangement	<ul style="list-style-type: none"> <li>Can't see the forces between particles</li> <li>Particles look like flat circles rather than 3D spheres</li> <li>Movement isn't shown</li> </ul>
Kinetic models (eg marbles or animations)	Easy to see particle arrangement  Can see the movement of particles	Can't see forces between particles

### Density

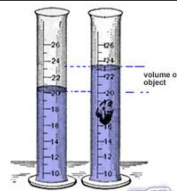
Density is mass per cm<sup>3</sup>

It can be calculated using:

$$\text{Density} = \text{mass} \div \text{volume}$$

$$\rho = m \div V$$

Measure the volume of small objects by putting them into a measuring cylinder with 100cm<sup>3</sup> water in



**Required practical – measuring the density of different materials.**

**For regular solids :**

Mass measured by **top pan balance**

Volume measured by measuring **length x breadth x height**

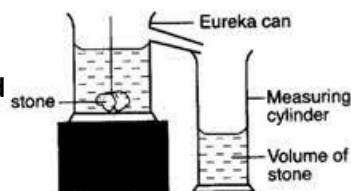
Measure the volume of larger objects by putting them into a full eureka can and catching and measuring the water that is displaced

**For irregular solids:**

Mass measured by **top pan balance**

Volume measured by **displacement of water**

**This means putting the object into water and measuring the volume of water 'pushed out'**



### Required practical continued : Density of liquids

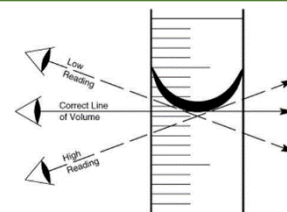
- Find the mass of an empty measuring cylinder using a top pan balance.
- Pour a known volume (100ml) of liquid into the measuring cylinder.
- Use the meniscus to measure the volume of the liquid accurately. This is the volume.
- Now measure the mass of the measuring cylinder + the liquid combined.
- Subtract the mass of the empty measuring cylinder and this is the mass of the liquid.

$$\text{Density} = \text{mass} \div \text{volume.}$$

Zero error



Read the meniscus!



## T2 Y10 P3 – Mainstream – Particles

1. Describe the arrangement of the particles in a solid, a liquid and a gas
2. Describe the movement of the particles in a solid, a liquid and a gas
3. In which state of matter are the forces between the particles the weakest?
4. In which state of matter are the forces between the particles the strongest?

1. Give one advantage of using particle diagrams to show the different states of matter
2. Give three disadvantages of using particle diagrams to show the different states of matter
3. Give two advantages of using kinetic models to show the different states of matter
4. Give one disadvantages of using kinetic models to show the different states of matter

1. Give the formula that links density, mass and volume?
2. Give a unit for density
3. Which piece of equipment is used to measure mass of an object?
4. What term is used to describe when water is pushed out of the way by a solid object?
5. Name two pieces of equipment that could be used to measure the volume of an irregular object
6. What three measurements do you need to calculate the volume of a regular object?

1. What type of error is it if a balance reads 0.03g when nothing is resting on it?
2. How do you find the density of a liquid?

# T2 Y10 P3 – Mainstream – Particles

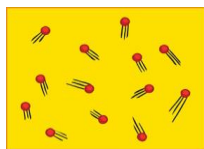
## Internal energy

The temperature of any substance is related to the average speed of its particles.

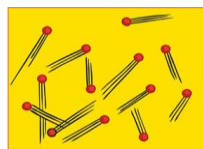
The internal energy of a system is the total kinetic energy and the potential energy of the particles

The particles in a system **vibrate** or **move around** because they have energy in their **kinetic energy stores**

The faster a particle moves, the greater its **kinetic energy store**



Low Temperature



High Temperature

The particles also have energy in their **potential energy stores** due to their position.

As particles **move further apart**, their potential energy stores **increase**

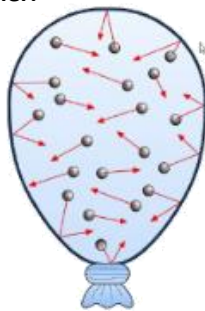
## Gas pressure

The particles in a gas are in constant random motion  
They collide with the walls of their container  
This exerts a force **on the container**.

The more energy the particles have, the higher the temperature.

An increase in temperature of a gas causes the particles to move further apart.

If this is not possible, because of the container, then there is an increase in pressure.



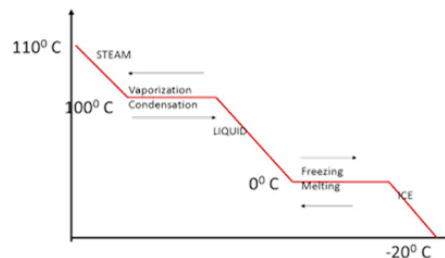
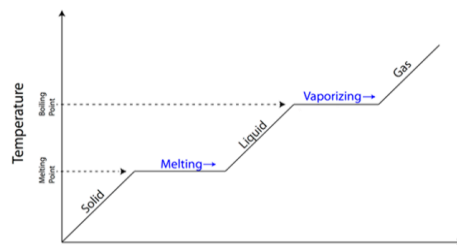
## Heating and cooling

When the internal energy of a substance changes, then either :

- **The temperature** of the substance changes
- **The state** of the substance changes

This can be seen by plotting the temperature change during **heating** or **cooling**.

Heating a solid would give us a graph that looks like this:



When the line is flat:

- The **temperature stays the same**.
- This is when a change of state is happening – for example melting.
- The energy transferred is not increasing the mean particle speed – it is increasing the potential energy of the particles.

When the line is increasing (heating) or decreasing (cooling)

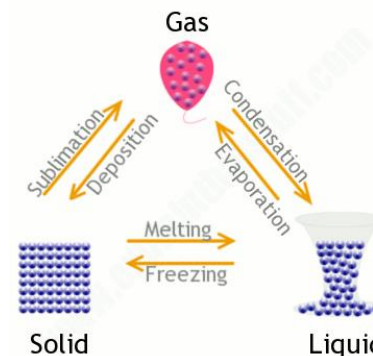
- The temperature is increasing / decreasing
- The kinetic energy store is increasing /decreasing
- Average particle speed is increasing /decreasing

## Specific latent heat

Specific latent heat is the amount of energy needed to **change 1kg of a substance from one state to another** without changing the temperature.

Specific latent heat will be different for different materials.

- Energy needed to change 1kg of Solid → liquid - **specific latent heat of fusion**
- Energy needed to change 1kg of Liquid → gas - **specific latent heat of vapourisation**



The amount of energy needed to change 1Kg of a material is found by the equation:

$$\text{Energy} = \text{mass (kg)} \times \text{specific latent heat (L)}$$

$$E = m L$$

## Specific heat capacity

This is the amount of energy needed to change the temperature of 1Kg of a substance by 1°C  
It is calculated by:

$E = \text{specific heat capacity} \times \text{mass} \times \text{temp change}$

$$E = \text{SHC} \times m \times \theta$$



## T2 Y10 P3 – Mainstream – Particles

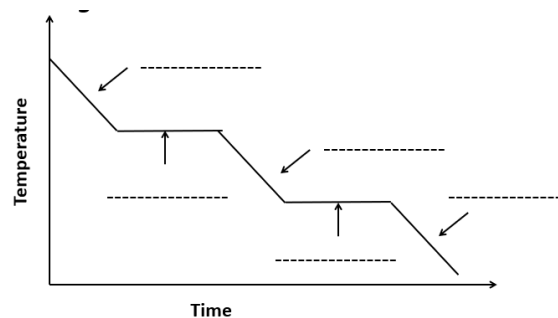
1. What two stores of energy make up internal energy?
2. Which energy store is linked with particle movement?
3. Which energy store increases if the particles in a substance move further apart?
4. What happens to the temperature when the kinetic store of the particles increases?

1. What causes gas pressure?
2. What happens to the temperature of a gas if the kinetic energy store of the particles increases?
3. What happens to the space between particles in a gas as it heats up?
4. If the volume of the gas is kept constant, what happens to the pressure?

1. What two things can happen to a substance when the internal energy changes?

2. Label the graph below using the words given:

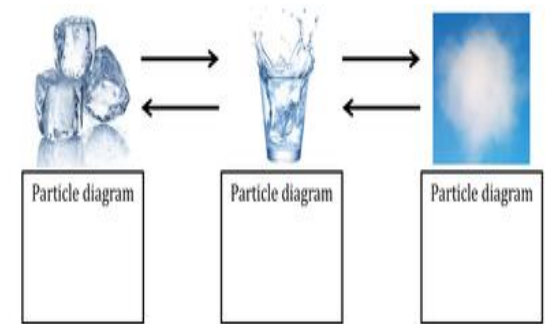
liquid, gas, solid, condensing, freezing



3. What is happening to temperature when the line is flat on a heating or cooling curve?

4. What is happening to the substance when the line is flat?

1. What is specific latent heat?
2. What is the term given to the amount of energy needed to change 1kg of a liquid into a solid?
3. What is the specific latent heat of vaporisation?
4. Label the changes of state below
  - a.
  - b.
  - c.
  - d.



5. Draw the particle diagrams in the boxes

1. What is specific heat capacity

## T2 Y10 C4 – Mainstream – Chemical changes

### The Reactivity Series

- A more reactive metal will replace a less reactive metal in a compound (**displacement**)

- e.g. potassium + magnesium chloride → potassium chloride + magnesium

Potassium is more reactive than magnesium

Potassium **displaces** magnesium from the compound and takes its place.

potassium	↑ Most Reactive
sodium	
calcium	
magnesium	
aluminium	
zinc	
iron	
tin	
lead	
copper	
silver	
gold	
platinum	

carbon → (points to aluminium)

hydrogen → (points to iron)

## Vocabulary: Crystallisation

### Reactions of acids with metals

- Metal + acid → salt + hydrogen

E.g. iron + sulfuric acid → iron sulfate + hydrogen

To name salt :  
1<sup>st</sup> name Metal  
2<sup>nd</sup> name Acid used

### Naming Salts

Acid used	Salt produced
Hydrochloric	Chloride
Sulfuric	Sulfate
Nitric	Nitrate

### Extraction of Metals

- Extraction = remove metal from an ore or a compound.

**Ore** = a rock containing enough metal to make extracting metal worthwhile.

#### How to extract metals:

**Less reactive than carbon** – reduction with carbon

Reduction = loss of oxygen

E.g. iron oxide + carbon → iron + carbon dioxide

Oxygen has been removed to extract iron.

Carbon and the oxygen removed from the iron react to make carbon dioxide

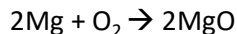
**More reactive than carbon** – electrolysis is used.

- Some metals are found in **native** form (not reacted, so in element form) – usually platinum and gold as **very unreactive**.

### Reaction of metals with oxygen

- Metal + oxygen → metal oxide

e.g. magnesium + oxygen → magnesium oxide



Oxidation reaction as metal gained oxygen

- Oxidation = gaining oxygen

- Reduction = losing oxygen

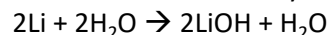
### Reaction of metals with water

- Most metals don't react well with water

- Group 1 and group 2 react to form alkalis

- Metal + water → metal hydroxide + hydrogen

e.g. lithium + water → lithium hydroxide + hydrogen



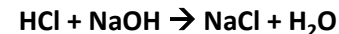
Metal hydroxides are alkaline

### Reactions of acids with alkalis

- Acid + alkali → salt + water (neutralisation)

Hydrochloric acid + sodium hydroxide → sodium chloride + water

salt



### Reactions of acids with carbonates

- Acid + carbonate → salt + water + carbon dioxide

sulfuric acid + calcium carbonate → calcium chloride + water + carbon dioxide

salt



## T2 Y10 C4 – Mainstream – Chemical changes

1. What is meant by displacement?

2. Name a very reactive metal

3. Name two metals which are less reactive than hydrogen.

1. State the general equation for the reaction of metal with acid.

2. State the salts produced from hydrochloric acid, sulfuric acid and nitric acid.

1. Define extraction.

2. What is an ore?

3. How do you extract a metal less reactive than carbon?

1. State the general equation for the reaction of metal with oxygen.

2. Write a word equation for the reaction of iron with oxygen.

1. State the general equation for the reaction of acid with an alkali.

4. What is meant by reduction?

1. State the general equation for the reaction of metal with water.

5. What is meant by a 'native metal'?

2. Are hydroxides acid/alkaline?

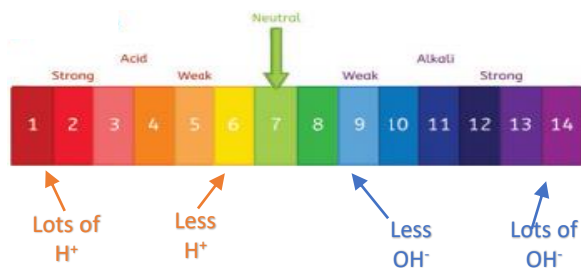
1. State the general equation for the reaction of acid with carbonates.

6. Give an example of a metal found in native form.

## T2 Y10 C4 – Mainstream – Chemical changes

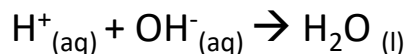
### pH Scale

- Shows how acidic or alkaline solution is.
- pH 1-6 = acid
- pH 7 = neutral
- pH 8-14 = alkali



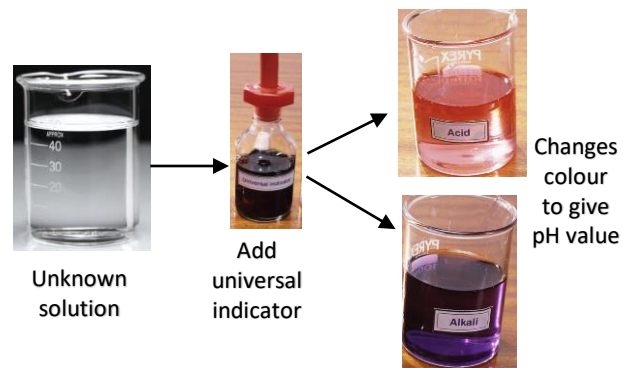
- **In aqueous solutions:**  
Acids – produce H<sup>+</sup> ions  
Alkalis – produce OH<sup>-</sup> ions

In neutralisation reactions:



### Measuring pH of a solution

- Can use **universal indicator**
- Gives the solution a colour
- Can compare colour to the pH scale



### Disadvantages of method

- Colour is **subjective** – different people may see different colours
- Doesn't give an exact pH number (could use **pH probe** to make more **accurate**).

## T2 Y10 C4 – Mainstream – Chemical changes

1. What is the pH range for an acid?
2. What is the pH range for an alkali?
3. If a substance has a pH of 7, what type of substance is it?
4. What ions do acids produce in solution?
5. What ions do alkalis produce in a solution?
6. State the ionic equation for neutralisation reactions.

1. Describe a simple method to test the pH of an unknown solution.
2. State 2 disadvantages of using universal indicator.
3. How can pH be measured more accurately?

## T2 Y10 C4 – Mainstream – Chemical changes – Required Practical – Preparation of soluble salts

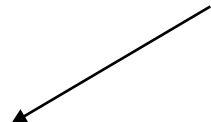
### Aim

Prepare a pure, dry sample of a soluble salt from an insoluble **oxide** or **carbonate**.

### Equipment

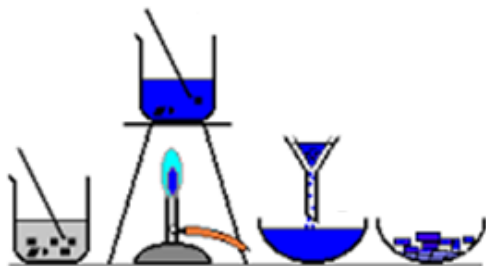
- Beaker
- Measuring cylinder
- Bunsen burner and safety mat
- Filter funnel and filter paper
- Named acid (e.g. hydrochloric acid)
- Metal oxide or carbonate.
- Spatula
- Glass stirring rod

Change method  
depending on reactants in  
the question.



### Method (example copper oxide and sulfuric acid to make copper sulfate)

1. Using measuring cylinder – 20cm<sup>3</sup> **sulfuric acid** → beaker
2. Warm the acid gently (not boiling)
3. Using spatula add **copper oxide** to the acid and stir
4. Keep adding until no more oxide will dissolve (excess).
5. Using a filter funnel and filter paper – filter excess copper oxide.
6. Evaporate some of the filtrate using a water bath.
7. Pour remaining filtrate into an evaporating basin – leave overnight to evaporate water
8. Pat the crystals dry.



### Common questions

**Q1)** Why do you heat the acid before adding the oxide?

**A1)** To speed up the reaction (particles have more energy to react).

**Q2)** Why is the oxide added in excess?

**A2)** To make sure that all the acid has been neutralised.

**Q3)** Why is the solution filtered?

**A3)** Remove any unreacted, excess solid.

**Q4)** Why is the solution left overnight in a warm, dry place?

**A4)** To evaporate excess water, to form crystals (crystallise).

**Q5)** Name 2 safety precautions you should take during this practical.

**A5)** Safety goggles and allow equipment to cool before putting away

**T2 Y10 C4 – Mainstream – Chemical changes – Required Practical – Preparation of soluble salts**

1. Write a method to prepare a pure, **dry** sample of copper sulfate crystals (6 marks).

Q2) Why do you heat the acid before adding the oxide?

Q3) Why is the oxide added in excess?

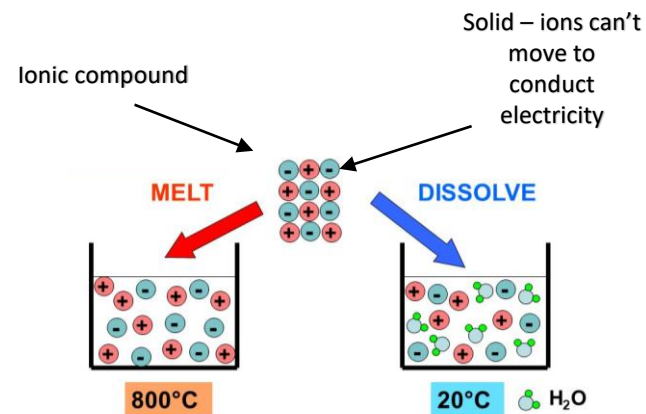
Q4) Why is the solution filtered?

Q5) Why is the solution left overnight in a warm, dry place?

Q6) Name 2 safety precautions you should take during this practical.

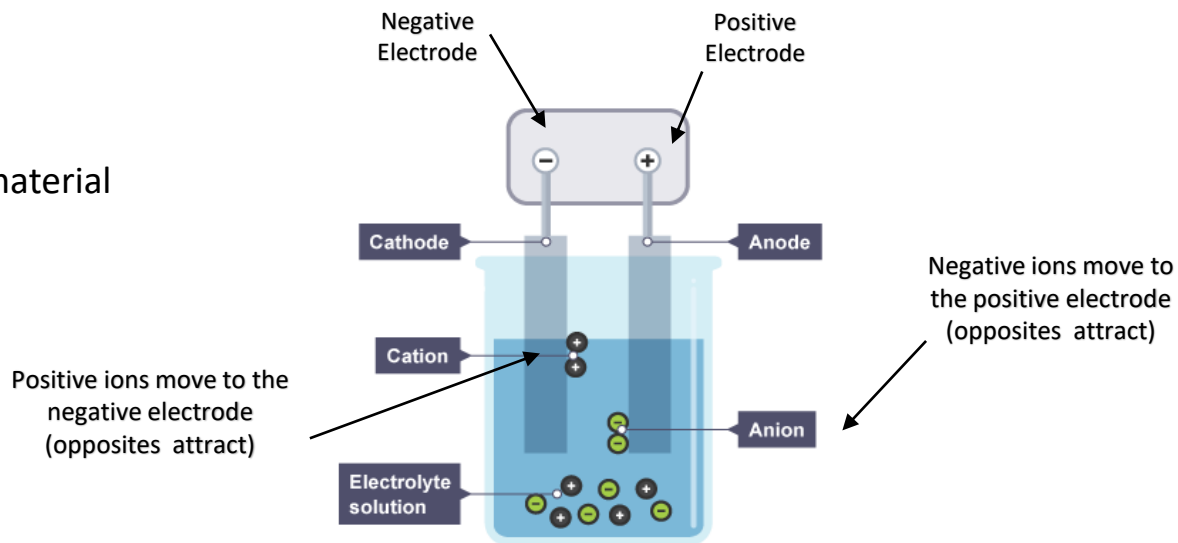
## Electrolysis

- **Splitting** up a **compound** using electricity.
- Used to extract metals from compounds, purify metals (eg copper)
- Must be **molten** or **aqueous** (dissolved in water) to allow **ions** to **move** to the electrodes



## The Process of Electrolysis

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





## T2 Y10 C4 – Mainstream – Chemical changes

1. What is meant by the term electrolysis?
2. What is electrolysis used for?
3. What must the compound be for electrolysis to take place?
4. Why can solid ionic compounds not conduct electricity?

1. What does inert mean?
2. Name the positive electrode.
3. Name the negative electrode.
4. Why do positive ions move to the negative electrode?

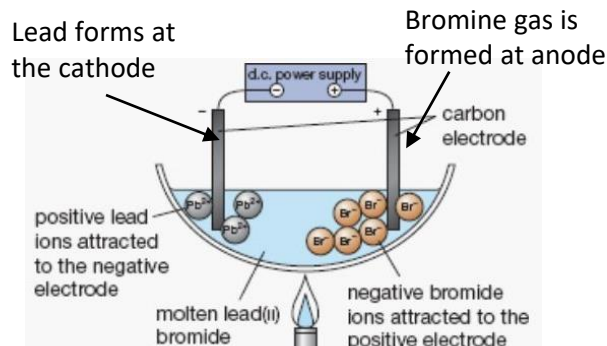
# T2 Y10 C4 – Mainstream – Chemical changes

## Electrolysis of Molten Ionic Compounds

**Molten** = melted so ions can move.

- Metal = produced at **anode**
- Non-metal = produced at **cathode**

### Example: Lead Bromide - $PbBr_2$



## Using Electrolysis to Extract Metals

- Used if metal is **too reactive** to be extracted by reduction with carbon.
- Requires **large amount of energy** to melt the compound and produce electrical current. (**expensive**)

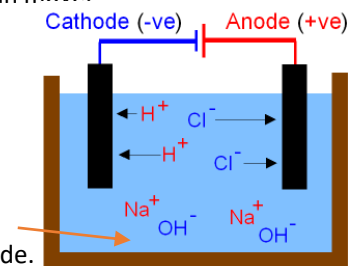
### Example: Aluminium Oxide

- **Cryolite** is added – reduces the melting point (less energy needed – less expensive)
- **Carbon** used as positive electrode – needs to be replaced constantly as **oxygen** will react with it to produce  $CO_2$  – it will degrade.

## Electrolysis of Aqueous Solutions

- Compound is dissolved in water so ions can move.

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



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

**Anode** – Non-metal or oxygen

**Cathode** – Metal or hydrogen

### Rules

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

### Examples

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

## T2 Y10 C4 – Mainstream – Chemical changes

1. Why is an ionic compound melted before electrolysis takes place?

2. Metals are produced at the..

3. Non-metals are produced at the..

1. When is electrolysis used to extract a metal?

2. Why is electrolysis expensive?

3. Why is cryolite added to aluminium oxide before electrolysis?

4. Why does the positive anode need constantly replacing when electrolysing aluminium oxide?

1. Why is the compound dissolved in water before electrolysing?

2. What two ions are also present in aqueous solutions (along with the compound)?

3. Which two substances can be produced at the anode?

4. Which two substances can be produced at the cathode?

5. When would a metal be produced at the cathode?

6. When would oxygen be produced at the anode?

## T2 Y10 C4 – Mainstream – Chemical changes

### Aim

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

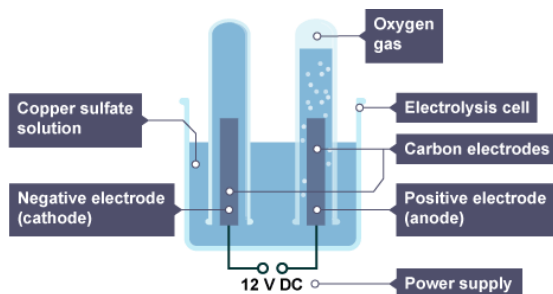
### Equipment

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

Change method depending on the question.

### Method (example copper sulfate solution.)

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



### Common questions

**Q1)** How do you test for hydrogen gas?

**A1)** Lit splint will make a squeaky pop.

**Q2)** How do you test for oxygen gas?

**A2)** Glowing splint – will relight.

**Q3)** Explain why copper is produced at the cathode.

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

**Q4)** Why do hydrogen ions move to the cathode?

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

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

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

## T2 Y10 C4 – Mainstream – Chemical changes

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

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

Q2) How do you test for hydrogen gas?

Q3) How do you test for oxygen gas?

Q4) Explain why copper is produced at the cathode.

Q5) Why do hydrogen ions move to the cathode?

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



### 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	
Integrated Transport System	
Brownfield	
Greenfield	
Commuter settlements	

### 5. Sustainable urban living

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

### 6. Urban transport strategies used to reduce traffic congestion

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



### 7. Distribution of population and major cities in the UK

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

### 8. Location and importance of Bristol

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

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

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

### 10. Urban change in Bristol

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

### 11. Opportunities created by urban change

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

### 12. An example of an urban regeneration project

Example	Why did it need regeneration?	What are the main features?	Successful?
Temple Quarter, Bristol	<ul style="list-style-type: none"> <li>• Bristol surrounded by a green belt.</li> <li>• Brownfield site- rundown, ugly.</li> <li>• By Bristol Temple Meads Station- poor impression for new visitors.</li> <li>• Previously an industrial area.</li> </ul>	<ul style="list-style-type: none"> <li>• Enterprise Zone e.g. low rents.</li> <li>• Improve access e.g. ITS.</li> <li>• New bridge across River Avon (access to planned Bristol Arena).</li> <li>• Maintain historical features, cobbled streets- gives character</li> <li>• Brunel's Engine Shed £1.7mill.</li> </ul>	<ul style="list-style-type: none"> <li>✓ 4,000 new jobs by 2020 (17,000 by 2037)</li> <li>✓ Attracts tourists.</li> <li>✓ Redeveloped brownfield site</li> <li>✗ Arena still not built</li> </ul>

### 13. Challenges created by urban change

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





**7. Distribution of population and major cities in the UK**

Population	
Cities	

**8. Location and importance of Bristol**

Location	
Importance within the UK	
Importance to wider world	

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

National migration	
International migration	
Impact on character	

**10. Urban change in Bristol**

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**11. Opportunities created by urban change**

Cultural mix	
Recreation and entertainment	
Employment	
Integrated transport system	
Urban greening	

**12. An example of an urban regeneration project**

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

**13. Challenges created by urban change**

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

### 8. Introduction to Nigeria

Located just north of the equator, in west Africa.

#### Importance of Nigeria

**Global importance** 🌍 NEE in 2014 > 21<sup>st</sup> largest economy.  
🌍 5<sup>th</sup> largest contributor to UN peace keeping.

**Local importance** 🌍 Fastest growing economy in Africa.  
🌍 In 2014 they had the highest GDP.

#### 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<sup>nd</sup> 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 20km <sup>2</sup> .
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 <b>another</b> 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. Nigeria's changing industrial structure

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

### 10. Transnational corporations

Term	Definition
Transnational Corporation	
Host country	
Footloose	
<b>Shell in Nigeria</b>	
Advantages	
Dis-advantages	-
Summary	

### 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	-
<b>International aid in Nigeria</b>	
Term	Definition
International aid	
Emergency aid	
Developmental aid	
<b>Aid in Nigeria</b>	
What?	
Nets for life	
Problems with aid	

### 13. Shell in Nigeria

Advantages:	Disadvantages:

# Year 10 OCR A Term 1 –Landscapes of the UK



Background:	
1.	The physical landscapes of the UK have distinctive characteristics. The characteristics are caused by changes in Geology, Climate and Land Use (A).
2.	There are a number of geomorphic processes which create distinctive landscapes (B, C, D)
3.	Rivers create a range of landforms which change with distance from their source within a river basin (E).
4.	There are a range of landforms within the coastal landscape (G, H, I & J)
5.	Landscapes are dynamic and differ depending on their geology, climate and human activity (F & K)

A.	UK Distinctive Landscapes
Mountainous / Upland Area	<ul style="list-style-type: none"> <li>Over 600m in height.</li> <li>Unevenly distributed across the UK,</li> <li>Located in Northern Ireland, Scotland &amp; Wales.</li> <li>Characteristics are mountainous, steep, rocky with low population.</li> <li>Geology = Igneous &amp; Metamorphic Rock</li> <li>Climate is cool and wet.</li> </ul>
Lowland Area	<ul style="list-style-type: none"> <li>Between 0 and 200m above sea level.</li> <li>Evenly distributed across Southeast England.</li> <li>Characteristics are hills, wide rivers, flat land and farmland with high population.</li> <li>Geology = fertile soil over Sedimentary rock.</li> <li>Climate is mild with lower rainfall.</li> </ul>
Glaciated Areas	<ul style="list-style-type: none"> <li>Glaciers are slow moving flows of ice which carve large valleys into mountains.</li> <li>Unevenly distributed across UK</li> <li>Located in Northern Scotland./ Lake district.</li> <li>Characteristics are mountainous areas with U shaped valleys used for sheep farming &amp; tourism.</li> <li>Geology = Igneous &amp; Metamorphic Rock</li> <li>Climate is cool and wet.</li> </ul>

B.	Geomorphic Processes
Geomorphic means a process that changes the landscape.	
Weathering	A Weathering is the breakdown of material in place (without being transported).
Mechanical weathering	Physical actions of rain, frost and wind that weaken the rock such as Onion Skin weathering and freeze thaw.
Chemical Weathering	Minerals in rocks reacting in different ways making them weaker such as Carbonic Acid dissolving limestone.
Biological	Plants and animals breaking rocks apart, such as roots growing in cracks or rabbits burrowing through soil.
Mass Movement	<p>The movement of soil and sediment down a slope by gravity.</p> <p><b>Sliding</b> happens when a section of soil or rock moves suddenly down a slope.</p> <p><b>Slumping</b> happens when a section of soil or rock moves gradually down a slope.</p>

C.	Erosion
Attrition	The 'knocking' of sediment against each other to become more rounded.
Hydraulic action	The sheer force of the water and air in cracks breaking down the riverbanks and bed.
Solution	The dissolving of minerals.
Abrasion	The action of sediment scraping against the bed and bank of the river (like sandpaper).

D.	Rivers - Transportation
Traction	Large rocks and boulders that are too heavy to pick up are ROLLED along the river bed.
Saltation	Medium size rocks are BOUNCED along the river bed.
Suspension	Small particles of sediment are CARRIED along by the river.
Solution	Minerals from the rock are DISSOLVED into the water.

E.	Rivers - Landforms
<b>V Shaped Valley (Upper Course)</b>	
<ul style="list-style-type: none"> <li>When it rains, the water soaks into the sides of the valley making them unstable.</li> <li>Vertical erosion makes the valley sides even more unstable.</li> <li>They collapse into the river and are transported away.</li> <li>This leaves behind a v-shaped valley.</li> </ul>	
<b>Waterfall (Upper Course)</b>	
<ul style="list-style-type: none"> <li>Occur when hard rock overlies soft rock.</li> <li>Soft rock erodes faster, <b>undercutting</b> the hard rock leaving a <b>ledge</b>.</li> <li>Eventually the unsupported ledge <b>collapses</b> and falls into the plunge pool.</li> <li>The process <b>repeats</b> and the waterfall <b>retreats</b> upstream, leaving behind a <b>Gorge</b>.</li> </ul>	
<b>Meander (Middle / Lower Course)</b>	
<ul style="list-style-type: none"> <li>A meander is a bend in a river.</li> <li>Water flows faster around the outside of the bend eroding the riverbank and creating a <b>River Cliff</b>.</li> <li>Water flows slower around the inside of the bend, depositing sediment and creating a <b>slip off slope</b>.</li> <li>Meanders constantly change the floodplain making it flat.</li> </ul>	
<b>Oxbow Lake (Middle / Lower Course)</b>	
<ul style="list-style-type: none"> <li>Form when the neck of a meander has been cut through by erosion.</li> <li>Water takes the quickest route.</li> <li>Deposition occurs sealing off the old meander,</li> <li>Over time sediment builds up completely cutting the Oxbow Lake off from the river.</li> </ul>	
<b>Levee (Middle / Lower Course)</b>	
<ul style="list-style-type: none"> <li>Levees are made of large material which cannot travel as far.</li> <li>When a river floods, it slows down away from the channel. The larger material is deposited first either side of the river.</li> <li>When the flood water drains away, the large pieces of sediment are left behind.</li> <li>These form raised embankments either side of the river called levees.</li> </ul>	

# Year 10 OCR A Term 1 –Landscapes of the UK



Background:	
1.	The physical landscapes of the UK have distinctive characteristics. The characteristics are caused by changes in Geology, Climate and Land Use (A).
2.	There are a number of geomorphic processes which create distinctive landscapes (B, C, D)
3.	Rivers create a range of landforms which change with distance from their source within a river basin (E).
4.	There are a range of landforms within the coastal landscape (G, H, I & J)
5.	Landscapes are dynamic and differ depending on their geology, climate and human activity (F & K)

A.	UK Distinctive Landscapes
Mountainous / Upland Area	<ul style="list-style-type: none"> <li>Over _____ in height.</li> <li>_____ distributed across the UK,</li> <li>Located in _____, Sc _____ d &amp; _____.</li> <li>Characteristics are _____s, v, r _____ with v population.</li> <li>Geology = I _____ &amp; M _____ ic Rock</li> <li>Climate is _____.</li> </ul>
Lowland Area	<ul style="list-style-type: none"> <li>Between 0 _____ above sea level.</li> <li>Evenly distributed across _____</li> <li>Characteristics are h _____</li> <li>Geology = _____</li> <li>S _____ y rock.</li> <li>Climate is _____.</li> </ul>
Glaciated Areas	<ul style="list-style-type: none"> <li>Glaciers are _____ Unevenly distributed _____</li> <li>Located in _____./ Lake district.</li> <li>Characteristics are _____.</li> <li>Geology = _____ Rock</li> <li>Climate is _____.</li> </ul>

B.	Geomorphic Processes
Geomorphic means a process that changes the landscape.	
	A Weathering is the breakdown of material in place (without being transported).
	Physical actions of rain, frost and wind that weaken the rock such as Onion Skin weathering and freeze thaw.
	Minerals in rocks reacting in different ways making them weaker such as Carbonic Acid dissolving limestone.
	Plants and animals breaking rocks apart, such as roots growing in cracks or rabbits burrowing through soil.
	The movement of soil and sediment down a slope by gravity. <b>Sliding</b> happens when a section of soil or rock moves suddenly down a slope. <b>Slumping</b> happens when a section of soil or rock moves gradually down a slope.

C.	Erosion
	The 'knocking' of sediment against each other to become more rounded.
	The sheer force of the water and air in cracks breaking down the riverbanks and bed.
	The dissolving of minerals.
	The action of sediment scraping against the bed and bank of the river (like sandpaper).

D.	Rivers - Transportation
	Large rocks and boulders that are too heavy to pick up are ROLLED along the river bed.
	Medium size rocks are BOUNCED along the river bed.
	Small particles of sediment are CARRIED along by the river.
	Minerals from the rock are DISSOLVED into the water.

E.	Rivers - Landforms
<b>V Shaped Valley (Upper Course)</b>	
<ul style="list-style-type: none"> <li>When it rains, the water _____ making them u _____.</li> <li>_____ makes the valley sides _____</li> <li>They collapse into _____ and are transported away.</li> <li>This leaves behind a _____.</li> </ul>	
<b>Waterfall (Upper Course)</b>	
<ul style="list-style-type: none"> <li>Occur when _____ overlies _____.</li> <li>Soft rock _____, <b>undercutting</b> the _____ leaving a l _____ e.</li> <li>Eventually the u _____ ledge <b>collapses</b> and falls into the p _____ pool.</li> <li>The process <b>repeats</b> and the waterfall <b>retreats</b> upstream, leaving behind a _____.</li> </ul>	
<b>Meander (Middle / Lower Course)</b>	
<ul style="list-style-type: none"> <li>A meander is a _____.</li> <li>Water flows f _____ around the outside of the bend eroding the riverbank and creating a _____.</li> <li>Water flows _____ around the inside of the bend, depositing s _____ t and creating a _____.</li> <li>Meanders constantly _____</li> </ul>	
<b>Oxbow Lake (Middle / Lower Course)</b>	
<ul style="list-style-type: none"> <li>Form when the neck of a meander _____</li> <li>Water takes the _____.</li> <li>Deposition occurs sealing off the _____.</li> <li>Over time sediment builds up completely cutting the _____ from the river.</li> </ul>	
<b>Levee (Middle / Lower Course)</b>	
<ul style="list-style-type: none"> <li>_____ are made of large material which cannot travel as far.</li> <li>When a river floods, _____ away from the channel. The larger material is deposited _____</li> <li>When the flood water drains away, the large pieces of sediment are _____.</li> <li>These form raised e _____ either side of the river called _____s.</li> </ul>	

# Year 10 OCR A Term 1 –Landscapes of the UK



<b>Background:</b>		<b>G. Coast - Landforms</b>		<b>J. Coasts – Depositional Landforms</b>	
<ol style="list-style-type: none"> <li>The physical landscapes of the UK have distinctive characteristics. The characteristics are caused by changes in Geology, Climate and Land Use (A).</li> <li>There are a number of geomorphic processes which create distinctive landscapes (B, C, D)</li> <li>Rivers create a range of landforms which change with distance from their source within a river basin (E).</li> <li>There are a range of landforms within the coastal landscape (G, H, I &amp; J)</li> <li>Landscapes are dynamic and differ depending on their geology, climate and human activity (F &amp; K)</li> </ol>		<p><b>Headland</b></p> <ul style="list-style-type: none"> <li>An area of resistant rock that sticks out into the sea.</li> </ul> <p><b>Bay</b></p> <ul style="list-style-type: none"> <li>An inlet along the coast where rock has been eroded away</li> </ul> <p><b>Concordant coasts</b></p> <ul style="list-style-type: none"> <li>A stretch of coastline that is made of the same rock type.</li> </ul> <p><b>Discordant Coasts</b></p> <ul style="list-style-type: none"> <li>A stretch of coastline that is made of different rock types, forming headlands and bays.</li> </ul>		<p>Deposition is the dropping of sediment due to reduction in energy.</p> <p><b>Beaches</b></p> <ul style="list-style-type: none"> <li>Beaches are formed by deposition. The sea loses energy due to friction with the seabed slowing down the wave.</li> <li>This causes the sea to drop sediment which forms a beach along the coastline.</li> <li>It can also be formed in sheltered bays where the land stops the wind and slows the waves down.</li> <li>Longshore drift moves sediment along a beach.</li> </ul> <p><b>SPIT</b></p> <ul style="list-style-type: none"> <li>A spit is a stretch of beach that projects out to sea.</li> <li>Longshore drift moves material along the coastline.</li> <li>A spit forms when the material is deposited due to change in direction of the coast.</li> <li>As the spit grows it will develop a hook if there is a secondary wind direction.</li> <li>Salt marshes form in the sheltered area behind the spit.</li> </ul>	
<b>F. Case Study - River Wye</b>		<b>H. Coasts - Erosional Landforms</b>		<b>K. Case Study – Holderness Coast</b>	
Human Influence	<p><b>Craig Goch Dam</b></p> <ul style="list-style-type: none"> <li>Provides flood protection downstream by regulating flow.</li> <li>Is a reservoir (it stores water for drinking)</li> <li>Made of impermeable rock.</li> <li>Some people think it is an eyesore.</li> </ul> <p><b>Flood Warning</b></p> <ul style="list-style-type: none"> <li>Soft engineering to alert people when flooding is likely.</li> </ul> <p><b>River Straightening</b></p> <ul style="list-style-type: none"> <li>River Lugg, a tributary to the Wye near Hereford was illegally straightened in 2020.</li> <li>River straightening speeds up flow and reducing flooding where it is straightened.</li> <li>It can cause flooding downstream and destroys habitats.</li> </ul> <p><b>Floodplain Zoning</b></p> <ul style="list-style-type: none"> <li>Land use on the lower course is restricted.</li> <li>Building houses on the floodplain is prohibited, as they would be damaged by flooding.</li> <li>Farming, sports fields and car parks are allowed on the floodplain around towns such as Hereford.</li> </ul> <p><b>Industry</b></p> <ul style="list-style-type: none"> <li>Industry grew near the River Wye as it provides raw materials (Iron and Stone) and was used for transport</li> </ul> <p><b>Agriculture</b></p> <ul style="list-style-type: none"> <li>The lower course is used for farming because it cannot be built on and is flat, fertile land.</li> </ul> <p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>Tourists use the river for walking, canoeing, rock climbing and visit attractions such as Tintern Abbey.</li> </ul>	<p>As headlands erode they form a sequence of distinctive landforms.</p> <p><b>Crack</b></p> <ul style="list-style-type: none"> <li>The top of the headland is weathered, exposing an area of weakness that turns into a <b>crack</b>.</li> </ul> <p><b>Cave</b></p> <ul style="list-style-type: none"> <li>Abrasion and hydraulic action erode the crack making it wider and turning it into a <b>cave</b>.</li> </ul> <p><b>Arch</b></p> <ul style="list-style-type: none"> <li>Eventually the cave erodes through to the other side of the headland forming an <b>arch</b>.</li> </ul> <p><b>Stack</b></p> <ul style="list-style-type: none"> <li>The bottom of the arch is eroded making it wider, and top of the arch is weathered making it weaker. Eventually the arch will collapse leaving behind a pillar of rock called a <b>stack</b>.</li> </ul> <p><b>Stump</b></p> <ul style="list-style-type: none"> <li>The base of the stack is eroded by waves and collapses leaving a <b>stump</b>.</li> </ul>		<p><b>Geology</b></p> <p>Made of hard rock (Chalk) to the North and weak rock to the south (Boulder Clay). Has one of Europe's fastest eroding coastlines at 2m / year.</p> <p><b>Human Influences</b></p> <p><b>Hard Engineering</b></p> <ul style="list-style-type: none"> <li>Groynes act as barriers to stop longshore drift.</li> <li>Gabions stabilise the base of cliffs stopping landslips.</li> <li>Sea walls reflect wave energy back out to sea.</li> </ul> <p><b>Soft Engineering</b></p> <ul style="list-style-type: none"> <li>Beach nourishment is where sand is pumped back onto the beach.</li> <li>Beach reprofiling is the reshaping of a steep beach, usually after a storm event.</li> <li>Managed retreat means deciding that some areas cannot be protected and are left to be flooded by the sea.</li> </ul>	
	<b>I. Coasts - Transport</b>				
<p>Longshore drift is a process of transportation that moves eroded material along the coastline.</p> <ol style="list-style-type: none"> <li>The prevailing wind makes waves approach the coast at an angle.</li> <li>Swash carries sediment up the beach at an angle.</li> <li>Backwash carries sediment straight down the beach with gravity – at right angles to the beach.</li> <li>This creates a zig-zag movement of sediment along the beach.</li> </ol>					

# Year 10 OCR A Term 1 –Landscapes of the UK



Background:	
1.	The physical landscapes of the UK have distinctive characteristics. The characteristics are caused by changes in Geology, Climate and Land Use (A).
2.	There are a number of geomorphic processes which create distinctive landscapes (B, C, D)
3.	Rivers create a range of landforms which change with distance from their source within a river basin (E).
4.	There are a range of landforms within the coastal landscape (G, H, I & J)
5.	Landscapes are dynamic and differ depending on their geology, climate and human activity (F & K)

G.	Coast - Landforms
	<p><b>Headland</b></p> <ul style="list-style-type: none"> <li>An area of resistant rock that sticks out into the sea.</li> </ul> <p><b>Bay</b></p> <ul style="list-style-type: none"> <li>An inlet along the coast where rock has been eroded away</li> </ul> <p><b>Concordant coasts</b></p> <ul style="list-style-type: none"> <li>A stretch of coastline that is made of the same rock type.</li> </ul> <p><b>Discordant Coasts</b></p> <ul style="list-style-type: none"> <li>A stretch of coastline that is made of different rock types, forming headlands and bays.</li> </ul>

J.	Coasts – Depositional Landforms
	<p>Deposition is the dropping of sediment due to reduction in energy.</p> <p><b>Beaches</b></p> <ul style="list-style-type: none"> <li>Beaches are formed by deposition. The sea loses energy due to friction with the seabed slowing down the wave.</li> <li>This causes the sea to drop sediment which forms a beach along the coastline.</li> <li>It can also be formed in _____ where the land stops the wind and slows the waves down.</li> <li>Longshore drift moves sediment along a beach.</li> </ul> <p><b>SPIT</b></p> <ul style="list-style-type: none"> <li>A spit is a stretch _____</li> <li>Longshore drift moves material _____.</li> <li>A spit forms when the material is _____</li> <li>As the spit grows it will develop a _____ if there is a secondary wind direction.</li> <li>_____ form in the sheltered area behind the spit.</li> </ul>

F.	Case Study - River Wye
Human Influences	<p><b>Craig Goch Dam</b></p> <ul style="list-style-type: none"> <li>Provides _____ downstream by regulating _____</li> <li>Is a reservoir (it stores water for drinking)</li> <li>Made of _____</li> <li>Some people think _____.</li> </ul> <p><b>Flood Warning</b></p> <ul style="list-style-type: none"> <li>Soft engineering to alert people when flooding is likely.</li> </ul> <p><b>River Straightening</b></p> <ul style="list-style-type: none"> <li>River Lugg, a tributary to the _____ near H _____ was illegally straightened in 2020.</li> <li>River straightening _____ flow and reducing flood risk where it is straightened.</li> <li>It can cause flooding downstream and destroys _____</li> </ul> <p><b>Floodplain Zoning</b></p> <ul style="list-style-type: none"> <li>Land use on the lower course is restricted.</li> <li>_____ on the floodplain is prohibited, as they would be damaged by _____.</li> <li>_____ are allowed on the floodplain around towns such as Hereford.</li> </ul> <p><b>Industry</b></p> <ul style="list-style-type: none"> <li>Ironstone mining grew near the River Wye as it provides _____ (Iron and Stone) and was used for transport</li> </ul> <p><b>Agriculture</b></p> <ul style="list-style-type: none"> <li>The lower course is used for farming because it cannot be built on and is _____.</li> </ul> <p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>Tourists use the river for _____ and visit attractions such as _____.</li> </ul>

H.	Coasts - Erosional Landforms
	<p>As headlands erode they form a sequence of distinctive landforms.</p> <p><b>Crack</b></p> <ul style="list-style-type: none"> <li>The top of the headland is weathered, exposing an area of weakness that turns into a _____</li> </ul> <p><b>Cave</b></p> <ul style="list-style-type: none"> <li>_____ erode the crack making it wider and turning it into a cave.</li> </ul> <p><b>Arch</b></p> <ul style="list-style-type: none"> <li>Eventually the _____ erodes through to the other side of the _____ forming an arch.</li> </ul> <p><b>Stack</b></p> <ul style="list-style-type: none"> <li>The _____ is eroded making it _____, and top of the arch is weathered making it _____r. Eventually the arch will collapse leaving behind a _____</li> </ul> <p><b>Stump</b></p> <ul style="list-style-type: none"> <li>The base of the stack is eroded by _____ and collapses leaving a stump.</li> </ul>

K.	Case Study – Holderness Coast
Geology	Made of hard rock (Chalk) to the North and weak rock to the south (Boulder Clay). Has one of Europe's fastest eroding coastlines at 2m / year.
Human Influences	<p><b>Hard Engineering</b></p> <ul style="list-style-type: none"> <li>_____ act as barriers to stop longshore drift.</li> <li>_____ stabilise the base of cliffs stopping landslips.</li> <li>_____ reflect wave energy back out to sea.</li> </ul> <p><b>Soft Engineering</b></p> <ul style="list-style-type: none"> <li>Beach nourishment is where sand is pumped _____.</li> <li>Beach reprofiling is the _____</li> <li>Managed retreat means deciding that some areas _____.</li> </ul>

I.	Coasts - Transport
	<p>Longshore drift is a process of transportation that moves eroded material along the coastline.</p> <ol style="list-style-type: none"> <li>The prevailing wind makes waves _____</li> <li>Swash carries sediment _____.</li> <li>Backwash carries sediment _____h.</li> <li>This creates a _____ of sediment along the beach.</li> </ol>

## GCSE History : The Medical Renaissance in England c1500-1750

A.	Can you define these key words?
apothecary	A person who mixes herbal remedies and treated patients as an alternative to a doctor as they were cheaper.
barber surgeon	Barbers and surgeons who also performed minor operations such as 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.
humanism	A belief that humans could make up their own minds when it came to discovering the truth around them.
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.

E.	Improved Communications (2.1)
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.
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 it 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 in 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.

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 and sold simple herbal remedies. Reports suggest they were very popular likely because they were cheaper than going to a licensed physician or apothecary.

B. Change and continuity in ideas about disease and illness in the Medical Renaissance.		
Causes	Prevention	Treatments
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.
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 continued to clean 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.
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 medical chemistry. This involved looking for chemical cures rather than relying on herbs or humoral theory. New remedies such as mercury and antimony were used to purge the body and they encouraged sweating and vomiting.
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

D. Key People			C.	The Great Plague
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 <i>On the Fabric of the Human Body</i> 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.	Causes	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)
			Treatments	Sweating out the disease – sit in thick woollen clothes by the fire. Transference was tried (strap chicken to buboes). Quack doctors mixed herbal remedies.
			Prevention	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),



**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?	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 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 <i>On the Fabric of the Human Body</i> 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.

### E.

#### Improved Communications (2.1)

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.
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 in 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.

### 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. leprosy 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 and sold simple herbal remedies. Reports suggest they were very popular likely because they were cheaper than going to a licensed physician or apothecary.

### D. Key People (2.3)

Sydenham	Vesalius	Harvey
<p>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 _____.</p>	<p>His 1543 book <i>On the Fabric of the _____ Body</i> 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.</p>	<p>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.</p>

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Keywords		What we are learning in this unit		B.	The 5 Pillars - Salah		
Tawalla	Showing love for God and for those who follow Him	A. The 5 Pillars and 10 Obligatory Acts B. Salah C. Sawm D. Zakah E. Hajj F. Jihad G. Id-ul-Adha H. Id-ul-Fitr		What is it?	<ul style="list-style-type: none"> <li>“Salah is a prescribed duty that has to be performed at the given time by the Qur’an”</li> <li>Muslims pray 5 times per day and this allows them to communicate with Allah.</li> <li>The prayers are done at dawn (fajr), afternoon (zuhr), late afternoon (asr), dusk (maghrib) and night (isha)</li> <li>Muslims face the holy city of Makkah when paying.</li> </ul>		
Tabarra	Disassociation with God’s enemies			A.	5 Pillars of Islam and 10 obligatory acts	Wuzu	<ul style="list-style-type: none"> <li>The washing process to purify the mind and body for prayer</li> <li>Muhammad said the key to Salah is cleanliness</li> <li>Hands, arms, nose, mouth, head, neck and ears are cleaned as well as both feet up to the ankle.</li> </ul>
Khums	The obligation to pay one-fifth of acquired wealth			What are the 5 pillars	<ul style="list-style-type: none"> <li>5 key practices or duties for Muslims</li> <li>Both Sunni and Shi’a keep these (Shi’a have them as part of the 10 obligations)</li> <li>They are seen as pillars “holding up the religion” and are all of equal importance</li> </ul>	Rak’ahs and recitations	<ul style="list-style-type: none"> <li>These are the movements that Muslims make during prayer</li> <li>Takbir – raise hands to ears and say ‘Allahu Akbar’</li> <li>Qiyam – Standing, Muslims recite Surah</li> <li>Then bow to the waist saying “Glory be to my Great Lord and praise be to Him”</li> <li>Then sink to their knees saying “Glory be to my Lord, The Most Supreme...”</li> </ul>
Lesser jihad	The physical struggle or holy war in defence of Islam			What are the 10 obligatory acts	<ul style="list-style-type: none"> <li>There are 10 obligations for a Muslim according to the Shi’a branch of Islam.</li> <li>These include prayer, fasting, almsgiving, pilgrimage, jihad, khums, directing others towards good, forbidding evil, tawalla and tabarra</li> </ul>	Salah at home	<ul style="list-style-type: none"> <li>Salah is a big part of family life</li> <li>Meals and other activities are usually scheduled to fit around prayer times</li> <li>Families pray all together and might have a room set aside for prayer</li> </ul>
Greater jihad	The daily struggle and inner spiritual striving to live as a Muslim			Shahadah	<ul style="list-style-type: none"> <li>Shahadah is the first of the 5 pillars</li> <li>It is the Muslim declaration of faith</li> <li>“there is no God but Allah, and Muhammad is His messenger”</li> <li>This is a statement that Muslims reject anything but Allah as their focus of belief</li> <li>It also recognises that Muhammad has an important role and his life is an example to follow</li> </ul>	Salah in the mosque	<ul style="list-style-type: none"> <li>All mosques have a qiblah wall which is to show where to face Makkah</li> <li>Men and women pray in separate rooms at the Mosque</li> </ul>
Sunni	Muslims who believe in the successorship of Abu Bakr, Umar, Uthman and Ali as leaders after the Prophet Muhammad			Jumma	<ul style="list-style-type: none"> <li>Jumma is congregational prayer held on a Friday at the mosque where the imam leads the prayer</li> <li>Praying together as a community develops the feeling of unity amongst Muslims</li> <li>Men are obliged to attend unless they are sick or too old</li> <li>Women do not have to go – they may pray at home instead</li> </ul>		
Shi’a	Muslims who believe in the Imamah, leadership of Ali and his descendants			Differences between Sunni and Shi’a	<ul style="list-style-type: none"> <li>Shi’a Muslims combine some prayers so they may only pray 3x a day</li> <li>Shi’a use natural elements e.g. clay where their head rests</li> </ul>		
Niyah	Intention during prayer - having the right intention to worship God						
Du’a	A personal prayer that is done in addition to Salah e.g. asking Allah for help						
		<i>Jihad</i>					
Lesser Jihad		<ul style="list-style-type: none"> <li>Originated when Prophet Muhammad and early Muslims were being attacked and oppressed by the Meccans and had no choice but to engage</li> <li>“Fight in the way of God those who fight against you but do not transgress”</li> <li>Conditions for declaration                             <ul style="list-style-type: none"> <li>self-defense</li> <li>proportionate</li> <li>legitimate authority</li> <li>no harm to civilians</li> </ul> </li> </ul>					
Greater Jihad		<ul style="list-style-type: none"> <li>A struggle within oneself to follow the teachings of Islam and be a better person</li> <li>e.g. perform the Five Pillars, follow Sunnah and avoid temptation</li> <li>“encourage what is right and forbid what is wrong”</li> </ul>					



Keywords		What we are learning in this unit		B.	<i>The 5 Pillars - Salah</i>		
Tawalla		A. The 5 Pillars and 10 Obligatory Acts B. Salah C. Sawm D. Zakah E. Hajj F. Jihad G. Id-ul-Adha H. Id-ul-Fitr		What is it?			
Tabarra				A.	<i>5 Pillars of Islam and 10 obligatory acts</i>	Wuzu	
Khums				What are the 5 pillars		Rak'ahs and recitations	
Lesser jihad				What are the 10 obligatory acts		Salah at home	
Greater jihad				Shahadah		Salah in the mosque	
Sunni				<i>Jihad</i>		Jummah	
Shi'a						Differences between Sunni and Shi'a	
Niyah							
Du'a							
Lesser Jihad							
Greater Jihad							



The 5 Pillars - Zakah	
The role of giving alms	<ul style="list-style-type: none"> <li>• <b>Muslims believe it is their duty to ensure Allah's wealth has been distributed equally as everyone is the same</b></li> <li>• The Qur'an commands to give to those in need</li> </ul>
The significance of giving alms	<ul style="list-style-type: none"> <li>• Giving 2.5% of savings/wealth to charity</li> <li>• Wealth can cause greed which is evil, so Zakah purifies wealth – wealth is given by God and must be shared</li> <li>• The Prophet Muhammad practiced Zakah as a practice in Medina</li> <li>• Given to the poor, needy and travellers</li> <li>• <b>Sadaqah</b> is giving from the heart out of generosity and compassion</li> </ul>
Khums	<ul style="list-style-type: none"> <li>• Shi'a Islam – one of the 10 obligatory acts</li> <li>• 20% of any profit earned by Shi'a Muslims paid as a tax</li> <li>• Split between charities that support Islamic education and anyone who is in need</li> <li>• <b>"know that whatever of a thing you acquire, a fifth of it is for Allah, for the Messenger, for the near relative, and the orphans, the needy, and the wayfarer"</b></li> </ul>

The 5 Pillars - Sawm	
The role of fasting	<ul style="list-style-type: none"> <li>• Fasting during Ramadan (9<sup>th</sup> month in Muslim calendar)</li> <li>• Muslims give up food, drink, smoking and sexual activity in daylight hours</li> <li>• Pregnant people, children under 12, travellers and elderly people are exempt from fasting.</li> </ul>
The significance of fasting	<ul style="list-style-type: none"> <li>• Ramadan is believed to be the month that Prophet Muhammad began to receive revelations of the Qur'an</li> <li>• Helps Muslims to become spiritually stronger</li> </ul>
Reasons for fasting	<ul style="list-style-type: none"> <li>• Obeying God and exercising self-discipline</li> <li>• Develops empathy for the poor</li> <li>• Appreciation of God's gifts</li> <li>• Giving thanks for the Qur'an</li> <li>• Sharing fellowship and community with other Muslims</li> </ul>
Night of power	<ul style="list-style-type: none"> <li>• The night when the Angel Jibril first appeared to Muhammad and began revealing the Qur'an.</li> <li>• The most important event in history – <b>"better than a thousand months"</b> <b>[Surah 97:3]</b></li> <li>• Laylat Al-Qadr is the holiest night of the year. Muslims try to stay awake for the whole night to pray and study for the Qur'an</li> </ul>

The 5 Pillars - Hajj	
The role of pilgrimage	<ul style="list-style-type: none"> <li>• A pilgrimage to Makkah which is compulsory for Muslims to take at least once as long as they can afford it and are healthy</li> </ul>
The significance of pilgrimage	<ul style="list-style-type: none"> <li>• God told Ibrahim to take his wife and son on a journey and leave them without food or water</li> <li>• Hajira ran up and down two hills in search of water, could not find any and prayed to God. Then water sprung from the ground. This is the Zamzam well</li> <li>• When Ibrahim returned he was commanded to build the Ka'ba as a shrine dedicated to Allah</li> <li>• Hajj is performed in the month of Dhu'l-Hijja</li> </ul>
Actions	<ul style="list-style-type: none"> <li>• Ihram – dressing in two pieces of white cloth</li> <li>• Circling the Ka'aba 7 times (tawaf)</li> <li>• Drinking water from the Zamzam well like Hajar</li> <li>• walking between Al-Safa and Al-Marwa hills seven times</li> <li>• Throwing stones at 3 pillars (jamarat) to represent casting out the devil and remembering Ibrahim throwing stones at the devil to drive him away</li> <li>• Asking Allah for forgiveness at Mt Arafat</li> <li>• Collecting pebbles at Muzdalifah</li> </ul>

Id-ul-Adha, Id-ul-Fitr, Ashura	
Id-ul-Adha  Not an official holiday in UK	<ul style="list-style-type: none"> <li>• <b>Festival of sacrifice</b></li> <li>• Marks the end of Hajj and is a chance for whole Ummah to celebrate</li> <li>• <b>Origins</b> – Ibrahim's commitment to God in being willing to sacrifice his son, Ishmael. God was testing Ibrahim</li> <li>• <b>Key events</b> – new clothes, sacrificing an animal, visiting the Mosque.</li> <li>• People ask a butcher to slaughter a sheep for them and share the meat with the community</li> </ul>
Id-ul-Fitr  Public holiday in Muslim majority countries, not UK	<ul style="list-style-type: none"> <li>• <b>Festival of fast-breaking</b></li> <li>• Marks the end of Ramadan</li> <li>• <b>Key events</b> – Decorate homes with colourful light and banners, dress in new clothes, gather in Mosques, give gifts and money, give to the poor</li> <li>• <b>Zakah ul-Fitr</b> – donation to the poor so that everyone can eat a generous meal at the end of Ramadan.</li> </ul>
Ashura	<ul style="list-style-type: none"> <li>• Sunni celebration – many fast on this day which was established by Prophet Muhammad</li> <li>• Shi'a mourning – Husayn was murdered and beheaded. Muslims remember his death and betrayal</li> <li>• <b>Key events</b> – public displays of grief, day of sorrow, wear black, re-enactments of martyrdom, not a public holiday in Britain but Muslims may have day off school</li> </ul>



*The 5 Pillars - Zakah*

The role of giving alms	
The significance of giving alms	
Khums	

*The 5 Pillars - Sawm*

The role of fasting	
The significance of fasting	
Reasons for fasting	
Night of power	

*The 5 Pillars - Hajj*

The role of pilgrimage	
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*Id-ul-Adha, Id-ul-Fitr, Ashura*

Id-ul-Adha Not an official holiday in UK	
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**GCSE Unit 7 SPANISH Knowledge organiser.**  
**Topic Global Issues**

Key Verbs				
Reciclar To recycle	Ir To go	Apagar To turn off	Hacer – to do/make	Encender To turn on
Reciclo I recycle	Voy I go	Apago I turn off	Hago I do	Enciendo I turn on
Reciclas You recycle	Vas You go	Apagas You turn off	Haces You do	Enciendas You turn on
Recicla Sh/e recycles	Va s/he goes	Apaga He/she turns off	Hace s/he does	Enciende He/she turns on
Reciclamos We recycle	Vamos They go	Apagamos We turn off	Hacemos We do	Encendemos We turn on
Reciclan They recycle	Van They go	Apagan They turn off	Hacen They do	Enciendan They turn on

What we are learning this term:	
A. Talking about reusing things, reducing waste and recycling	
B. Talking about ways of protecting the environment	
C. Talking about poverty	
D. Talking about homelessness	
6 Key Words for this term	
1. la libertad	4. el destrozo
2. pensamientos	5. violento/a
3. asistir a	6. la culpa

7.1F Protegiendo el medio ambiente	
la basura	rubbish
la bombilla (de bajo consumo)(low-energy)	light bulb
el combustible	fuel
combatir	to fight, to combat
la contaminación atmosférica	air pollution
desaparecer	to disappear
el desastre	disaster
desconectar	to disconnect, to unplug,
switch off	
deshacer	to undo
los desperdicios	rubbish, refuse, waste
la especie	species
incluso	even
inquietante	worrying
luchar	to struggle, fight
la medida	measure, means
medioambiental	environmental
el motor	engine
los residuos	refuse, waste, rubbish
salvar	to save

7.2F Los “sin techo”	
el destrozo	damage, destruction
escoger	to choose
la falta	lack
formar parte de	to be part of
el/la gamberro/a	hooligan, lout,
troublemaker	
maltratar	to mistreat, to ill-treat
los niños de la calle	street children
la ONG (organización NGO (non-governmental organisation) no gubernamental)	
la pobreza	poverty
recoger	to pick up
robar	to steal, rob
el vertedero	rubbish dump, tip
la violencia	violence
violento/a	violent

7.1H Problemas ecológicos	
acercarse a	to approach
el agujero	hole
la aldea	(small) village
alejarse	to move (something)
further away	
alejarse de	to move further away
from	
amenazar	to threaten
arruinar	to ruin
el atasco	traffic jam, hold-up
el ave (marina) (fem.) (sea) bird	
el calentamiento global	global warming
la capa de ozono	ozone layer
el casco	helmet, hull (of ship)
el centenar	about a hundred
la central eléctrica	power station
la circulación	traffic
constituir	to constitute
cortar	to cut, to cut off
el efecto invernadero	greenhouse effect
extender	to spread, to stretch
frenar	to brake, to put a stop
to	
el humo	smoke
el huracán	hurricane
el incendio	fire
la lluvia	rain
la mancha	stain
la marea negra	oil slick
la muerte	death
el nivel	level
el petrolero	oil tanker
el/la pescador/a	fisherman/fisherwoman

7.1G Reutilizar, reducir, reciclar	
ahorrar	to save
la basura	rubbish
la bolsa de plástico	plastic bag
el cartón	cardboard
cerrar	to shut, to close, to turn off (tap)
el contenedor	container
en vez de	instead of
intentar	to try to
la lata	tin, can
el malgasto	waste
el papel (reciclado)	(recycled) paper
la papelera	wastepaper basket
la pila	battery
el plástico	plastic
ponerse	to put on (clothes)
los productos químicos	chemicals, chemical
products	
el proyecto	project
recargable	rechargeable
reciclar	to recycle
reutilizar	to reuse
la Tierra	Earth
tirar	to pull, to throw away
tratar de	to try to
el vidrio	glass

7.2G Los necesitados	
a favor (de)	in favour (of)
la alimentación	feeding,
nourishment, food	
la asistencia médica	medical care
asistir a	to attend
buscar	to look for
contribuir	to contribute
la creencia	belief
la culpa	blame, fault
la enfermedad	illness
en contra	against
estar dispuesto/a a	to be prepared to, to be
ready to	
faltar	to be lacking, to be
missing	
fresco	fresh
hace(n) falta	to be necessary, to need
la libertad (de pensamiento)	freedom (of thought)
merecer	to deserve
necesitar	to need
perder	to lose
perezoso/a	lazy
querer	to love

7.2H Es importante ayudar a los demás	
el agua corriente (fem.)	running water
bastar	to be enough
la comisaría	police station
consumir	to consume
la corriente	(electric) current,
electricity supply	
crear	to create
la criminalidad	crime
cualquier(a)	any
el empleo	job
el/la encargado/a	person in charge
el éxito	success



**GCSE Unit 7 SPANISH Global organiser.**  
**Topic Global Issues**

Key Verbs				
Reciclar _____	Ir To go	Apagar To turn off	Hacer – _____	_____ To turn on
_____ I recycle	Voy I go	Apago _____	_____ I do	_____ I turn on
Reciclas _____	Vas _____	_____ You turn off	Haces _____	Enciendes _____
_____ Sh/e recycles	Va s/he goes	Apaga He/she turns off	Hace _____	_____ He/she turns on
Reciclamos _____	Vamos They go	Apagamos We turn off	Hacemos We do	Encendemos _____
Reciclan They recycle	Van They go	Apagan They turn off	_____ They do	_____ They turn on

**What we are learning this term:**

A. Talking about reusing things, reducing waste and recycling  
 B. Talking about ways of protecting the environment  
 C. Talking about poverty  
 D. Talking about homelessness

**6 Key Words for this term**

1. la libertad	4. el destrozo
2. pensamientos	5. violento/a
3. asistir a	6. la culpa

**7.1F Protegiendo el medio ambiente**

la basura \_\_\_\_\_  
 la bombilla (de bajo consumo)(low-energy) light bulb  
 el \_\_\_\_\_ fuel  
 \_\_\_\_\_ to fight, to combat  
 la contaminación \_\_\_\_\_  
 atmosférica \_\_\_\_\_  
 desaparecer to \_\_\_\_\_  
 el desastre \_\_\_\_\_  
 \_\_\_\_\_ to disconnect, to unplug,  
 switch off  
 deshacer \_\_\_\_\_  
 los \_\_\_\_\_ rubbish, refuse, waste  
 la especie \_\_\_\_\_  
 \_\_\_\_\_ even  
 inquietante \_\_\_\_\_  
 \_\_\_\_\_ to struggle, fight  
 la \_\_\_\_\_ measure, means  
 medioambiental \_\_\_\_\_  
 \_\_\_\_\_ engine  
 \_\_\_\_\_ refuse, waste, rubbish  
 salvar \_\_\_\_\_

**7.1G Reutilizar, reducir, reciclar**

ahorrar \_\_\_\_\_  
 la basura \_\_\_\_\_  
 la bolsa de plástico \_\_\_\_\_  
 el cartón \_\_\_\_\_  
 \_\_\_\_\_ to shut, to close, to turn off (tap)  
 el contenedor \_\_\_\_\_  
 \_\_\_\_\_ instead of  
 intentar \_\_\_\_\_  
 la lata \_\_\_\_\_  
 \_\_\_\_\_ waste  
 el papel (reciclado) \_\_\_\_\_  
 la \_\_\_\_\_ wastepaper basket  
 la \_\_\_\_\_ battery  
 el \_\_\_\_\_ plastic  
 ponerse to \_\_\_\_\_  
 los \_\_\_\_\_ chemicals, chemical products  
 el proyecto \_\_\_\_\_  
 \_\_\_\_\_ rechargeable  
 \_\_\_\_\_ to recycle  
 reutilizar to \_\_\_\_\_  
 la \_\_\_\_\_ Earth  
 \_\_\_\_\_ to pull, to throw away  
 tratar de \_\_\_\_\_  
 el \_\_\_\_\_ glass

**7.2G Los necesitados**

a favor (de) \_\_\_\_\_  
 la alimentación feeding, \_\_\_\_\_  
 nourishment, food  
 la asistencia médica \_\_\_\_\_  
 \_\_\_\_\_ to attend  
 \_\_\_\_\_ to look for  
 contribuir to \_\_\_\_\_  
 la \_\_\_\_\_ belief  
 la culpa \_\_\_\_\_  
 la enfermedad \_\_\_\_\_  
 en contra \_\_\_\_\_  
 estar dispuesto/a to be prepared to, to be ready to  
 \_\_\_\_\_ to be lacking, to be missing  
 fresco \_\_\_\_\_  
 \_\_\_\_\_ to be necessary, to need  
 la libertad (de pensamiento) \_\_\_\_\_  
 \_\_\_\_\_ to deserve  
 necesitar to \_\_\_\_\_  
 \_\_\_\_\_ to lose  
 perezoso/a \_\_\_\_\_  
 \_\_\_\_\_ to love

**7.2F Los "sin techo"**

el \_\_\_\_\_ damage, destruction  
 escoger to \_\_\_\_\_  
 la falta \_\_\_\_\_  
 formar parte de \_\_\_\_\_  
 \_\_\_\_\_ hooligan, lout,  
 troublemaker \_\_\_\_\_  
 \_\_\_\_\_ to mistreat, to ill-treat  
 los niños de la calle \_\_\_\_\_  
 la ONG (organización NGO (non-governmental organisation) no gubernamental)  
 \_\_\_\_\_ poverty  
 \_\_\_\_\_ to pick up  
 \_\_\_\_\_ to steal, rob  
 \_\_\_\_\_ rubbish dump, tip  
 la violencia \_\_\_\_\_  
 violento/a v \_\_\_\_\_

**7.2H Es importante ayudar a los demás**

el agua corriente \_\_\_\_\_  
 \_\_\_\_\_ to be enough  
 la \_\_\_\_\_ police station  
 consumir to \_\_\_\_\_  
 la \_\_\_\_\_ (electric) current,  
 electricity supply \_\_\_\_\_  
 \_\_\_\_\_ to create  
 la criminalidad \_\_\_\_\_  
 cualquier(a) \_\_\_\_\_  
 \_\_\_\_\_ job  
 el/la encargado/a \_\_\_\_\_  
 \_\_\_\_\_ success

**7.1H Problemas ecológicos**

acercarse a to \_\_\_\_\_  
 el agujero \_\_\_\_\_  
 la aldea \_\_\_\_\_  
 \_\_\_\_\_ to move (something) further away  
 \_\_\_\_\_ to move further away from  
 \_\_\_\_\_ to threaten  
 arruinar to \_\_\_\_\_  
 el \_\_\_\_\_ traffic jam, hold-up  
 el ave (marina) (fem.) \_\_\_\_\_  
 el calentamiento global \_\_\_\_\_  
 la \_\_\_\_\_ ozone layer  
 el \_\_\_\_\_ helmet, hull (of ship)  
 el \_\_\_\_\_ about a hundred  
 la central eléctrica \_\_\_\_\_  
 la circulación \_\_\_\_\_  
 c \_\_\_\_\_ to constitute  
 \_\_\_\_\_ to cut, to cut off  
 el efecto invernadero \_\_\_\_\_  
 \_\_\_\_\_ to spread, to stretch  
 \_\_\_\_\_ to brake, to put a stop to  
 el humo smoke \_\_\_\_\_  
 el huracán \_\_\_\_\_  
 el \_\_\_\_\_ fire  
 la lluvia \_\_\_\_\_  
 la mancha \_\_\_\_\_  
 la marea negra \_\_\_\_\_  
 la \_\_\_\_\_ death  
 el nivel \_\_\_\_\_  
 el petrolero \_\_\_\_\_  
 el/la pescador/a \_\_\_\_\_

Translation Practice. G – blue F – orange H - Green	
_____ agua	I <b>save</b> water
_____ transporte público	I <b>use</b> public transport
Uso pilas _____	I use <b>rechargeable</b> batteries
_____ al instituto a pie	I <b>go</b> to school by foot
_____ latas	I <b>recycle</b> cans
_____ el uso de productos químicos	I <b>avoid</b> the use of chemical products
Es necesario tomar _____ urgentes	It's necessary <b>to take</b> urgent measures
_____ que luchar	<b>We have</b> to fight
_____ que proteger el medio ambiente	<b>We must</b> protect the environment
_____ uso bolsas reciclables	I <b>always</b> use recyclable bags
_____ reciclar lo mucho que posible	I <b>try</b> to recycle as much as possible
No _____ nada	I <b>don't recycle</b> anything
_____ ayudar	I <b>want</b> to help
Me _____ que hay tanta pobreza	It <b>worries</b> me that there is so much poverty
Me _____ que hay gente sin comida	It <b>annoys</b> me that there are people without food
Me _____ de que tu hermana pueda ayudar	I'm <b>delighted</b> that your brother can help
Me _____ triste la situación	It <b>makes</b> me sad the situation
Nos _____ falta recursos	We are <b>missing</b> resources
Me _____ mucho	It <b>matters</b> to me a lot

Key Questions: Answer the following in your own words. Use these model answers	
¿Qué haces para ahorrar energía/agua?	Me importa ahorrar energía y agua. Normalmente me ducho en vez de bañarme. Siempre cierro los grifos. Intento no malgastar agua o energía. Me pongo un jersey en vez de ponerla calefacción y solo pongo el lavaplatos cuando el lavaplatos está lleno.
¿Qué cosas reutilizas?/reciclas? / ¿Usas papel reciclado?	Me preocupa el reciclaje. Me importa reutilizar cosas y reducir el malgasto de recursos. Uso pilas recargables y reutilizo bolsas de plástico. Reciclo las latas, el papel, y el cartón, el plástico y el vidrio. Siempre separo la basura.
¿Qué deberías hacer para proteger el medio ambiente?	Hay muchas cosas que deberías hacer para proteger el medio ambiente. Deberías apagar las luces, el televisor y el ordenador. Tienes que cerrar las puertas en casa y debes reciclar las latas, las bolsas de plástico y el vidrio. Debes bañarte lo menos posible. Deberías usar el coche lo menos posible.
¿Qué vas a hacer para proteger el medio ambiente?	En el futuro voy a reciclar más. Siempre voy a reciclar las botellas de vidrio y de plástico. Voy a apagar el televisor y el ordenador cuando termino. Voy a ir lo más posible en bicicleta o a pie. Voy a ir en coche lo menos posible.
¿Qué hiciste ayer para proteger el medio ambiente?	Ayer reciclé la basura en casa. Ayer separé la basura en casa para mis padres. Ayer fui a colegio a pie en vez de ir en autobús/en coche. Ayer cerré las puertas y las ventanas en casa para conservar el calor en casa.
¿Qué es el problema del planeta que te preocupa más?	Lo que más me preocupa es la deforestación/el problema del tráfico/la sequía/las mareas negras/la contaminación del aire porque es importante evitar el cambio climático/porque causa huracanes/sequias/el calentamiento global/los incendios forestales/las enfermedades de los pulmones/afecta la flora y la fauna/ los animales/los seres humanos/amenaza el planeta//amenaza la vida humana/la vida de los animales.

Key Grammar	
<b>Future Tense ('will...')</b>	<b>All verb groups:</b> -é, -ás, -á, -emos, -éis, -án  <i>With this tense, do NOT take the verb ending away but ADD it on to the infinitive.</i>
Forming the conditional ('would like to' tense). Always remove the -AR, -ER, -IR endings first	Remember the conditional ('would') tense endings for -AR, -ER, -IR verbs. They are:  -AR, -ER, -IR: -ía, -ías, -ía, -íamos, -íais, -ían
Using the immediate future tense IR + A + INFINITIVE	Voy a casarme = I'm going to get married Va a discutir con su padre = He / She is going to argue with his/her father



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

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

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

Common Algorithms	Explained
Binary Search	Compares the search object to the middle point of a sorted list. If they are not equal, the half in which the target cannot lie is eliminated and the search continues on the remaining half, again taking the middle point to compare to the search object, and repeating this until the target value is found or the end is reached.
Bubble Sort	Sorts a list by continuously stepping through a list, swapping items until they appear in the correct order.
Linear Search	Compares the search object with each item in the list in order from the beginning until it is found or the end is reached.
Merge Sort	Sorts a list by repeatedly dividing a list into two until all the elements are separated individually. Pairs of elements are then compared, placed into order and combined. The process is then repeated until the list is recompiled in the correct order as a whole.

Term	Definition
Arithmetic Operator	A mathematical character to perform a calculation. Example: +
Array	A set of values, of the same data type, stored in sequence. A list.
Casting	Setting or changing the data type of a variable.
Concatenation	Connecting strings of characters together.
Condition	A statement which is either true or false. A computation depends on whether a condition is true or false.
Constant	A value which does not change whilst the program is running.
Element	An individual item in an array. A value in a list.
File	Anything you can save. Document, piece of music, data etc.
Identifier	A name, usually for part of the program such as a constant, variable, array etc.
IF Statement -Selection	A statement that lets a program select an action depending on whether it is true or false.
Loops -Iteration	Repeating an action, activity or section within a program.
Operator	A character which determines what action is to be considered or determined. Example: =
Relational Operator	An operator which compares two values. Example: <
Subroutine	A section of code written outside of the main program. Covers procedures and functions.

Variable	A memory location within a computer where values are stored.
----------	--

```

Input/Output and Calculation
userInputName = input("Enter your name: ") userNum =
int(input("Enter an integer: ")) userDec = float(input("Enter a
decimal number: "))
calculation = userNum + userDec
print("Hello", userInputName, "the result is", calculation)
Enter your name: Mr. Weston Enter an integer: 3 Enter a decimal
number: 15.2 Hello Mr. Weston the result is 18.2

IF Statements
print("Press 1 for a greeting. Press 2 for a farewell.") userChoice =
int(input("Awaiting Input: "))
if userChoice == 1: print("Hello User!")
elif userChoice == 2: print("Goodbye User!")
else:
    print("Error - 1 or '2' not detected.")
    
```

```

Press 1 for a greeting. Press 2 for a farewell Awaiting Input: 1
Hello User!
>>>
Press 1 for a greeting. Press 2 for a farewell Awaiting Input: 2
Goodbye User!
>>>
Press 1 for a greeting. Press 2 for a farewell
Awaiting Input: 3
Error - '1' or '2' not detected.
    
```

```

LOOPS
(userChoice = "Yes"
while userChoice == "Yes":
    userChoice = input ("Do you want to repeat this? ")
    
```

```

userCount = int(input("How many times do you want to use this
loop? "))
for x in range (1, userCount+1): print("You asked for this many.")
    
```

```

Do you want to repeat this? Yes Do you want to repeat this? Yes
Do you want to repeat this? No thank you.
How many times do you want to use this loop? 3 You asked for
this many.
You asked for this many.
You asked for this many.
    
```



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

Data Type	Explanation	Example
	TRUE/FALSE or 1/0	
	A single, alphanumeric character.	
	Whole numbers	
	One or more alphanumeric characters.	
	Decimal numbers	

Flowchart Symbol	Name	Usage
Start/Stop	Terminator	
Process	Process	
	Input/	
w Input/ M	Output	
* Output		
	Decision	

Common Algorithms	Explained
	Compares the search object to the middle point of a sorted list. If they are not equal, the half in which the target cannot lie is eliminated and the search continues on the remaining half, again taking the middle point to compare to the search object, and repeating this until the target value is found or the end is reached.
	Sorts a list by continuously stepping through a list, swapping items until they appear in the correct order.
	Compares the search object with each item in the list in order from the beginning until it is found or the end is reached.
	Sorts a list by repeatedly dividing a list into two until all the elements are separated individually. Pairs of elements are then compared, placed into order and combined. The process is then repeated until the list is recompiled in the correct order as a whole.

Term	Definition
	A mathematical character to perform a calculation. Example: +
	A set of values, of the same data type, stored in sequence. A list.
	Setting or changing the data type of a variable.
	Connecting strings of characters together.
	A statement which is either true or false. A computation depends on whether a condition is true or false.
	A value which does not change whilst the program is running.
	An individual item in an array. A value in a list.
	Anything you can save. Document, piece of music, data etc.
	A name, usually for part of the program such as a constant, variable, array etc.
	A statement that lets a program select an action depending on whether it is true or false.
	Repeating an action, activity or section within a program.
	A character which determines what action is to be considered or determined. Example: =
	An operator which compares two values. Example: <
	A section of code written outside of the main program. Covers procedures and functions.

Variable	A memory location within a computer where values are stored.
----------	--

```

Input/Output and Calculation
userInputName = input("Enter your name: ") userNum =
int(input("Enter an integer: ")) userDec = float(input("Enter a
decimal number: "))
calculation = userNum + userDec
print("Hello", userInputName, "the result is", calculation)
Enter your name: Mr. Weston Enter an integer: 3 Enter a decimal
number: 15.2 Hello Mr. Weston the result is 18.2

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print("Press 1 for a greeting. Press 2 for a farewell.") userChoice =
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else:
    print("Error - 1 or '2' not detected.")
    
```

```

Press 1 for a greeting. Press 2 for a farewell Awaiting Input: 1
Hello User!
>>>
Press 1 for a greeting. Press 2 for a farewell Awaiting Input: 2
Goodbye User!
>>>
Press 1 for a greeting. Press 2 for a farewell
Awaiting Input: 3
Error - '1' or '2' not detected.
    
```

```

LOOPS
(userChoice = "Yes"
while userChoice == "Yes":
    userChoice = input("Do you want to repeat this? ")
    
```

```

userCount = int(input("How many times do you want to use this
loop? "))
for x in range(1, userCount+1): print("You asked for this many.")
    
```

```

Do you want to repeat this? Yes Do you want to repeat this? Yes
Do you want to repeat this? No thank you.
How many times do you want to use this loop? 3 You asked for
this many.
You asked for this many.
You asked for this many.
    
```

**17. Business Aims & Objectives****Businesspeople like to use the term SMART objectives**

Which Objective?	Explanation of Objective
<b>Specific</b>	Businesses set very specific targets that are very clear and to the point
<b>Measurable</b>	Businesses set measurable targets that can be measured. For example: Business set themselves specific sales targets over a set period.
<b>Achievable</b>	Businesses set realistic targets that are ambitious yet achievable.
<b>Realistic</b>	Businesses set realistic targets that will motivate employees at the same time they will be achievable
<b>Time- Bound</b>	Businesses set their targets over a <u>period of time</u> as this creates a sense of excitement and urgency.

**18. Aims and Objectives in Business****Businesses have both financial and non-financial aims**

Type of Objectives	Explanation
<b>Financial Objectives</b>	Profit. Sales. Market Share. Reduce costs.
<b>Non-Financial Objectives</b>	Social objectives. Independence. Control.

**19. Business Revenue, Costs & Profits**

Term	Definition
<b>Fixed Costs</b>	Costs that don't vary just because output varies for example 'rent'.
<b>Profit (gross/net)</b>	The difference between revenue and total costs; if the figure is negative the business is making a loss
<b>Revenue</b>	The total value of the sales made within a set period, such as a month.
<b>Total Costs</b>	All the costs for a set period, such as a month
<b>Variable Costs</b>	Costs that vary as output varies such as raw materials

**20. Business Revenue, Costs & Profits**

Term	Formulae
<b>Sales Revenue</b>	<b>Price x Quantity Sold</b>
<b>Total Costs</b>	<b>Variable costs + Fixed Costs</b>
<b>(Gross) Profit</b>	<b>Total Revenue – Total Costs</b>

**21. Breaking Even**

Term	Definition
<b>Break - Even</b>	The level of sales at which total costs are equal to total revenue. At this point the business is making neither a profit nor a loss.
<b>Break-even Chart</b>	A graph showing a company's revenue and total costs at all possible levels of output
<b>Margin of Safety</b>	The amount by which demand can fall before the business starts making losses

**22. The Importance of Cash**

Question	Answer
Why does Cash matter to a Business?	Cash matters because, without it, bills go unpaid and a business can fail. If you have no cash, you can't pay suppliers or employees.
Why is cash important to a business?	Cash is required to pay suppliers, employees or other costs. Typical overheads include: <b>Salaries/ Rent and Rates/ Utilities and Bills</b>
What is the difference between cash and profit?	Cash flow shows the immediate impact of a transaction on a company's bank account; profit shows the longer-term impact after costs have been taken into account.

**23. The Importance of Cash (definitions)**

Term	Definition
Cash	The money the firm holds in notes and coins, and in its bank accounts
Cash Flows	The movement of money into and out of the firm's bank account.
Insolvency	When a business lacks the ability to pay its debts
Overdraft	A short-term form of credit. A bank will allow a business to spend more money than it actually has.
Overdraft Facility	An agreed maximum level of overdraft

**25. Short Term Sources of Finance**

Term	Definition
Bank Overdraft	If a company requires some short term finance they can negotiate to extend their overdraft facility with the bank
Trade Credit	When a supplier provides goods without immediate payment – This gives the business time to sell products in order to pay off the debt.

**24. Cash Flow Forecasts**

**Cash flow forecasting means predicting the future flows of cash into and out of a Business.**

Successful cash flow forecasts require:

- Accurate prediction of monthly sales
- Accurate predictions of when customers will pay for the goods they have bought
- Careful allowance of operating costs and the timing of payments
- Careful allowance for in flows and outflows of cash

Key Term	Definition
Opening Balance	The amount of cash in the bank at the start of the month
Net Cash Flow	Cash inflow minus cash outflow over the course of a month
Negative Cash Flow	When cash outflows are greater than cash inflows
Closing Balance	The amount of cash left in the bank at the end of the month

**26. Long Term Sources of Finance**

Term	Definition
Crowdfunding	Raising Capital online from many small investors (but not through the stock market).
Share Capital	Raising finance by selling a share of the business, Shareholders have the right to question the directors and take profit out the firm.
Venture Capital	A combination of share capital and loan capital, provided by an investor.
Retained Profit	Profit kept within the Business that is used for business growth.

**17. Business Aims & Objectives****Businesspeople like to use the term SMART objectives**

Which Objective?	Explanation of Objective
Specific	
Measurable	
Achievable	
Realistic	
Time- Bound	

**18. Aims and Objectives in Business****Businesses have both financial and non-financial aims**

Type of Objectives	Explanation
Financial Objectives	
Non-Financial Objectives	

**19. Business Revenue, Costs & Profits**

Term	Definition
Fixed Costs	
Profit (gross/net)	
Revenue	
Total Costs	
Variable Costs	

**20. Business Revenue, Costs & Profits**

Term	Formulae
Sales Revenue	
Total Costs	
(Gross) Profit	

**21. Breaking Even**

Term	Definition
Break - Even	
Break-even Chart	
Margin of Safety	

### 22. The Importance of Cash

Question	Answer
Why does Cash matter to a Business?	
Why is cash important to a business?	
What is the difference between cash and profit?	

### 24. Cash Flow Forecasts

Cash flow forecasting means predicting the future flows of cash into and out of a Business.

Key Term	Definition
Opening Balance	
Net Cash Flow	
Negative Cash Flow	
Closing Balance	

### 23. The Importance of Cash (definitions)

Term	Definition
Cash	
Cash Flows	
Insolvency	
Overdraft	
Overdraft Facility	

### 26. Long Term Sources of Finance

Term	Definition
Crowdfunding	
Share Capital	
Venture Capital	
Retained Profit	

### 25. Short Term Sources of Finance

Bank Overdraft	
Trade Credit	



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Macronutrients, fibre and water

### Macronutrients

Macronutrients provide energy. The macronutrients are:

- carbohydrate;
- protein;
- fat.

Macronutrients are measured in grams (g).

### Alcohol

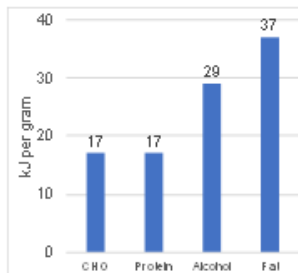
Alcohol is not considered a nutrient, but is a source of energy in the diet.

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

### Energy from food

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

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



### Protein

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

The essential amino acids are isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.

In young children, additional amino acids, e.g. histidine and tyrosine, are sometimes considered to be essential (or 'conditionally essential') because they may be unable to make enough to meet their needs.

### Recommendations

- 0.75g/kg bodyweight/day in adults.

Sources:

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

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

### Protein complementation

Different food contains different amounts and combinations of amino acids.

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

Examples are:

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

### Carbohydrate

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

These three types are:

- monosaccharides (e.g. glucose);
- disaccharides (e.g. lactose);
- polysaccharide (e.g. sucrose).

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

Starchy carbohydrate is an important source of energy.

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

### Recommendations

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

### Fibre

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

Dietary fibre helps to:

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

### Fat

Sources of fat include:

- saturated fat;
- monounsaturated fat;
- polyunsaturated fat.

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

### Recommendations

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

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

Sources:

**Saturated fat:** fatty cuts of meat; skin of poultry; butter; hard cheese; biscuits, cakes and pastries; chocolate.

**Monounsaturated fat:** edible oils especially olive oil; avocados; nuts.

**Polyunsaturated fatty acids:** edible oils especially sunflower oil; seeds; margarine; spreadable fats made from vegetable oils and oily fish.

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

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

### Key terms

**Dietary reference values:** Estimated dietary requirements for particular groups of the population.

**Essential amino acids:** 8 of the different amino acids found in proteins from plants and animals that have to be provided by the diet.

**Macronutrients:** Nutrients needed to provide energy and as the building blocks for growth and maintenance of the body.

**Protein complementation:** combining different protein types at the same meal to ensure all EAAs are ingested.

**Reference Intakes:** Guidelines for the maximum amount of nutrients consumed.

### Hydration

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

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

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

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

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



# KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER



## Micronutrients

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

There are two main groups of micronutrients:

- vitamins;
- minerals and trace elements.

Micronutrients are measured in milligrams (mg) and micrograms ( $\mu\text{g}$ ) with  $1\text{mg} = 0.001\text{g}$  and  $1\mu\text{g} = 0.001\text{mg}$ .

**Micronutrient recommendations**  
People have different requirements for each micronutrient, according to their:

- age;
- gender;
- physiological state (e.g. pregnancy).

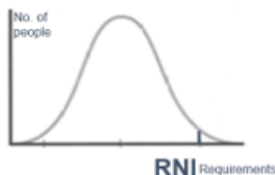


### Vitamins

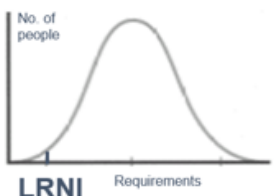
Nutrient	Function	Sources
<b>Vitamin A</b>	Helps the immune system to work as it should and with vision.	Liver, cheese, eggs, dark green leafy vegetables and orange-coloured fruits and vegetables.
<b>B vitamins</b>	<b>Thiamin</b> , riboflavin, niacin, folate, and vitamin B12 have a range of functions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

### Micronutrient recommendations

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



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



For more information, go to: <https://bit.ly/36KUn1j>

### Vitamins

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

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

Vitamins are grouped into:

- fat-soluble vitamins (vitamins A, D, E and K);
- water-soluble vitamins (B vitamins and vitamin C).

### Minerals

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

The body requires different amounts for each mineral.

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

### Minerals

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

### Key terms

**Micronutrients:** Nutrients needed in the diet in very small amounts.

**Lower Reference Nutrient Intake (LRNI):** is the amount of a nutrient that is enough for only the small number of people who have low requirements (2.5%). The majority of people need more.

**Reference Nutrient Intake (RNI):** the amount of a nutrient that is enough to ensure that the needs of nearly all the group (97.5%) are being met. The RNI is used for recommendations on protein, vitamins and minerals.

### Vitamin D

Vitamin D is a pro-hormone in the body. It can be obtained in two forms:

- ergocalciferol (vitamin D<sub>2</sub>);
- cholecalciferol (vitamin D<sub>3</sub>).

Vitamin D<sub>3</sub> is also formed by the action of sunlight. Different to most vitamins, the main source of vitamin D is synthesis in the skin following exposure to sunlight. The wavelength of UVB during the winter months in the UK does not support vitamin D synthesis.



### Frayer Model Key Words

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



## QUIZ

### Macronutrients

Macronutrients provide energy. The macronutrients are:

- .
- .
- .

Macronutrients are measured in..... ( ).

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

There are two main groups of micronutrients:

- .
- .

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

### Key terms

**Dietary reference values:**

**Essential amino acids:**

**Macronutrients:**

**Protein complementation:**

**Reference Intakes:**

### Protein

Made up of building blocks called .....

There are ..... amino acids found in protein. Eight amino acids have to be provided by the diet (called..... amino acids).

Sources:

**Animal sources:**

**Plant sources:**

### Vitamins

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

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

Vitamins are grouped into:

-

-

### Protein complementation

Different food...

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

Examples are:

- .
- .
- .
- .
- .

### Carbohydrate

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

These three types are:

- 
- 
- 

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

Starchy carbohydrate is an important source of energy.

Starchy foods –

### Recommendations

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

### Key terms

**Micronutrients:**

.

**Lower Reference Nutrient Intake (LRNI):**

**Reference Nutrient Intake (RNI):**

### Fat

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

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

### Recommendations

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

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

**Sources:**



**What we are learning this term:**

- A. One-Point Perspective    B. Two-point Perspective    C. Isometric Drawing  
 D. Exploded Drawing    E. Oblique Drawing    F. CAD    G. Orthographic Drawing

**Design Strategies Introduction.**

Design strategies are used to create technical drawings, to show an object in 3D on a 2D page. Perspective drawings show an object getting smaller in the distance. The rest are done to scale.

**A. One-point Perspective Drawing**

Single-point perspective shows an object from the front in a realistic way. The front view goes back towards a vanishing point on the horizon.

Commonly used by interior designers to show a view into a room.

**B. Two-point Perspective Drawing**

Two-point perspective shows an object from the side with two vanishing points. It gives the most realistic view of a product as it shows the item edge on, as we would see it. It is often used to produce realistic drawings of an object.

Commonly used by architects to show realistic building ideas.

**C. Isometric Technical Drawing**

Made up of a series of parallel **vertical lines** and parallel **30-degree lines**. But no **horizontal lines**.

Used by architects and engineers to communicate their ideas to the client and manufacturer.

**D. Exploded Technical Drawing**

Exploded technical drawing is an Isometric drawing of all the parts and components of an object.

All parts are shown separately so you can see all aspects. **Dashed lines** indicate where everything goes and in what order.

**E. Oblique Technical Drawing**

Consists of an object where the front view is drawn flat with height and width of the object drawn to the correct lengths. Diagonal lines are drawn at 45-degrees.

Commonly used by engineers for drafting ideas.

**F. CAD (Computer Aided Design)**

This is designing using a computer using a software such as 2D Design or Solidworks.

Commonly used to model, test and develop an idea before manufacture.

**G. Orthographic Projection – 2D NOT 3D Drawing Strategy!**

This shows 2D views of a 3D object from different angles – front, plan and end. Lines are dimensions have specific meaning to avoid confusion.

- Object Line
- - - Hidden Line
- · - · - Center Line
- Dimension Line
- Construction Line

Commonly used in industry to help the manufacturer understand the design.



**What we are learning this term:**

- A. One-Point Perspective
- B. Two-point Perspective
- C. Isometric Drawing
- D. Exploded Drawing
- E. Oblique Drawing
- F. CAD
- G. Orthographic Drawing

**Design Strategies Introduction.**

Design strategies are used to create technical drawings, to show an object in 3D on a 2D page. Perspective drawings show an object getting smaller in the distance. The rest are done to scale.

**A. One-point Perspective Drawing**

**C. Isometric Technical Drawing**

**E. Oblique Technical Drawing**

**F. CAD (Computer Aided Design)**

**B. Two-point Perspective Drawing**

**D. Exploded Technical Drawing**

**G. Orthographic Projection – 2D NOT 3D Drawing Strategy!**


- Object Line
- - - Hidden Line
- · - · - Center Line
- Dimension Line
- Construction Line



What we are learning this term:	
A.	How media can increase exposure of minority sports
B.	How it provides an increase in promotional opportunities
C.	How it educates its audience
D.	How media increases income for sports
E.	How the media inspires people to participate
F.	How it provides competition between sports

A.	Key question from Assessment objectives?
Key word	Key definition
Minority sport	A sport that is not very popular
Promotional opportunities	The opportunity to promote a brand or business
Income	Money generated
Participation	Taking part in sport
Exposure	Greater publicity from the media
Media rights	The rights to share media
Investment	Money invested into projects/equipment
Role models	A person looked to by others as an example

A.	What sports are minority sports in the UK but maybe not in other parts in the world?
American football- USA	
Table tennis- China	
Badminton- Asia	
Ice Hockey- Canada	

Main assessment objectives	
Learning outcome: Understand the positive effects that media can have on sport	
C.	How might a club get more spectators?
	<ol style="list-style-type: none"> <li>Cheap tickets for children or older people</li> <li>Alternative formats of the game</li> </ol>
How may the media increase participation?	How might the media educate people?
<ol style="list-style-type: none"> <li>Success in Olympics</li> <li>When certain sports are on- Wimbledon</li> <li>Creation of positive role models</li> </ol> 	<ol style="list-style-type: none"> <li>Develop a better understanding about rules and tactics</li> </ol>

A.	Give 5 examples of minority sports in the UK
<ol style="list-style-type: none"> <li>Archery</li> <li>Squash</li> <li>Ultimate frisbee</li> <li>Lacrosse</li> <li>Water polo</li> </ol>	  

A.	How can clubs promote themselves through the media?
<ol style="list-style-type: none"> <li>Many clubs now have social media accounts</li> <li>Some football clubs have their own TV channels</li> <li>Increased interaction with fans.</li> </ol>	 

G.	How can an increased income improve a sport or club
Sport(3)	<ol style="list-style-type: none"> <li>Bigger prize money for tournaments</li> <li>More teams in tournaments</li> <li>Higher participation levels</li> </ol>
Club (4)	<ol style="list-style-type: none"> <li>Build new facilities</li> <li>Invest in new equipment</li> <li>Buy better players</li> <li>Employ more coaches/experts</li> </ol> 

Key information	
Sky sports channels	Skysports Golf Skysorts Cricket Skysports F1
Social media accounts	Real Madrid FC have 200+million followers on Twitter
Educating the audience	Through analysis in highlights
Increase income	Through media rights
Rises in participation	Cycling participation rises around the time of the Olympics
Positive role models	Usain Bolt Nicola Adams Mo Farah
Exposure of minority sports	Increased TV time. Highlights on BBC Sport
MNF	Monday night football provides key analysis to help educate people
Jargon Buster	ITV racing explain specific words related to horseracing
Ashes Zone	Give demonstrations on how to play shots properly and different bowling techniques
Golf swing analysis	Allows you to track your ball and analysis your swing
Serve Analysis	Gives a slow-motion analysis of how to serve effectively



**What we are learning this term:**

- A. *How media can increase exposure of minority sports*
- B. *How it provides an increase in promotional opportunities*
- C. *How it educates its audience*
- D. *How media increases income for sports*
- E. *How the media inspires people to participate*
- F. *How it provides competition between sports*

<b>A.</b>	<b>Key question from Assessment objectives?</b>
	<b>Key definition</b>
	A sport that is not very popular
	The opportunity to promote a brand or business
	Money generated
	Taking part in sport
	Greater publicity from the media
	The rights to share media
	Money invested into projects/equipment
	A person looked to by others as an example


**A.** **What sports are minority sports in the UK but maybe not in other parts in the world?**

American football- USA  
 Table tennis- China  
 Badminton- Asia  
 Ice Hockey- Canada



**Main assessment objectives**

**Learning outcome: Understand the positive effects that media can have on sport**

<b>C.</b>	<b>How might a club get more spectators?</b>	
	<ol style="list-style-type: none"> <li>1. Cheap tickets for children or older people</li> <li>2. Alternative formats of the game</li> </ol>	
	<b>How may the media increase participation?</b>	<b>How might the media educate people?</b>
		


**A.** **Give 5 examples of minority sports in the UK**

1. Archery
2. Squash
3. Ultimate frisbee
4. Lacrosse
5. Water polo





**A.** **How can clubs promote themselves through the media?**




**MUTV**

**G.** **How can an increased income improve a sport or club**

**Sport(3)**

**Club (4)**



<b>Key information</b>	
	Skysports Golf Skysorts Cricket Skysports F1
	Real Madrid FC have 200+million followers on Twitter
	Through analysis in highlights
	Through media rights
	Cycling participation rises around the time of the Olympics
	Usain Bolt Nicola Adams Mo Farah
	Increased TV time. Highlights on BBC Sport
	Monday night football provides key analysis to help educate people
	ITV racing explain specific words related to horseracing
	Give demonstrations on how to play shots properly and different bowling techniques
	Allows you to track your ball and analysis your swing
	Gives a slow-motion analysis of how to serve effectively



**FRANTIC ASSEMBLY**

**A. Component 1 – Key focus**

In this component, you will develop your understanding of drama by examining the work of the practitioners: Willy Russel, Frantic Assembly, John Godber and Stephen Haddon. The practitioners cover the genres: Epic Theatre, Comedy and physical visual storytelling. You will explore the processes used to create performance by working through the processes yourselves. At the same time you will research the job roles and responsibilities within the industry that enable shows to happen.

You will experience a range of work across the discipline of drama by viewing recorded and/or live work. We will aim to go to live shows in Bristol, London and the surrounding area in order to absorb as many different styles as possible. While this is primarily a theoretical study of the performing arts practical investigations, students will be working at developing practical skills through workshops and links with Component 2 Developing Skills and Techniques in the Performing Arts, to engage in primary exploration of specific repertoire.

**What we are learning this term:**

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

**G. Key learning aims from Component 1**

*Learning aim A: Examine professional practitioners' performance work*

**A1: Professional practitioners' performance material, influences, creative outcomes and purpose**  
Examine live and recorded performances in order to develop understanding of practitioners' work with reference to influences, outcomes and purpose. Focus on thematic interpretation of particular issues and how artists communicate their ideas to an audience. 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.



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

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

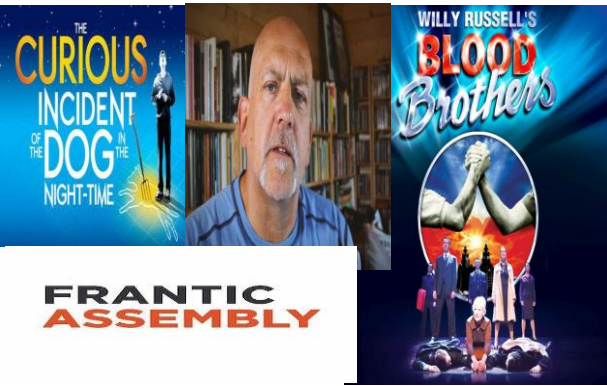
When watching a professional performance, the key questions you need to think about are the following...  
How do we Explore artistic purpose?  
Explore artistic purpose (across all three disciplines/styles) including:  
to educate  
to inform  
to entertain  
to provoke  
to challenge viewpoints  
to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

**C. Key question from Assessment objectives**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. What are physical skills</li> <li>2. What are interpretive skills</li> <li>3. How do we use these skills practically?</li> <li>4. How do we IMPROVE on these skills?</li> </ul> | <ul style="list-style-type: none"> <li>1. What is a professional work</li> <li>2. What is a practitioner</li> <li>3. How do we analyse a performance</li> <li>4. What are a practitioner's creative intentions</li> </ul> |
|---|---|



**YEAR 10 BTEC DRAMA KNOWLEDGE ORGANISER – COMPONENT ONE**



**FRANTIC ASSEMBLY**

<b>A.</b>	<b>Component 1 – Key focus</b>
<p>In this component, you will develop your understanding of drama by examining the work of the practitioners: Willy Russel, Frantic Assembly, John Godber and Stephen Haddon. The practitioners cover the genres: Epic Theatre, Comedy and physical visual storytelling. You will explore the processes used to create performance by working through the processes yourselves. At the same time you will research the job roles and responsibilities within the industry that enable shows to happen.</p> <p>You will experience a range of work across the discipline of drama by viewing recorded and/or live work. We will aim to go to live shows in Bristol, London and the surrounding area in order to absorb as many different styles as possible. While this is primarily a theoretical study of the performing arts practical investigations, students will be working at developing practical skills through workshops and links with Component 2 Developing Skills and Techniques in the Performing Arts, to engage in primary exploration of specific repertoire.</p>	

<b>What we are learning this term:</b>
<p>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. Different performance styles / genres</p>

<b>G.</b>	<b>Key learning aims from Component 1</b>
<p><i>Learning aim A: Examine professional practitioners' performance work</i></p>	<p><b>A1: Professional practitioners' performance material, influences, creative outcomes and purpose</b>          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?</p>
<p><i>Learning aim B: Explore the interrelationships between constituent features of existing performance material</i></p>	<p>Processes used in performance</p> <ul style="list-style-type: none"> <li>● Responding to stimuli to generate ideas for performance material.</li> <li>● Exploring and developing ideas to develop material.</li> <li>● Discussion with performers.</li> <li>● Setting tasks for performers.</li> <li>● Sharing ideas and intentions.</li> <li>● Providing notes and/or feedback on improvements.</li> </ul>


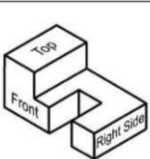
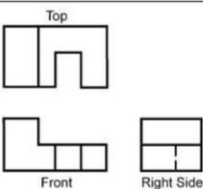







<b>E.</b>	<b>Keywords</b>
Practitioners	
Performance material	
Creative Intentions	
Review	
Analyse/ Evaluate	
Influences	
Physical skills	








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



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




What we are learning this term:		
A. Health & Safety      C. Isometric      E. Materials and properties B. Manufacturing processes      D. Marking and measuring tools		
A. Health & Safety 	C. Isometric	
<b>Risk Assessment</b> A risk assessment is the analysis of the risks involved when using equipment or performing a process.	  <p>Isometric Drawing      2D Orthographic Projection</p>	
<b>Signage</b> Signage is the word used for all the signs that you may see in a workshop environment. Knowing how to translate and understand the signs in a workshop is vital when dealing with potentially dangerous equipment and processes.		
 <b>Mandatory sign-</b> Specific instruction on behaviour		 <b>Prohibition sign-</b> Prohibiting or actions
 <b>Warning sign-</b> Giving warning of hazard or danger		 <b>No danger sign-</b> Information on exits, first aid etc
B. Manufacturing processes 		
<b>Pillar drill</b>		
Pillar drills are free standing machine tools that use high powered motors to rotate drill bits at varying speed		
<b>Milling machine</b>		
A milling machine is a device that rotates a circular cutting tool that has a number of cutting edges. The workpiece is held in a vice or similar device clamped to a table that can move in directions. X, Y & Z axis		
<b>Centre lathe</b>		
A centre lathe is used to manufacture cylindrical product /objects and is 'turned' to create different shapes. Different cutting tools can be used such as <b>facing, parting</b> and <b>knurling</b> .		
	 The symbol $\varnothing$ on this dimension represents <b>Diameter</b> – so it is telling us how wide the circle is overall.	
	 The letter R on this dimension tells us the <b>Radius</b> of the curve or circle – the distance from the centre to the outside	





D. Marking and measuring tools 	
	<b>Inside calliper</b> – Used by placing it inside the object to be measured and expanding the arms. Measures the inside of a hollow space.
	<b>Outside calliper</b> – Used by closing the arms on to the outside of the object to be measured. Wide arms allow it to reach around protruding parts of the object.
	<b>Dividers</b> - The ends of these legs are very sharp, so it can scratch into surfaces. Is used for measuring, transferring, or marking off distances onto materials.
	<b>Odd-leg or "jenny" calliper</b> – One leg has a scratching tool while the other has a notch. This allows the user to hook the tool to the edge of a workpiece and slide it along to make marks equidistant from the edge.
	<b>Vernier Calliper</b> – The most versatile calliper. Can measure depth, inside measurements, and outside measurements of objects. May also have a digital display.
E. Materials and properties 	
<b>Strength</b>	Ability of a material to withstand compression, tension and shear
<b>Hardness</b>	Ability to withstand impact without damage
<b>Toughness</b>	Materials that are hard to break or snap are tough & can absorb shock
<b>Malleability</b>	Being able to bend or shape easily would make a material easily malleable
<b>Ductility</b>	Materials that can be stretched are ductile
<b>Elasticity</b>	Ability to be stretched and then return to its original shape





**What we are learning this term:**

A. Health & Safety      C. Orthographic      E. Materials and properties  
 B. Manufacturing processes      D. Tools & Equipment

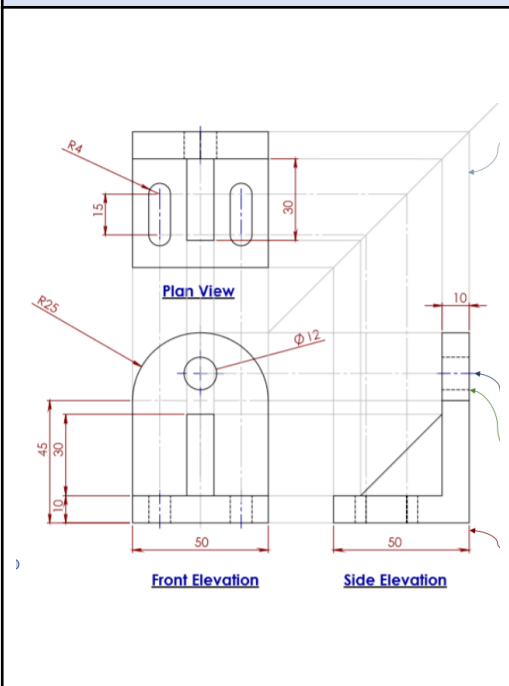
A. Health & Safety 	
Risk Assessment	
Signage	

 _____ sign- Specific instruction on behaviour	 _____ sign- Prohibiting or actions
 _____ sign- Giving warning of hazard or danger	 _____ sign- Information on exits, first aid etc







B. Manufacturing processes 	
Pillar drill	
Milling machine	
Centre lathe	

**C. Orthographic **

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







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$R25$	

D. Tools & Equipment 	
	
	
	
	
	

E. Materials and properties 	
Strength	
Hardness	
Toughness	
Malleability	
Ductility	
Elasticity	





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

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






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






D.	How do humans develop physically (P)?
<b>0-2</b>	<ul style="list-style-type: none"> <li>Gross Motor Development (G) = life head, roll over, sit unaided, walk holding onto something, walk unaided, climb stairs, kick and throw, walk upstairs, jump.</li> <li>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.</li> </ul>
<b>3-8</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>
<b>9-18</b>	<ul style="list-style-type: none"> <li>Girls = puberty starts at 10-13 years, breasts grow, hips widen, menstruation begins, uterus and vagina grow.</li> <li>Boys = voice deepens, muscles and strength increase, erections, facial hair, produce sperm.</li> <li>Both = pubic and underarm hair, growth spurts.</li> </ul>
<b>19-45</b>	<ul style="list-style-type: none"> <li>Physically mature, sexual characteristics are fully formed, peak of physical fitness, full height, women at most fertile.</li> <li>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</li> </ul>
<b>46-65</b>	<ul style="list-style-type: none"> <li>People may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down.</li> <li>Women go through the menopause – when menstruation ends and they can no longer become pregnant.</li> <li>Men may continue to be fertile throughout life but decrease in sperm production in this life stage.</li> </ul>
<b>65+</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Stamina, reaction time, muscle and senses (hearing, sight, taste) all reduce.</li> </ul>

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

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

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





What we are learning this term:		F. How do humans develop emotionally (E)?	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?			
E. <b>How do humans develop intellectually (I)?</b>			
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.	<b><u>Bonding and Attachment</u></b> 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.	<b><u>Adolescence and adulthood</u></b>  <b><u>Self-image and Self-esteem</u></b> 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.
		<b><u>Security</u></b> For infants and young children, security is mainly the feeling of being cared for, being safe and loved – it is closely linked with attachment.	<b><u>Security</u></b> 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.
		<b><u>Contentment</u></b> Infants and young children are content if they have had enough food, love, are clean and dry and all other needs are met.	<b><u>Contentment</u></b> When people feel discontented with aspects of their life – for example, relationships or work – their emotions can be negatively affected.
Early childhood  	At 3-4 years of age children become more inquisitive and enjoy exploring objects and materials. They ask lots of questions and enjoy solving simple problems. At 5-6 years old children's memory is becoming well developed. This helps them to talk about the past and anticipate the future.	<b><u>Independence</u></b> 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.	<b><u>Independence</u></b> Adolescence are dependent on their parents but are beginning to enjoy more independence and freedom to make their own choices. Adults enjoy living independently and controlling their own lifestyle and environment. Later in adulthood people become more dependent on others again.
		G. How do humans develop socially (S)?	
		Life Stage	Types of relationships and social development
Adolescence  		Infancy	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
		Early childhood	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>
Early and Middle Adulthood  		Adolescence	<ul style="list-style-type: none"> <li>• People become more independent and build more informal and formal relationships.</li> <li>• Social development closely linked to emotions.</li> <li>• Often strongly influenced by peers – 'peer group pressure'.</li> </ul>
		Early adulthood	<ul style="list-style-type: none"> <li>• Increased independence means greater control of decisions about informal relationships.</li> <li>• People may be developing emotional and social ties with partners and their own children.</li> <li>• Social life often centred on the family but social skills are required to build and maintain formal relationships.</li> </ul>
Later adulthood  		Middle adulthood	<ul style="list-style-type: none"> <li>• Children have often left home, but there are likely to still be strong family relationships.</li> <li>• Social circles may expand through travel, spending more time on hobbies or joining new groups.</li> </ul>
		Later adulthood	<ul style="list-style-type: none"> <li>• Retired by this stage and so may enjoy more social time with family and friends or join new groups.</li> <li>• 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.</li> </ul>

<b>What we are learning this term:</b>		<b>F. How do humans develop emotionally (E)? Explain each.</b>	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?		<b>Infancy and Early Childhood</b>	
<b>E. How do humans develop intellectually (I)?</b>		<b>Adolescence and adulthood</b>	
Infancy		<b>Bonding and Attachment</b>	
		<b>Self-image and Self-esteem</b>	
Early childhood		<b>Security</b>	
		<b>Security</b>	
Adolescence		<b>Contentment</b>	
		<b>Contentment</b>	
Early and Middle Adulthood		<b>Independence</b>	
		<b>Independence</b>	
Later adulthood		<b>G. How do humans develop socially (S)?</b>	
		<b>Life Stage</b>	
		Types of relationships and social development	
		Infancy	
		Early childhood	
		Adolescence	
		Early 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 of prevent participation in physical activity.
Intellectual Development	Some genetically inherited diseases may result in missed schooling, or have a direct impact on learning – conditions such as Edward's syndrome impact learning.	School, college, university, work or training could be missed. Memory and concentration could be affected.
Emotional Development	Physical appearance affects how individuals see themselves (self-image), and how others respond to them impacts on their confidence and wellbeing.	May cause worry and/or stress. Individuals may develop negative self-esteem. Could lead to feelings of isolation.
Social Development	Physical characteristics or disease may affect opportunities or confidence in building friendships and becoming independent.	May cause difficulty in having opportunities to socialize with other and build wider relationships.



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



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.		
<u>Positive lifestyle choices lead to:</u>		<u>Negative lifestyle choices lead to:</u>
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>		<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>
Our <b>appearance</b> includes: body shape, facial features, hair and nails, personal hygiene and our clothing. Our appearance can affect the way we view ourselves- self-image		
<u>Positive self-image:</u>		<u>Negative self-image</u>
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>		<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>



**K How do social and cultural factors affect development**

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

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

Positive affects of a persons culture/religion:

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

Negative affects of a persons culture/religion:

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

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

Belonging to a community:

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

Not belonging to a community:

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

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

What happens when people face discrimination because of gender:

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

**What we are learning this term:**

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

**L How do relationships and isolation affect development?**

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

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

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

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

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

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

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

**M How do economic factors affect development**

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

Not having enough money causes stress and anxiety.

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

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

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

Living in good housing with open spaces:

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

Living in a poor housing with cramped and damp conditions:

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

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

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



**K How do social and cultural factors affect development**

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

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

Positive affects of a persons culture/religion:

- 
- 

Negative affects of a persons culture/religion:

- 
- 

**Community** refers to:

Belonging to a community:

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- 
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Not belonging to a community:

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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:

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**What we are learning this term:**

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

**L How do relationships and isolation affect development?**

1

2

3

4

5

6

7

**M How do economic factors affect development**

Having enough money....

- 
- 

Not having enough money .....

- 
- 



Having enough money means that....

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Not having enough money can mean that...

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

Living in good housing with open spaces:

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Living in a poor housing with cramped and damp conditions:

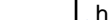
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Material possession like a new phone or coat has a positive effect on the persons development because.....

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Not having a phone or the newest trainers can have a negative affect on.... Because....

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

O.	How do people deal with life events?
Individual	<ul style="list-style-type: none"> <li>The effects of life events vary from person to person based on how they deal with their new situation.</li> <li>Some people react to able to react to life events positively, others find it more difficult due to a range of factors.</li> </ul>
Factors	<ul style="list-style-type: none"> <li>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).</li> </ul>
Adapting	<ul style="list-style-type: none"> <li>Adapt – to adjust to new conditions or circumstances.</li> <li>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.</li> </ul>
Resilience	<ul style="list-style-type: none"> <li>Resilience – a person's ability to come to terms with, and adapt to, events that happen in life.</li> <li>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.</li> </ul>
Time	<ul style="list-style-type: none"> <li>Sometimes people need a long time to adapt to unexpected life events.</li> <li>It can take time for people to move on from and accept difficult changes in their life.</li> </ul>

P.	How is dealing with life events supported?
Types of Support	How this helps individuals deal with life events
Emotional Support	Emotional support is needed to help individuals deal with all life events – expected and unexpected. Having someone to talk to helps people feel secure and adapt to change. Sometimes individuals can find this support in family and friends or professionals to process difficult life events – such as bereavement.
Information and Advice	Life events, particularly unexpected ones, can cause people to feel like they do not know what to do. Information and advice can help people to have a better understanding of their situation, which allows them to deal with it more successfully. Information and advice help them know where to go for help, the choices than are available to them and how to make healthy choices.
Practical Help	<ul style="list-style-type: none"> <li>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.</li> <li>Childcare – an individual may need support looking after their children i.e. a lone parent after a divorce that needs to go to work.</li> <li>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.</li> </ul>
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.

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

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

# SWINDON ACADEMY READING CANON

## Year 7



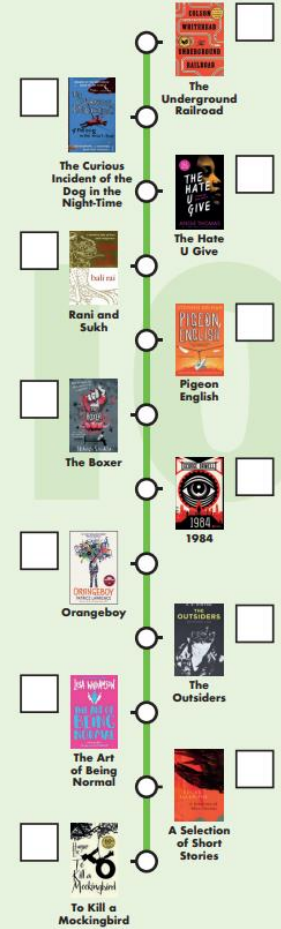
## Year 8



## Year 9



## Year 10



#ReadingisPower