

100% book - Year 10 Booster

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

Term 3



Swindon Academy 2024-25

Name:

Tutor Group:

Tutor & Room:

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

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

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

Knowledge Organisers

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

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

Quizzable Knowledge Organisers

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

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

Top Tip

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

Expectations for Prep and for using your Knowledge Organisers

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

How do I complete Knowledge Organiser Prep?

Step 1

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

The image shows the Epraise website interface. On the left is a weekly planner for May 2020. On the right is a knowledge organiser for 'What is particle theory?'. It includes sections for 'What is particle theory?', 'What is the law of conservation of mass?', 'What are the different changes of state?', and 'What are the different states of matter?'. Each section has a brief definition and a diagram illustrating the concept.

Step 2

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

This image shows a printed knowledge organiser with handwritten notes. The date '29th May 2020' is written at the top. The title 'Particle theory' is underlined. The sections are filled with text from the original knowledge organiser, including definitions and diagrams for particle theory, conservation of mass, and changes of state.

Step 3

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

Handwritten notes on lined paper. At the top, the date '29th May 2020' is written. Below it, the title 'Properties of the states of matter' is underlined. The notes define 'Particle theory = all matter is made of particles'. It then lists the three states of matter with their characteristics: 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' repeated three times: 'Solid = regular pattern, particles vibrate in fixed position'.

Step 5

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

This image shows a printed quizzable knowledge organiser with handwritten answers. The questions are: 'What is the law of conservation of mass?' (Answer: Self quizzing), 'What are the different changes of state?' (Answer: Arrangement/ Movement of matter), 'What are the different states of matter?' (Answer: Solid = regular pattern, Liquid = particles are arranged randomly but are still touching each other, Gas = particles are far apart and are arranged randomly, particles carry a lot of energy).

Step 6

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

Handwritten notes on lined paper showing the final definitions of the states of matter. The definitions are: 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- Foundation

| 1. Context | |
|---|---|
| <p>Writer: Charles Dickens (1812-1870)</p> <p>Dates: First published in 1843</p> <p>Genre: Allegorical; a ghost story.</p> <p>Era: Victorian</p> <p>Set: Victorian London</p> <p>Structure: The novella is divided into 5 staves (chapters).</p> | <p><u>Biography of Dickens</u></p> <ul style="list-style-type: none"> Born in Portsmouth in 1812 When Dickens was 12, his father was sent to debtors' prison as he was unable to pay his bills. 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. Dickens dedicated his life to writing works that revealed the horrors of life in Victorian London for those living in poverty. |
| <p>Christmas:</p> <p>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>London and inequality:</p> <p>Dickens contrasts the lives and attitudes of the different classes. He switches between scenes of wealth and poverty to highlight the inequality within Victorian London.</p> |
| <p>The Poor Law, 1834</p> <p>In order to prevent poor people from claiming financial help, the government made people live in workhouses if they did not have enough money. The workhouses were essentially, prisons for the poor. Dickens hated this law and wanted to highlight the situation facing poor people.</p> | <p>Malthusian Theory</p> <p>Thomas 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 thought 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>The Supernatural: 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>Ebenezer Scrooge: He is initially established as a villain who dismisses the generosity associated with Christmas and refuses to help others. After being forced to change, he feels remorse for his avarice and becomes a symbol of Christmas spirit. Scrooge demonstrates that anyone can change.</p> | |
| <p>Bob Cratchit: Bob is Scrooge's loyal employee. His family live in poverty but remain cheerful, love one another and demonstrate the Christmas Spirit. Bob shows pity for Scrooge, and provides a contrast to Scrooge's isolation and meanness.</p> | |
| <p>Fred: Scrooge's nephew. He demonstrates Christmas cheer and refuses to be discouraged by his Scrooge's misery. Fred shows that Scrooge has chosen isolation and forgives Scrooge in Stave Five.</p> | |
| <p>Marley's Ghost: Marley's ghost shows the reader 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 will experience the same fate if he does not change.</p> | |
| <p>The ghosts: The Ghost of Christmas Past is a symbol of childhood, truth and realisation. The Ghost of Christmas Present represents goodwill, plenty and the festival of Christmas. The Ghost of Christmas Yet to Come symbolises what will happen if Scrooge does not change.</p> | |
| <p>Belle: The woman that Scrooge was engaged to when he was a young man. Belle broke off the engagement between her and Scrooge because he was not the man she had fallen in love with- now he loved money too much.</p> | |

| 3. Central Themes | |
|---|--|
| <p>Social injustice</p> | <p>Dickens highlights the unfairness within society through the poor and wealthy characters. Scrooge's refusal to give to charity and his view that the poor should be in workhouses or die shows the selfishness of the higher classes. The children, Ignorance and Want, demonstrate what could happen if poverty continues.</p> |
| <p>Transformation and redemption</p> | <p>The character of Scrooge emphasises the idea that everyone is capable of transformation and redemption. From starting as a greedy man, 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>Social responsibility</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 making money but is about having concern for others. Just like Scrooge realises at the end, we must realise that we should help others and be kind to them.</p> |

| 4. Key Vocabulary | |
|----------------------|---|
| Avarice | Extreme greed of possessions or money |
| Salvation | Saving someone from harm or destruction |
| Miserly | someone who is greedy and does not like spending money |
| Callous | Mean or cruel |
| Antithesis | The exact opposite of something |
| Epiphany | A moment of sudden understanding |
| Redemption | The act of being saved or freed from sin or error |
| Benevolence | Kind and helpful towards others |
| Philanthropic | Showing concern for others by being charitable |
| Misanthropic | Someone who has a hatred for other people |
| Penitence | sincere regret for wrong or evil things that you have done |
| Remorse | a strong feeling of sadness and regret about something wrong that you have done |
| Deprivation | When someone is unable to have the things they need or want |
| Despotism | exercising power in a cruel and controlling way |
| Capitalism | 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>Stave</p> | <p>Chapters in the novella, but we normally associate staves with music, as if the book 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>Circular structure</p> | <p>Circular narratives cycle through the story one event at a time to end back where the story originated.</p> |
| <p>Allegory</p> | <p>A story that can be interpreted to reveal a hidden meaning, typically a moral or political one.</p> |
| <p>Foreshadowing</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>Semantic Field</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- Foundation

1. Context Notes

| | |
|---|---|
| <p>Writer: (1812-1870)</p> <p>Dates: First published in</p> <p>Genre:</p> <p>Era:</p> <p>Set:</p> <p>Structure:</p> | <p>Biography of Dickens</p> <ul style="list-style-type: none"> Born in Portsmouth in _____ When Dickens was 12... <p>Dickens had to...</p> <p>Dickens dedicated his life to...</p> |
|---|---|

| | |
|--------------------------|--------------------------------------|
| <p>Christmas:</p> | <p>London and inequality:</p> |
|--------------------------|--------------------------------------|

| | |
|----------------------------------|---------------------------------|
| <p>The Poor Law, 1834</p> | <p>Malthusian Theory</p> |
|----------------------------------|---------------------------------|

| |
|---------------------------------|
| <p>The Supernatural:</p> |
|---------------------------------|

2. Key Character Notes

| |
|---------------------------------|
| <p>Ebenezer Scrooge:</p> |
| <p>Bob Cratchit:</p> |
| <p>Fred:</p> |
| <p>Marley's Ghost:</p> |
| <p>The ghosts:</p> |
| <p>Belle:</p> |

3. Central Themes Notes

| | |
|---|--|
| <p>Social injustice</p> | |
| <p>Transformation and redemption</p> | |
| <p>Social responsibility</p> | |

4. Key Vocabulary

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

5. Key Terminology, Symbols and Devices

| | |
|-----------------------------------|--|
| <p>Stave</p> | |
| <p>Circular structure</p> | |
| <p>Allegory</p> | |
| <p>Allegorical figures</p> | |
| <p>Foreshadowing</p> | |
| <p>Didactic</p> | |
| <p>Semantic Field</p> | |

T3 Year 10 Mainstream Combined Science P2 Mainstream Electricity

Domestic use of electricity

There are two types of electrical supply – direct (DC) and alternating current (AC)

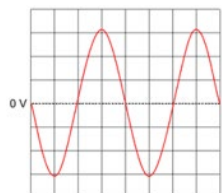
AC

The pd changes direction and magnitude, giving alternating current

The number of times the change of direction happens per second is the frequency.

UK mains is AC - **230V**

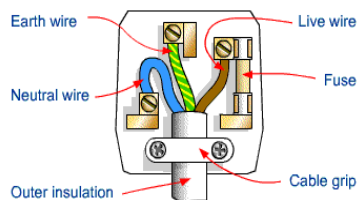
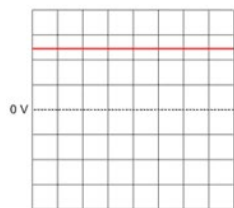
Frequency of **50 Hz**



DC

A direct pd produces current that flows in one direction

Batteries supply DC



Electrical appliances are connected using 3 core cable

- Brown – live wire, with pd of 230V
- Blue – neutral, 0V, completes the circuit
- Yellow and green – Earth wire, is at 0V unless there is a fault, when it will become live

Appliances in the home and power

Power is measured in Watts (W) or kW

Power can be calculated by using:

Power = Voltage x current

$$P = IV$$

Power = current² x resistance

$$P = I^2 R$$

Appliances transfer energy.

Energy is measured in Joules (J) or kJ

The energy transferred can be calculated by using:

Energy = charge flow x potential difference

$$E = QV$$

Energy = power x time

$$E = p t$$

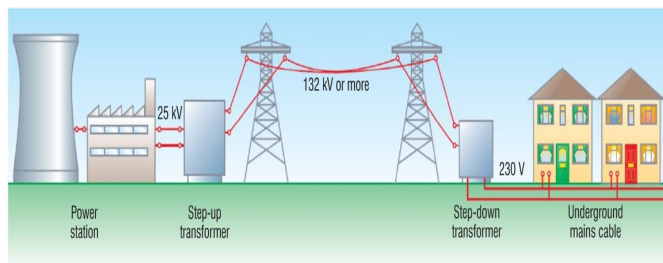
For example

A kettle transfers energy from the thermal store of the filament in the kettle to the thermal store of the water inside.

Some energy is transferred to the thermal store of the surroundings.

The National Grid

The National Grid is a system of cables and transformers connecting power stations to homes and businesses



The National Grid uses very high pd and low current.

High current causes heating in the wires and would result in large energy losses.

Step up transformers increase the pd from the power station (to around 400000V) so that low current can be used to transmit power.

This means the wires don't get hot, so less energy is lost.

Near homes and businesses, step down transformers reduce the pd to 230V for safety.

T3 Year 10 Mainstream Combined Science P2 Mainstream Electricity

Domestic use of electricity

1. What are the two types of current?
2. What type of power supply produces DC current?
3. What are the two differences between AC and DC current?
4. What is the pd of the UK mains supply?
5. What is the frequency of UK mains supply?
6. What colour is the live wire in UK plugs?
7. What is the purpose of the blue wire in UK plugs?
8. When does the yellow and green wire carry a current?

The National Grid

1. What is the National Grid?
2. What sort of pd does the National Grid use to transmit electrical power?
3. What is used to increase the pd from the power station?
4. What is used to reduce the pd near homes and businesses?
5. Why is such a high pd used?

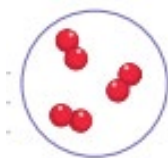
Appliances in the home and power

1. What is the equation linking current, potential difference and power?
2. What is the equation linking current, resistance and power?
3. What two factors affect how much energy an appliance transfers?
4. What is the equation linking energy, power and time?
5. What are the units for power?
6. What is the equation linking charge, energy and potential difference?
7. What are the units for energy?

T3 Year 10 Mainstream Combined Science C8 – Chemical Analysis

Pure substances

Pure = single element or compound – not mixed with any other substance.



Testing to see if a substance is pure:

- Pure substances have specific melting and boiling points

- Compare your data to a library of known values.

E.g. Water has a boiling point of 100°C, if it is above or below this, it is not pure.

Formulations

Formulation = a mixture that is designed as a useful product.

- Components mixed carefully to get the required **properties**.

Examples of formulations:

- Fuels
- Cleaning agents
- Paints
- Medicines
- Alloys
- Fertilisers
- Food



Chromatography

- Technique used to separate mixtures of **soluble substances**.
- How soluble a substance is determines how far it travels across paper.

More soluble = travels further (higher up paper)

Mobile phase

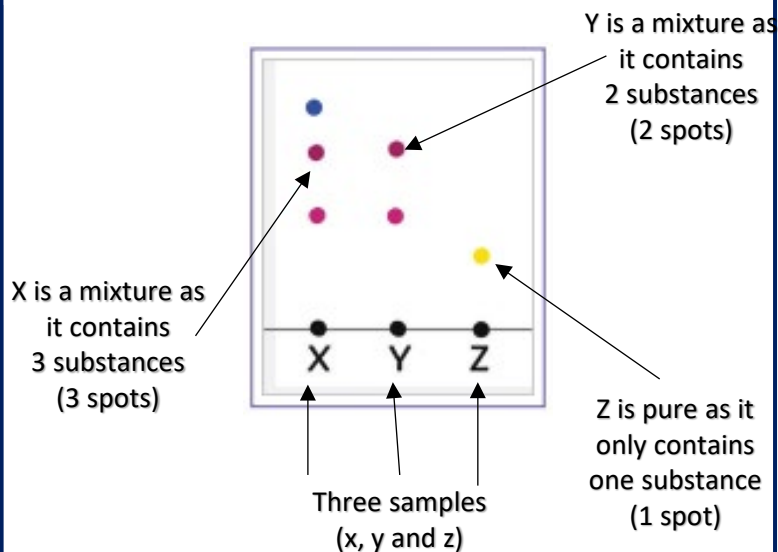
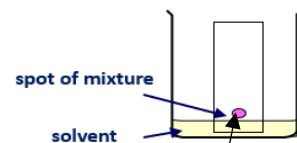
- **Solvent** is the mobile phase
- The substances dissolve in the solvent
- The solvent then moves through the stationary phase.

Stationary phase

- Does not move. The paper is the stationary phase.

Important – start line on paper must be drawn in **pencil** as pencil is **insoluble** and **will not run**

The spot and start line must be **above the solvent line** so the colours won't just wash into the solvent in the beaker.



Rf Values

This is the ratio of the distance moved by a substance to the distance moved by the compound

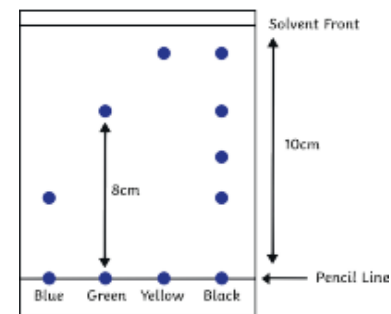
$$R_f = \frac{\text{distance travelled by substance}}{\text{distance travelled by solvent}}$$

- Should always be between 0 and 1.

- Each substance has a unique Rf value.

- Can compare Rf values to a library of known substances

- Can identify unknown substances.



Rf value of green:

$$8\text{cm} / 10\text{cm} = 0.8$$

T3 Year 10 Mainstream Combined Science C8 – Chemical Analysis

1. What is a pure substance?
2. How can you test that a substance is pure?

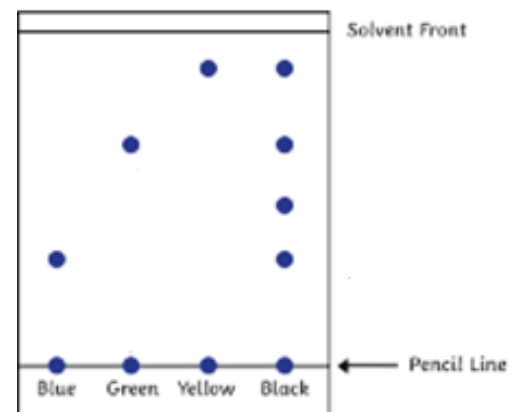
1. What is chromatography used for?
2. What determines how far the substance travels?
3. What is the mobile phase in paper chromatography?
4. What is the stationary phase in paper chromatography?

1. How do you calculate the Rf value?
2. Rf values should always be between...
3. Use a ruler to measure the distance the solvent moved in the diagram below.
4. Use a ruler to measure how far the yellow spot moved

1. What is a formulation?
2. Give 3 examples of formulations.

5. How would you be able to identify a pure substance on a chromatogram?
6. Draw and label a diagram of the experiment to Investigate how many different colours there are in food colouring using paper chromatography.

5. Calculate the Rf value for yellow





9. Global atmospheric circulation

| Factor | Explanation |
|--------------------------------|---|
| Global atmospheric circulation | Worldwide system of winds, which transport heat from the equator to the poles. Wind is large scale movement of air from HIGH to LOW pressure. |
| Key information | This is caused by differences in temperature at the Equator and the poles. The circulation is divided into loops called CELLS. Low pressure = Rising air = Rain. High pressure = Sinking air = Clear skies. |
| | At the poles, cool air sinks creating high pressure. (<250mm rainfall). |
| | At 60°N air rises between the <u>Ferrel</u> and Polar cell creating an area of low pressure. The UK gets lots of <u>low pressure</u> weather blown in from the Atlantic. |
| | At 30°N air sinks between the <u>Ferrel</u> /Hadley cell creating high pressure (deserts <250mm rain). |
| | On the equator air rises as the sun's heat is most concentrated. This creates a <u>low pressure</u> area with high rainfall. (Rainforests >2000mm of rain). |
| | Surface winds blow towards the equator (trade winds). Direct hurricanes to west. |
| | Here winds blow towards the poles and are called Westerlies. (From the west). |
| | The winds curve due to the spin of the earth (Coriolis effect). |

10. Weather hazards in the UK

| Hazard | Example |
|-----------------|--|
| Extreme weather | A weather event that is significantly different from the average pattern and is especially severe or unseasonal. |
| Strong winds | Damage property / disrupt transport. 2018 Storm Ali killed 2 people. |
| Heavy rain | Can cause flooding, costing millions. Cockermouth 2009 314 mm in 24 hrs. |
| Snow | Injury, death, travel disruption. March 2018 Beast from East. 50 cm. |
| Drought | Crop failure, rules to conserve water. April 10-March 12 only 75% of rain. |
| Heatwaves | Pollution builds up- breathing problems. Death. BUT tourism benefits. 2018. |

12. An example of a recent extreme weather event in the UK

| | |
|-----------------------|--|
| Name | Somerset Floods, 2014 |
| Causes | 350mm rain fell in Jan and Feb High tides, rivers not dredged for 20 yrs |
| Impacts | <ol style="list-style-type: none"> £10 million damage 14,000 ha of farmland flooded 600 homes flooded Moorland and <u>Muchelney</u> cut-off Floodwaters contaminated Soil damaged for 2 years after |
| Management strategies | Immediate responses <ul style="list-style-type: none"> Army helped with rescue boats Volunteers and community groups Locals used boats to go shopping/school Long term responses <ul style="list-style-type: none"> £20 million flood action plan Rivers dredged Road levels raised Tidal barrage by 2024 |

11. Evidence that weather is becoming more extreme...

Our weather is naturally variable BUT extreme events are becoming more common and severe.

| Hazard | Example |
|-------------|---|
| Temperature | 10 warmest yrs all occurred since 1990 2018 joint hottest summer on record. Dec 2010 coldest month for 100 years. |
| Rainfall | More rainfall records broken between 2010 - 2014 than in any other decade. Dec 2015 wettest month on record. |



| 9. Global atmospheric circulation | |
|--|-------------|
| Factor | Explanation |
| Global atmospheric circulation | |
| Key information | |
| <p>The diagram illustrates the three-cell model of global atmospheric circulation. It shows the Earth with latitude lines at 60°N, 30°N, 0° (Equator), 30°S, and 60°S. The cells are labeled as follows: <ul style="list-style-type: none"> Polar cell: Located between the poles and 60° latitude. Air descends at the poles and rises at 60° latitude. Ferrel cell: Located between 30° and 60° latitude. Air descends at 30° latitude and rises at 60° latitude. Hadley cell: Located between the equator and 30° latitude. Air descends at 30° latitude and rises at the equator. Wind patterns are shown with arrows: Westerlies between 30° and 60° in both hemispheres, and Trade winds between the equator and 30° in both hemispheres. High (H) and Low (L) pressure systems are indicated at the boundaries of the cells. </p> | |

| 10. Weather hazards in the UK | |
|-------------------------------|---------|
| Hazard | Example |
| Extreme weather | |
| Strong winds | |
| Heavy rain | |
| Snow | |
| Drought | |
| Heatwaves | |

| 11. Evidence that weather is becoming more extreme... | |
|---|--|
| | |
| | |
| | |
| | |
| Temperature | |

| 12. An example of a recent extreme weather event in the UK | |
|--|--|
| Name | |
| Causes | |
| Impacts | |
| Management strategies | |



13. Tropical storms

Hurricanes, cyclones, typhoons. An area of low pressure with winds moving in a spiral around the calm central point called the eye of the storm. Winds are powerful and rainfall is heavy.

| Factor | Explanation |
|-----------------------|--|
| Global distribution | 5° – 30° north and south of equator (sea temp warm, wind shear low). More in the northern hemisphere. Move towards the west. |
| Relationship with ACM | Trade winds (from high to low pressure) send tropical storms to west. |
| Structure | Circular, can be 100s of km wide. Eye- calm in centre (air ↓, LOW). Eyewall- strong winds, torrential rain. Edges- Wind speed falls, rain reduces. |



How will climate change affect them?

| | |
|--------------|---|
| Distribution | Increase to higher latitudes (warmer sea temperatures). |
| Frequency | Number could increase. (Longer season) |
| Intensity | Stronger? More evaporation. |

14. Formation of tropical storms

Include processes and ensure correct sequence.

| | |
|------------|--|
| Conditions | 5-30° latitude. Ocean depth > 60m deep. Sea temperature > 27°C. Form summer and autumn. |
|------------|--|

1. Sun heats the ocean (27°C) > **rapid evaporation**.
2. **Condensation** occurs quickly leading to a large amount of cloud forming (**tropical depression**).
3. Due to the earth's rotation, this cloud mass starts to spin. An eye is formed in the centre.
4. Due to rising air, a **low pressure** area forms below. Air rushes into this creating high wind speeds. (>74mph = **tropical storm**)
5. The **low pressure** results in the ocean being uplifted forming a **storm surge**.


15. How can we reduce the impacts?

| Strategy | Explanation |
|-------------------------|--|
| Prediction / monitoring | Satellites and aircraft to monitor storms. Computer models calculate the predicted track. Allows warnings so people can evacuate or protect their home. |
| Planning | New developments avoid high risk areas. Emergency services train and prepare. Plan evacuation routes. Reduces the injuries and deaths. |
| Protection | Building design- reinforced concrete, stilts to reduce flood risk. Flood defences along rivers and coasts. Reduces the number of buildings destroyed so fewer injuries and deaths. |

16. Tropical storms affect people and environments.

| | Generic | Typhoon Haiyan 2013 Philippines |
|---------------------|---|---|
| Primary effects | Direct results of strong winds, high rainfall, storm surges. Flooding, buildings destroyed, death. | † 6,201 deaths. (Most drowned in storm surge.) † 1.1 million houses damaged. ⚡ 90% of Tacloban city destroyed. |
| Secondary effects | Homelessness > lead to poor health. Lack of sanitation > diseases (cholera) Food shortages, price increase. | † 4.1 million homeless. ⚡ Damage cost US\$12 billion. ⚡ 1.1 million tonnes of crops destroyed (rice). |
| Immediate responses | Evacuate before the storm. Rescue those affected. Provide food, water, blankets. Aid workers arrive from abroad. Recover dead bodies (prevent disease). | ➤ Over 1200 evacuation shelters set up. ➤ Philippines Red Cross delivered basic food aid. ➤ UK sent shelter kits. ➤ 800,000 evacuated (warnings given 2 days early). |
| Long term responses | Repair homes and infrastructure. Promote economic recovery. | ➤ More cyclone shelters built. ➤ No build zones. ➤ 'Cash for work' programmes. |



| 13. Tropical storms | |
|--|--------------------|
| Factor | Explanation |
| Global distribution | |
| Relationship with ACM | |
|  | |
| How will climate change affect them? | |
| Distribution | |
| Frequency | |
| Intensity | |

| 14. Formation of tropical storms | |
|----------------------------------|--|
| Conditions | |

| 15. How can we reduce the impacts? | |
|------------------------------------|-------------|
| Strategy | Explanation |
| Prediction / monitoring | |
| Planning | |
| Protection | |

| 16. Tropical storms affect people and environments. | | |
|---|---------|--|
| | Generic | Typhoon Haiyan 2013 Philippines |
| Primary effects | | <ul style="list-style-type: none"> ↓ ⊖ |
| Secondary effects | | <ul style="list-style-type: none"> ↓ ⊖ |
| Immediate responses | | <ul style="list-style-type: none"> ➤ ➤ ➤ ➤ |
| Long term responses | | <ul style="list-style-type: none"> ➤ ➤ ➤ |

Climate Change

| Background: | |
|-------------|--|
| 1. | Since the 1860s the global climate has been recorded. |
| 2. | Since then the climate globally has increased by 0.8° Celsius. |
| 3. | Climate scientists can use methods to find out about the global climate before we started recording it. (B) |
| 4. | From this evidence we can see that the planet has always gone through periods of warming and cooling. (A) |
| 5. | However, the rapid increase of carbon dioxide in the atmosphere from burning fossil fuels, is causing the enhanced greenhouse effect. (D) |
| 6. | The enhanced greenhouse effect is causing changes to the planet, such as the melting of Artic sea ice, rising temperatures, and an increase in extreme weather events such as tropical storms. (E, F) |
| 7. | Countries are trying to resolve the climate change issue by limiting the amount of carbon dioxide released into the atmosphere, this is known as mitigation. (G, H) |
| 8. | Some countries are trying to adapt to climate change by building flood barriers and growing drought resistant crops. (G, H) |

| A. Changes in climate (3) | |
|---------------------------|--|
| Climate change | The process of the Earth's climate changing over time. |
| Glacial periods | Cold periods. |
| Inter-glacial periods | Warm periods. |

| B. Measuring climate change (3) | |
|---------------------------------|--|
| Ice cores | Each layer of ice in a core represents a different year. CO ₂ can be measured in each layer, and therefore the temperature. |
| Tree rings | Each ring represents a different year. Thicker rings show a warmer climate. |
| Historical evidence | Paintings and diaries e.g. paintings of ice fairs on the frozen Thames 500 years ago. |

| C. Natural climate change (3) | |
|-------------------------------|--|
| Volcanic eruptions | Ash from volcanic eruptions can block sunlight, making it colder. |
| Sun spots | The sun can give out more energy due to an increase in sun spots. |
| Orbital change | The orbit of the sun changes from oval (ellipse) to circular approx. 98,000 yrs. |

| E. Effects on people (6) | |
|--------------------------|--|
| Tropical storms | Increase in frequency and intensity so more damage. |
| Sea-level rise | Increased risk of floods, damaging property and businesses. |
| Melting Arctic ice | Affects trading routes in the Arctic Circle. |
| More droughts/floods | Crop failure, could lead to starvation and famine. |
| Cost of defence | Governments have to spend more money on disasters instead of developing. |
| Environmental Refugees | Pressure on countries to accept refugees. |

| G. Strategies to resolve climate change (4) | |
|---|---|
| Adaptation | Adapting to climate change to make life easier. |
| Adaptation examples (3) | 1. Building flood defences. 2. Growing new crops to suit the new climate. 3. Irrigation channels, sending water from areas of surplus to deficit. |
| Mitigation | Trying to stop climate change from happening by reducing greenhouse gases. |
| Mitigation examples (3) | 1. International agreements. 2. Alternative energies. 3. Carbon capture. |

| D. Human-induced climate change (5) | |
|-------------------------------------|---|
| Greenhouse effect | The way that gases in the atmosphere trap heat from the sun. Like glass in a greenhouse they let heat in, but prevent most from escaping. |
| Greenhouse gases | Gases like carbon dioxide and methane that trap heat around the Earth, leading to climate change. |
| Transport | More cars, so more CO ₂ causing the enhanced greenhouse effect. |
| Farming | Farming livestock produces methane, this is a greenhouse gas. |
| Energy | More energy required, meaning more fossil fuels burnt, so more CO ₂ . |

| F. Effects on the environment (4) | |
|-----------------------------------|---|
| Sea temperature rises | Coral bleaching and destruction of marine ecosystems. |
| More droughts | Migration/ death of species which can not survive drought conditions. |
| Melting glaciers (ice rivers) | Will send more fresh water into the sea, causing the sea level to rise. |
| Melting Arctic ice | Loss of habitats for animals, such as polar bears. |

| H. Place specific examples (2) | |
|--------------------------------|--|
| Adaption | The Thames Barrier. Positive: Stops flooding due to rising sea levels. Negative: Expensive |
| Mitigation | The Paris Agreement. Positive: Countries are trying to lower CO ₂ emissions. Negative: The USA pulled out and China did not sign up. |

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| Climate change | |
| Glacial periods | |
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| B. | Measuring climate change (3) |
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| Ice cores | |
| Tree rings | |
| Historical evidence | |

| C. | Natural climate change (3) |
|--------------------|----------------------------|
| Volcanic eruptions | |
| Sun spots | |
| Orbital change | |

| E. | Effects on people (6) |
|------------------------|-----------------------|
| Tropical storms | |
| Sea-level rise | |
| Melting Arctic ice | |
| More droughts/ floods | |
| Cost of defence | |
| Environmental Refugees | |

| G. | Strategies to resolve climate change (4) |
|-------------------------|--|
| Adaptation | |
| Adaptation examples (3) | |
| Mitigation | |
| Mitigation examples (3) | |

| D. | Human-induced climate change (5) |
|-------------------|----------------------------------|
| Greenhouse effect | |
| Greenhouse gases | |
| Transport | |
| Farming | |
| Energy | |

| F. | Effects on the environment (4) |
|-------------------------------|--------------------------------|
| Sea temperature rises | |
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| Melting glaciers (ice rivers) | |
| Melting Arctic ice | |

| H. | Place specific examples (2) |
|------------|-----------------------------|
| Adaption | |
| Mitigation | |

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|--|
| What we are learning this term: |
| 3.1 Ideas about the cause of disease and illness 3.2 Approaches to treatment and prevention 3.3 Key Individuals and fighting cholera in London, 1854 |

| | |
|------------------------|---|
| A. | Can you define these key words? |
| microbes | Any living organism that is too small to see without a microscope. Microbes include bacteria. |
| vaccination | Treatment with a vaccine to produce immunity against a disease |
| spontaneous generation | Claimed rotting matter created microbes. |
| bacteriology | The study of bacteria. |
| inoculate | Deliberately infecting yourself with a disease to avoid a more severe case later on. |

C. Fighting cholera in London , 1854 (3.3)

| | |
|------------------------|---|
| What is Cholera a? | Cholera was a terrible water borne disease that spread quickly across England from 1831. There were lots of cases in slum dwellings. |
| Attempts to prevent it | Some steps were taken to clean up the filthiest areas of the city. Idea that it was caused by miasma was widespread, so local councils focused on cleaning up the mess in which they were living |
| John Snow | John Snow was surgeon who investigated the 1854 epidemic. He created a spot map to show the deaths and noticed they were concentrated around a water pump in Broad Street, SoHo. Clear the water pump was the source of the outbreak |
| Impact of Snows work | In the short-term Snow removed the handle from the Broad Street pump and the deaths in that area went away. Long-term Snow presented his work to the government arguing clean water needed to be supplied. Many rejected his work and clung to the idea of miasma causing cholera |

| B. Change and continuity in ideas about disease and illness in the 18th and 19th Century. (3.1-3.2) | | |
|--|--|---|
| <u>Causes</u> | <u>Prevention</u> | <u>Treatments</u> |
| Religion – People no longer believed that God was responsible for illnesses and world events | Vaccinations – the work of Edward Jenner in the 18 th century led to the first vaccination being created for smallpox. This led the way to other vaccinations being produced as Pastuer and Robert Koch isolated microbes which caused certain diseases | Continuance – despite the new ideas about the cause of disease and illness in the 18 th century, it took a while for medical science to catch up. Not a great deal of understanding how to remove germs as part of treatment |
| Age of Enlightenment/Scientific Revolution – people started to look for answers in the world about disease and illness. There was also great change across science influencing ideas about cause | Public Health Act 1875 – in the 18 th Century the government had a very <i>laissez-faire</i> attitude to public health. This changed when more men could vote. The government realised changes were needed and passed the Public Health Act. This Act stated that clean water, sewage system, public parks, housing officers and street lighting had to be provided | Hospitals – Florence Nightingale was a pioneer in changing hospitals and hospital care in the 19 th Century. Following her success at the war hospital in the Crimea, Nightingale changed the way that hospitals were designed to having separate wards and more ventilation. Also set up a training school for nurses to give better care |
| Miasma – people still believed in the theory that disease and illness was caused by harmful fumes in the air. BUT it was becoming less popular | Role of the government – Took a more active role in preventing disease, making smallpox vaccinations compulsory | Anaesthetics – one of the big problems in the 18 th and 19 th centuries was pain during surgery. Ether and laughing gas had been used but they were not good enough. John Simpson discovered that chloroform could be used as a pain relief – this led to more complex surgeries being performed |
| Spontaneous Generation – this theory stated that rotting matter caused bacteria to form, causing people to get ill | | Antiseptics – another big problem with surgery was infections. Joseph Lister built on Pasteur's work and discovered that carbolic acid could be used to prevent infections. Used on wounds and Sterilised equipment, but some surgeons did not like the change |
| Germ Theory – this correct theory put forward by Louis Pastuer was that germs caused matter to rot. He linked this to disease and illness, stating that germs caused people to get ill | | |

D. Key People (3.3)

| Edward Jenner | John Snow | Edwin Chadwick |
|--|--|--|
| Country doctor who realised that milkmaids who got cowpox did not catch smallpox – decided they must be connected. Tested his theory by infecting a local boy with cowpox and then tried to infect him with smallpox but he did not get ill. Wrote up his findings to make sure doctors could follow. Had successfully developed the first vaccine, which was supported by the government. | Used scientific methods to prove that cholera was a water borne disease in the 1850's. Snow presented his findings to the government, recommending that the sewer systems were improved, which they were eventually. | Published his <i>Report on the Sanitary Conditions of the Labouring Classes</i> in 1842. he spent time researching the urban poor and discovered that people living in cities had a lower life expectancy than people living in the countryside. Campaigned for all cities to set up boards of health, responsible for clean water and disposing sewage. |

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| A. | <i>Can you define these key words?</i> |
|------------------------|--|
| microbes | |
| vaccination | |
| spontaneous generation | |
| bacteriology | |
| inoculate | |

| C. | Fighting cholera in London , 1854 (3.3) |
|------------------------|--|
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| Impact of Snows work | |

| B. Change and continuity in ideas about disease and illness in the 18th and 19th Century. (3.1-3.2) | | |
|--|-------------------|-------------------|
| <u>Causes</u> | <u>Prevention</u> | <u>Treatments</u> |
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GCSE History : Medicine in 18th and 19th Century Britain

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| C. Fighting cholera in London , 1854 (3.3) | | D. Key People (3.3) | | |
| What is Cholera ? | Cholera was a terrible _____ disease that spread quickly across England from _____. There were lots of cases in _____ dwellings. | Edward Jenner | John Snow | Edwin Chadwick |
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| microbes | Any living organism that is too small to see _____. Microbes include _____ |
| vaccination | Treatment with a vaccine to _____ against a _____ |
| spontaneous generation | Claimed _____ created microbes. |
| bacteriology | The study of _____ |
| inoculate | Deliberately _____ yourself with a disease to avoid a _____ case later on. |



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



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



The 5 Pillars - Zakah

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

The 5 Pillars - Sawm

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

The 5 Pillars - Hajj

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

Id-ul-Adha, Id-ul-Fitr, Ashura

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



| <i>The 5 Pillars - Zakah</i> | |
|---------------------------------|--|
| The role of giving alms | |
| The significance of giving alms | |
| Khums | |

| <i>The 5 Pillars - Sawm</i> | |
|-----------------------------|--|
| The role of fasting | |
| The significance of fasting | |
| Reasons for fasting | |
| Night of power | |

| <i>The 5 Pillars - Hajj</i> | |
|--------------------------------|--|
| The role of pilgrimage | |
| The significance of pilgrimage | |
| Actions | |

| <i>Id-ul-Adha, Id-ul-Fitr, Ashura</i> | |
|---|--|
| Id-ul-Adha Not an official holiday in UK | |
| Id-ul-Fitr Public holiday in Muslim majority countries, not UK | |
| Ashura | |

Year 10 Spanish Knowledge Organiser

Term 3

ESPAÑOL 

This is some of the vocabulary that you will learn / come across in **Term 3**. Use this knowledge organiser to revise / go over vocabulary. These words have been added in by the exam board (Edexcel) so the more you learn, the better your grade!



Techniques for learning vocab:

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

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

¡Qué rico! (pages 80–81):

Para ...
el desayuno / la comida
la merienda / la cena

una comida típica
un **plato** popular

¿De qué país es cada
plato?

El/La ... es de ...

Los/Las ... son de ...

México / España / Perú

Chile / Argentina / Cuba

argentino/a / chileno/a
colombiano/a / cubano/a
español(a) / inglés/inglesa
mexicano/a / peruano/a
venezolano/a

¿En qué consiste(n)?

Está hecho/a con ...

For ...
breakfast / lunch
afternoon snack / dinner

a typical meal
a popular dish

What country is each dish
from?

... is from ...

... are from ...

Mexico / Spain / Peru

Chile / Argentina / Cuba

Argentinian / Chilean
Colombian / Cuban
Spanish / English
Mexican / Peruvian
Venezuelan

What is it / are they made of?

It is made with ...

Están hechos/as con ...
Consiste(n) en ...
verdura/carne/*pollo
pescado/arroz

¿Qué comida o bebida te
gustaría probar?
Me gustaría **probar** (la paella).

¿Por qué te gustaría
probarlo/la/los/las?

Porque ...

parece/suena rico/a

me gusta(n) ...

es (muy) sano/a.

tiene muchos **beneficios** para
la salud.

¡A comer!

¡Buen provecho!

They are made with ...
It consists / They consist of ...
vegetables/meat/chicken
fish/rice

What food or drink would
you like to try?
I would like to try (paella).

Why would you like to try it/
them?

Because ...

it looks/sounds tasty

I like ...

it is (very) healthy.

it has lots of health benefits.

Let's eat!

Enjoy your meal!

¿Llevas una vida sana? (pages 82–83):

| | |
|-------------------------------------|---|
| ¿Cómo es tu *rutina? | <i>What is your routine like?</i> |
| Por la mañana/tarde/noche ... | <i>In the morning/afternoon/night ...</i> |
| Durante el día/la semana ... | <i>During the day/week ...</i> |
| El fin de semana ... | <i>At the weekend ...</i> |
| Los domingos ... | <i>On Sundays ...</i> |
| todos los días / fines de semana | <i>every day / weekend</i> |
| algunos días / fines de semana | <i>some days/weekends</i> |
| Primero / Luego ... | <i>First / Later/Afterwards ...</i> |
| Finalmente ... | <i>Finally ...</i> |
| Antes de / Después de ... | <i>Before / After ...</i> |
| hacer los deberes | <i>doing homework</i> |
| levantarme / vestirme | <i>getting up / getting dressed</i> |
| terminar las clases | <i>finishing classes</i> |
| tomar el desayuno | <i>having breakfast</i> |
| volver a casa / acostarme | <i>returning home / going to bed</i> |
| ¿Qué costumbres sanas tienes? | <i>What healthy habits do you have?</i> |
| Duermo (bien) / *entreno | <i>I sleep (well) / I train</i> |
| Hago diez minutos de ejercicio. | <i>I do ten minutes of exercise.</i> |

| | |
|--|--|
| Llevo una botella de agua. | <i>I carry a bottle of water.</i> |
| Me levanto / Me acuesto ... | <i>I get up / I go to bed ...</i> |
| a las ... / a la misma hora | <i>at ... (o'clock) / at the same time</i> |
| tarde / temprano | <i>late / early</i> |
| Tomo un descanso / Me relajo | <i>I have a rest / I relax</i> |
| Suelo comer / hacer *meditación | <i>I usually eat / do meditation</i> |
| Tengo / Tienes / Tiene ... | <i>I am / you are / he/she is ...</i> |
| sed/hambre | <i>thirsty/hungry</i> |
| sueño/calor | <i>sleepy/hot</i> |
| ¿Tienes costumbres malsanas? | <i>Do you have any unhealthy habits?</i> |
| Si tengo hambre/sed, ... | <i>If I'm hungry/thirsty, ...</i> |
| tomo / como / bebo ... | <i>I have / eat / drink ...</i> |
| mucha agua. | <i>lots of water.</i> |
| algunos/muchos *dulces. | <i>some/lots of sweets.</i> |
| algunas/muchas verduras. | <i>some/lots of vegetables.</i> |
| chocolate/fruta/pasta. | <i>chocolate/fruit/pasta.</i> |

¿Somos lo que comemos? (pages 84–85):

| | |
|---|--|
| ¿A qué hora tomas ... el desayuno/almuerzo? la merienda/cena? | <i>What time do you have ... breakfast/lunch? afternoon snack/dinner?</i> |
| Normalmente/Generalmente lo/la tomo ... entre las ... y las ... A veces como a las ... | <i>Normally/Generally I have it ... between ... and ... Sometimes I eat at ...</i> |
| ¿Te gustaría probarlos/las? Te recomiendo ... Hay que probar ... Es un postre / una bebida ... rico/a / típico/a. Me gustaría probarlo/la/ probarlos/las ... porque parece/suena ... porque parecen /suenan ... | <i>Would you like to try them? I recommend ... You have to try ... It is a ... dessert/drink. tasty/typical I would like to try it/them ... because it looks/sounds ... because they look/sound ...</i> |

| | |
|---|---|
| ¿Cómo es tu dieta? (No) Tengo una dieta sana porque ... soy vegano/a / vegetariano/a como comida sana/malsana como demasiados *dulces/ pasteles | <i>What is your diet like? I (don't) have a healthy diet because ... I am vegan / vegetarian I eat healthy/unhealthy food I eat too many sweets/cakes</i> |
| ¿Qué hay que hacer para tener una dieta sana? Hay que / Se necesita ... Hace falta ... comer una dieta equilibrada tener cuidado con la cantidad de azúcar que tomas | <i>What do you have to do to have a healthy diet? You have to / need to ... It is necessary to ... eat a balanced diet be careful with the amount of sugar you have</i> |

¡Los tiempos cambian! (pages 86–87):

| | |
|---------------------------------------|---|
| ¿Cómo eras antes? | <i>What were you like before?</i> |
| Cuando era pequeño/a ... | <i>When I was little</i> |
| Cuando era más joven ... | <i>When I was younger ...</i> |
| Antes / Cuando tenía ... años, ... | <i>Before / When I was ... years old, ...</i> |
| dormía bien/mal | <i>I slept well/badly</i> |
| me levantaba / me acostaba ... | <i>I got up / I went to bed ...</i> |
| temprano/pronto / tarde | <i>early / late</i> |
| (no) era muy activo/a. | <i>I was (not) very active.</i> |
| (no) tenía ... | <i>I had / I didn't have ...</i> |
| (mucha) energía | <i>(lots of) energy</i> |
| una vida sana | <i>a healthy life</i> |
| (nunca) iba al gimnasio | <i>I (never) went to the gym</i> |

| | |
|--------------------------------|--|
| ¿Qué te gustaba comer y beber? | <i>What did you like to eat and drink?</i> |
| Solía comer / beber ... | <i>I usually ate / drank ...</i> |
| (No) Comía ... | <i>I ate / I didn't eat ...</i> |
| Bebía demasiado café. | <i>I drank too much coffee.</i> |
| Me encantaban los postres. | <i>I loved desserts.</i> |
| Me gustaba comer *dulces. | <i>I liked eating sweets.</i> |

| | |
|---|--|
| ¿Qué hacías en tu tiempo libre cuando eras pequeño/a? | <i>What did you do in your free time when you were little?</i> |
| (No) Hacía (mucho/suficiente) ejercicio/deporte. | <i>I did / didn't do (lots of/enough) exercise/sports.</i> |
| (No) Iba a la piscina (tres veces a la semana). | <i>I went / didn't go to the pool (three times a week).</i> |
| (No) Montaba en *bicí (cada día). | <i>I rode / didn't ride my bike (every day).</i> |
| (No) Jugaba ... | <i>I played / didn't play ...</i> |

(Siempre) Estaba cansado/a y enfermo/a. *I was (always) tired and sick.*

¿Cómo es tu *rutina ahora? *What is your routine like now?*
Cuido más mi dieta. *I look after my diet more.*

¿Cómo eres ahora? *What are you like now?*
Me siento mucho mejor. *I feel a lot better.*
Soy bastante activo/a. *I am quite active.*
No / **Ya no** ... *I don't / no longer ...*
hago (mucho) ejercicio/ deporte *do (lots of) exercise/sports*
hago nada para **mantenerme** en forma *do anything to stay in shape*
me levanto temprano como antes *get up early like before*

¿Qué te gusta comer y beber? *What do you like to eat and drink?*
(No) Como comida rápida/ malsana. *I (don't) eat fast/unhealthy food.*
(**Ya no**) Bebo/Como ... *I (no longer) eat/drink ...*
Prefiero las bebidas con azúcar. *I prefer sugary drinks.*
Me gusta comer comida sana. *I like to eat healthy food.*

¿Qué haces en tu tiempo libre? *What do you do in your free time?*
(No) Hago ejercicio/deporte. *I (don't) do exercise/sports.*
(No) **Voy** al **gimnasio**/cine. *I (don't) go to the gym/cinema.*
(No) Juego a *los videojuegos. *I (don't) play videogames.*

¡Qué mal estoy! (pages 88–89):

| | |
|---|--------------------------------------|
| ¿Qué te pasa? | What's the matter with you? |
| Me / te / le duele(n) ... | My / your / his/her ... hurt(s) |
| el brazo / el estomago | arm / stomach |
| el pie / la boca / la mano | foot / mouth / hand |
| la cabeza / la espalda | head / back |
| la garganta / la nariz | throat / nose |
| la rodilla / la pierna | knee / leg |
| los oídos / los ojos / los dedos | ears / eyes / fingers |
| los dientes / (todo) el cuerpo | teeth / (whole) body |
| Estoy (muy) enfermo/a. | I am (very) sick. |
| Me siento (muy) mal. | I feel (very) unwell. |
| No me siento bien porque tengo ... | I don't feel well because I have ... |
| fiebre / dolor de cabeza | a fever / a headache |
| una herida | an injury |
| Ayer / La semana pasada ... | Yesterday / Last week ... |
| me rompí / me corté ... | I broke my / I cut my ... |
| me quemé ... | I burned my ... |

la pierna/**piel**

leg/skin

| | |
|--|---|
| ¿Desde cuándo estás así? | Since when have you been like this? |
| desde (ayer) | since (yesterday) |
| desde hace una hora / más de (dos días) | for an hour / more than (two days) |
| Debes / Necesitas ... | You must / You need to ... |
| Tienes que ... | You have to ... |
| quedarte en la cama / en casa descansar/dormir | stay in bed / at home rest/sleep |
| comprar medicinas (en la farmacia) | buy medicine (at the chemist's) |
| evitar el sol | avoid the sun |
| recuperarte/relajarte | recover/relax |
| ir al médico /hospital | go to the doctor's/hospital |
| Voy a pedir cita con el médico . | I am going to ask for a doctor's appointment. |

Mi salud, de la cabeza a los pies (pages 90–91):





| | |
|--------------------------------------|--|
| ¿Cómo cambiarás tu estilo de vida? | How will you change your lifestyle? |
| Si dejo de comer/beber/fumar, ... | If I stop eating/drinking/smoking, ... |
| Si duermo (al menos ocho horas), ... | If I sleep (at least eight hours), ... |
| Si practico más deporte, ... | If I practise more sport, ... |
| Si tengo (una vida más activa), ... | If I have (a more active life), ... |
| me sentiré más feliz | I will be happier |
| mi salud física/mental mejorará | my physical/mental health will improve |
| dormiré mejor | I will sleep better |
| me levantaré con más energía | I will wake up with more energy |

| | |
|--|--|
| ¿Qué harás para mejorar tu salud en el futuro? | What will you do to improve your health in the future? |
| Para cambiar esta mala costumbre, ... | To change this bad habit, ... |
| Para mejorar mi dieta/salud ... | To improve my diet/health ... |
| dormiré más tiempo / beberé agua | I will sleep longer / I will drink water |
| no usaré el móvil (después de las nueve) | I won't use my mobile (after nine o'clock) |
| iré (al gimnasio) | I will go (to the gym) |
| evitaré beber alcohol y fumar | I will avoid drinking alcohol and smoking |
| empezaré a practicar deporte | I will start practising sport |

Year 10 Computer Science – Term 1 Answers

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

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

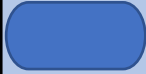


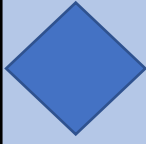
| C. | Flowchart Symbol | |
|---|---|---------------|
| Symbol | Usage | Symbol Name |
|  | The start or end of the algorithm. | Terminator |
|  | An action which occurs during the algorithm. | Process |
|  | Data is either inputted to or outputted from the algorithm. | Input/ Output |
|  | A Yes/No,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

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

Year 10 Computer Science – Term 1

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

| What we are learning this term: | | |
|--|-------------------|-----------------------|
| B. | Common Algorithms | Worked Example |
| A. Terms B. Common Algorithms C. Flowcharts D. Data Types | | |
| Binary Search | | 2,5,6 searching for 6 |
| Bubble Sort | | 5,1,3 |
| Linear Search | | 2,6,5 searching for 6 |
| Merge Sort | | 5,1,3 |

| C. Flowchart Symbol | | |
|---|------------|-------------|
| Symbol | Usage | Symbol Name |
|  | | |
|  | | |
|  | | |
|  | | |
| D. | Data Types | Example |
| Boolean | | |
| Character | | |
| Integer | | |
| String | | |
| Real/Float | | |

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

| Which Objective? | Explanation of Objective |
|--------------------|--|
| Specific | Businesses set very specific targets that are very clear and to the point |
| Measurable | Businesses set measurable targets that can be measured. For example: Business set themselves specific sales targets over a set period. |
| Achievable | Businesses set realistic targets that are ambitious yet achievable. |
| Realistic | Businesses set realistic targets that will motivate employees at the same time they will be achievable |
| Time- Bound | 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 |
|---------------------------------|---|
| Financial Objectives | Profit. Sales. Market Share. Reduce costs. |
| Non-Financial Objectives | Social objectives. Independence. Control. |

19. Business Revenue, Costs & Profits

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

20. Business Revenue, Costs & Profits

| Term | Formulae |
|-----------------------|-------------------------------------|
| Sales Revenue | Price x Quantity Sold |
| Total Costs | Variable costs + Fixed Costs |
| (Gross) Profit | Total Revenue – Total Costs |

21. Breaking Even

| Term | Definition |
|-------------------------|---|
| Break - Even | 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. |
| Break-even Chart | A graph showing a company's revenue and total costs at all possible levels of output |
| Margin of Safety | The amount by which demand can fall before the business starts making losses |

17. Business Aims & Objectives

Businesspeople like to use the term SMART objectives

Which Objective?

Specific

Measurable

Achievable

Realistic

Time- Bound

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

18. Aims and Objectives in Business

Businesses have both financial and non-financial aims

Type of Objectives

Explanation

**Financial
Objectives**

**Non-Financial
Objectives**

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? | 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: Salaries/ Rent and Rates/ Utilities and Bills |
| 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. |

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? | |

23. The Importance of Cash (definitions)

| Term | Definition |
|--------------------|------------|
| Cash | |
| Cash Flows | |
| Insolvency | |
| Overdraft | |
| Overdraft Facility | |

25. Short Term Sources of Finance

| Term | Definition |
|----------------|------------|
| Bank Overdraft | |
| Trade Credit | |

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 | |

26. Long Term Sources of Finance

| Term | Definition |
|-----------------|------------|
| Crowdfunding | |
| Share Capital | |
| Venture Capital | |
| Retained Profit | |



Year 10 PRODUCT DESIGN Term 3



| A. Physical & Working Properties | What we are learning this term: | | E. 6 R's | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|--|-------|-----------------|-----------------|------------|--------------|--------------|------------------|---------------|-----------------|-----------------|-------------|--|-------------------|--|----------|----------|-----|-------|-------|------|----------|--------|-----|--|-------|
| Physical properties are the traits a material has before it is used. | A. Physical & Working Properties B. Forces & Stressors C. Types of Motion D. Paper & Card/Boards E. 6 R's F. Natural & Manufactured Timbers | | You can use the 6R's when designing to help reduce the impact that new products have on the environment. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Absorbency Ability to soak up moisture, light or heat | B. Forces and Stressors | C. Types of Motions | Repair It's better to fix things instead of throwing them away. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Density How solid a material is | | | Reuse You can extend a products life by passing it on or using it again. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fusibility Ability of a material to be heated and joined to another material when cooled | Forces apply stress to objects, causing them to break or change shape. | Linear Moves something in a straight line. E.g. a train moving down a track | Recycle The uses less energy than obtaining new materials. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Conductivity Ability to conduct electricity | Different materials can withstand different forces. | Reciprocating Has a repeated up and down motion or back-and-forth motion. E.g a piston or pump | Rethink You should think about your design carefully. Is it needed? | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thermal Conductivity Ability to conduct heat | Tension Is a stretching or pulling force. E.g. the ropes of a suspension bridge | Rotary Is where something moves around an axis or pivot point. E.g a wheel | Reduce Making long-lasting durable products. Think rechargeable! | | | | | | | | | | | | | | | | | | | | | | | | | |
| Working properties are how a material behaves when it is manipulated. | Compression Is a pushing or squashing force, e.g. the weight of a building on its foundation | Oscillating Has a curved backwards and forwards movement that wings on an axis or pivot point. E.g a swing or clock pendulum | Refuse You can refuse to buy a product if you think it is wasteful. Such as plastic bags. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strength Ability of a material to withstand compression, tension and shear | Bending Is a combination of tension and compression. It exerts tension on one side and compression on the other, e.g. bending anything | D. Paper & Card/Boards | F. Natural & Manufactured Timbers | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hardness Ability to withstand impact without damage | Shear Is a cutting force. The opposing forces are not directly opposite each other, e.g. cutting paper with scissors. | Paper and cards/boards both come from wood pulp. | Natural timber comes from trees. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Toughness Materials that are hard to break or snap are tough & can absorb shock | Torsion Is a twisting force that attempts to rotate two ends of a material in opposite directions, e.g. wringing out a wet cloth. | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Paper</th> <th style="width: 50%;">Board</th> </tr> </thead> <tbody> <tr> <td>Cartridge Paper</td> <td>Corrugated Card</td> </tr> <tr> <td>Grid Paper</td> <td>Duplex Board</td> </tr> <tr> <td>Layout Paper</td> <td>Foil-Lined Board</td> </tr> <tr> <td>Tracing Paper</td> <td>Foam Core Board</td> </tr> <tr> <td>Corrugated Card</td> <td>Inkjet Card</td> </tr> <tr> <td></td> <td>Solid White Board</td> </tr> </tbody> </table> | Paper | Board | Cartridge Paper | Corrugated Card | Grid Paper | Duplex Board | Layout Paper | Foil-Lined Board | Tracing Paper | Foam Core Board | Corrugated Card | Inkjet Card | | Solid White Board | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Hardwood</th> <th style="width: 50%;">Softwood</th> </tr> </thead> <tbody> <tr> <td>Ash</td> <td>Larch</td> </tr> <tr> <td>Beech</td> <td>Pine</td> </tr> <tr> <td>Mahogany</td> <td>Spruce</td> </tr> <tr> <td>Oak</td> <td rowspan="2">Softwoods are faster growing and cheaper to buy.</td> </tr> <tr> <td>Balsa</td> </tr> </tbody> </table> | Hardwood | Softwood | Ash | Larch | Beech | Pine | Mahogany | Spruce | Oak | Softwoods are faster growing and cheaper to buy. | Balsa |
| Paper | Board | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cartridge Paper | Corrugated Card | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grid Paper | Duplex Board | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Layout Paper | Foil-Lined Board | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tracing Paper | Foam Core Board | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Corrugated Card | Inkjet Card | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Solid White Board | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hardwood | Softwood | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ash | Larch | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Beech | Pine | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mahogany | Spruce | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oak | Softwoods are faster growing and cheaper to buy. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsa | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malleability Being able to bend or shape easily would make a material easily malleable | | | Manufactured Boards | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ductility Materials that can be stretched are ductile | | | Manufactured boards are usually made from natural timber waste and adhesive. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elasticity Ability to be stretched and then return to its original shape | | | Medium-density fibreboard (MDF) | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Plywood | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Chipboard | | | | | | | | | | | | | | | | | | | | | | | | | |



Year 10 PRODUCT DESIGN Term 3



| A. Physical & Working Properties | What we are learning this term: | E. 6 R's | | | | | | | | | | | | | | | | | | |
|---|---|--|------------------------|----------|-------|-------|--|------|-----------------|--|--|------------------------------|--------------|--|--|-----------------|-----------------|--|--|-------------------|
| Physical properties are _____. | A. Physical & Working Properties B. Forces & Stressors C. Types of Motion D. Paper & Card/Boards E. 6 R's F. Natural & Manufactured Timbers | You can use the 6R's when designing to help reduce the impact that new products have on the environment. | | | | | | | | | | | | | | | | | | |
| Absorbency | B. Forces and Stressors Forces apply _____ to objects, causing them to _____ or _____. Different materials can withstand different forces. | Repair | | | | | | | | | | | | | | | | | | |
| How solid a material is | | Recycle You can extend a products life by passing it on or using it again. | | | | | | | | | | | | | | | | | | |
| Fusibility | Tension | Reduce | | | | | | | | | | | | | | | | | | |
| Ability to conduct electricity | | You can refuse to buy a product if you think it is wasteful. Such as plastic bags. | | | | | | | | | | | | | | | | | | |
| Thermal Conductivity Ability to conduct heat | Is a pushing or squashing force, e.g. _____ _____ _____ | F. Natural & Manufactured Timbers | | | | | | | | | | | | | | | | | | |
| Working properties are _____. | Bending | Natural timber comes from _____. | | | | | | | | | | | | | | | | | | |
| Strength | | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Hardwood</th> <th style="width: 50%;">Softwood</th> </tr> </thead> <tbody> <tr> <td>Ash</td> <td></td> </tr> <tr> <td></td> <td>Pine</td> </tr> <tr> <td>Mahogany</td> <td></td> </tr> <tr> <td></td> <td>Softwoods are _____ _____</td> </tr> </tbody> </table> | Hardwood | Softwood | Ash | | | Pine | Mahogany | | | Softwoods are _____ _____ | | | | | | | | |
| Hardwood | Softwood | | | | | | | | | | | | | | | | | | | |
| Ash | | | | | | | | | | | | | | | | | | | | |
| | Pine | | | | | | | | | | | | | | | | | | | |
| Mahogany | | | | | | | | | | | | | | | | | | | | |
| | Softwoods are _____ _____ | | | | | | | | | | | | | | | | | | | |
| The ability to withstand impact with damage | Is a cutting force. The opposing forces are not directly opposite each other, e.g. _____ _____ | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">D. Paper & Card/Boards</th> </tr> <tr> <th style="width: 50%;">Paper</th> <th style="width: 50%;">Board</th> </tr> </thead> <tbody> <tr> <td colspan="2">Paper and cards/boards both come from _____.</td> </tr> <tr> <td>Cartridge Paper</td> <td></td> </tr> <tr> <td></td> <td>Duplex Board</td> </tr> <tr> <td>Layout Paper</td> <td></td> </tr> <tr> <td></td> <td>Foam Core Board</td> </tr> <tr> <td>Corrugated Card</td> <td></td> </tr> <tr> <td></td> <td>Solid White Board</td> </tr> </tbody> </table> | D. Paper & Card/Boards | | Paper | Board | Paper and cards/boards both come from _____. | | Cartridge Paper | | | Duplex Board | Layout Paper | | | Foam Core Board | Corrugated Card | | | Solid White Board |
| D. Paper & Card/Boards | | | | | | | | | | | | | | | | | | | | |
| Paper | Board | | | | | | | | | | | | | | | | | | | |
| Paper and cards/boards both come from _____. | | | | | | | | | | | | | | | | | | | | |
| Cartridge Paper | | | | | | | | | | | | | | | | | | | | |
| | Duplex Board | | | | | | | | | | | | | | | | | | | |
| Layout Paper | | | | | | | | | | | | | | | | | | | | |
| | Foam Core Board | | | | | | | | | | | | | | | | | | | |
| Corrugated Card | | | | | | | | | | | | | | | | | | | | |
| | Solid White Board | | | | | | | | | | | | | | | | | | | |
| Toughness | Torsion | Manufactured Boards | | | | | | | | | | | | | | | | | | |
| Being able to bend or shape easily would make a material easily malleable | | Manufactured boards are usually made from _____. | | | | | | | | | | | | | | | | | | |
| Ductility | | Plywood | | | | | | | | | | | | | | | | | | |
| Elasticity Ability to be stretched and then return to its original shape | | | | | | | | | | | | | | | | | | | | |

Film Music

Area of study 3 - Eduqas GCSE Music



Some film **SOUNDTRACKS** include specially composed **SCORES**, either for orchestra (e.g. composers like John Williams, Ennio Morricone) or songs written especially for the film (e.g. Disney films). Other films use pre-existing music e.g. popular songs from the era/place in which the film is set.

STRINGS

- Violin
- Cello
- Viola
- Double bass
- Harp

WOODWIND

- Flute
- Clarinet
- Oboe
- Bassoon
- Saxophone

BRASS

- Trumpet
- Trombone
- French horn
- Tuba

KEYBOARDS

- Piano
- Electronic keyboard
- Harpsichord
- Organ
- Synthesizer

PERCUSSION

- Bass drum
- Snare drum
- Triangle
- Cymbal
- Drum kit (untuned)
- Timpani
- Glockenspiel
- Xylophone (tuned)

OTHER

- Electric guitar
- Bass guitar
- Spanish/classical guitar
- Traditional world instruments

Musical elements

Film composers use the **MUSICAL ELEMENTS** (tempo, texture, dynamics, timbre, tonality, rhythm, melody, harmony) to create mood and atmosphere to help to tell the story and enhance the action.

For example:

In a sad, reflective scene, a composer might use slow tempo, minor tonality, soft dynamics, legato, homophonic texture, long sustained notes, and a conjunct melody.

An exciting car chase scene in a thriller might have a fast tempo, busy, polyphonic texture, dissonant chords, loud dynamics, syncopated rhythms, a disjunct melody and short riffs.

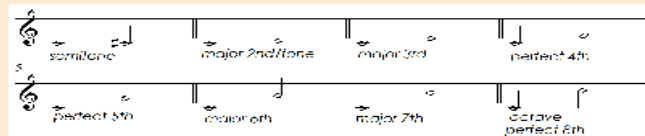
A scene where the superhero 'saves the day' might use a major tonality, brass fanfares, loud dynamics, accents, 4th and 5th (intervals).

Composers will often use **CONTRASTS** to create effect (e.g. using a wide range of pitch from very high to very low).

Intervals

Film composers often use intervals to create a particular effect (e.g. a rising perfect 4th sounds 'heroic', and a semitone can sound 'menacing').

An interval is the distance between two notes.



Rising interval: moving upwards (ascending)

Falling interval: moving downwards (descending)

Specific instrumental terms

| | |
|------------------------|--|
| Pizzicato | Plucking the strings. |
| Divisi | Two parts sharing the same musical line. |
| Double stopping | Playing two strings at the same time. |
| Arco | Using a bow to play a stringed instrument. |
| Tremolo | A 'trembling' effect, moving rapidly on the same note or between two chords (e.g. using the bow rapidly back and forth). |
| Tongued | A technique to make the notes sound separated (woodwind/brass). |
| Slurred | Notes are played smoothly. |
| Muted | Using a mute to change/dampen the sound (brass/strings). |
| Drum roll | Notes/beats in rapid succession. |
| Glissando | A rapid glide over the notes. |
| Trill | Alternating rapidly between two notes. |
| Vibrato | Making the notes 'wobble' up and down for expression. |

Composers also use:

| | |
|--------------------------|---|
| Theme | The main tune/melody. |
| Motif | A short musical idea (melodic or rhythmic). |
| Leitmotif | A recurring musical idea linked to a character/object or place (e.g. Darth Vader's motif in Star Wars). |
| Underscoring | Music playing underneath the dialogue. |
| Scalic | Melody follows the notes of a scale. |
| Triadic | Melody moves around the notes of a triad. |
| Fanfare | Short tune often played by brass instruments, to announce someone/something important; based on the pitches of a chord. |
| Pedal note | A long, sustained note, usually in the bass/lower notes. |
| Ostinato/riff | A short, repeated pattern. |
| Conjunct | The melody moves by step. |
| Disjunct | The melody moves with leaps/intervals. |
| Consonant harmony | Sounds 'good' together. |
| Dissonant harmony | Sounds 'clashy'. |
| Chromatic harmony | Uses lots of semitones/accidentals that's not in the home key. |
| Minimalism | A style of music using repetition of short phrases which change gradually over time. |

| Question | Answer | Question | Answer |
|---|--|--|--|
| What is a Theme in film music? | | What does the word Interval mean? | |
| Define Pizzicato | | A _____ Texture is typically used for a sad scene | Polyphonic Monophonic Homophonic |
| What is Minimalism ? | | A Major tonality is used for what kind of scene? | |
| How does a Rising Perfect 4th sound? | | What is a Trill ? | |
| Define Ostinato | | The term for a piece of music written for a film is a..... | Score Soundtrack |
| What Dynamics could be used in a car chase scene? | <i>pp p f ff mp mf</i> | What is a Falling interval ? | |
| Circle the correct definition for Conjunct | <ol style="list-style-type: none"> The melody moves in leaps The melody moves in steps The melody moves in octaves The melody repeats the same 3 notes | List 3 film composers | |
| What is Vibrato ? | | If notes are Slurred they are played? | Short and snappy Smoothly |
| What do composers use to create effect? Circle the correct answer | Contrast Brass Fanfares Dynamics | What interval is an Octave ? | Perfect 4th Major 2nd Minor 2nd Perfect 8th |
| What is the term for a theme that is repeated throughout a film? | | What does Scalic mean? | |



| Main assessment objectives | |
|---|--|
| Learning outcome: Know the personal qualities, styles, roles and responsibilities associated with effective sports leadership. | |
| Be able to plan sports activity sessions. | |

| What we are learning this term: | |
|--|--|
| A. Different leadership roles B. Role-related responsibilities C. Personal qualities D. Leadership styles E. Key considerations when planning sports activity | |

| Can you give examples of managers from different sports? | |
|--|--|
| Gareth Southgate Eddie Jones | |

| Role models | |
|--------------------------------------|---|
| Positive Mo Farah Nicole Adams | Negative Luis Suarez Nick Kyrgios |

| Key sections | |
|--|--|
| Different leadership roles and opportunities | |

| | |
|---------------------------------------|----------------------------------|
| Captain Coach Expedition leader | Manager Teacher Role model |
|---------------------------------------|----------------------------------|

| Role related responsibilities | |
|-------------------------------|--|
|-------------------------------|--|

| | |
|--|----------------------------|
| Knowledge of; Activity Safety Child protection Basic first aid | Enthusiasm for activity |
|--|----------------------------|

| A. The different leadership roles within sport | |
|--|---|
| Role | Definition |
| Coach | A person involved in the direction, instruction and training of the operations of a sports team |
| Manager | Responsible for handling the business matters of athletes and sports teams |
| Captain | The leader of the team who is usually also a player |
| Teacher | A person who teaches, especially in a school |
| Expedition leader | Someone who leads groups on adventurous activities |
| Role model | A person looked to by others as an example |

| A. Role related responsibilities | |
|---|--|
| Knowledge of activity Enthusiasm for activity Knowledge of safety Knowledge of child protection issues Knowledge of basic first aid | |

| G. Considerations when planning sports activities | |
|---|--|
| Session content | Objectives for the session appropriate venue Equipment needs Supervision needs Timing of activities Introduction/conclusion of session Basic warm up/cool down Skills and technique development Engaging Organisation |

| Personal qualities | |
|---|--|
| Reliability Punctuality Confidence Communication Creativity | |

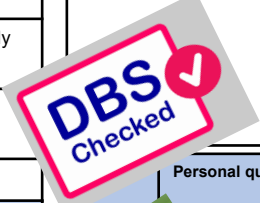
| Safety | Risk assessments- facilities, equipment/clothing checks, activity-specific risks Corrective action- wiping up puddles, removing litter, reporting faulty equipment Emergency procedures- procedures in the event of an accident, procedures in the event of other emergencies, summoning qualified help, completion of relevant documents |
|--------|---|
|--------|---|

| Personal qualities | |
|--------------------|--|
|--------------------|--|

| |
|---|
| Reliability Punctuality Communication Confidence Creativity |
|---|

| Leadership styles | |
|-------------------|--|
|-------------------|--|

| |
|---|
| Autocratic Democratic Laissez-faire |
|---|





Main assessment objectives

Learning outcome: Know the personal qualities, styles, roles and responsibilities associated with effective sports leadership.
Be able to plan sports activity sessions.



What we are learning this term:

- A. Different leadership roles
- B. Role-related responsibilities
- C. Personal qualities
- D. Leadership styles
- E. Key considerations when planning sports activity

| | |
|--------------------|---|
| C. | Can you give examples of managers from different sports? |
| | |
| Role models | |
| Positive | Negative |

| | |
|-----------|--------------------------------------|
| A. | Role related responsibilities |
| | |

| | |
|------------------------|---|
| G. | Considerations when planning sports activities |
| <i>Session content</i> | |
| <i>Safety</i> | |

| | |
|-----------|---------------------------|
| A. | Personal qualities |
| | |

Key sections

Different leadership roles and opportunities

| | |
|--|--|
| | |
|--|--|

Role related responsibilities

| | |
|--|--|
| | |
|--|--|

Personal qualities

| | |
|--|--|
| | |
|--|--|

Leadership styles

| | |
|--|--|
| | |
|--|--|

| | |
|-------------------|--|
| A. | The different leadership roles within sport |
| Role | Definition |
| Coach | |
| Manager | |
| Captain | |
| Teacher | |
| Expedition leader | |
| Role model | |

| | |
|-----------|--------------------------|
| A. | Leadership styles |
| | |



What we are learning this term:

A. Health & Safety

B. Manufacturing processes

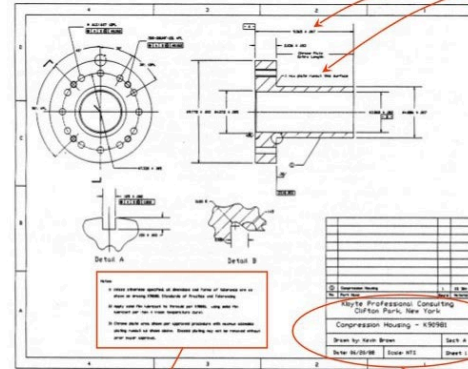
C. reading technical drawings

D. Tools & Equipment



| A. Health & Safety | |
|--|---|
| Risk Assessment | A risk assessment is the analysis of the risks involved when using equipment or performing a process. |
| Hazard – something that may harm someone. Risk – how likely a hazard is to happen. Control measure – actions taken to reduce the risk of harm | |
| Ejection hazard – material being thrown out of the machine toward the user | Entrapment hazard – the user being caught and pulled into the moving parts of the machine |
| Inhalation hazard – people in the vicinity of the hazard breathe in harmful dust or chemicals | Sharp force hazard – the user is cut, stabbed or scraped by the sharp material. |
| Slip, trip and fall hazards – common hazards caused by unclean or cluttered workspaces. | Blunt force hazard – a victim is crushed, hit or bruised by the blunt object. Major blunt trauma can cause fractures or internal bleeding. |

C. Reading technical drawings



Dimension & Notes

Technical drawings always include a border and title block to identify them and give the reader important information. You may also write notes on a technical drawing, if relevant.

The scale factor shows how big the real product is compared to the drawing.

| | |
|--|----------------------------|
| TITLE WHEEL BEARING | |
| NAME John Smith | CHECKED <i>[Signature]</i> |
| VERSION 1.1 | DATE 16/10/98 |
| NO NEED TO MEASURE. ALL MEASUREMENTS IN MM | SCALE 1:1 |
| ITI ENGINEERING | |

The type of orthographic drawing is shown by this symbol.

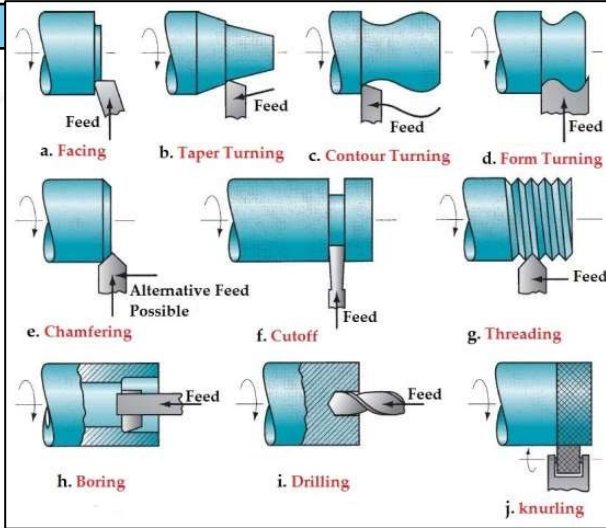
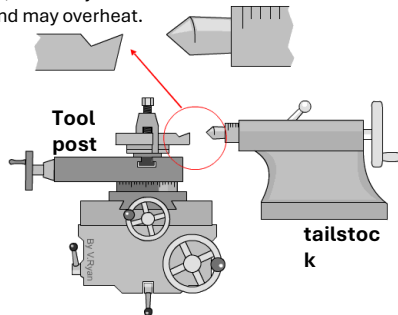
Notes

Lec. Bhuiyan Shameem Mahmood

B. Manufacturing processes

The **dead center tool** is used to align the tools in the **tool post**.

The dead center is placed in the **tailstock**. If the cutting tools are not in line with it, then they will not cut efficiently and may overheat.



D. Tools & Equipment



External calliper – used for measuring the external dimensions of a workpiece



Lathe tools – cutting tools for a range of functions. From left to right; Parting tool, right-hand cutting tool, threading tool, left-hand cutting tool







Knurling tool - an attachment for the lathe that allows you to impress a diamond pattern into the material. Example shown here.



Tap and die set – these tools are attached to wrenches and allow you to cut an internal or external thread (spiral) in a hole. The hole must be pre-drilled 0.5mm smaller than the intended size of the final hole.





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

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






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





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

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

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

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





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

| What we are learning this term: | | F. How do humans develop emotionally (E)? Explain each. | |
|---|--|---|--|
| E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)? | | | |
| | | | |
| E. <i>How do humans develop intellectually (I)?</i> | | | |
| Infancy  | | <u>Infancy and Early Childhood</u> | |
| | | <u>Adolescence and adulthood</u> | |
| | | <u>Bonding and Attachment</u> | |
| | | <u>Self-image and Self-esteem</u> | |
| | | <u>Security</u> | |
| | | <u>Security</u> | |
| | | <u>Contentment</u> | |
| | | <u>Contentment</u> | |
| | | <u>Independence</u> | |
| | | <u>Independence</u> | |
| | | G. How do humans develop socially (S)? | |
| | | Life Stage Types of relationships and social development | |
| | | Infancy | |
| | | Early childhood | |
| | | Adolescence | |
| | | Early adulthood | |
| | | Middle adulthood | |
| | | Later adulthood | |
| Adolescence  | | | |
| Early and 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? | |
|--|--|--|
| Lifestyle choices include; diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance. | | |
| Positive lifestyle choices lead to: <ul style="list-style-type: none"> • Healthy hair, skin, nails and teeth • Positive self-image • Energy and stamina • Good health • Emotional security  | | Negative lifestyle choices lead to: <ul style="list-style-type: none"> • Being overweight or underweight • Lack of energy • Ill health • Negative self-image • Sexually transmitted diseases (STDs) • Unplanned pregnancy  |
| Our appearance includes: body shape, facial features, hair and nails, personal hygiene and our clothing. Our appearance can affect the way we view ourselves- self-image | | |
| Positive self-image: <ul style="list-style-type: none"> • Feel good about yourself. • Healthy hair, skin, nails and teeth • Big social circle. • High self-esteem. • High self-confidence.  | | Negative self-image <ul style="list-style-type: none"> • Low self-esteem • Low self-confidence • Can lead to eating disorders e.g. anorexia • Can lead to anxiety or depression • Can lead to self-harm • Negative impact on building relationships- social circle decreases.  |

| What we are learning this term: | |
|---------------------------------|--|
| H. | Key words |
| I. | How do physical factors affect development? |
| J. | How does lifestyle affect development? |
| K. | How do social and cultural factors affect development? |
| L. | How do relationships and isolation affect development? |
| 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"> • • • • • | | <ul style="list-style-type: none"> • • • • • |
| Our appearance includes: body shape, facial features, hair and nails, personal hygiene and our clothing. Our appearance can affect the way we view ourselves- self-image | | |
| <u>Positive self-image:</u> |  | <u>Negative self-image</u> |
| <ul style="list-style-type: none"> • • • • • | | <ul style="list-style-type: none"> • • • • • |



K How do social and cultural factors affect development

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

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

Positive affects of a persons culture/religion:

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

Negative affects of a persons culture/religion:

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

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

Belonging to a community:

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

Not belonging to a community:

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

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

What happens when people face discrimination because of gender:

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

What we are learning this term:

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

L How do relationships and isolation affect development?

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

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

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

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

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

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

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

M How do economic factors affect development

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

Not having enough money causes stress and anxiety.

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

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

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

Living in good housing with open spaces:

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

Living in a poor housing with cramped and damp conditions:

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

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

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



K How do social and cultural factors affect development

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

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

Positive affects of a persons culture/religion:

-
-

Negative affects of a persons culture/religion:

-
-

Community refers to:

Belonging to a community:

-
-
-
-
-

Not belonging to a community:

-
-
-
-
-

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

What happens when people face discrimination because of gender:

-
-
-
-

What we are learning this term:

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

L How do relationships and isolation affect development?

| | |
|---|--|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

M How do economic factors affect development

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

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

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

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

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

SWINDON ACADEMY READING CANON

Year 7



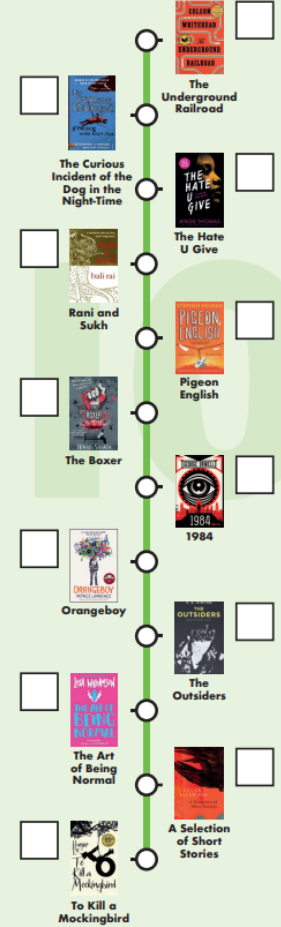
Year 8



Year 9



Year 10



#ReadingisPower