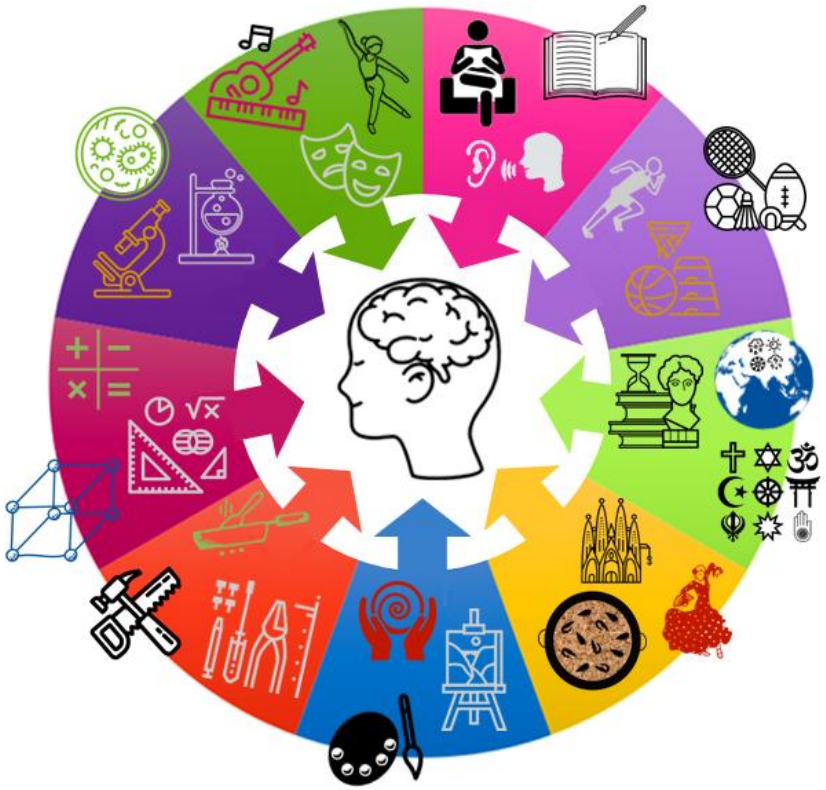
100% book - Year 10 Foundation

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



Term 3

Swindon Academy 2025-26	
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."

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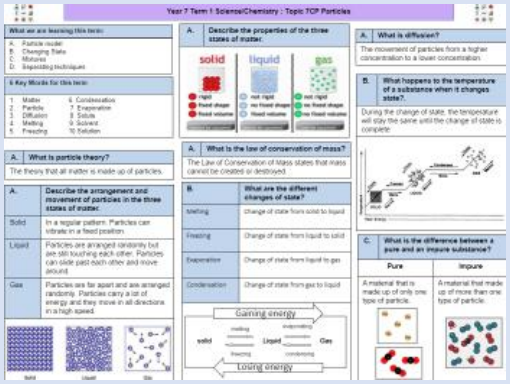
How to use your 100% book of Knowledge Organisers and Quizzable Organisers

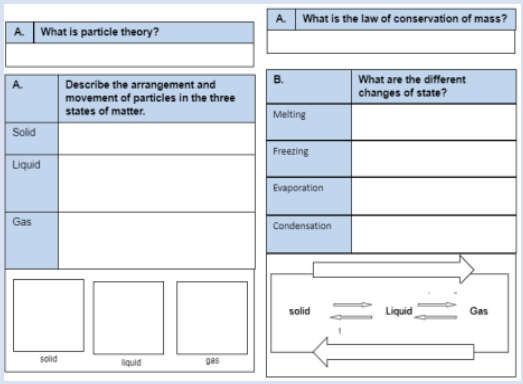
Knowledge Organisers



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

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

Quizzable Knowledge Organisers



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

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

Top Tip

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

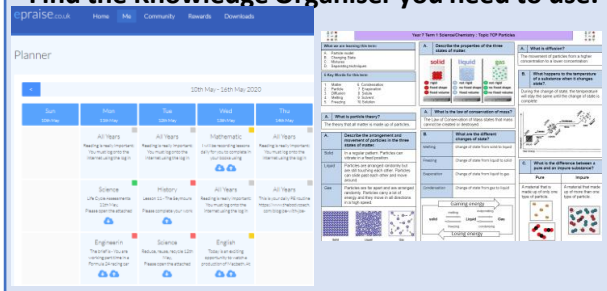
Expectations for Prep and for using your Knowledge Organisers

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

How do I complete Knowledge Organiser Prep?

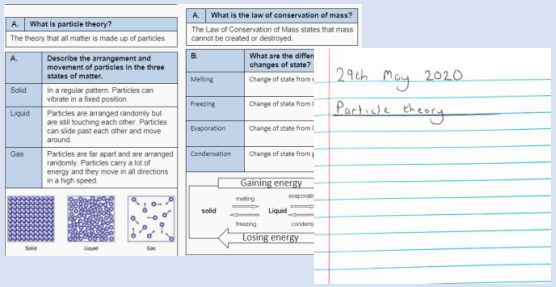
Step 1

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



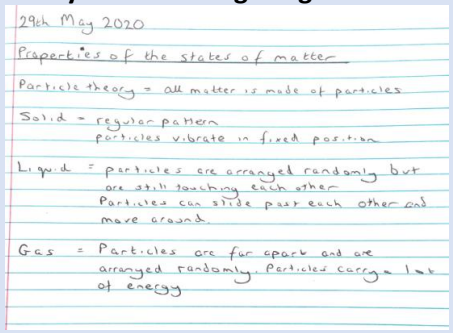
Step 2

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



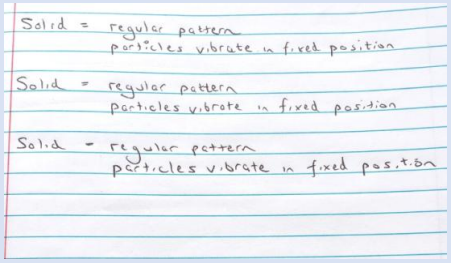
Step 3

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



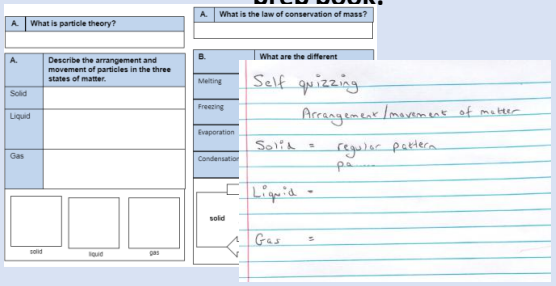
Step 4

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



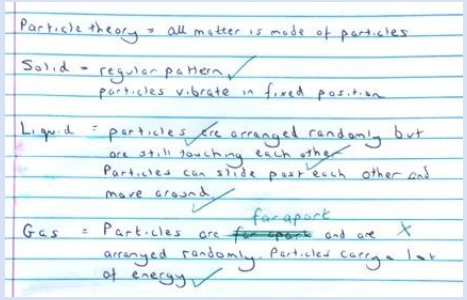
Step 5

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



Step 6

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



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

ENGLISH –A Christmas Carol- Foundation

1. Context

Writer: Charles Dickens (1812-1870)
Dates: First published in 1843
Genre: Allegorical; a ghost story.
Era: Victorian
Set: Victorian London
Structure: The novella is divided into 5 staves (chapters).

Biography of Dickens

- 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.

Christmas:
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.

London and inequality:
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.

The Poor Law, 1834
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.

Malthusian Theory
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.

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).

2. Key Characters

Ebenezer Scrooge: He is initially established as a villain who is 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.

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.

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.

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.

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.

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.

3. Central Themes

Social injustice	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.
Transformation and redemption	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.
Social responsibility	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.

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

Stave	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.
Circular structure	Circular narratives cycle through the story one event at a time to end back where the story originated.
Allegory	A story that can be interpreted to reveal a hidden meaning, typically a moral or political one.
Foreshadowing	Foreshadowing is a literary device in which a writer gives an advance hint of what is to come later in the story.
Semantic Field	A set of words that are related in meaning. Dickens frequently uses semantic fields of warmth and coldness that are associated with the characters.

ENGLISH –A Christmas Carol- Foundation

1. Context Notes

Writer:
(1812-1870)
Dates: First published in

Genre:

Era:

Set:

Structure:

Biography of Dickens

- Born in Portsmouth in _____
- When Dickens was 12…
- Dickens had to…
- Dickens dedicated his life to…

Christmas:

London and inequality:

The Poor Law, 1834

Malthusian Theory

The Supernatural:

2. Key Character Notes

Ebenezer Scrooge:

Bob Cratchit:

Fred:

Marley's Ghost:

The ghosts:

Belle:

3. Central Themes Notes

Social injustice	
Transformation and redemption	
Social responsibility	

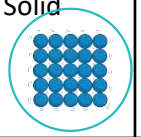
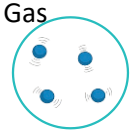
4. Key Vocabulary

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

5. Key Terminology, Symbols and Devices

Stave	
Circular structure	
Allegory	
Allegorical figures	
Foreshadowing	
Didactic	
Semantic Field	

T3 P3 – Particle model of matter

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

Models	+	-
Particle diagrams	Easy to see/draw arrangement	• Can't see the forces between particles • Particles look like flat circles rather than 3D spheres • Movement isn't shown
Kinetic models (eg marbles or animations)	Easy to see particle arrangement Can see the movement of particles	Can't see forces between particles

Density

Density is mass per cm^3

It can be calculated using:

Density = mass ÷ volume

ρ = m ÷ V

Required practical – measuring the density of different materials.

For regular solids :

Mass measured by **top pan balance**

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

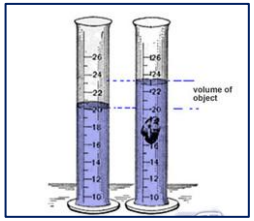
For irregular solids:

Mass measured by **top pan balance**

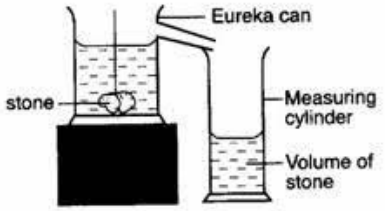
Volume measured by **displacement of water**

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

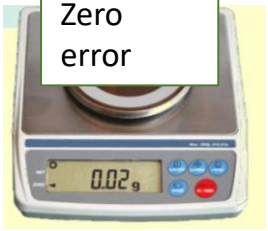
Measure the volume of small objects by putting them into a measuring cylinder with $100cm^3$ water in



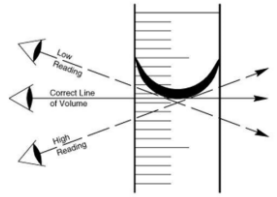
Measure the volume of larger objects by putting them into a full eureka can and catching and measuring the water that is displaced



Zero error



Read the meniscus!



Required practical continued : Density of liquids

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

Density = mass ÷ volume.

Particle model

1. Describe the arrangement of the particles in a solid, a liquid and a gas
2. Describe the movement of the particles in a solid, a liquid and a gas
3. In which state of matter are the forces between the particles the weakest?
4. In which state of matter are the forces between the particles the strongest?
5. Give one advantage of using particle diagrams to show the different states of matter
6. Give three disadvantages of using particle diagrams to show the different states of matter
7. Give two advantages of using kinetic models to show the different states of matter
8. Give one disadvantages of using kinetic models to show the different states of matter

Density

1. Give the formula that links density, mass and volume?
2. Give a unit for density
3. Which piece of equipment is used to measure mass of an object?
4. What type of error is it if a balance reads 0.03g when nothing is resting on it?
5. What term is used to describe when water is pushed out of the way by a solid object?
6. Name two pieces of equipment that could be used to measure the volume of an irregular object
7. What three measurements do you need to calculate the volume of a regular object?

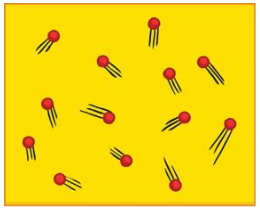
Internal energy

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

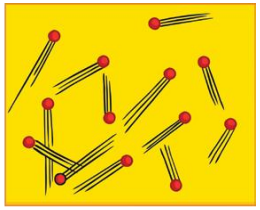
The internal energy of a system is the total kinetic energy and the potential energy of the particles

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

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



Low Temperature



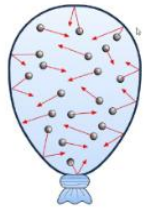
High Temperature

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

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

Gas pressure

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



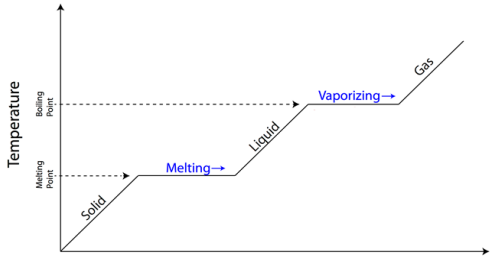
The more energy the particles have, the higher the temperature.
An increase in temperature of a gas causes the particles to move further apart.
If this is not possible, because of the container, then there is an increase in pressure.

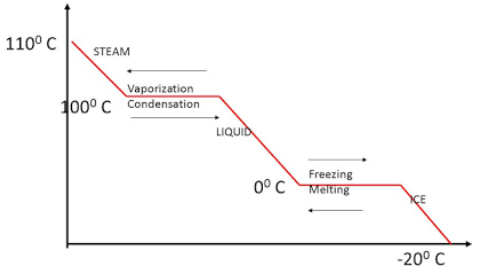
Heating and cooling

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

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

This can be seen by plotting the temperature change during **heating** or **cooling.**
Heating a solid would give us a graph that looks like this:





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

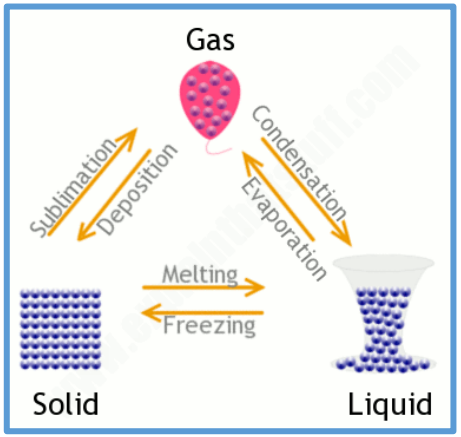
When the line is increasing (heating) or decreasing (cooling)

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

Specific latent heat

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

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



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

Energy = mass (kg) x specific latent heat (L)

$E = m L$

Specific heat capacity

This is the among of energy needed to change the temperature of 1Kg of a substance by 1ºC
It is calculated by:

E = specific heat capacity x mass x temp change

$E = SHC \times m \times \theta$

Internal energy

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

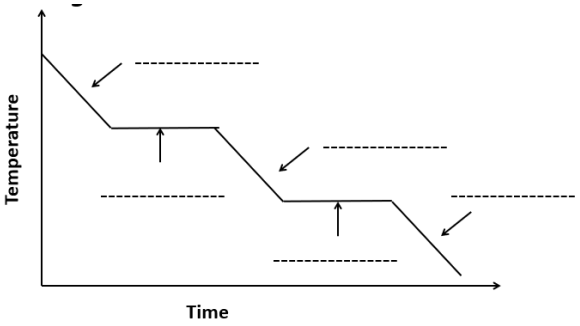
Gas pressure

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

Heating and cooling

1. What two things can happen to a substance when the internal energy changes?
2. Label the graph below using the words given:

liquid, gas, solid, condensing, freezing

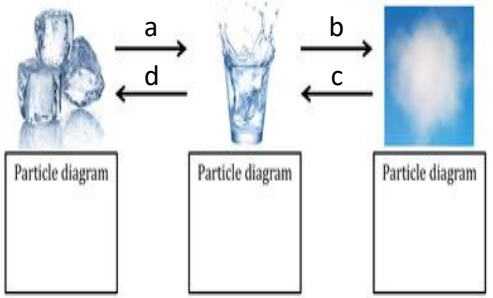


3. What is happening to temperature when the line is flat on a heating or cooling curve?

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

Specific latent heat

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



5. Draw the particle diagrams in the boxes

C3 – Quantitative Chemistry

Conservation of Mass

- Atoms cannot be created or destroyed during reactions.
- **Mass of reactants = mass of products**.

To show mass is conserved in a reaction:
M_r on the left-side must be same as the right side.

$2Mg + O_2 \rightarrow 2MgO$
$(2 \times 24) + (2 \times 16) \rightarrow 2(24 + 16)$
$48 + 32 \rightarrow 2 \times 40$
$80 \rightarrow 80$

Reacting masses

Use conservation of mass to predict masses:

magnesium + oxygen → magnesium oxide
8g ? 10g

Both sides need to be equal:
10g – 8g = 4g of oxygen

Percentage Mass

- Percentage mass of an element in a compound

$$\frac{\text{Mass of the element in compound}}{\text{Total mass of compound}} \times 100$$

Example Question:
Find the percentage mass of oxygen in magnesium oxide (MgO).
A_r of magnesium = 24 A_r of oxygen = **16**

M_r of MgO = 24 + 16 = **40**

$$\% \text{ mass} = \frac{A_r}{M_r} = \frac{16}{40} = 0.4 \times 100 = 40\%$$

X 100 to make a %

40% of the mass of MgO is oxygen

Mass Changes

- Mass is always conserved in a reaction.
- Sometimes it may seem like the mass has increased/decreased.

- If a **reactant** is a gas – mass may **increase**.

magnesium + oxygen → magnesium oxide

Oxygen is in the air before it combines with magnesium – you cannot find the mass of oxygen on the balance.

It will look like the mass has increased when it is re-weighed at the end.

- If a **product** is a gas and the gas is able to escape the system – mass will **decrease**.

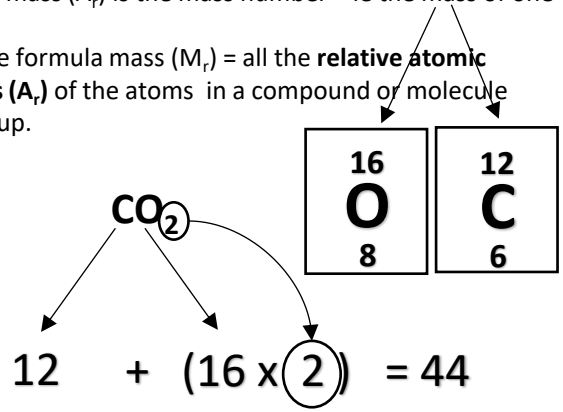
sodium carbonate → sodium oxide + carbon dioxide

It will look like the mass has decreased as some of the atoms have been given off as gas and have escaped – so cannot be re-weighed.

Atomic mass (A_r) and Relative Formula Mass (M_r)

- Atomic mass (A_r) is the mass number – ie the mass of one atom
- Relative formula mass (M_r) = all the **relative atomic masses (A_r)** of the atoms in a compound or molecule added up.

Example



The Mole (HT only)

- Avogadro constant – 6.02 x 10^{23}

- One mole contains 6.02 x 10^{23} atoms or molecules
- The mass, in g, of one mole is the Ar (if an element) or Mr if a compound or molecular element

Iron has a A_r of 56, so 1 mole of iron is 56 g and contains 6.02 x 10^{23} atoms of iron

Ammonia (NH_3) has an Mr of 17, so 1 mole of ammonia has a mass of 17g. and contains 6.02 x 10^{23} molecules of ammonia

C3 – Quantitative Chemistry

1. What is meant by conservation of mass?
2. Mass of reactants = ?
3. The M_r of the left side of an equation must be the same as..

1. How do you calculate the percentage mass of an element in a compound?
2. What do you do to convert a decimal into a percentage?

1. Should mass change in a reaction?
2. If a reactant is a gas, what will happen to the mass?
3. Why will it appear this has happened?

1. What does M_r stand for?
2. What is the relative formula mass?
3. Where can you find the relative atomic mass (A_r) of an element?

1. How many atoms are in one mole?
2. How do we know what the mass of one mole of an element is?
3. How do we know the mass of one mole of a compound?

4. If a product is a gas, what will happen to the mas?
5. Why will it appear this has happened?

C3 – Quantitative Chemistry

Concentrations of Solutions

- Concentration =mass of dissolved substance in specific volume (eg dm^3)
- More substance dissolved = more concentrated solution

Concentration = mass ÷ volume
(g/dm^3) (g) (dm^3)

Can be rearranged to find mass dissolved:

mass = concentration x volume
(g) (g/dm^3) (dm^3)

$1000cm^3 = 1dm^3$
cm^3 → dm^3 = divide by 1000.

Calculating mass in a given volume

If you have a known volume of a solution of known concentration then you can calculate the mass of dissolved solid.

E.g Calculate the mass of dissolved solid in $25cm^3$ of a $96g/dm^3$ solution

$96g/dm^3$ means 96g in every $1000cm^3$

$25c\ m^3$

How do we get from 1000 to 25? (÷40)

Do the same to the other side (÷40)

2.4g

Moles and Equations (HT only)

- You can use moles to help you write balanced symbol equations.

Example Question
18.4g of Sodium reacted with 6.4g of oxygen to give 24.8g sodium oxide. Use the masses to write the balanced equation.

Step	Example
Write the equation for the reaction (unbalanced)	$Na + O_2 \rightarrow Na_2O$
write down the mass or % given in the question	18.4 + 6.4 → 24.8
Write the mass of one mole of each element or compound	23 32 62 (e.g 18.4 ÷ 23)
Divide the mass given in question by the mass of one mole	0.8 0.2 0.4
Turn the answers into whole number simple ratio	8 2 4 (cancel down) 4 1 2
Put the numbers into the equation	$4Na + O_2 \rightarrow 2Na_2O$

Calculating reacting masses (HT)

Example Question
Calculate the mass of calcium needed to make 11.2g Calcium oxide

Step	Calculation
Write the balanced equation	$2Ca + O_2 \rightarrow 2CaO$
Write the masses of each substance	80 + 32 → 112
Write down the given mass in the question.	11.2
Work out the 'scale' factor (ie what did you have to do to the original number to get to the desired mass	÷ 10
Do the same to the other side	8g

Limiting Reactants (HT only)

- If one reactant runs out before the other, then the reaction will stop.
- The reactant that runs out first in a reaction is known as the limiting reactant.

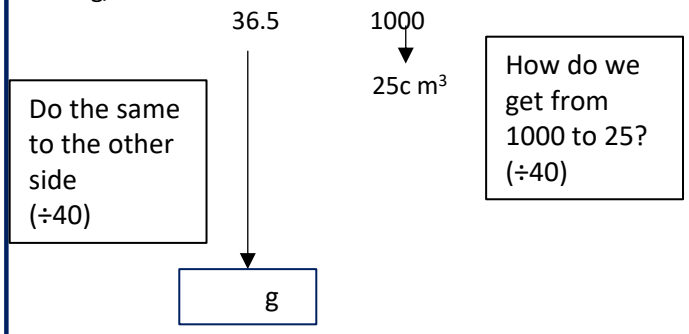
C3 – Quantitative Chemistry

1. What does concentration mean?
2. How can you make a solution more concentrated?
3. State the equation to calculate concentration in g/dm^3.
4. What is the unit for volume?
5. How many cm^3 are in a dm^3?

Calculating mass in a given volume

1. What does 36.5g/dm^3 mean?

2. Calculate the mass of dissolved solid in 25 cm^3 of a 36.5g/dm^3 solution



Moles and Equations (HT only)

12g of magnesium (Mg) reacted with 8g of oxygen (O_2) to produce 20g magnesium oxide (MgO). Use the masses to write a balanced equation

Step	Example
Write the equation for the reaction (unbalanced)	
write down the mass or % given in the question	
Write the mass of one mole of each element or compound	
Divide the mass given in question by the mass of one mole	
Turn the answers into whole number simple ratio	
Put the numbers into the equation	

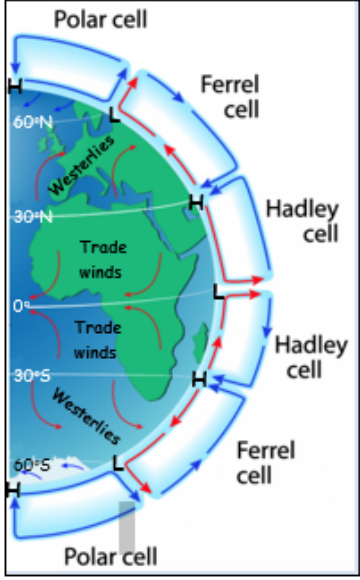
1. What is a limiting reactant?

2. Complete the calculation: Calculate the mass of calcium needed to make 224g of calcium oxide

Step	**Calculation**
Write the balanced equation	$2Ca + O_2 \rightarrow 2CaO$
Write the masses of each substance	
Write down the given mass in the question.	
Work out the 'scale' factor (ie what did you have to do to the original number to get to the desired mass	
Do the same to the other side	

GCSE Geography AQA. 3. Natural Hazards

9. Global atmospheric circulation

Factor	Explanation
Global atmospheric circulation	Worldwide system of winds, which transport heat from the equator to the poles.
Key information	Wind is large scale movement of air from HIGH to LOW pressure. 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 Ferrel and Polar cell creating an area of low pressure. The UK gets lots of low pressure weather blown in from the Atlantic. At 30°N air sinks between the Ferrel/Hadley cell creating high pressure (deserts <250mm rain). On the equator air rises as the sun's heat is most concentrated. This creates a low pressure 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.

11. Evidence that weather is becoming more extreme…

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

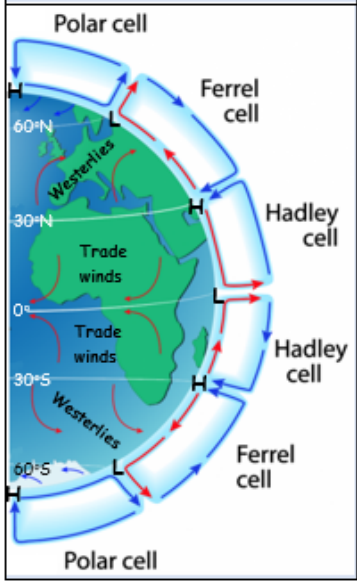
Hazard	Example
Temperature	10 warmest yrs all occurred since 1990 2018 joint hottest summer on record. Dec 2010 coldest month for 100 years.
Rainfall	More rainfall records broken between 2010 - 2014 than in any other decade. Dec 2015 wettest month on record.

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	1 £10 million damage 2 14,000 ha of farmland flooded 3 600 homes flooded 4 Moorland and Muchelney cut-off 5 Floodwaters contaminated 6 Soil damaged for 2 years after
Manage-ment strategies	**Immediate responses** • Army helped with rescue boats • Volunteers and community groups • Locals used boats to go shopping/school **Long term responses** • £20 million flood action plan • Rivers dredged • Road levels raised • Tidal barrage by 2024

GCSE Geography AQA. 3. Natural Hazards

9. Global atmospheric circulation

Factor	Explanation
Global atmospheric circulation	
Key information	
	

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…

.

Hazard	Example
Temperature	

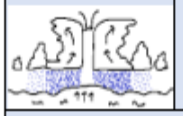
12. An example of a recent extreme weather event in the UK

Name	
Causes	
Impacts	
Manage-ment strategies	

GCSE Geography AQA. 3. Natural Hazards

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?

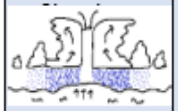
Strategy	Explanation
Prediction / monitoring	Satellites and aircraft to monitor storms. Computer models calculate the predicted track. Allows warnings so people can evacuate or protect their home.
Planning	New developments avoid high risk areas Emergency services train and prepare. Plan evacuation routes. 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.

GCSE Geography AQA. 3. Natural Hazards

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		
Secondary effects		
Immediate responses		
Long term responses		

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.

Climate Change

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A.	**Changes in climate** *(3)*
Climate change	
Glacial periods	
Inter-glacial periods	

B.	**Measuring climate change** *(3)*
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	
More droughts	
Melting glaciers (ice rivers)	
Melting Arctic ice	

H.	**Place specific examples** *(2)*
Adaption	
Mitigation	

GCSE History : Medicine in modern Britain c1900-present

What we are learning this term:

1.1 Ideas about the cause of disease and illness
1.2 Approaches to prevention and treatment
1.3 Case studies: Fleming, Florey, Chain and the fight against lung cancer in the 21st century

A.	*Can you define these key words?*
DNA	Short for deoxyribonucleic, DNA carries genetic information from one living thing to another
Genome	The complete set of DNA containing all information needed to build a particular organism
Haemophilia	A genetic disease passed from parent to child that stops blood clotting
Mastectomy	Surgery during which a person has one or both breasts removed.
Magic bullet	A chemical cure that will attack microbes in the body without damaging the body
Antibiotic	A Drug made from bacteria that kill other bacteria and so cure and infection or illness
Penicillin	The first antibiotic drug produced from the mould of penicillin to treat infections

C.	Lung Cancer (1.3)
What is lung cancer?	Lung cancer is the second most common cancer in the UK. It mainly affects people over the age of 40, it is an infection of the lungs.
Causes	Lung cancer became a much more common disease after 1900. Most lung cancers are caused by external factors such as smoking and chemicals in the air such as radon gas. In 1950, scientists proved that smoking was linked to lung cancer.
Treatments	There are three key treatments for lung cancer in the 21st century. People can be treated using a transplant, radiotherapy and chemotherapy. There is also research into genetic treatments, however it is not yet possible to treat lung cancer with genetics meaning its impact is limited.
Prevention	The British taking action through encouraging current smokers to quit, preventing people from becoming smokers and from protecting non-smokers from the dangers of second-hand smoke through varies pieces of legislation being produced.

B. Change and continuity in ideas about disease and illness in modern Britain. (1.1-1.2)

Causes	Prevention	Treatments
Germ theory – By 1900, the germ theory had been around for 40 years and microbes had been linked with outbreaks of disease.	Doctors now understood that the body produced antibodies to fight diseases that had previously infected it and that is how vaccines worked.	Mass production of penicillin – Florey and Chain proved that penicillin was effective in treating infections. The US government, observing the benefits funded the mass production.
Lifestyle factors – drinking too much alcohol leads to liver and kidney problems, intravenous drug taking and unprotected sex can spread diseases and the fashion of tanning led toa rise in skin cancer.	Antibiotics – Inspired by the discovery of penicillin, other scientists investigated molds and fungi in the search for more antibiotics. In the short term antibiotics have been a miracle cure for a variety of diseases, however their long-term impact has yet to be measured.	Science of technology in lung cancer treatment; the use of transplants, radiotherapy and chemotherapy. Genetic research is not yet used as a possible treatment for lung cancer.
Fundamental laws of inheritance: By 1900, a German scientist Mendel had theorized that genes come in pairs and one is inherited from each parent	New approaches to prevention through mass vaccinations – for example the national vaccination campaign against diphtheria was launched in 1942, the first of its kind.	Improved access to care – There was rapid improvement in the availability of care outside the home from 1948 onwards. The NHS made medical services free at point of service. This gave everybody access to medical care.
The human genome project –this was launched in 1990 and was originally led by James Watson. For a decade, 18 teams of scientists all over the world worked together to decode and map the human genome, this would make it possible for scientists to identify mistakes of mismatches in DNA	Government legislation - the government has passed laws to provide a healthy environment for the population. Examples of these were Clean Air Acts of 1956 and 1968. These two pieces of legislation were triggered by bad episodes of smog in London in 1952.	Specific, effective medicines matched with the diseases that they treat. In 1900 25% of deaths were caused by infectious diseases, by 1990 that number had fallen to less than 1%.
	Government lifestyle campaigns were also used to help people prevent disease themselves by promoting healthier lifestyles.	

D. Key People (1.3)

Fleming	Florey	Chain
Fleming was a British doctor working at ST. Mary's hospital in London. He had a keen interest in bacteriology and had been one of the first doctors to use the first 'magic bullet' to treat syphilis. Fleming identified the mould in his dirty petri dish as penicillin. The bacteria appeared to kill off the harmful staphylococcus bacteria. Fleming published his findings and at this time scientists were actively searching for chemical treatments.	Florey was an Australian pathologist working at Oxford medical school. Florey (with Chain) was conducting investigations into neglected research. Following the testing on mice, further tests of penicillin needed to be done on a larger scale, however Florey and Chain struggled to produce penicillin on a large scale. Florey refused to patent the drug, saying it should be available for everybody, meaning the development of the drug didn't cost much money.	Chain had escaped Nazi Germany where he had been a biochemist. Chain along with Florey was conducting investigations into previously neglected research. In 1940 he tested the extracted penicillin on infected mice. It appeared to be promising and the penicillin was working. Chain and Florey

GCSE History : Medicine in modern Britain c1900-present

What we are learning this term:

1.1 Ideas about the cause of disease and illness
1.2 Approaches to prevention and treatment
1.3 Case studies: Fleming, Florey, Chain and the fight against lung cancer in the 21st century

A.	*Can you define these key words?*
DNA	
Genome	
Haemophilia	
Mastectomy	
Magic bullet	
Antibiotic	
Penicillin	

C.	Lung Cancer (1.3)
What is lung cancer?	
Causes	
Treatments	
Prevention	

B. Change and continuity in ideas about disease and illness in modern Britain. (1.1-1.2)

Causes	Prevention	Treatments

D. Key People (1.3)

Fleming	Florey	Chain

Year 10 GCSE Religious Education KO - Islam Practices

Keywords	
Tawalla	Showing love for God and for those who follow Him
Tabarra	Disassociation with God's enemies
Khums	The obligation to pay one-fifth of acquired wealth
Lesser jihad	The physical struggle or holy war in defence of Islam
Greater jihad	The **daily** struggle and inner spiritual striving to live as a Muslim
Sunni	Muslims who believe in the successorship of Abu Bakr, Umar, Uthman and Ali as leaders after the Prophet Muhammad
Shi'a	Muslims who believe in the Imamah, leadership of Ali and his descendants
Niyyah	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

What we are learning in this unit

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

A.	*5 Pillars of Islam and 10 obligatory acts*
What are the 5 pillars	• 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
What are the 10 obligatory acts	• 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
Shahadah	• 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

	Jihad

Lesser Jihad	• 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
	  • self-defense
	  • proportionate
	  • legitimate authority
	  • no harm to civilians

Greater Jihad	• 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"***

B.	*The 5 Pillars - Salah*
What is it?	• ***"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.
Wuzu	• 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.
Rak'ahs and recitations	• 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...".***
Salah at home	• 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
Salah in the mosque	• All mosques have a qiblah wall which is to show where to face Makkah • Men and women pray in separate rooms at the Mosque
Jummah	• Jummah 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
Differences between Sunni and Shi'a	• 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

Year 10 GCSE Religious Education KO - Islam Practices

Keywords	
Tawalla	
Tabarra	
Khums	
Lesser jihad	
Greater jihad	
Sunni	
Shi'a	
Niyyah	
Du'a	

What we are learning in this unit

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

A.	*5 Pillars of Islam and 10 obligatory acts*
What are the 5 pillars	
What are the 10 obligatory acts	
Shahadah	

	Jihad
Lesser Jihad	
Greater Jihad	

B.	*The 5 Pillars - Salah*
What is it?	
Wuzu	
Rak'ahs and recitations	
Salah at home	
Salah in the mosque	
Jummah	
Differences between Sunni and Shi'a	

Year 10 GCSE Religious Education KO - Islam Practices

	The 5 Pillars - Zakah
The role of giving alms	• ***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	• 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	• 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 - Hajj
The role of pilgrimage	• 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	• 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	• 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

	The 5 Pillars - Sawm
The role of fasting	• 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	• 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	• 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	• 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

	Id-ul-Adha, Id-ul-Fitr, Ashura
Id-ul-Adha Not an official holiday in UK	• ***Festival of sacrifice*** • Marks the end of Hajj and is a chance for whole Ummah to celebrate • ***Origins*** – Ibrahim's commitment to God in being willing to sacrifice his son, Ishmael. God was testing Ibrahim • ***Key events –*** new clothes, sacrificing an animal, visiting the Mosque. • People ask a butcher to slaughter a sheep for them and share the meat with the community
Id-ul-Fitr Public holiday in Muslim majority countries, not UK	• ***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	• 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

Year 10 GCSE Religious Education KO - Islam Practices

	The 5 Pillars - Zakah
The role of giving alms	
The significance of giving alms	
Khums	

	The 5 Pillars - Sawm
The role of fasting	
The significance of fasting	
Reasons for fasting	
Night of power	

	The 5 Pillars - Hajj
The role of pilgrimage	
The significance of pilgrimage	
Actions	

	Id-ul-Adha, Id-ul-Fitr, Ashura
Id-ul-Adha Not an official holiday in UK	
Id-ul-Fitr Public holiday in Muslim majority countries, not UK	
Ashura	

Year 10 Spanish Knowledge Organiser Term 3

Techniques for learning vocab:

- Write down the vocabulary 3 times each word.
- 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.
- Use TALKAL, free APP in the chat mode and speak with the AI Ema.

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

TOP 10 2get TOP Marks in Spanish writing

1) Use two tenses in the same sentence:

Impress the examiner by using two different tenses in the same sentence. For example, you could use both the **preterite** and **imperfect tenses:**E.g. **Fuimos a San Sebastián que era bonito pero bastante caro.**
We went to San Sebastian which was pretty but quite expensive.

2) Create more complex sentences by linking with "donde" or "cuando":

E.g. Pasé el verano en un pueblo en el sur de Francia donde tengo unos amigos.
I spent the summer in a village in the south of France where I have friends.

3) Refer to other people: Talk about a variety of people by changing the subject of the sentence. Make sure you use the correct verb ending.

E.g. A mí me gusta nadar pero mi amiga prefiere jugar al voleibol.
I like swimming but my friend prefers to play volleyball.

4) Use a variety of connectives such as:**También** *(also)*, **además** *(moreover)*, **pero** *(but)*, **sin embargo** *(however)*, **por eso** */* **por lo tanto** *(therefore)*, **así que** *(so)*, **entonces** *(then)*, **luego** *(later)*, **aunque** *(although)*, **aún** *(even)*, **antes**, *(before)*, **después** *(after)*, **por ejemplo** *(for example)*, **tal como** *(such as)* and so on.

5) Use exclamation expressions to show surprise, fear, happiness, etc.:

¡Qué horror! – *How awful!*
¡Qué miedo! – *How scary!* **¡Qué bien!** – *Great!*
Qué suerte! – *How lucky!* **¡Qué pena!** – *What a shame!*

6)Use the subjunctive.

Try to include a subjunctive verb if possible. Easy ways to use the subjunctive involve the following expressions:
Es importante que … *(It is important that …)* **Es probable que …** *(It is likely that …)*
Espero que … *(I hope that …)* **Quiero que …** *(I want …)* **No creo que …** *(I don't believe that …)*

7) Remember to justify your opinions:

E.g. **Me encanta viajar a otros países para practicar la lengua y para conocer otras culturas.**
I love travelling to other countries to practice the language and to learn about other cultures.

8) Use a wide range of vocabulary and show off how many different words you know!

9) Use a variety of opinion phrases, don't just stick to "Pienso que…" (I think that …):

Creo que – *I believe that* **Opino que** – *I give the opinion that*
A mi modo de ver – *As I see it* **En mi opinión** – *In my opinion*
Me parece que – *It seems to me that* **Para mí** – *As for me*
(No) Estoy de acuerdo – *I agree (I don't agree)* **Me molesta que –** *It bothers me that*
No aguanto – *I can't stand* **No soporto** – *I can't tolerate*

10) Use comparative structures.

Más + **adjetivo** + **que**: **Mi hermano es más trabajador que yo.**
My brother is more hardworking than me.
Menos + **adjective** + **que:** E.g. **Mi amiga Ana es menos habladora que yo.** *My friend Ana is less talkative than me.* • **Make sure the adjective agrees with the noun it is describing. Tan + adjective + como: (as … as):**
E.g. **La chaqueta es tan cara como el abrigo.** *The jacket is as expensive as the coat.*
Tanto/a/os/as + noun + como: *(as much/many as):*

¡Qué rico! (pages 80–81):

Para ...	*For ...*
el desayuno / la comida	*breakfast / lunch*
la merienda / la cena	*afternoon snack / dinner*
una comida típica	*a typical meal*
un **plato** popular	*a popular dish*
¿De qué país es cada plato?	*What country is each dish from?*
El/La ... es de ...	*... is from ...*
Los/Las ... son de ...	*... are from ...*
México / España / Perú	*Mexico / Spain / Peru*
Chile / Argentina / Cuba	*Chile / Argentina / Cuba*
argentino/a / chileno/a	*Argentinian / Chilean*
colombiano/a / cubano/a	*Colombian / Cuban*
español(a) / inglés/inglesa	*Spanish / English*
mexicano/a / peruano/a	*Mexican / Peruvian*
venezolano/a	*Venezuelan*
¿En qué consiste(n)?	*What is it / are they made of?*
Está hecho/a con ...	*It is made with ...*
Están hechos/as con ...	*They are made with ...*
Consiste(n) en ...	*It consists / They consist of ...*
verdura/carne/*pollo	*vegetables/meat/chicken*
pescado/arroz	*fish/rice*
¿Qué comida o bebida te gustaría probar?	*What food or drink would you like to try?*
Me gustaría **probar** (la paella).	*I would like to try (paella).*
¿Por qué te gustaría probarlo/la/los/las?	*Why would you like to try it/them?*
Porque ...	*Because ...*
parece/**suena** rico/a	*it looks/sounds tasty*
me gusta(n) ...	*I like ...*
es (muy) sano/a.	*it is (very) healthy.*
tiene muchos **beneficios** para la salud.	*it has lots of health benefits.*
¡A comer!	*Let's eat!*
¡Buen provecho!	*Enjoy your meal!*

Learn the vocabulary on these pages.

Write 3 sentences with me gustaría probar:

_____

_____

_____

justify the opinion with dado que parece...

_____

_____

_____

¿Llevas una vida sana? (pages 82–83):

¿Cómo es tu *rutina?	*What is your routine like?*
Por la mañana/tarde/noche ...	*In the morning/afternoon/night ...*
Durante el día/la semana ...	*During the day/week ...*
El fin de semana ...	*At the weekend ...*
Los domingos ...	*On Sundays ...*
todos los días / fines de semana	*every day / weekend*
algunos días / fines de semana	*some days/weekends*
Primero / Luego ...	*First / Later/Afterwards ...*
Finalmente ...	*Finally ...*
Antes de / Después de ...	*Before / After ...*
hacer los deberes	*doing homework*
levantarme / vestirme	*getting up / getting dressed*
terminar las clases	*finishing classes*
tomar el desayuno	*having breakfast*
volver a casa / **acostarme**	*returning home / going to bed*
¿Qué costumbres sanas tienes?	*What healthy habits do you have?*
Duermo (bien) / *entreno	*I sleep (well) / I train*
Hago diez minutos de ejercicio.	*I do ten minutes of exercise.*
Llevo una botella de agua.	*I carry a bottle of water.*
Me levanto / Me acuesto ...	*I get up / I go to bed ...*
a las ... / a la misma hora	*at ... (o'clock) / at the same time*
tarde / temprano	*late / early*
Tomo un descanso / **Me relajo**	*I have a rest / I relax*
Suelo comer / hacer *meditación	*I usually eat / do meditation*
Tengo / Tienes / Tiene ...	*I am / you are / he/she is ...*
sed/hambre	*thirsty/hungry*
sueño/calor	*sleepy/hot*
¿Tienes costumbres malsanas?	*Do you have any unhealthy habits?*
Si tengo hambre/sed, ...	*If I'm hungry/thirsty, ...*
tomo / como / bebo ...	*I have / eat / drink ...*
mucha agua.	*lots of water.*
algunos/muchos *dulces.	*some/lots of sweets.*
algunas/muchas verduras.	*some/lots of vegetables.*
chocolate/fruta/pasta.	*chocolate/fruit/pasta.*

Learn the vocabulary on these pages.
Write sentences with Durante:

_____

_____

Antes de / después de

_____

_____

_____

_____

Write a list of your routines in weekdays:
Durante la semana and at the weekend:

_____

_____

_____

_____

_____

_____

_____

¿Somos lo que comemos? (pages 84–85):

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

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

Learn the vocabulary on these pages.

Write 3 sentences with me gustaría probarlo/a:

_____

_____

_____

Answer: ¿ Como es tu dieta?

_____

_____

_____

¡Los tiempos cambian! (pages 86–87):

¿Cómo eras antes?	*What were you like before?*
Cuando era pequeño/a ...	*When I was little*
Cuando era más joven ...	*When I was younger ...*
Antes / Cuando tenía ... años, ...	*Before / When I was ... years old, ...*
dormía bien/mal	*I slept well/badly*
me levantaba / **me acostaba** ...	*I got up / I went to bed ...*
temprano/pronto / tarde	*early / late*
(no) era muy activo/a.	*I was (not) very active.*
(no) tenía ...	*I had / I didn't have ...*
(mucha) energía	*(lots of) energy*
una vida sana	*a healthy life*
(nunca) iba al **gimnasio**	*I (never) went to the gym*
¿Qué te gustaba comer y beber?	*What did you like to eat and drink?*
Solía comer / beber ...	*I usually ate / drank ...*
(No) Comía ...	*I ate / I didn't eat ...*
Bebía demasiado café.	*I drank too much coffee.*
Me encantaban los postres.	*I loved desserts.*
Me gustaba comer *dulces.	*I liked eating sweets.*
¿Qué hacías en tu tiempo libre cuando eras pequeño/a?	*What did you do in your free time when you were little?*
(No) Hacía (mucho/suficiente) ejercicio/deporte.	*I did / didn't do (lots of/enough) exercise/sports.*
(No) Iba a la piscina (tres veces a la semana).	*I went / didn't go to the pool (three times a week).*
(No) Montaba en *bici (cada día).	*I rode / didn't ride my bike (every day).*
(No) Jugaba ...	*I played / didn't play ...*
(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.*

Learn the vocabulary on these pages.

Write 3 sentences using Imperfect tense: Cuando era Pequeño/a...

_____

_____

_____

¡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	*stay in bed / at home*
descansar/dormir	*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*

Learn the vocabulary on these pages.

Write 3 sentences using Imperfect tense: me siento mal/bien porque...

_____

_____

_____

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 period of time 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	

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

20. Business Revenue, Costs & Profits

Term	Formulae
Sales Revenue	
Total Costs	
(Gross) Profit	

21. Breaking Even

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

22. The Importance of Cash

Question	Answer
Why does Cash matter to a Business?	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	

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- **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

Physical properties are the traits a material has before it is used.

Absorbency	Ability to soak up moisture, light or heat
Density	How solid a material is
Fusibility	Ability of a material to be heated and joined to another material when cooled
Electrical Conductivity	Ability to conduct electricity
Thermal Conductivity	Ability to conduct heat

Working properties are how a material behaves when it is manipulated.

Strength	Ability of a material to withstand compression, tension and shear
Hardness	Ability to withstand impact without damage
Toughness	Materials that are hard to break or snap are tough & can absorb shock
Malleability	Being able to bend or shape easily would make a material easily malleable
Ductility	Materials that can be stretched are ductile
Elasticity	Ability to be stretched and then return to its original shape

What we are learning this term:

A. Physical & Working Properties B. Forces & Stressors C. Types of Motion
D. Paper & Card/Boards E. 6 R's F. Natural & Manufactured Timbers

B. Forces and Stressors

Forces apply stress to objects, causing them to break or change shape.

Different materials can withstand different forces.

Tension	Is a stretching or pulling force. E.g. the ropes of a suspension bridge
Compression	Is a pushing or squashing force, e.g. the weight of a building on its foundation
Bending	Is a combination of tension and compression. It exerts tension on one side and compression on the other, e.g. bending anything
Shear	Is a cutting force. The opposing forces are not directly opposite each other, e.g. cutting paper with scissors.
Torsion	Is a twisting force that attempts to rotate two ends of a material in opposite directions, e.g. wringing out a wet cloth.

C. Types of Motions

Linear	Moves something in a straight line. E.g. a train moving down a track
Reciprocating	Has a repeated up and down motion or back-and-forth motion. E.g a piston or pump
Rotary	Is where something moves around an axis or pivot point. E.g a wheel
Oscillating	Has a curved backwards and forwards movement that wings on an axis or pivot point. E.g a swing or clock pendulum

D. Paper & Card/Boards

Paper and cards/boards both come from wood pulp.

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

E. 6 R's

You can use the 6R's when designing to help reduce the impact that new products have on the environment.

Repair	It's better to fix things instead of throwing them away.
Reuse	You can extend a products life by passing it on or using it again.
Recycle	The uses less energy than obtaining new materials.
Rethink	You should think about your design carefully. Is it needed?
Reduce	Making long-lasting durable products. Think rechargeable!
Refuse	You can refuse to buy a product if you think it is wasteful. Such as plastic bags.

F. Natural & Manufactured Timbers

Natural timber comes from trees.

Hardwood	Softwood
Ash	Larch
Beech	Pine
Mahogany	Spruce
Oak	Softwoods are faster growing and cheaper to buy.
Balsa	

Manufactured Boards

Manufactured boards are usually made from natural timber waste and adhesive.

- Medium-density fibreboard (MDF)
- Plywood
- Chipboard

Year 10 PRODUCT DESIGN Term 3

A. Physical & Working Properties

Physical properties are _____ _____.

Absorbency	
	How solid a material is
Fusibility	
	Ability to conduct electricity
Thermal Conductivity	Ability to conduct heat

Working properties are _____ _____.

Strength	
	The ability to withstand impact with damage
Toughness	
	Being able to bend or shape easily would make a material easily malleable
Ductility	
Elasticity	Ability to be stretched and then return to its original shape

What we are learning this term:

A. Physical & Working Properties B. Forces & Stressors C. Types of Motion
D. Paper & Card/Boards E. 6 R's F. Natural & Manufactured Timbers

B. Forces and Stressors

Forces apply _____ to objects, causing them to _____ or _____.

Different materials can withstand different forces.

Tension	
	Is a pushing or squashing force, e.g. _____ _____ _____
Bending	
	Is a cutting force. The opposing forces are not directly opposite each other, e.g. _____ _____
Torsion	

C. Types of Motions

Linear	
	Has a repeated up and down motion or back-and-forth motion. E.g _____ _____
Rotary	
	Has a curved backwards and forwards movement that wings on an axis or pivot point. E.g __ _____ _____

D. Paper & Card/Boards

Paper and cards/boards both come from _____.

Paper	Board
Cartridge Paper	
	Duplex Board
Layout Paper	
	Foam Core Board
Corrugated Card	
	Solid White Board

E. 6 R's

You can use the 6R's when designing to help reduce the impact that new products have on the environment.

Repair	
	You can extend a products life by passing it on or using it again.
Recycle	
	You should think about your design carefully. Is it needed?
Reduce	
	You can refuse to buy a product if you think it is wasteful. Such as plastic bags.

F. Natural & Manufactured Timbers

Natural timber comes from _____.

Hardwood	Softwood
Ash	
	Pine
Mahogany	
	Softwoods are _____ _____ _____
Balsa	

Manufactured Boards

Manufactured boards are usually made from _____.

Plywood

Year 10 Engineering Term 3 (Unit 1)

What we are learning this term:

A. Health & Safety | B. Manufacturing processes | C. reading technical drawings | D. Tools & Equipment

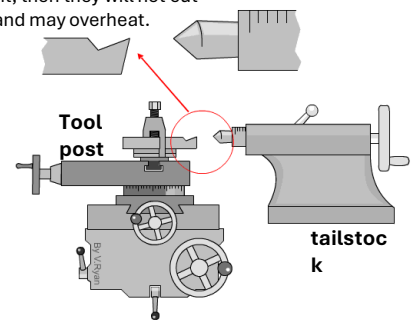
A. Health & Safety

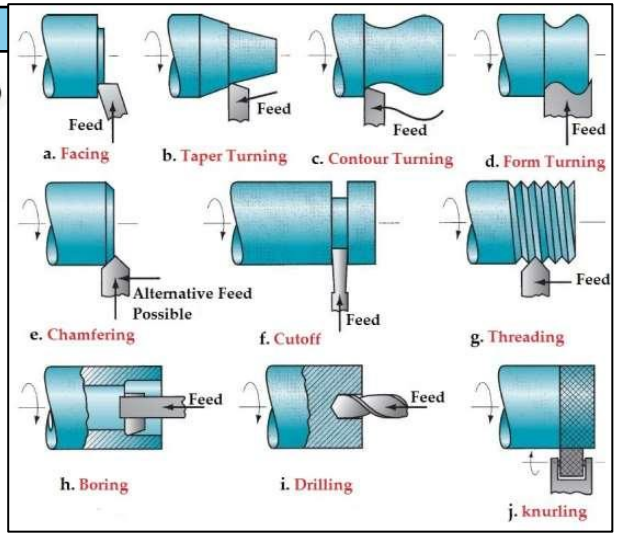
Risk Assessment	A risk assessment is the analysis of the risks involved when using equipment or performing a process.
Hazard – something that may harm someone. **Risk –** how likely a hazard is to happen. **Control measure –** actions taken to reduce the risk of harm	
Ejection hazard – material being 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.

B. Manufacturing processes

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

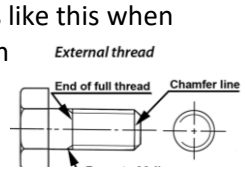
The dead center is placed in the **tailstock**. If the cutting tools are not in line with it, then they will not cut efficiently and may overheat.





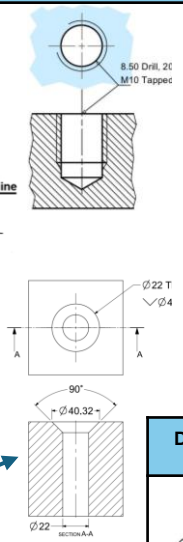
C. Reading technical drawings

M – the diameter of a threaded component. Looks like this when drawn



Ø – diameter

CSINK – counter sunk holes, look like this when drawn



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.

Year 10 Engineering Term 3 (Unit 1)

What we are learning this term:

A. Health & Safety | B. Manufacturing processes | C. reading technical drawings | D. Tools & Equipment

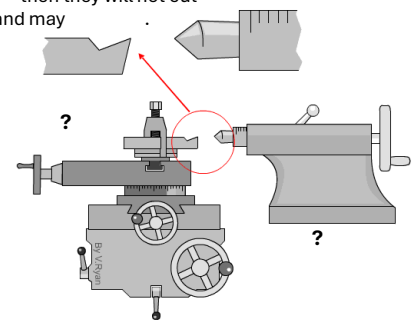
A. Health & Safety

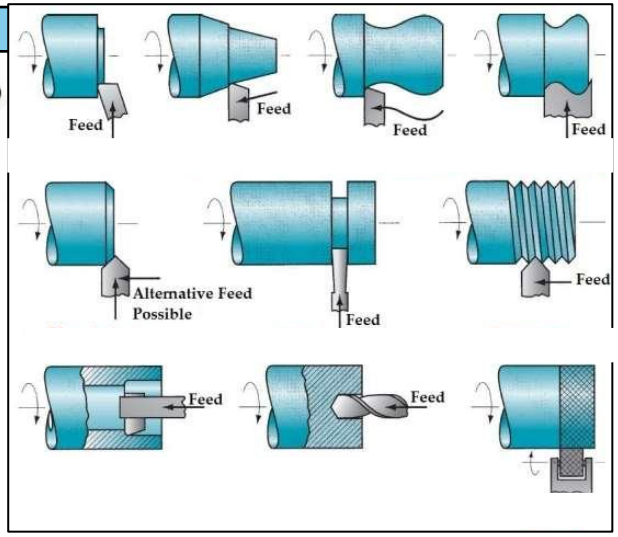
Risk Assessment	A risk assessment is the analysis of the risks involved when?
Hazard –. **Risk –** **Control measure –**	
Give an example of an Ejection hazard –	**Give an example of an Entrapment hazard –**
Give an example of an Inhalation hazard –	**Give an example of a Sharp force hazard –**
Give an example of Slip, trip and fall hazards –	**Give an example of a Blunt force hazard –**

B. Manufacturing processes

The ? is used to the tools in the .

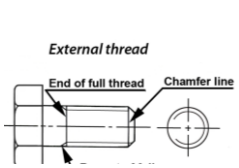
The dead center is placed in the . If the cutting tools are not then they will not cut efficiently and may .

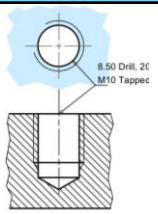


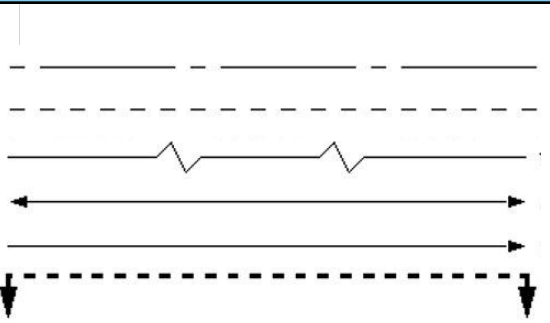


C. Reading technical drawings

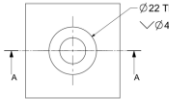
M – the diameter of a _____.



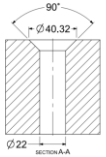




Ø – _____



CSINK – c_____ holes, look like this when drawn



D. Tools & Equipment

– used for measuring the external dimensions of a workpiece

– cutting tools for a range of functions.
From left to right; tool, cutting tool, tool, cutting tool

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

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

Year 10 Food & Nutrition Term 3

What we are learning this term:

A. Food Spoilage B. Enzymes C. Critical Temperatures D. Preparing Food Safely E. Date Marks F. Food Poisoning G. Ambient Foods

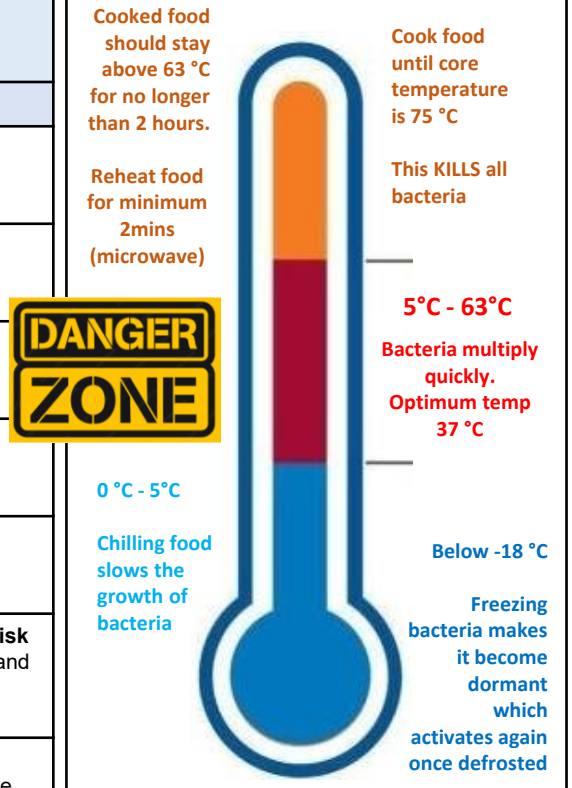
A. Food Spoilage

Most microorganisms are harmless, but **pathogenic** microorganisms **spoil** food and cause **food poisoning**

Microorganisms need <u>five</u> things to grow:

	**Warm** temperature
	Lots of **moisture**
	Lots of **food**
	Right **pH**
	Plenty of **time**
Bacteria:	**Ready-to-eat foods are at high risk** of bacteria (moist, high in protein and short shelf life) e.g. cooked foods, dairy products…
Moulds:	Can **spoil bread, cheese & fruit**. Make food look **'fuzzy'** and change the smell and taste.
Yeasts:	Can **spoil fruit by fermenting sugars** into alcohol & CO2

C. Critical Temperatures



Defrost meat completely in the fridge 24hours

Keep leftovers covered and tinned foods transferred to separate container.

D. Preparing Food Safely

Avoid **cross-contamination** by following **safety & hygiene procedures**:

Preparing	Have good personal hygiene, separate raw & cooked foods, wash veg, clean equipment, santise work surfaces, defrost food fully
Cooking	Cook at right temperatures for right amount of time, cook all the way through, use a temperature probes - 75°C
Serving	Serve hot food straight away or keep it above 63°C for up to 2 hours, cool food down within 90mins, keep food covered & dated

E. Date Marks – printed on food packaging

Use By	**Best Before**
- Short shelf life - Food may not be safe to eat after this date has past	- Longer shelf life - Food may not taste as nice after this date has past

Eggs has a best before date BUT should be treated like a use by date

F. Food Poisoning – from eating contaminated food

Symptoms include: sickness, diarrhoea, stomach cramps, fever *(even death)*

Campylobacter	2-5 days	Raw or undercooked poultry
E. Coli 0157	1-3 days	Raw beef, unwashed veg
Staphylococcus aureus	1-6 hours	Animals / people e.g. skin, hair
Salmonella	6-72 hours	Raw poultry, eggs
Listeria	Up to 70 days	Soft cheese, pate, shellfish

- Milk is **pasteurized** (heat treated to 72°C) to kill bacteria
- Chickens are **vaccinated** against salmonella to avoid contaminating eggs

B. Enzymes – proteins that act as a biological catalysts (which speed up chemical reactions)

- Make fruit ripen e.g. bananas become soft and sweet

- Cause food to turn brown e.g. sliced apples or potatoes

Slow enzymes by **adding an acid** (to stop browning) or destroy them by **blanching** (before freezing)

E. Ambient Foods – safely stored at room temperature

Should be stored in a sealed container in a cool, dry place. Preservation =

Freeze-drying	Vacuum Packing
Canning	Using Chemicals

Year 10 Food & Nutrition Term 3

What we are learning this term:

A. Food Spoilage B. Enzymes C. Critical Temperatures D. Preparing Food Safely E. Date Marks F. Food Poisoning G. Ambient Foods

A. Food Spoilage

Most microorganisms are harmless, but **pathogenic** microorganisms **spoil** food and cause **food poisoning**

Microorganisms need <u>five</u> things to grow:

	
	
	
	
	
Bacteria:	
Moulds:	
Yeasts:	

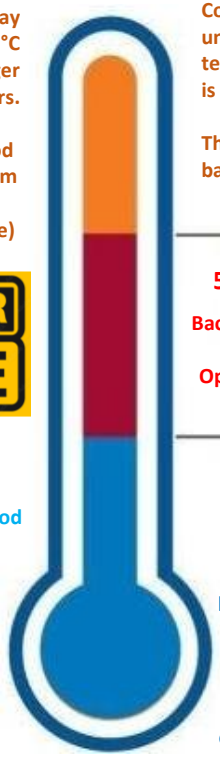
C. Critical Temperatures

Cooked food should stay above 63 °C for no longer than 2 hours.

Reheat food for minimum 2mins (microwave)

Cook food until core temperature is 75 °C

This KILLS all bacteria



5°C - 63°C

Bacteria multiply quickly. Optimum temp 37 °C

0 °C - 5°C

Chilling food slows the growth of bacteria

Below -18 °C

Freezing bacteria makes it become dormant which activates again once defrosted

Defrost meat completely in the fridge 24hours

Keep leftovers covered and tinned foods transferred to separate container.

D. Preparing Food Safely

Avoid **cross-contamination** by following **safety & hygiene procedures**:

Preparing	
Cooking	
Serving	

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Symptoms include: sickness, diarrhoea, stomach cramps, fever *(even death)*

Campylobacter		
E. Coli 0157		
Staphylococcus aureus		
Salmonella		
Listeria		

- Milk is **pasteurized** (heat treated to 72°C) to kill bacteria
- Chickens are **vaccinated** against salmonella to avoid contaminating eggs

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- Make fruit ripen e.g. bananas become soft and sweet

- Cause food to turn brown e.g. sliced apples or potatoes

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E. Ambient Foods – safely stored at room temperature

Should be stored in a sealed container in a cool, dry place. Preservation =

Freeze-drying	Vacuum Packing
Canning	Using Chemicals

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

What we are learning this term:

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

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

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

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

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

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

What we are learning this term:

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

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

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

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

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

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

What we are learning this term:

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

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

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

F. How do humans develop emotionally (E)?

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

G. How do humans develop socially (S)?

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

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

What we are learning this term:

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

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

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

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

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

What we are learning this term:

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

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

I. How do physical factors affect development?

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

J. How does lifestyle affect development?

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

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

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

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

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

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

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H	Key words:
Genetic inheritance	
Genetic disorders	
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Material possessions	
Economic	

I. How do physical factors affect development?

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

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

Positive lifestyle choices lead to:

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Negative lifestyle choices lead to:

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

Positive self-image:

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Negative self-image

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

K How do social and cultural factors affect development

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

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

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

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

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

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

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 chices0 can be positive or negative.

M How do economic factors affect development

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

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

Living in good housing with open spaces:	Living in a poor housing with cramped and damp conditions:
• Feeling good about themselves • Be more likely to stay healthy, • Space to take exercise • Feel safe ad secure • Warmth	• Have low self-esteem and self-image • Be more likely to experience ill health • Be lesson likely to exercise • Anxious and stressed.

Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image. →	Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.

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

What we are learning this term:

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K How do social and cultural factors affect development

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- **Values**: how they behave
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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:
-
-
-
-

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.

Living in good housing with open spaces:	Living in a poor housing with cramped and damp conditions:
• • • • •	• • • • •
Material possession like a new phone or coat has a positive effect on the persons development because…..	Not having a phone or the newest trainers can have a negative affect on…. Because….
• • •	• • • •

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

What we are learning this term:

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

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

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

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

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

What we are learning this term:
N. What are life events?
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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	

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

BRASS
- Trumpet
- Trombone
- French horn
- Tuba

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

WOODWIND
- Flute
- Clarinet
- Oboe
- Bassoon
- Saxophone

KEYBOARDS
- Piano
- Electronic keyboard
- Harpsichord
- Organ
- Synthesizer

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.

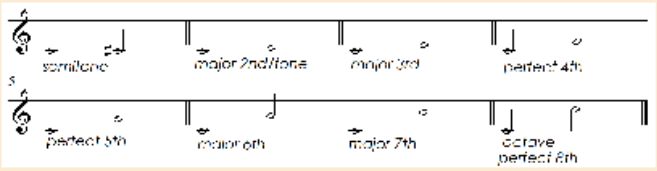
A scene where the **superhero 'saves the day'** might use a major tonality, brass fanfares, loud dynamics, accents, 4ths and 5ths (intervals).

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.

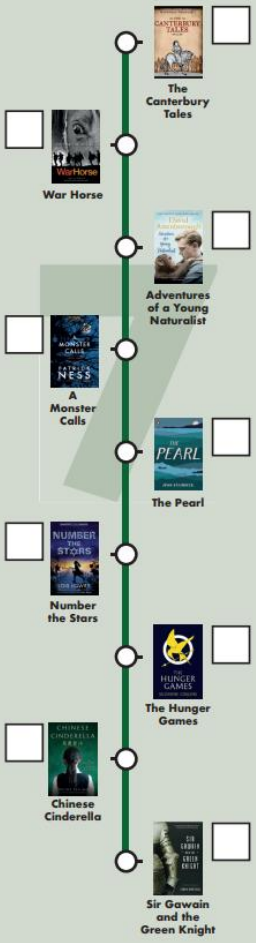
Composers also use:

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?	***pp*** ***p*** ***f*** ***ff*** ***mp*** ***mf***	What is a **Falling interval**?	
Circle the correct definition for **Conjunct**	1. The melody moves in leaps 2. The melody moves in steps 3. The melody moves in octaves 4. 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?	

SWINDON ACADEMY READING CANON

Year 7



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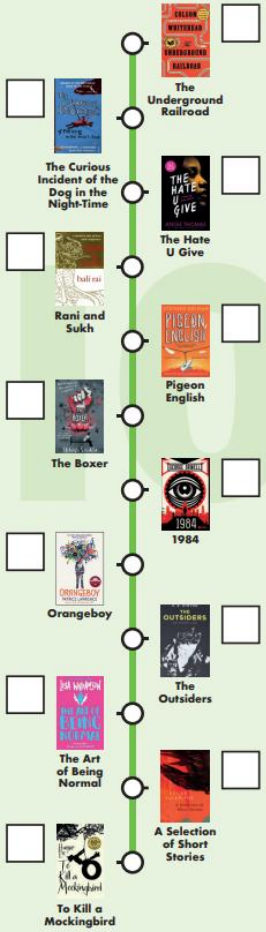
Year 10



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