

# 100% book - Year 10 Mainstream

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

## Term 3



### Swindon Academy 2022-23

Name:	
Tutor Group:	
Tutor & Room:	

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

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

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

## Knowledge Organisers

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

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

## Quizzable Knowledge Organisers

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

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

### Top Tip

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

## Expectations for Prep and for using your Knowledge Organisers

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

# How do I complete Knowledge Organiser Prep?

## Step 1

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

The image shows the Epraise website interface. On the left is a 'Planner' for the week of 20th May to 26th May 2020, with columns for Sun, Mon, Tue, Wed, Thu, and Fri. On the right is a 'Knowledge Organiser' for 'Year 7 Science: Particles'. It contains various sections: 'What is particle theory?', 'Describe the arrangement and movement of particles in the three states of matter', 'What is the law of conservation of mass?', 'What are the different changes of state?', and 'What are the differences between the three states of matter?'. There are also diagrams of particle arrangements for solid, liquid, and gas.

## Step 2

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

This image shows a printed page from the knowledge organiser with handwritten notes. At the top, the date '29th May 2020' and the title 'Particle theory' are written. The page includes sections for 'What is particle theory?', 'What is the law of conservation of mass?', and 'What are the different changes of state?'. A diagram shows energy changes: 'Gaining energy' (melting, evaporation, boiling) and 'Losing energy' (freezing, condensation, cooling). The bottom part shows particle diagrams for solid, liquid, and gas.

## Step 3

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

Handwritten notes on lined paper. At the top, the date '29th May 2020' is written. Below it is the title 'Properties of the states of matter'. The notes define 'Particle theory = all matter is made of particles'. It then describes the three states: 'Solid = regular pattern particles vibrate in fixed position', 'Liquid = particles are arranged randomly but are still touching each other Particles can slide past each other and move around.', and 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy'.

## Step 4

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

Handwritten notes on lined paper showing the definition of 'Solid' repeated three times: 'Solid = regular pattern particles vibrate in fixed position'.

## Step 5

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

This image shows a printed page from the quizzable knowledge organiser with handwritten answers. The questions are: 'What is the law of conservation of mass?' (Answer: Self quizzing), 'What are the different changes of state?' (Answer: Arrangement/movement of matter), 'What are the differences between the three states of matter?' (Answers: Solid = regular pattern, Liquid = pa, Gas =). The bottom part shows particle diagrams for solid, liquid, and gas.

## Step 6

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

Handwritten notes on lined paper showing the definition of 'Solid' with corrections. The notes are: 'Particle theory = all matter is made of particles', 'Solid = regular pattern particles vibrate in fixed position', 'Liquid = particles are arranged randomly but are still touching each other Particles can slide past each other and move around', and 'Gas = Particles are far apart and are arranged randomly. Particles carry a lot of energy'. There are checkmarks and an 'X' indicating corrections.

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

## ENGLISH –A Christmas Carol- Traditional

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

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

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

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

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

## ENGLISH –A Christmas Carol- Traditional

### 1. Context

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

### 2. Key Characters

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

### 3. Central Themes

<b>Social injustice</b>	
<b>Transformation and redemption</b>	
<b>Social responsibility</b>	

### 4. Key Vocabulary

<b>Avarice</b>	
<b>Salvation</b>	
<b>Miserly</b>	
<b>Callous</b>	
<b>Antithesis</b>	
<b>Epiphany</b>	
<b>Redemption</b>	
<b>Benevolence</b>	
<b>Philanthropic</b>	
<b>Misanthropic</b>	
<b>Penitence</b>	
<b>Remorse</b>	
<b>Deprivation</b>	
<b>Despotism</b>	
<b>Capitalism</b>	

### 5. Key Terminology, Symbols and Devices

<b>Stave</b>	
<b>Intrusive Narrator</b>	
<b>Circular structure</b>	
<b>Allegory</b>	
<b>Allegorical figures</b>	
<b>Foreshadowing</b>	
<b>Didactic</b>	
<b>Semantic Field</b>	



# Science T3 Y10 C2.7 Mainstream Energy Changes

## Exothermic Reactions

- Energy transferred to the surroundings
- Temperature of the reaction mixture **increases**
- This energy is transferred **to** the surrounding

EX: EXIT

Examples include:

- Hand warmers
- Combustion reactions
- Respiration
- Neutralisation reactions
- Self-heating cans.



Exothermic

## Endothermic Reactions

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

EN: ENTER

Examples include:

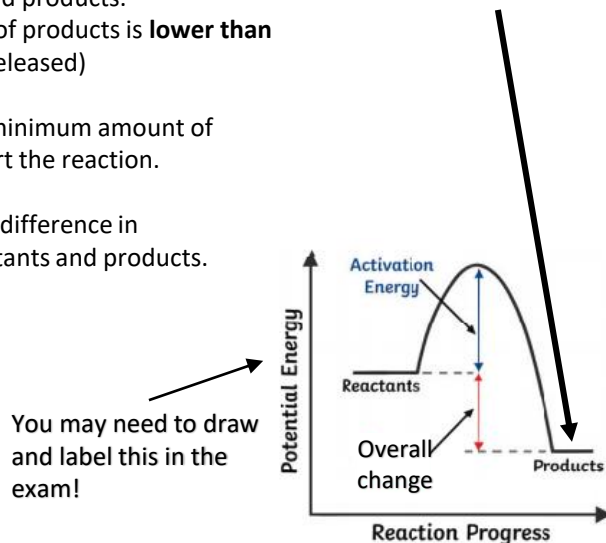
- Ice packs (injuries)
- Reaction of citric acid and sodium hydrogen carbonate
- Thermal decomposition of calcium carbonate



Endothermic

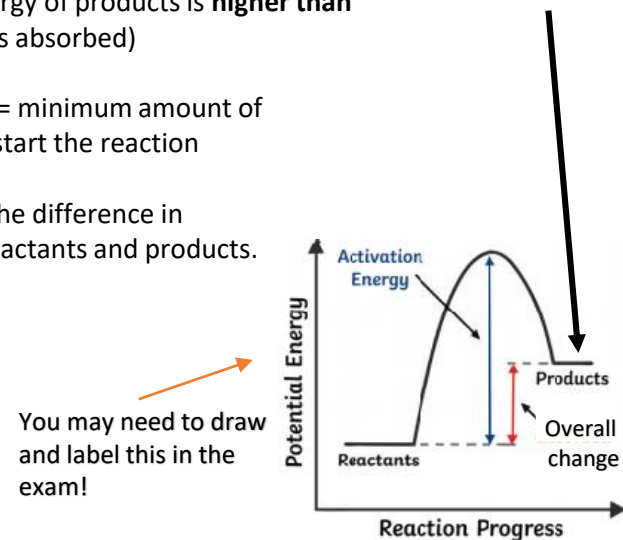
## Reaction Profiles – Exothermic

- Energy level diagrams show **difference in energy** between reactants and products.
- Exothermic = Energy of products is **lower than** reactants (energy is released)
- **Activation Energy** = minimum amount of energy needed to start the reaction.
- **Energy change** = the difference in energy between reactants and products.



## Reaction Profiles – Endothermic

- Energy level diagrams show **difference in energy** between reactants and products.
- Endothermic = Energy of products is **higher than** reactants (energy is absorbed)
- **Activation Energy** = minimum amount of energy needed to start the reaction
- **Energy change** = the difference in energy between reactants and products.

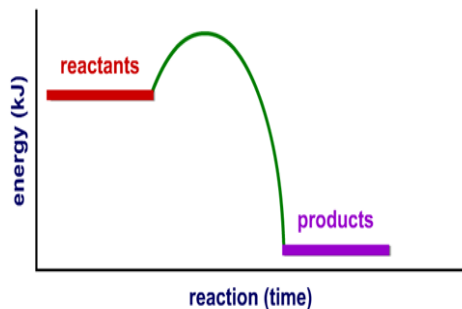


## Science T3 Y10 C2.7 Mainstream Energy Changes

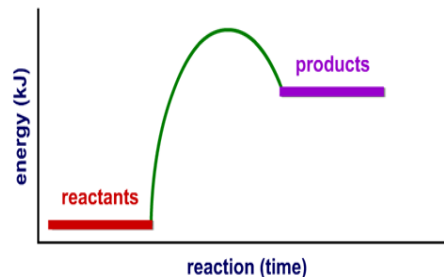
1. Which way is energy transferred in an exothermic reaction?
2. What happens to the temperature of the reaction mixture in an exothermic reaction?
3. State two examples of exothermic reactions.

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

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



1. What does an energy level diagram show?
2. On the graph below, draw and label the :
  - overall energy change
  - activation energy



## Hypothesis

The energy change in the reaction between acid and alkali depends on the volume of alkali added.

## Equipment

- Polystyrene cup and lid
- Thermometer
- 250cm<sup>3</sup> beaker
- Measuring cylinder
- Liquid reactants



## Method (example for hydrochloric acid and sodium hydroxide)

1. Using measuring cylinder to measure 30cm<sup>3</sup> hydrochloric acid and put in polystyrene cup
2. Stand cup inside beaker to make stable.
3. Use a thermometer to measure the temperature of acid and record.
4. Using measuring cylinder – 5cm<sup>3</sup> sodium hydroxide → polystyrene cup
5. Fit the lid and gently stir with thermometer through hole.
6. When reading stops on thermometer, record temperature in table.
7. Repeat, each time adding 5cm<sup>3</sup> more sodium hydroxide up to a maximum of 40cm<sup>3</sup>.
8. Calculate the temperature change on each attempt.
9. Repeat the experiment 3 times and calculate a mean temperature change for each volume of sodium hydroxide.

## Variables

**Independent** – Volume of sodium hydroxide

**Dependent** – Temperature change

**Control** – Volume of hydrochloric acid, concentration of acid, concentration of sodium hydroxide

## Common questions

**Q1)** Why do you use a polystyrene cup and lid?

**A1)** Because polystyrene cups are insulators, which reduces heat loss in the experiment, making the results more accurate.

**Q2)** Why should you calculate the temperature change, instead of just using the final temperature?

**A2)** Because the initial (starting) temperature of the acid may have been different.

**Q3)** Why is it important to stir the mixture?

**A3)** To make sure all of the reactants have reacted and to get a uniform temperature.

**Q4)** Why is the experiment conducted 3 times?

**A4)** So that anomalies can be seen and removed and a mean calculated

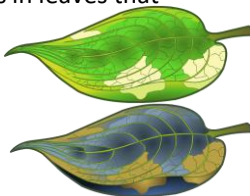
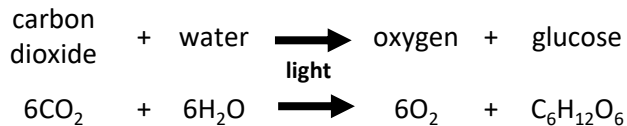
## **Energy changes could also be investigated using:**

1. Changing the **mass of metal** added to acid and measuring the **temperature increase**
2. Changing the **type of metal** added to acid and measuring the **temperature increase**
3. Dissolving different **masses of potassium nitrate** into water and observing the **temperature decrease**.



## Photosynthesis

Endothermic chemical reaction that takes place in chloroplasts in leaves that produces glucose and oxygen from carbon dioxide and water



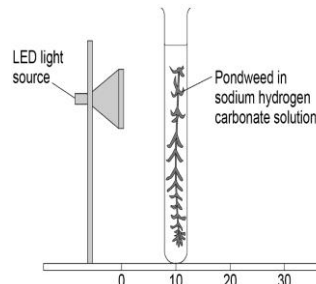
### What do plants do with the glucose?

- Stored as starch
- Stored as fats and oils
- For making cellulose (for cell walls)
- For respiration
- For making amino acids (along with nitrates from soil)

### Testing the leaf for starch:

- Boil the leaf for 5 minutes to soften
- Put into heated ethanol to remove chlorophyll (turn off Bunsen burner!)
- Spread leaf on a white tile
- Add iodine
- In the places that contain starch the iodine will turn blue/black
- In a variegated leaf, only the parts containing chlorophyll turn blue black
- This shows chlorophyll is essential for photosynthesis

## RP5 – Effect of light intensity on rate of photosynthesis



**Independent variable:** distance between lamp and plant (or light intensity)

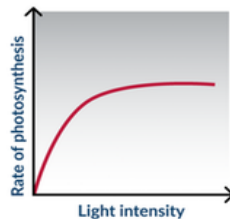
**Dependent variable** – number of bubbles per second / rate of photosynthesis

**Control variables** – temperature of solution, piece of pondweed

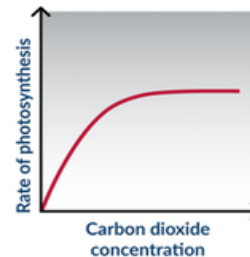
1. Measure 10cm length of pondweed and cut with scissors.
2. Place into beaker of 250ml  $\text{NaHCO}_3$  solution. (this provides  $\text{CO}_2$ )
3. Place lamp 10cm away from pondweed – turn on lamp and leave for 2 minutes to adjust to light intensity.
4. Count number of bubbles produced in 60 seconds and record in table.
5. Repeat steps 3 and 4 for lamp distances of 20cm – 50cm at 10cm intervals.
6. Keep the temperature of the solution the same (LED light is used to not give off heat)

### Factors that affect the rate of photosynthesis

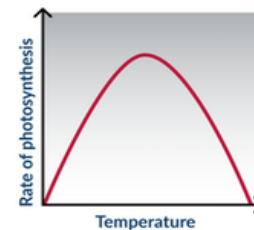
- Light
- Temperature
- $\text{CO}_2$  concentration



Increased light intensity increases the rate, but only up to a point, when  $\text{CO}_2$  or temperature become limiting



Increased  $\text{CO}_2$  conc increases the rate, but only up to a point, when light or temperature become limiting



Increased temperature increases the rate, but only up to a point, then the enzymes are denatured & rate drops

Whichever one is in the shortest supply is called the **limiting factor** – as it is the one limiting the rate of photosynthesis

## Photosynthesis

1. What are the two reactants for photosynthesis?
2. What are the two products?
3. Where in a cell does this reaction happen?
4. Name two uses of glucose produced in photosynthesis.
5. What else is needed for plants to produce amino acids?
6. What chemical is used to test for starch?
7. Which parts of the leaf contain starch in a variegated leaf?



## RP5 – Effect of light intensity on rate of photosynthesis

1. What is the independent variable in this investigation?
2. What needs to be kept the same?
3. What is the dependent variable?
4. Why is an LED lamp used rather than a regular lamp?
5. Why is sodium hydrogen carbonate solution used?
6. What is a good range and interval for the distance measurements?
7. Why is the plant left for 2 minutes every time the lamp is moved?
8. Describe the relationship between distance and the number of bubbles per minute

## Factors that affect rate of photosynthesis

1. What are the three main factors that affect the rate of photosynthesis?
2. What is a 'limiting factor'?
3. Why does increasing the temperature above a certain point cause the rate to drop?
4. Describe the effect of increasing the concentration of CO<sub>2</sub> on the rate of photosynthesis

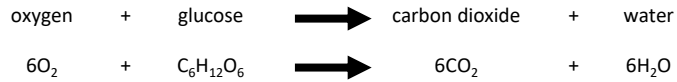
# Science T3 Y10 B2.9 Mainstream Respiration

## Respiration

Respiration is a chemical reaction that happens in the mitochondria of cells to release energy from glucose.

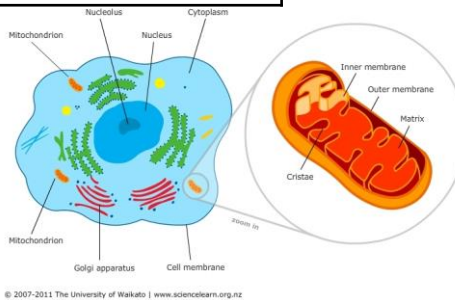
There are two types – Aerobic and Anaerobic.

### Aerobic: - with oxygen



Organisms need energy for:

- chemical reactions to build larger molecules
- movement
- keeping warm.



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## Anaerobic respiration

### Respiration without oxygen

In animal cells = glucose → lactic acid

In plant/yeast cells = glucose → ethanol + carbon dioxide

In yeast, this is fermentation and is used in brewing and baking



	Aerobic	Anaerobic
<b>Oxygen used?</b>	Yes	No
<b>Waste products</b>	CO <sub>2</sub> and H <sub>2</sub> O	Lactic acid (animals) Ethanol + CO <sub>2</sub> (plants/yeast)
<b>Energy released</b>	Lots	Much less

## Exercise

During exercise, more energy is needed so that muscles can keep contracting. This means more respiration is needed.

### Increased breath depth -

Get more oxygen into blood per breath and remove CO<sub>2</sub>

### Increased breathing rate -

Get oxygen into blood quickly.



### Increased heart rate -

Get more oxygenated blood to muscles.

**Heart beats harder** - more blood is pumped with every beat.

During intense exercise, there is just not enough oxygen getting into the body.

The muscles start to respire anaerobically.

The build up of lactic acid can cause cramp/stitch.

(HT ONLY) When exercise is over, the lactic acid has to be oxidised to CO<sub>2</sub> and H<sub>2</sub>O. The amount of oxygen needed to do this is called the oxygen debt

## Metabolism

Metabolism is the sum of all the reactions in a cell or the body.

The 'metabolic rate' is the rate at which all of these reactions take place.

An example of a reaction = making proteins using amino acids from digestion.

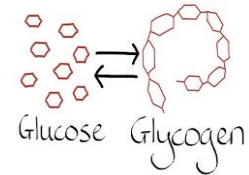


amino acids

protein

More examples:

- glucose → glycogen (in muscles/liver)
- respiration
- protein → urea
- glycerol and fatty acids → fats



Glucose Glycogen

## Respiration

1. What is respiration?
2. Where does respiration take place?
3. What does aerobic mean?
4. Give two uses for the energy released from respiration
5. What are the two types of respiration?
6. What are the reactants in respiration?
7. Write the equation for respiration below

## Exercise

1. Describe two changes to breathing during exercise
2. Why does breathing need to change during exercise?
3. What happens to heart rate during exercise?
4. When does anaerobic respiration happen?
5. Which chemical builds up in muscles during anaerobic respiration?




## Anaerobic respiration

1. What is anaerobic respiration?
2. What is 'fermentation'?
3. What are the waste products of anaerobic respiration in humans?
4. What are the waste products of anaerobic respiration in plants and yeast cells?
5. Which type of respiration releases most energy?

## Metabolism

1. What is the metabolic rate?
2. Give two examples of metabolic reactions other than respiration
3. What is glucose stored as in muscles?
4. What are fats made of?

# Science T3 Y10 P2.6 Mainstream Molecules and 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	<ul style="list-style-type: none"> <li>Can't see the forces between particles</li> <li>Particles look like flat circles rather than 3D spheres</li> <li>Movement isn't shown</li> </ul>
Kinetic models (eg marbles or animations)	Easy to see particle arrangement  Can see the movement of particles	Can't see forces between particles

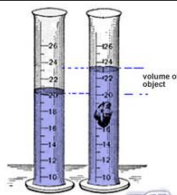
## Density

Density is mass per cm<sup>3</sup>  
It can be calculated using:

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

$$\rho = m \div V$$

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



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

**For regular solids :**

Mass measured by **top pan balance**

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

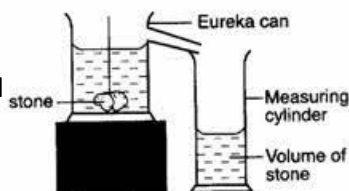
Measure the volume of larger objects by putting them into a full eureka can and catching and measuring the water that is displaced

**For irregular solids:**

Mass measured by **top pan balance**

Volume measured by **displacement of water**

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



## Required practical continued : Density of liquids

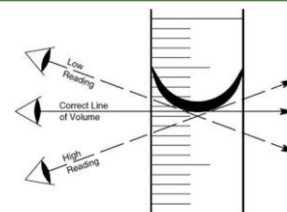
- Find the mass of an empty measuring cylinder using a top pan balance.
- Pour a known volume (100ml) of liquid into the measuring cylinder.
- Use the meniscus to measure the volume of the liquid accurately. This is the volume.
- Now measure the mass of the measuring cylinder + the liquid combined.
-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

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

Zero error



Read the meniscus!



## Science T3 Y10 P2.6 Mainstream Molecules and matter

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

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

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

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

# Science T3 Y10 P2.6 Mainstream Molecules and matter

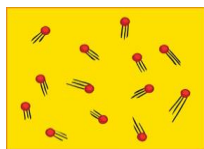
## Internal energy

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

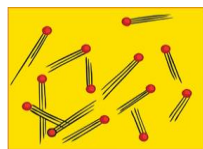
The internal energy of a system is the total kinetic energy and the potential energy of the particles

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

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



Low Temperature



High Temperature

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

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

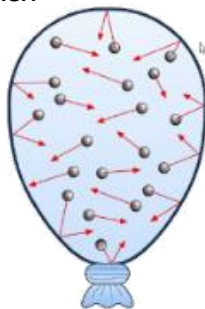
## Gas pressure

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

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

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

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



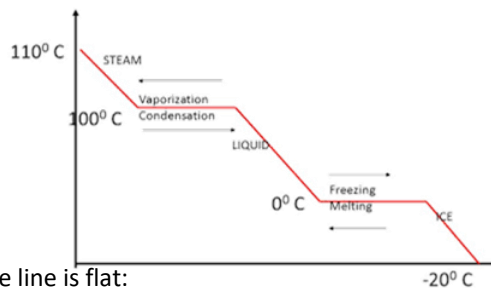
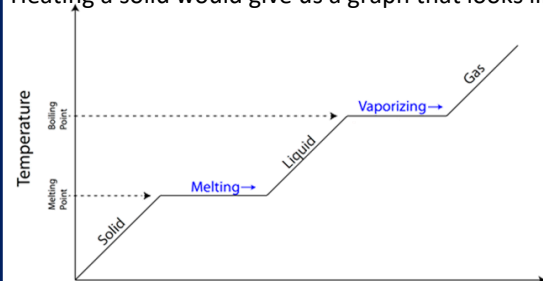
## Heating and cooling

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

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

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

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



When the line is flat:

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

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

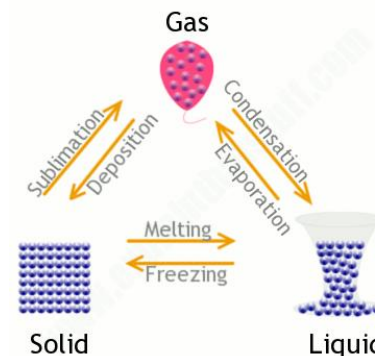
- The temperature is increasing / decreasing
- The kinetic energy store is increasing /decreasing
- Average particle speed is increasing /decreasing

## Specific latent heat

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

Specific latent heat will be different for different materials.

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



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

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

$$E = m L$$

## Specific heat capacity

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

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

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



## Science T3 Y10 P2.6 Mainstream Molecules and matter

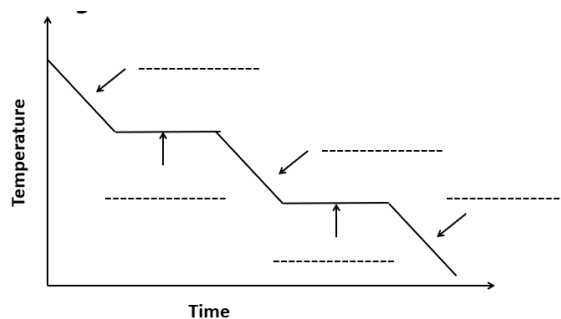
1. What two stores of energy make up internal energy?
2. Which energy store is linked with particle movement?
3. Which energy store increases if the particles in a substance move further apart?
4. What happens to the temperature when the kinetic store of the particles increases?

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

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

2. Label the graph below using the words given:

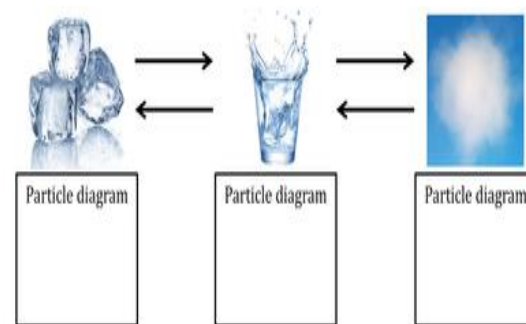
liquid, gas, solid, condensing, freezing



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

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

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

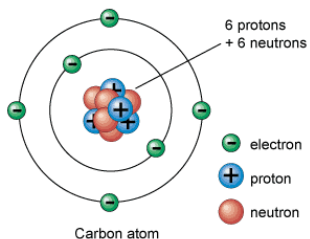


5. Draw the particle diagrams in the boxes

1. What is specific heat capacity

# Science T3 Y10 P2.7 Mainstream Radioactivity

## Atoms



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

### Electrons can move further away or closer to the nucleus



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

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

### How the atomic model developed:

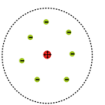
The atomic model has developed over time, when new evidence was discovered.



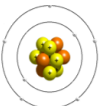
Atoms were first thought to be tiny spheres that could not be divided



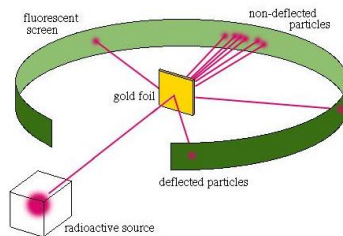
JJ Thomson then discovered the electron  
Led to the plum pudding model  
Atoms a cloud of positive charge with electrons randomly scattered



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



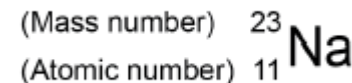
Chadwick discovered neutrons  
Bohr discovered the electrons orbit in shells



### Rutherford's experiment:

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

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



Sodium has :

11 protons

11 electrons

12 neutrons (23-11)

### Isotopes

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

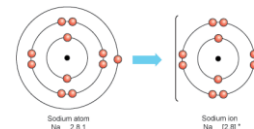
E.g.



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

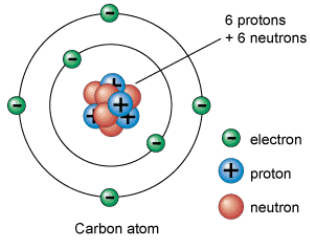
### Ions

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

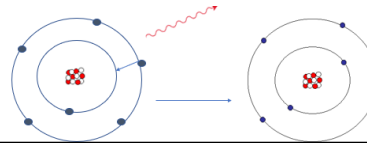
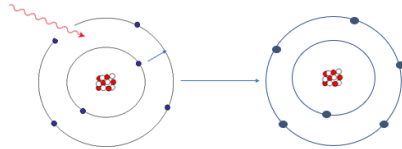


# Science T3 Y10 P2.7 Mainstream Radioactivity

## Atoms



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



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

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

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

1. What causes scientific ideas to change and develop?

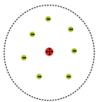


2. What was the thinking about atoms initially?

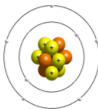


3. Which particle was discovered by JJ Thomson?

4. Where is the positive charge in this model?

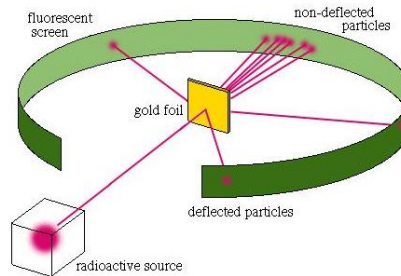


5. Where is the positive charge in this model?



6. Who discovered neutrons?

7. What was the discovery that Bohr made?



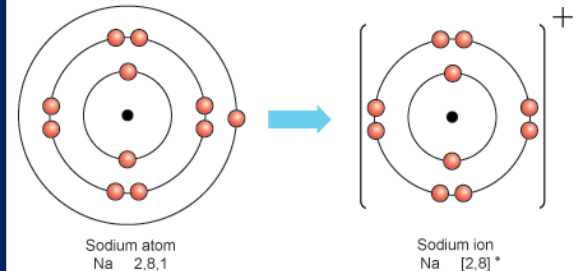
### Rutherford's experiment:

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

5. What is an isotope?

6. What is an ion?

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



# Science T3 Y10 P2.7 Mainstream Radioactivity

## Nuclear radiation

If an isotope is **unstable**, then **particles** and **energy** are emitted from the nucleus.

There are 3 main types :

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

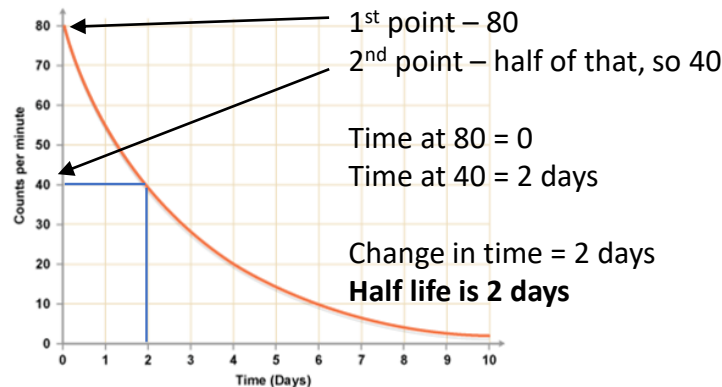
Neutrons can also be emitted from the nucleus.

## Half life

Radioactive decay is random.

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

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



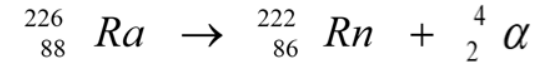
Isotopes are selected for use depending on their properties and half life – e.g. a medical tracer needs to have a short half life so it isn't in the body for very long

## Alpha decay:

An unstable nucleus gives out 2 protons and 2 neutrons

An alpha particle is written as :  ${}^4_2\alpha$

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



## Beta decay:

In an unstable nucleus, a neutron changes into a proton and an electron.

The electron is fired out as the beta particle

Beta particles are written as  ${}^0_{-1}\beta$  or  ${}^0_{-1}e$

The proton number increases

The mass number stays the same

E.g.  ${}^{14}_6\text{carbon} \rightarrow {}^{14}_7\text{nitrogen} + {}^0_{-1}e$

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

**Irradiation** is the exposure to alpha, beta or gamma radiation

**Contamination** is the presence of radioactive atoms on materials.

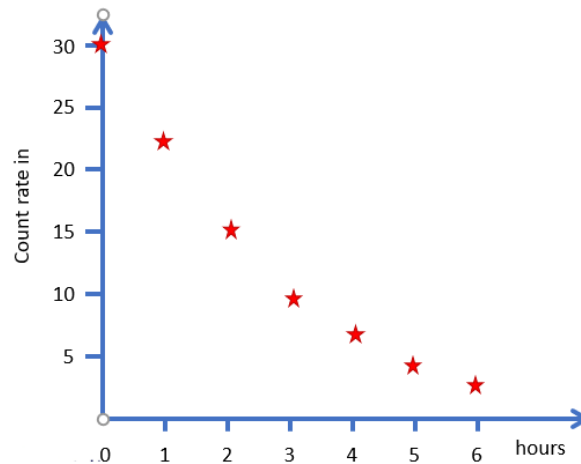
# Science T3 Y10 P2.7 Mainstream Radioactivity

## Nuclear radiation

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

## Half life

1. What is half life?
2. What is the unit missing from the Y axis on the graph opposite?
3. Draw a line of best fit onto the graph
4. What sort of half life would you want in an isotope being used as a medical tracer?

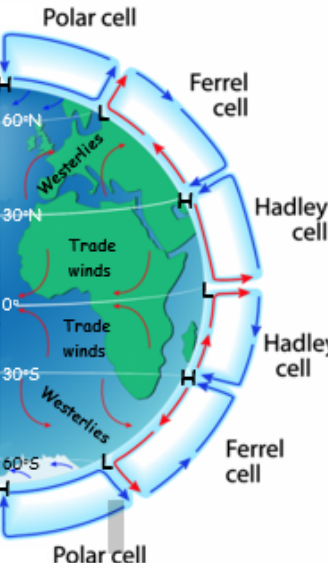


## Alpha decay:

1. How is an alpha particle written?
2. What happens to the proton number of an atom when alpha decay happens?
3. What happens to the mass number when alpha decay happens?
4. What happens in the nucleus during beta decay?
5. How is a beta particle written?
6. What happens to the proton number during beta decay?
7. What happens to the mass number during beta decay?
8. What is irradiation?
9. What is contamination?



### 9. Global atmospheric circulation

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

### 10. Weather hazards in the UK

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

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

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

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

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

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





9. Global atmospheric circulation	
Factor	Explanation
Global atmospheric circulation	
Key information	
<p>The diagram illustrates the three-cell model of global atmospheric circulation. It shows the Earth with latitude lines at 60°N, 30°N, 0° (Equator), 30°S, and 60°S. The Polar cell is located between the poles and 60° latitude, with air sinking at the poles and rising at 60° latitude. The Ferrel cell is between 60° and 30° latitude, with air sinking at 30° latitude and rising at 60° latitude. The Hadley cell is between the equator and 30° latitude, with air sinking at 30° latitude and rising at the equator. Wind patterns are shown: Westerlies between 30° and 60° latitude, and Trade winds between the equator and 30° latitude. High (H) and Low (L) pressure systems are indicated at the boundaries of the cells.</p>	

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


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

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



**13. Tropical storms**

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

Factor	Explanation
Global distribution	5° – 30° north and south of equator (sea temp warm, wind shear low). More in the northern hemisphere. Move towards the west.
Relationship with ACM	Trade winds (from high to low pressure) send tropical storms to west.
Structure	Circular, can be 100s of km wide. Eye- calm in centre (air ↓, LOW). Eyewall- strong winds, torrential rain. Edges- Wind speed falls, rain reduces.
	
<b>How will climate change affect them?</b>	
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.
<ol style="list-style-type: none"> <li>Sun heats the ocean (27°C) &gt; <b>rapid evaporation</b>.</li> <li><b>Condensation</b> occurs quickly leading to a large amount of cloud forming (<b>tropical depression</b>).</li> <li>Due to the earth's rotation, this cloud mass starts to spin. An eye is formed in the centre.</li> <li>Due to rising air, a <b>low pressure</b> area forms below. Air rushes into this creating high wind speeds. (&gt;74mph = <b>tropical storm</b>)</li> <li>The <b>low pressure</b> results in the ocean being uplifted forming a <b>storm surge</b>.</li> </ol>	

**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.	<ul style="list-style-type: none"> <li>† 6,201 deaths. (Most drowned in storm surge.)</li> <li>† 1.1 million houses damaged.</li> <li>💰 90% of Tacloban city destroyed.</li> </ul>
Secondary effects	Homelessness > lead to poor health. Lack of sanitation > diseases (cholera) Food shortages, price increase.	<ul style="list-style-type: none"> <li>† 4.1 million homeless.</li> <li>💰 Damage cost US\$12 billion.</li> <li>💰 1.1 million tonnes of crops destroyed (rice).</li> </ul>
Immediate responses	Evacuate before the storm. Rescue those affected. Provide food, water, blankets. Aid workers arrive from abroad. Recover dead bodies (prevent disease).	<ul style="list-style-type: none"> <li>➢ Over 1200 evacuation shelters set up.</li> <li>➢ Philippines Red Cross delivered basic food aid.</li> <li>➢ UK sent shelter kits.</li> <li>➢ 800,000 evacuated (warnings given 2 days early).</li> </ul>
Long term responses	Repair homes and infrastructure. Promote economic recovery.	<ul style="list-style-type: none"> <li>➢ More cyclone shelters built.</li> <li>➢ No build zones.</li> <li>➢ 'Cash for work' programmes.</li> </ul>



**13. Tropical storms**

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

**14. Formation of tropical storms**

14. Formation of tropical storms	
Conditions	

**15. How can we reduce the impacts?**

Strategy	Explanation
Prediction / monitoring	
Planning	
Protection	

**16. Tropical storms affect people and environments.**

	Generic	Typhoon Haiyan 2013 Philippines
Primary effects		<ul style="list-style-type: none"> <li>↓</li> <li>⊖</li> </ul>
Secondary effects		<ul style="list-style-type: none"> <li>↓</li> <li>⊖</li> </ul>
Immediate responses		<ul style="list-style-type: none"> <li>➤</li> <li>➤</li> <li>➤</li> <li>➤</li> </ul>
Long term responses		<ul style="list-style-type: none"> <li>➤</li> <li>➤</li> <li>➤</li> </ul>



**What we are learning this term:**

- A. The UK is connected to many other countries and places.
- B. The UK is a diverse and unequal society which has geographical patterns.
- C. There are different causes and consequences of development within the UK.
- D. The UK's population is changing.
- E. There are causes for and consequences of urban trends in the UK.
- F. Cities have distinct challenges and ways of life, influenced by its people, culture and geography.

**6 Key Words for this term**

- |                        |                         |
|------------------------|-------------------------|
| 1. Trade               | 4. Suburbanisation      |
| 2. Deindustrialisation | 5. Counter-urbanisation |
| 3. Infrastructure      | 6. Re-urbanisation      |

<b>A.</b>	<b>The UK is connected to many other countries and places.</b>
1. Trade	The movement of goods and services across the world.
2. Imports	Products brought into a country
3. Exports	Products taken out of a country.
4. Trade deficit	When a country imports more than they export.
6. Tariffs	Tax that must be paid on imports or exports.

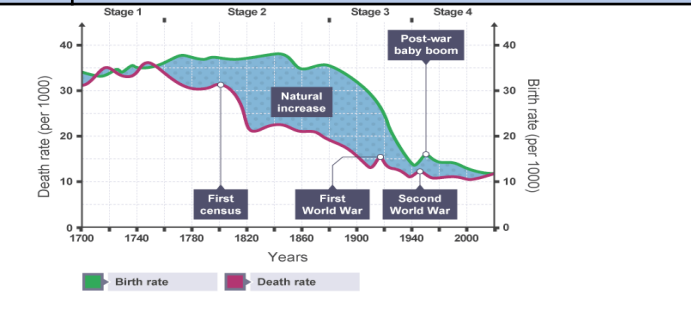
<b>B.</b>	<b>The UK is a diverse and unequal society which has geographical patterns.</b>
1. Tertiary sector	Employment in the services industry such as education or healthcare.
2. Quaternary sector	Employment is research, technology and media.
3. Disposable income	The money people have to live on once their taxes, pensions and rent have been paid.
4. Diversity	Differences within society. For example, race, levels of education and wealth.

**C. There are different causes and consequences of development within the UK.**

North-south divide	The difference in wealth in the UK between North and South.
Deindustrialisation	The closing down of factories and industry in an area.
Geographical location	The south of England is closer to London so there are more job opportunities.
Economic change	Deindustrialisation in the North led to mines and factories closing down. This led to widespread unemployment.
Infrastructure	Transport, services and communications are better in the South meaning it is easier to travel to Europe.
Government policy	The government invest more in the south because it is closer to London. This can lead to improved infrastructure, education and healthcare.

How has <b>Swindon</b> experienced economic growth?	How has <b>Swindon</b> experienced economic decline?
<ol style="list-style-type: none"> <li><b>Great Western Railway</b> was opened in <b>1843</b> providing many jobs and connecting Swindon to London and Bristol.</li> <li><b>Honda</b> was built in <b>1985</b> and has attracted many other car companies such as BMW and Jaguar.</li> <li>The old train sheds were converted into the <b>Outlet centre</b> which attracts tourists.</li> </ol>	<ol style="list-style-type: none"> <li><b>GWR</b> yard was closed in <b>1986</b> meaning that <b>40%</b> of Swindon lost their jobs.</li> <li><b>Honda</b> closed in <b>2019</b> because it was cheaper to produce cars abroad. Over <b>3,000</b> jobs lost.</li> <li>Low levels of employment mean that people have <b>less disposable income</b> to spend in local businesses.</li> </ol>

**D. The UK's population is changing.**



1. Demographic transition model (DTM).	Shows the changes in population over time by measuring birth rate and death rate.
2. Ageing population	Growing proportion of people above the age of 60.
3. Economically active	Proportion of the population who are employed and pay taxes.
4. Immigration	Inward movement of people to the UK.

**D. The UK's population is changing**

<i>Causes of an ageing population (2)</i>	<ol style="list-style-type: none"> <li>Improved healthcare.</li> <li>People living more active lifestyles.</li> </ol>
Positive effects of an ageing population (2)	<ol style="list-style-type: none"> <li>Skilled workforce</li> <li>More money spent in leisure facilities or resorts.</li> </ol>
Negative effects of an ageing population (2)	<ol style="list-style-type: none"> <li>Cost of healthcare is high.</li> <li>Elderly people do not work so do not pay taxes.</li> </ol>
Government responses to an ageing population (2)	<ol style="list-style-type: none"> <li>Pension age raised to encourage people to continue working.</li> <li>Increased investment in care homes and healthcare.</li> </ol>



**What we are learning this term:**

- A. The UK is connected to many other countries and places.
- B. The UK is a diverse and unequal society which has geographical patterns.
- C. There are different causes and consequences of development within the UK.
- D. The UK's population is changing.
- E. There are causes for and consequences of urban trends in the UK.
- F. Cities have distinct challenges and ways of life, influenced by its people, culture and geography.

**6 Key Words for this term**

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

**A. The UK is connected to many other countries and places.**

- |                  |  |
|------------------|--|
| 1. Trade         |  |
| 2. Imports       |  |
| 3. Exports       |  |
| 4. Trade deficit |  |
| 6. Tariffs       |  |

**B. The UK is a diverse and unequal society which has geographical patterns.**

- |                      |  |
|----------------------|--|
| 1. Tertiary sector   |  |
| 2. Quaternary sector |  |
| 3. Disposable income |  |
| 4. Diversity         |  |

**C. There are different causes and consequences of development within the UK.**

- |                       |  |
|-----------------------|--|
| North-south divide    |  |
| Deindustrialisation   |  |
| Geographical location |  |
| Economic change       |  |
| Infrastructure        |  |
| Government policy     |  |

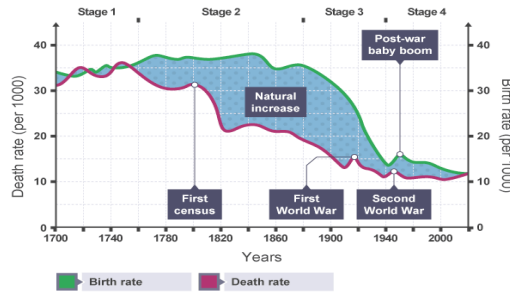
How has **Swindon** experienced economic growth?

- 1.
- 2.
- 3.

How has **Swindon** experienced economic decline?

- 1.
- 2.
- 3.

**D. The UK's population is changing.**



- |                                        |  |
|----------------------------------------|--|
| 1. Demographic transition model (DTM). |  |
| 2. Ageing population                   |  |
| 3. Economically active                 |  |
| 4. Immigration                         |  |

**D. The UK's population is changing**

*Causes of an ageing population (2)*

- 1.
- 2.

*Positive effects of an ageing population (2)*

- 1.
- 2.

*Negative effects of an ageing population (2)*

- 1.
- 2.

*Government responses to an ageing population (2)*

- 1.
- 2.



D. The UK's population is changing			
Immigration in the 21 <sup>st</sup> century.		1. International migration has increased in the 21 <sup>st</sup> century due to increase in job opportunities, high quality education and global conflict. 2. Immigrants come from all over the world including Poland, India and Pakistan.	
Positive impacts of migration on the UK		Negative impacts of migration on the UK	
Social (2)	1. Different cultures including food, music and fashion. 2. They bring skills that may be in short supply in the UK.	Social (2)	1. People may feel that they are taking local jobs and houses. 2. Can lead to cultural conflict
Economic (2)	1. Workers pay taxes which can be invested into the community. 2. Immigrants are often highly skilled and well educated (e.g. doctors)	Economic (2)	1. Extra costs for healthcare and education. 2. Money may be sent home and not spend in the local community,

E. There are causes for and consequences of urban trends in the UK		E. There are causes for and consequences of urban trends in the UK	
Urban	Towns and cities	Causes of suburbanisation (3)	1. Overcrowding in cities. 2. Improved transport links into inner-city areas. 3. Land may be cheaper outside of the city.
Rural	Countryside and villages		
Urbanisation	The growing proportion of people moving to cities		
Suburbanisation	The outward spread of cities into surrounding green areas.	Causes of counter-urbanisation (3)	1. Overcrowding in cities. 2. People want a more peaceful lifestyle. 3. Poor air quality in cities.
Counter-urbanisation	The movement of people from urban to rural areas.		
Re-urbanisation	Improving inner city areas to attract people and businesses.	Causes of re-urbanisation (3)	1. Government investment. 2. Counter-urbanisation. 3. Inner city decline.

E. There are causes for and consequences of urban trends in the UK					
Consequences of suburbanisation		Consequences of counter-urbanisation		Consequences of re-urbanisation	
Social (2)	1. Increased traffic congestion. 2. Longer commutes.	Social (2)	1. Housing prices in countryside increases. 2. Crowded public services	Social (2)	1. over-crowding. 2. Housing prices increase
Economic (2)	1. Commute is more expensive. 2. Shops in city centres close.	Economic (2)	1. House prices increase in countryside. 2. Inner-city decline	Economic (2)	1. Housing prices increase. 2. Office space is expensive.
Environmental (2)	1. Poor air quality. 2. Green areas destroyed	Environmental (2)	1. More traffic congestion. 2. Pressure on local water supply	Environmental (2)	1. Increased traffic in cities. 2. Air pollution

D. Cities have distinctive challenges and ways of life, influenced by its people, culture and geography. (CASE STUDY OF BRISTOL)	
Location	South-west England. Near the Bristol Channel 1.5 hours from London
Importance within the UK and wider world	1. Two universities 2. UK's 8 <sup>th</sup> largest tourist destination 3. Home of Airbus and Rolls Royce 4. Home of Aardman Animations
Migration	1. Population has doubled between 1851 and 1891. 2. 50 countries are represented in Bristol 3. St Paul's carnival brings music from African and Caribbean communities.
<b>Challenges:</b> Housing availability	1. Average house price is £350,000 2. Highest homeless population in the UK
<b>Challenges:</b> Transport provision	1. UK's most congested city. 2. Poor public transport links
<b>Challenges:</b> Waste management	1. High amount of food waste. 2. Half a million tonnes of waste per year.
<b>Sustainable strategies:</b> Housing	Brabazon housing estate with provide over 2,500 new affordable homes. • <b>Successful</b> because it uses brownfield sites. • <b>Unsuccessful</b> because the homes are still expensive
<b>Sustainable strategies:</b> Transport	Voi electric scooters. Park and ride to connect the suburbs to the inner city. • <b>Successful</b> because it reduces CO2 emissions. • <b>Unsuccessful</b> because the park and ride is unreliable.
<b>Sustainable strategies:</b> Waste	'Slim my waste, feed my face' initiative to cut down on food waste. • <b>Successful</b> because it has led to food being recycled • <b>Unsuccessful</b> because it is not well monitored.





<b>D. The UK's population is changing</b>			
Immigration in the 21 <sup>st</sup> century.	<ol style="list-style-type: none"> <li></li> <li></li> </ol>		
Positive impacts of migration on the UK		Negative impacts of migration on the UK	
Social (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Social (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>
Economic (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Economic (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>

<b>E. There are causes for and consequences of urban trends in the UK</b>		<b>E. There are causes for and consequences of urban trends in the UK</b>	
Urban		Causes of suburbanisation (3)	<ol style="list-style-type: none"> <li></li> <li></li> <li></li> </ol>
Rural			
Urbanisation			
Suburbanisation		Causes of counter-urbanisation (3)	<ol style="list-style-type: none"> <li></li> <li></li> <li></li> </ol>
Counter-urbanisation			
Re-urbanisation		Causes of re-urbanisation (3)	<ol style="list-style-type: none"> <li></li> <li></li> <li></li> </ol>

<b>E. There are causes for and consequences of urban trends in the UK</b>					
<b>Consequences of suburbanisation</b>		<b>Consequences of counter-urbanisation</b>		<b>Consequences of re-urbanisation</b>	
Social (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Social (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Social (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>
Economic (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Economic (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Economic (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>
Environmental (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Environmental (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>	Environmental (2)	<ol style="list-style-type: none"> <li></li> <li></li> </ol>


<b>F. Cities have distinctive challenges and ways of life, influenced by its people, culture and geography. (CASE STUDY OF BRISTOL)</b>	
Location	<ol style="list-style-type: none"> <li></li> <li></li> <li></li> </ol>
importance within the UK and wider world	<ol style="list-style-type: none"> <li></li> <li></li> <li></li> <li></li> </ol>
Migration	<ol style="list-style-type: none"> <li></li> <li></li> <li></li> </ol>
<b>Challenges:</b> Housing availability	<ol style="list-style-type: none"> <li></li> <li></li> </ol>
<b>Challenges:</b> Transport provision	<ol style="list-style-type: none"> <li></li> <li></li> </ol>
<b>Challenges:</b> Waste management	<ol style="list-style-type: none"> <li></li> <li></li> </ol>
<b>Sustainable strategies:</b> Housing	<ul style="list-style-type: none"> <li>• <b>Successful</b> because</li> <li>• <b>Unsuccessful</b> because</li> </ul>
<b>Sustainable strategies:</b> Transport	<ul style="list-style-type: none"> <li>• <b>Successful</b> because</li> <li>• <b>Unsuccessful</b> because</li> </ul>
<b>Sustainable strategies:</b> Waste	<ul style="list-style-type: none"> <li>• <b>Successful</b> because</li> <li>• <b>Unsuccessful</b> because</li> </ul>



are learning this term:		B.	What can be inferred from a source about how well Germany was being governed in November 1918
A. The situation in Germany at the end of WWI	<p>1 – Anarchy</p> <p>This means that a country is being run without a government and this is the situation that was developing in Germany at the end of WWI. After the Kaiser abdicated, a republic was declared to ensure that the anarchy in Germany did not take over</p>	2 – Ruins	<p>It was not just France and Belgium that had been damaged during the war. Parts of Germany was also in ruins at the end of the war and the country was in a lot of debt, which would make it much harder for the country to rebuild</p> <p>The people of Germany were in suffering by the end of the war, due to the navy blockades preventing food coming in and also due to the amount of men that had been killed or injured during the war</p> <p>The war had exhausted Germany and the people were also exhausted with the bad leadership that was being shown by their Kaiser</p>
B. The strengths and weaknesses of the Weimar Republic			
C. Opposition to the Treaty of Versailles			
D. Political challenges to the Weimar Republic			
E. The occupation of the Ruhr and hyperinflation			
F. The recovery of the Weimar Republic	3 – Despairing		
G. Changes to culture and standards of living	4 – Exhausted	4 – Exhausted	
<b>6 Key Words for this term</b>		<b>C. Why did people oppose the Treaty of Versailles?</b>	
1 <b>Republic</b> – A state where power is held by the people and the people who elected them	<p>1. <b>Diktat</b> – The Treaty of Versailles was seen as a 'diktat', meaning that the terms of the treaty (written by Britain, France and the USA) were imposed on Germany and not agreed by them</p> <p>2. <b>War guilt</b> – The term that people hated term was the guilt clause. Article 231 of the treaty stated that Germany was to blame for the war, which the people did not agree with. They were not to blame for the war starting, but the Allies did not want Germany to start another war in the future so restriction were put on the country</p> <p>3. <b>Reparations</b> – Germany had to pay money to the Allies as compensation for the war. The amount was fixed at £6.6 billion in 1921.</p> <p>4. <b>Land</b> – Germany lost its colonies in Africa and the Far East. Parts of Germany were also lost to France, Belgium and Poland. This meant that people living in these areas were now part of a new country</p> <p>5. <b>Military</b> – The German army was limited to 10,000 men with no heavy artillery. The navy was limited as well with 6 battleships and cruisers and no submarines</p> <p>6. <b>Dolchstoß</b> - The Treaty of Versailles was also seen as a 'stab in the back' to the army, as the people of Germany did not believe that its army had been defeated in war</p>	<b>Why did people oppose the Treaty of Versailles?</b>	
2 <b>Constitution</b> – The rules for how a country is run			
3 <b>Coalition</b> – A government made up of two or more political parties			
4 <b>Chancellor</b> – The Head of Government in Weimar Germany			
5 <b>Democracy</b> – A system of government where the whole eligible population elects the people who they want to run the country			
6 <b>Armistice</b> – An agreement to end WWI, made between the Allies and Germany			
<b>A. What can you infer from a source about Germany at the end of WWI and how well it was being governed in 1918?</b>	<b>E. What can you infer about life in Germany during hyperinflation?</b>		
Kaiser	This is the German word for Emperor. During the war, Kaiser Wilhelm II was in charge of Germany. By the end of the war, the Kaiser had lost control of Germany and the people wanted him gone.	1 Occupation of the Ruhr	France grew angry when Germany was no longer able to pay reparations and so they invaded the industrial area of the Ruhr to take what was owed to them
Abdication	The Kaiser was forced to abdicate which meant that he was forced to step down from his position. This is because he had lost the support of the people and the army in Germany.	2 Industrial	The Ruhr contained many factories and around 80% of Germanys coal, iron and steel reserves, which was worth a lot of money.
Riots	Before the war was officially declared over and before the Kaiser had abdicated, the people of Germany were rioting in the streets. This is due the suffering that the German people had faced throughout the war.	3. Strike	The German government told the German people living in this area to go on strike, which means they are not working. This made Germany poorer as they were not making money
Anarchy	This means that a country is being run without a government and this is the situation that was developing in Germany at the end of WWI. After the Kaiser abdicated, a republic was declared to ensure that the anarchy in Germany did not take over	4. Inflation	There was a shortage of goods (things to buy) in Germany caused by the strikes in 1923 which meant the price of things rose. This is inflation
Blockades	During the war, British navy blockaded German ports, preventing German ships brining food into the country. Over 750,000 Germans died because of food shortages during the war	5 Hyperinflation	To pay back the money they owed France, the German government printed more money, which made the situation worse as the price of things went ridiculously high
Weary	This means that someone is exhausted and tired. At the end of WWI, the people of Germany were tired of the ongoing war. This is due to the lack of food and the amount of men dying in the war – 55% of troops became casualties	6 Worthless	Money became worthless in Germany as there was suddenly so much of. This led to people using money for other things, like burning to keep their houses warm as cheaper than firewood
<b>D. What was the political situation like in 1920?</b>		<b>F. How successfully did Stresemann help the Weimar Republic to recover?</b>	
1 <b>Outrage</b>	The people in Germany were outraged at the Treaty of Versailles and the terms that had been forced on them by the Allies in 1919	<p>1. <b>Rentenmark</b> – In 1923, Stresemann set up a new bank and issued a new currency. The supply of notes was limited which meant that they had real value</p> <p>2. <b>Dawes Plan</b> – This was a plan written up by an American banker. Under this plan reparations were temporarily reduced to £50m a year and US banks agreed to give loans to German industry</p> <p>3. <b>Young Plan</b> – This plan was put forward by a committee set up by the Allies. Reduced the reparation debt to £2 billion with a further 59 years to pay</p> <p>4. <b>The Locarno Pact</b> – This was a treaty between Germany, Britain, France, Italy and Belgium. Germany accepted its new border with France and talks were opened about Germany joining the League of Nations</p> <p>5. <b>League of Nations</b> – This was an Allied group that discussed wats of solving the world's population without resorting to war. In September 1926, Stresemann persuaded the other great powers to accept Germany as a member.</p> <p>6. <b>Kellogg-Briand Pact</b> – Germany and 61 other countries signed this pact. It promised that countries would not use war to achieve foreign policy aims. This showed that Germany was now included amongst the main global powers</p>	
2 <b>Condemned</b>	Versailles was condemned (criticised) by the people and they felt the Weimar government did not work hard enough to not have it forced on Germany	<b>E. Changes to culture and standards of livings</b>	
3 <b>Lacked support</b>	The SPD party, who were the main party in the Weimar Republic, lacked support from the people in Germany following the treaty	<p>1. <b>Unemployment</b> – Unemployment reduced from 1926 to 1928 by 700,000 and workers were being charged 3% of their wages to provide benefits if they became unemployed or sick</p> <p>2. <b>Housing</b> – from 1925-29, private companies built 37,000 new homes and building associations built 64,000, easing the housing shortage</p> <p>3. <b>Changes for Women</b> –more women were working in politics and high powered jobs by 1932, women were also working in other sectors such as retail, education and medicine, but only around 35% of the female population were working</p> <p>4. <b>New Women</b> – women had more freedom under the Weimar Republic. They had more independence, going out more, wearing make-up and their hair short. They drank and smoke and became less interested in marriage and families</p> <p>5. <b>Artistic changes</b> – The 1920s saw a surge in cultural activity due to New Objectivism, Modernism and Expressionism.</p> <p>6. <b>Art and Architecture</b> – Painters began to paint a more critical scene of Germany and architecture became more futuristic</p> <p>7. <b>Cinema</b> – Film became popular in the 1920s and films became more innovative. Horror and science fiction became popular</p>	
4 <b>Spartacists</b>	Left-wing group who wanted to force a communist government on Germany, This would mean that the workers in the country would set up a government		
5 <b>Kapp Putsch</b>	Right-wing group who wanted Germany to go back to the old way of being run with a Kaiser.		





are learning this term:		<b>B.</b> What can be inferred from a source about how well Germany was being governed in November 1918	
<b>6 Key Words for this term</b> 1 Republic –  2 Constitution –  3 Coalition –  4 Chancellor –  5 Democracy –  6 Armistice –	1 – Anarchy		
	2 – Ruins		
	3 – Despairing		
	4 – Exhausted		
	<b>C.</b> Why did people oppose the Treaty of Versailles?		
	1. Diktat – 2. War guilt – 3. Reparations – 4. Land – 5. Military – 6. Dolchstoß -		
<b>A.</b> What can you infer from a source about Germany at the end of WWI and how well it was being governed in 1918?			
Kaiser			
Abdication			
Riots			
Anarchy			
Blockades			
Weary			
<b>D.</b> What was the political situation like in 1920?			<b>E.</b> What can you infer about life in Germany during hyperinflation?
1 Outrage			1 Occupation of the Ruhr
2 Condemned			2 Industrial
3 Lacked support			3. Strike
4 Spartacists			4. Inflation
5 Kapp Putsch			5 Hyperinflation
		6 Worthless	
		<b>F.</b> How successfully did Stresemann help the Weimar Republic to recover?	
		1. Rentenmark –	
		2. Dawes Plan –	
		3. Young Plan –	
		4. The Locarno Pact –	
		5. League of Nations –	
		6. Kellogg-Briand Pact –	
		<b>E.</b> Changes to culture and standards of livings	
		1. Unemployment –	
		2. Housing –	
		3. Changes for Women –	
		4. New Women –	
		5. Artistic changes –	
		6. Art and Architecture –	
		7. Cinema –	

# Year 10 GCSE Religious Education KO - Christianity Beliefs

Keywords	
Ascension	Jesus returning to be with God in Heaven after the crucifixion
Atonement	Making things better after sinning, asking for forgiveness from God
Benevolent	God's nature as all-loving
Crucifixion	Jesus' execution by the Romans on the cross
Incarnation	God becoming flesh in the form of Jesus Christ
Just	God's nature as fair
Omnipotent	God's nature as all-powerful
Original sin	The built-in tendency to do wrong which comes from Eve's disobedience
Resurrection	Jesus returning from the dead after he was crucified
Salvation	Being saved from sin and given eternal life in heaven by God
Sin	Any thought or action which goes against God's will
Trinity	God's nature as three-parts-in-one, the Father, Son and Holy Spirit.

What we are learning in this unit			
A. Nature of God B. Evil and suffering C. The Holy Trinity D. Creation E. Resurrection, judgement, Heaven and Hell		F. Incarnation G. Crucifixion H. Christ in Salvation I. Ascension and resurrection J. Sin and salvation	
A.	<i>The Nature of God</i>	<i>How is it shown in The Bible?</i>	B.
One God	<ul style="list-style-type: none"> <li>Christians believe in one God who is the creator and sustainer of all that exists</li> </ul>	<ul style="list-style-type: none"> <li><b>"the Lord he is God; there is none else beside him"</b></li> </ul>	What is the problem of evil <ul style="list-style-type: none"> <li>There is evil and suffering going on in the world</li> <li>suffering is physical or emotional pain a person goes through for any reason</li> <li>Christians may find it difficult to make sense of God allowing suffering to happen</li> </ul>
Omnipotent	<ul style="list-style-type: none"> <li>God is almighty and has unlimited power</li> <li>Nothing can defeat the power of God</li> </ul>	<ul style="list-style-type: none"> <li><b>"For nothing is impossible with God"</b></li> <li>The creation of the universe</li> <li>miracles performed by Jesus</li> <li>Sending the 10 plagues to Egypt to help the Hebrews be free</li> </ul>	How do Christians solve the problem of evil and suffering? <ul style="list-style-type: none"> <li>Human beings have free will and have the ability to choose their own actions - God doesn't cause it, humans do</li> <li>Jesus Christ suffered on the cross and Christians believe they can learn from suffering too</li> <li>Christians believe they get rewarded for suffering in Heaven</li> <li>"God works in mysterious ways" – we cannot understand God</li> <li><b>Job</b> – there is sin in the world, we need to keep faith</li> </ul>
Benevolent	<ul style="list-style-type: none"> <li>God is all-loving and all-good</li> <li><b>"agape"</b> refers to a self-giving, sacrificial love</li> </ul>	<ul style="list-style-type: none"> <li><b>"For God so loved the world, he gave his One and Only Son"</b></li> <li>Jesus' death on the cross is an example of that love</li> <li>The Parable of the Prodigal Son – the father forgave his son because he loved him how God is also loving</li> </ul>	C.
Just	<ul style="list-style-type: none"> <li>God is perfect and a fair judge</li> </ul>	<ul style="list-style-type: none"> <li><b>"he is faithful and righteous to forgive us our sins"</b></li> </ul>	What is it? <ul style="list-style-type: none"> <li>The concept of the three persons of God</li> <li>Each person of the Trinity is fully God, but they are not the same</li> <li><b>"we believe in one God, Father, Son and Holy Spirit"</b></li> </ul>
Problem of suffering	<ul style="list-style-type: none"> <li>If God is <b>benevolent</b>, why would he allow bad things and suffering to happen to innocent people?</li> <li>Some Christians argue that if God is <b>fair</b> and <b>just</b>, why does he allow suffering?</li> </ul>		God The Father <ul style="list-style-type: none"> <li>God of the Old Testament – creator, ruler, judge</li> <li>The creator of all life</li> </ul>
			God The Son <ul style="list-style-type: none"> <li>Jesus Christ – both fully human and fully God</li> <li>God became incarnate through Jesus</li> </ul>
			The Holy Spirit <ul style="list-style-type: none"> <li>The unseen power of God at work in the world</li> <li>e.g. answering prayers, guides and comforts Christians</li> </ul>
			Why is the trinity important? <ul style="list-style-type: none"> <li>It expresses who God is</li> <li>It expresses how humans can interact with God</li> <li>It allows humans to come face to face with God</li> <li>Helps to make the best sense of what Christians read in the Bible</li> <li>When Jesus was baptised, the Holy Spirit descended like a dove and said <b>"you are my Son..."</b></li> </ul>

# Year 10 GCSE Religious Education KO - Christianity Beliefs

Keywords	
Ascension	
Atonement	
Benevolent	
Crucifixion	
Incarnation	
Just	
Omnipotent	
Original sin	
Resurrection	
Salvation	
Sin	
Trinity	

What we are learning in this unit			
A. Nature of God		F. Incarnation	
B. Evil and suffering		G. Crucifixion	
C. The Holy Trinity		H. Christ in Salvation	
D. Creation		I. Ascension and resurrection	
E. Resurrection, judgement, Heaven and Hell		J. Sin and salvation	
A.	<i>The Nature of God</i>	<i>How is it shown in The Bible?</i>	B.
One God			What is the problem of evil
Omnipotent			How do Christians solve the problem of evil and suffering?
Benevolent			C.
Just			<i>The Holy Trinity</i>
Problem of suffering			What is it?
			God The Father
			God The Son
			The Holy Spirit
			Why is the trinity important?

## Year 10 GCSE Religious Education KO - Christianity Beliefs

D.	<i>Creation</i>
Beliefs about creation	<ul style="list-style-type: none"> <li>The trinity must have existed before creation</li> <li>The trinity is the way in which the world was created</li> </ul>
Genesis 1:1-3	<ul style="list-style-type: none"> <li><b>"In the beginning, God created the Heavens and Earth"</b></li> <li>God created Earth and all living things</li> <li>Christians believe that everything created <b>"was good"</b></li> <li>Most Christians interpret the story as a way of describing the creation of the world</li> <li>Not all believe it was in literally 6 days</li> <li><b>"now the Earth was formless and empty, darkness was over the face of the deep and the Spirit of God was hovering over the face of the waters"</b></li> </ul>
John 1:1-3	<ul style="list-style-type: none"> <li><b>"In the beginning was the Word, and the Word was with God"</b></li> <li>'The Word' refers to God the Son. This shows the Son (Jesus) was involved in creation</li> </ul>
Messages from the story	<ul style="list-style-type: none"> <li>God is the omnipotent creator</li> <li>Every aspect of God's creation is good</li> <li>The world is sacred</li> <li>Humans have stewardship and dominion – they have authority over the rest of the world</li> <li>Humans are made in the image of God</li> </ul>

E.	<i>Resurrection, judgement, Heaven and Hell</i>
What is Resurrection	<ul style="list-style-type: none"> <li>Jesus overcame death through resurrection</li> <li>If Jesus lived after death, then so will they</li> <li>Makes Christians treat their body as a <b>"temple of the Holy Spirit"</b></li> </ul>
What do Christians mean by resurrection	<ul style="list-style-type: none"> <li>Some Christians believe that God will raise them back to life before Judgement Day</li> <li>Catholics believe in purgatory – where the soul goes after death to be purified.</li> </ul>
Judgement	<ul style="list-style-type: none"> <li>There will be a Judgement Day at the end of time and will be judged by Jesus according to how they behaved</li> <li>Jesus <b>"will come again in glory to judge the living and the dead"</b></li> <li>After judgement, they will wait to be rewarded with Heaven or punished with Hell</li> <li><b>The Parable of the rich man and Lazarus</b> – ignoring the needs of others has eternal consequences</li> <li><b>The Parable of the sheep and the goats</b> – on Judgement Day, some will be rewarded with Heaven for helping others and others are sent to Hell</li> </ul>
Heaven	<ul style="list-style-type: none"> <li>Heaven is being with God outside time and space</li> <li>Eternal happiness with no suffering</li> <li>Heaven is a state of being</li> </ul>
Hell	<ul style="list-style-type: none"> <li>Hell is eternal separation from God</li> <li><b>"God predestines no one go to hell; for this, a wilful turning away from God... is necessary and persistence in it until the end"</b></li> <li>Some Christians reject any idea of hell because they think it would mean God's love would not triumph over evil</li> </ul>

F.	<i>Incarnation</i>
What is it	<ul style="list-style-type: none"> <li>God took on human form as Jesus Christ</li> <li><b>"The Word became flesh and lived for a while among us"</b></li> <li>Jesus was fully divine and fully human</li> </ul>
Jesus as the Son of God	<ul style="list-style-type: none"> <li>Mary was impregnated by the Holy Spirit and gave birth as a virgin – proof that Jesus is the son of God</li> </ul>
Belief in incarnation	<ul style="list-style-type: none"> <li>The incarnation is important to teach Christians how to live</li> </ul>



**Year 10 GCSE Religious Education KO - Christianity Beliefs**

<b>D.</b>	<i>Creation</i>
Beliefs about creation	
Genesis 1:1-3	
John 1:1-3	
Messages from the story	

<b>E.</b>	<i>Resurrection, judgement, Heaven and Hell</i>
What is Resurrection	
What do Christians mean by resurrection	
Judgement	
Heaven	
Hell	
<b>F.</b>	<i>Incarnation</i>
What is it	
Jesus as the Son of God	
Belief in incarnation	

## Year 10 GCSE Religious Education KO - Christianity Beliefs

I.	<i>Ascension and resurrection</i>
Resurrection	<ul style="list-style-type: none"> <li>Jesus was buried in a rock tomb and left there due to the Sabbath</li> <li>When the women returned for the burial, Jesus' body was gone</li> <li>Jesus appeared for the next 40 days to his disciples and other believers</li> </ul>
Ascension	<ul style="list-style-type: none"> <li>Jesus appeared to his disciples and told them to spread the word of him</li> <li>The time between resurrection and ascension reminds Christians that God will forgive sins and they can become closer to God</li> <li>The ascension happened 40 days after the resurrection</li> <li>It assures Christians they will rise again after death and live in the afterlife</li> </ul>
Why is Jesus' resurrection important	<ul style="list-style-type: none"> <li>Christians interpret the resurrection as proof that he is the Son of God</li> <li>Shows God's triumph over evil and death</li> </ul>

G.	<i>Crucifixion</i>
Why was Jesus crucified	<ul style="list-style-type: none"> <li>Jesus was arrested and convicted of blasphemy</li> <li>He was sentenced to death by Pilate</li> <li>Crucifixion was a humiliating method which is slow and agonising</li> </ul>
How does it influence a Christian	<ul style="list-style-type: none"> <li>By accepting Jesus' sacrifice, their sins will be forgiven and they will go to Heaven</li> <li>Suffering is a part of life</li> </ul>
Why did Jesus have to die?	<ul style="list-style-type: none"> <li>Blasphemy – some of the things he said and did were considered blasphemy and threatened authority</li> <li>Pilate – Pilate was going to pardon him but was afraid of the consequences from Rome</li> <li>God – Jesus had to die to fulfil God's commands for him – this way, humans could be reunited with God</li> </ul>

I.	<i>Sin and salvation</i>
Original sin	<ul style="list-style-type: none"> <li>Christians believe humans are separated from God due to original sin which they have due to Adam and Eve (Genesis)</li> <li>God in Christ offered salvation</li> </ul>
Salvation through law	<ul style="list-style-type: none"> <li>Jews thought they needed to obey the law to be accepted by God</li> <li>Some Christian groups claim salvation depends on keeping to all the rules that are put in place</li> <li>However some say that the thoughts in our mind and love in our hearts for God is more important</li> </ul>
Grace and spirit	<ul style="list-style-type: none"> <li>Grace = unconditional love that God shows to everyone, even when it seems undeserved</li> <li>God loves humans despite what we do or do not do</li> <li><b>Parable of the Prodigal Son</b> = the son did not deserve the forgiveness, but that is how God treats humanity</li> <li>Jesus' actions made forgiveness for the sins of the world and reconciliation possible</li> <li>Christians believe they receive God's grace through the presence of the Holy Spirit</li> </ul>

H.	<i>Christ in salvation</i>
Atonement	<ul style="list-style-type: none"> <li>Christians see Jesus' death as atonement</li> </ul>
Reconciliation	<ul style="list-style-type: none"> <li>Reconciliation is the restoration of relationships</li> <li>The relationship between God and human beings was damaged</li> <li>Human beings need to be reconciled with God to get to Heaven</li> <li>God sacrificed his Son to allow this to happen</li> </ul>

Year 10 GCSE Religious Education KO - Christianity Beliefs

I.	<i>Ascension and resurrection</i>
Resurrection	
Ascension	
Why is Jesus' resurrection important	

G.	<i>Crucifixion</i>
Why was Jesus crucified	
How does it influence a Christian	
Why did Jesus have to die?	

I.	<i>Sin and salvation</i>
Original sin	
Salvation through law	
Grace and spirit	

H.	<i>Christ in salvation</i>
Atonement	
Reconciliation	

**GCSE Unit 8 SPANISH Knowledge organiser.**  
**Topic Holidays and Travel**



**What we are learning this term:**

- A. Talking about travelling to holiday destinations
- B. Talking about the weather
- C. Talking about holiday accommodation
- D. Talking about the regions of Spain
- E. Understanding tourist leaflets and websites

**6 Key Words for this term**

- |               |               |
|---------------|---------------|
| 1. alojarse   | 4. vacaciones |
| 2. veranear   | 5. un folleto |
| 3. la pensión | 6. el AVE     |

**8.1F ¿Dónde te alojas?**

el abrebotellas bottle-opener  
 el abrelatas tin-opener  
 el aeropuerto airport  
 a la derecha on the right  
 a la izquierda on the left  
 el albergue juvenil youth hostel  
 Alojarse to stay (in a hotel)  
 el bañador swimming costume  
 la cama de matrimonio double bed  
 camping campsite, camping  
 la estación de servicio petrol station  
 la estrella star  
 fatal awful, terrible  
 el folleto leaflet  
 la gasolina (sin plomo) (unleaded) petrol  
 el guía / la guía guide (person)  
 la guía guidebook  
 la habitación (doble/ (double/single) room individual)  
 la llave key  
 mojarse to get wet  
 la oficina de turismo tourist office  
 el papel higiénico toilet paper  
 el parador state-owned hotel (in Spain)  
 el pasaporte passport  
 la pensión boarding house, B & B  
 ponerse en camino to set off  
 por desgracia unfortunately  
 la recepción reception  
 la reserva reservation  
 el saco de dormir sleeping bag  
 los servicios toilets  
 la tarjeta de embarque boarding card  
 la tienda (de campaña) tent  
 la taquilla ticket office

**8.2G ¿En qué región vives?**

el desempleo unemployment  
 la diversión entertainment  
 muy poblado crowded  
 nacer to be born  
 Nací I was born  
 nació he/she was born  
 el país country  
 Pescar to fish  
 el río river  
 la sierra mountain range  
 tanto so much, so many

Key Verbs				
Quedarse To stay	Ir To go	Veranear To summer holiday	Hacer – to do/make	Volar To fly
Me quedo I stay	Voy I go	Veraneo I summer holiday	Hago I do	Vuelo I fly
Te quedas You stay	Vas You go	Veraneas You summer hol	Haces You do	Vuelas You fly
Se queda He/she/it stays	Va s/he goes	Veranea He/she summer hol	Hace s/he does	Vuela He/she/ it flies
Nos quedamos We stay	Vamos They go	Veraneamos We summer hol	Hacemos We do	Volamos We fly
Se quedan They stay	Van They go	Veranean They summer hol	Hacen They do	Vuelan They fly

**8.2F Un folleto turístico**

abrir to open  
 abierto/a open  
 callado/a quiet, reserved  
 cargar to load  
 cerrar to close, shut  
 la cocina cuisine, cooking  
 conocer to know (a person /a place)  
 el cultivo crop  
 entero/a entire, whole  
 gruñón/oña grumpy  
 ir de paseo to go for a walk  
 la mina mine  
 el monasterio monastery  
 el monte hill, mountain  
 la oveja sheep  
 Pintoresco picturesque  
 recomendar to recommend  
 el recuerdo memory, reminder, souvenir  
 la refinera (de petróleo) (oil) refinery  
 la sombrilla sunshade, parasol  
 el taller workshop  
 tranquilo/a peaceful  
 la vaca cow  
 el valle valley  
 el/la visitante visitor

**8.2H Describiendo tu región**

acostumbrado/a accustomed to, used (adj) to  
 la barca pesquera fishing boat  
 casero/a home-made  
 la cita amorosa date (with someone)  
 el clima climate

**8.1H ¿Qué hiciste y qué te gustaría hacer durante las vacaciones?**

aburrirse to get bored  
 acabar de (+ infinitive) to have just (done something)  
 broncearse to get a tan  
 coger to catch, to take  
 el crucero cruise  
 descansar to rest  
 el esquí acuático water skiing  
 extranjero/a foreign  
 el extranjero (en el \_\_, abroad al \_\_)  
 Francia France  
 genial brilliant, great  
 Grecia Greece  
 la insolación sunstroke  
 la isla island  
 las Islas Canarias Canary Islands  
 a mediados de in the middle of (time)  
 el Mediterráneo Mediterranean  
 ocupado/a busy, engaged  
 el oro gold  
 la plata silver  
 regresar to return  
 relajarse to relax  
 la sombrilla sunshade, parasol  
 el vestuario changing room, cloakroom  
 la vida nocturna night life  
 volver to return  
 el vuelo flight  
 colocar to place, to put  
 la empresa company, firm  
 la época era, age, time

Key Verbs				
Quedarse To stay	To go	To summer holiday	Hacer – to do/make	Volar _____
Me quedo _____	Voy I go	_____ I summer holiday	Hago _____	_____ I fly
Te _____ You stay	Vas _____	Veraneas _____	_____ - You do	Vuelas _____
_____ queda He/she/it stays	_____ s/he goes	_____ He/she summer hol	Hace s/he does	Vuela He/she/ it flies
Nos quedamos We stay	Vamos They go	Veraneamos We summer hol	_____ We do	_____ We fly
Se _____ They stay	_____ They go	_____ They summer hol	Hacen They do	_____ They fly

What we are learning this term:	
A. Talking about travelling to holiday destinations	
B. Talking about the weather	
C. Talking about holiday accommodation	
D. Talking about the regions of Spain	
E. Understanding tourist leaflets and websites	
6 Key Words for this term	
1. alojarse	4. vacaciones
2. veranear	5. un folleto
3. la pensión	6. el AVE

8.1F ¿Dónde te alojas?
el abrebotellas _____ _____ tin-opener
el aeropuerto _____ _____ on the right
a la izquierda _____
el albergue juvenil _____
Alojarse _____ _____ swimming costume
la cama de matrimonio _____
camping campsite, camping _____
la estación de servicio _____
la estrella _____ _____ awful, terrible
el folleto _____
la gasolina (sin plomo) _____
el guía / la guía _____
la guía _____ _____ (doble/ (double/single) room individual)
la llave _____ _____ to get wet
la oficina de turismo _____
el papel higiénico _____
_____ state-owned hotel (in Spain)
el pasaporte _____
_____ boarding house, B & B
ponerse en camino _____
_____ unfortunately
la recepción _____ _____ reservation
el saco de dormir _____
los servicios _____
la tarjeta de embarque _____
la tienda (de campaña) _____
la taquilla ticket _____

8.1G ¡Me voy de vacaciones!
el aire acondicionado _____
el andén _____
el asiento _____
el autocar _____
el AVE (tren de alta velocidad) _____
_____ plane
_____ cheap
_____ boat
_____ bike, bicycle
_____ car
_____ left-luggage office
_____ cruise
desde luego _____
echar de menos _____
_____ Scotland
_____ narrow
_____ luggage
_____ railway
el invierno _____
la maleta _____
_____ underground
_____ non smoking
el otoño _____
_____ spring
la sala de espera _____
_____ South America
_____ tram
las vacaciones _____
_____ summer
viajar _____
el viaje _____

8.2G ¿En qué región vives?
_____ unemployment
_____ entertainment
_____ crowded
nacer _____
Nací _____
_____ he/she was born
el país _____
pescar _____
_____ river
la sierra _____
_____ so much, so many

8.2F Un folleto turístico
abrir to _____ _____ open
_____ quiet, reserved
cargar _____ _____ to close, shut
_____ cuisine, cooking
_____ to know (a person /a place)
el cultivo _____
_____ entire, whole
gruñón/oña _____
_____ to go for a walk
la mina _____
_____ monastery
el monte _____
_____ sheep
pintoresco _____
_____ to recommend
_____ memory, reminder, souvenir
_____ (de petróleo) (oil) refinery
_____ sunshade, parasol
el taller _____
tranquilo/a _____
_____ cow
_____ valley
el/la visitante _____

8.1H ¿Qué hiciste y qué te gustaría hacer durante las vacaciones?
aburrirse _____ _____ (+ infinitive) to have just (done something)
broncearse _____
_____ to catch, to take
_____ cruise
descansar _____
el esquí acuático _____
_____ foreign
el extranjero (en el ____, abroad al __)
Francia _____
_____ brilliant, great
Grecia _____
la insolación _____
_____ island
las Islas Canarias _____
a mediados de _____
_____ Mediterranean
_____ busy, engaged
el oro _____
la plata _____
_____ to return
relajarse _____
_____ sunshade, parasol
_____ changing room, cloakroom
la vida nocturna _____
volver _____
el vuelo _____
colocar to place, _____
la empresa _____
la época _____

8.2H Describiendo tu región
_____ accustomed
to, used (adj) to
la barca pesquera _____
_____ home-made
_____ date (with
someone)
_____ climate

<b>What we are learning this term:</b>	
A. Giving your opinion about different subjects	
B. Talking about your studies	
C. Talking about your school life and daily routine	
D. Talking about school rules and uniform	
E. Translating into English	
<b>6 Key Words for this term</b>	
1. asignaturas	4. suspender
2. notas	5. licenciatura
3. aprobar	6. elegir

<b>9.1G El instituto y las asignaturas</b>
el arte dramático drama la asignatura subject la carrera career, university course las ciencias science la clase class la cocina cooking, food technology continuar to continue, carry on los deberes homework dejar to drop el dibujo art difícil difficult, hard divertido/a fun la educación física PE Escoger to choose el español Spanish estudiar to study fácil easy el francés French la geografía geography la historia history el inglés English las matemáticas maths práctico/a practical próximo/a next la selección choice Útil useful

<b>9.1F ¿Cómo ser buen estudiante?</b>
abrir to open Afectar to affect el apoyo support aprender to learn los apuntes notes asistir a to attend la biblioteca library el/la compañero/a classmate completar to complete Consultar to consult el debate discussion los deberes homework el diccionario dictionary la duda doubt, query el ejercicio exercise entender to understand la escuela school Esperar to hope, to wait, to expect el examen, exámenes exam, exams la excursión trip faltar a clase to miss lessons la frase sentence Intentar to try interrumpir to interrupt el instituto school levantar la mano to raise your hand la literatura literature llevar to take, to carry, to wear mejorar to improve mirar to look at el mundo world necesitar to need la nota grade ofrecer to offer el ordenador computer organizar to organise la palabra word la pantalla screen participar to take part pedir to ask for, to request pegado/a a glued to perder to lose, miss la pizarra blackboard la pizarra interactiva smartboard Preguntar to ask el/la profesor(a) teacher el progreso progress la prueba test Repasar to revise

<u>Aprobar</u> To pass	<u>Elegir</u> To choose	<u>Suspender</u> To fail	<u>Estudiar</u> To study	<u>Pensar</u> To think
Apruebo I pass	Eligo I choose	Suspendo I fail	Estudio I study	Pienso I think
Apruebas You pass	Eliges You choose	Suspendes You fail	Estudias You study	Piensas You think
Aprueba He/she/it passes	Elige He/she/it chooses	Suspende He/she/it fails	Estudia He/she/it studies	Piensa He/she/it thinks
Aprobamos We pass	Elegimos We choose	Suspendemos We fail	Estudiamos We study	Pensamos We think
Aprueban They pass	Eligen They choose	Suspenden They fail	Estudian They study	Piensan They think

<b>9.1F ¿Cómo ser buen estudiante?</b>
el repaso revision responsable responsible resultar en to end up with, to lead to saber to know sacar buenas / to get good / bad grades malas notas serio/a serious las tareas homework el trabajo work, piece of work la tutoría tutorial Usar to use el vocabulario vocabulary

<b>9.1H ¿Qué tal el instituto?</b>
preocupar to worry la sala de informática IT room sencillo/a simple Sentirse to feel usar to use el viaje journey la zona área

<b>9.1H ¿Qué tal el instituto?</b>
el/la alumno/a pupil antiguo/a old asustado/a frightened asustar to frighten el atasco traffic jam, blockage atento/a attentive el aula (fem.) classroom ayudar to help buscar to look for cambiar to change cansado/a tired conocer to meet, to get to know contento/a glad, happy contestar to answer el curso school year, course los deberes homework deteriorado/a dilapidated, shabby distinto/a different la emoción excitement emocionante exciting encima on top encontrar to find explicar to explain feo/a ugly el gimnasio sports hall, gym hambriento/a hungry el idioma language inmenso/a immense el laboratorio laboratory largo/a long mejor better nervioso/a anxious, nervous el patio del recreo the school yard, playground la pregunta question



Translation Practice. G – blue F – orange H - Green	
Me _____ el francés	I <b>like</b> French
La historia es _____ divertida que el inglés	History is <b>more fun</b> than English
_____ a estudiar las matemáticas	I <b>am going to</b> study maths
La literatura es más _____ que el francés	Literature is <b>more fun</b> than French
Me encanta dibujo. Voy a _____ en Septiembre	I love art. I'm going to <b>study it</b> in September.
No, no _____ elegir esa opción	No, I <b>don't want</b> to pick that option
Pienso que las ciencias son muy _____	I think that science is really <b>useful</b>
No creo que voy a _____	I don't believe that I'm going to <b>fail</b>
_____ informática en la escuela primaria	I <b>used to study</b> ICT in primary school
Ayer _____ mis deberes	Yesterday I <b>did</b> my homework
La semana pasada _____ con mi profesora	Last week I <b>spoke</b> with my teacher
Voy a _____ estudiando tecnología	I'm going to <b>continue</b> studying technology
Si necesitas algo, _____ al profesor.	If you need anything <b>ask</b> the teacher
_____ mucho estudiar ciencias	I <b>enjoy</b> studying science a lot
Ya _____ hablado con el profesor	I <b>have</b> already spoken with the teacher
Va a _____ muy interesante	It's going to <b>be</b> very interesting
He _____ esta opción	I have <b>chosen</b> this option
Quiero _____ mucho	I really want to <b>do it</b> a lot
No sé _____ hacer	I don't know <b>what</b> to do

Key Questions: Answer the following in your own words. Use these model answers	
¿Qué estudias ahora, que te gustaría estudiar en el futuro, que vas a dejar?	Ahora en el colegio, estudio unas asignaturas obligatorias. Las asignaturas obligatorias son las matemáticas, las ciencias y el inglés. También he elegido estudiar el español, la geografía, la historia, la tecnología, el arte, el dibujo .... La asignatura que me interesa más es ..... porque .... La asignatura que me molesta/irrita más es .... porque ...
¿Cómo es tu colegio, las reglas, los edificios, las instalaciones?	Mi colegio es un colegio grande que tiene circa ochocientos alumnos. Está en las afueras de Swindon en los barrios de Pinehurst y Penhill. Tenemos una biblioteca nueva, una cantina acogedora, un patio grande ... En el colegio no debes comer chicle, no debes acosar, no tienes que gritar, no deberías comportarse mal... En el colegio tienes que comportarse bien, llevar el uniforme, ir al baño solo durante el recreo, llegar al colegio a hora ....
¿Describe tu primer día en tu colegio?	El primer día, estaba un poco nervioso porque me preocupaban los profesores, los otros alumnos, las clases, ... me preocupaba que los profesores serian estrictos, me preocupaban los exámenes, me preocupaba que el colegio sería tan inmenso
Es obligatorio estudiar matemáticas. ¿Crees que es una buena idea? ... ¿Por qué (no)?	Si, en mi opinión me parece una buena idea porque ... las matemáticas son muy importantes en el futuro/para un buen trabajo bien pagado/para mi futuro/para ir a una buena universidad/porque las matemáticas se usan en todos los trabajos
En tu opinión, ¿cuáles son las características más importantes de un buen profesor?	En mi opinión, un buen profesor es siempre simpático, nunca malhumorado, es de vez en cuando gracioso, es comprensivo y cariñoso, es siempre alegre y no es nunca antipático
¿Qué cambiarías de tu colegio si tuvieras la oportunidad?	Si tuviera la oportunidad, cambiaría/me gustaría cambiar las reglas. Me gustaría cambiar el uniforme porque me parece que es tan feo, me gustaría cambiar las reglas porque son demasiadas estrictas, me gustaría cambiar unos profesores porque son tan antipáticos

Key Grammar	
Imperfect Tense (Past, ongoing actions, descriptions, 'used to' or 'was doing')	-ar -aba, -abas, -aba, -ábamos, -abais, -aban -er and -ir -ía, -ías, -ía, -íamos, -íais, -ían
Forming the conditional ('would like to' tense). Always remove the -AR, -ER, -IR endings first	Remember the conditional ('would') tense endings for -AR, -ER, -IR verbs. They are: -AR, -ER, -IR: -ía, -ías, -ía, -íamos, -íais, -ían
Future Tense ('will...')	<b>All verb groups:</b> -é, -ás, -á, -emos, -éis, -án  <i>With this tense, do NOT take the verb ending away but ADD it on to the infinitive.</i>

## Functions / Procedures / Subroutines

```
#defining the function
def greeting_function():
    name = input("Please enter your name: ")
    print(name+",", "I like it.")

#calling the function
greeting_function()

Please enter your name: Mr.Weston
Mr.Weston, I like it.
>>> |
```

### String Manipulation

Using .upper() .lower() methods.

```
userName = input("Enter lowercase name: ")
userName = userName.upper()
print(userName) | Enter lowercase name: mr.weston
MR.WESTON
```

Concatenation (merging strings together).

```
firstName = input("Enter first name")
lastName = input("Enter last name")
fullName = firstName + lastName
print(fullName) | Enter first nameSamuel
Enter last nameWeston
SamuelWeston
```

```
userSentence = input("Enter a sentence")
sentenceList = userSentence.split()
print(sentenceList) | Enter a sentenceSphinx of black quartz, judge my vow
['Sphinx', 'of', 'black', 'quartz,', 'judge', 'my', 'vow']
```

Using .split() to put each word into a list.

Using .replace("wordToReplace", "wordReplacing") to replace individual words in a string.

```
userSentence = input("Enter a sentence for judgement")
judgedSentence = userSentence.replace("here", "leaving")
print(judgedSentence)
```

```
Enter a sentence for judgementI am here
I am leaving
```

## Text Files

```
#setting the file which needs to be opened
fileName = "greeting.txt"
#instructing the program to open the file in "r" reading mode.
fileOpen = open(fileName, "r")
#reading and then printing the file
fileRead = fileOpen.read()
print(fileRead) | Hello there!
Good morning!
Hi everyone!
```

```
#opening the file in "a" append mode.
fileOpen = open(fileName, "a")
#adding a greeting at the end, on a new line "\n"
fileOpen.write("\nGreetings!")
#closing the file when we are done with it
fileOpen.close()
```

greeting - Notepad

File Edit Format View Help

```
Hello there!
Good morning!
Hi everyone!
Greetings!
```

```
#If the file doesn't exist, you can make it using open()
newFile = open("Newfile.txt", "w")
#writing to the new file and then closing it to save changes
newFile.write("Life as a file is great!")
newFile.close()
```

Newfile - Notepad

File Edit Format View Help

```
Life as a file is great!
```

### Validation

```
userPassword = str(input("Enter password: "))
passwordLength = len(userPassword)
```

```
if passwordLength < 8:
    print("Password too short")
elif passwordLength >= 8:
    print("Password accepted")
```

```
Enter password: pencil
Password too short
>>>
= RESTART: C:/Users/samu-
tion.py
Enter password: pencils!
Password accepted
```

```
try:
    #put all your program code here (indented) in order to catch any errors when they arise
    prin("Everything is fine")
```

```
#the catch to print an error message and end the program gracefully
except:
    print("An unhandled exception occurred.")
```

```
An unhandled exception occurred.
```

```
>>> |
```

**Number Bases**

Three common bases in computer science.

Decimal / Denary – Base 10, Our normal number system.

Binary – Base 2, used by Computers.

Hexadecimal – Base 16, easier for humans to understand and work with than binary and relates more to binary than denary does.

DECIMAL	HEX	BINARY
0	0	0000
1	1	0001
2	2	0010
3	3	0011
4	4	0100
5	5	0101
6	6	0110
7	7	0111
8	8	1000
9	9	1001
10	A	1010
11	B	1011
12	C	1100
13	D	1101
14	E	1110
15	F	1111

Uses for hexadecimal: Memory locations, error codes, colour codes, MAC addresses.

**Units of Memory**

Bits – Binary digits. Either 1 or 0.

Nibble – Four bits.

Byte – Eight bits.

1,000 bytes (1,000 B)	1 kilobyte (KB)
1,000 kilobytes (1,000 KB)	1 megabyte (MB)
1,000 megabytes (1,000 MB)	1 gigabyte (GB)
1,000 gigabytes (1,000 GB)	1 terabyte (TB)
1,000 terabytes (1,000 TB)	1 petabyte (PB)

**Character Sets**

Assigning a binary pattern to characters. There are two primary character sets.

ASCII -American Standard Code for Information Interchange. Uses seven bits for characters, which means it can hold at maximum 128 characters

Unicode - Uses sixteen bits as standard, allowing for just over 65,000 characters. Used for different languages, scientific symbols, emojis etc.

**Terms**

Term	Definition
Overflow Error	An overflow error occurs when the result of a calculation requires more bits than are in the available range.
Bit Depth / Sample Resolution	The number of bits we assign or are used for each sample
Colour Depth	The number of bits we assign for each pixel in an image. More bits means more colours available.
Pixel	Smallest part of a bitmapped image.
Bitmap Image	An image made up of a grid of pixels.
Resolution	The fineness of detail that the image contains, the higher the resolution, the more detail it contains and the higher the quality.
Compression	Compression reduces the file size by the reducing the number of bits inside the file. This makes transferring a file quicker and it takes up less storage.
Lossy Compression	Reduces digital file size by removing data.
Lossless Compression	Reduces digital file size without losing detail.

**Run-Length-Encoding**

Lossless compression where the data within the file is checked and when there is a consecutive series of the same data, they are stored as one entry instead of many. E.g. for the data below - 6 0 , 8 1, 6 0



**Huffman Coding**

A form of lossless compression which makes files smaller using the frequency with which characters appear in a message. This works particularly well when characters appear multiple times in a string as these can then be represented using fewer bits.

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

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

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

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

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

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

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

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

**21. Breaking Even**

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

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

Which Objective?

**Specific****Measurable****Achievable****Realistic****Time- Bound****19. Business Revenue, Costs & Profits**

Term

Definition

**Fixed Costs****Profit  
(gross/net)****Revenue****Total Costs****Variable Costs****20. Business Revenue, Costs & Profits**

Term

Formulae

**Sales Revenue****Total Costs****(Gross) Profit****18. Aims and Objectives in Business****Businesses have both financial and non-financial aims**

Type of Objectives

Explanation

**Financial  
Objectives****Non-Financial  
Objectives****21. Breaking Even**

Term

Definition

**Break - Even****Break-even Chart****Margin of Safety**

## 22. The Importance of Cash

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

## 23. The Importance of Cash (definitions)

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

## 25. Short Term Sources of Finance

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

## 24. Cash Flow Forecasts

<b>Cash flow forecasting means predicting the future flows of cash into and out of a Business.</b>	
<b>Successful cash flow forecasts require:</b>	
<ul style="list-style-type: none"> <li>• <b>Accurate prediction of monthly sales</b></li> <li>• <b>Accurate predictions of when customers will pay for the goods they have bought</b></li> <li>• <b>Careful allowance of operating costs and the timing of payments</b></li> <li>• <b>Careful allowance for <u>in flows</u> and outflows of cash</b></li> </ul>	
Key Term	Definition
<b>Opening Balance</b>	The amount of cash in the bank at the start of the month
<b>Net Cash Flow</b>	Cash inflow minus cash outflow over the course of a month
<b>Negative Cash Flow</b>	When cash outflows are greater than cash inflows
<b>Closing Balance</b>	The amount of cash left in the bank at the end of the month

## 26. Long Term Sources of Finance

Term	Definition
<b>Crowdfunding</b>	Raising Capital online from many small investors (but not through the stock market).
<b>Share Capital</b>	Raising finance by selling a share of the business, Shareholders have the right to question the directors and take profit out the firm.
<b>Venture Capital</b>	A combination of share capital and loan capital, provided by an investor.
<b>Retained Profit</b>	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)**

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Key Term	Definition
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**26. Long Term Sources of Finance**

Term	Definition
Crowdfunding	
Share Capital	
Venture Capital	
Retained Profit	

## Food science

### Functions of ingredients

Ingredients provide a variety of functions in recipes.

### Carbohydrate, protein and fat

Carbohydrate, protein and fat all have a range of properties that make them useful in a variety of food products.

### Carbohydrates perform different functions in food.

They can:

- help to cause the colour change of bread, toast and bakery products (dextrinisation);
- contribute to the chewiness, colour and sweet flavour of caramel;
- thicken products such as sauces and custards (gelatinisation).

### Maillard reaction

Foods which are baked, grilled or roasted undergo colour, odour and flavour changes. This is primarily due to a group of reactions involving amino acids (from protein) and reducing sugars.

### Dextrinisation

When foods containing starch are baked they can also produce brown compounds due to dextrinisation. Dextrinisation occurs when the heat breaks the large starch polysaccharides into smaller molecules known as dextrins which produce a brown colour.

### Caramelisation

When sucrose (table sugar) is heated above its melting point it undergoes physical and chemical changes to produce caramel.

### Gelatinisation

When starch is mixed with water and heated, the starch granules swell and eventually rupture, absorbing liquid, which thickens the mixture. On cooling, if enough starch is used, a gel forms.

### Proteins perform different functions in food products.

They:

- aerate foods, e.g. whisking egg whites;
- thicken sauces, e.g. egg custard;
- bind ingredients together, e.g. fishcakes;
- form structures, e.g. gluten formation in bread;
- gel, e.g. lime jelly.

### Gluten formation

Two proteins, gliadin and glutenin, found in wheat flour, form gluten when mixed with water. Gluten is strong, elastic and forms a 3D network in dough. In the production of bread, kneading helps untangle the gluten strands and align them. Gluten helps give structure to the bread and keeps in the gases that expand during cooking.

### Gelation

Gelatin is a protein which is extracted from collagen, present in animal connective tissue. When it is mixed with warm water, the gelatin protein molecules start to unwind. On cooling, a stable, solid network is formed, trapping the liquid.

### Denaturation

Denaturation is the change in structure of protein molecules. The process results in the unfolding of the protein's structure. Factors which contribute to denaturation are heat, salts, pH and mechanical action.

### Coagulation

Coagulation follows denaturation. For example, when egg white is cooked it changes colour and becomes firmer (sets). The heat causes egg proteins to unfold from their coiled state and form a solid, stable network.

### Aeration

Products such as creamed cakes need air incorporated into the mixture in order to give a well-risen texture. This is achieved by creaming a fat, such as butter or baking spread, with sugar. Small bubbles of air are incorporated and form a stable foam.

### Fats performs different functions in food.

They help to:

- add 'shortness' or 'flakiness' to foods, e.g. shortbread, pastry;
- provide a range of textures and cooking mediums;
- glaze foods, e.g. butter on carrots;
- aerate mixtures, e.g. a creamed cake mix;
- add a range of flavours.

### Plasticity

Fats do not melt at fixed temperatures, but over a range. This property is called plasticity.

### Colloidal systems

Colloidal systems give structure, texture and mouthfeel to many different products.

System	Disperse phase	Continuous phase	Food
Sol	Solid	Liquid	Unset jelly
Gel	Liquid	Solid	Jelly
Emulsion	Liquid	Liquid	Mayonnaise
Solid emulsion	Liquid	Solid	Butter
Foam	Gas	Liquid	Whipped cream
Solid foam	Gas	Solid	Meringue

### Raising agents

Raising agents include anything that causes rising within foods, and are usually used in baked goods. Raising agents can be:

- biological, e.g. yeast;
- chemical, e.g. baking powder;
- mechanical, e.g. adding air through beating or folding.

### Functional ingredients

These are ingredients that are specifically included in food for additional health benefits. They include:

- probiotics – 'good' bacteria that may have a positive impact on human health;
- prebiotics – food ingredients that promote the growth of beneficial microorganisms in the gut;
- sterols/stanols – compounds that can lower cholesterol;
- healthy fats (e.g. omega-3);
- added vitamins and minerals (more than in the original food).

### Food is prepared and cooked to:

- make the food more palatable – improves flavour, texture and appearance;
- reduce the bulk of the food;
- provide variety and interest to meals.

### Methods of cooking food

The methods of cooking are divided up into groups. These are based on the cooking medium used. They are:

- moist/liquid methods, e.g. boiling;
- dry methods, e.g. grilling;
- fat-based, e.g. frying.

Selecting the most appropriate way of preparing and cooking certain foods is important to maintain or enhance their nutritional value.

- Vitamins can be lost due to oxidation during preparation or leaching into the cooking liquid.
- Fat-based methods of cooking increase the energy (calories) of the food.
- The use of different cooking methods affects the sensory qualities of the food.

### There are three ways that heat is transferred to food.

- Conduction – the exchange of heat by direct contact with foods on a surface.
- Radiation – energy in the form of rays.
- Convection – currents of hot air or hot liquid transfer the heat energy to the food.

### Key terms

**Conduction:** the exchange of heat by direct contact with foods on a surface.

**Convection:** currents of hot air or hot liquid transfer the heat energy to the food.

**Functional ingredients:** Included in food for additional health benefits.

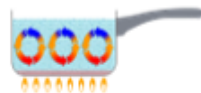
**Heat transfer:** transference of heat energy between objects.

**Radiation:** energy in the form of rays.

### Tenderisation

• Mechanical tenderising – a meat cleaver or meat hammer may be used to beat the meat. Cutting into small cubes or mincing can also help.

• Chemical tenderisation (marinating) – the addition of any liquid to flavour or soften meat before cooking.



### Tasks

- Choose a recipe that you enjoy or have made recently and explain in detail the functions of the ingredients.
- Explain the function of raising agents, giving examples of recipes.

# KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER T2

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Gelatine is a protein which is extracted from collagen, present in animal connective tissue. When it is mixed with warm water, the gelatine protein molecules start to unwind. On cooling, a stable, solid network is formed, trapping the liquid.

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## Key terms

**Conduction:**

**Convection:**

**Functional ingredients:**

**Heat transfer:**

**Radiation:**

**Food is prepared and cooked to:**

- 
- 
- 

## Tenderisation

- Mechanical tenderising
- Chemical tenderisation (marinating)





## Year 10 PRODUCT DESIGN Term 3



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



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

6 Key Words for this term	
1 Practitioners	4 Performance material
2 Physical skills	5 Analyse
3 Interpretive skill	6 Intentions

A.	Key question – What is the artistic purpose of a performance work?
<p>When watching a professional performance, the key questions you need to think about are the following...</p> <p>How do we Explore artistic purpose?</p> <p>Explore artistic purpose (across all three disciplines/styles) including:</p> <ul style="list-style-type: none"> <li>to educate</li> <li>to inform</li> <li>to entertain</li> <li>to provoke</li> <li>to challenge viewpoints</li> <li>to raise awareness</li> <li>to celebrate.</li> </ul>	

A.	Component 1 – Key focus
<p>In this component of the qualification students will develop their understanding of drama by examining the work of existing practitioners and the processes used to create performance. Students should experience a range of work across the discipline of drama by viewing recorded and/or live work.</p> <p>While this is primarily a theoretical study of the performing arts practical investigations, students will be working at developing practical skills through workshops and links with Component 2 Developing Skills and Techniques in the Performing Arts, to engage in primary exploration of specific repertoire.</p>	

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

G.	Key learning aims from Component 1
<p><i>Learning aim A: Examine professional practitioners' performance work</i></p>	<p><b>A1: Professional practitioners' performance material, influences, creative outcomes and purpose</b></p> <p>Examine live and recorded performances in order to develop understanding of practitioners' work with reference to influences, outcomes and purpose.</p> <p>Focus on thematic interpretation of particular issues and how artists communicate their ideas to an audience.</p> <p>Roles and responsibilities in theatre.</p>
	<p><i>Learning aim B: Explore the interrelationships between constituent features of existing performance material</i></p> <p>Processes used in performance</p> <ul style="list-style-type: none"> <li>● Responding to stimuli to generate ideas for performance material.</li> <li>● Exploring and developing ideas to develop material.</li> <li>● Discussion with performers.</li> <li>● Setting tasks for performers.</li> <li>● Sharing ideas and intentions.</li> <li>● Providing notes and/or feedback on improvements.</li> </ul>

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





What we are learning this term:	
A.	Understanding professional works
B.	What is a professional work
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G.	Three different performance styles / genres

6 Key Words for this term	
1 Practitioners	4 Performance material
2 Physical skills	5 Analyse
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A.	Key question – What is the artistic purpose of a performance work?
<p>When watching a professional performance, the key questions you need to think about are the following... How do _____? (across all three disciplines/styles) including: to _____ to _____ to _____ to _____ to _____ to _____</p>	

A.	Component 1 – Key focus
<p>In this component of the qualification students will develop their understanding of drama by examining the work of _____s and the _____ used to _____.</p> <p>Students should experience a range of work across the discipline of drama by viewing recorded and/or live work.</p> <p>While this is primarily a theoretical study of the performing arts practical investigations, students will be working at developing practical skills through _____s and links with Component 2 _____ and Te_____s in the Performing Arts, to engage in primary exploration of specific repertoire.</p>	

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

G.	Key learning aims from Component 1
<p><i>Learning aim A: Examine professional practitioners' performance work</i></p>	<p><b>A1: Professional practitioners' performance material, influences, creative outcomes and purpose</b></p> <p>Examine _____ and _____ performances in order to develop _____ of practitioners' work with reference to _____s, o_____s and p_____se. Focus on _____ i_____ of particular i_____ and how artists c_____te their ideas to an _____e. Roles and responsibilities in theatre.</p>
	<p><i>Learning aim B: Explore the interrelationships between constituent features of existing performance material</i></p> <p>Processes used in performance</p> <ul style="list-style-type: none"> <li>• Responding to _____ to generate id_____s for performance material.</li> <li>• Exploring and developing ideas to develop material.</li> <li>• D_____on with performers.</li> <li>• Setting _____ for performers.</li> <li>• S_____ng ideas and intentions.</li> <li>• Providing _____ and/or fe_____ck on imp_____nts.</li> </ul>

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



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

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

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

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

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

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

G. Considerations when planning sports activities	
Session content	Objectives for the session appropriate venue Equipment needs Supervision needs Timing of activities Introduction/conclusion of session Basic warm up/cool down Skills and technique development Engaging Organisation
Safety	Risk assessments- facilities, equipment/clothing checks, activity-specific risks  Corrective action- wiping up puddles, removing litter, reporting faulty equipment  Emergency procedures- procedures in the event of an accident, procedures in the event of other emergencies, summoning qualified help, completion of relevant documents

Personal qualities	
Reliability Punctuality Confidence Communicator Creativity	

Key sections	
Different leadership roles and opportunities	

Captain Coach Expedition leader	Manager Teacher Role model
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Role related responsibilities	
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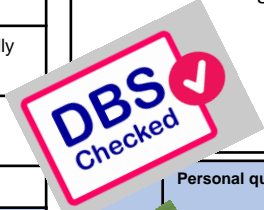
Knowledge of; Activity Safety Child protection Basic first aid	Enthusiasm for activity
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Personal qualities	
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Reliability Punctuality Communication Confidence Creativity
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Leadership styles	
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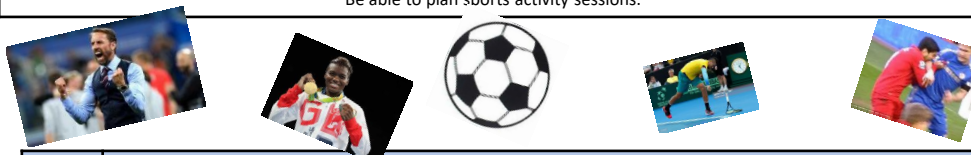
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**Main assessment objectives**

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



**What we are learning this term:**

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

C.	<b>Can you give examples of managers from different sports?</b>
<b>Role models</b>	
Positive	Negative

A.	<b>Role related responsibilities</b>

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

A.	<b>Personal qualities</b>

**Key sections**

**Different leadership roles and opportunities**

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**Role related responsibilities**

--	--

**Personal qualities**

--	--

**Leadership styles**





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A.	<b>The different leadership roles within sport</b>
<b>Role</b>	<b>Definition</b>
Coach	
Manager	
Captain	
Teacher	
Expedition leader	
Role model	

A.	<b>Leadership styles</b>





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

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






B	What are the main life stages?		C	What are the 4 areas of growth and development (PIES)?	
Age Group	Life Stage	Developmental Characteristics and Progress	 Physical Development (P)	P = growth patterns and changes in the mobility of the large and small muscles in the body that happen throughout life.	
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.		 Intellectual Development (I)	I = how people develop their thinking skills, memory and language.
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.		 Emotional Development (E)	E = how people develop their identity and cope with feelings.
46-65 years	Middle Adulthood	Having more time to travel and take up hobbies as children may be leaving home; beginning of the aging process.			
65+ years	Later Adulthood	The aging process continues, which may affect memory and mobility.	 Social Development (S)	S = describes how people develop friendships and relationships.	






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

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

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

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

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





<b>What we are learning this term:</b>		<b>F.</b> How do humans develop emotionally (E)? Explain each.	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?		<b>Infancy and Early Childhood</b>	
<b>E.</b> <i>How do humans develop intellectually (I)?</i>		<b>Adolescence and adulthood</b>	
Infancy		<b><u>Bonding and Attachment</u></b>	
		<b><u>Self-image and Self-esteem</u></b>	
		<b><u>Security</u></b>	
		<b><u>Contentment</u></b>	
Early childhood		<b><u>Independence</u></b>	
			
		<b>G.</b> How do humans develop socially (S)?	
		<b>Life Stage</b> Types of relationships and social development	
Adolescence		Infancy	
		Early childhood	
		Adolescence	
Early and Middle Adulthood		Early adulthood	
		Middle adulthood	
Later adulthood		Later adulthood	
			



What we are learning this term:	
H.	Key words
I.	How do physical factors affect development?
J.	How does lifestyle affect development?
K.	How do social and cultural factors affect development?
L.	How do relationships and isolation affect development?
M.	How do economic factors affect development?

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



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

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

What we are learning this term:	
H.	Key words
I.	How do physical factors affect development?
J.	How does lifestyle affect development?
K.	How do social and cultural factors affect development?
L.	How do relationships and isolation affect development?
M.	How do economic factors affect development?

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

I.	How do physical factors affect development?	
	<u>Genetic Disorders</u>	<u>Disease and Illness</u>
Physical Development		
Intellectual Development		
Emotional Development		
Social Development		

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



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

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

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

<p><u>Positive affects of a persons culture/religion:</u></p> <ul style="list-style-type: none"> <li>• A sense of security and belonging from sharing the same values and beliefs with others.</li> <li>• Good self-esteem through being accepted and valued by others</li> </ul>	<p><u>Negative affects of a persons culture/religion:</u></p> <ul style="list-style-type: none"> <li>• Feeling discriminated against by people who do not share their religion/culture which leads to low self-image</li> <li>• Feeling excluded and isolated because their needs like diet, are not catered for.</li> </ul>
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**Community** refers to: local area where people live, school, religious group or hobby clubs. They have common values and goals.

<p><u>Belonging to a community:</u></p> <ul style="list-style-type: none"> <li>• Brings sense of belonging essential for emotional development.</li> <li>• Building and maintaining relationships- social development</li> <li>• Feeling of security.</li> <li>• Increases self-image and self-confidence</li> </ul>	<p><u>Not belonging to a community:</u></p> <ul style="list-style-type: none"> <li>• Minimal contact with others- isolation</li> <li>• Anxiety leading to depression</li> <li>• Making negative lifestyle choices</li> <li>• Feeling less secure</li> <li>• Difficulty in building relationships</li> <li>• Slow self-image and self-confidence</li> </ul>
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Traditionally, men and women had distinctive responsibilities and expectations which for their gender called **gender roles**. However, nowadays UK equality legislation stops people being discriminated against because of their gender.

What happens when people face discrimination because of gender:

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

**What we are learning this term:**

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

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

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

**M How do economic factors affect development**

Having enough money gives individuals and their families feeling of content and security	Not having enough money causes stress and anxiety.
Having enough money means that the whole family is eating healthy.	Not having enough money can mean that the family is not about to eat well balanced diet, and this has a negative effect on their physical development
Elderly people rely on state pension to live which is not enough and have to cut down on travel, shopping, bills, therefore it speeds their aging process and lead to health decline.	
<p><u>Living in good housing with open spaces:</u></p> <ul style="list-style-type: none"> <li>• Feeling good about themselves</li> <li>• Be more likely to stay healthy,</li> <li>• Space to take exercise</li> <li>• Feel safe ad secure</li> <li>• Warmth</li> </ul>	<p><u>Living in a poor housing with cramped and damp conditions:</u></p> <ul style="list-style-type: none"> <li>• Have low self-esteem and self-image</li> <li>• Be more likely to experience ill health</li> <li>• Be lessson likely to exercise</li> <li>• Anxious and stressed.</li> </ul>
Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image.	Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.



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

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

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

Positive affects of a persons culture/religion:

- 
- 

Negative affects of a persons culture/religion:

- 
- 

**Community** refers to:

Belonging to a community:

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- 
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- 
- 

Not belonging to a community:

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

What happens when people face discrimination because of gender:

- 
- 
- 
- 

**What we are learning this term:**

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

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

1	
2	
3	
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**M How do economic factors affect development**

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

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

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

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

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

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