ASH GREEN SCHOOL
Creative Education Trust

"For every minute spent organising, an hour is earned."

Benjamin Franklin

YEAR 11

KNOWLEDGE ORGANISER

2023-2024

Name:

Form:

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How to use your Knowledge Organiser

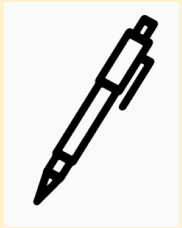
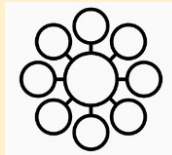
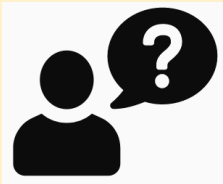
What is a Knowledge Organiser and how will it help me ?
It is an organised collection of knowledge that you need to know and learn for every topic you study in every subject. It will help you to be successful in your tests and exams.
Your teacher will use the knowledge organiser in your lessons. They will ask you to refer to various sections - they might talk this through and/or ask you to make key notes in your books or to highlight certain sections on your knowledge organiser.
Your teacher will set homework, where you will be asked to learn key knowledge from your knowledge organiser - you will then be tested in lessons regularly via short quizzes.

Do I have to bring my Knowledge Organiser every day ?
Yes, you do. It is one of our key expectations that you bring your knowledge organiser to every lesson, every day in your special Knowledge Organiser bag. Your Form Tutor will check this every morning.

Is there anything I could use to support me when using my knowledge organiser ?
Some people find post it's handy to stick onto their knowledge organiser pages - these are useful for extra notes.
Small white revision/flash cards are helpful so you can write key facts down. These can then be placed up around the house to help your revision.

How should I use my Knowledge Organiser to help me learn ?
There are lots of ways to use your knowledge organiser - the key to success is to find what works for you. The table below shows you some different ways to use them.

How to use a knowledge organiser – A step by step guide

	Look, Cover, Write, Check	Definitions to key words	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
Step 1	Look at and study a specific area of your knowledge organiser. 	Write down the key words and definitions. 	Use your knowledge organiser to condense and write down key facts and information on your flash cards 	Use your knowledge organiser to create a new quiz. Write down questions using your knowledge organiser. 	Create a mind map with all the information you can remember from your knowledge organiser. 	Ask a partner or family member to have the knowledge organiser or flash cards in their hands 
Step 2	Cover or flip the knowledge organiser over and write down everything you remember. 	Try not to use your knowledge organiser to help you. 	Add pictures to help support. Then self quiz yourself using the flash cards. You can write questions on one side and answers on the other. 	Answer the questions and remember to use full sentences. 	Check your knowledge organiser to see if there were any mistakes with the information you have made. 	They can then test you by asking you questions on different sections of your knowledge organiser 
Step 3	Check what you have written down. Correct any mistakes in green pen and add anything you missed. Repeat. 	Use your green pen to check your work. 	Use a parent/carer or friend to help quiz you on the knowledge. 	You can also use family to help quiz you. Keep self-quizzing until you get all questions correct. 	Try to make connections that links information together. 	Write down your answers. 

Year 11 – Maths - Standard Form

Standard Index Form

Standard form represents very large or very small numbers.

A number is in standard form if it is written as:

$a \times 10^n$ where $1 \leq a < 10$

Examples:

2.5×10^3	4.62×10^5
1×10^7	8.563×10^{17}

Converting to Standard Form

When changing large numbers into standard index form. The index notation will be positive.

$7.8300. = 7.83 \times 10^5$

$8.6300. = 8.63 \times 10^4$

When changing small numbers into standard index form. The index notation will be negative.

$0.049 = 4.9 \times 10^{-2}$

$0.000000821 = 8.21 \times 10^{-9}$

Converting to Ordinary Numbers

Example 1:

$2.37 \times 10^5 = 2.37000. = 237000$

Positive powers – decimal moves right

Example 2:

$6.4 \times 10^{-4} = 0.0006.4 = 0.00064$

Negative powers – decimal moves left

Addition and subtraction of numbers in standard form

Example 1: $7 \times 10^3 + 4 \times 10^4$

Convert your numbers to ordinary form

7000 40000

Step 2: $40000 + 7000 = 47000$ Add or subtract

Step 3: $47000. = 4.7 \times 10^4$

Convert your answer back to standard form afterwards

Multiplication And Division Of Numbers In Standard Form

Example 1: $(5 \times 10^2) \times (3 \times 10^6)$

Multiply the number parts: $5 \times 3 \times 10^2 \times 10^6$

Use the laws of indices to simplify

$15 \times 10^8 = 1.5 \times 10^9$

REMEMBER TO CHECK THAT YOUR ANSWER IS IN STANDARD FORM

Example 2: $(8 \times 10^5) \div (2 \times 10^3)$

Divide the number parts: $8 \div 2 \times 10^5 \div 10^3$

Use the laws of indices to simplify

$4 \times 10^2 = 4 \times 10^2$

KEY VOCABULARY

Word	Definition
Base	the number that a power is attached to, example 2^3 the base is 2
Index/Indices/ Power/Exponent	how many times to multiply a number by, for example $2^3 = 2 \times 2 \times 2$
Standard form	Is a way of writing down very large or very small numbers easily. $10^3 = 1000$, so $4 \times 10^3 = 4000$

Year 11 Maths: Ratio & Proportion

Simplifying Ratio

A **ratio** is used to compare one quantity to another. We can **simplify ratio** like we do with fractions, **divide all parts by a common factor**:

Example 1: Simplify the ratio 15:30:24

$$15:30:24 \quad \div 3$$
$$5:10:8$$

When simplifying ratio, the solution should **always have integer (whole number) parts**. However sometimes we are asked **to express a ratio in the form 1:n or n:1**. To do this we divide both sides by the part we need to make 1 :

Example 2: Express 4 : 35 in the form 1:n

$$4:35 \quad \div 4$$
$$1:\frac{35}{4}$$
$$= 1:8\frac{3}{4} = 1:8.75$$

Ratio to Fractions

Ratios can be written as **fractions** in a couple of ways:

Example 1: The ratio of red to blue counters in a bag is 3 : 2

There are $\frac{3}{2}$ as many red counters as blue counters

There are $\frac{2}{3}$ as many blue counters as red counters

Alternativiley, we can write either part as a fraction of the total. E.g. $\frac{2}{5}$ of the counters are blue

Sharing in a Ratio

We can **share amounts into a given ratio**. There are 3 types of questions we need to know:

The ratio of blue to green tokens is 2 : 3

Scenario 1: Given the total. There are 45 tokens…

45 ÷ 5 = 9 per part

Blue	9	9		18 Blues
Green	9	9	9	27 Greens

Scenario 2: Given one amount. There are 30 blue tokens…

30 ÷ 2 = 15 per part

Blue	15	15		30 Blues
Green	15	15	15	45 Greens

Scenario 3: Given the difference. There are 12 more green than blue tokens…

12 ÷ 1 = 12 per part

Blue	12	12		24 Blues
Green	12	12	12	36 Greens

Direct Proportionality

If two quantities are **directly proportional**, then as **one increases the other also increases** at the same rate (proportionally), e.g. as one doubles, the other one also doubles

Example:

4 pens cost £3.20
Multiply by 2
8 pens cost £6.40
Divide by 8
1 pens cost £0.80
Multiply by 30
30 pens cost £24.00

Calculating the value of 1 is called the unitary method and is most useful

Inverse Proportionality

If two quantities are **inversely proportional**, then as **one increases the other decreases** at the same rate (proportionally), e.g. as one doubles, the other one halves

Example:

6 builders can build 10 houses in 30 months
Multiply 6 and 30
1 builder would take 180 months
Divide by 18
18 builders would take 10 months

Calculating the value of 1 is called the unitary method and is most useful

KEY VOCABULARY

Word	Definition
Ratio	The relationship between two or more quantities
Proportion	The relationship of one thing to another in terms of quantity, size, or number
Factor	A number than divides another number equally (without a remainder)

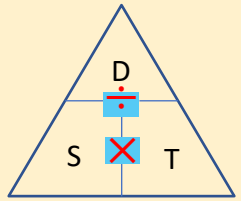
Year 11 Maths: Compound Measures

Speed, Distance & Time

The speed of an object is how far the object travels in one unit of time.

Common units:
metres per second (m/s), kilometres per hour (km/h)
miles per hour (mph).

From this useful triangle we get three different formulae:



$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} \qquad \text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

$$\text{Distance} = \text{Speed} \times \text{Time}$$

Example 1:
A car travels 90 miles in 3 hours.
Calculate the car's average speed.

$\text{Speed} = \frac{90}{3} = 30$ mph

Example 2:
Jim drives at 40 mph for 3 hours.
How far did he travel?

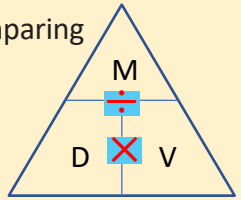
Distance = $40 \times 3 = 120$ miles

Example 3:
A train travels 300 miles at 60 mph.
How long did this take?

$\text{Time} = \frac{300}{60} = 5$ hours

Density, Mass & Volume

Density is a way of comparing how heavy different materials are with the same volume.

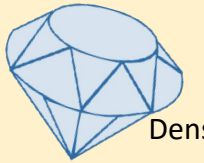


From this useful triangle we get three different formulae:

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}} \qquad \text{Volume} = \frac{\text{Mass}}{\text{Density}}$$

$$\text{Mass} = \text{Density} \times \text{Volume}$$

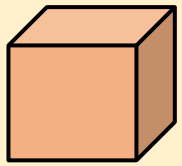
Example 1:



7.02 g (Mass)
2 cm³ (Volume)

$\text{Density} = \frac{7.02\text{ g}}{2\text{ cm}^3} = 3.51\text{ g/cm}^3$

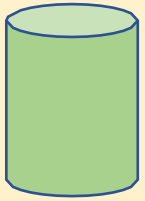
Example 2:



8 cm³ (Volume)
7.1 g/cm³ (Density)

Mass = 8 cm³ x 7.1 g/cm³
= 56.8 g

Example 3:

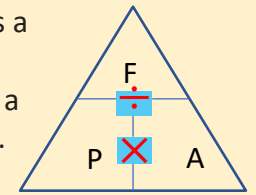


70 g (Mass)
1.55 g/cm³ (Density)

$\text{Volume} = \frac{70\text{ g}}{1.55\text{ g/cm}^3} = 45.2\text{ cm}^3$

Pressure, Area & Pressure

The unit of force is a Newton (N).
The unit of area is a square metre (m^2).
Pressure will be measured in Newton/m^2.



From this useful triangle we get three different formulae:

$$\text{Pressure} = \frac{\text{Force}}{\text{Area}} \qquad \text{Area} = \frac{\text{Force}}{\text{Pressure}}$$

$$\text{Force} = \text{Area} \times \text{Pressure}$$

Example 1:
A force of 150 N is being applied over an area measuring $0.5m^2$. Calculate the pressure on the object ensuring you give the correct units.
Pressure = $150 \div 0.5 = 300$ N/ m^2

Example 2:
A woman is applying 300 N/ m^2 of pressure onto a door with her hand. Her hand has area 0.02 m^2. Work out the force being applied.
Force = $300 \times 0.02 = 6$ N

Example 3:
Pressure of 150 N/ m^2 is experienced when a force of 2000 N is applied. Calculate the area over which the force is applied to obtain the pressure stated.
Area = $2000 \div 150 = 13.3\ m^2$

Unit Cost

The **unit price** of an object is the price for one unit. It is used to compare the value of objects.

Example:
Which packet of biscuits is better value?

Pack A: £1 for 400 g

Pack B: £1.90 for 1 kg

It is hard to decide which item is better value if they are different sizes. We must first work out the unit price for each packet.

Pack A: $100\text{p} \div 400\text{g} = 0.25$ pence per gram.

Pack B: $190\text{p} \div 1000\text{g} = 0.19$ pence per gram.

So the large packet is better value as the unit cost is lower.

Rates of Pay

$Pay = Hours \times Rate$

Example:
In a week, Janice works for 8 hours a day for 5 days.
Janice earns £8.62 an hour.
How much does she get paid a week?

$(8 \times 5) \times 8.62 =$ £344.80

KEY VOCABULARY

Word	Definition
Speed	a measure of how fast something is travelling.
Density	a measurement of the amount of a substance contained in a certain volume
Pressure	the amount of force being exerted per unit area

Useful Powers and Roots

$\sqrt{4} = 2$ $\quad \sqrt{9} = 3$ $\quad \sqrt{16} = 4$ $\quad \sqrt{25} = 5$

$\sqrt[3]{8} = 2$ $\quad \sqrt[3]{27} = 3$ $\quad \sqrt[3]{64} = 4$ $\quad \sqrt[3]{125} = 5$

$\sqrt[4]{16} = 2$ $\quad \sqrt[4]{81} = 3$

$\sqrt[5]{32} = 2$

Laws of Indices

Multiplying $a^x \times a^y = a^{x+y}$	Fractional (Unit) $a^{\frac{1}{x}} = \sqrt[x]{a}$
Dividing $\frac{a^x}{a^y} = a^{x-y}$	Fractional (Non-Unit) $a^{\frac{y}{x}} = (\sqrt[x]{a})^y$
Brackets $(a^x)^y = a^{xy}$ $\left(\frac{a}{b}\right)^x = \frac{a^x}{b^x}$	$\left(\frac{a}{b}\right)^{\frac{y}{x}} = \left(\frac{\sqrt[x]{a}}{\sqrt[x]{b}}\right)^y$
Negative $a^{-x} = \frac{1}{a^x}$	Negative Fractional $\left(\frac{a}{b}\right)^{-\frac{y}{x}} = \left(\frac{\sqrt[x]{b}}{\sqrt[x]{a}}\right)^y$

Word	Definition
Power/Index	how many times to use the number in a multiplication. It is written as a small number to the right and above the base number.
Square root	a value that, when multiplied by itself, gives the number.
Cube root	the number which produces a given number when multiplied by itself three times.

Laws of Indices examples

Multiplying

$4^3 \times 4^4 = 4^{3+4} = 4^7$

Dividing

$\frac{4^5}{4^2} = 4^{5-2} = 4^3$

Brackets

$(4^3)^2 = 4^{(3)(2)} = 4^6$

$(\frac{4}{2})^3 = \frac{4^3}{2^3}$

Negative

$4^{-3} = \frac{1}{4^3}$

Fractional (Unit)

$8^{\frac{1}{3}} = \sqrt[3]{8}$

Fractional (Non-unit)

$8^{\frac{2}{3}} = (\sqrt[3]{8})^2$

$(\frac{8}{64})^{\frac{2}{3}} = (\frac{\sqrt[3]{8}}{\sqrt[3]{64}})^2$

Negative Fractional

$(\frac{27}{64})^{-\frac{2}{3}} = (\frac{64}{27})^{\frac{2}{3}} = (\frac{\sqrt[3]{64}}{\sqrt[3]{27}})^2$

Year 11H – Maths - Surds

When working with surds, you will need to know your square numbers:

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225

Simplify:

$\sqrt{32}$

↓

$\sqrt{16 \times 2}$

↓

$\sqrt{16} \times \sqrt{2}$

↓

$4 \times \sqrt{2} = 4\sqrt{2}$

Multiply:

Combine ↓

Simplify ↓

$\sqrt{2} \times \sqrt{10}$

$\sqrt{2 \times 10}$

$\sqrt{20}$

$\sqrt{4 \times 5}$

$\sqrt{4} \times \sqrt{5}$

$2\sqrt{5}$

Divide:

$9\sqrt{24} \div 3\sqrt{3}$

$\frac{9}{3}\sqrt{\frac{24}{3}}$

$3\sqrt{8} \quad = 6\sqrt{2}$

Add/Subtract:

$\sqrt{8} + \sqrt{18}$

$\sqrt{4 \times 2}$ ↙ ↘ $\sqrt{9 \times 2}$

$2\sqrt{2} \quad + \quad 3\sqrt{2}$

$5\sqrt{2}$

We can only collect terms with the same radicands.

Expand Brackets:

$(2 + \sqrt{3})(4 + \sqrt{3})$

	2	$+\sqrt{3}$
4	**8**	$\mathbf{4\sqrt{3}}$
$+\sqrt{3}$	$\mathbf{2\sqrt{3}}$	**3**

$8 + 4\sqrt{3} + 2\sqrt{3} + 3$

$11 + 6\sqrt{3}$

Rationalising the Denominator:

$$\frac{2}{\sqrt{5}} \overset{\times\sqrt{5}}{=} \frac{2 \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}} = \frac{2\sqrt{5}}{5}$$

$\sqrt{5}$: irrational; 5: rational

To rationalise a denominator with two terms, we must multiply by the term's **conjugate**.

$$\frac{1}{(3+\sqrt{3})} \times \frac{(3-\sqrt{3})}{(3-\sqrt{3})} = \frac{3-\sqrt{3}}{9+3\sqrt{3}-3\sqrt{3}-3} = \frac{3-\sqrt{3}}{6}$$

Word	Definition	Word	Definition
Surd	A root of the whole number that has an irrational value	Rational	A number that can be written as a fraction, where both the numerator and denominator are integers, and the denominator is not equal to zero
Radicand	The value you want to take the root of	Irrational	A real number that cannot be written as a simple fraction

Year 11 – Maths - Sequences and Substitution

Linear/ Arithmetic Sequences

Finding the next term

When you need to find the next term in the sequence you need to work out what the general rule for the sequence is.

The rule is add 2 because the difference between each number is 2.

+2 +2 +2

5, 7, 9, 11, 13 ...

13 is the next number because 11 + 2 = 13.

Finding the nth term

The nth term is the general rule for a sequence. We can use the nth term to then calculate any term in the sequence.

+4 +4 +4 = 4n

6, 10, 14, 18, ...

1) Find the difference between numbers

2) This means that the nth term starts with 4n and we need to look at the 4 times table.

4, 8, 12, 16 .....

6, 10, 14, 18 ..... +2

3) Remember to calculate how we get from the times table to the original sequence.

The nth term is 4n + 2

Generating a sequence

Nth term = 2n + 3

n	2n + 3	Term
n = 1	2 × 1 + 3	5
n = 2	2 × 2 + 3	7
n = 3	2 × 3 + 3	9

Substitute 1, 2 & 3 where n is in the nth term to get the first 3 numbers in the sequence.

Sequence = 5, 7, 9, …

Special sequences

Triangular numbers

1, 3, 6, 10, 15, 21, 28, …

The difference increases by 1 each time

Fibonacci Sequence

1, 1, 2, 3, 5, 8, 13, 21, 34, …

Add the previous two numbers each time

Quadratic nth term – Higher tier only

1) Find the **2nd difference** & **halve it** to find the **n^2 coefficient**
2) Subtract the **quadratic** from the **original** sequence to find the remainder
3) Express the remainder as a **linear sequence**
4) **Join** the quadratic with the linear sequence

+ 4 + 4 + 4

+ 3 + 7 + 11 + 15

4, 7, 14, 25, 40

Quadratic = $2n^2$

n	1	2	3	4	5
Original	4	7	14	25	40
Quadratic: $2n^2$	2	8	18	32	50
Remainder	2	−1	−4	−7	−10

−3n + 5

$2n^2 - 3n + 5$

KEY VOCABULARY

Word	Definition
Linear/Arithmetic sequence	Add or subtract the same number each time
Geometric Sequence	Multiply or dive by the same number each time
Term	Each value in a sequence is called a term
Rule	The value that a sequence increases or decreases by.

Year 11 Maths: Linear Equations

Equations

An equation is a number statement with an equal sign (=). Expressions on either side of the equal sign are of equal value and can be solved.

a + 14 = 20	a add 14 equals 20
b – 20 = 15	b subtract 20 equals 15
4c = 28	c multiplied by 4 equals 28
d + 12 = 30	d add twelve equals 30
3e – 5 = 10	e multiplied by 3 then subtract 5 equals 10

Solving 1-step Equations

Example 1: x + 5 = 12

- 5 - 5

x = 7

Take 5 from both sides (balancing method)

Example 2: 4x = 20

÷ 4 ÷ 4

Divide both sides by 5 (balancing method)

Solving 2-step Equations

Example: $2x + 4 = 10$

$-4 \quad -4$

$2x = 6$

Subtract 4 from both sides

$\div 2 \quad \div 2$

$x = 3$

Divide both sides by 2

Example: $5x + 4 = 2x + 10$

$-2x \quad -2x$

$3x + 4 = 10$

$-4 \quad -4$

$3x = 6$

$\div 3 \quad \div 3$

$x = 2$

Start by balancing the equation so that all the variables ($x's$) are on one side.

Then solve using the balancing method

Equations with brackets

Example: $12(x - 4) = 24$

Expand the brackets

$12x - 48 = 24$

$+48 \quad +48$

$12x = 72$

$\div 12 \quad \div 12$

$x = 6$

Formulae

A formula also contains equal expressions but values are substituted to evaluate one variable.

Example:

The formula to find the area of a rectangle is:

$$Area = length \times width$$

If we are told the length is 7cm and width is 5cm, we can use the formula to find the area:

$$Area = 5 \times 7$$

$$Area = 35cm^2$$

Rearranging formulae

We can manipulate formulae and 'change the subject' to calculate other variables. This means we don't have to learn loads of different formulae, and can instead manipulate the ones we already know.

Example: The formula to find the area of a rectangle is:

$$Area = length \times width$$

The current subject of this formula is Area as this is on its own. We can rearrange to change the subject to length:

$$Area = length \times width$$

$\div width \qquad \div width$

$$\frac{Area}{Width} = length$$

We can now use this formula to work out the length of any rectangle given the area and width.

KEY VOCABULARY

Word	Definition
Equation	A statement that the values of two mathematics expressions are equal.
Formula	Equal expression where values of substituted to find variables
Variable	A value that is unknown, letters are used to represent these values.
Subject	The variable that is on its own in a formula. It is the variable that is being worked out

Year 11 Maths: Inequalities

Inequalities are used to represent a range of numbers that satisfy a rule. We use the following symbols $<, >, \leq, \geq, \neq$.
Inequalities have infinite solutions all numbers that fit the rule could be a solution, including decimals. We are often asked to consider the **Integer** solutions.

Writing Inequalities

Inequalities show the range of numbers that satisfy a rule.

$x < 2$ means x is less than 2
$x \leq 2$ means x is less than or equal to 2
$x > 2$ means x is greater than 2
$x \geq 2$ means x is greater than or equal to 2
$x \neq 2$ means x does not equal 2

We can also have 'double sided' inequalities that show a range of number between two limits.

$2 \leq x < 5$ means x is greater than or equal to 2 but less than 5.

These have infinite numbers that fall into this range but sometimes only **Integer** solutions are required.

Example:

State the Integers of n that satisfy:

$$-2 < n \leq 3$$

Cannot be equal to -2 — Can be equal to 3

-1, 0, 1, 2, 3

Representing Inequalities on a number line

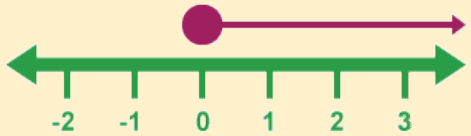
On a **number line** we use circles to highlight the key values:

○ An empty circle is used **for less/greater than**

● A solid circle is used **for less/greater than or equal to**

Example 1:

$$x \geq 0$$



Example 2:

$$x < 0$$

Example 3:

$$-5 \leq x < 4$$

Solving inequalities

We solve inequalities the same as equations by using the balancing method but keep the inequality symbol rather than the equals sign

Example: Solve the inequality $3m + 2 > -4$ and represent the solution on a number line:

$$\begin{aligned} 3m + 2 &> -4 \\ -2 & \quad -2 \\ 3m &> -6 \\ \div 3 & \quad \div 3 \\ m &> -2 \end{aligned}$$

KEY VOCABULARY

Word	Definition
Inequality	When one thing is not equal to another. This could be less than, greater than or not equal.
Integer	A whole number. This can be positive or negative. For example 2 is an integer but 2.5 is not.
Solve	Find the value of the variable (the letter)

Year 11 Maths: Linear Graphs

Linear Graphs The equation y = 2x + 1 is a **linear** equation or forms a straight line on the **graph**. When the value of x increases, then ultimately the value of y also increases by twice of the value of x plus 1.

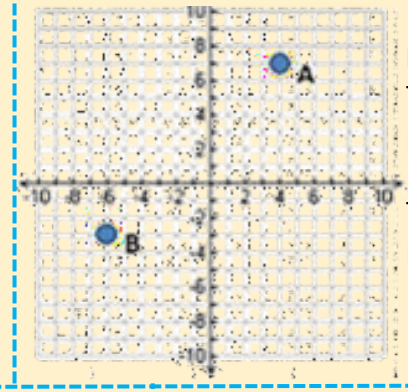
Equations provide a very precise way to describe various features of the world and how to work something out

Linear Graphs:

- Ensure the equation of the straight line is in the form y = mx + c
- Draw a table to represent the x and y values
- Substitute the values of x into the equation and find the y values – these are the (x, y) coordinates
- Draw the x & y axes (usually drawn on the exam paper)
- Plot the (x, y) coordinates and draw the straight-line graph

Coordinates

Coordinates are numbers, written in pairs and give the position of a point on a graph. The first term is the x-coordinate (movement across). The second term is the y-coordinate (movement up or down)

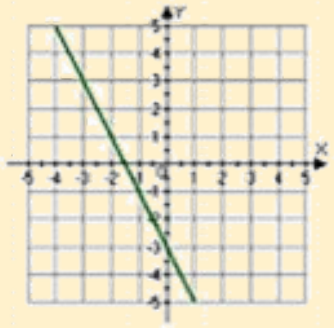


Example:
The coordinates of point A are (4,7)

The coordinates of point B are (-6,-3)

Straight line graphs

The general equation of a linear graph is $y = mx + c$ where m is the gradient and c is the y-intercept (where is crosses the y axis). T**he** equation of a linear graph can contain an x-term, a y-term and a number



Example:
The equation of the green line is $y = -2x - 3$.
The gradient of the line is -2 and it crosses the y-axis at (0,-3)

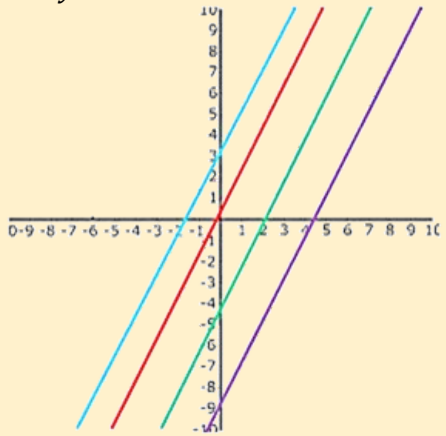
Parallel Line

If two lines are **parallel**, they will have the **same gradient**.

Example: The equation for each line:

$y = 2x + 3$
$y = 2x$
$y = 2x - 4$
$y = 2x - 9$

As these lines are **parallel**, they all have the same gradient of 2



Find the gradient

To find the gradient of a line we calculate we calculate the change in the y-coordinates and divide it by the change in the x coordinates:

Example:
Change in y = 3
Change in x = 2

$$Gradient = \frac{change\ in\ y}{change\ in\ x}$$

$$Gradient = \frac{3}{2}$$

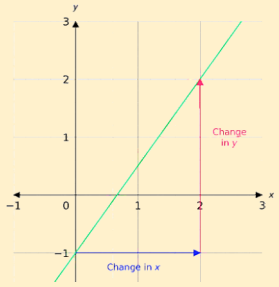


Table of values

We use a table of values to generate a list of coordinates so that we can plot a line. In a table of values, the value of y depends on the value of x. That means that we choose the values for x and substitute them into the equation to generate the corresponding value for y.

Example: $y = 2x + 5$ Multiply the x by 2 then add 5

x	−3	−2	−1	0	1	2	3
y	−1	1	3	5	7	9	11
	(−3, −1)	(−2, 1)	(−1, 3)	(0, 5)	(1, 7)	(2, 9)	(3, 11)

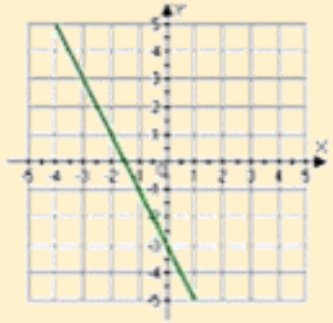
KEY VOCABULARY

Word	Definition
Linear Graph	Linear means straight and a graph is a diagram which shows a connection or relation between two or more quantity. So, the linear graph is nothing but a straight line or straight graph which is drawn on a plane connecting the points on x and y coordinates.
Equations	A statement that the values of two mathematical expressions are equal (indicated by the sign =)

Year 11 Maths H: Linear Graphs

Straight line graphs

The general equation of a linear graph is $y = mx + c$ where m is the gradient and c is the y-intercept (where is crosses the y axis). The equation of a linear graph can contain an x-term, a y-term and a number



Example:
The equation of the green line is $y = -2x - 3$.
The gradient of the line is -2 and it crosses the y-axis at (0,-3)

Finding the equation of line

To find the equation of a line we use $y = mx + c$. We need to calculate the gradient and y-intercept to find the equation of a line.

Example 1:

Find the equation of a straight line that passes through the points:
(0,4) and (5, 14)

Step 1: Find the gradient.

$$Graident = \frac{Change\ in\ y}{change\ in\ x} = \frac{10}{5} = 2$$

Step 2: Find the y-intercept.
In this example we have the y-intercept (0,4). We know this because the x coordinate is 0.
Therefore out final equation is:

$$y = 2x + 4$$

Example 2: Find the equation of a straight line that passes through the points:
(5,9) and (7,5)

Step 1: Find the gradient.

$$Graident = \frac{Change\ in\ y}{change\ in\ x} = \frac{-4}{2} = -2$$

Step 2: Find the y-intercept.
This time we do not have the y-intercept so we substitute 1 pair of coordinates into our new equations

$$y = -2x + c$$
$$9 = -2(5) + c$$
$$9 = -10 + c$$
$$9 + 10 = c$$

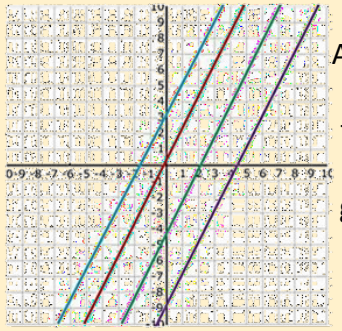
Therefore the final equation is:

$$y = -2x + 19$$

Parallel Lines

If two lines are **parallel**, they will have the **same gradient**.

Example: The equation for each line:
$y = 2x + 3$
$y = 2x$
$y = 2x - 4$
$y = 2x - 9$

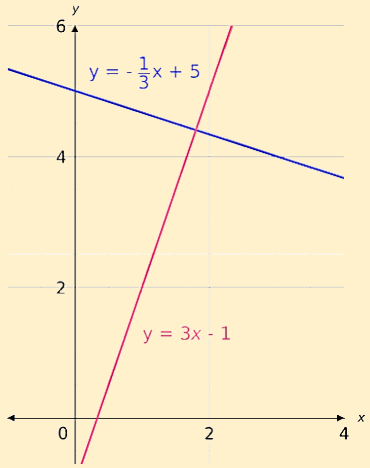


As these lines are **parallel**, they all have the same gradient of 2

Perpendicular Lines

If two lines are **perpendicular**, they meet at a right angle. Their gradients multiply to make -1. This means that the gradients of two perpendicular lines are the negative **reciprocal** of each other.

Example:
Find the equation of the line perpendicular to $y = 3x - 1$ that passes through the point (9, 2)



Step 1: Calculate the gradient.
The gradient of the first line is +3. The gradient of a line perpendicular to this is the negative reciprocal so = $-\frac{1}{3}$

Step 2: Find the y-intercept.

$$y = -\frac{1}{3}x + c$$
$$2 = -\frac{1}{3}(9) + c$$
$$2 = -3 + c$$
$$2 + 3 = c$$

Therefore the final equation is:

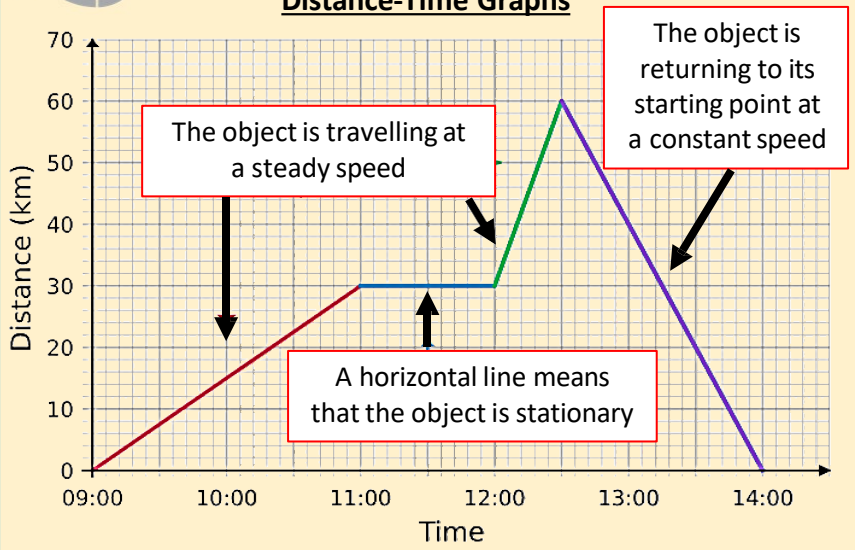
$$y = -\frac{1}{3}x + 5$$

KEY VOCABULARY

Word	Definition
Gradient	The steepness of a line.
Y-intercept	The point at which a line crosses the y-axis.
Parallel	Always the same distance apart, will never meet.
Perpendicular	Meet at a right angle.
Reciprocal	A pair of numbers that, when multiplied together, equal 1.

Year 11 Maths: Real Life Graphs

Distance-Time Graphs

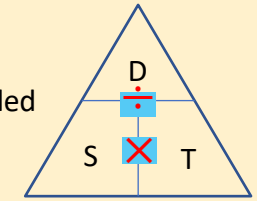


The speed of an object can be calculated from the gradient of the graph.

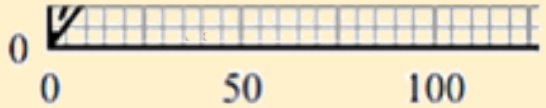
The greater the gradient (the steeper the line) the faster the object is moving.

Example: (Using the above graph)

Calculate the speed at which the object travelled between 9am and 11am: Speed = 30 ÷ 2 = 15 km/hr

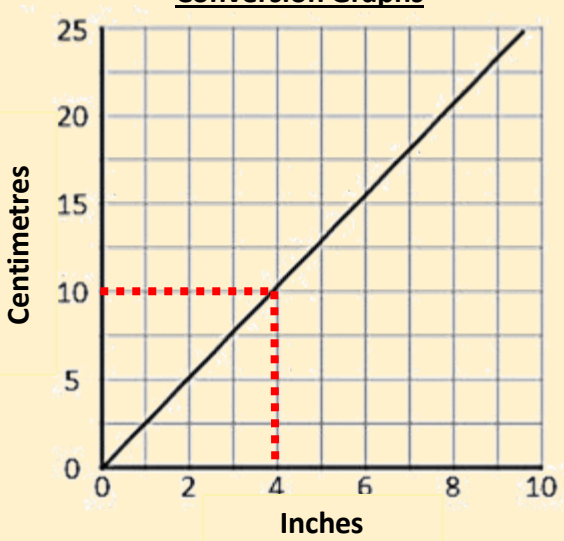


Always check the scales used before answering a question.



Here, the scale is 50 seconds in 10 small squares.
Each small square is 50 ÷ 10 = 5 seconds.

Conversion Graphs



A line graph to convert one unit to another.

Can be used to convert units (eg. miles and kilometres) or currencies ($ and £)

Find the value you know on one axis, read up/across to the conversion line and read the equivalent value from the other axis.

Example: (Using the above graph)

Convert 10 cm to inches:

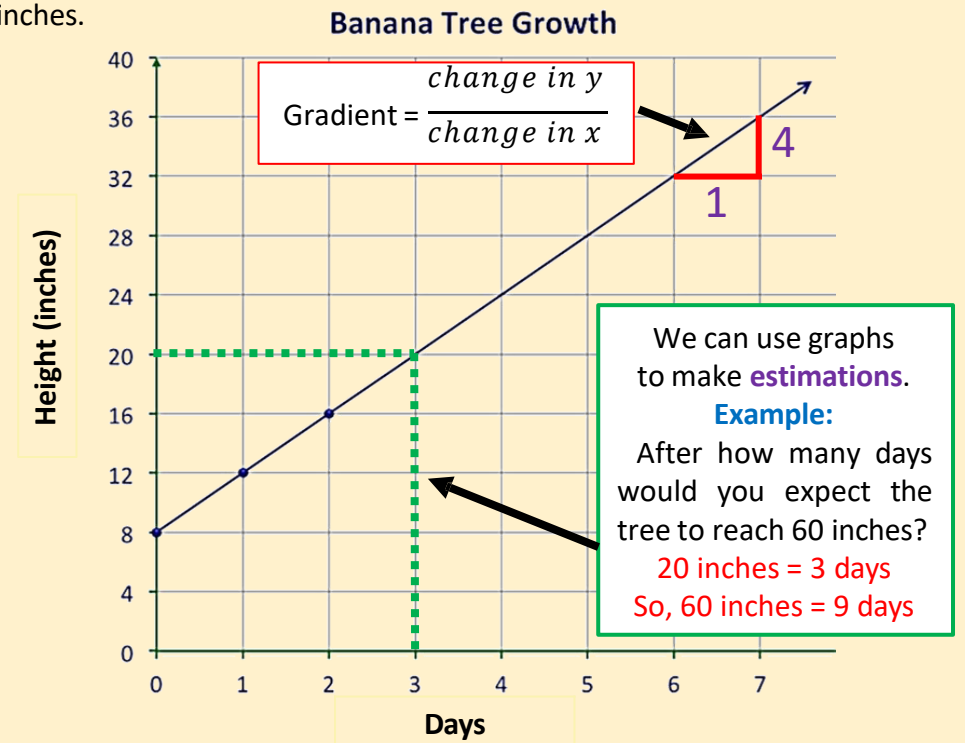
Draw across from 10 to the graph, then down to read off the amount of inches. 10 cm = 4 inches

Graphs can be used to represent a number of real life situations. It is important to read the labels on both axes to determine the meaning of the graph.

Other real life graphs

Example: (Using the graph below)

A graph showing the growth of a banana tree for various numbers of days.
The gradient shows the growth per day. It grows 4 inches per day.
The y-intercept shows the height of the tree when the measurements began, 8 inches.



KEY VOCABULARY

Word	Definition
Gradient	Describes both the direction and the steepness of the line
Convert	To change a value or expression from one form to another.
Variable	A variable is a quantity that may change within the context of a mathematical problem or experiment

Year 11 Maths: Quadratics

Expanding double brackets

To expand double brackets, we need to multiple all terms in one bracket by all the terms in the other. We use the multiplication grid to help us out:

Example : Expand & Simplify:

$$(x+3)(x-2)$$

×	x	$+3$
x	x^2	$+3x$
-2	$-2x$	-6

$$x^2+3x-2x-6$$

$$x^2+x-6$$

Step 1: Split up each term onto the sides of the multiplication grid, including the positive/negative sign.
Step 2: Multiply all 4 terms together
Step 3: Write all these 4 terms down, making sure to include all positive/negative signs.
Step 4: Collect the like terms to simplify the answer.

Factorising quadratics

Factorsing quadratics is the opposite of expanding. The aim is to put a quadratic expression in the form x^2+bx+c back into double brackets.

Top tip: The numbers in the bracket multiply to make c and add to make b

Example :

Factorise:
x^2+6x+8

Step 1: List the factors of +8:
1 and 8
2 and 4

Step 2: Which add to make +6?
1 and 8
2 and 4

Step 3: Complete the brackets
$(x+2)(x+4)$

Solving Quadratic Equations

We solve quadratic equations by factorising it first following the steps above.

Important: Quadratic equations need to be equal to zero to solve by factorising, if it is not, rearrange it to make it equal to zero before you start

Example : **Solve:** $x^2+7x+13=3$

Step 1: Balance the equation to make it equal to zero

$$x^2+7x+13=3$$
$$-3 \quad -3$$
$$x^2+7x+10=0$$

Step 2: Factorise the quadratic

$$(x+5)(x+2)=0$$

Step 3: Make each bracket equal to 0 and solve.

$(x+5)=0$ $\quad$ *or* $\quad$ $(x+2)=0$

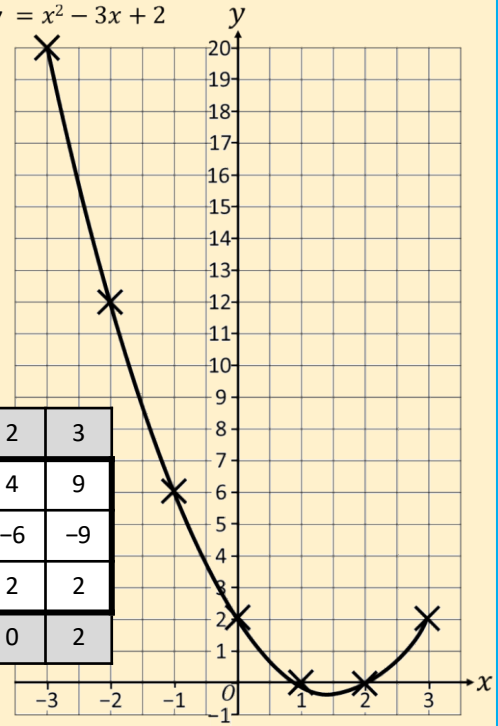
$x=-5$ $\quad$ $x=-2$

Plotting Quadratic Graphs

Plot the graph of
$y=x^2-3x+2$

1) Split the equation into separate terms in the table.
2) Complete each row.
3) Total the columns
4) Use the x value with the y value as coordinates.

x	−3	−2	−1	0	1	2	3
x^2	9	4	1	0	1	4	9
$-3x$	9	6	3	0	−3	−6	−9
$+2$	2	2	2	2	2	2	2
y	20	12	6	2	0	0	2



KEY VOCABULARY

Word	Definition
Quadratic	An expression or equation containing a squared term. E.g. x^2
Expand	To multiply each term in the bracket by the expression outside the bracket
Factorise	The reverse process of expanding brackets

Year 11 Maths: Simultaneous Equations

Solving Through Pictures

We can use maths, and algebra, to solve problems like this.

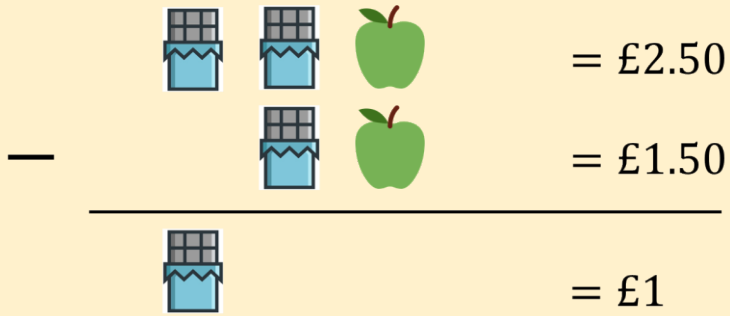
If we calculate the **difference** between these sums, we can see how much **more** Jill spent.

Jill bought 1 more apple and spent 50p more.
1 apple must be 50p

If 1 apple is 50p, 1 doughnut must be £1.

2 chocolate bars & 1 apple costs £2.50
1 chocolate bar & 1 apple costs £1.50

How much is a chocolate bar?



Simultaneous equations are multiple equations that share the same variables and which are all true as the same time.

Solving using elimination

When solving using elimination, we need to make the coefficients of one variable the same before adding/subtracting the equations to eliminate one variable.

Example: Solve $4x + 3y = 14$ (1)
$5x + 7y = 11$ (2)

Number the equations and equate the coefficients of one variable…

(1) x5 -> $20x + 15y = 70$
(2) x4 -> $20x + 28y = 44$

Subtract the equations to eliminate x

$$\begin{array}{r} 20x + 15y = 70 \\ -\ 20x + 28y = 44 \\ \hline -13y = 26 \end{array}$$

Solve to find out y

$$-13y = 26$$
$$y = -2$$

Substitute y back into one of the starting equations to calculate x

$$4x + 3y = 14$$
$$4x + 3(-2) = 14$$
$$4x - 6 = 14$$
$$4x = 20$$
$$x = 5$$

$x = 5, y = -2$

Solving using substitution

Sometimes, especially when one of the equations is non-linear. It is easier to substitute one equation into another.

Example: Solve $x^2 + 2y = 9$
$y = x + 3$

Since the second equation is in terms of y, we can substitute this into the first equation…

$$x^2 + 2(x + 3) = 9$$

This will form a quadratic. Remember to factorise to solve

$$x^2 + 2x + 6 = 9$$
$$x^2 + 2x - 3 = 0$$
$$(x - 1)(x + 3) = 0$$
$$x = 1 \text{ and } x = -3$$

We have two solutions for x. We use both to find two solutions for y using the 'simpler' equation…

When $x = 1$, $y = 1 + 3 = 4$
When $x = -3$, $y = -3 + 3 = 0$

Remember to include all solutions in your answer

When $x = 1$, $y = 4$
When $x = -3$, $y = 0$

KEY VOCABULARY

Word	Definition
Simultaneous Equations	two or more algebraic equations that share common variables and are solved at the same time
Substitution	the act, process, or result of substituting one thing for another

Year 11 Maths H: Algebraic Fractions

Simplifying linear algebraic fractions

Algebraic fractions can be simplified the same as normal fractions, by finding common factors in the numerator and denominator.

Example:

$$\frac{55x^4y^3}{15x^2y}$$

Using our knowledge of simplifying numbers and index laws, this fraction would simplify to:

$$\frac{11x^2y^2}{3}$$

Simplifying quadratic algebraic fractions

Algebraic fractions containing quadratics may not have obvious factors, but if we factorise, we can compare factors to find common ones:

Example:

$$\frac{x^2+x-6}{3x+9}$$

Step 1: Factorise the numerator and denominator (we are looking for common factors):

$$\frac{(x+3)(x-2)}{3(x+3)}$$

Step 2: Cancel the common factors

$$\frac{\cancel{(x+3)}(x-2)}{3\cancel{(x+3)}}$$

Answer: $\frac{x-2}{3}$

Adding and subtracting algebraic fractions

We add and subtract algebraic fractions the same as we do normal fractions. We first need to find a common denominator:

Example 1:

$$\frac{x+4}{3}+\frac{x+1}{2}$$

Step 1: find equivalent fractions with common denominators:

$$\frac{2(x+4)}{6}+\frac{3(x+1)}{6}$$

Step 2: Combine as 1 fraction, expand and simplify:

$$\frac{2x+8+3x+3}{6}$$

$$\frac{5x+11}{6}$$

Example 2:

$$\frac{2}{x+5}+\frac{3}{(x+1)}$$

Step 1: find equivalent fractions with common denominators:

$$\frac{2(x+1)}{(x+5)(x+1)}+\frac{3(x+5)}{(x+5)(x+1)}$$

Step 2: Combine as a single fraction, expand and simplify:

$$\frac{2(x+1)+3(x+5)}{(x+5)(x+1)}$$

$$\frac{2x+2+3x+15}{(x+5)(x+1)}$$

$$\frac{5x+17}{(x+5)(x+1)}$$

Note: If the denominator is already factorised, unless told, we don't need to expand.

Multiplying and Dividing algebraic fractions

Example 1:

$$\frac{x+5}{7}\times\frac{5}{2x+3}$$

Multiply the numerators and denominators and combine a single fraction

$$\frac{5(x+5)}{7(2x+3)}=\frac{5x+25}{14x+21}$$

Note: On some occasions you may need to simplify if they have common factors.

Example 2:

$$\frac{3x+1}{x-1}\div\frac{2x}{x-1}$$

Step 1: Use Keep Flip Change (K.C.F) like with normal fractions:

$$\frac{3x+1}{x-1}\times\frac{x-1}{2x}$$

Step 2: Multiply and combine as a single fraction:

$$\frac{(3x+1)(x-1)}{2x(x-1)}$$

Step 3: Cancel down any common factors:

$$\frac{(3x+1)\cancel{(x-1)}}{2x\cancel{(x-1)}}=\frac{3x+1}{2x}$$

KEY VOCABULARY

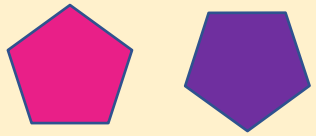
Word	Definition
Numerator	The number on the top of a fraction
Denominator	The number on the bottom of a fraction
Equivalent	Fractions that are the same in value but with different numerators and denominators

Year 11 – Maths - Congruency and Similarity

Congruent Shapes

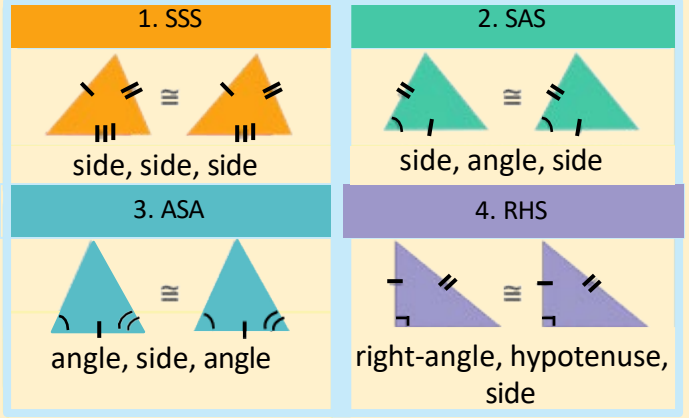
Shapes are congruent if they are identical – same shape and same size

Shapes can be rotated or reflected but still be congruent



Congruent Triangles

4 ways of proving that two triangles are congruent:

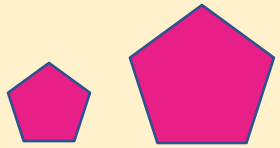


SSA or AAA do not prove congruency.

Similar Shapes

Shapes are similar if they are the same shape but different sizes.

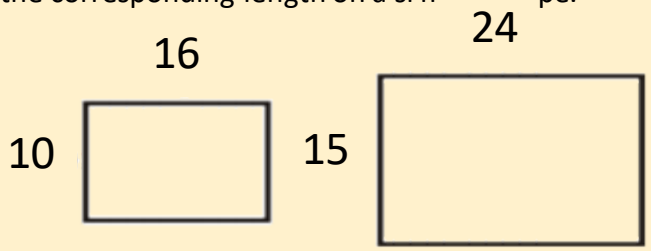
The proportion of the matching sides must be the same, meaning the ratios of corresponding sides are all equal.



Scale factor

The ratio of corresponding sides of two similar shapes.

To find a scale factor, divide a length on one shape by the corresponding length on a similar shape.



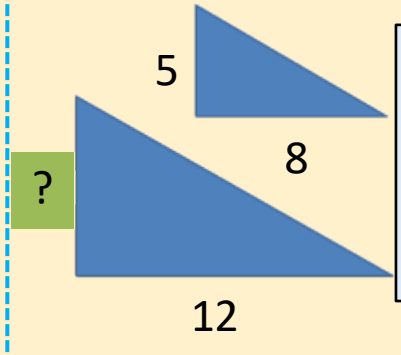
Scale Factor = $15 \div 10 = 1.5$

Finding missing lengths in similar shapes

1. Find the scale factor.
2. Multiply or divide the corresponding side to find a missing length.

If you are finding a missing length on the larger shape you will need to multiply by the scale factor.

If you are finding a missing length on the smaller shape you will need to divide by the scale factor.



Find scale factor: $\frac{12}{8} = 1.5$

Then multiply or divide other sides by scale factor as appropriate.

$x = 5 \times 1.5$

$x = 7.5$

Scaling area and volumes

If the length increases by a scale factor k,

- the area increases by scale factor squared, i.e. k^2
- the volume increases by scale factor cubed, i.e. k^3

	Shape A		Shape B
Length:	3cm	$\times 2$ →	6cm
Area:	$5cm^2$	$\times 4$ →	$20cm^2$
Volume:	$10cm^3$	$\times 8$ →	$80cm^3$

Similar Triangles

To show that two triangles are similar, show that :

1. The three sides are in the same proportion
2. Two sides are in the same proportion, and their included angle is the same.
3. The three angles are equal.

KEY VOCABULARY

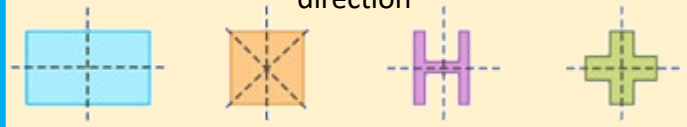
Word	Definition
Congruency	In geometry, two figures or objects are congruent if they have the same shape and size, or if one has the same shape and size as the mirror image of the other.
Similarity	Two shapes are Similar when one can become the other after a resize, flip, slide or turn.
Scale factor	The size of an enlargement/reduction is described by its **scale factor**. For example, a **scale factor** of 2 means that the new shape is twice the size of the original

Year 11 – Maths -Transformations

Symmetry

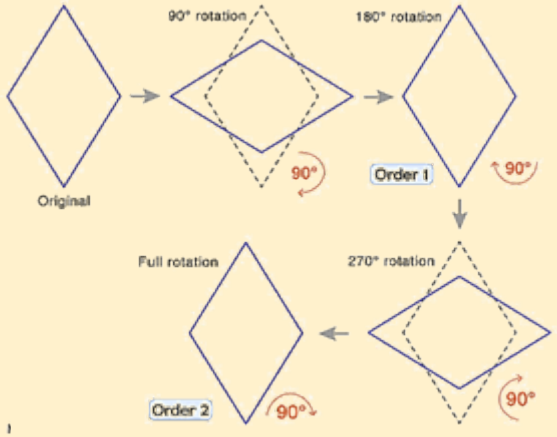
Line Symmetry

The line of symmetry or mirror line can be in any direction



Rotational Symmetry

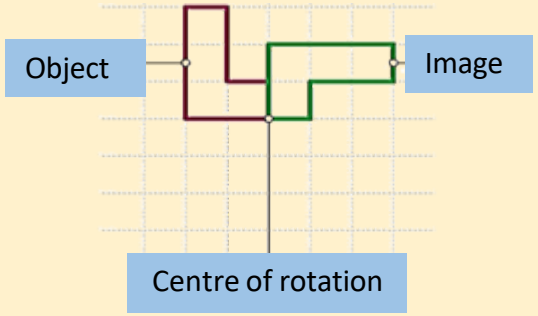
How many times it matches the original shape in a 360 degree turn is called the Order.



Rotation

Three properties are needed for a rotation

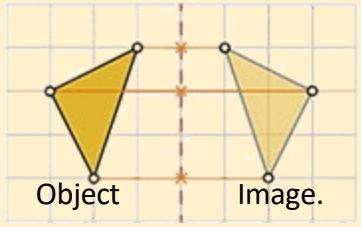
1. Centre of rotation
2. Angle of rotation
3. Direction (Clockwise or anti clockwise)



The object is rotated around a centre, clockwise, using an angle of 90°

Reflection

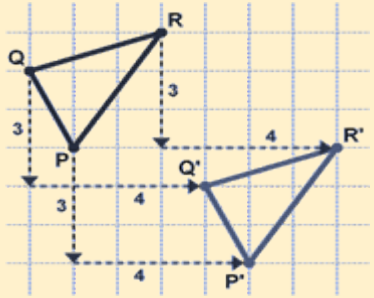
A shape appears 'flipped'. The size does not change.



Every point on the shape is the same distance away on the other side of the mirror line.

Translation and column vectors

A shape 'slides' across a grid. The size does not change.



Every point in the shape is translated the same distance in the same direction.

Every point has moved 4 right and 3 down

$$\begin{pmatrix} 4 \\ -3 \end{pmatrix}$$

We can **describe a translation** with a column **vector**.

$$\begin{pmatrix} x \\ y \end{pmatrix}$$

The first part moves **left** or **right**.

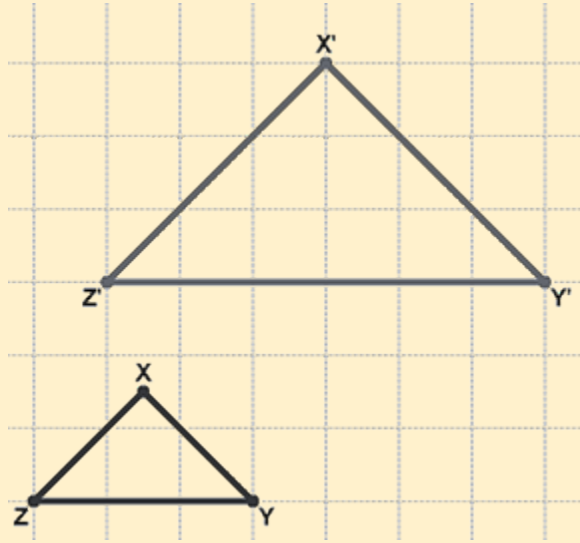
The second part moves **up** or **down**.

$$\begin{pmatrix} \leftrightarrow \\ \updownarrow \end{pmatrix}$$

Any movement **left** or **down** is given as a **negative number**.

Enlargement

Enlarging a shape changes its size.



All the sides of the triangle X'Y'Z' are twice as long as the sides of the original triangle XYZ. The triangle XYZ has been enlarged by a **scale factor** of 2.

Note:
When the lengths of a shape increase by a SF of 2, the area will increase by a SF of $2^2 = 4$

KEY VOCABULARY

Word	Definition
Translate	Translation is when a shape is moved a certain distance from its original position
Rotation	Rotation is when a shape is turned around a point
Enlargement	Changing a shape's size by a scale factor
Tessellation	Shapes closely fitted together, especially of polygons in a repeated pattern without gaps or overlapping.
Reflection	Reflection is when a shape is reflected in a mirror line.

Year 11 – Maths - Area, Surface Area and Volume

Area

The **area** of a 2D shape is the amount of space it takes up in 2 dimensions, and its units are always squared, e.g. cm^2,m^2

You need to know the formulas to calculate the areas following shapes and be able to rearrange them

Area of a Rectangle = Base x Height

Area of a Triangle = $\frac{\text{Base x Perpendicular Height}}{2}$

Area of a parallelogram = Base x Perpendicular Height

Area of a trapezium = $\frac{1}{2}(a + b)h$

(where a and b are the parallel sides and h the perpendicular height)

Surface area

The **surface area** is the combined area of the faces of a 3D shape. We need to be able to calculate the surface area of prisms and also some complex 3D shapes.

Volume

The **volume** is the space inside a 3D shapes.

Volume of any prism = Area of cross section x Depth

We also need to be able to work out the volume of some complex 3D shapes.

Pyramids

A pyramid is not a prism because it does not have a consistent cross section.

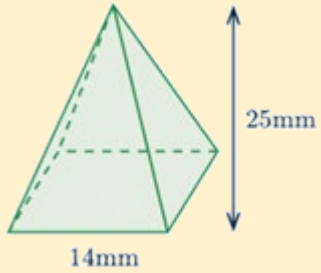
$$\textbf{Volume of a pyramid} = \frac{\textbf{area of base} \times \textbf{Perpendicualr height}}{3}$$

Example: Find the volume:

$Area\ of\ base = 14 \times 14 = 196$

$$Volume = \frac{196 \times 25}{3}$$

$$Volume = 1633.3mm^3$$



To find the **surface area** of a pyramid, you would work out the area of the base and the triangles that make up the sides.

Cones

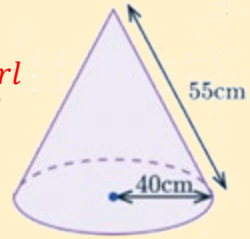
A cone is similar to a pyramid but has a circular base and a curved surface. **Volume** is similar to a pyramid except the base is a circle so will need to use πr^2.

$$\textbf{Volume of a cone} = \frac{\textbf{area of base } (\pi r^2) \times \textbf{Perpendicualr height}}{3}$$

Example: Find the surface area:

$surface\ area\ of\ a\ cone = \pi r^2 + \pi rl$

Where r is the radius and l is the slanted length.



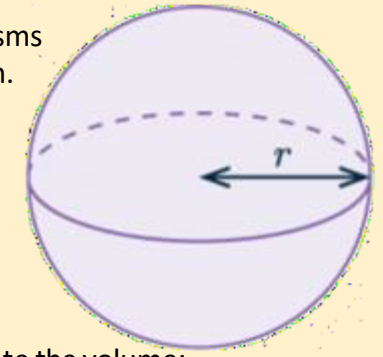
S.A = $\pi \times 40^2 + \pi \times 40 \times 55$

Surface area = $11938.1m^2$

Remember: Surface area is units squared as it is a form of area.

Spheres

Spheres, like cones and pyramids, are not prisms as they do not have a consistent cross section. We have two formulae we need to know involving spheres:



$$\textbf{Volume of a sphere} = \frac{4\pi r^3}{3}$$

$$\textbf{Surface area of a sphere} = 4\pi r^2$$

Example 1: Find the volume

The above sphere has a radius of 4cm calculate the volume:

$$volume = \frac{4 \times \pi \times 4^3}{3}$$

$$volume = 268.08cm^3$$

Example 2: Find the surface area

The above sphere has a radius of 4cm calculate the volume:

$$Surface\ area = 4 \times \pi \times 4^2$$

$$volume = 201.02cm^2$$

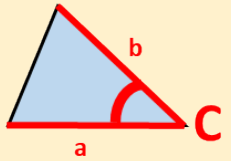
KEY VOCABULARY

Word	Definition
Prism	A 3D shape with a uniform cross-section
Cross section	A face of a 3D shape that is consistent throughout.
Perpendicular	Meet at a right angle
Parallel	Two lines that never meet.

Year 11 – Maths – Pythagoras & Trigonometry

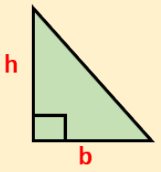
	Pythagoras	Trigonometry	Sine Rule	Cosine Rule
Foundation Tier or Higher Tier	F and H	F and H	H	H
What does it help me find?	Missing sides	Missing sides or angles	Missing sides or angles	Missing sides or angles
How can I decide which one to use?	Used when you are given two sides and need to find a 3rd side. e.g. 6cm, x, 5cm	Used when you are given two sides and need to find an angle, or you are given a side and an angle and need to find a 2nd side. e.g. 10cm, x, 5cm	Used if you have two pairs of angles and their matching side, where one of these is an unknown. e.g. 4cm, 6cm, 40°, x	Used if you have 3 sides and an angle, where one of these is an unknown. e.g. 4cm, 5cm, x, 9cm
How do I label the triangle?	a, c, b	H, O, x, A	A, b, c, B, a, C	A, b, c, B, a, C
Which formula shall I use?	If you want the 'c': $a^2 + b^2 = c^2$ If you have the 'c': $c^2 - a^2 = b^2$ or $c^2 - b^2 = a^2$ REMEMBER TO SQUARE ROOT	$\sin\theta = \frac{O}{H}$ $\cos\theta = \frac{A}{H}$ $\tan\theta = \frac{o}{A}$ REMEMBER TO $Sin^{-1}/Cos^{-1}/Tan^{-1}$ FOR AN ANGLE	To find a side: $\frac{a}{SinA} = \frac{b}{SinB} = \frac{c}{SinC}$ To find an angle: $\frac{Sin\,A}{a} = \frac{Sin\,B}{B} = \frac{Sin\,C}{c}$ REMEMBER YOU ONLY NEED 2 OUT OF 3 PAIRS	To find a side: $a^2 = b^2 + c^2 - 2bcCosA$ To find an angle: $A = Cos^{-1}\left(\frac{a^2 - b^2 - c^2}{-2bc}\right)$ REMEMBER YOU CAN LABEL ANY ANGLE 'A', JUST CHANGE THE SIDES ACCORDINGLY!

(Higher Tier)
To find the area of a **non right-angled** triangle:



$$A = \frac{1}{2}abSinC$$

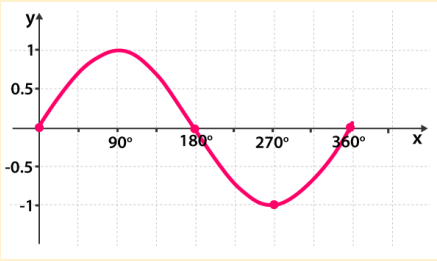
To find the area of a **right-angled** triangle:



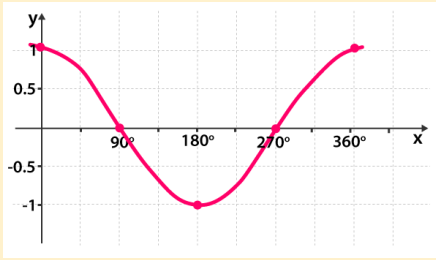
$$A = \frac{b \times h}{2}$$

Trig Graphs

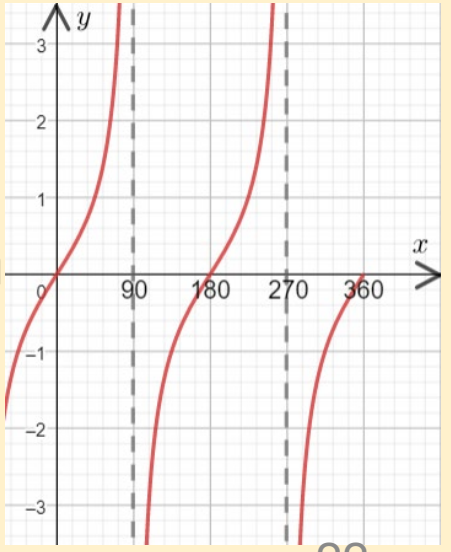
Sin



Cos



Tan



Year 11 – Maths – Statistical Diagrams

Tally Charts And Frequency Tables

Eye Colour	Tally	Frequency
brown	𝍸 I	6
blue	𝍸 III	8
green	III	3
grey	IIII	4
hazel	𝍸	5

Tally marks are used to help count things. Each vertical line represents one unit. The fifth tally mark goes across the first four to make it easier to count.

The frequency column is completed after all the data has been collected.

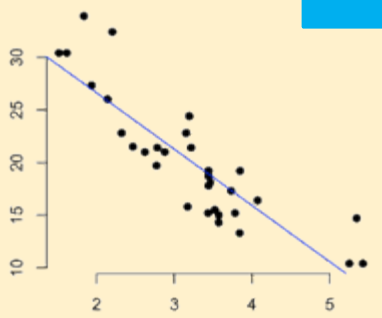
Pictograms

Team	Number of house points
Diamond	★★½
Ruby	★★★
Sapphire	★★★½
Emerald	★★½

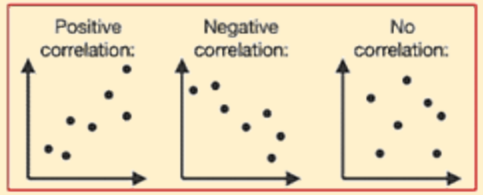
Key: ★ = 8 points

Uses pictures or symbols to show the value of the data. A pictogram must have a key that explains the value that the symbol represents.

Scatter Graphs

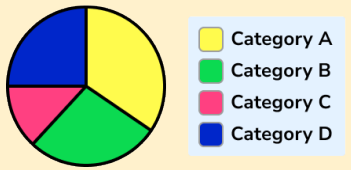


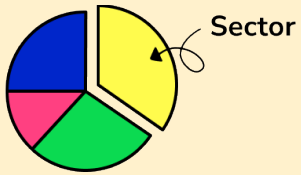
A **line of best fit** is a straight line drawn as close to as many points as possible on a scatter graph, they are used to make predictions.



Pie Charts

They represent discrete data. A circle is divided into segments, where each segment represents a data category. The size of each segment matches its proportion of the total amount.



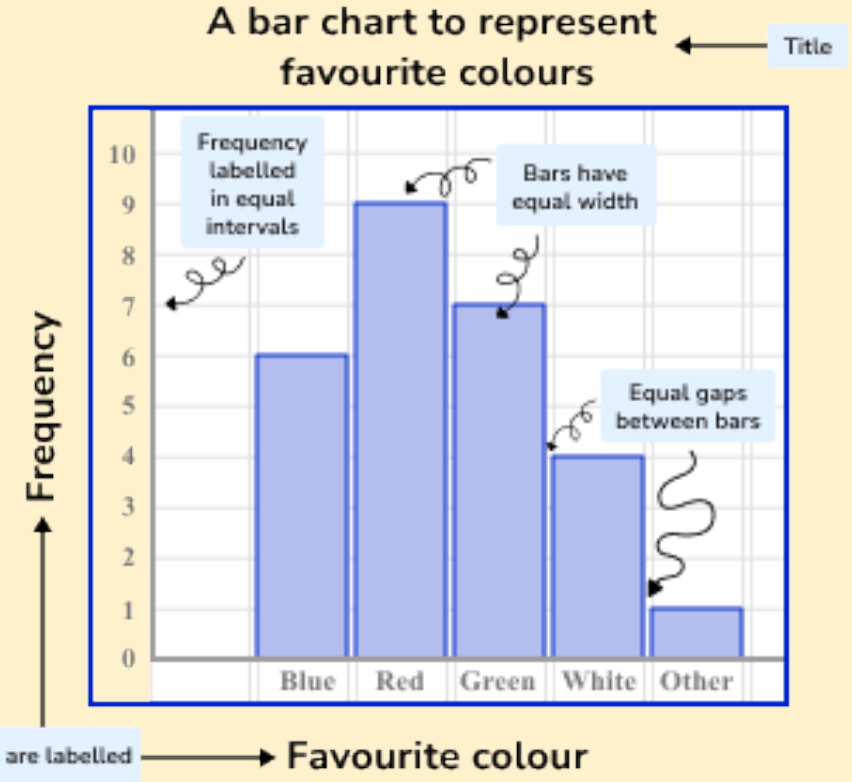


Angle for the sector $= \frac{category\ frequency}{total\ frequency} \times 360$

e.g. 20 people were asked what their favourite genre of TV is. 4 people said Documentary.

$$= \frac{4}{20} \times 360 = 72°$$

Bar Charts



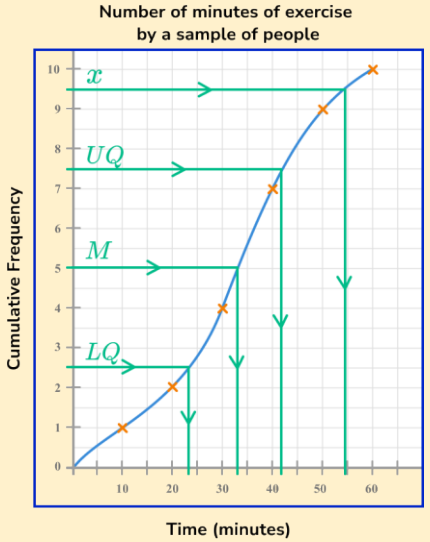
KEY VOCABULARY

Word	Definition
Outlier	A value that doesn't fit the pattern of the data
Frequency	How often something happens (usually during a period of time).
Correlation	a mutual relationship or connection between two or more things.

Year 11H – Maths – Statistical Diagrams

Cumulative Frequency Graph

Cumulative frequency is the running total of frequencies in a frequency distribution.
Data points are plotted on the upper class boundary.
To estimate the median, quartiles or percentiles from a cumulative frequency graph, draw a horizontal line from the cumulative frequency axis to the curve, then a vertical line to the x-axis, and read off the appropriate value

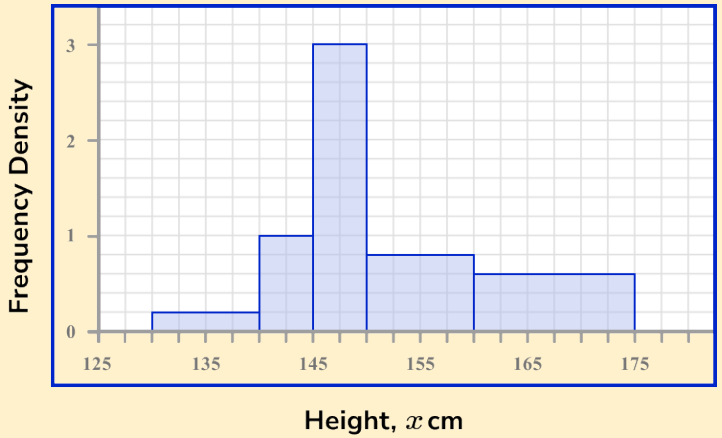


Value	Percentage of data below this value
Lower Quartile (LQ)	25%
Median (M)	50%
Upper Quartile (UQ)	75%

Histogram

A histogram is similar to a bar chart but is used to display quantitative continuous data. The area of each bar represents the frequency of values in that class interval. To draw a histogram we need to find the frequency density of each class interval.

$$Frequency\ density = \frac{frequency}{class\ width}$$



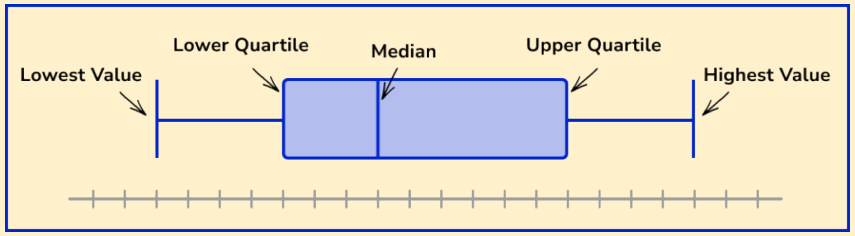
Height, cm	Frequency	Frequency Density
$130 \leq x < 140$	2	0.2
$140 \leq x < 145$	5	1
$145 \leq x < 150$	15	3
$150 \leq x < 160$	8	0.8
$160 \leq x < 175$	9	0.6

In a histogram the **area of the bars represent the frequencies**.

Box Plot

A box plot is a diagram showing the following information for a set of data:

- Lowest value
- Lower quartile
- Median
- Upper Quartile
- Highest value



Each box plot should be featured on a numerical scale.

You can calculate the Interquartile range by subtracting the Lower quartile from the Upper quartile

KEY VOCABULARY

Word	Definition
Median	The middle value when data is in order
Frequency	How often something happens (usually during a period of time).
Continuous data	Data that can take any value (within a range).
Quantitative data	Data that can be counted or measured

Year 11 – Maths - Averages

"Hey diddle diddle, the median's the middle, add and divide for the mean. The mode is the one you see the most and the range is the difference between."

Averages from grouped data

Length (L cm)	Frequency (f)	Midpoint (x)	fx
$0 < L \leq 10$	10	5	10 x 5 = 50
$10 < L \leq 20$	15	15	15 x 15 = 225
$20 < L \leq 30$	23	25	25 x 25 = 575
$30 < L \leq 40$	7	35	7 x 35 = 245
Total	55		1095

Estimate of the mean:

Step 1: Calculate the total frequency
Step 2: Find the midpoint of each group
Step 3: Calculate $\boldsymbol{f} \times \boldsymbol{x}$
Step 4: Calculate the mean by dividing $\boldsymbol{fx}$ by the frequency

$$\frac{Total\ fx}{Total\ f} = \frac{1095}{55} = 19.9\text{cm}$$

The modal class: The class with the highest frequency

Modal Class is $20 < L \leq 30$

The median: This is the middle piece of data and would be the

$$\frac{Total\ frequency + 1}{2}$$

$$\frac{55+1}{2} = 28th\ value$$

add the frequency column until you reach the 28th value

Median is in the group $20 < x \leq 30$

Finding the averages

The average tells us about the 'expected' value for a set of data. This could be the average height of a group of people, we could calculate the mean, mode, or median :

Mean = $\frac{\text{sum of all values}}{\text{total number of values}}$

Example :

Find the mean of : 10, 12, 18, 20

Mean = $\frac{10 + 12 + 18 + 20}{4} = \frac{40}{4} = 10$

Mode = most common value

Example 1 :

Find the mode of : 10, **12**, **12**, 18, 20

Mode = 12

Example 2 :

Find the mode of : **10**, **10**, **12**, **12**, 18, 20

Mode = 10 and 12 (two modes = bimodal)

Example 3 :

Find the mode of : 10, 12, 18, 20

Mode = no mode (no value shows up more than any other)

You cannot have **three modes**.

Median = middle value when the data is in order

Example 1 :

Find the median of : 10, 12, 16, 18, 20

10, 12, 16, 18, 20

Median is 16

Example 2 :

Find the median of : 10, 12, 18, 20

10, 12, 18, 20

If there are two middle values, the **Median** is halfway between the two middle values :

$$\frac{12 + 18}{2} = \frac{30}{2} = 15$$

Finding the range

The range isn't an average. The range measures how **spread out** the data is. This is more useful when comparing sets of data. A **smaller range** means the data is **more consistent**.

Range = The difference between the highest value and the smallest value

Example 1 :

Find the range of : 10, 12, 16, 18

Range is 18 – 10 = 8

KEY VOCABULARY

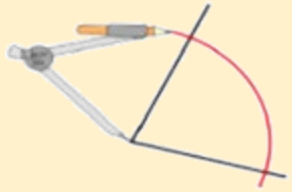
Word	Definition
Mean	The **average** of the numbers. Add up the values you are given and divide by the number of values you have.
Median	The median is the middle value, when your data is in order.
Mode	The value or item there is the most of.
Range	The difference between the largest and smallest values.
Continuous Data	Data which can take any values e.g. weight, height

Year 11 – Maths - Constructions and Loci

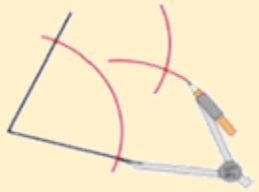
Constructions: Angle Bisector

An **angle bisector** cuts an angle in half. It also shows us a line in which any point on that line is exactly half way between each of the two lines that form the angle.

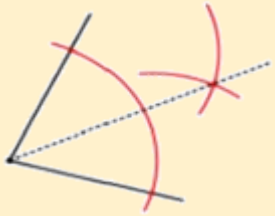
Step 1: Draw an arc from the point of the angle that cuts both of the lines.



Step 2: Place the compass on the two points where it crosses the line and draw an arc from both sides that cross.



Step 3: Using a ruler, draw a line that goes through the two joining arcs and the point of the angle.



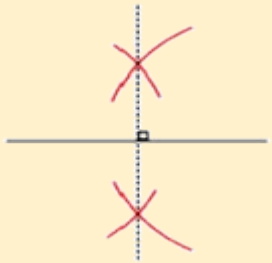
Constructions: Perpendicular Bisector

A **perpendicular bisector** cuts a line exactly in half and at a right angle. It also shows us a line in which any point on that line is exactly half way between the two end points.

Step 1: Join the two points with a straight line. Draw an arc from one end point that is over half way (doesn't matter how much more than half).

Step 2: Without changing the length of the compass, draw an arc from the other end point. The two arcs should cross twice (once above the line and once below.

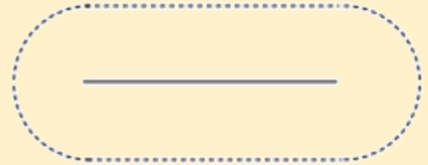
Step 3: Using a ruler, draw a line through each intersection of the arcs. This line can continue further than the arcs. This line will meet the first line at 90° (a right angle).



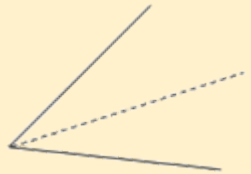
Loci

A locus (**loci** is the plural) is a collection of points which share a rule.

A circle is the locus of all points **equidistance** from a single point.



This locus shows all points that are **equidistance** from a line.



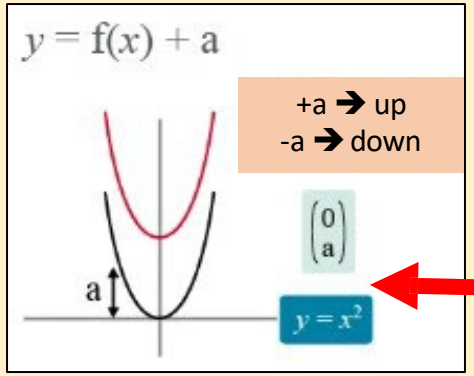
A angle bisector shows us a locus of points half way between two lines.

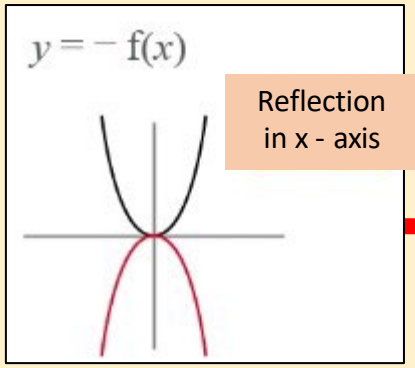
A perpendicular bisector shows us a locus of points half way between two points.

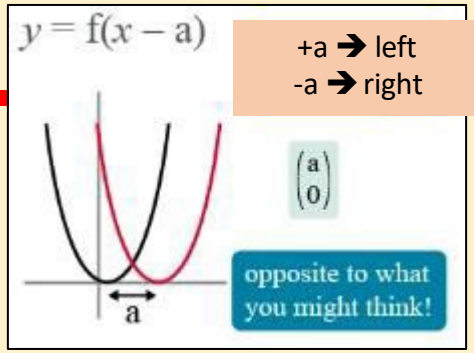
KEY VOCABULARY

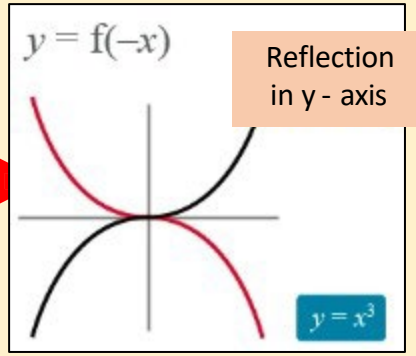
Word	Definition
Bisect	Cut in half
Perpendicular	At right angles
Equidistance	Equal distance
Perpendicular Bisector	The line that cuts another in half at right angles
Angle Bisector	The line that cuts an angle exactly in half
Loci	All the positions of points following a rule

$y = f(x)$	What's happening…	$(4, 3)$	Result…
$y = f(x + 1)$	• Translation • Inside the function • Affects x- values • Opposite to what's expected	$(3,3)$	Graph moves left 1
$y = f(x) - 1$	• Translation • Outside the function • Affects y- values • Does what's expected	$(4,2)$	Graph moves down 1
$y = f(-x)$	• Reflection • Inside the function • Negative of x- value	$(-4,3)$	Reflection in the y - axis
$y = -f(x)$	• Reflection • Outside the function • Negative of y- value	$(4,-3)$	Reflection in the x - axis









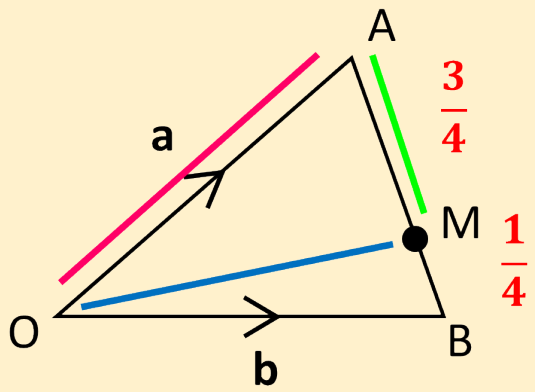
KEY VOCABULARY

Word	Definition
Translation	"Sliding": moving a shape without rotating or flipping it. The shape still looks exactly the same, just in a different place.
Reflection	An image or shape as it would be seen in a mirror.
Function	A special relationship where each input has a single output. It is often written as "f(x)" where x is the input value.

Vector Geometry

The arrows are used to describe the direction.
e.g. $\overrightarrow{OA} = \boldsymbol{a}, so\ going\ backwards, \overrightarrow{AO} = -\boldsymbol{a}$

$AM : MB = 3 : 1$



Prove $\overrightarrow{OM} = \frac{1}{4}\boldsymbol{a} + \frac{3}{4}\boldsymbol{b}$

$\overrightarrow{OM} = \overrightarrow{OA} + \overrightarrow{AM}$

$\overrightarrow{OM} = \overrightarrow{OA} + \frac{3}{4}\overrightarrow{AB}$

$\overrightarrow{AB} = -\boldsymbol{a} + \boldsymbol{b}$

$\overrightarrow{OM} = \boldsymbol{a} + \frac{3}{4}(-\boldsymbol{a} + \boldsymbol{b})$

$= \boldsymbol{a} + (-\frac{3}{4}\boldsymbol{a} + \frac{3}{4}\boldsymbol{b})$

$= \frac{1}{4}\boldsymbol{a} + \frac{3}{4}\boldsymbol{b}$

Word	Definition
Vector	describes a movement from one point to another. It has both direction and magnitude
Ratio	shows the relative sizes of two or more values.
Magnitude	The magnitude of a **vector** is its length

Proof

Representing an even number: 2n

Representing an odd number: 2n +1

Representing consecutive even number: 2n, 2n + 2, 2n + 4

Representing consecutive odd numbers: 2n + 1, 2n + 3, 2n + 3

Representing consecutive numbers n, n + 1, n + 3

Odd and Even number calculations

Odd + Odd = Even

Even + Even = Even

Odd + Even = Odd

Even + Odd = Odd

Even x Even = Even

Odd x Odd = Odd

Even x Odd = Even

Odd x Even = Even

Prove that 2a + 2 is always an even number, for all values of a.

If a is odd then

2 x a + 2 = Even x Odd + Even
Even x Odd = Odd
So Odd + Even = **Even**

If a is even then

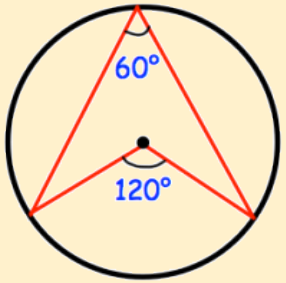
2 x a + 2 = Even x Even + Even
Even x Even = Even
Even + Even = **Even**

Therefore even for all values of a

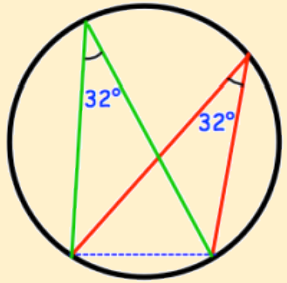
Year 11H: Circles, Sectors & Circle Theorems

Circle Theorems deal with angle facts that occur with shapes and lines drawn within and connected to a circle. You need to be familiar with these, recognise them in diagrams and use in calculations. You are likely to be asked to state the circle theorem you have used to calculate a missing angle. You may be asked to calculate the circumference or area of circles, or parts of circles (sectors). You need to be able to recall the formulae and substitute values from the diagram using a calculator. On a non-calculator question, you may be asked to leave your answers in terms of pi.

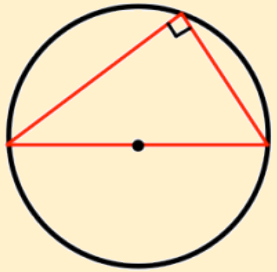
The angle at the centre is twice the angle at the circumference



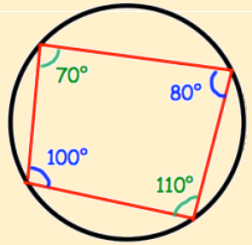
Angles in the same segment are equal.



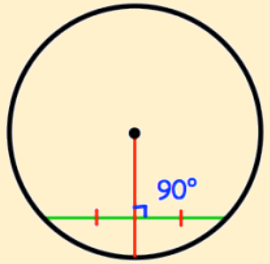
The angle in a semicircle is 90°



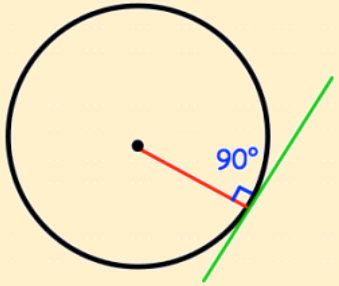
Opposite angles in a cyclic quadrilateral add up to 180°



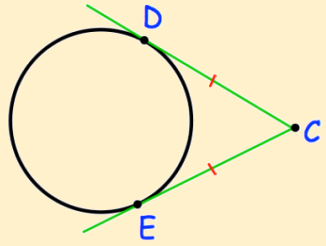
The perpendicular from the centre to the chord bisects the chord



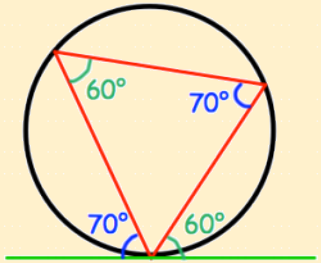
The angle between a tangent and a radius is 90°

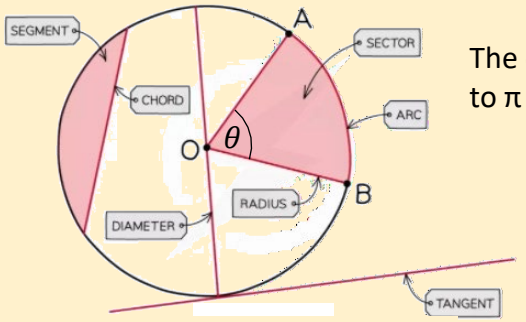


Tangents from a point outside a circle are equal in length



Alternate segments are equal





The diameter is equal to twice the length of the radius

d = 2r

Circumference of a circle

The circumference of a circle is equal to π multiplied by the diameter :

C = πd

Area of a circle

The circumference of a circle is equal to π multiplied by the diameter :

A = πr²

Area of a sector

A sector is a portion of the area of the circle, determined by the angle it covers.

$A = \frac{\theta}{360} \times \pi r^2$ where θ is the angle of the sector

KEY VOCABULARY

Word	Definition
Segment	A part (area) of a circle cut off by a chord
Chord	A straight line connecting two points on a circumference
Circumference	The distance around the outside of a circle.
Arc	A part of the circumference
π	The Greek letter pi. Used to represent the never ending number 3.141592654…
Sector	An area enclosed by two radii and an arc, looks like a slice of pizza.

ASH GREEN SCHOOL

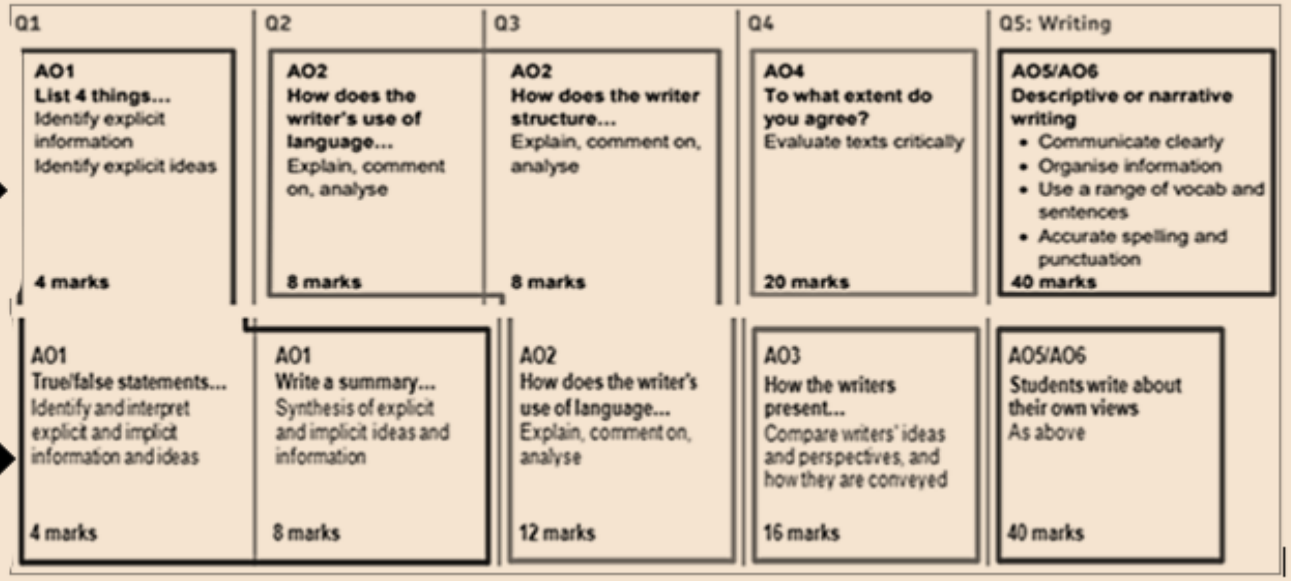
ENGLISH LANGUAGE: COMPLETE KNOWLEDGE ORGANISER

Language Paper 1: Order

- Q5
- Q4
- Q1
- Q2
- Q3

Language Paper 2: Order

- Q5
- Q1
- Q3
- Q4
- Q2



Language Paper 1 **1 hour 45mins** **1 Fiction Extract**	**Question 1** **Box the passage off** & highlight key passages. Write **4 full sentences** and be clear / explicit.	**Question 2** **2 x PEA** paragraphs • Point • Evidence • Analysis Aim for **2 paragraphs** Higher marks for rigorous analysis (see overleaf)	**Question 3** **2-3 PEA** paragraphs • Point • Evidence • Analysis Focus on **shifts** in narrative focus, tone, character, ideas. Always compare the start to the end! Structural features overleaf.	**Question 4** **2-3 PEAL** paragraphs • Point • Evidence • Analysis • Link (to statement) Evaluate the statement: can you agree? Can you challenge it? Analyse methods & infer deeper meanings/reasons.	**Question 5** **Descriptive Writing:** Describing a scene in detail, evoking imagery for your reader. **Narrative Writing:** Conveying character and setting in your writing, developing action and plot **Tips:** Plan a well-crafted piece of writing: clear thread throughout; cyclical structure: 2-3 pages. • Vary sentence types and punctuation to control pace & tone. • Stretch your vocabulary; no boring words.
Language Paper 2 **1 hour 45mins** **2 Non-fiction Extracts (1 x 19th century)**	**Question 1** Choose **4** statements **which are true** and shade **only these boxes** Double check the wording.	**Question 2** **PEE-C-PEE** **Source A:** Point, Evidence, Explain ***Comparison*** **Source B:** same PEE. Higher marks for detailed inference when explaining/comparing.	**Question 3** **2-3 x PEA** paragraphs • Terminology • Evidence • Analysis Higher marks for rigorous analysis (see overleaf)	**Question 4** **2 x PEA-C-PEA** **Source A:** How (methods) does it convey an idea/perspective? Analyse thoroughly. Compare with how **Source B** conveys an idea/perspective. Analyse.	**Question 5** **Read the question carefully** – highlight the **TAP**: text type, audience, and purpose. **Adopt a clear point of view** – don't sit on the fence. **Plan** your paragraphs: intro; 3 topic paragraphs; conclusion. Each **paragraph has a purpose.** Include **4-5 devices** in each paragraph to add power and credibility to your point. Use **varied sentences** and **powerful vocabulary**!

Analytical verbs and phrases:

The writer's use of this…

- Conveys
- Connotes
- Suggests
- Highlights
- Establishes
- Develops

The…

- Tone
- Pace
- Imagery
- Idea
- Impression
- Characterisation

Extended analysis: higher marks

1 – **Zoom:** In particular, the word '….' shapes the reader's understanding by

2- **Effect of combined techniques:** The writer uses _____coupled with _____ to highlight…

3 – **Extending analysis:** Furthermore, this effect is extended in a different passage: ….

4 – **Alt reading:** However, the reader may alternatively infer that…

Language terms and features:

Simile	A comparison using 'as' or 'like', e.g. he eats like a pig
Metaphor	Using a word non-literally for something else, e.g. he's a pig
Personification	Giving an inanimate object human features, e.g. 'the tree danced in the wind'
Alliteration	Using the same letter sound for closely connected words. Plosive = strong letter sounds, e.g. d, b, p
Sibilance	Alliteration of the 'S' sound
Symbolism	An object or action that represents more than itself
Repetition	The purposeful repeating of a word or phrase for emphasis.
Oxymoron	A self-contradiction, e.g. 'deafening silence'
Pathos	Language that creates a strong feeling of sadness
Imperative	A command phrase
Rhetorical Question	A question that assumes an answer and agreement with it
Tricolon	3 clauses or words in a successive list, e.g. I came, I saw, I conquered.

Structural terms and features:

1. Juxtapositions –a deliberate contrast between ideas to create tension / imagery

2. Dialogue –speech to reveal information about characters

3. Foreshadowing –a hint of what is to happen later to build dramatic tension

4. Narrative perspectives –the viewpoint of the narrator and how this develops and changes

5.Shifts or changes in time, topics, places, tone and focus –changes to signpost new events or ideas to the reader – takes the reader on a journey

Sentence types and sentencing for effect

Minor: An incomplete, short sentence. E.g. 'Yes, indeed.'

Simple: one independent clause that has a subject and a verb and expresses a complete thought.

Compound: two independent clauses that have related ideas joined by a coordinating conjunction (for, and, nor, but, or, yet, so) or by a semicolon,

Complex: A simple sentence + one or more subordinate clause.

Punctuation and its use:

Full Stop	.	Used at the end of a sentence
Comma	,	Separates clauses in a sentence or items in a list
Question Mark	?	Used at the end of a question
Exclamation Mark	!	Adds emphasis or strong emotion at the end of a sentence
Colon	:	Introduces a list/explanation/description
Semi-Colon	;	Separates two linked, complete sentences
Dash	-	Can replace commas or brackets
Apostrophe	'	Used to show possession or omission

Powerful Vocabulary

- Absurd
- Preposterous
- Nightmarish
- Abhorrent
- Sublime
- Sensational
- Stupendous
- Callous
- Brazen
- Connive
- Erudite
- Insatiable
- Infinitesimal
- Maudlin
- Ostentatious
- Quintessential
- Zealous
- Melodic

Non-fiction writing features:

Letter: Addresses, Dear…, Yours faithfully / sincerely

Speech: Greet & thank audience

Article: Headline (**leaflet**: add subheadings)

Year 11 – English – Poetry Anthology and Unseen Poetry

Episode 1: What can you infer about a poem by using the three quick wins?

Three quick wins:

Title:
- What are the connotations of the title?
- How does the title create a first impression of the poem's content?
- Why might the writer have chosen this title?

First line:
- What is suggested in this first line?
- How has the writer structured this first line?
- Why might the writer have made these choices?

Last line:
- What is suggested in this last line?
- How has the writer structured this last line?
- Why might the writer have made these choices?

Key methods:
- **Imagery:** visually descriptive or figurative language.
- **Tone:** the author's attitude to a topic.
- **Turning point (volta):** a change in thoughts, ideas or tone

Episode 2: How is power presented as having an impact on human beings?

Key theme: Power.
To have influence over another or others.

'Ozymandias': The narrator retells the story of finding a broken statue of a King in the desert.
Subthemes: Power of command, power of hierarchy.
Vocabulary: Dominance, permanent, transient.

'My Last Duchess': A powerful Duke expresses his thoughts and feelings about his last Duchess.
Subthemes: Power of gender; being powerless.
Vocabulary: Patriarchy, hierarchy, powerless, oppression.

'London': The author describes what he is seeing as he walks around the city of London.
Subthemes: Power of oppression; being powerless, power of hierarchy.
Vocabulary: Oppression, corruption.

'Charge of the Light Brigade': A third person retelling of the experiences of the Light Brigade in the Crimean War.
Subthemes: Power of command; power of belief.
Vocabulary: Corruption, hierarchy.

Episode 3: How is the reality of conflict presented by those who have experienced conflict?

Key theme: Conflict:
A serious disagreement or disagreement or argument.

'Exposure': The narrator describes a soldier's experience of trench warfare and the natural hazards that face soldiers. They also describe the slowness of conflict.
Subthemes: The reality of conflict; the power of nature; the power of time.
Vocabulary: Trench warfare, exposure, brutality, dehumanise, propaganda.

'Bayonet Charge': The experience of a bayonet charge is recounted from the perspective of a third party looking in.
Subthemes: The reality of conflict; the brutality of conflict; inner conflict.
Vocabulary: Bayonet, brutality, futility.

'Remains': A first person recount of a traumatic experience during conflict and the aftermath.
Subthemes: The reality of conflict; the aftermath of conflict; inner conflict.
Vocabulary: Aftermath, trauma, Post Traumatic Stress Disorder.

Episode 4: How do poets present ideas about different topics in their texts?

Question 27.1.
- 24 marks.
- 30 minutes.
- 1 unseen poem.
- AO1: Respond to the task/text and use references.
- AO2: Analyse the writer's methods and their effects.

Thesis statement:
A statement or theory that is put forward to be proved.

S E I Zi Ef

Sentence stems:
- This implies
- This evokes the idea that…
- It can be inferred from this that…
- The writer's choice of (method) _____could suggest that …
- Overall, this
- ❑ highlights…
- ❑ emphasizes…
- ❑ creates…

Episode 5: How is the impact of conflict on bystanders portrayed by different poets?

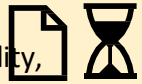
Key theme: Conflict:
A serious disagreement or disagreement or argument.

'War Photographer': A third person narrator recounts the experiences of a War Photographer who has documented the experiences of those caught up in conflict.
Subthemes: Reality of conflict; aftermath of conflict; the impact of conflict.
Vocabulary: Bystander, desensitised, spools, suffering, aftermath.

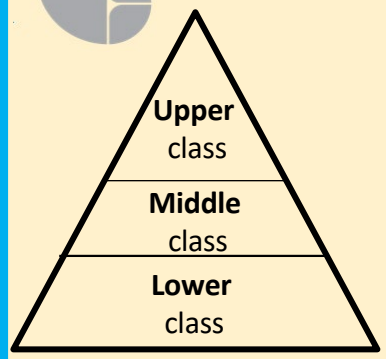
'Kamikaze': A kamikaze pilot's daughter describes her father's journey to complete his Kamikaze mission and its aftermath.
Subthemes: Reality of conflict; aftermath of conflict; bystanders in conflict.
Vocabulary: Kamikaze, honour, patriotism, incantations.

'Poppies': A mother describes her experience of her son going to war.
Subthemes: Aftermath of conflict; bystanders in conflict; power of memory.
Vocabulary: Remembrance, nostalgia.

Year 11 – English – Poetry Anthology and Unseen Poetry

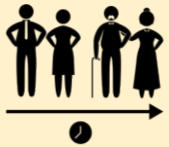
Episode 6: Compare how poets present ideas in different poems.	Episode 7: How is nature presented as a threat to mankind?	Episode 8: How is memory presented as something which can be unreliable?	Episode 9: How is identity presented by different poets?	Episode 10: How do writers use methods to present ideas?
Question 26: • 30 marks. • 45 minutes. • 2 poems from the anthology – one named and one of your choice. • AO1: Compare ideas in both poems and use references. • AO2: Analyse the methods and their effects. • AO3: Make links to context of the text. **Key Skill: Comparison.** Looking at the similarities and differences between the ideas presented in the poems.	**Key theme: Power.** To have influence over another or others. **'The Prelude':** The narrator is lured to a lake where he steals a boat. He then takes a journey across the lake which changes him for the rest of his life. **Subthemes:** The power of nature; conflict between man and nature; powerlessness. **Vocabulary:** Romanticism, idealise, reflection, loneliness. 	**Key theme: Power.** To have influence over another or others. **'Tissue':** The narrator explains how human beings place power in things, rather than giving power to more worthwhile activities, such as living in the moment. **Subthemes:** The power of belief; the power of time; the power of memory. **Vocabulary:** Fragility, impermanence, destructive. 	**Key theme: Power.** To have influence over another or others. **'Checking out me History':** The narrator recounts his experience of having his identity suppressed and his search for who he truly is. **Subthemes:** Power of identity; inner conflict.; conflict of belief. **Vocabulary:** Suppression; identity; colonialism. 	Question 27.2 • 8 marks • 15 minutes. • 2 unseen poems (one is the poem given in 27.1). • References • AO2: Compare the methods used and their effects **only**. **Key Skill: Comparison.** Looking at the similarities and differences between the methods used to present ideas in the poems.
Thesis statement: A statement or theory that is put forward to be proved.	**'Storm on the Island':** An extended description of a storm making landfall on an island, and the impact it has on the island's residents. **Subthemes:** The power of nature; conflict between man and nature; powerlessness; power of belief. **Vocabulary:** Community, emotive.	**'The Emigree':** The narrator is describing her homeland, which she has left behind. She uses her memories to inform her description, rather than current experiences. **Subthemes:** The power of belief; the power of time; the power of memory; the impact of conflict; inner conflict. **Vocabulary:** Emigrant, fragility, distorted.	**Methods:** Imagery Tone Turning point **Poems:** Sonnet Dramatic Monologue Quatrains Eulogy In media res Free verse Epic poem Narrative poem	**Thesis statement:** A statement or theory that is put forward to be proved.
S E I Zi Zo Ef Sentence stems: • This implies • This evokes the idea that… • It can be inferred from this that… • The writer's choice of (method) _____could suggest that … • Overall, this ❑ highlights… ❑ emphasizes… ❑ creates…				**E Zi Ef** Sentence stems: • This implies • This evokes the idea that… • It can be inferred from this that… • The writer's choice of (method) _____could suggest that … • Overall, this ❑ highlights… ❑ emphasizes… ❑ creates…

Year 11 English: Modern Drama - An Inspector Calls



Didactic	Dramatic Monologue	Dramatic Irony	Literary foil	Antithesis	Microcosm	Portentous
Has a moral or a message	Told by the perspective of one person	Something the audience know that the character doesn't	Two contrasting characters	Opposites	Small units within a larger unit	A person who thinks they are self important
Mouthpiece	**Glutenous**	**Infallible**	**Superficial**	**Materialistic**	**Aristocratic**	**Conceited**
To express or interpret another's views	Excessively greedy	Faultless	What is on the outside and not on the inside	More value on possessions	Upper Class	High opinion of oneself

Family



Older V Younger

Social responsibility

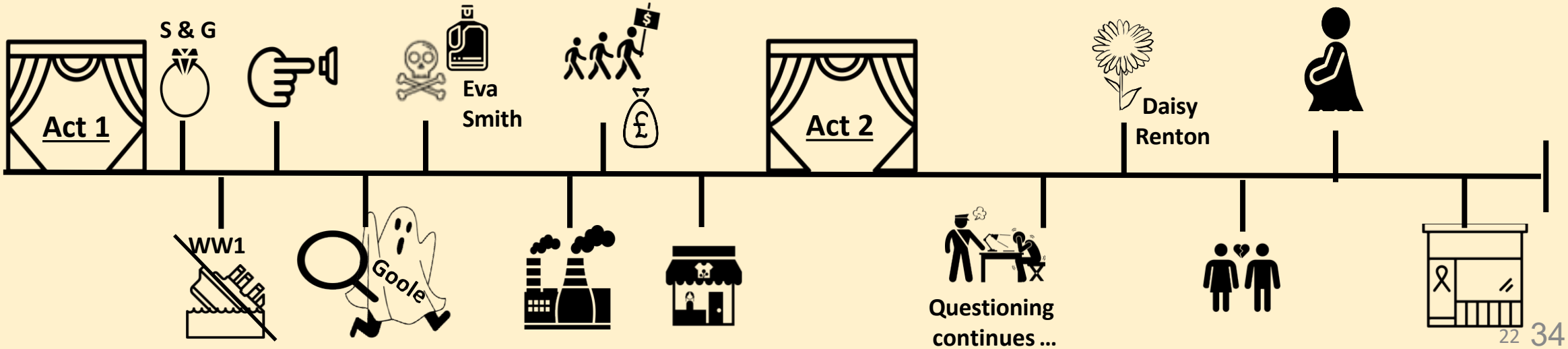
Gender divide

Act 1

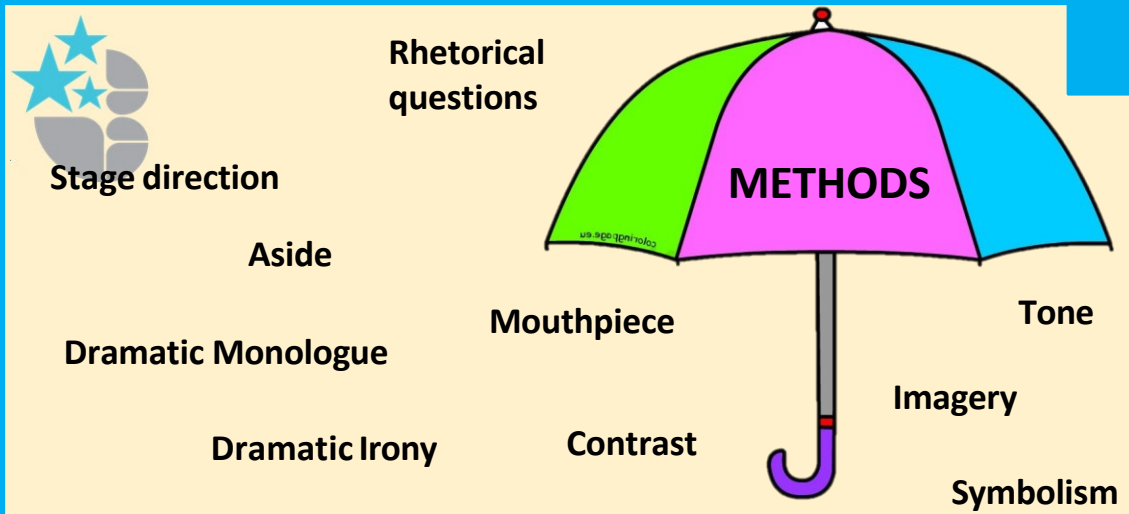
- The Birling family are celebrating the engagement of S & G
- The inspector arrives and announces the suicide of a young girl
- Mr Birling and S are implicated

Act 2

- G had an affair with the young girl
- Mrs Birling is implicated due to her lack of charity



Year 11 English: Modern Drama - An Inspector Calls



Assessment Objectives

AO1: Read, understand and respond to texts. Use textual references to support ideas.

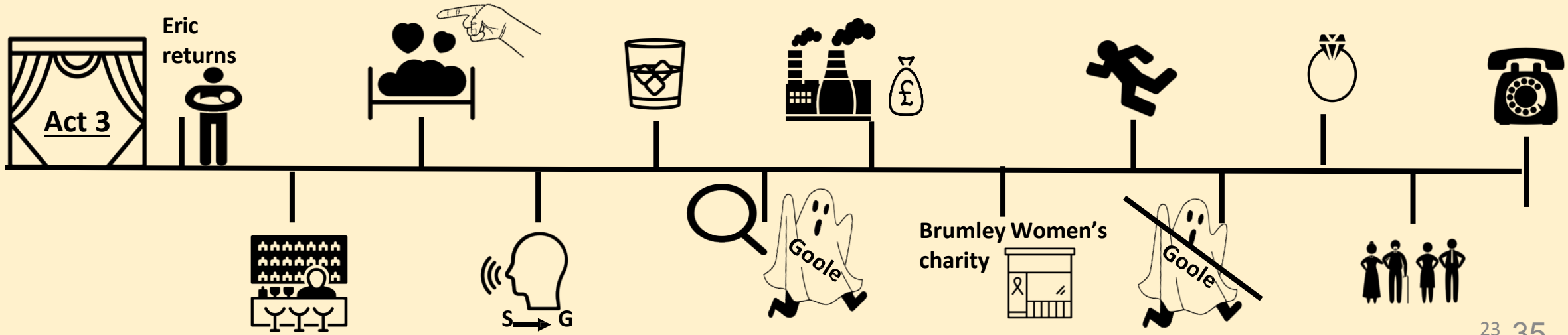
AO2: Analyse methods used to create ideas and meanings.
Use of the correct subject terminology.

AO3: Show an understanding of the relationships between texts and the contexts in which they were written.

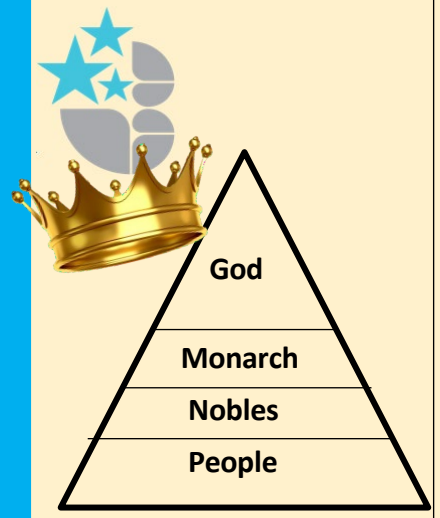
AO4: Use a range of vocabulary for clarity, purpose and effect, with accurate spelling, punctuation and grammar.

Act 3

- Eric returns and knows that the Inspector has revealed he was the father of the baby.
- He tells them how he forced Daisy to have sex and stole money from his father's business.
- Sheila tells Eric that Mrs Birling says the father should take responsibility.
- They learn the inspector is not really an inspector.
- The inspector delivers a speech to them all about looking after one another.



Year 11 English: Shakespeare - Macbeth



Tyrant	Supernatural	Tragedy	Jacobean	Dramatic irony	Soliloquy	Fate
A cruel and oppressive ruler.	Events or things that cannot be explained by nature or science.	The downfall and reversal of fortune of a good person.	Relating to the reign of King James I.	When the audience know something the characters do not.	The act of talking to ones self.	Events outside a persons control.
Juxtaposition	**Toxic masculinity**	**Prophecy**	**Apparition**	**Puns**	**Misogyny**	**In Medias Res**
Two opposing words or phrases side by side.	Cultural pressures for men to behave in a certain way.	Prediction of something to come.	An unusual or expected sight.	A play on words which suggests multiple meanings.	Hatred, contempt, or prejudiced towards women for no reason other than their gender	Starting in the middle of action

Themes

Ambition

Kingship

The Supernatural

Act 1

- Witches plan to meet Macbeth.
- They tell him he will be Thane of Cawdor
- Duncan makes Macbeth Thane.
- Lady Macbeth persuades him to murder Duncan. Macbeth reluctantly agrees to the plan.

Act 2 & 3

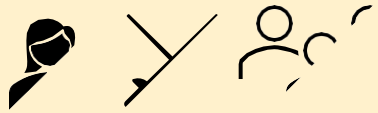
- Lady Macbeth plants the daggers on the servants.
- Macduff discovers the body. Malcolm and Donalbain flee Scotland.
- Noblemen start to become suspicious.
- Macbeth is crowned King & orders the death of Banquo and his son Fleance. Fleance escapes.
- Macbeth hosts feast & sees Banquo's Ghost.
- Macduff creates an army to overthrow Macbeth.

Act 1

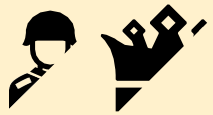
Plotting

Duncan

Act 2



Sons flee to Scotland



Macbeth is King

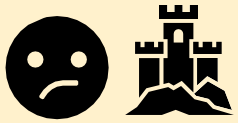
Act 3

Banquo

Thane of Cawdor

Lady Macbeth

Duncan is murdered



Noblemen

Banquo & son

Army

Year 11 English: Shakespeare - Macbeth

Tyrant	Supernatural	Tragedy	Jacobean	Dramatic irony	Soliloquy	Fate
A cruel and oppressive ruler.	Events or things that cannot be explained by nature or science.	The downfall and reversal of fortune of a good person.	Relating to the reign of King James I.	When the audience know something the characters do not.	The act of talking to ones self.	Events outside a persons control.

Juxtaposition	Toxic masculinity	Prophecy	Apparition	Puns	Misogyny	In Medias Res
Two opposing words or phrases side by side.	Cultural pressures for men to behave in a certain way.	Prediction of something to come.	An unusual or expected sight.	A play on words which suggests multiple meanings.	Hatred, contempt, or prejudiced towards women for no reason other than their gender	Starting in the middle of action

Loyalty & betrayal

Good vs. Evil

Fate

Act 4

- Macbeth visits the Witches – they summon 3 apparitions.
- Macduff fled to England.
- An army fights Macbeth.
- Macduff learns Macbeth has killed his family.

Act 5

- Lady Macbeth goes mad with guilt.
- Scottish Lords meet with the English to attack Macbeth.
- Macbeth is not worried.
- Lady Macbeth commits suicide.
- Malcolm is made King of Scotland.

Act 4

Flees to England

Fights Macbeth

Act 5

Guilt

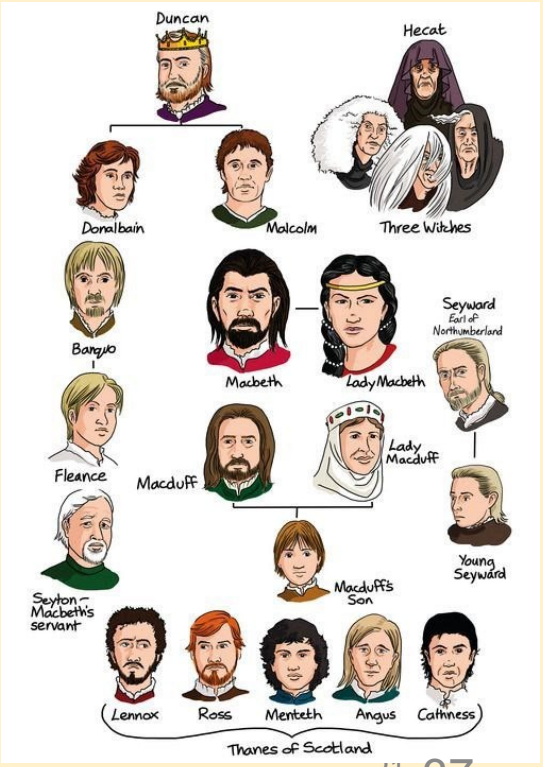
Commits suicide

3 apparitions

Macduff's wife and children murdered.

Malcolm is King

Characters



Context

- **King James I** – Macbeth was written in 1606, early in the reign of James I, who succeeded to the English throne in 1603 after being King of Scotland. The play pays homage to the king's Scottish lineage and hatred of witches. Additionally, the witches' prophecy that Banquo will found a line of kings is a nod to James' family's claim to have descended from the historical Banquo.
- **The Divine Right of Kings** – the idea that kings got their power from God and not from their subject. James I was a believer in this, and the idea meant that any treasonous activity was a crime against God. Only a century earlier, England had suffered under the massive disorder of the Wars of the Roses, so many supported the idea to avoid civil unrest.
- **Patriarchy** – patriarchal societies are those in which men dominate, and inheritance passes through male heirs.
- **Gender** – Macbeth and Lady Macbeth switch between having masculine and feminine characteristics. In the play, gender is often linked to ambition and a willingness to do anything to achieve power.
- **Women** – Women were expected to follow social expectations with their behaviour towards men. They were meant to obey all men, be faithful and respectful, not be violent and be religious. They would have been regarded as a possession, first owned by the father, then given to and owned by the husband. Women were considered the delicate, 'fairer' sex and they should be quiet and reserved, always respecting the wishes and opinions of the males in their lives. Lady Macbeth subverts these expectations in the play to manipulate Macbeth in getting what she wants.
- **Adam, Eve and the serpent** – in the bible, Adam and Eve live peacefully in the Garden of Eden until Eve is tempted by the serpent and eats the forbidden fruit from the tree of knowledge. She convinces Adam to eat as well, and God curses them and banishes them to Earth. The serpent is frequently alluded to in Macbeth.
- **Witchcraft** – in Shakespeare's time there was no scientific knowledge to explain natural disasters such as earthquakes, floods and droughts. One of the ways they accounted for the unexplained was the idea of witches. In Elizabethan England, hundreds of thousands of women were tortured and executed in Europe because they were accused of witchcraft. The King wrote a book on the subject entitled 'Daemonologie' and appealed to parliament to pass the following act in 1563 which was still a part of English law until 1951. At the time Shakespeare was writing, many people thought that witches were real, so the weird sisters would have seemed believable and frightening to an audience in the 1600s.
- **The 5 Acts**: Macbeth is a typical tragedy. The first part builds up the turning point (Duncan's murder), and the second part deal with the consequences of this, which leads to the main character's downfall.

Key Things to Remember

- The play was written in 1606 but was set in the 11th century (Medieval period).
- In the play, King Duncan was a benevolent king and loved by all. In real life he was a weak king.
- Banquo is intrigued by the prophecies and does have ambitious thoughts, but he does not choose to act on these thoughts.
- There are many similarities between Banquo and Macbeth. They are both soldiers, they are both very patriotic at the start of the play and they are both considered to be brave and noble.
- Shakespeare believed the human nature is prone to evil and that people are greedy. He illustrates this in the Macbeths' desire to become King and Queen. This greed led them to resort to extreme measures such as regicide. In Macbeth's case, his greed led him to kill others, too.
- Macbeth kills Macdonald, Duncan, Duncan's guards and Young Siward himself.
- Macbeth orders the deaths of Lady Macduff, her family and household and Banquo.
- Macbeth is the only Shakespearean play set in Scotland.
- Macbeth's castle is in Inverness. The Royal Palace is in Dunsinane.
- The Gunpowder Plot occurred in 1605, one year before the play was written.

Characters

Macbeth	A loyal warrior who becomes duplicitous as he becomes obsessed with the witches' prophecies of power.
Lady Macbeth	Macbeth's wife who drives his ambition in the beginning but loses her control by the end.
Banquo	Macbeth's close friend and ally who also receives prophecies.
Fleance	Banquo's son who represents innocence and justice.
Duncan	King of Scotland at the beginning of the play - a strong, respected leader.
Malcolm	Duncan's oldest son and next in line to the throne. Joins the English army to defeat Macbeth at the end of the play.
Donalbain	Duncan's youngest son disappears (to Ireland) after Duncan's murder.
Macduff	Macbeth's antagonist: A brave warrior who is loyal to Duncan and is consistently suspicious of Macbeth.

- **Tragic Conventions:** Macbeth is one of Shakespeare's Tragedies and follows specific conventions. The climax must end in a tremendous catastrophe involving the death of the main character; the character's death is caused by their own flaw(s) (hamartia); the character has something the audience can identify with which outweighs their flaws so we care about them.
- **The Real Macbeth:** Macbeth is loosely based on true events in feudal Scotland in the 11th Century and would have been known to King James. King James inherited the throne through his ancestors Banquo and Fleance who appear in the play.

Themes	
Ambition	The witches' prophecies spur Macbeth and Lady Macbeth to fulfil their ambitions, but they never *make* them do anything.
Fate and Free Will	What made it all happen? Fate? The witches? Macbeth's free will?
Good and Evil	Good and evil are hown through contrasts in the play. Evil is illustrated by the witches, Macbeth, Lady Macbeth, the assassins & traitors. Good is shown by Duncan, Malcolm, Banquo, Macduff, Lady Macduff.
The Supernatural	This is shown through the witches & LM calling upon the spirits.
Appearance and Reality	M and LM look innocent but are plotting behind people's backs.
Light and Darkness	Light links to good, life and God. Darkness links to evil and foreboding.
Guilt	Guilt is shown through M (internal conflict) and LM's blood imagery.
Gender	LM challenges and controls M. She subverts the gender stereotypes of the time.

Key Terminology	
Antithesis	Opposite / Contrast
Aside	A remark heard only by the audience.
Dramatic Irony	When the audience knows things that the characters don't.
Iambic Pentameter	A line of verse, with 5 metrical feet, each with one unstressed syllable followed by one stressed syllable.
Juxtaposition	Two things closely placed with contrasting effect.
Monologue	A long speech by one actor.
Motifs	A dominant / recurring idea.
Paradox	A person/thing with contradictory features or qualities.
Semantic field	A group of words, which relate to a common theme or motif.
Soliloquy	Speaking one's thoughts aloud.
Key Vocabulary	
Ambition	Strong desire to achieve something.
Apparitions	A ghost/ghost-like image of a person.
Betrayal	Being disloyal.
Catholics	A person belonging to the Christian church.
Fatal Flaw	A defect / weakness in character.
Hallucination	Apparent vision of something not present.
Invincible	Feeling too powerful to be defeated.
Jacobean	Relating to the reign of King James I.
Kinsman	A relative / blood relation.
Masculinity	Qualities considered to be of a man.
Noble	Belonging to aristocracy.
Protestant	A member of the Western Christian church.

Plot

Act 1

- The 3 witches gather to meet Macbeth and Banquo.
- Duncan hears the Thane of Cawdor has betrayed him.
- Macbeth is seen as a hero.
- Macbeth and Banquo hear the predictions.
- Duncan decides that Malcolm will be heir to the throne.

Act 2

- Macbeth has doubts and sees a vision of a floating dagger.
- He follows through with Duncan's murder.
- LM has to finish the job by wiping blood on the drunk guards.
- Macduff discovers Duncan's body.
- The guards are the likely suspects.
- Macbeth kills the guards.
- Malcolm and Donalbain flee the castle because they are afraid.

Act 3

- Banquo suspects Macbeth for the murder of King Duncan.
- Macbeth sends murderers to kill Banquo. Banquo is murdered but Fleance escapes.
- The ghost of Banquo is at the banquet. Macbeth rants and raves. LM tries to cover up the situation.
- Macduff didn't attend the banquet as he is suspicious of Macbeth.

Key Quotations

Act 1

- "Fair is foul, and foul is fair" (1.1) Witches
- "For brave Macbeth – well he deserves that name" (1.2) The Captain
- "So foul and fair a day I have not seen" (1.3) Macbeth
- "Stars hide your fires, let not light see my black and deep desires" (1.4) Macbeth
- "Come you spirts…unsex me here and fill me from the crown to the toe top full of direst cruelty." (1.5) Lady Macbeth
- "Look like the innocent flower but be the serpent under'it" (1.6) Lady Macbeth
- "When you durst do it, then you were a man" (1.7) Lady Macbeth
- "But screw your courage to the sticking place and we'll not fail." (1.7) Lady Macbeth

Act 2

- "Is this a dagger I see before me, the handle towards my hand?"(2.1) Macbeth
- "Give me the daggers. The sleeping and the dead are but as pictures" (2.2) Lady Macbeth
- "Will all great Neptune's ocean wash this blood clean from my hand?" (2.2) Macbeth
- "A little water clears us of this deed" (2.2) Lady Macbeth
- "Wake Duncan with thy knocking, I would thou couldst." (2.2) Macbeth
- "Oh horror! Horror! Horror! Tongue nor heart cannot conceive, nor name thee" (2.3) Macduff
- "There's daggers in men's smiles" (2.3) Donaldbain

Act 3

- "Thou has it all now, King, Cawdor, Glamis, all, as the weird sisters promised, and I fear though play'st most foully for't." (3.1) Banquo"To be thus is nothing, but to be safely thus. Our fears in Banquo stick deep" (3.1) Macbeth
- "Of full of scorpions is my mind, dear wife" (3.2) Macbeth
- "Be innocent of the knowledge, dearest chuck, till thou applaud the deed" (3.2) Macbeth
- "Thou canst not say I did it; never shake they gory locks at me" (3.4) Macbeth
- " My lord is often thus, and hath been from his youth" (3.4) Lady Macbeth
- "I am in blood stepp'd so far, that, should I wade no more, returning were as tedious as go o'ver" (3.4) Macbeth

Act 4

- Macbeth visits the 3 witches and they show him more visions. He believes he can't be killed by any man.
- Macbeth sends murderers to Macduff's castle to kill his family.
- In England, Macduff begs Malcolm to return to the throne.
- Malcolm tests Macduff's loyalty then agrees to the war against Macbeth.

Act 5

- LM has gone mad with guilt. She sleepwalks and tries to clean blood from her hands. She commits suicide.
- Many of Macbeth's supporters decide to help Malcolm. Macbeth isn't worried as he believes the prophecies.
- Macbeth confronts Macduff and learns that he was not born naturally but by caesarean section.
- Macbeth and Macduff fight and natural order is restored when Macbeth is killed and Malcolm is crowned king.

Act 4

- "Something wicked this way comes" (4.1) Witches
- "Speak, I charge you" (4.1) Macbeth
- "From this moment, the very firstlings of my heart shall be the firstling of my hand" (4.1) Macbeth
- "The castle of Macduff I will surprise; seize upon Fife." (4.1) Macbeth
- "Let grieve convert to anger. Blunt not the heart, enrage it" (4.3) Malcolm
- "Macbeth is ripe for shaking, and the powers above put on their instrument" (4.3) Malcolm

Act 5

- "Out, damned spot! Out, I say!... Will these hand ne'er be clean?" (5.1) Lady Macbeth
- "All the perfumes of Arabia will not sweeten this little hand" (5.1) Lady Macbeth
- "My name's Macbeth" (5.7) Macbeth
- "Turn, hell-hound, turn...I have no words; my sword is my voice" (5.8) Macduff
- "I bear a charmed life which must not yield to one of woman born" (5.8) Macbeth
- "Macduff was from his mother's womb untimely ripp'd" (5.8) Macduff
- "I will to yield to kiss the ground before young Malcolm's feet" (5.8) Macbeth
- "Behold where stands the usurper's head" (5.9) Macduff
- "His fiend-like queen who, as 'tis thought, by self and violent hands took off her life" (5.9) Malcolm.

Regicide	The action of killing a king.
Remorseless	Without guilt or regret.
Scepticism	Doubts the truth of things.
Thane	A man with land granted by the king.
Tragedy	A play with tragic events.
Traitor	A person who betrays someone.
Treason	Betraying one's country.
Virtuous	Having high moral standards.

A CHRISTMAS CAROL

Dickens' Life (Week 1)

1. Charles Dickens was born on February 7, 1812, in Hampshire into a middle-class family.
2. His dad was imprisoned for debt leading to poverty for the family.
3. Charles was put to work at Warren's Blacking Factory.
4. Dickens found employment as an office boy.
5. A Christmas Carol was written in 1843

Charity (Week 1)

1. Industrial revolution led to a gap between the rich and poor with many struggling to survive relying on the generosity of those better off than themselves.
2. Some philanthropists were keen to enhance the lives of the workers. Cadburys tried to provide quality homes and improve lifestyles for workers at their factory in Bournville.

Industrial Revolution (Week 2)

1. From 1780 factory owners in Britain began to use coal-fired steam engines to power the machines in big factories, bringing great fortune.
2. Transition from traditional farming methods to machinery led to Industrial revolution.
3. People flocked from the countryside to the cities. London's population between 1800 and 1900 from 1 million to 6 million people.
4. This led to over-crowding and hunger, disease, and crime. There were no proper drainage / sewage systems. Many families had to share one tap / toilet. Children suffered the most and were exploited by factory owners who forced them to work long hours in dangerous conditions.

Malthus and the Poor Laws (Week 2)

1. Thomas Malthus wrote that the human population would grow faster than food supplies leading to famines and death. Malthus believed poverty was the result of overpopulation.
2. Malthus believed people should families in later life and not have too many children
3. Dickens believed Malthus was wrong. He believed there was plenty of food to go around but only if the rich were more generous. Dickens felt it wrong the poor should suffer because the rich were too selfish to share their wealth.
4. Malthus thought existing poor laws in Britain were too charitable. Poverty relief, he believed, encouraged laziness in the poor and reduced the incentive to work hard and save money.
5. 1834 a new Poor Law was introduced to reduce the financial help available to the poor. It also ruled that all unemployed people would have to enter a workhouse to receive food and shelter. Conditions in workhouses were unpleasant to discourage the poor from relying on society to help them.

Education (Week 3)

1. Dickens believed strongly in the importance of education.
2. As part of his campaign against the treatment of the poor, Dickens worked with a friend called Angela Burdett-Coutts.
3. In 1840s, Dickens and Coutts became involved in the Ragged Schools. The aim was to provide poor children with basic education.
4. Dickens believed that it is through education that one can leave poverty.

Christmas (Week 4)

1. Start of 19th century Christmas was hardly celebrated. By the end of the century, it was the most important celebration of the year.
2. Traditions associated with Christmas became important: cards, crackers, carols, decorations, gifts, and Christmas dinner. Prince Albert in 1840 brought a tree from Germany to Britain for the first time. Christmas Card dates to 1843 when Henry Cole asked an artist to design one for him. They were expensive so children made their own.
3. Christmas celebrations were becoming more secular as feasts and games became a central part of the festivities.

Religion (Week 4)

1. Christianity held a strong influence in Victorian Britain, especially amongst the middle / upper classes.
2. Good Christians believed in a strict moral code – attending church regularly, avoiding alcohol and exercise sexual restraint.
3. Dicken's view on Christianity was different. He believed that to be a good Christian people should seek out opportunities to do good deeds for other people.
4. Sabbatarianism – when people spent Sunday going to church and resting. Dickens was opposed to this because it meant that working poorer people were denied any enjoyment on their one day off – everything was shut.
5. Poorer people didn't have ovens at home so often food cooked by bakers. Sabbatarianism meant that many people couldn't get a hot meal on Sundays because the bakers were shut.

Challenge Tasks (Context) Choose one of the tasks below to stretch your learning further:

- Write an article that Dickens might have published outlining his views about Thomas Malthus' beliefs
- Create a revision poster of key points about the context of the novella using the information on your Knowledge Organiser
- Research how
- Imagine you are the young Charles Dickens, working in Warren's Blacking Factory. Write a letter to your younger brother describing the working conditions. You may wish to research this further to develop your writing in depth.
- Write a speech to be presented at the annual CET speech competition in which you argue that it is through education that one can leave poverty.
- Research a Victorian Christmas. Find facts about how the festivities we know developed over time and create a collage poster of these facts and accompanying images.

Week 5: Features of the form (novella)		Week 6: Features of the form (novella)	
Allegory	A story which can be interpreted to reveal a hidden meaning, typically a moral or political one.	Cyclical structure	The reader reaches a sense of closure when the piece finds its way back to the beginning of the narrative.
Novella	A novella is longer than a short story, but not as long as a traditional novel.	Parallel structures	Using the same pattern of words to show that two or more ideas have the same level of importance.
Stave	A set of five parallel lines on any one or between any adjacent two of which a note is written to indicate its pitch.	Tension and suspense	A building of extreme emotion / anticipation where the outcome is uncertain.
Omniscient narrator	A narrator that sees everything, including what a character is thinking and feeling.	Dramatic Irony	Where the reader knows something that a character(s) is not aware of.
Protagonist	The leading character in a novel.	Cliff-hanger	A dramatic and exciting ending to an episode of a serial, leaving the audience in suspense and anxious not to miss the next episode.
Tone	How the narrator or a character speaks; can also be set through description.	Similes	A figure of speech involving the comparison of one thing with another thing of a different kind, used to make a description more emphatic or vivid.
Contrast	The differences between two characters or settings etc.	Personification	Attributing a human characteristic to something non-human.
Symbolism	The use of symbols to represent ideas or qualities.	Exaggeration	A statement that represents something as better or worse than it really is.
Foreboding	A feeling that something bad will happen.	Dialogue	A discussion or conversation, or simply the words spoken by a character.
Repetition	Saying the same thing more than once for emphasis.	Rhetorical questions	A question that is asked to make a point rather than elicit an answer.
Analepsis (flashback)	These are ways in which a narrative's dialogue re-order's a given story by "flashing back" to an earlier point in the story	Motif	An image that is repeated throughout a text showing the dominance of an idea.

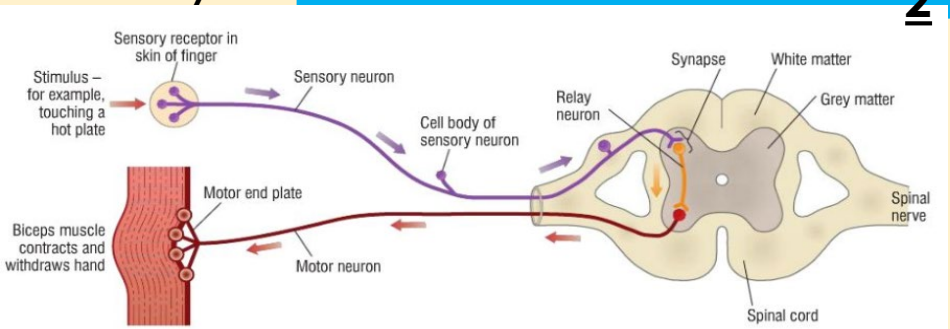
Week 7 Characters		Week 8: Themes and key quotes	
Ebenezer Scrooge	Miserly, mean, bitter, materialistic, unsympathetic, indifferent, cold, selfish, isolated, cynical, charitable, value driven, generous, happy, sociable, transformed.	**Christmas spirit**	Fred (on Christmas) 'a good time; a kind, forgiving, charitable, pleasant time: when men and women seem by one consent to open their shut up hearts freely' Scrooge: "I am as light as a feather, I am as happy as an angel, I am as merry as a schoolboy. I am as giddy as a drunken man.'
Marley's Ghost	Materialistic, self-centred, terrifying, haunting, exhausted, direct, reformed, regretful, hopeful, selfless, wise	**Redemption**	Scrooge: 'Tell me I may sponge away the writing on this stone!' Scrooge: "I will honour Christmas in my heart. I will live in the Past, the Present, and the Future. I will not shut out the lessons that they teach."
Bob Cratchit	Uncomplaining, tolerant, courteous, deferential, patient, civil, eager, pleasurable, good-humoured, playful, caring, tender, cheerful, loving, forgiving.	**Poverty and Social Responsibility**	Scrooge: Scrooge: 'If they had rather die, they better do it and decrease the surplus population' Scrooge: 'What reason have you to be merry? You're poor enough!' Scrooge: 'I can't afford to make idle people merry.' "Many thousands are in want of common necessities"
Fred	Warm-hearted, empathetic, cheerful, optimistic, even-tempered, insightful, determined, generous, forgiving, jovial, enthusiastic, caring	**Supernatural**	Describing the Ghost of Christmas Past: "It was a strange figure-like a child: yet not so like a child as like an old man" Describing the Ghost of Christmas Yet to Come "It was shrouded in a deep black garment which concealed its head, its face, its form and left nothing visible except one outstretched hand"
Ghost of Christmas Past	Contradictory, strong, gentle, quiet, forceful, questioning, mysterious Ephemeral	**Family**	"There's another fellow, my clerk with fifteen shillings a week, and a wife and family, talking about a merry Christmas. I'll retire to Bedlam" Tiny Tim: 'God bless us everyone'
Ghost of Christmas Present	Compassionate, abundant, generous, cheerful, jolly, friendly, severe, sympathetic Prophetic	**Loneliness and isolation**	Describing Scrooge: 'Solitary as an oyster' Describing Scrooge as a child: 'A solitary child, neglected by his friends'
Ghost of Christmas Future	Mysterious, silent, ominous, intimidating, frightening, resolute	**Time**	Belle: 'Our contract was an old one. It was made when we were both poor and content to be so.' Ghost of Christmas Present: 'The child will die'
Tiny Tim	Frail, ill, good, religious,	**Greed**	"'What shall I put you down for?' 'Nothing!' Scrooge replied." Belle: 'Another idol has displaced me. A golden one.' Belle: 'Gain engrosses you'

B5 Knowledge Organiser – 4.5.1 – Homeostasis and response

Homeostasis 1

- The **regulation of the internal conditions** of a cell or organism **to maintain optimum conditions** for enzyme action and all cell functions.
- Include control of:
- blood glucose concentration
- body temperature
- water levels.

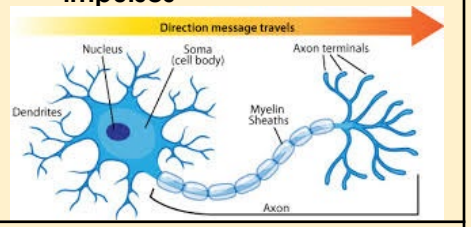
Nervous system structure 2



- Stimulus → Receptor → Sensory neuron → Relay neuron → Motor neuron → Effector → Response.
- Reflex actions are automatic and rapid; they do not involve the conscious part of the brain.

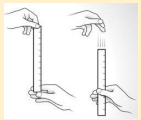
Nervous system 3

- Nerves are **long and thin** to allow fast transmission of electrical impulses
- Dendrites provide **large surface area**
- Myelin sheath provides insulation of **electrical impulses**



Reaction times (RP) 4

- Person A sits on stool and hold non-dominant hand out in front of you
- Person B stands and holds a ruler vertically with 0cm in between person A's finger and thumb
- Person B drops the ruler without warning
- Person A catches the ruler as quickly as possible, read off value level with top of thumb.
- Record and convert to a time using the chart
- Repeat 10 times



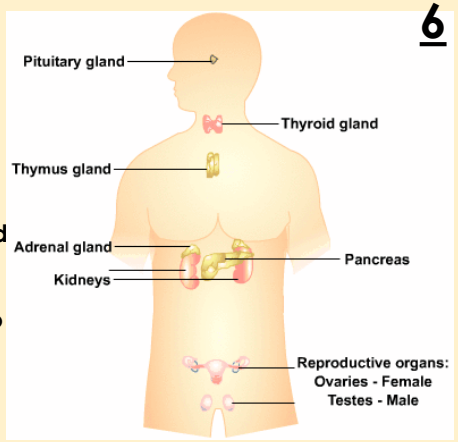
Negative feedback (HT) 5

- Negative feedback prevents a system from becoming overactive
- It becomes inhibited by its own products when levels become too high.
- **Examples:**
- **Thyroxine** stimulates basal metabolic rate, which is important in growth and development.
- **Adrenaline** is produced by the adrenal gland. Increases heart rate and increases delivery of oxygen and glucose to target organs preparing for fight or flight

Endocrine system 6

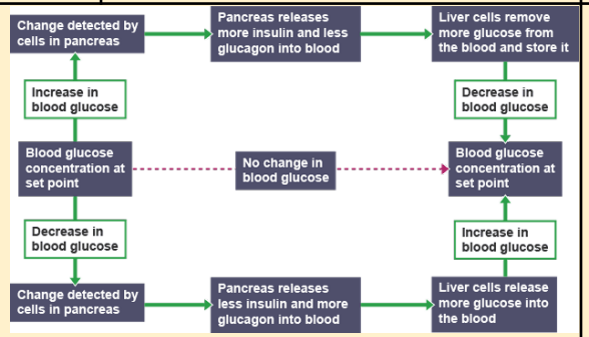
- Composed of glands which secrete chemicals called hormones directly into the bloodstream.
- The blood carries the hormone to a target organ where it produces an effect.
- **The pituitary gland is the master gland which releases several hormones into the body, which then act on other glands to stimulate other hormones to be released**

Compared to the nervous system the effects are slower but act for longer.



Control of blood glucose 7

- **Type 1 diabetes** – Pancreas fails to produce insulin. Treated with injections
- **Type 2 diabetes** – Body cells no longer respond to insulin. Obesity risk factors. Treated with carbohydrate controlled diet



Hormones in reproduction. 8

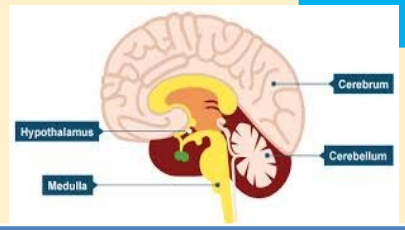
- **FSH** – causes maturation of an egg in the ovary
- **LH** – stimulates release of an egg
- **Oestrogen/ Progesterone** – maintains uterus lining
- High levels of oestrogen and progesterone inhibit the release of LH and FSH

Treating infertility (HT) 9

- **FSH and LH given as fertility drugs during IVF**
- Stimulates maturation of eggs
- Eggs collected and fertilised by sperm
- Develop embryos
- 1 or 2 embryos inserted into mother's uterus

B5 Knowledge Organiser – 4.5.2 – Homeostasis (BIOLOGY ONLY CONTENT)

The brain 1



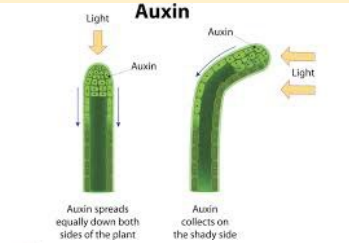
Part	Function
Cerebrum	Conscious thought, intelligence, memory, language
Cerebellum	Co-ordination of muscle activity
Hypothalamus	Responsible for maintaining homeostasis. Connected to pituitary gland which releases hormones
Medulla	Controls unconscious activities: heartbeat and breathing

The brain (HT) 2

- Brain mapped using an MRI scanner
- Uses strong magnetic fields and radio waves to produce an image
- Treating brain disorders is very difficult due to potential tissue damage
- Monoclonal antibodies and gene therapy are being developed to treat brain cancer
- Stem cells may be used to repair tissue damage

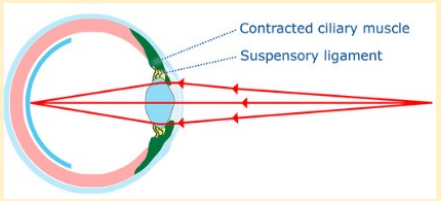
Plant hormones (HT) 3

- Hormones control growth and response to light (phototropism) and gravity (geotropism)
- **Unequal distribution of auxin causes unequal growth**
- Required practical – effect of light or gravity on growth of seedlings



Focusing - near object 4

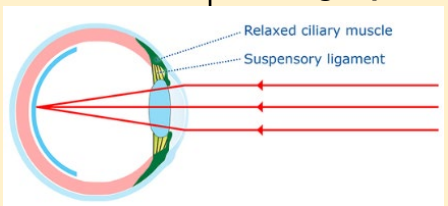
- **Ciliary muscles contract**
- **Suspensory ligaments loosen**
- **Lens thickens and refracts light rays strongly**



Focusing – distant object

- **Ciliary muscles relax**
- **Suspensory ligaments are pulled tight**
- **Lens pulled thin and only slightly refracts light rays**

5

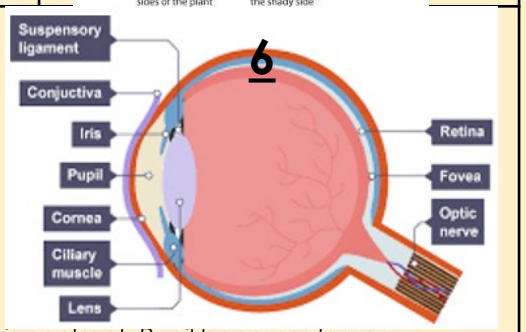


The structure of the eye

Common defects:

- **Myopia – short sightedness**
- **Hyperopia – long sightedness**
- **Corrected with corrective lenses in glasses**
- **Laser surgery corrects the shape of he cornea**

6



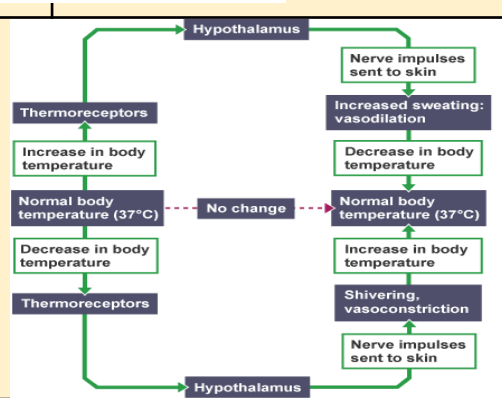
Adaptation to dim light

- Dim light – **Radial muscles** in the iris contract. Pupil becomes larger
- Bright light – **Circular muscles** in the inner iris contract and the pupil becomes smaller

Regulating body temperature

- Body temperature is controlled by the thermoregulatory centre in the brain
- Both the thermoregulatory centre and the skin contain receptors which send nervous impulses to the brain

- Too hot – Blood vessels dilate and sweat is produced
- Too cold – Blood vessels constrict, sweating Stops and muscles contract (shiver)



7 Maintaining water and nitrogen levels 8

- Digestion of proteins results in excess amino acids which are converted to ammonia in the liver. Ammonia is toxic so converted to urea to be excreted safely
- Kidneys maintain water balance. Produce urine by filtration of blood and selectively reabsorbs glucose, ions and water
- ADH controls water levels. ADH is released by the pituitary gland when the blood is too concentrated, so stimulates the reabsorption of more water into the blood from the kidney. Controlled by negative feedback

B6 Knowledge Organiser – 4.6.1 – Inheritance

Advantages of sexual reproduction 1

- produces variation in the offspring
- if the environment changes variation gives a survival advantage by natural selection
- natural selection can be speeded up by humans in selective breeding to increase food production.

2

Sexual	Asexual
Involves fusion of egg and sperm cells in animals	Involves only one parent
Involves fusion of pollen and egg cells in plants	No fusion of gametes
Leads to genetic variation	No genetic variation – Genetically identical offspring (clones)
Gametes formed by meiosis	Only mitosis involved

Advantages of Asexual reproduction 3

- only one parent needed
- more time and energy efficient as do not need to find a mate
- faster than sexual reproduction
- many identical offspring can be produced when conditions are favourable

DNA 4

- DNA is a polymer made up of 2 strands forming a **double helix**
- DNA is contained within **chromosomes**
- **A gene is a small section of DNA on a chromosome**
- Each gene codes for a particular sequence of amino acids to make a specific protein
- Mutations change the sequence of amino acids and the protein made
- 3 bases code for one amino acid

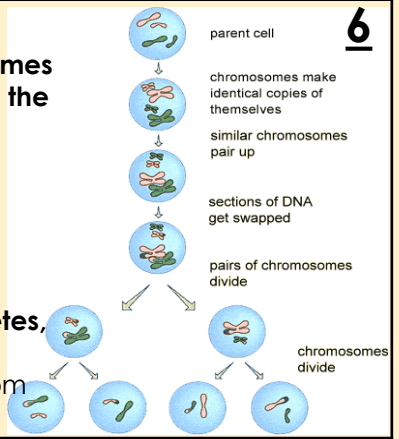
The genome 5

- The genome of an organism is the entire genetic material of that organism
- The whole human genome has now been studied
- **It has been identified that specific genes cause certain diseases**
- **Research has allowed scientists to understand and treat inherited disorders**
- Studying the genome has also allowed us to trace human migration patterns from the past

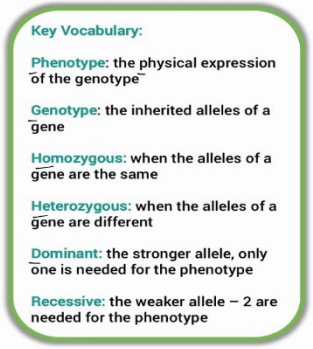
Meiosis

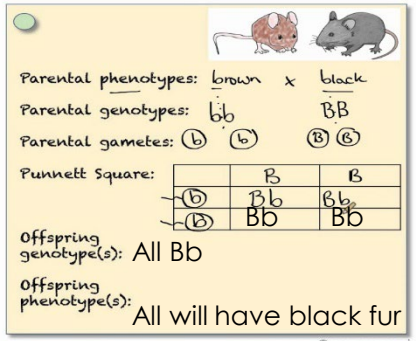
- **Meiosis halves the number of chromosomes in gametes (23) and fertilisation restores the full number of chromosomes (46).**
- Cells in reproductive organs divide by meiosis to form gametes.
- When a cell divides to form gametes copies of the genetic information are made
- **The cell divides twice to form four gametes, each with a single set of chromosomes**
- All gametes are genetically different from each other.

6



The Punnett Square





7

Alleles are different versions of the same gene, e.g. brown fur, black fur

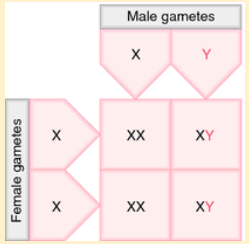
Inherited disorders 8

Some disorders are inherited. These disorders are caused by the inheritance of certain alleles.

- **Polydactyly** (having extra fingers or toes) is caused by a **dominant** allele.
- **Cystic fibrosis** (a disorder of cell membranes) is caused by a **recessive** allele.

Sex determination 9

- In females the sex chromosomes are the same (XX).
- In males the chromosomes are different (XY)
- **Chance of Child being a Boy = 50%**
- **Chance of Child being a Girl = 50%**



B6 Knowledge Organiser – 4.6.2 – Variation and evolution

Variation 1

• The genome and its interaction with the environment influence the development of the phenotype of an organism.

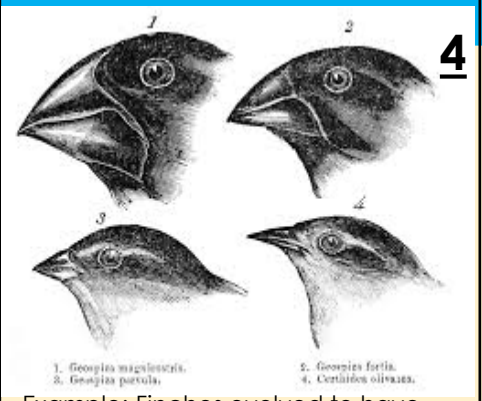
- **Variation and may be due to differences in:**
- **the genes they have inherited (genetic causes)**
- **the conditions in which they have developed (environmental causes)**
- **a combination of genes and the environment.**

Variation within a population 2

- usually extensive genetic variation within a population of a species
- **all variants arise from mutations and that most have no effect on the phenotype**
- Mutations occur continuously.
- Very rarely a mutation will lead to a new phenotype.
- **If the new phenotype is suited to an environmental change it can lead to a relatively rapid change in the species.**

Evolution 3

- **Evolution occurs through natural selection of variants that give rise to phenotypes best suited to their environment.**
- If two populations of one species become so different in phenotype that they can no longer interbreed to produce fertile offspring they have formed two new species.



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Example: Finches evolved to have different beaks in order to exploit different food sources. Creating new species of finch

Selective breeding 5

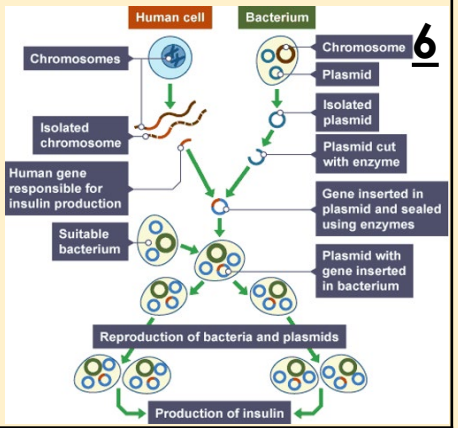
A process by which humans breed plants and animals for particular genetic characteristics. **Selective breeding involves choosing parents with the desired characteristic from a mixed population. They are bred together. From the offspring those with the desired characteristic are bred together.** This continues over many generations until all the offspring show the desired characteristic. Examples:

- **Disease resistance in food crops.**
- **Animals which produce more meat or milk.**
- **Domestic dogs with a gentle nature.**
- **Large or unusual flowers.**

Selective breeding can lead to 'inbreeding' where some breeds are particularly prone to disease or inherited defects.

Genetic engineering

- A process which involves modifying the genome of an organism by introducing a gene from another organism to give a desired characteristic.
- Plant crops have been **genetically engineered to be resistant to diseases or to produce bigger better fruits.** Bacterial cells have been genetically engineered to **produce useful substances such as human insulin to treat diabetes.**



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Evidence for evolution: 7

Fossils

Fossils are the 'remains' of organisms from millions of years ago, which did not decay and are found in rocks. Fossil records show how features of organisms changed over time, and allows the identification of similarities and differences from organisms today

Resistant bacteria 8

Mutations of bacterial pathogens produce new strains. Some strains might be resistant to antibiotics. They survive and reproduce, so the population of the resistant strain rises. To reduce the rate of antibiotic resistant strains: • doctors should not prescribe antibiotics for non-serious or viral infections • patients should complete their course of antibiotics • the agricultural use of antibiotics should be restricted.

Extinction 9

Extinctions occur when there are no remaining individuals of a species still alive.

Factors contributing to extinction:

- **Poaching**
- **Destruction of habit**
- **Lack of food**
- **Disease**

Classification 10

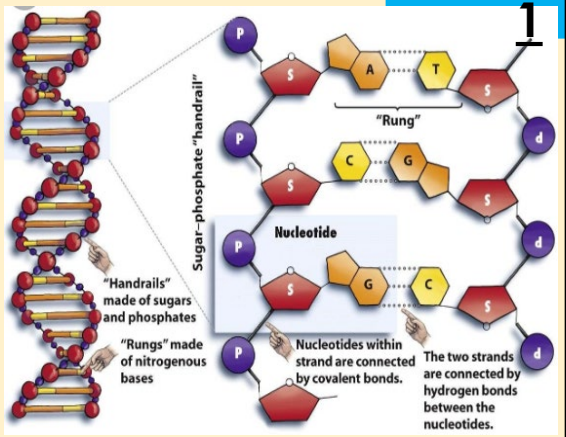
Three-domain system

- **Archaea** (primitive bacteria usually living in extreme environments)
- **Bacteria** (true bacteria)
- **Eukaryota** (which includes protists, fungi, plants and animals).

B6 Knowledge Organiser – 4.6.1 – Inheritance (Biology only)

DNA Structure 1

- 4 bases
- A pairs with T
- (2 hydrogen bonds)
- G pairs with C
- (3 hydrogen bonds)
- Mutations cause base pairs to bond Incorrectly coding for incorrect amino Acids
- Sugar-phosphate backbone



Protein synthesis 2

- Proteins are synthesised on **ribosomes**
- Carrier molecules bring specific amino acids to add to the growing protein chain in the correct order.
- When the protein chain is complete it folds up to form a **unique shape**. This unique shape enables the proteins to do their job as enzymes, hormones or forming structures in the body such as collagen.

Cloning – key words 3

Tissue culture: using small groups of cells from part of a plant to grow identical new plants. This is important for preserving rare plant species

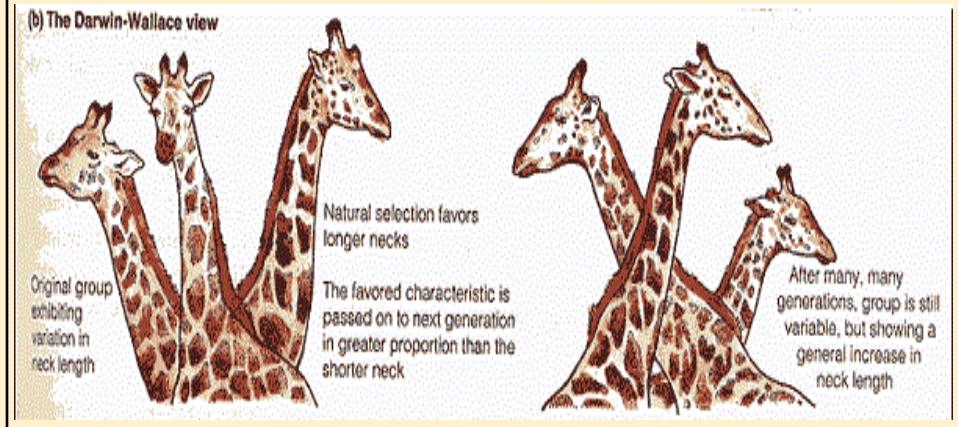
Cuttings: used by gardeners to produce many identical new plants from a parent plant.

Embryo transplants: splitting apart cells from a developing animal embryo before they become specialised, then transplanting the identical embryos into host

Cloning - process 4

1. The nucleus is removed from an unfertilised egg cell.
2. The nucleus from an adult body cell, such as a skin cell, is inserted into the egg cell.
3. An electric shock stimulates the egg cell to divide
4. These embryo cells contain the same genetic information as the adult skin cell.
5. When the embryo has developed into a ball of cells, it is inserted into the womb of an adult female

Darwin's Theory of evolution 5



Accepting Darwin's theory 6

Only gradually accepted because:

- The theory challenged the idea that God made all the animals and plants that live on Earth
- There was insufficient evidence at the time the theory was published to convince many scientists
- The mechanism of inheritance and variation was not known until 50 years after the theory was published.

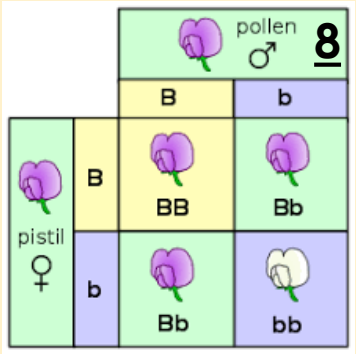
Speciation 7

- Formation of new species due to isolation because of physical barriers

1. Large population with **common gene pool**
2. **Physical barrier/geographical isolation** causes separation of the population
3. **Mutations** occur over time causing each population to adapt to its environment
4. **Natural selection** due to environmental pressures occur in both populations
5. Forms two new species that can **no longer reproduce to produce fertile offspring**

Mendel

- In the mid-19th century Gregor Mendel carried out breeding experiments on pea plants. One of his observations was that the inheritance of each characteristic is determined by 'units' that are passed on to descendants unchanged.
- Purple: White pea plants occur in a 3:1 ratio
- The 'units', now called genes, were located on chromosomes and are responsible for inherited characteristics, e.g. flower colour.



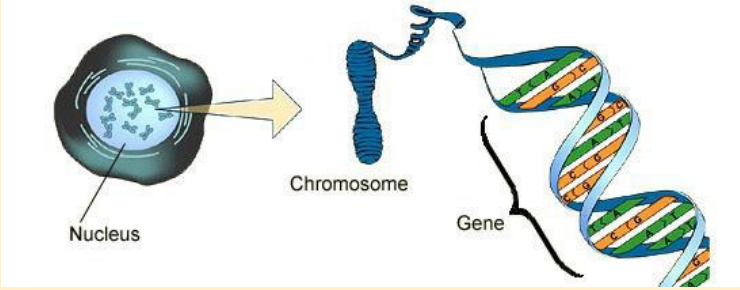
- Genes are inherited from both mother and father.
- Genes are arranged as long strands of DNA, organised into 23 pairs of chromosomes.

Year 11 Science - Inheritance, Variation & Evolution (B6)

Nucleus ➔Chromosome➔ Punnet Square ➔ Genes ➔ Alleles ➔ DNA Base Pairs

1.Nucleus

The **nucleus** of a cell contains the **46 chromosomes**. The chromosomes are made up of strands of **DNA.** A small sections of DNA are called **genes**.



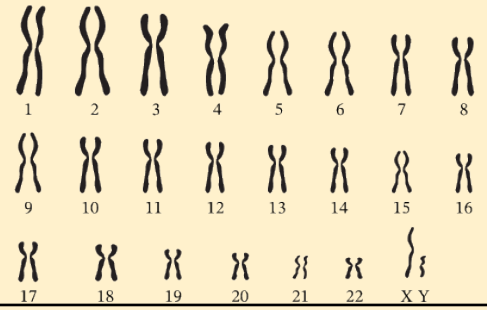
2. Chromosome

Humans have 23 pairs of **chromosomes** (46 overall). Half of these **chromosomes** are from the mother, half from the father.

The 23rd pair determines the sex of the person.

XX = female

XY = male



3.Punnet Square

A **genetic diagram**, like a Punnett square, shows how alleles may combine in **zygotes**. They can be used to understand how traits are inherited from mother and father.

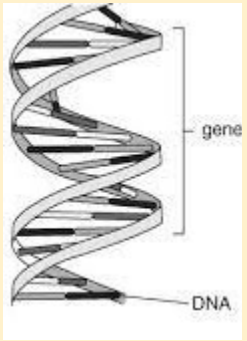
50% of offspring are male
50% of offspring are female

		Mother	
		X	X
Father	X	XX	XX
	Y	XY	XY

4. Genes

- A **gene** is a length of **DNA.**
- Genes contain a **code** that regulates the **proteins** that are made in the body.
- Each chromosome contains **hundreds of genes**.

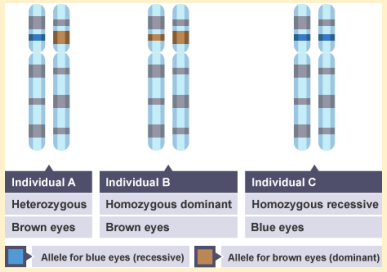
Understanding the human genome is important for studying **diseases** and **disorders**.



5. Alleles

Alleles are **different versions** of the same gene.

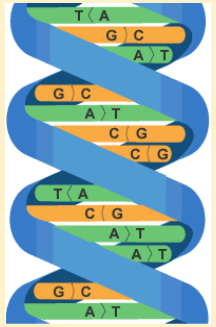
A **dominant allele** is always expressed, even if one copy is present. A **recessive allele** is only expressed if the individual has two copies and does not have the dominant allele of that gene.



6. DNA Base Pairs

Each strand of DNA is made of chemicals called **bases**.

- **thymine**, T
- **adenine**, A
- **guanine**, G
- **cytosine**, C



In a **DNA** strand **thymine** pairs with **adenine** (T–A), and **guanine** pairs with **cytosine** (G–C)

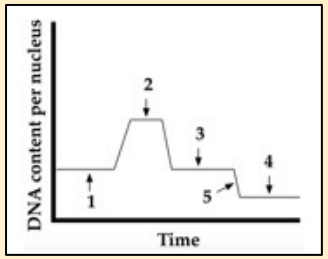
The shape formed is called a **double helix.**

Year 11 Science - Inheritance, Variation & Evolution (B6)

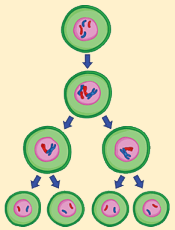
- Gametes (sperm and eggs) are produced by meiosis.
- Organisms reproduce sexually or asexually or both .
- Our phenotype is determined by our genotype - the combination of genes we inherit from our parents.

Cell Division ➔ Reproduction ➔ DNA ➔ Inheritance ➔ Genetic Disorders

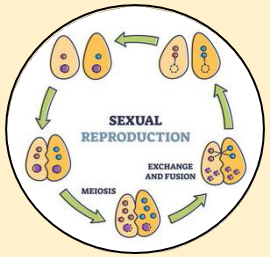
7. Meiosis



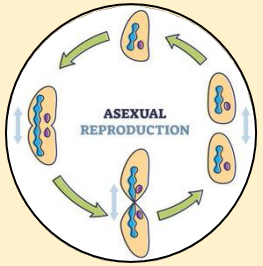
Meiosis halves the number of **chromosomes** in gametes (**23**).
When a cell divides copies of the **chromosomes** are made.
The cell divides twice to form 4 **genetically** non-identical **gametes** (sperm/eggs).



8. Sexual & Asexual Reproduction



Sexual reproduction:	Asexual reproduction:
• Two parents	• One parent only
• Fusion of a female & male cells (gametes)	• No gametes are produced
• Parent & offspring are not identical	• Parent and offspring are identical

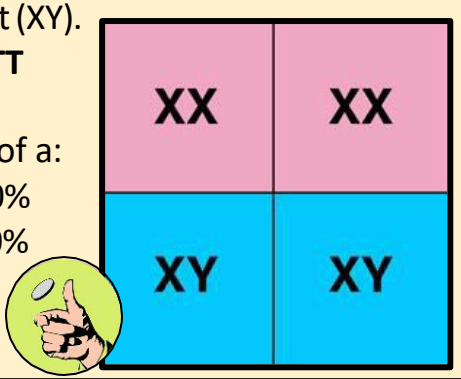


Advantages of Sexual Reproduction
Produces **variation** in the **offspring.**
If the **environment** changes **variation** gives a survival advantage by **natural selection.**

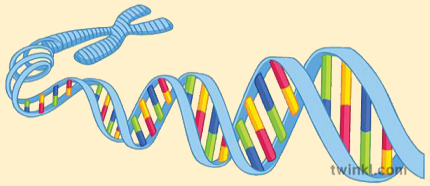
Advantages of Asexual Reproduction
More time and energy efficient.
Faster than sexual reproduction
Many **identical offspring** can be produced

9. Sex Determination

In females the sex **chromosomes** are the same (XX).
In males the **chromosomes** are different (XY).
PUNNETT square:
Chance of a:
Boy = 50%
Girl = 50%



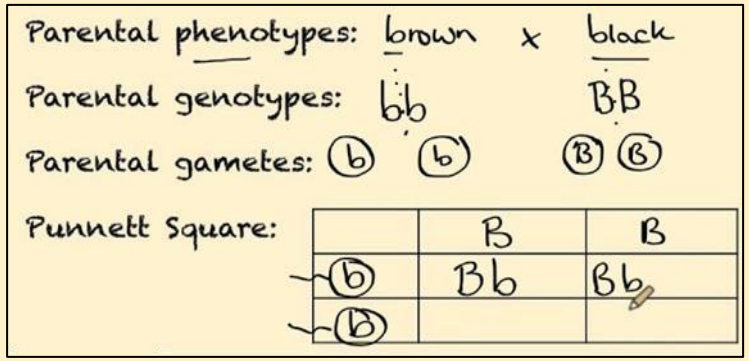
10. DNA and the Genome

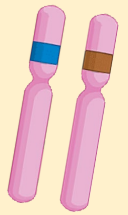


DNA is a 2 stranded structure formed into a **double helix**. It is contained in long strands called **chromosomes** which consist of sections called **genes**. Each gene codes for an **amino acid** which join to form **proteins**.
The **genome** is the entire sequence of an organisms DNA.

11. Inheritance

Alleles are different versions of the same **gene,** e.g. brown eye **allele** and blue eye **allele** or brown fur allele and black fur **allele.**





recessive

DOMINANT

12. Genetic Disorders

Some **disorders** are inherited. These disorders are caused by certain alleles.

- **Polydactyly** (having extra fingers or toes) is caused by a **dominant allele**.
- **Cystic fibrosis** (a disorder of cell membranes) is caused by a **recessive** allele.



- Variation is caused by genetics and environment
- Mutations can lead to a new phenotype
- Evolution occurs as a result of natural selection

Year 11 Science - Inheritance, Variation & Evolution (B6)

Variation ➔Evolution➔ Selective Breeding ➔ Genetic Engineering

13. Variation

Variation and may be due to differences in:

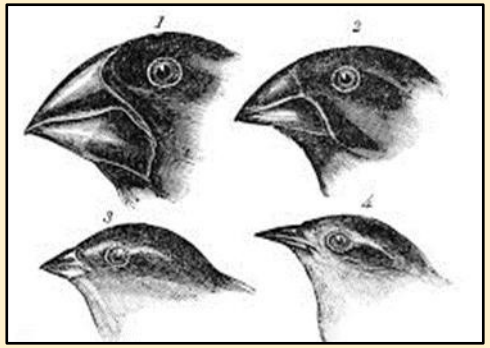
- the **genes** they have **inherited** (genetic causes)
- the conditions in which they have developed (environmental causes)
- a combination of **genes** and the **environment**.

14. Variation within a population

- Most **mutations** have no effect on the **phenotype**
- **Mutations** occur continuously.
- Very rarely a **mutation** will lead to a new phenotype.
- If the new **phenotype** is suited to an environmental change it can lead to a relatively rapid change in the species.

15. Evolution

- Occurs through **natural selection** of variants that give rise to **phenotypes** best suited to their environment.
- If two populations of one species become so different that they can no longer interbreed to produce fertile offspring they have formed two new species.



Example: Finches evolved to have different beaks in order to exploit different food sources. Creating new species of finch.

16. Selective Breeding

Involves breeding parents with the desired characteristic. Offspring with desired characteristics are bred together. This continues over many generations until all the offspring show the desired characteristic.

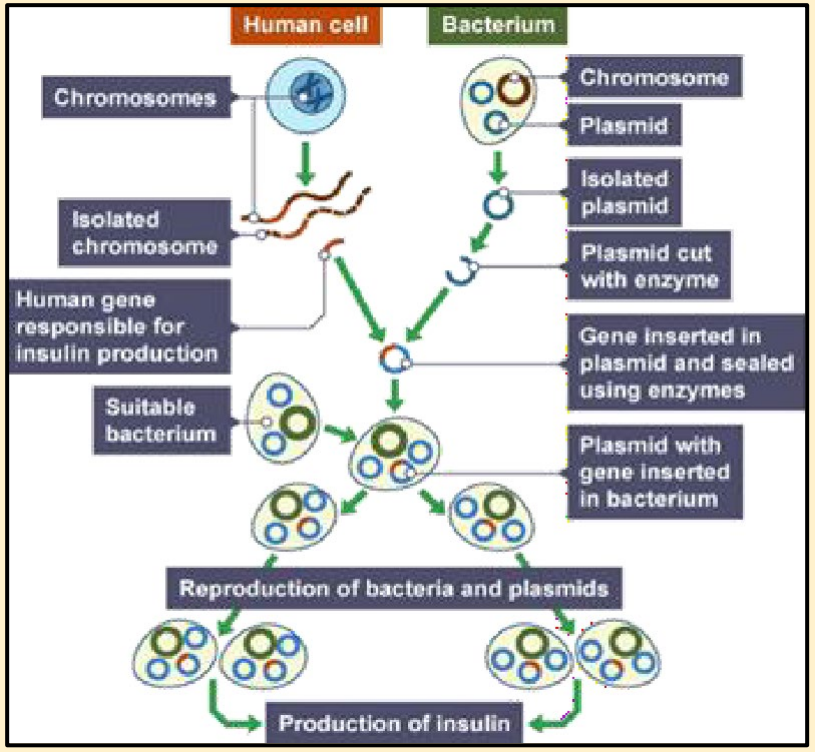
Examples:

- Disease resistance in food crops.
- Animals which produce more meat or milk.
- Domestic dogs with a gentle nature.
- Large or unusual flowers.

Can lead to 'inbreeding' where some breeds are particularly prone to disease or inherited defects.

17. Genetic Engineering

Modifying the **genome** of an **organism** by introducing a **gene** from another organism to give a desired **characteristic**.



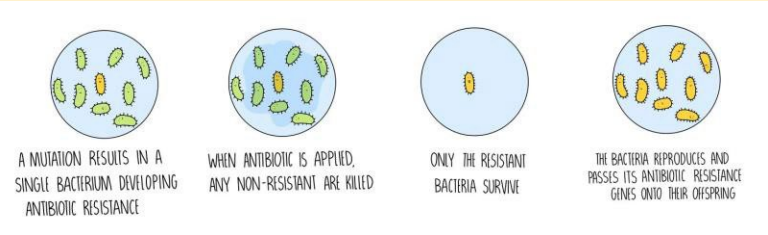
- Fossils and antibiotic resistance show evidence for evolution
- Linnaeus classified organisms based on physical characteristics
- Woese used developments in microscopes and DNA to classify organisms into three domains

Year 11 Science - Inheritance, Variation & Evolution (B6)

Evidence for evolution ➔ extinction ➔ Classification

18. Evolution of antibiotic resistance

Development of antibiotic resistance provides evidence of evolution



To slow down the development of **<u>antibiotic-resistant</u>** strains, we should:

- Restrict the use of antibiotics in agriculture
- Only prescribe antibiotics to people when necessary and avoid using them to treat non-serious or viral infections
- Complete the course of antibiotics so that all bacteria are killed and none survive to mutate into resistant strains

19. Fossils

<u>Fossils</u> may be formed:

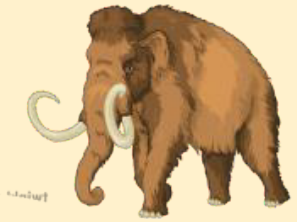
- from parts of organisms that have not decayed because one or more of the conditions needed for decay are absent
- when parts of the organism are replaced by minerals as they decay
- as preserved traces of organisms, such as footprints, burrows and rootlet traces.

20. Extinction

No more individuals of that species left alive.

Causes:

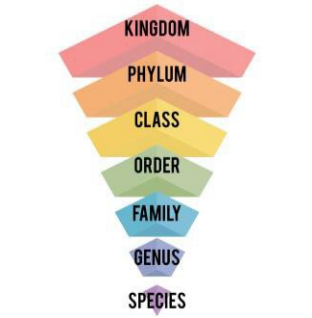
- Change in environment
- New diseases
- New predators
- New competitors
- Catastrophic events



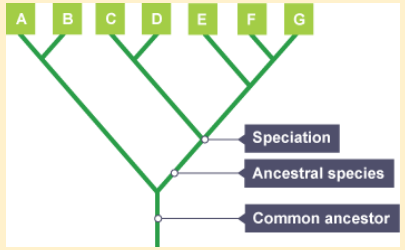
21. Classification Systems: Linnaeus

Organisms are named by the **<u>binomial</u>** system of **<u>genus</u>** and **<u>species:</u>**

Pond bat = *Myotis dasycneme*



22. Evolutionary trees

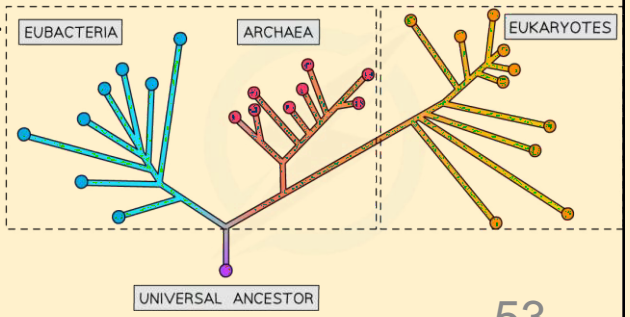


In this evolutionary tree, species A and B share a recent common ancestor. Species A is therefore most similar to species B

23. Carl Woese: Three Domain System

Developed due to improvements in microscopes, and the understanding of biochemical processes and DNA.

- **<u>Archaea</u>** (primitive bacteria usually living in extreme environments)
- **<u>Bacteria</u>** (true bacteria)
- **<u>Eukaryota</u>** (which includes protists, fungi, plants and animals).



Year 11 Science – Ecology (B7)

Classification ➔ Ecosystems ➔ Sampling ➔ Feeding Relationships

- Ecosystems are complex communities of animals and plants.
- Scientists can sample the population numbers and distributions of organisms using quadrats and transects.
- Organisms in a habitat are interdependent.

1. Communities:

Population: all the members of a single species which live in the same area

Habitat: the area in which an organism lives

Community: all the populations of different species which interact together in the same habitat

Ecosystem: a community of organisms and the habitat in which it lives (i.e. both the biotic and abiotic factors

2. Biotic and abiotic

Biotic factors: **living** factors in the ecosystem:

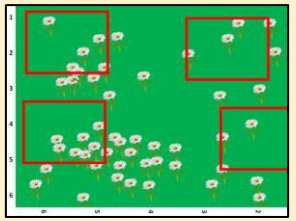
Availability of food.
New pathogens.
New predators.
Competition.

Abiotic factors: **non-living** factors in the ecosystem:

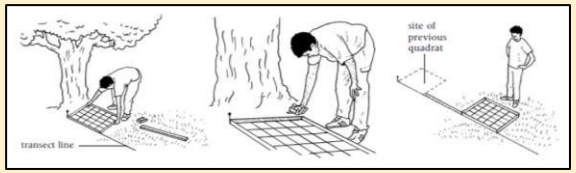
Light intensity
Temperature
Moisture levels
Soil pH
Mineral content
Wind intensity
Wind direction
Carbon dioxide
Oxygen levels

3. Sampling required practical: estimating population sizes using a quadrat:

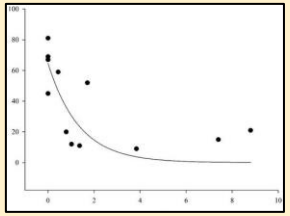
- A quadrat is a **square** frame used to count a sample of organisms in an area.
- **Randomly** place the quadrat in the habitat (use a random number generator to locate it).
- **Count** the numbers of organisms in the quadrat
- **Repeat** as many times as possible in other areas.
- Work out the **mean** number of organisms per quadrat
- Multiply this number by the total **area** of the habitat.
- This gives your population **estimate** for the habitat.



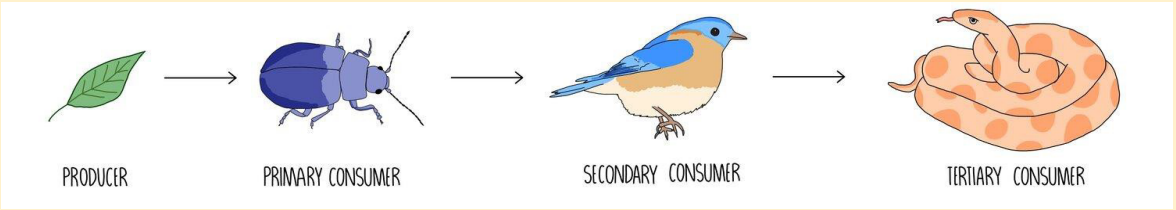
5 Sampling required practical: investigating distribution using a transect line:



- Lay tape **measure** along the habitat.
- Place a **quadrat** at 0m on the tape.
- **Count** the number of organisms.
- **Record** the results.
- **Repeat** along the transect line.



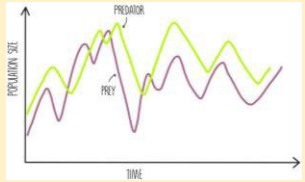
6 Feeding relationships:



All food chains begin with a producer which synthesises molecules. This is usually a green plant or alga which makes glucose by photosynthesis.

7. Predator-prey graphs:

- The population of predators is limited by the prey numbers.



- If the prey numbers increase, the predators numbers will shortly after. This causes the number of prey to decrease.

Year 11 Science - Ecology (B7)

- Animals and plants are adapted to their habitats.
- Materials are recycled in a stable ecosystem.
- Biodiversity is the variety of all the different species on Earth.
- The rise in the human population has caused pollution.

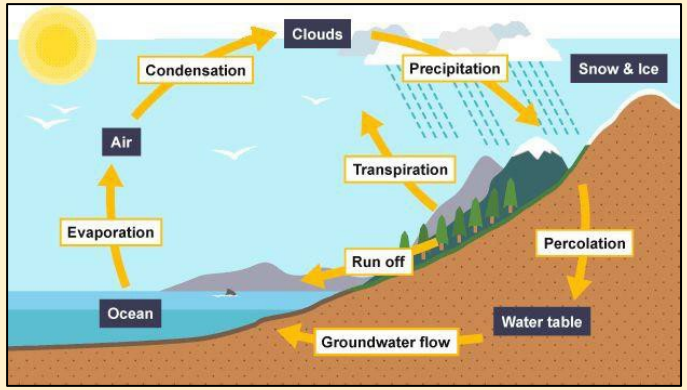
Adaptations ➔ Material Cycling ➔ Pollution ➔ Maintaining Biodiversity

8. **Adaptations**:

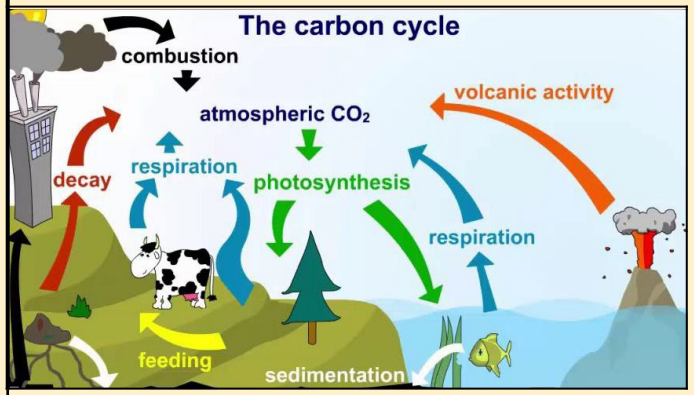
Structural	Behavioural	Functional
Physical features which increase chances of survival. Sharp claws Camouflage Eye position	Behaviours which give them an advantage. Working as a pack Using tools Mating rituals	Processes which occur within the body Venom production Hibernation & Migration Less urine in heat

Extremophiles live in extreme conditions such as at high **temperatures**, **pressures** or **salt concentrations**.

9. The water cycle:

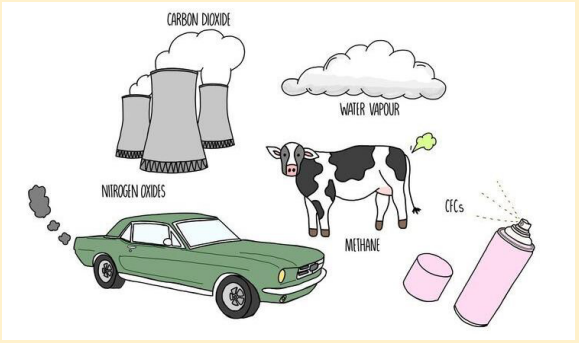


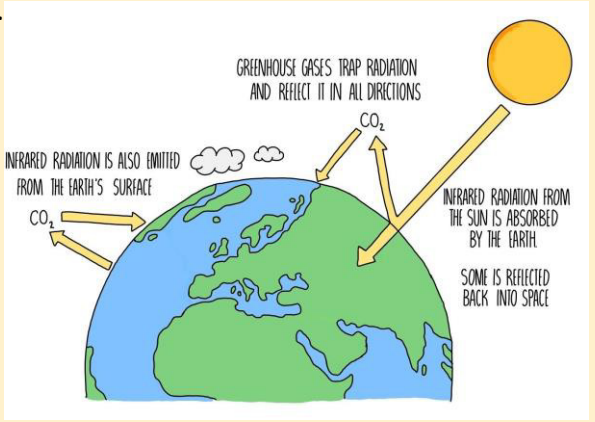
10 .The carbon cycle:



11. The effects of humans on the planet:

- Increased **greenhouse gas** (CO_2 and methane) emissions causes **global warming** and **climate change**.
- Increased use of **pesticides** leads to the **bioaccumulation** of **toxins** in food chains.
- Increased use of **fertilisers** causes **eutrophication** in waterways.
- **Deforestation** and **peat bog** destruction leas to **habitat** loss and loss of carbon stores.
- Burning of **fuels** releases sulphur dioxide and nitrogen oxides which cause **acid rain**.





12. Biodiversity

Biodiversity is the variety of all the different species of organisms

Importance:

- Future medicines
- Food supply
- Avoid disruption to
- food chains

Maintaining biodiversity:

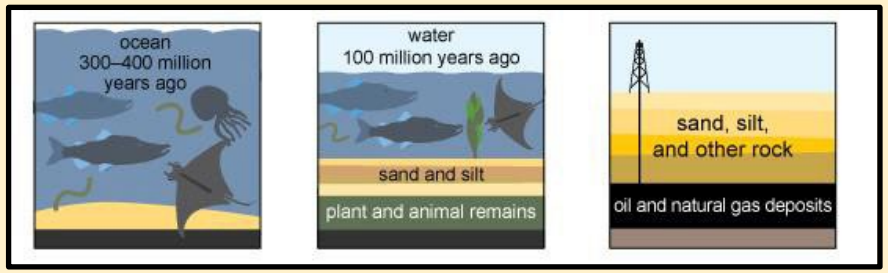
- Breeding programmes for endangered species
- Protection and regeneration of rare habitats
- Reintroduction of field margins and hedgerows
- Reduction of deforestation and pollution
- Recycling rather than landfill

Year 11 Science - Organic Chemistry (C7)

- Crude oil is a finite resource made from dead organisms, mainly plankton.
- Crude oil is separated using fractional distillation which produces short and long chain alkanes.

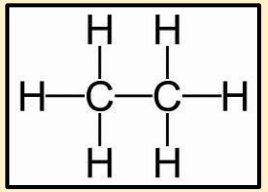
Crude oil ➔ fractional distillation ➔ Hydrocarbons ➔ Alkanes ➔ Alkenes ➔ Cracking

1. How is crude oil formed



2. Hydrocarbons

Hydrocarbons are made up of hydrogen and carbon only

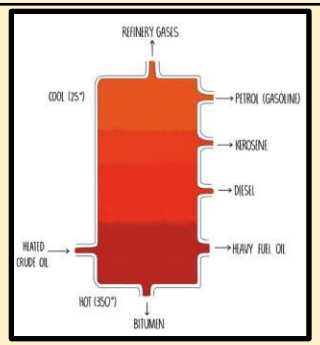


3. Properties of hydrocarbons

- Boiling point increases with chain length – more intermolecular bonds which require more energy to break
- Short chains are more flammable
- Long chains are more viscous

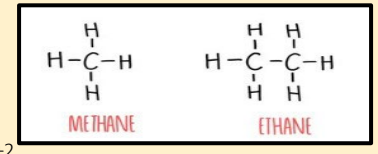
1. Fractional distillation of crude oil

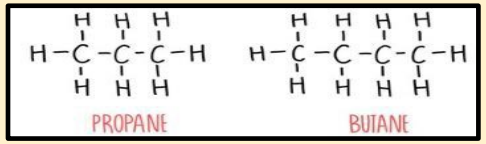
- Crude oil is heated
- Evaporates/ vaporises
- Vapours travel up the fractionating column
- Until they reach a temperature matching their b.p
- Vapours condense
- Collected as a liquid
- Separated according to boiling point



4. Alkanes

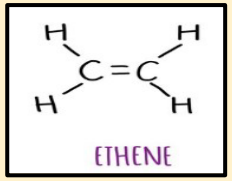
Saturated
Single bonds C-C
General formula: C_nH_{2n+2}
Used as fuels





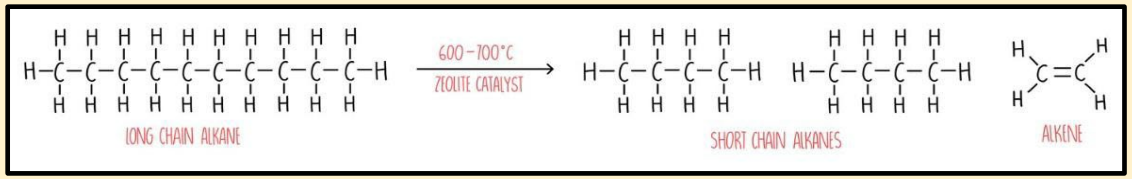
Alkenes

Unsaturated
Double bond C = C
Formula: C_nH_{2n}
Used to make plastic

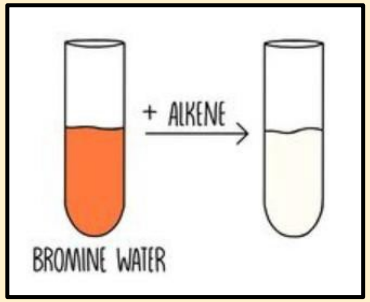


5. Cracking

Requirements:
- catalyst
- high temperatures



6. Testing for Alkenes



7. Chemical and Fuel cells

A chemical cell produces a voltage until one of the reactants is used up

Chemical Cell requires:

- 2 different metals
- An electrolyte which can be a salt, acid or alkaline.

Year 11 Science - Chemical Analysis (C8)

- Chromatography is a separating technique.
- Flame tests are used to identify metal ions
- Flame emission spectroscopy identify metal ions.

Pure and impure ➔ Chromatography ➔ Testing for ions

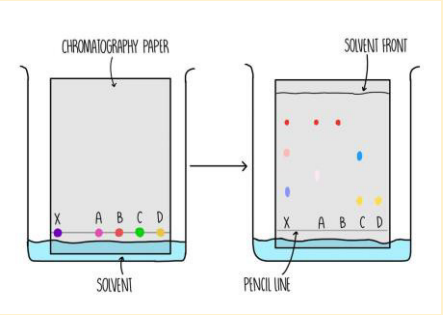
1. Pure substances

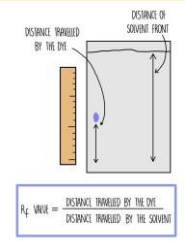
- Single element or compound, not mixed with any other substance
- Pure substances melt or boil at specific temperatures
- E.g. pure water will boil at 100°C
- Salt water will boil above 100°C as it contains an impurity .
- A formulationis a mixture that has been designed for a particular

2. Chromatography (Required Practical)

- Chromatography is used to separate mixtures based on their solubility
- Stationary phase = filter paper
- Mobile phase = Solvent (e.g. water)
- Rf is the ratio of how far the dissolved substance has travelled
- Rf value must be less than 1

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

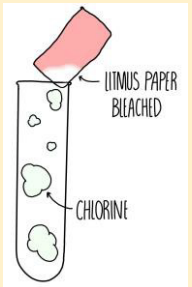


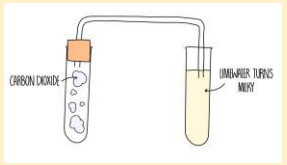


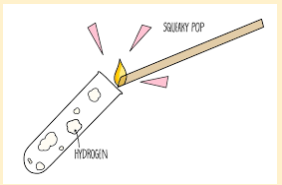
Chromatography basics:

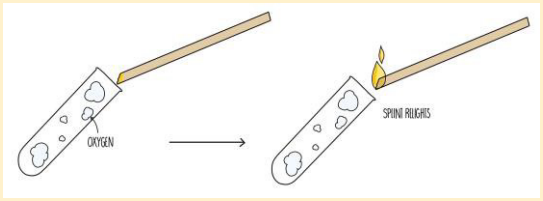
- Baseline must be drawn in pencil – ink will run
- Solvent line must be below the baseline – or it will dissolve the solute (pigments)
- Used for identifying unknown substances against known samples
- Rf values compared – same Rf value means it is the same substance

3. Testing for gases



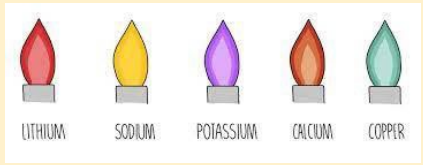






4. Cations (Chemistry only)

If there is a mixture of ions the flame colour could be masked.



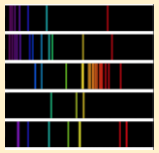
CATION	RESULT AFTER ADDING NaOH
NH_4	AMMONIA GAS PRODUCED
Cu^{2+}	BLUE PRECIPITATE OF $Cu(OH)_2$
Fe^{2+}	GREEN PRECIPITATE OF $Fe(OH)_2$
Fe^{3+}	BROWN PRECIPITATE OF $Fe(OH)_3$

5. Anions (Chemistry only)

ANION	TEST	RESULT
Cl^-	SILVER NITRATE	WHITE PRECIPITATE OF AgCl
Br^-	SILVER NITRATE	CREAM PRECIPITATE OF AgBr
I^-	SILVER NITRATE	YELLOW PRECIPITATE OF AgI
CO_3^{2-}	HYDROCHLORIC ACID	CO_2 PRODUCED
SO_4^{2-}	BARIUM CHLORIDE	WHITE PRECIPITATE OF $BaSO_4$

6. Instrumental methods (Chem only)

- Instrumental methods = machines
- Elements and compounds can be detected and identified using instrumental methods
- Instrumental methods are better than lab methods as they are fast, sensitive and accurate.



C8 Knowledge Organiser – 4.8.1 – Chemical Analysis

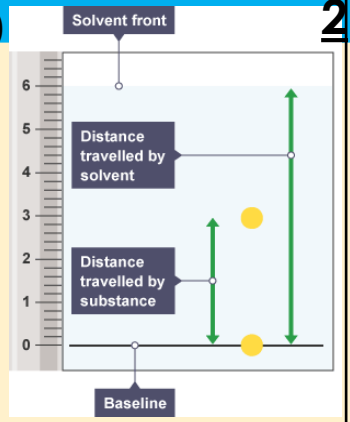
Pure substances 1

- Single element or compound, not mixed with any other substance
- **Pure substances melt or boil at specific temperatures**
- E.g. pure water will boil at 100°C
- Salt water will boil above 100°C as it contains an impurity

Chromatography (Required practical) 2

- Chromatography is used to separate mixtures based on their solubility
- **Stationary phase = filter paper**
- **Mobile phase = Solvent (e.g. water)**
- **Rf is the ratio of how far the dissolved substance has travelled**
- **Rf value must be less than 1**

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



Chromatography basics 3

- **Baseline must be drawn in pencil – ink will run**
- **Solvent line must be below the baseline – or it will dissolve the solute (pigments)**
- **Used for identifying unknown substances against known samples**
- **Rf values compared – same Rf value means it is the same substance**

Formulations 4

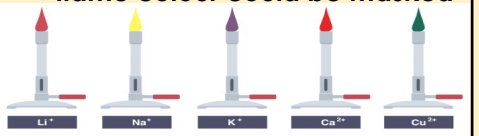
- A formulation is a mixture that has been designed for a particular use
- **Each chemical in a formulation is measured carefully**
- **The incorrect amount of each component means that the formulation will not work**

5

Gas	Test
Hydrogen	Squeaky pop – Burning spill held at the open end of test tube
Oxygen	Glowing spill inserted into test tube – spill re-lights
Carbon dioxide	Limewater – Turns from colourless to cloudy. Precipitate of calcium hydroxide forms
Chlorine	Damp litmus paper is bleached and turns white

Flame tests (Chem Only) 6

- **Lithium ion – Crimson flame**
- **Sodium ion – Yellow flame**
- **Potassium ion – Lilac flame**
- **Calcium ion – Orange – red flame**
- **Copper ion – Green flame**
- **If there is a mixture of ions the flame colour could be masked**



Identifying metal ions using Sodium hydroxide (Chem only) 6

Metal ion	Result with NaOH (aq)
Aluminium	White precipitate – dissolves in excess
Calcium	White precipitate
Magnesium	White precipitate
Copper (II)	Blue precipitate
Iron (II)	Green precipitate
Iron (III)	Brown precipitate

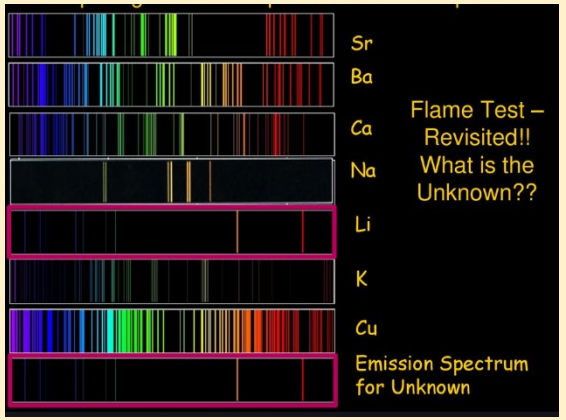
7

Non-Metal ion	Positive test for ion
Carbonate (CO_3^{2-})	Reacts with dilute acid to form carbon dioxide, which is then identified using limewater
Halide (Cl-, Br-, I-)	React with silver nitrate solution and nitric acid. Silver chloride is white, Silver bromide is cream and silver iodide is yellow
Sulphate (SO_4^{2-})	Produces white precipitate with barium chloride and HCl

Instrumental methods (Chem only) 8

- Instrumental methods = machines
- Elements and compounds can be detected and identified using instrumental methods
- **Instrumental methods are better than lab methods as they are fast, sensitive and accurate**

Flame Emission Spectroscopy (Chem only) 9

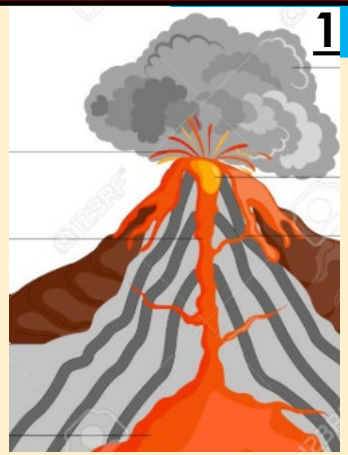


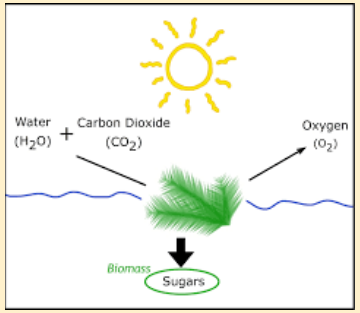
Used to analyse and identify metal ions in solution
The sample is put into a flame and light is given out and is passed through a spectroscope.
The output line spectrum can be analysed against knowns to identify ions and measure their concentrations

C9 Knowledge Organiser – 4.9.1 – Chemistry of the atmosphere

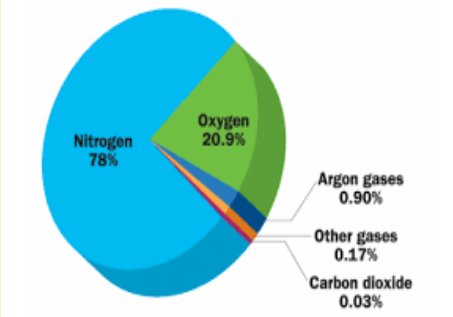
Development of the atmosphere 1

- 4.6 billion years ago the Earth was a molten ball of rock covered in volcanoes
- **Volcanic activity released gases that formed the early atmosphere – methane, ammonia, water vapour and carbon dioxide**
- The Earth cooled to 100°C and the **water vapour condensed to form the oceans**
- Algae evolved in the oceans and **photosynthesised to produce oxygen**
- Oxygen levels gradually increased over the next billion years which enabled animals to evolve
- The Earth's early atmosphere is similar to the atmosphere of Mars and Venus today





Composition of the atmosphere 2



Decrease of Carbon dioxide 3

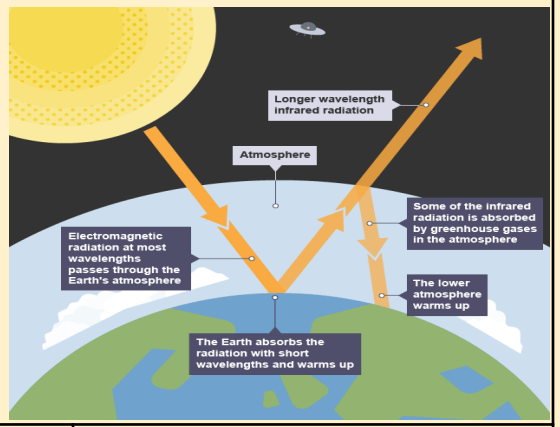
- **Absorbed by green plants for photosynthesis**
- **Formation of sedimentary rocks and fossil fuels, e.g. coal and oil**
- **Absorbed by the oceans**

4 Greenhouse gases and the greenhouse effect

Greenhouse gases are important in maintaining the Earth's temperature.

- **Methane**
- **Carbon dioxide**
- **Water vapour**

Greenhouse gases in the atmosphere have increased leading to the greenhouse effect



Human activities 5

- Human activities increase the amounts of greenhouse gases in the atmosphere, e.g.
- **Combustion** of fuels releases carbon dioxide
- **Farming cattle** releases methane
- **Deforestation** releases carbon dioxide and reduces the absorption of carbon dioxide

Peer review 6

- Based on peer-reviewed evidence, scientists believe human activities will cause the temperature of the Earth's atmosphere to increase
- It is difficult to model complex systems such as global climate change.
- This leads to simplified models, speculation and opinions presented in the media that may be based on only parts of the evidence and which may be biased.

Climate change 7

- Effects of global climate change:
- **Rising sea levels/Flooding**
- **Melting ice caps**
- **Drought**

- The carbon footprint is the total amount of carbon dioxide and other greenhouse gases emitted over the full life cycle of a product, service or event.
- **The carbon footprint can be reduced by reducing emissions of carbon dioxide and methane.**

Pollutants from fuels 8

- Carbon dioxide formed from combustion of fuels. Causes global warming
- Carbon monoxide formed during incomplete combustion and is it a toxic gas
- Sulphur dioxide forms from sulphur impurities reacting with oxygen in the atmosphere. Causes acid rain
- Nitrous oxides form from nitrogen and oxygen in the air reacting at high temperatures, e.g. in a car engine. Causes respiratory problems
- Carbon particulates are formed during incomplete combustion. Causes global dimming

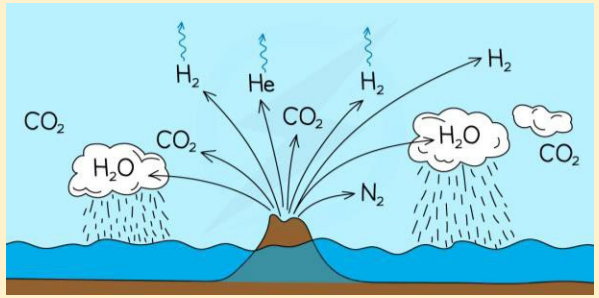
Year 11 Science - Earth's Atmosphere (C9)

- The Earth's atmosphere has evolved.
- Greenhouse gases cause the greenhouse effect.
- Atmospheric pollutants can cause smog and acid rain.

Earth's atmosphere ➔ Today's atmosphere ➔ Pollutants ➔ Climate change.

1. Earth's early atmosphere

The earth was mainly volcanic which released carbon dioxide, water vapour and

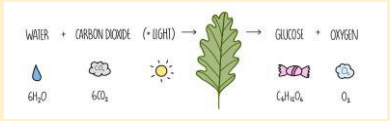


2. Changing atmosphere

Change 1:
Earth cooled down – water vapour **condensed** to form oceans.

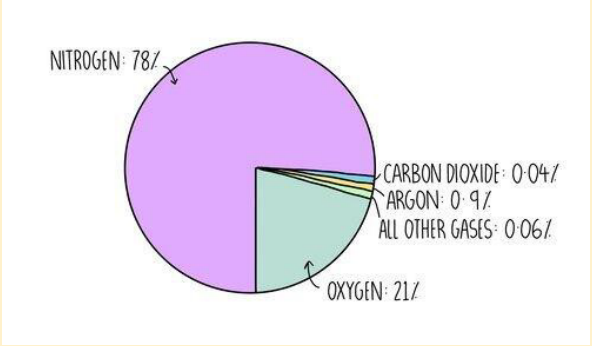
Carbon dioxide decreased as it dissolved into oceans.

Change 2:



Blue-green algae formed meaning photosynthesis occurred. Carbon dioxide decreased and Oxygen increased.

3. Today's atmosphere

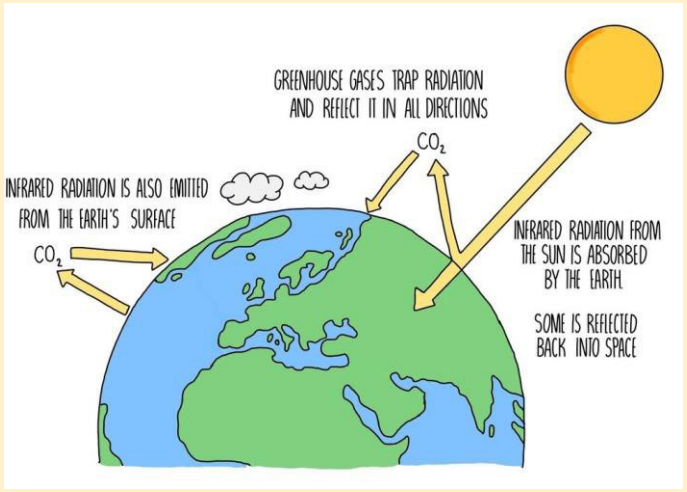


4. Pollutants

Pollutant	Cause	Effect
Nitrogen Oxides (No_x)	Nitrogen and Oxygen from the air react in the high temperatures of the car engine. This causes acid rain.	Lakes to become acidic Limestone buildings weather.
Sulphur Dioxide	Sulphur from coal reacts with oxygen when it combusts. This causes acid rain.	
Particulates (soot)	Incomplete combustion of fuels.	Global dimming Respiratory problems

5. Greenhouse gas effect

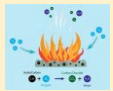
- Short λ enters as UV.
- IR is absorbed
- Greenhouse gases trap long λ as thermal radiation.
- Thermal radiation is reflected back to the earth and leads to **global warming.**



6. Human impact

Adding carbon dioxide:

Deforestation



Combustion of fuels

Adding Methane:

cattle farming

7. Climate change

Flooding, extreme weather, change in rainfall, loss of habitat.

Year 11 Science – Forces (P5)

Scalars & Vectors ➔ Forces ➔ Elasticity ➔ Acceleration

- A force is a push or pull that acts on an object.
- When a force causes an object to move through a distance work is done on the object.

1. Scalar and Vector Quantities

- Scalar quantities ➔ magnitude only
- Vector quantities ➔ magnitude and direction
- Scalars include time and speed while vectors include velocity.
- A vector quantity may be represented by an arrow, the length represents the magnitude, and the direction of the arrow the direction of the vector.

2. Contact and non-contact forces

- A force is a push or pull that acts on an object.
- Contact forces – the objects are physically touching, i.e. friction, or air resistance.
- Non-contact forces – the objects are physically separated, i.e. gravitational force or electrostatic force.
- Force is a vector quantity

3. Gravity

- Weight is a force acting on an object due to gravity.
- weight = mass × gravitational field strength

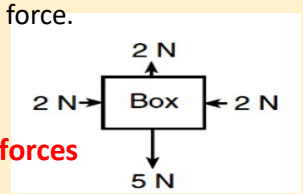
4. Workdone and energy transfer

- When a force causes an object to move through a distance work is done on the object.

Work done (J) = Force (N) x Distance (m)

5. Resultant Force

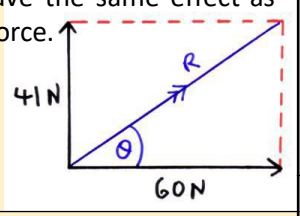
- A number of forces acting on an object may be replaced by a single force that has the same effect as all the original forces acting together.
- This single force is called the resultant force.



Resultant forces = 5-2= 3N

6. Resolution of Forces (HT only)

- A single force can be resolved into two components acting at right angles to each other.
- The two component forces together have the same effect as the single force.



7. Forces and Elasticity

- The extension of an elastic object, such as a spring, is directly proportional to the force applied, provided that the limit of proportionality is not exceeded.

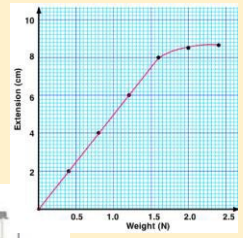
Force Applied = Spring Constant x Extension

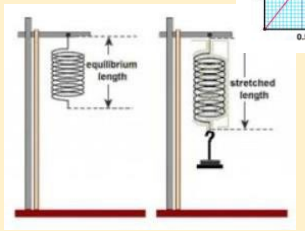
- A force that stretches (or compresses) a spring does work and elastic potential energy is stored in the spring.
- Provided the spring is not inelastically deformed, the work done on the spring and the elastic potential energy stored are equal.

Elastic potential energy = 0.5 x spring constant x (extension)²

8. Hooke's law Required practical

- Investigate the relationship between force and extension for a spring.





9. Distance and Displacement

- Distance is how far an object moves.
- Distance does not involve direction, it's a scalar quantity.
- Displacement includes both the distance an object moves and the direction of that straight line, it's a vector quantity.

10. Speed and Velocity

- Speed is a scalar quantity as it does not involve direction.
- The speed of a moving object is normally changing and so is rarely constant.
- The formula to calculate the speed of an object is:

Speed = Distance / Time

- The velocity of an object is its speed in a particular direction, velocity is a vector quantity.
- If you are travelling around a roundabout (in a circle) your speed may be constant, but the velocity will be changing as you are constantly changing direction.

11. Acceleration

- This is a measurement of the rate in which an objects velocity changes.
- If an object is slowing down than it is said to be decelerating. It can be calculated using the equation:

Acceleration = change in velocity / time taken

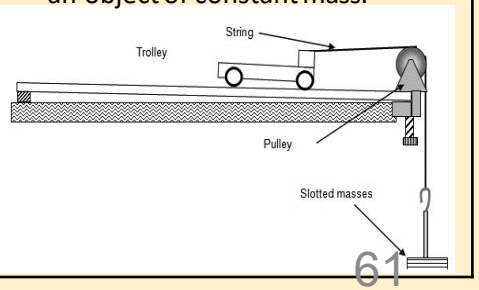
12. Uniform Acceleration

- The following equation applies to uniform acceleration (you are given this one on your data sheet):

(final velocity)² – (initial velocity)² = 2 x acceleration x distance

13. Effect of force on acceleration - Required practical

- Investigate the effect of varying the force on the acceleration of an object of constant mass.



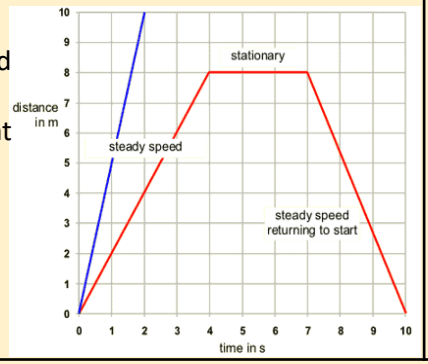
- An object will not change its motion unless a force acts on it.
- The force on an object is equal to its mass times its acceleration.

Year 11 Science – Forces (P5)

Graphs ➔ Stopping Distance ➔ Newtons Laws

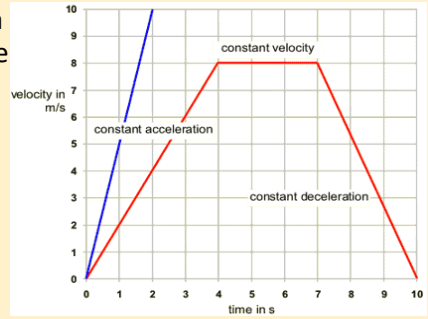
14. Distance Time Graphs

- The speed can be calculated from the gradient of its distance–time graph.
- If an object is accelerating, its speed at any particular time can be determined by drawing a tangent and measuring the gradient of the distance–time graph at that time.



15. Velocity Time Graphs

- The acceleration of an object can be calculated from the gradient of a velocity–time graph.
- The distance travelled by the object can be calculated by measuring the area underneath the line of a velocity time graph.



16. Stopping Distance

- The stopping distance of a vehicle is the sum of the distance the vehicle travels during the driver's reaction time (thinking distance) and the distance it travels under the braking force (braking distance).
- For a given braking force the greater the speed of the vehicle, the greater the stopping distance.

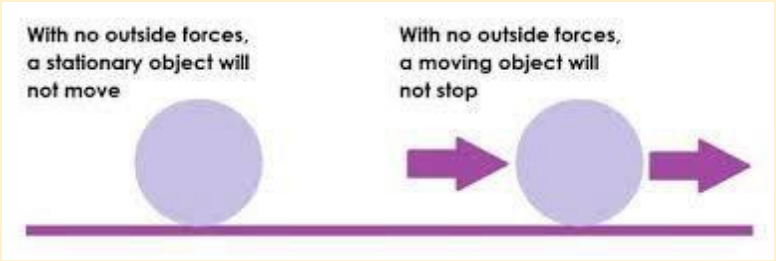
Thinking distance + Braking distance = Stopping distance

17. Braking distance

- Is affected by the road and weather conditions, e.g. wet oricy conditions.
- The greater the speed of a vehicle the greater the braking force needed to stop the vehicle in a certain distance.
- The greater the brakingforce the greater the deceleration of the vehicle.
- Large decelerations may lead to brakes overheating and/orloss of control

18. Newtons First Law

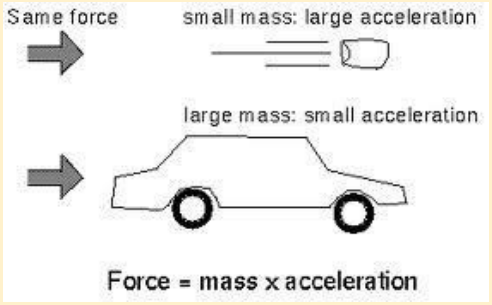
- If the resultant force acting on an object is zero and the object is stationary, the object will stay stationary.
- If the object is moving, the object continues to move at the same speed and in the same direction.
- This means the object continues to move at the same velocity.



19. Newtons Second Law

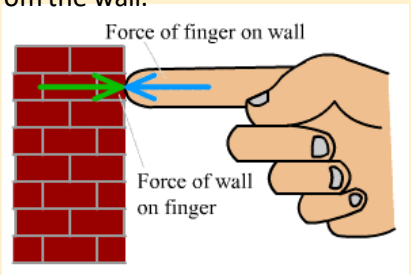
- This is the rule that the acceleration of an object is proportional to the resultant force acting on an object, and inversely proportional to the mass of the object.
- The equation for this is:

Resultant Force = Mass x Acceleration



20. Newtons Third Law

- Whenever two objects interact, the forces they exert on each other are equal and opposite.
- For example a man pushes on a wall with 100N and experiences a force of 100N in the opposite direction from the wall.



21. Momentum (HT only)

- Momentum can be calculated using the equation:

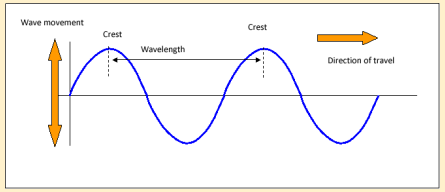
Momentum = Mass x Velocity

- In a closed system, the total momentum before an event is equal to the total momentum after the event. This is called conservation of momentum.

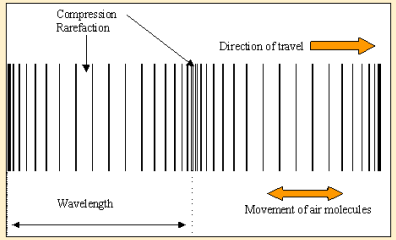
P6 Knowledge Organiser – 4.6.1 - Waves

Transverse and Longitudinal Waves

Waves can be either Transverse or Longitudinal.
Transverse Waves. All waves transfer energy.



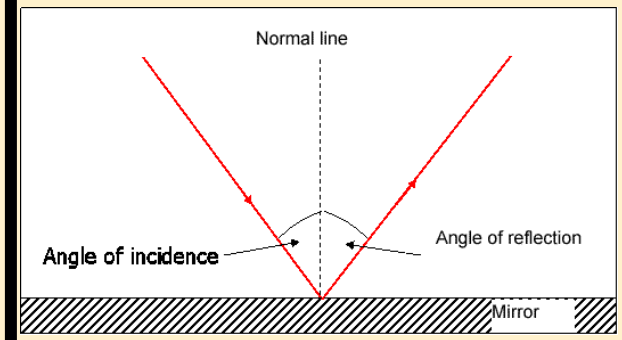
In a transverse waves the particles oscillate perpendicular to the direction of energy transfer. Examples of transverse waves include water waves and electromagnetic waves.
In a longitudinal wave the particles oscillate parallel to the direction of energy transfer. Examples of longitudinal waves include sound waves.



Reflection of waves

Waves can be reflected at a boundary between two different materials. They could also be transmitted or absorbed at a boundary between two different materials.
A ray diagram illustrates the reflection of a wave at a boundary. All ray diagrams should be drawn with a pencil and arrows clearly indicate the direction the light is travelling. These arrows must be included in all ray diagrams.

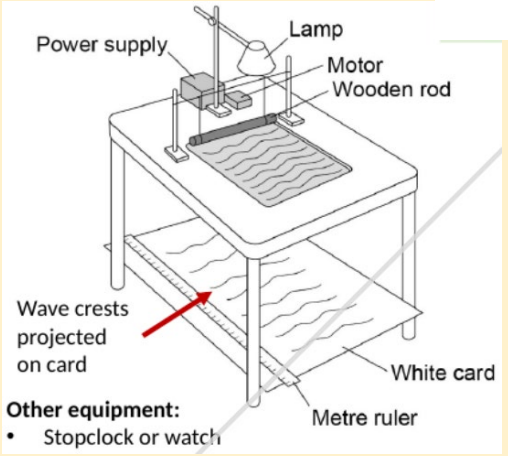
The angle of incidence = the angle of reflection



Sound Waves

Sound waves can travel through solids causing vibrations in the solid.
In the human ear, sound waves cause the ear drum to vibrate which allows us to detect sound. The conversion of sound waves to vibrations of solids only works over a limited frequency range. This restricts the range of human hearing. The range of human hearing is from 20Hz to 20kHz.

Ripple tank required practical



Method A: ripple tank

1. Place a metre ruler at right angles to the waves shown in the pattern on the card.
2. Measure across as many waves as possible. Then divide that length by the number of waves. This gives the **wavelength** of the waves.
3. Count the number of waves passing a point in the pattern over a given time (say 10 seconds).
4. Then divide the number of waves counted by 10. This gives the **frequency** of the waves.
5. Record your measurements.

Wave Properties

The frequency of a wave is the number of waves passing through a fixed point each second.

The amplitude of a wave is the maximum displacement of a point on a wave from its undisturbed position.

The wavelength of a wave is the distance from a point on one wave to the equivalent point on the adjacent wave.

The wave speed is the speed at which the wave moves through the medium. This is also the speed at which the energy is transferred through the medium.

Wave Equation

Period = 1/frequency (you do not need to recall)

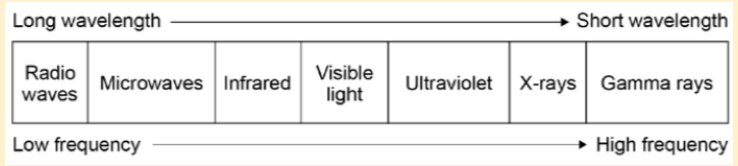
Wave speed = frequency x wavelength

Quantity	Symbol	Unit
Frequency	f	Hz
Wave Speed	v	m/s
Wavelength	λ	m
period	T	s

P6 Knowledge Organiser – 4.6.1 - Waves

Types of Electromagnetic Waves

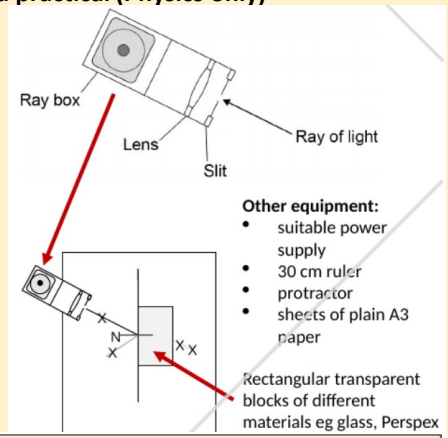
Electromagnetic waves are transverse waves that transfer energy from the source to an absorber. All electromagnetic waves travel at the same speed, $3x10^8$m/s. Electromagnetic waves form a continuous spectrum . The spectrum is grouped by order of their wavelength and frequency. Humans can only detect the visible light part of the spectrum with their eyes.



Component	Use
Radio Waves	Television and radio signal
Microwaves	Satellite communication, cooking food
Infrared	Electrical heaters, cooking food, infrared cameras
Visible Light	Fibre optic communication
Ultraviolet	Sun tanning, detecting forged notes
X-Rays	Medical imaging and treatment
Gamma Rays	Kill cancer cells, sterilization.

Reflection of waves – Required practical (Physics only)

Waves can be reflected at the boundary between two different materials. Waves can be absorbed or transmitted at the boundary between two different materials.



Method

1. Draw around the transparent block, and draw a normal line from the middle of the block . Be careful **not** to move it.
2. Switch on the ray box. Move the ray box or paper to change the angle of incidence. Do this until you see:
   - a clear ray reflected from the surface of the block
   - another clear ray leaving the opposite face of the block.
3. Mark the path of the incident ray, the reflected ray and the transmitted ray (see diagram)
4. Use the protractor to measure:
   - the angle between the incident ray and normal - this is the angle of incidence
   - the angle between the reflected ray and normal - this is the angle of reflection
   - the angle between the ray inside the block and the normal - this is the angle of refraction.
5. Record these measurements.
6. Move the ray box to a range of different angles of incidence and make the same measurements.
7. Repeat for a block of different material, using the same paths for the incident rays as with the first block.

Properties of Electromagnetic Waves

Radio waves can be produced by oscillations in electric circuits. When radio waves are absorbed they can create an alternating current with the same frequency as the radio wave itself, so radio waves can themselves induce oscillations in an electrical circuit.

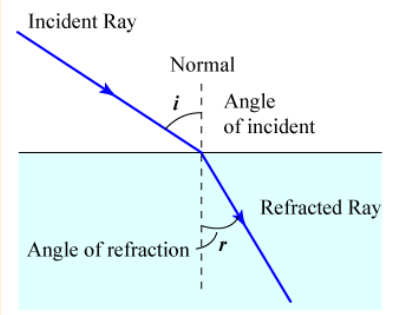
Changes in atoms and the nuclei of atoms can result in electromagnetic waves being generated or absorbed over a wide frequency range. Gamma rays originate from changes in the nucleus of an atom.

Ultraviolet waves, X-rays and gamma rays can have hazardous effects on human body tissue. The effects depend on the type of radiation and the size of the dose. Radiation dose is a measure of the risk of harm resulting from an exposure of the body to the radiation.

Ultraviolet waves can cause skin to age prematurely and increase the risk of skin cancer. X-rays and gamma rays are ionising radiation that can cause the mutation of genes and cancer.

Properties of Electromagnetic Waves

Electromagnetic Waves can be absorbed, transmit, refract or reflect. Refraction is due to the difference in velocity that the waves travel in the different substances. A ray diagram can be used to illustrate refraction.



P6 Knowledge Organiser – 4.6.1 – Waves - Physics only content

Light

Each colour of light on in the visible spectrum has its own narrow band of wavelength and frequency. Colour filters can be used by absorbing certain wavelengths (and colour) and transmitting other wavelength's (and colours).

The colour of an opaque object is determined by which wavelengths of light are more strongly reflected. Wavelengths that are not reflected are absorbed.

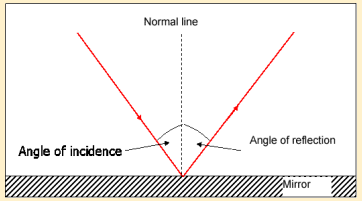
An object appears white because all of the wavelengths of light are reflected equally off the object. If all of the wavelengths are absorbed the object appears black.

Objects that transmit light are transparent if the transmit all light through or translucent if they tranmit some light through.

Reflection of Light

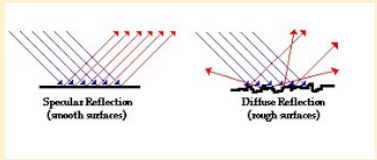
Waves can be reflected at a boundary between two different materials.

A ray diagram can be used to show the law of reflection.

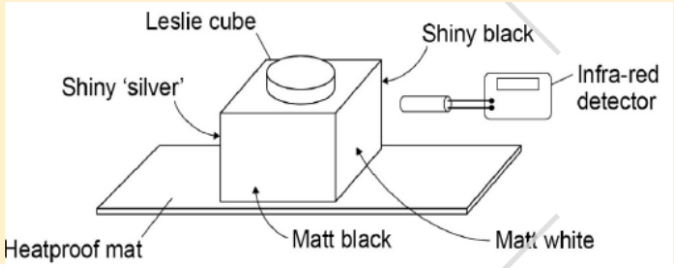


The normal line is a perpendicular line from the surface. All angles are measured to the normal. The angle of incidence is equal to the angle of reflection when light is reflected by a plane mirror.

Reflection from a smooth surface in a single direction is called specular reflection. Reflection from a rough surface causes scattering. This is called diffuse reflection.



Infra red radiation Required Practical



Method:

1. Place the Leslie cube on to a heat proof mat.
2. Fill the cube with very hot water and replace the lid of the cube.
3. Use the detector to measure the amount of infrared radiated from each surface.
4. Make sure that before a reading is taken the detector is the same distance from each surface.
5. Record your data in a suitable results table.

All bodies (objects), no matter what temperature, emit and absorb infrared radiation. The hotter the body, the more infrared radiation it radiates in a given time. A perfect black body is an object that absorbs all of the radiation incident on it. A black body does not reflect or transmit any radiation. Since a good absorber is also a good emitter, a perfect black body would be the best possible emitter.

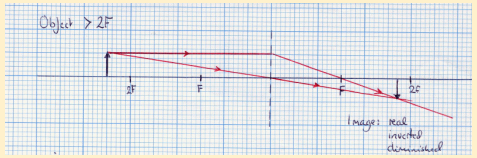
Lenses

A lens will form an image by refracting light. In a convex lens parallel light rays are brought to focus at a point by the principal focus. The distance to the principal focus is called the focal length. Images produced by convex lenses can be either real or virtual. Concave lenses always produce virtual images.

In ray diagrams a convex lens will be represented by:

A concave lens will be represented by:

An image is 'real' if the image if formed on a ray diagram on the right hand side of the lens on a ray diagram. i.e. the rays actually meet. This is an example of a ray diagram of a convex lens



A virtual image is formed by rays diverging after passing through the lens and being traced back to a principal focus on the left hand side of a ray diagram. The image height of an object can be measured using a ray diagram, as well as the object height. This can be used to calculate the magnification of an object.

$$magnification = \frac{image\ height}{object\ height}$$

Magnification does not have any units. You do not need to remember this equation.

P7 Knowledge Organiser – 4.7.1 - Magnetism

Poles of a Magnet
The poles of a magnet are the places where the magnetic forces are strongest. When two magnets are brought close together they exert a force on each other. Two like poles repel each other. Two unlike poles attract each other. Attraction and repulsion between two magnetic poles are examples of non-contact force.

Permanent Magnets
A permanent magnet produces its own magnetic field.

Like poles repel
Opposite poles attract

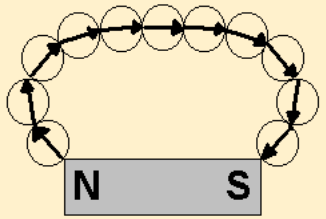
Induced Magnets
An induced magnet is a material that becomes a magnet when it is placed in a magnetic field. Induced magnetism always causes a force of attraction. When removed from the magnetic field an induced magnet loses most/all of its magnetism quickly.

Electromagnetism
When a current flows through a conducting wire a magnetic field is produced around the wire. The strength of the magnetic field depends on the current through the wire and the distance from the wire. Shaping a wire to form a solenoid increases the strength of the magnetic field created by a current through the wire. The magnetic field inside a solenoid is strong and uniform. The magnetic field around a solenoid has a similar shape to that of a bar magnet. Adding an iron core increases the strength of the magnetic field of a solenoid. An electromagnet is a solenoid with an iron core.

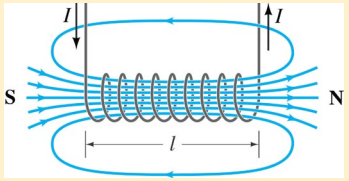
Motors
A coil of wire carrying a current in a magnetic field tends to rotate. This is the basis of an electric motor. The size of the force can be increased by increasing the current or using a stronger magnet. The size of the force depends on the angle between the wire and the magnetic field. The force is greatest when the wire is perpendicular to the magnetic field and zero when the wire is parallel.

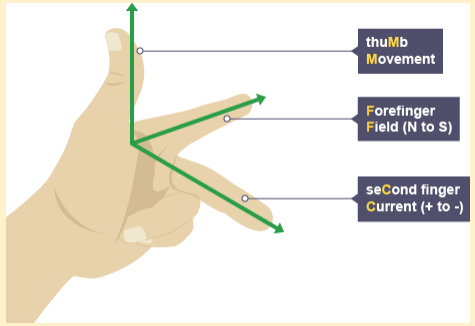
Magnetic Fields
The region around a magnet where a force acts on another magnet or on a magnetic material (iron, steel, cobalt and nickel) is called the magnetic field. The force between a magnet and a magnetic material is always one of attraction. The strength of the magnetic field depends on the distance from the magnet. The field is strongest at the poles of the magnet. The direction of the magnetic field at any point is given by the direction of the force that would act on another north pole placed at that point. The direction of a magnetic field line is from the north (seeking) pole of a magnet to the south(seeking) pole of the magnet.

Plotting a Magnetic Field
Mark a dot near the north pole of a bar magnet and place the tail of the compass needle above the dot and mark a second dot at the tip of the needle. Repeat this with the tail of the next compass over the new dot until you reach the south pole. Repeat this with further lines.



Solenoids
A solenoid is a long coil of insulating wire and they are used in lots of electrical devices where a strong magnetic field is needed. When a current is passed through the wire the magnetic field increases in strength if the current is increased and reverses in direction if the current is reversed.





Flemings Left Hand Rule (HT)
When a conductor carrying a current is placed in a magnetic field the magnet producing the field and the conductor exert a force on each other. **This is called the motor effect**. You need to be d be able to show that Fleming's left-hand rule represents the relative orientation of the force, the current in the conductor and the magnetic field.

Magnetic Flux Density
For a conductor at right angles to a magnetic field and carrying a current:

Force = Magnetic Flux Density x Current x Length

Quantity	Symbol	Unit
Force	*F*	N
Magnetic Flux Density	*B*	T
Current	*I*	A
Length	*l*	m

P7 Knowledge Organiser – 4.7.1 - Magnetism

Uses of the Generator Effect (Physics HT only)

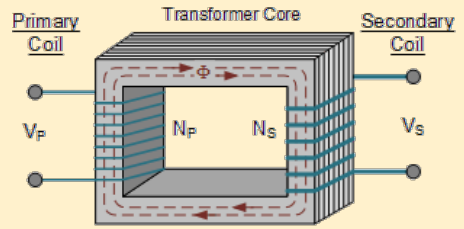
The generator effect is used in an alternator to generate ac and in a dynamo to generate dc.

Loudspeakers (Physics HT only)

Loudspeakers and headphones use the motor effect to convert variations in current in electrical circuits to the pressure variations in sound waves.

How Transformers Work (Physics HT only)

Two coils of insulated wire are wound around an iron core. The primary coil is connected to ac and when the current passes through the primary coil potential difference is induced in the secondary coil.



Efficiency of a Transformer.

If transformers were 100% efficient the electrical power output would equal the electrical power input. This is represented by the equation:

$$V \times I = V \times I$$

Induced Potential (Physics HT only)

If an electrical conductor moves relative to a magnetic field or if there is a change in the magnetic field around a conductor, a potential difference is induced across the ends of the conductors. If the conductor is part of a complete circuit a current is induced in the conductor. **This is called the generator effect.**

An induced current generates a magnetic field that opposes the original change, either the movement of the conductor o the change in magnetic field. The size of an induced potential current/potential difference is affected by the strength of a magnetic field, the speed at which the conductor crosses through the lines of the magnetic field.

Transformers (Physics HT only)

A basic transformed is made up of a primary coil and a secondary coil wound on an iron core. Iron is used as the core as it is easily magnetised. For each of these coils they have a number of turns and a potential different across the coil. You can calculate the number of turns or potential difference for either of these coils using the equation:

$$\frac{\text{Potential Difference Across Primary Coil}}{\text{Potential Difference Across Secondary Coil}} = \frac{\text{Number of Turns On Primary Coil}}{\text{Number of Turns On Secondary Coil}}$$

In a step up transformed the voltage of the secondary coil is greater than the voltage of the primary coil while in a step down transformed the voltage of the secondary coil is less than the voltage of the primary coil.

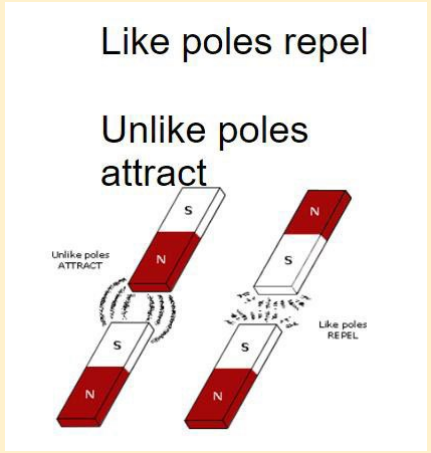
Quantity	Symbol	Unit
Potential Difference Across Primary Coil	V_p	V
Potential Difference Across Secondary Coil	V_s	V
Primary Coil Number of Turns	N_p	
Secondary Coil Number of Turns	N_s	
Primary Coil Current	I_p	A
Secondary Coil Current	I_s	A

Year 11 Science - Magnetism and Electromagnetism

Magnets ➔ Plotting fields ➔ Motors ➔ Solenoids & Electromagnets

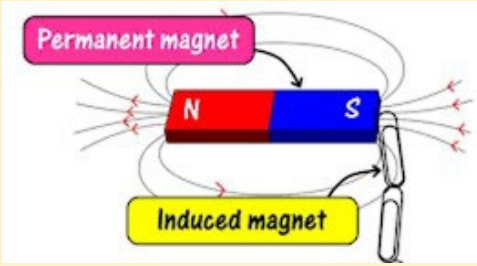
- Magnets have two poles, North and South.
- Like poles repel each other.
- Unlike poles attract each other.

1. Poles of a Magnet



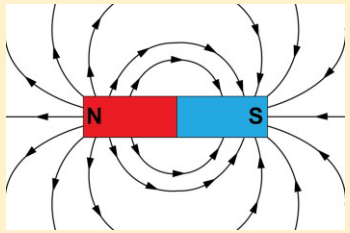
2. Induced Magnets

- An **induced** magnet is a material that becomes a magnet when it is placed in a magnetic field.
- When removed from the **magnetic field** an induced magnet loses most/all of its **magnetism** quickly.



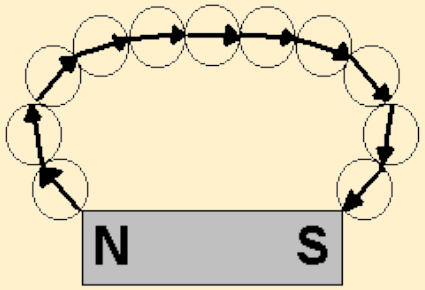
3. Magnetic Fields

- The region around a magnet where a force acts on another magnet or on a magnetic material (iron, steel, cobalt and nickel) is called the magnetic field. It is strongest at the poles.
- The direction of a magnetic field line is from north to south .



4. Plotting a Magnetic Field

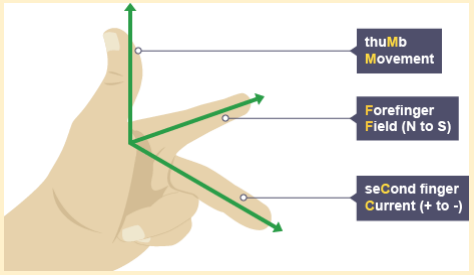
- Mark a dot near the north pole of a bar magnet and place the tail of the compass needle above the dot and mark a second dot at the tip of the needle.



5. Motors

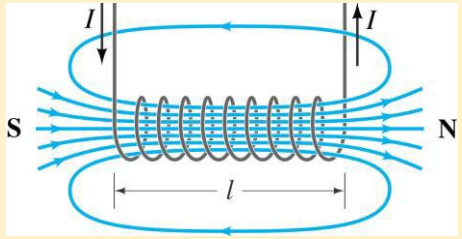
- A **coil** of wire carrying a current in a magnetic field tends to rotate. This is the basis of an electric motor.
- The size of the force can be increased by increasing the current or using a stronger magnet.
- The size of the force depends on the angle between the wire and the magnetic field.
- The force is greatest when the wire is **perpendicular** to the magnetic field and zero when the wire is parallel.

6. Flemings Left Hand Rule (HT)



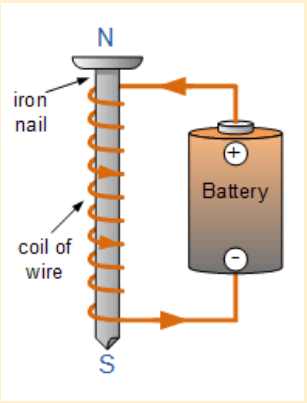
7. Solenoids

- A **solenoid** is a long coil of insulating wire, and they are used in lots of electrical devices where a strong magnetic field is needed.



8. Electromagnetism

- When a current flows through a conducting wire a magnetic field is produced around the wire.
- The strength of the magnetic field depends on the current through the wire and the distance from the wire.
- Shaping a wire to form a solenoid increases the strength of the magnetic field created by a current through the wire.

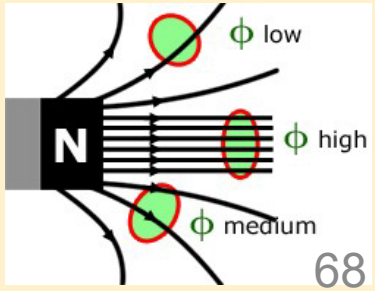


- Adding an iron core increases the strength of the magnetic field of a solenoid.
- An electromagnet is a solenoid with an iron core.

9. Magnetic Flux Density (HT)

- For a **conductor** at right angles to a magnetic field and carrying a current:

Force = Magnetic Flux Density x Current x Length



Year 11 – Geography - Urban Issues and Challenges

What is the global pattern of urban change?

Pattern
- HIC – slower rate of growth as already urbanised.
- LIC – faster rate of growth as higher natural increase & more rural to urban migration.

Factors affecting urbanisation
- Rural to urban migration – moving from countryside to city.
- Natural increase – birth rate higher than death rate.

Megacities
- City with a population that exceeds 10 million.

LIC/NEE Case study – Lagos
Why is Lagos important?

Location
- Western Africa
- South-west coast of Nigeria
- Over 14 million people

National Importance
- 80% Nigeria's industry
- 25% Nigeria's GDP

International importance
- Financial centre of West Africa
- Global trade centre
- Nollywood

What opportunities has urban growth created in Lagos?

Social
- More healthcare centres, hospitals and better range of medicines in Lagos.
- Almost 90% of Nigerian children attend primary school compared to 60% in rural areas.
- Better access to electricity – most people can light their homes and cook more easily.
- Water treatment plants provide safe water that is piped directly to some areas of the city.

Economic
- Income can be 4 times higher in Lagos than in rural Nigeria so many migrate in search of better paid jobs.
- Rapid growth means lots of construction jobs, e.g. building of Eko Atlantic.
- Home to many banks, government departments and manufacturing industries. There are also two major ports and a growing fishing industry.
- Thriving film industry and music industry – Nollywood films are very popular.

Environmental
- Many informal jobs involve collection and recycling of rubbish, meaning recycling levels are high.

What challenges has urban growth created in Lagos?

Informal squatter settlements
- There's not enough houses for the growing population, making prices high and unaffordable.
- 66% of people live in illegal settlements like Makoko, built floating on the lagoon.
- These houses are flimsy wooden huts. As they are illegal, people face eviction.

Access to clean water, sanitation and energy
- Water – only 40% of the city is connected to the state water supply. Many dig their own wells and bores holes.
- Sanitation – up to 15 households share a toilet, and waste often goes straight into water sources.
- Energy – Not enough electricity for the whole city to use at once so many experience power-cuts.

Access to health and education
- There aren't enough healthcare facilities for everyone and many can't afford treatment.
- There aren't enough schools for the growing population – there's only one primary school in Makoko.

Unemployment and crime
- Not enough formal jobs for growing population.
- 60% work in informal jobs without legal protection.
- High levels of crime – Makoko is patrolled by gangs who commit crime.

How has urban planning improved the life of the urban poor in Lagos?

Name of project
- 2013 Makoko Floating School

What the project involved?
- Building of a floating school to provide access to free education for the poorest children.

Social benefits
- Up to 100 students education for free.
- Built by local unskilled workers
- Also provides space for local community for meetings and activities

Economic benefits
- Education improves job prospects for children
- Teaching jobs for local teachers
- Encouraged the government to launch the 'Makoko Regeneration Plan' aiming to develop the slums by building homes and biogas plant for cooking.

Environmental benefits)
- Built using locally sources materials
- Can be adjusted to different water levels, protecting from flooding.
- Runs on solar power
- Collects rainwater

Year 11 – Geography - Urban Issues and Challenges

UK City Case Study

Why is Birmingham important?

Location – Central England, West Midlands

National importance
- Central rail network
- NEC
- 90% of England within 4hrs

International importance
- 300 companies from outside UK
- International airport

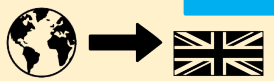
How has migration affected Birmingham?

National migration

Growth
- People move from other parts of the UK to go to the 5 universities – 50,000 students. In 2012-13 40,800 UK migrants arrived.

Changing character
- Europe's youngest city
- University buildings located across the city e.g. lecture halls or accommodation.
- Increase in bars, restaurants and entertainment facilities aimed at students.

International migration



Growth
City has welcomes migrants and refuges from across the world but particularly Jewish Europeans, Pakistanis and Indians. In 2012-13 12,000 migrants arrived.

Changing character
- Multi-cultural city
- Migrants bring a range of skills, contributing to areas such as the Jewellery Quarter and the Polish Catholic Centre in Digbeth.
- Balti Triangle, area of over 100 Indian restaurants with 20,000 visitors a week.

What opportunities & challenges has urban growth created in Birmingham?

Social Opportunities

- Excellent transport links across the country via New Street Station, busiest outside London.
- Bull Ring shopping centre
- Most Michelin star restaurants outside London.

Economic opportunities

- Largest number of businesses outside London.
- Large number of job opportunities

Environmental opportunities

- 500 parks
- Blue corridors created along the canal network.

Social & economic challenges

- Inequality across the city, particularly between inner city and northern suburbs like Four Oaks.
- 6th most deprived area in the country.
- Major cause of industrial decline in inner-city areas, particularly along the canals, led to derelict land and a spiral of decline.
- Large number of homeless due to urban deprivation.
- **Education (5 GCSEs A*-C) –** Sutton Four Oaks, 87%. Ladywood, 43%.
- **Average life expectancy –** Sutton Four Oaks, 86. Winson Green, 75.
- **Unemployment –** Sutton Four Oaks, 21.7%. Lozells, 41.4%.

Environmental challenges
- An increase in traffic congestion as people commute to work – 150-200 000 commuters a day.
- An increase in air pollution from the increase in traffic.
- Building on greenfield sites for new housing results in urban sprawl and further growth of the city outwards.
- 42,000 people have moved out of the city in last 10 years to commuter settlements like Dudley, Lichfield, Bromsgrove.
- Growing population and business means more waste. Only 30% currently recycled.

How has regeneration affected Birmingham?

- Regeneration is the improvement of social, economic and environmental conditions in run down areas.

Name of project: Jewellery Quarter

Why was it needed?
- Once a busy industrial area of the city, declined as manufacture of jewellery moved abroad.
- Area forgotten in previous regeneration due to ring road.

Features of the project
- £80 million residential development St George's urban village.
- 600 new homes including 300 loft style in the Kettleworks

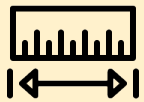
How can cities be sustainable?
- Sustainable means to preserve an area, creating minimal environmental damage.

Features
- Reduced water use.
- Use of renewable energy.
- Energy conservation.
- Creating green space.
- Recycling.

Transport strategies to reduce congestion
- Use of public transport.
- Park and ride.
- Low emission zones.

Year 11 – Geography - Economic Development

How can development be measured?



Measures

- **Life expectancy:** average age people live.
- **Infant mortality:** number of babies who die before 1 per 1000 people.
- **Birth rate:** number of babies born per 1000.
- **Death rate:** number of deaths per 1000.
- **Literacy rate:** % adults who can read & write.
- **GNI per capita:** income per person.
- **Human Development Index:** is a combined measure.

Limitations of measures

Economic: GNI per capita is inaccurate as it is an average figure.

Social: These measures are hard to measure during a war, so are inaccurate.

Link to the demographic transition model

- The model shows how population changes over time.
- Stage 2: LICs
- Stage 3: NEEs
- Stage 4 & 5: HICs

Is world development uneven?

Uneven development means the level of development in all countries is not the same.

Causes of uneven development

a) **Physical:** poor climate, lots of natural hazards.

b) **Economic:** being in debt, poor trade links.

c) **Historical:** war, colonialism.

Consequences of uneven development

Wealth

- Africa has the least wealth with many people in poverty.
- Europe & North America are the wealthiest.

Health

People in LICs dies from curable diseases, but HICs would vaccinate.

Migration

- People will move for job opportunities or to escape war zones.

How can we reduce the development gap?

- The development gap is the gap between HICs and LICs.
- The aim of the strategies is to make the gap between HICs and LICs smaller.

Strategies

- **Debt relief** – involves cancelling debt.
- **Aid** – help given by one country to another
- **Fair trade** – guaranteed price given to the farmer.
- **Microfinance loans** – small loans given to people in LICs.
- **Intermediate technology** – simple, cheap and easy to maintain.
- **Investment** – TNCs invest in factories & infrastructure.
- **Industrial development** – country moves from agriculture to manufacturing.

How can tourism reduce the development gap?

Location: Jamacia, 4th largest island in Caribbean

Attractions: sandy beaches and rich cultural heritage.

How has it helped development?

- 24% of Jamacia's GDP in 2014
- Investment in high level of infrastructure on north coast.
- Conservation and landscaping projects
- Jobs
- 200 000 jobs, either directly or indirectly

Issues

- Other areas of the country remain isolated and undeveloped.
- Mass tourism causes environmental damage
- Many still lack clean water and sanitation

Why is Nigeria important?

Location: West Africa

Importance

- National – largest population in Africa.
- International, large oil producer and one of the fastest growing economies.

Context

- Social: 3 tribes, Muslim in the north and Christian in the south.
- Environmental: rainforest in the south and savanna in the north.
- Political;: democracy but at threat from extremist groups.

How is Nigeria's economy changing?

Industrial structure

- Primary jobs in agriculture decreased.
- Secondary and tertiary jobs have increased.

How can manufacturing stimulate development?

- People get jobs.
- Government gets more tax.
- Tax money used to develop infrastructure.
- New infrastructure attracts more manufacturing industry.
- Growth in manufacturing leads to the multiplier effect e.g. to supply parts.
- People have a more secure income, so increase spending in local businesses.

Year 11 – Geography – Economic Development

Advantages & disadvantages of TNCs

- A TNC is a transnational corporation. This is a company that operates in more than one country.
- Shell located in Nigeria.

Advantages
- Employs 65.000 people.
- Employs 250,000 in linked industries.
- Pays tax to the government.

Disadvantages
- Oil spills affected habitats, reduced soil quality leading to lower crop yields and affected the fishing industry.
- Profits can go back to the host country where the TNC came from.

How do trade and aid affect Nigeria?

Changes in trade
- Used to trade with the UK.
- Now it imports goods from China and exports to the USA & Europe.

UK aid to Nigeria
- Money used to improve education & water supply.

International aid
- Insecticidal bed nets given to reduce malaria.

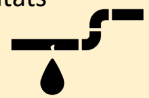
What are the impacts of economic development?

Which TNC has helped Nigeria develop?

- Shell located in Nigeria.
- The company extracted oil.

Impact on the environment

- 80% forest destroyed to build industries.
- 10,000 illegal industries – chemicals pollute water, air pollution
- Bodo oil spill 2008 happened when a ruptured pipeline leaked 600,000 barrels of oil into the area. This polluted rivers affecting habitats and the food chain.



Impact on quality of life

- Life expectancy increased by 13 years
- Literacy rate improved by 7%.
- More reliable income than farming.
- More disposable income.
- Improved infrastructure.
- Better access to clean water, sanitation and healthcare.

What has happened to the UK economy?

What changes have taken place?

- Primary industry & secondary industry have decreased.
- Tertiary & quaternary industry have increased.

Why have the changes taken place?

- Deindustrialisation – factories moved abroad for cheaper labour.
- Containerisation and globalisation – high volumes of goods can be shipped across the worlds- increasing imports.
- Changing government policy – for example between 1979 – 2010 the government sold off state run industries e.g. British Steel.

What is a post-industrial society?

- This is when secondary industry declines, to be replaced by growth in tertiary and quaternary industry.
- In a post-industrial society, the IT industry develops, many people are employed in finance, science parks develop near universities to develop research and business parks develop at the edge of cities.

How has UK industry affected the environment?

Impact of traditional industry

- **Air pollution** from burning fossil fuels and lorries transporting raw materials or goods.
- **Water pollution** – chemicals from wastewater from the production process.
- **Landfill** - Waste products taken from factories.
- **Visual pollution** - Quarries scar the landscape

Can modern industry be environmentally sustainable?

Nissan Cars is an example of a modern industry that is environmentally sustainable.

- Uses 10 wind turbines and 19,000 solar panels to generate 7% of its energy needs.
- CO2 levels have reduced by 22% since 2005, due to changing energy and the less energy intensive production process.
- More parts of the car can be recycled, therefore less parts that are replaced will go to landfill.

Year 11 – Geography - Economic Development

What social and economic changes happen in rural areas?

Positive Impacts on an area of growth

- Increased supply of housing.
- Increase demand in local shops.
- Farmers can make profit from selling land.

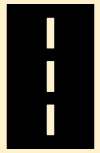
Negative impacts on an area of growth

- House prices can rise forcing out local people.
- Schools and doctors' surgeries are overcrowded.

Negative impacts on an area of decline

- Shops may close.
- Schools close.
- Bus services may reduce.
- Buildings can become derelict.

How has improved transport infrastructure benefitted the UK?



Road

- £15 billion invested –new lanes on motorways and 100 new roads.
- Increasing the capacity of roads, meaning less congestion.

Rail

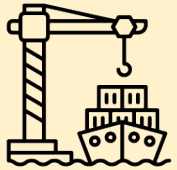
- The HS2 rail link will run between London and north of England to reduce travel time.
- During its construction it will employ 22,000 people.
- It should reduce travel time and thereby improving business links in the north.

Airports

- The proposed new runway at Heathrow will support an increase in goods being sent abroad.
- It will generate around 70,000 new jobs.

Ports

- Liverpool 2 cost £400 million to build.
- The expansion has doubled the capacity of the port to over 1.5 million containers per year and increases global trade.
- It created 5,000 jobs boosting the northwest economy.



How can we reduce the north – south divide?

What is the north – south divide?

- The north – south divide looks at the economic differences between the south of the UK and north of the UK.
- The south of the UK has a better quality of life with higher wages, lower unemployment and a higher life expectancy than the north.

Why does the north – south divide exist?

- In the north of the UK many factories have moved abroad and there has been the closure of coal mines.
- The south of the UK has a growing service sector.

What strategies can be used to reduce the regional differences?

Improve transport infrastructure

- The HS2 rail link will – reduced travel time making the north of England more attractive for industry. However, there is concern they may not be able to fund the build.

Enterprise zones

- In the zones they will reduce costs for businesses by lowering business rates or offering tax reductions, However, these zones also exist in the south, meaning there is no advantage.

How does the UK fit into the wider world?

The UK has many links to the world, although they are changing. For example Britain left the EUin January 2020.

Transport – Eurostar train, many international airports and ports.

Electronic communication –Trans-Atlantic cables with phone and internet connections link us with Europe.

Trade – the UK trades with USA and Asia, its overseas exports are worth over £160 billion per year.

Culture – the UK is small, but have a significant impact on global culture in sport, music, books and TV.

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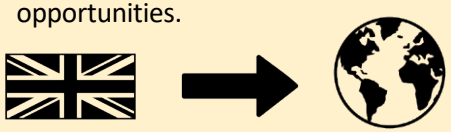
Commonwealth – The King is Head of the Commonwealth. The Commonwealth promotes co-operation between member countries e.g. through sport or trade opportunities.



Year 11 – Geography – Resource Management

What resources are fundamental to development?

Distribution of resources

- HICs access the most resources.
- LICs access the least resources.

Social well – being

- Looks at the health and happiness of people.
- A lack of food will cause malnourishment and starvation.
- A lack of clean water can lead to disease and will lead to sanitation issues.
- A lack of energy, means people have limited access to lighting.

Economic well – being

- Looks at the ability to make money.
- A lack of food mean people will not have the energy to work productively.
- A lack of water will reduce the ability to grow crops and will spend time fetching water rather than working.
- A lack of energy means machines can not be powered to make goods.

How is the demand for food changing in the UK?

The UK now imports 40% of its food because:

- Cheaper food is available from abroad.
- Our climate is unsuitable for some food, for example, bananas.
- There is a demand for seasonal produce all year round.

Why does the UK food needs create a large carbon footprint?

Imported food have larger food miles. This is the distance the food travels from production to consumer.

This increase the carbon footprint, which is the amount of CO_2 released into the atmosphere by an activity.

This is because the planes burn more fuel to transport the goods.

How has the demand changed?

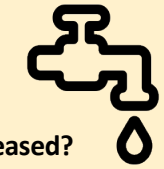
Increased demand for locally sourced foods, reducing food miles.

Increased demand for organic produce. This is where food is grown without using chemicals.

What is agribusiness?

- This is when business skills are applied to farming.
- This means large farms have taken over smaller ones, meaning they can reduce costs when using machinery.

How is the demand for water changing in the UK?



Why has the demand for water increased?

- The demand for water has increased due to an increasing population and an increased use of water in appliances in the home.

How can the UK match the supply and demand of water?

- In the UK, there is a water surplus in the northwest of the UK, meaning supply is greater than demand due to higher rainfall levels and lower populations.
- In the UK, there is a water deficit in the southeast of the UK, meaning demand is greater than supply due to lower rainfall levels and a higher population.
- To solve this problem water transfer schemes can be used, people can install water meters and rainwater can be collected to use in gardens or toilets.

How does the UK control water quality?

- Water in the UK is polluted from fertilisers, chemicals and oil from industrial waste and pollution from vehicles entering the water via surface run off.
- Stricter laws meaning farmers and industry can be fined if they pollute the water.

How is the energy mix in the UK changing?

- We have reduced our use of fossil fuels to reduce levels of CO_2 in the air. However, this can lead to increased unemployment in coalmining areas and as we import these it can reduce our energy security.
- The UK is now using more renewable energy. These produce less greenhouse gases and jobs are available in the manufacture and maintenance of the technology. However, set up costs can be high and some people think wind turbines are ugly and create noise pollution.

Why is the demand for food changing globally?

Pattern of food consumption

- HICs have a higher calorie intake than LICs.
- Africa is the continent where there is more food shortages.
- HIC have greater food security as they can buy or import more food.

Why has the demand for food increased?

- The demand for food is increasing due to a rising global population.
- Today the population is over 8 billion.

Year 11 – Geography – Resource Management

What factors affect food supply?

- Climate –drought or flooding can affect the amount of crops grown.
- Conflict – food supplies can be seized or destroyed during war.
- Poverty – the poorest people cannot afford to buy tools or fertilisers.
- Water stress– drier environment can lead to desertification so crops can not be grown.
- Pests and diseases – spreading due to rising global temperatures.
- Technology– can overcome temperature, water and nutrient deficiencies.

Episode 7: What are the impacts of food insecurity?

Food insecurity is when people do not have access to nutritious food.

Social & economic impacts

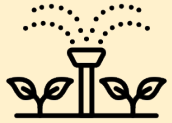
- Malnutrition & undernutrition.
- Famine.
- Rising prices.
- Social unrest and food riots.

Environmental impacts

- Increase in soil erosion.

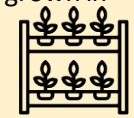
What strategies are used to increase food supply?

- Irrigation – artificial watering of the land.



- Aeroponics –plants are sprayed with a fine mist of water containing nutrients.

- Hydroponics – plants are grown in mineral rich water.



- Biotechnology – Genetically modified crops, to grow crops which are drought or disease resistant.

- Appropriate technology – using skills or materials that are appropriate to the community.
- Green revolution – Use rainwater harvesting, crop rotation & biotechnology to increase yields in Africa.

How successful is the large- scale agricultural development in Almeria?

Where is Almeria?

- Almeria is located in southern Spain.
- It is an area with low rainfall levels.

Features of the scheme

- It has the world's largest concentration of greenhouses, which protect the crops from the wind and help ripen the crops.
- Hydroponics are used in the greenhouses.
- Main crop is tomatoes.
- Have 2 harvests per year.

Advantages

- Produces 40% of Almeria's income
- Makes over US$1.5 billion a year
- Increase jobs - employs 15,000 farmers
- Use of drip irrigation in hydroponics, reduces water usage.

Disadvantages

- Produces 45,000 tonnes of waste plastic per year, which is burnt. This is toxic and hazardous to human health
- Habitats and ecosystems destroyed by the construction of the greenhouses.
- Large scale water use - puts a strain on the local water source.

How can we increase food supplies in a sustainable way?

- **Seasonal food**: Buy seasonal products from local food sources to reduce food miles.
- **Organic farming**: Growing crops/ rearing animals without use of chemicals.
- **Urban farming**: Growing food in and around cities. This can be on balconies, green roof spaces or allotments.
- **Reducing waste and losses:** consume food in order of expiry date, love food hate waste campaign, improved storage e.g. climate controlled warehouses.
- **Permaculture:** encourages farming in harmony with the environment. Uses natural systems rather than artificial pesticides
- **Sustainable fishing:** conserves fish stocks by using quotas.
- **Sustainable meat supplies:** free range or organic.

In Makueni county in Kenya they have built sand dams which is a cost-effective way to increase water supplies to help grow crops.

Year 11 Geography: Paper 3 – Unfamiliar fieldwork skills

Types of Data

- **Primary data** – collected by you.
- **Secondary data** – collected by someone else e.g. the government.
- **Quantitative data** – measures amounts.
- .
- **Qualitative data** – measures opinions

Advantages and disadvantages of data

Primary
Advantage – know how reliable the data is.
Disadvantage – limited sample size, time consuming.

Secondary
Advantage – Large sample size – increasing accuracy.
Disadvantage – unsure of reliability, can be out of date.

Quantitative
Advantage – can be analysed statistically, comparisons can be made.
Disadvantage – can lack important detail and be too generalised.

Qualitative
Advantage – produce in depth results.
Disadvantage – hard to analyse.

Types of Graph

Bar charts

- Show discrete data.
- Discrete data means each value is separate and different.
- Example: the results of a traffic count.

Line graph

- Show changes over time (continuous data).
- Example: CO_2 levels in the atmosphere.

Pie charts

- Show a quantity that can be divided into parts.
- Show amounts or percentages.
- Example: How long people are staying on holiday?

Scatter graph

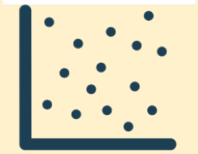
- Show relationship (links) between two pieces of related data.
- A line of best-fit should be drawn on the graph.
- The line will indicate the correlation between the two data sets.
- Example a graphs sowing life expectancy versus income

Dispersion graph

- Easy to compare sets of data.
- Ask your Geography teacher to show you one.

Positive correlation
As one variable increases, so does the other variable.

Negative correlation
As one variable increases, the other decrease.



No correlation
There is no relationship between the two variables.

Using unfamiliar techniques

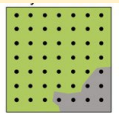
In the exam it is highly likely that you will have questions on techniques you have never seen before. There are some common advantages and disadvantages you can apply to these questions.

Advantages	Disadvantages
• Easy to understand. • No specialist equipment is needed. • No specialist skills are needed. • Quantitative – data can be easily compared. • Qualitative – in depth analysis.	• Subjective – as based on opinions or perceptions. • Be more accurate if equipment was used to measure it e.g. noise. • Unclear what the categories mean.

Year 11 Geography: Paper 3 – Unfamiliar fieldwork skills

Types of Sampling

Random Sampling
Sample taken from anywhere or anyone in an area.



Systematic Sampling
Samples chosen in a regular way e.g. every 5th person or every 10m along the river.

Stratified Sampling
Dividing samples into groups e.g. five people from each age group or three sites from each stage of a river.

Advantages and disadvantages of types of sampling

Random
Advantage – avoids bias, used with large sample sizes.
Disadvantage – can lead to a poor representation of the population.

Systematic
Advantage – simple, better coverage of the study area.
Disadvantage – has bias as not all areas have an equal chance of being covered.

Stratified
Advantage – produces a representative sample as all areas/groups looked at.
Disadvantage – hard to stratify some questionnaire data e.g. knowing people's age.

Remember systematic sampling may not always be possible as sites maybe difficult to get to or can be too dangerous.

Statistical Methods

Mode
This is the most common number found in a set of data.

Mean
All numbers are added together then divided by the total number.

Median
All of the numbers are placed in rank order (lowest to highest), the median is the middle number.
If there are an even number of figures the middle two are selected and the average is calculated.

Range
Difference between the highest and lowest number.

Inter quartile Range
Ask your Geography teacher how to work this out.

Percentages
Percentage can be calculated by dividing the value by the total value, and then multiplying the result by 100.

Percentage increase or decrease
You may be asked to work out a percentage increase or decrease. Use the method given to you by your Maths teacher or ask your Geography teacher for help.

Describing patterns

- What is the main pattern shown?
- Add data from the information given to back up your point.

Suggesting reasons for patterns

- Look at the map, graph or diagram carefully.
- What is the main pattern shown?
- Identify sensible and logical reasons for the pattern.

Unfamiliar questionnaire data

- You may be asked how surveys can be improved or what is another question that can be asked?
- On these questions apply logic.
- Read the question.
- Identify what has been asked already or any problems with the questionnaire data.
- Think of a sensible answer that fits the question.

Risks linked to carrying out fieldwork

You may be asked what the risks would be in different locations. These could by physical fieldwork or human fieldwork locations.
Examples of risks are shown in the table below.

Physical Fieldwork (coasts and rivers)	Human fieldwork (urban areas)
• Uneven ground. • Unstable cliff face. • River current was fast. • Tide could come in quickly. • Poor weather conditions. • Water temperature was too cold.	• Uneven surfaces. • Danger completing surveys near the road, as traffic is busy.

Year 11 – History - Weimar and Nazi Germany (1918-39)

Episode 1 – Why did the Weimar Republic face problems between 1918 and 1923?

1 - Legacy of World War I

- War debt = 150bn marks (1918)
- 750,000 died from starvation due to British Naval Blockade.
- November 1918 = Uprising in Bavaria by Kurt Eisner, **Kiel Mutiny** and Kaiserabdicates, Armistice agreed 11th November – Unpopular as people refused to believe that Germany had lost the war and had been betrayed- **DOLSCHTOSS**

2 - Weimar Constitution

- All men and women over 20 couldvote.
- Elect president every 7 years and **Reichstag** every 5 years.
- Proportional Representation = **9 coalitions** between 1919 and 1923 as there were too many parties(29). Instability - 376 Political murders between 1919 and 1923.
- Article 48 = President rules without the Reichstag in an emergency - BUT – never defined an emergency,

3 - The Treaty of Versailles (1919) - LAMB

- Land - Germany lost 11 colonies, 13% of European land (Alsace and Lorraine to France), 15% of coal reserves and 50% of iron reserves. Rhineland DEMILITARISED – bordered France.
- Army – 100,000 soldiers, 6 battleships, no air force
- Money - £6.6bn in REPARATIONS
- Blame – Article 231: Germany must accept responsibility for the war.

4 – Political Uprisings

Spartacist Uprising (1919)

- Left Wing (Communist)– Led by Liebknecht and Luxemburg
- Retaliation for Berlin Police chief being sacked.
- 100,000 march on Berlin – take over telegraphs and printing presses.
- Put down by the **Freikorp** – demobilised soldiers

The Kapp Putsch (1920)

- .Freikorp march on Berlin - fear being disbanded and want to bring back the Kaiser.
- Army refuse to stop them - "Reichswehr will not fire on Reichswehr" - Government flee Berlin – replaced by Wolfgang Kapp.
- General Strike forces Kapp to stand down – Putsch fails

5 – Economic Problems

- Dec 1922 – Germany stops paying Reparations.
- Jan 1923 France invades the Ruhr – takes over factories.
- Workers go on strike – refuse to work for the French - Germany prints more money to pay striking workers = HYPERINFLATION.
- Nov 1923 – Bread = 200bn marks
- POSITIVES - Debts wiped out
- NEGATIVE- Pensions and savings are now worthless. Other countries won't trade with Germany.

Episode 2 – How did the Nazi Party change between 1919 and 1923?

- Founded 1919 as DAP by Anton Drexler.
- 1920 - Drexler and Hitler wrote 25 Point Programme – Get rid of Treaty of Versailles, Jews to lose citizenship.
- Hitler = Great speaker- spoke at 31/ 46 party meetings between 1919 and 20.
- 1920 - Bought newspaper (People Observer).
- 1921 - Hitler made leader and the SA were set up.
- Membership grew from 2000 in 1921 to 50,000 in 1923.

Episode 3 – Was the Munich Putsch a success or failure?

- The Nazis had grown to 50,000, Hitler was inspired by Mussolini. Stressemann was starting to get a handle on hyperinflation - it was now or never.
- Hitler and SA burst in on a meeting of the Bavarian leaders – leaders agree to support Hitler's rebellion, but later contact the police/ army.
- SA march on Munich and are put down by the army. 14 supporters killed.
- **SHORT TERM FAILURE** - Hitler arrested and imprisoned for 9 months, Nazi Party banned (but weakly enforced and lifted in 1925.
- **LONG TERM SUCCESS** - Trial gives Hitler national publicity, Hitler writes Mein Kampf, the Nazis change direction and try and get elected.

Year 11 – History - Weimar and Nazi Germany (1918-39)

Episode 4 – How far did the Weimar Republic recover between 1923 and 29? The Golden Years/ Stresemann

- Introduced new currency the **Rentenmark**. It was based on property/ gold and therefore kept its value.
- **1924: Dawes Plan** - **Reduced** amount Germany needed to pay in Reparations **each year** to £50million. America would loan Germany $25bn.

- **1929: Young Plan** - **Reduced total reparations** bill to £2bn. Gave Germany longer to pay reparations – 59 years (1988).
- **"RECOVERY BUILT ON QUICKSAND FOUNDATIONS"**
- **1925: Locarno Pact** - Agreement with Italy, France, Britain and Belgium to respect 1919 borders.
- **1926: Joined the League of Nations** – International Recognition.
- **1928: Kellogg-Briand Pact** - 62 countries agree to settle international disputes without going to war.

Life during the Golden Years

- Real wages increased by 10% by 1928 – but savings were still lost from HYPERINFLATION.
- 200,000 homes were built and homelessness was reduced by 60%.

- 1927 = National Insurance.
- By 1926 = 32 Women in the Reichstag, by 1933 = 3000 women drs. and 100,000 women teachers.
- Art = New Objectivity
- Architecture =Bauhaus
- Cinema = Metropolis.

Episode 5 – Why are the Years 1923-28 called the Lean Years of the Nazi Party?

- Ban lifted in 1925
- Create regional branches of the party called Gau – each lead by a Gauleiter
- 1926 – SS set up.
- Bamburg Conference (1926) - Nazis = Nationalist and Hitler in charge of everything (Fuhrerprinzip).

- Vote decreased from 32 seats (1924) - 12 (1928), but membership increased to 100,000 by 1928.

Episode 6 – Why did support for the Nazis increase after 1929? - C.H.O.P.P.O.W'D – The Nazi's went from 12 seats in 1928 to 230 in July 1932/ 197 in Nov 32.

- **Communism (Fear)** - Communists increased vote (17% in Nov 1932) - Farmers and Factory ownewrs were scared of this.
- **Hitler** - gave amazing speeches. The NAzis bought a plane so Hitler could be flown around the country to give speeches.
- **Opposition (weak)** - Brunning used **Article 48 110 times** between 1931 and 32 to reduce government spending on unemployment.
- **Propaganda** – Goebbels produced propaganda to show that only Hitler could solve Germany's problems.
- **Promises** – Nazi's promised work and bread – popular amongst the unemployed.
- **Organisation** – The SA were used to run soup kitchens.
- **Wall Street Crash (1929)** - American Stock market collapsed. Resulting in America recalling loans - 6million unemployed by 1932.
- **Deal** - Von Papen and Hindenburg agree a deal which made Hitler Chancellor in **Jan 1933**. The did this because they thought they could control him.

Episode 7 – How was Hitler able to become a Dictator by 1934? R.E.E.O.N.A

- **Reichstag Fire (Feb 1933)** - Dutch Communist accused of burning down the Reichstag. Nazis able to say this was a Communist plot. Hitler given emergency powers to imprison leaders, ban their newspapers and meetings.
- **Elections (March 33)** - Nazi gain 288 seats.

- **Enabling Act (March 33)** - Passed by 444 votes to 94 thanks to SA intimidation and promises made to the Center Party. Hitler can now make laws without the Reichstag = **DICTATOR**
- **Opposition Removed** - May 33: Trade Unions banned, July 33 – All other political parties banned, Jan 34 – Lander abolished so **all decision can be made by Hitler.**

- **Night of the Long Knives (July 34)** - SA were loyal to Rohm not Hitler and numbered 3million. Hitler used the SS to kill 400 political opponent including Rohm and other SA leaders. This ensured all were loyal to him.
- Army – Following the death of Hindenburg in August 34 Hitlercombined the roles of Chancellor and President (Fuhrer). The army sworn an oath of loyalty to him.

Year 11 – History - Weimar and Nazi Germany (1918-39)

How did Hitler take control

Terror

Hitler used the power given to him by the Enabling Act to increase his control over Germany, this created a culture of fear.

1. **The Gestapo**: Nazi secret police, they used phone tapping, informants and block wardens. People could be prosecuted without a trial.
2. **The SS**: The elite bodyguard made up of Aryan men and ran by **Heinrich Himmler**. They inspired terror in their blackshirts and ran concentration camps
3. **The SD:** An organisation ran by Reinhard Heydrich that used surveillance to find those who criticised the government
4. **Control over the courts**: Hitler created 'people's courts' where anybody who criticised the state could be given the death penalty. All judges that did not support the Nazis were removed

Propaganda

Joseph Goebbels was in charge of propaganda and believed people should also be persuaded to support the Nazis.

1. **Newspapers**: Editors Law meant that newspaper editors were liable for anything their paper wrote, newspapers that criticised the Nazis were closed.
2. **Radio**: radios were made cheap and 70% households had them by 1939, Hitler did speeches on them
3. **Rallies**: Huge rallies e.g. Nuremberg railles showed Nazi power and support
4. **Olympics**: The Berlin Olynpics in 1936 showcased Nazi technology and it was hoped Aryan strength. Black American Jesse Owens won 4 gold medals
5. **Poster**: Simple slogans and visual, swastikas were placed everywhere.

Episode 9- opposition to the Nazis

Church:

Catholics: Hitler signed the **Concordant with Pope** agreeing not to interfere with Catholic Church if they did not interfere with Nazi state. This did not last and Catholic priests were arrested**, Cardinal Galen** was a prominent opponent of Nazi treatment of Jews.

Hitler set up Protestant Reich Church, many pastors opposed this including **Martin Neimoller** who set up his own Confessing Church

Political opposition: The ban on political parties made it very difficult for political groups to meet. Some Communists remained in the Rhineland but were targeted by Gestapo due to their newspaper and posters. Many other Social Democrats fled the country.

Youth: There was cultural opposition from the youth who did not like the Hitler youth movement and banning of Jazz and Swing music.

The Edelweiss Pirates: working class boys who wore their hair long and American fashions, they grew more violent against Hitler

Swing Kids: organised dances and listened to banned swing and jazz music

All opposition to the Nazi's failed due to: 1. Inability to speak out 2. Lack of organisation of opposition 3. People happy with Nazi economic policies

Episode 10- Life in Nazi Germany

Workers: Economy controlled by German Labour Front (DAF)

National Labour Service: 6 months compulsory work for men aged 18-25, physical work e.g. road building

Public Work's Schemes: e.g. Autobahns

Rearmament: 2 years compulsory military service reduced unemployment figures

KDF Strength Through Joy: Leisure activities for workers

Invisible unemployment: women and Jews

Women:

Nazi's used policies and propaganda to encourage Aryan women to stay at home and raise children. This linked to Hitler's idea of Lebesnraum (expanding Germany).

1. **Law for the Encouragement of Marriage**: Loans for married women, 25% of the loan written off for every child they had
2. Mother's Cross: Medals for women with 4+ children
3. **Lebensborn**: Aryan women had children with SS Officers
4. Women not allowed to work in professional jobs

Youth:

Hitler Youth: youth group for young boys aged 14-18 where they did sports, marching, Nazi education and army practice. There was League of German Maidens for girls which focused on motherhood. This was compulsory in 1939

Ethnic Minorities: Nazis believed in eugenics (some races are more 'advanced' than others) all of Hitler's policies were to promote the Aryan race

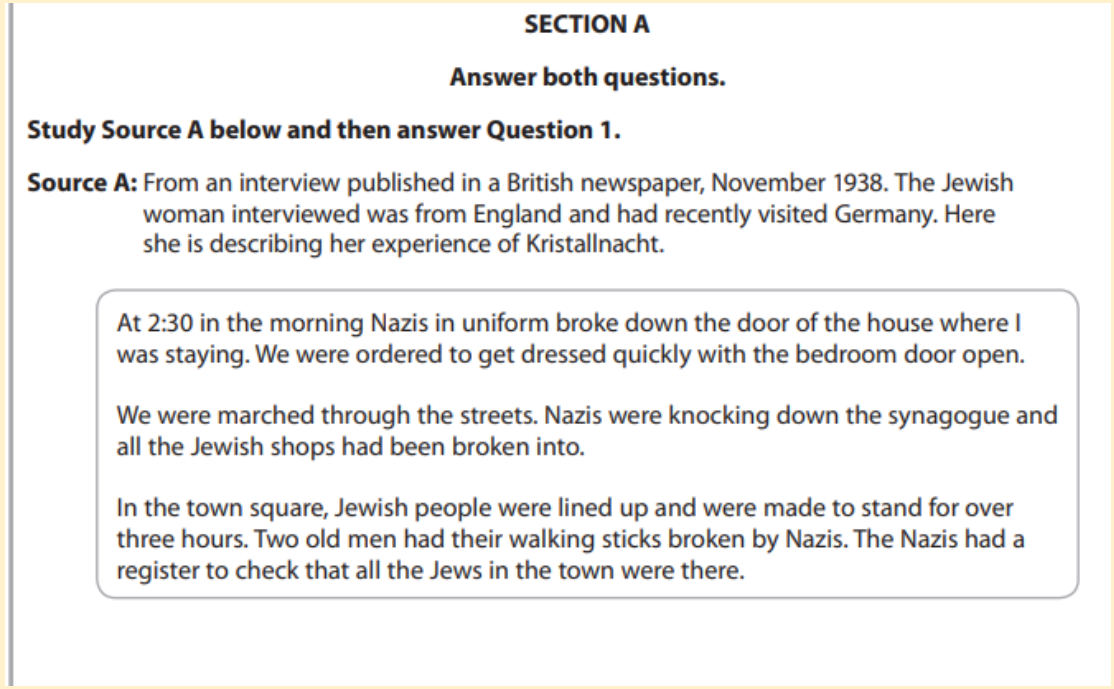
1. **Disability: 1935 Disabled people were sterilised (400,000 by 1939)**
2. **Homosexuals:** Gay men were sent to concentration camps
3. **Slavs:** Eastern Europeans were considered a lesser race and **Roma and Sinti Gypsies** (plans for deportation of gypsies)
4. Jews: Anti-semetic laws e.g. Nuremburg Laws 1935 strip Jews of citizenship, persecution increased with Kristallnacht 1938

Exam technique
Paper 3

Section 1

1. ***Give two things you can infer*** from Source A about… (4 marks) 5 mins

Table (couple of lines) to complete for each inference: what I can infer… and details in this source which tell me this… (quote)



SECTION A

Answer both questions.

Study Source A below and then answer Question 1.

Source A: From an interview published in a British newspaper, November 1938. The Jewish woman interviewed was from England and had recently visited Germany. Here she is describing her experience of Kristallnacht.

At 2:30 in the morning Nazis in uniform broke down the door of the house where I was staying. We were ordered to get dressed quickly with the bedroom door open.

We were marched through the streets. Nazis were knocking down the synagogue and all the Jewish shops had been broken into.

In the town square, Jewish people were lined up and were made to stand for over three hours. Two old men had their walking sticks broken by Nazis. The Nazis had a register to check that all the Jews in the town were there.

2. ***Explain why***… (12 marks= 3 paragraphs) 15 mins

- Given two prompts and add own point

Section 2

3b) Study interpretations 1 and 2. They give different views about… ***What is the main difference between these views?*** (4 marks= 1 paragraph) 10 mins

- Identify an overall difference rather than different pieces of information e.g. is one positive and one negative?

3c) ***Suggest one reason what Interpretations 1 and 2 give different views about***? (4 marks= 1 paragraph) 5 mins

- Give a clear reason for the difference i.e. historians have chosen to focus on different evidence e.g. cultural or economic

3d) ***How far do you agree with Interpretation (1 or 2) about…?*** (16 marks +4 SPAG= 2 long paragraphs and conclusion) 30 mins

- Should use points from the two interpretations and own knowledge
- Need an overall conclusion- which one do you agree with more?

Year 11 – History - The American West (1835-95)

Episode 1 – How did the Plains Indians live on the Plains?

- **Nomadic** - followed the buffalo. Practiced exposure (leaving old people behind)
- No-one could own, farm or mine land as it was sacred.
- Believed in **Wakan Tanka - P**eople communicated with him through music and dance. Also used sweat lodges to have visions

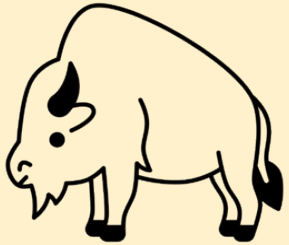
- **Tribes were made up of different bands** - come together on spiritual occasions and each summer.
- T**ribes were governed by a council**. After 1885 the US government set up Federal Courts and sent Children to Christian schools to reduce the power of the Council.
- Plains Indians practiced **polygamy** (more than one wife).

Importance of horses

- Horses were essential to the **nomadic lifestyle**, hunting the Buffalo and in warfare.
- Indians measured their wealth in horses.

Importance of the buffalo

- Crucial to the way of life of the Native Americans- they used every part of it. Tongue = Hairbrush
- After 1883 the number of Buffalo was reduced from 25 million to 200 as part of the Government's attempt to control the Indians.



Episode 2 - Why was there Conflict between the Plains Indians and US government?

- **1830 Indian Removal Act:** Removed 46,000 Indians from the East (Trail of Tears). Established the Permanent Indian Frontier (border – closed in 1890).

- **1851 Indian Appropriations Act: S**et aside **reservations**. Hunting land allocated.

- **1851 First Fort Laramie Treaty:** agreed

1. The government would give the Indians $50,000 per year and protect Indians from migrants
2. The Indians would allow safe travel (if migrants stuck to the Oregon Trail) and the government would be allowed to build roads and army forts.

- **Little Crow's War 1861-62:** Agreed to move to reservations for $80,000 per year (not paid). Land was not suitable for farming.
- Indians attacked and killed 700 settlers. Army called in and Indians forced to move to smaller reservation – 400 Indians died in the first winter.

- **Cheyenne Wars 1862-1864:** Gold discovered in Colorado(1858) - miners moved in **breaking the Fort Laramie Treaty (1851).** Clashed between Indians and prospectors – Army called in.
- Colonel Chivington massacred 150 men, women and children at Sand Creek (1864) and Custer held women and children hostage at Washita (1864). Cheyenne move to smaller reservations.

- **Red Cloud's War 1866-68:** Gold was discovered in Montana (1862). Miners rushed to it along a new route called the **Bozeman Trail.** Broke Fort Laramie Treaty 1851 = Conflict. Captain Fetterman and 82 men were killed and scalped by 1000 Indians. Led to 2nd Fort Laramie Treaty.

- **1868 –Second Fort Laramie Treaty: Bozeman Trail** closed.

- **1868- Grants Peace Policy:** Indians would be treated as wards of the state

- **1871 Appropriations Act:** Easier for the government to take Indian land

Battle of the Little Bighorn 1876: Gold discovered in Black Hills (sacred land) – Sioux refuse to sell for $6million.
Custer's and 200 men attacked 2000 Indians (rather than waiting for reinforcements) and were killed and scalped. The Indians won in the short term but were forced onto reservations by the army becoming dependent on the government for food. All old treaties were ended and the Sioux were forced to give up the Black Hills. US government started the policy of "Kill the Indian, save the man".

Episode 3 - How was the Plains Indians way of life destroyed?

1887 Dawes Act – Split the reservations by giving Indian families 160 acres. Those who accepted became American citizens. Land was poor quality and Indians lacked knowledge to farm so many sold. Therefore Indian land reduced by 50% between 1887 and 1890. Worsening conditions on reservations led to Ghost Dance movement. Suppressed in **Wounded Knee Massacre (146 Indians killed) .**

Year 11 – History - The American West (1835-95)

Episode 4 – Why did people move west?

Push Factors:

- **1837 Economic crash –** 25% lost jobs.
- **Immigration from Europe –** Irish potato famine (1845-49) led to an increased population.

Pull Factors:

- **The Oregon Trail -** Used by 400,000 between 1846-69). Over 2000miles.
- **Mountain men -** Told stories of "**Paradise in the West".**
- Manifest Destiny - It was the destiny or **"God-Given right"** of all US citizens to take over the whole of North America.
- **The Gold Rush -** Gold was discovered in California (1848). Over 25,000 people moved to California by 1849. By 1852 the population had reached 250,000.

- **The Donner Party (1846/47):**
- Took "Hasting's Cutoff" which they thought was a shortcut – Added 100miles.
- Trapped in Sierra Nevada Mountains for the Winter.
- Only 45 of the original 81 survived – some resorted to cannibalism.

Mormons Migration (1846/47):

- Persecuted in the East due to practicing polygamy.
- **Brigham Young let the group to** Salt Lake City. Journey was well planned - kept out of the way of travellers, had rest stops and created a winter quarters in Nebraska – harsh and many died.
- **Made a success of Salt Lake City through irrigation and teamwork – 2000 arrived by 1847.**

- **Pacific Railroad Act (1862) granted the job of building a railroad to two companies.**
- In the West **Central Pacific** (Chinese labourers)
- East = **the Union Railroad** (Irish and ex-soldiers).
- Both were given 6,4000 acres of land alongside the tracks for every mile of track built. This land could be advertised and sold to settlers.
- The track was completed in 1869, with losses of 12,000 people.

Episode 5 – How successfully did the Homesteaders adapt to living on the Plains

- **Homestead Act (1862):** Claim 160 acres – Needed to farmed it for five years. 60% of claims not "proven up."

Problems and solutions Homesteaders:

- **Water shortages –** Built well (300meters deep) and used Windmills (Halliday) to bring water to the surface.
- **Lack of building materials –** Built Sod Houses (hard earth used as bricks) – later railway brought wood to the Plains.
- **Weather extremes –** Dry Farming – plough immediately after rain to trap the water.
- **Difficulty growing crops and ploughing –** Sod Buster Plough, Seed Drills and Turkey Red Wheat.
- Joseph Glidden introduced Barbed Wire which allowed Homesteaders to fence off their claims.
- **Timber Culture Act (1873):** 160 acres of land if planted 40 acres of trees. Failed as the Plains soiland rainfall was simply not suitable to grow trees.

Episode 6 – How did the Cattle Industry change?

- After Civil War ended in 1865, beef was in great demand in the big industrial cities of the North – Cows cost $5 in Texas due to over population, but $40 in Chicago. Solution – Move the Cows to the North.

The Goodnight Loving Trail (1866):

- Opportunity to sell cattle directly to new population centres in the West.
- Opened a trail through the West to Fort Sumner, New Mexico and made $12,000.

Abilene:

- Cattle transported easily using the railway.
- **Joseph McCoy created the cow town of Abilene** in 1867 – at the end of Chisholm Trail. 35,000 cattle were driven along the Chisholm Trail to Abilene by the end of 1867 where they were transported East using 100 railway carriages. Later they developed refrigerated rail carriages.

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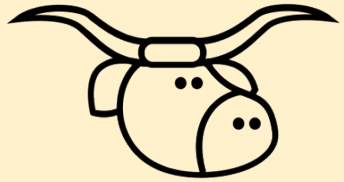
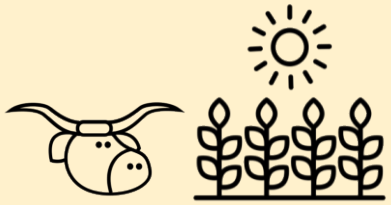
The 'open range' :

- John Illiff discovered that cattle could survive the winter on the Plains – reduced the need for Cattle Drives.

BUT: Winter of 1886/7 led to 15% of Open Range cows dying. Result = smaller farms and selective breading.



Year 11 – History - The American West (1835-95)

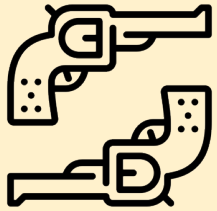


Johnson County War (1892):

- Between cattle barons and homesteaders. about the control of land and resources.
- Ranchers unhappy that the homesteaders had claimed land that they wanted to graze their cattle.
- The conflict in Wyoming followed the hanging of two homesteaders. The small ranchers announced a round up of cattle earlier than the WSGA – the big ranchers. Fearing they would take their cattle the WSGA hired gunmen to kill suspected cattle rustlers.
- The invasion failed as they got involved in a shoot out with rancher Nate Champion who was killed. The invaders were surrounded and arrested.

Consequences of the Johnson County War:

- The invaders were set free
- The cattle barons continued their dominance but the WSGA agreed to let small ranchers join
- It showed that vigilantism continued throughout the west but showed people would not accept it and fought back.



Episode 7 – How did the end of slavery impact westward migration?

The Exoduster Movement, 1879 :

- Freed Slaves who moved West. 1880s: 56,000 (Oklahoma), 43,000 (Kansas).
- Conflict with the white homesteaders who had already settled there.
- Land claimed was poor quality so difficult to make a living from.

Episode 8 – How did the California Gold Rush impact the West?

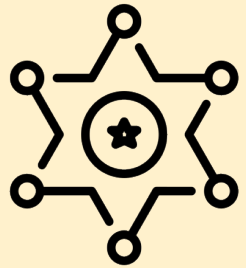
- 1848 – Gold discovered in Sierra Navada mountains.
- 1849, - The population of California grew from 15000 in 1848 to 250,000 in 1852 (10% from China). Attracted crooks, bandits, gamblers and outlaws who migrated West to live in all male communities which were full of violence, alcoholism and prostitution
- Chinese miners came to escape rebellion. Most arrived under the Credit Ticket System- companies paid for their ticket. Racism towards Chinese immigrants was a serious problem.
- Claim jumping' - miners would stealother miners claims to land.

Episode 9 – Why was the West so lawless?

- Distance – hard to cover such large areas
- Poverty – after much of the initial gold was claimed many struggled to earn money
- Land claims and conflict between groups. For example, the population of Abilene would increase from 500 to 7,000 during the peak season for the cattle trade leading to lawlessness
- Ineffective court system and corruption
- Vigilantes – people taking law in their own hands, rarely working out.

Episode 10 – How successfully were issues of lawlessness addressed?

- **Vigilante groups** began as a way to deal with a crime wave in San Francisco in 1851. They quickly spread out to Gold Rush mining camps and other settlements across the west as a way of responding to serious crimes.



- **County Sheriff-** elected official responsible for law enforcement. Ran the county jail and employed his own deputies. Town constable/city marshal-elected official- appointed own officers or policemen.
- **The militia-** During the Civil War western towns raised militia units to replace the regular army- In Aurora there were 2 militia- The Esmeralda Rangers and the Hooker Light Infantry- until the end of the Civil War in 1865.
- **The courts-** There was a Justice Court, a District Court and a Coroners court to record any deaths. The Grand Jury- investigated public offences and handed down indictments, which would go to trial. Members were drawn from registered voters in the country
- **O**ften the justice system was ineffective and often bribed by local gangs

1. ***Explain two consequences*** of (2x4 marks= 2 paragraphs) 10 mins

2. ***Write a narrative account*** analysing… (8 marks= 3 paragraphs) 15 mins
   - Explain how events led to an outcome. **Start → this led to → the consequence**
   - You are given two prompts to help you. You need three points.

3. ***Explain the importance of ___ for _____*** (2x8 marks= 2 paragraphs per question) 25 mins
   - You are given 3 question options- pick 2
   - Explain the importance of events and developments
   - Must explain how they led to the event/ theme mentioned

Practice Narrative Questions

Narrative (8-mark question)
Write a narrative account analysing the main developments in US Government policy towards the Plains Indians in the period 1836-61.
You may use the following in your answer:
- The movement of the Bureau of Indian Affairs
- The Fort Laramie Treaty of 1851 You must also use information of your own

Write a narrative account analysing why Americans went west in the years 1836-49.
You may use the following in your answer:
- The Oregon Trail from 1836.
- The California Gold Rush of 1849. You must also include information of your own.

Write a narrative account analysing the ways in which homesteaders solved the problems of farming on the Great Plains in the years 1862-76.
You may use the following in your answer:
- The development of the railroads
- The invention of barbed wire You must also use information of your own

Write a narrative account analysing the development of the Johnson County War, 1892.
You may use the following in your answer:

Year 11 – RSMS - Christian Practices

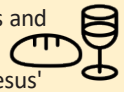
"No one can enter the kingdom of God unless they are born of water and the Spirit." (John)

Forms of Worship

There are four main types of worship that Christians can engage in:

- **Liturgical worship**
- **Non-liturgical worship**
- Informal worship
- Private worship

Christians can be involved in all four of these forms of worship. Examples of activities that may take place at some or all of these forms of worship are readings from the **Holy Bible**, prayers and the **Eucharist**.



Sunday is regarded by Christians as the **Sabbath** because Jesus' resurrection happened on a Sunday. It is also a reminder to Christians that God rested on the seventh day of creation. Most churches have their main service on a Sunday morning

Liturgical worship

Liturgical worship is a church service that follows a set pattern of prayers and readings, usually found in a printed book.

Christians who participate in liturgical services may feel connected to other worshippers as they are following the same traditions.

As a **congregation**, Christians often participate together, repeating key information and singing hymns.

Non-liturgical worship

Non-liturgical worship is more informal and has less structure, and the elements can be tailored to different types of services. For example, the **sermon** could be on a topical theme, and prayers could be in the service leader's own words rather than those written in a book.

Informal worship

Informal worship focuses on the adoration of God and is not always carried out in a church. Often, large **auditoriums** are used.

Frequently the music used during informal worship is popular and modern in style, and instruments are commonly used.

Charismatic worship is a kind of informal worship. Although Charismatic services have recognisable Christian features, such as prayers and readings, they are very free-flowing services.

Prayer

Prayer is how Christians communicate with God, through both talking and listening and being open to the guidance of the **Holy Spirit**. It is a two-way method of communication that gives Christians comfort as they feel that God is listening and may send messages back.

Jesus spoke often about the importance of prayer, as he felt it deepened a person's relationship with God. Similarly, many Christians believe that prayer can bring them closer to God.

Christians often use formal written prayers, which are often memorised in order to be recited both publicly and privately. An example of this is the **Lord's Prayer**, which was the prayer that Jesus taught his followers when they asked him to pray. This can be found in the Anglican Book of Common Prayer.

Christians also use informal prayers, which are personal and allow individuals to connect with God.

- **A**doration - Praising God, eg "Dear God, I know that you are all-loving…"
- **C**onfession - Saying sorry, eg "Please forgive me for the horrible things I have said about…"
- **T**hanksgiving - Thanking God, eg "Thank you for the amazing weather this week…"
- **S**upplication - Asking for something, eg "Give me strength to…"

A fifth common component is intercession:

- Intercession - Praying for someone who may be ill, eg "Please remember my cousin, who is ill, and help them to heal after their operation."

The Lord's Prayer

"Our Father, which art in heaven, Hallowed be thy Name. Thy Kingdom come. Thy will be done in earth, As it is in heaven. Give us this day our daily bread. And forgive us our trespasses, As we forgive them that trespass against us. And lead us not into temptation, But deliver us from evil. For thine is the kingdom, The power, and the glory, For ever and ever. Amen."

The Sacraments

Anoi nting, Baptism, Communion, Confirmation, Holy Orders, Marriage, Reconciliation

Infant Baptism

Some Christians believe baptism makes a Christian a member of God's family. In many denominations babies are baptised, and this is known as infant baptism.

For **Orthodox Christians**, infant baptism involves **total immersion**. However, other denominations make the sign of the cross on the baby's head using oil and use **holy water** on the forehead.

"Jesus' instructions were to "baptise in the name of the Father, Son and Holy Spirit", so these words are said during a baptism." (Matthew)

Believers Baptism

Baptists and **Pentecostals** believe baptism should only occur once somebody is an adult, as it is then that the individual can accept Christianity for themselves. This type of baptism is called believers' baptism.

It is done using total immersion, where the person being baptised walks down into a pool and is fully submerged three times before walking out into their new life.

Some Christians prefer believers' baptism because Jesus was baptised as an adult and because, as an adult, you are able to make decisions for yourself.

Evangelism involves converting people to Christianity. It often goes hand in hand with the activities of missionaries. Some Christians feel that they should take on this role as they believe that they can help people to discover their real purpose in life.

While some evangelists tell people directly about God, others try to show God's love through their actions. For example, Gideons International, an association of evangelical Christians, donates copies of the Bible to hotels and hospitals in the UK and around the world.

Year 11 – RSMS - Christian Practices

Eucharist

The **Eucharist**, also known as **Holy Communion**, is a sacrament that commemorates the **Last Supper**. Not all Christians celebrate this sacrament. The most important element of the Eucharist is the bread and the wine, but there are varying beliefs about the roles of these items.

- **Belief 1 - Catholics** believe that the bread and the wine become the actual flesh and blood of Jesus Christ. This belief is known as **transubstantiation**.
- **Belief 2** - Some Christians believe that the Holy Communion is a re-enactment or commemoration of the Last Supper. The bread and wine are seen as symbolic of Jesus' death.
- **Belief 3 - Baptists** believe the bread and wine are symbols that can be used to bring people together as a community. They use non-alcoholic wine and the bread is offered from person to person.
- **Belief 4 - Orthodox Christians** believe that Jesus is mystically present in the bread and wine.
- **Belief 5 - Church of England** Christians believe that the bread and wine hold the spiritual presence of the body and blood of Jesus but do not become it.

Pilgrimage

A pilgrimage is a journey that has religious or spiritual significance. The journey is usually taken to an important religious place. There are many sites of Christian pilgrimage, several of which are mentioned in Bible stories about the life of Jesus, including **Jerusalem**.

Lourdes

- Lourdes is a famous pilgrimage site in France where the waters are believed to have healing powers.
- In 1858, Bernadette Soubirous, a young local girl, was said to have seen the **Virgin Mary** at Lourdes and her friend was said to have been healed in the waters. Bernadette was made a saint by Pope Pius XI in 1933.
- Often the water is taken home by pilgrims, and there have been many more stories of healings.

Iona

- Iona is a quiet island in Scotland where a **monastery** was built by Columba, a **monk**. It is often visited by pilgrims.
- Christians go there to study the Bible and pray, which may lead to spiritual growth. People often feel that they benefit from having their lives redirected or feel that they learn something about themselves while in Iona. This can allow Christians to face the challenges of life back at home in a different way.

Christmas

Christmas celebrates the birth of Jesus, as told in the **Gospel** of Matthew and the Gospel of Luke. The festival of Christmas does not fall on Jesus' actual birthday, and different **denominations** celebrate it on different dates. **Protestant** and **Catholic** Christians celebrate Christmas on 25 December, while **Orthodox Christians** celebrate it on 6 January.

Easter

Easter begins with Lent, which is the name given to a period of 40 days leading up to the day of **resurrection**.

The week leading up to the resurrection is known as **Holy Week** and there are special services held in Christian churches across the week:

- **Palm Sunday** - On this day, the four gospels state that Jesus entered Jerusalem on a donkey. The people were overjoyed to see him, and they showed their love for him by waving palm branches as he passed by. Palm crosses are given out during Christian services as a symbol of this event.
- **Maundy Thursday** - On this day, Jesus hosted the **Last Supper**, which was followed by his arrest in the **Garden of Gethsemane**. This day marks the beginning of a time of sadness and reflection for Christians.
- **Good Friday** - Jesus' **crucifixion** and death. Traditionally, some Christians commemorated this with a day of fasting or by ending the Lent fast and eating **hot cross buns**. Today, many churches hold services during the afternoon at a similar time to when Jesus died (3pm). Some Catholics may hold a procession called the Stations of the Cross, which re-enacts the final journey of Jesus when he carried his cross to his crucifixion. There is a series of 14 stops, all of which remind Catholics of the events that happened during Jesus' final day.
- **Easter Sunday** - Jesus' resurrection. Some churches hold a **vigil** on the Saturday evening before a service on the Sunday. For Christians, Easter Sunday is a day of joy to celebrate what God has done for humanity. Cards are swapped and in the UK, chocolate Easter eggs are given and eaten by Christians. The eggs symbolise new life and, for some Christians, they remind people of the shape of the boulder that rolled away from the entrance of Jesus' tomb. People of other faiths and those who do not hold religious beliefs may also enjoy exchanging chocolate eggs because they are freely available in shops.

Role of the Church

Charity

The following charities are three examples of Christian organisations that spread Christianity's key messages through international action. They provide both emergency short-term and long-term aid locally and globally. These charities each fundraise within the UK and internationally, and use the media to highlight their campaigns. There are many other Christian charities around the world.

CAFOD

The **Catholic Agency for Overseas Development** (CAFOD) works to fight poverty and injustice around the world. It works through churches in places that have suffered natural disasters, aiming to give people the skills to help themselves.

Christian Aid

Christian Aid was set up after **World War Two** to help refugees in Europe. It now works in disaster zones around the world.

Every year, during Christian Aid Week, the organisation asks each household in the UK to give money to help continue its work to end poverty throughout the world. Christian Aid projects often use the skills of local people to improve life for the community.

Tearfund

Tearfund is an **evangelical** organisation that aims to help to end hunger all over the world. It cares for **refugees** in particular.

Often young people from within the congregation are encouraged to spend time overseas helping on projects. Various kinds of aid are supplied, but there is a large focus on spiritual need, not just physical, and Tearful has set up over 67,000 churches.

Mission

According to the **Gospel** of Matthew, Jesus told his disciples that they should spread his message throughout the world and should try to **convert** people to Christianity.

Missionaries spread the Christian message abroad, not necessarily only through **preaching**, but through their actions too - for example, helping with development projects. This is how Christianity as it is known today has spread across the globe.

Year 11 – RSMS - Theme C: The Existence of God

Christianity	Islam	Hinduism
Monotheism - Christians believe that there is only one God. They are monotheists. **Trinity** - most Christians believe that there are **three distinct parts** (usually referred to as Persons) to this one God and that these three aspects form a unity. This belief is called the doctrine of the Trinity: **God the Father** - the creator and sustainer of all things. **God the Son** - the **incarnation** of God as a human being, Jesus Christ, on Earth. **God the Holy Spirit** - the aspect of God which is active in the world, drawing people towards God.	Muslims believe that Allah: • is the one true God - all worship and praise is directed towards him • should be treated with respect as he is the supreme being • is the creator, designer and sustainer of the world The word **Tawhid** is used to describe the **oneness of Allah**, which is the fundamental belief of Islam. It means believing in Allah, believing that he is the one and only God. It helps Muslims to think of Allah as the centre point of life.	Many Hindus believe in **Brahman** as the ultimate reality – one 'Supreme Spirit' in many forms. Brahman is male, female and even animal. Brahman is also commonly understood as the **Trimurti** - three gods with three key functions: **Brahma** - the source of all creation. **Vishnu** - responsible for keeping all good things on Earth and bringing harmony when needed. **Shiva** – assists in the creation of new things – some things have to end for others to begin. However many Hindus believe in Vishnu or Shiva as the one Supreme **Deity**.

Key Ideas

Nature of God

Omnipotent, Omniscient, Benevolent

According to the Bible and Christian teachings, God is **omnipotent** (all-powerful), **omniscient** (all-knowing) and **benevolent** (all-loving).

Problem of Suffering

This however leads to the Problem of Suffering. If God is all-powerful and all-loving **why does so much suffering exist in the world?** Some people see this as an argument against God's existence.

Personal vs Impersonal

Different Christians have different views on God with some seeing them as personal and some as impersonal.
A **personal God** has human characteristics and Christians can form a relationship with them through prayer.
An **impersonal God** is mysterious and unknowable and has no human characteristics. More like an idea or a force than a human being.

Transcendent vs Immanent

They also disagree about God's place in the world.
A **transcendent God** exists beyond and outside of life on earth and is not limited by the laws of physics or the rules of time and space.
An **immanent God** is active and involved in life on earth and can play a role in events that happen here. This could be through the Holy Spirit answering prayers for example.

Key Words

Atheist	Someone who does not believe a God exists	**Omnipotent**	God's nature as all-powerful
Benevolent	God's nature as all-loving and all-good	**Omniscient**	God's nature as all-knowing and aware of all that has happened past, present, future
Faith	A commitment to God and religion that goes beyond proof	**Personal**	God's nature as merciful, compassionate and something humans can relate to
General Revelation	God making themselves known through ordinary experiences open to all	**Proof**	Evidence that shows something is true or existent
Immanent	God's nature as present in and involved in the world	**Special Revelation**	God making themselves known through extraordinary experiences
Impersonal	God's nature as non-human, unknowable and mysterious	**Theist**	Someone who believes in a God or Gods
Miracle	A remarkable event that cannot be explained by science alone	**Transcendent**	God's nature as beyond our understanding, existing outside the universe

Year 11 – RSMS - Theme C: The Existence of God

Key ideas	
Design Argument	The **Design Argument** argues that God must exist because the world around us is so intricate and well-designed that there must be an intelligent creator behind it. **William Paley** puts this forward in his **Watchmaker's Argument** that says if you found a watch in the grass you would not assume its intricate mechanism had come about by accident, you would assume someone had created it. The same applies for the world around us. Atheists argue that nature and science are responsible for the world around us and that much of the so-called design is the result of **chance** and **natural selection**. Also, maybe God did once exist and designed the world but has since died. Just because something looks designed doesn't mean it is! Penicillin is a very important medicine which was created by accident. The post it note is also a great design, but it was created by accident and not designed.
First Cause Argument	The **First Cause Argument** was put forward by **Thomas Aquinas** and it argues that there has to be an **uncaused cause** that made everything else happen and that must be God. It argues that nothing moves without first being pushed and that God is the only possible being that can exist with no cause as God is **eternal** (never beginning, never ending). Gods existence is necessary to have created the movement in the first place that caused the Big Bang. Atheists argue that by this logic **God must have a cause** or that if God is eternal then the universe itself could be eternal as well. Aquinas may have been rather biased and lacking in quality evidence back in the 13th Century though. He clearly had not spoken to everyone or seen everything to ensure his theories were true. He also does not consider the God could have created an imperfect world and not be able to fix it.
Argument from Miracles	The **Argument from Miracles** argues that **miracles** (a remarkable event seemingly only explained by God's actions) prove that God exists. They argue that these events (like Jesus walking on water or people coming back from the dead) **cannot be explained by science** and that they must be the result of God's intervention. An act of God. Aquinas' 3 Types of Miracles 1. Those things which only God can do and which nature can not do (these are supernatural events, such as the creation of something from nothing) 2. Those things which nature can do, but which are not in the usual order (for example, nature can give sight but not, in its normal operation, after blindness. Jesus' healing of Blind Bartimaeus is an example of this kind of miracle). 3. Those things which nature can do, but which are without the usual principles (for example, a crop that grows without seed). Atheists argue that miracles are not more than happy coincidences and that they can be explained either by **science** or people being **delusional** or **lying**.
Special and General Revelation	**Special Revelation** This is a form of revelation where God reveals themselves through **remarkable experiences** usually only open to one or a small group of people. These could be **visions** (seeing Mary, God or Jesus), **dreams**, **miracles** or **hearing God's call** directly. In the Bible **Saul** experiences a vision of Jesus on the Road to Damascus and this causes him to believe in God, change his name, and preach the Gospel **General Revelation** This is a form of revelation where God reveals themselves through **ordinary experiences** which are open to all people to experience. This could be through **nature** where God's creation is revealed in the intricacy of the human eye or the beauty of the Grand Canyon. It could be through **scripture**, God reveals much information about themselves in the Bible.

Year 11 – RSMS - Theme D: Religion, Peace & Conflict

Reasons for war

- There are many reasons for war, often they are a combination of factors.
- **Greed**: ne country or people want what another has and tries to take it. Christians are against this as it breaks the Decalogue 'Do not covet' and it is against the Golden Rule.
- **Self-defence**: One country or people must defend themselves if attacked e.g. World War II. The Pope said that it is a duty to defend each other.

- **Retaliation**: One country is attacked and so they try to get back at the attackers e.g. war on terror in Afghanistan and Iraq after the Twin Towers attack. Religious groups are divided on this due to teachings such as 'eye for an eye' and 'blessed are the peace makers' which suggest different things.
- Other reasons can be social, political and moral (defending people who can't defend themselves).

Terrorism

This is when a group of people use violence to get governments to give them what they want e.g. ISIS.

All religions think that terrorism is wrong as it is unjust and kills innocent people which goes against the Decalogue, 'love your neighbour' and the Golden Rule.

Religion as a cause of war

In the world today there is strong belief that religion causes war. This can be the case when you think of ISIS and the actions of the IRA in Ireland, however usually there is political motivation too. 93% of wars are caused by something other than religion e.g. wars in Syria and Libya was caused by oppression of the people by their leaders.

Others would argue that religion does cause conflict e.g. ISIS believe that traditional Islam is the correct religion that should be followed.

Weapons of mass destruction (WMD)

These are weapons which cause damage to people and the environment indiscriminately – they hurt anyone in their path regardless of whether they are a civilian or military. WMD are nuclear weapons, biological weapons or chemical weapons. Most people are against their use because they hurt innocent people and damage the environment. An example of the use of each weapon is:

- Nuclear: During WWII the US bombed Hiroshima in Japan killing thousands almost instantly
- Biological – 2001 anthrax was mailed to news media centres and senators killing 5 people
- Chemical – 1995 sarin gas was released during a terror attack on subway in Tokyo, Japan killing 12 people

Nuclear weapons

All religious people **<u>are always against</u>** their use due to 'do not kill', 'love your neighbour', the Golden Rule etc., they harm innocent people and bring suffering.

Some religious people may agree with having them **<u>but not using them</u>** as they act as a deterrence. This can prevent war as no-one would attack as it would mean mutually assured destruction.

Some people would argue that they are pointless as most countries will never use them so what's the point in having them, they also are costly to build, replace and maintain.

Violent protest

Many Christians believe that violence is not the answer. People often get hurt which goes against "Do not kill, 'love your neighbour' and the Golden Rule. It also goes against St. Paul 'Obey the State authorities'. Martin Luther King showed that non-violence works.

Others say that sometimes it is necessary as other ways don't always work. Bonhoeffer used violence to try to kill Hitler as other methods just didn't work. He said it was the 'most loving thing' and he was showing love to his neighbour.

Reconciliation

Forgiveness is very important in religion. If we expect God to be all loving then we should also be.

Corrie Ten Boom – Dutch girl who was captured by the Nazi's and her family was killed. When giving talks on the Holocaust she met a SS guard who had guarded them in Ravensbrook Concentration Camp, as he held out his hand to shake her hand she fought with her emotions to refuse it but she decided that she should use agape and the example of Jesus I her actions and took his hand.

Eric Lomax – was captured and tortured by the Japanese during WWII. He learnt that the interpreter, Nagase had helped the Allies to locate the war dead. Lomax had said he would kill him if he ever saw him again, but he forgave Nagase when he said he was sorry.

Reasons for war

There are many reasons for war, often they are a combination of factors.

Greed: One country or people want what another has and tries to take it. Christians are against this as it breaks the Decalogue 'Do not covet' and it is against the Golden Rule.

Self-defence: One country or people must defend themselves if attacked e.g. World War II. The Pope said that it is a duty to defend each other.

Retaliation: One country is attacked and so they try to get back at the attackers e.g. war on terror in Afghanistan and Iraq after the Twin Towers attack. Religious groups are divided on this due to teachings such as 'eye for an eye' and 'blessed are the peace makers' which suggest different things.

Other reasons can be social, political and moral (defending people who can't defend themselves).

Year 11 – RSMS - Theme D: Religion, Peace & Conflict

Pacifism

This means people refusing to fight as a way to keep the peace. Many people think that not using violence is the best way to solve problems. People can protest, hold peace talks, countries can issue sanctions to force a country to behave. If people don't retaliate then it shows them to be the better person (as Martin Luther King did). Many would argue that **forgiveness** and **reconciliation** are better than violence as it allows people to move on and prevents war breaking out again, or continuing. Corrie Ten Boom and Eric Lomax are examples of people who forgave and reconciled with their enemy, both said it actually made them feel better.

Many Christians support pacifism as Jesus said "Blessed are the peacemakers." Also, it follows the Decalogue "Do not kill" and Golden Rule etc. Keeping the peace prevents death and destruction which destroys God's creation. Forgiveness and reconciliation also follows 'forgive not seven times but seventy times seven.

War and violence

Some may argue that actually war is necessary, even though it is not liked, as it can lead to justice. At times war can be the 'lesser of two evils' e.g. if defending people such as in WWII. Sometimes a country has to fight back or seem weak which leads them open to further attack e.g. Britain had to fight for the Falklands

Some Christians think that war may be acceptable because in the Old Testament it teaches 'God is war' and there are many examples of God instructing people to fight in his name. The Just War Theory also allows war under certain conditions, and the Bible teaches 'an eye for an eye'. The Qur'an teaches that Muslims who die in holy war will go to paradise. Jesus also said 'if you don't have a sword, sell your cloak and buy one.'

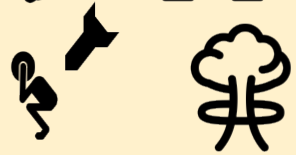
The Just War Theory

Just means fair. This is a set of rules which tells Christians:

a) When it's ok to go to war and be fair
b) How to act when at war and be fair

It was created by St Aquinas as Christians were unsure how to follow Jesus' teachings about love yet live in a world where war was always around them. To be a Just war ALL rules need to be followed.

1. It must be declared by those in authority
2. There must be a just cause
3. There must be a reasonable chance of success
4. The intention behind the war must be good
5. All other ways of resolving the problem should have been tried first
6. The means used must be in proportion to the end that the war seeks to achieve
7. Innocent people must not be deliberately targeted
8. Only appropriate force can be used



Holy War

This is a war fought in the name of religion e.g. the Crusades. The Bible and Qur'an teach that holy wars can be fought. In Islam a holy war has rules which are virtually the same as the Just War Theory. The only exception is that farm land must not be deliberately destroyed to ensure that people can get back to normal as quickly as possible. Islam is clear that war should not go too far, do what is necessary but no more – 'Do not transgress, for God hates transgressors.'

Peace-making in the contemporary world

A non-religious organisation is the United Nations. This is a group of 193 countries who try to keep world peace through trade sanctions, diplomacy and their peace keeping army.

Pax Christi and Christian Aid both work for peace though using the millions of Christians worldwide to support each other. They try to stop causes of war through giving aid to troubled areas, they lobby governments to try to intervene, they give sermons on the need for peace etc.

Helping victims of war

All believers think that helping victims of war is good. These people are innocent and made 'in the image of God.' Jesus taught people to 'love their neighbour' and the Golden Rule. War causes suffering to people and the aim of Buddhism is to relieve suffering. Muslims follow the teaching 'love your neighbour near and far' and believe that everyone is a member of the ummah – the Muslim community.

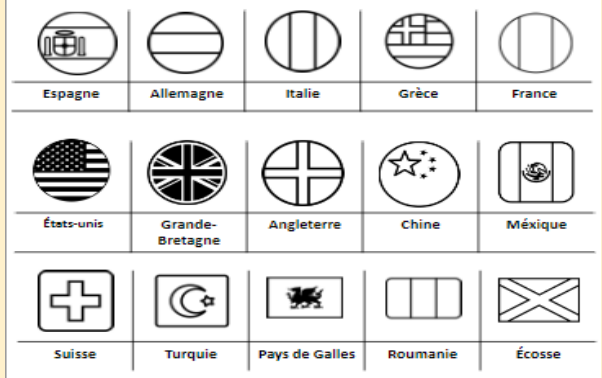
Year 11 - French - Le grand large/ the big wide world

AO phrases

On peut y + (verb)
One can + (verb) there
Si je pouvais, je voudrais...
If I could, I would like to…
Ce que (opinion) c'est que
What (opinion) is that
Qu'est-ce que vous me recommandez?
What do you recommend?
Je doute que ce soit
I doubt that it's
J'ai peur que ce soit
I'm afraid that it's

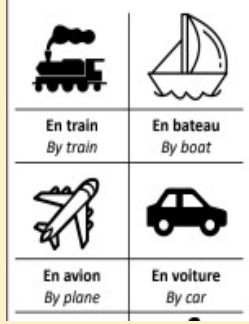
I can name a variety of countries

D'où venez-vous?	*Where are you from?*
Je viens de...	*I am from...*
Où allez-vous en vacances?	*Where do you go on holidays?*
Je vais en vacances en/au/ aux...	*I go on holiday to...*
Les saisons	*Seasons*

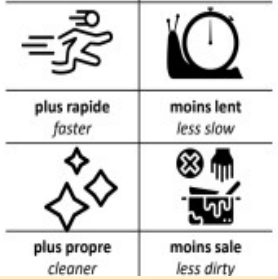


I can describe types of transport

Aller	*To go*
Voyager	*To travel*
Le transport	*Transport*
L'aéroport	*Airport*
La gare	*Train station*

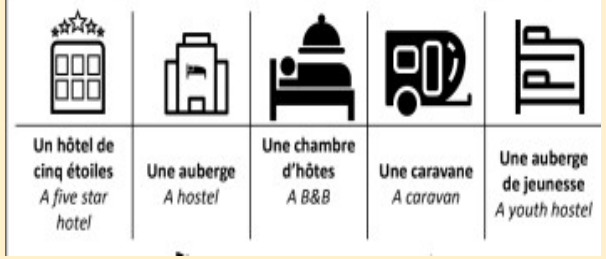


Je préfère ça	*I prefer it*
parce que c'est	*because it is*



I can describe types of accommodation

Je loge dans...	*I stay in*
J'ai logé dans...	*I stayed in*
Nous logeons dans...	*We stay in*
Nous avons logés dans..	*We stayed in*



C'est	*It is*
C'était	*It was*

Sale	*Dirty*	Bon marché	*Cheap*
Propre	*Clean*	Confortable	*Comfortable*
Vieux	*Old*	Luxeux	*Luxurious*
Animé	*Lively*	Bruyant	*Noisy*
Cher	*Expensive*	Tranquille	*Quiet*

I can describe a range of holiday activities

The conditional tense

This tense refers to actions that you would do or how things would be. It's the tense most used when using your imagination.

Let's look at forming the **conditional tense**. There are three steps. Nearly all verbs follow this rule.

Step one: Decide on the verb you need. Then, take its infinitive form.

voyager= to travel

Step two: Add the pronoun you need. For now, we will use "je"

Je + voyager

Step three: Add the correct ending depending on your pronoun.

Je + voyagerais = I would travel

The ending of the verb will change depending on who is doing the action.

Pronoun	Ending
Tu (you)	-ais
Il/elle/on (he/she/we)	-ait
Nous (we)	-ions
Vous (You formal/group)	-iez
Ils/Elles (they)	-aient

Year 11 - French - Le grand large/ the big wide world

AO phrases

J'ai dû + infinitive
= I had to …
Je voulais + infinitive
= I wanted to …
Le pire c'était quand…
The worst thing was when
J'y suis allé(e)/resté(e)
= I went/stayed **there**
Quand je peux, j'aime + infinitive
= When I can, I like + infinitive
J'ai toujours aimé/voulu + infinitive
I've always liked/wanted + infinitive

I can describe a range of holiday activities

En ville			*In the city/town*
Flâner les rues *Wander along the streets*	Faire du shopping *Go shopping*	Faire du tourisme *Do sightseeing*	Prendre des photos *Take photos*
Voir un match *Watch a match*	Visiter un musée *Visit the museum*	Découvrir l'histoire *Discover the history*	Profiter du quartier *Enjoy the neighbourhood*
Faire de la promenade *Go for a walk*	Monter la tour *Go up the tower*	Faire un excursion *Go on a tour*	Faire du skate *To skate*

À la maison			*At home*
Se détendre/se relaxer *Relax*	Lire *Read*	Cuisinier *Cook*	Regarder la télé *Watch TV*

I can describe accommodation problems

Je veux déposer une plainte	*I want to make a complaint*
Il y a beaucoup de problèmes	*There are lots of problems*
Je veux parler à la direction	*I want to talk to the manager*
Je veux changer la chambre	*I want to change rooms*

L'ascenseur ne fonctionne pas *The lift doesn't work*	La climatisation ne fonctionne pas *The air-con doesn't work*	La douche est sale *The shower is dirty*	La lumière ne fonctionne pas *The light doesn't work*	La chambre est sale *The room is dirty*

Il y a des rats dans le lit — *There are rats in the bed*

Il n'y a pas de..	*There isn't*	J'ai besoin de..	*I need*

Papier toilette *Loo paper*	Sèche cheveux *Hairdryer*	Serviette *Towels*	Shampooing *Shampoo*	Savon *Soap*

L'aide	*Help*
C'est inacceptable	*It's unacceptable*
Désolé	

I can describe disasters on holiday

Malheureusement	*Unfortunately*
D'un côté	*On one hand*
De l'autre côté	*On the other hand*

La voiture				*The car*
Avoir un accident *To have an accident*	Avoir une crevaison *To have a puncture*	Il y avait une collision *There was a crash*	Rentrer dans *To crash into*	Tomber en panne *To breakdown*

Attendre longtemps	*Wait a long time*
Aller à l'hôpital / le commissariat (de police)	*Go to hospital/police station*
Appeler un mécanicien	*Call a mechanic*

L'aéroport				*The airport*
Rater l'avion *To miss the flight*	Perdre le bagage *To lose the luggage*	Arriver très tard *To arrive very late*	Avoir un retard *To have a delay*	Perdre les clés *To lose the keys*

GCSE role play scenarios

I can ask questions and answers for a role play in a restaurant.

Qu'est-ce que vous allez prendre… *What are you going to have…*

Pour l'entrée? *for starter?*	Pour le plat principal? *for main course?*	Pour le dessert? *for dessert?*	Pour boire? *to drink?*

Je vais prendre.. *I'm going to have…*

Le filet de porc *pork fillet*	**Les escargots** *snails*	**Le steak / les moules -frites** *steak / mussels and chips*
Le poulet chasseur *chicken chasseur*	**Les haricots verts** *green beans*	**Les pommes de terres** *potatoes*
Le cabillaud grillé *grilled cod*	**Le pot au feu** *hot pot*	**Les profiteroles** *profiteroles*

Qu'est-ce que vous recommandez? *What do you recommend?*

Le menu du jour– *The set menu* **Le plat du jour** – *The dish of the day*

C'est vraiment délicieux– *It's extremely tasty*

Autre chose? *Anything else?*

Rien d'autre, merci	*Nothing else, thank you*
Je suis végétarien(ne) / allergique au..	*I'm vegetarian – allergic to…*
Bon appétit !	*Enjoy your meal!*

I can ask questions about room bookings

Il y a …?	*Is there….?*		
du wifi gratuit	*Free wifi*		
de la climatization	*Air conditioning*		
une réservation	*A reservation*		
Pour combien de nuits?	*For how many nights?*		
Pour sept nuits	*For seven nights*		
Du…au…(mois)	*From the…to the…(month)*		
C'est combien pour une chambre?	*How much does a room cost?*		
Ça coute…euros	*It costs…euros*		
À quelle heure est le pétit déjeuner?	*What time is breakfast served?*		
Le pétit déjeuner est inclus?	*Is breakfast included?*		
De…à…. / Depuis….jusqu'à….	*From…..until…..*		
Les chiens sont permis?	*Are dogs allowed?*		
C'est combien le supplément pour…	*How much is the supplement for…?*		
Pouvez-vous répéter, s'il vous plaît?	*Can you repeat, please?*		
Pouvez-vous parler plus lentement?	*Can you speak more slowly?*		

Year 11 - French - Jours ordinaires et jours de fêtes

I can describe mealtimes with food verbs

Normalement	*Normally*
Pendant la semaine	*During the week*
Comme dessert	*For dessert*
Le matin	*In the morning*
Le soir	*In the evening*

Prendre/manger…pour le petit-déjeuner	*to have… for breakfast*
prendre/manger … pour le déjeuner/à midi	*to have… for lunch*
manger…pour le goûter	*to have… for tea*
prendre/manger…pour le dîner	*to have… for dinner*
prendre	*to have (food/drink)*

Quelque chose de léger, comme…	*something light, like…*
Quelque chose de très rapide	*something very quick*
Quelque chose de sucré	*something sweet*
J'ai un faible pour les sucreries	*I have a sweet tooth*
J'ai très faim	*I'm very hungry*
Je suis tellement pressé(e)	*I'm in such a hurry*

I can give opinions and reasonings for my favourite dish

Mon plat préféré, c'est…	*My favourite dish is…*
J'aime beaucoup…/j'adore…	*I really like…/I love…*

Parce que/car - *because* puisque - *since* étant donné /vu que – *given that*

C'est une sorte de *it's a type of*

boisson *drink*	ragoût *stew*	soupe *soup*	dessert *dessert*	poisson *fish*

C'est un plat chaud/froid	*it's a hot / cold dish*
C'est un plat traditionnel de…	*it's a traditional dish from…*
Il contient/ils contiennent du/de la/de l'/des…	*it contains / they contain*
Il consiste/ils consistent de/d'	*it consists of /they consist of*

viande de porc *pork*	Viande de boeuf *beef*	Viande d'agneau *lamb*	poulet *chicken*	Fruits de mer *seafood*
oeufs *eggs*	saucisses *sausages*	thon *tuna*	riz *rice*	ail *garlic*
oignon *onion*	concombre *cucumber*	piments *peppers*	haricots *beans*	carottes *carrots*

I can describe the daily routine using reflexives

- Reflexive verbs describe actions that we do to ourselves.
- Reflexive verbs are formed in the same way as regular verbs but they include a reflexive pronoun.
- In the infinitive the pronoun is shown at the front of the verb: e.g., *se doucher*.
- In the present tense the pronoun goes in front of the verb and changes according to the person.

Me *1. I*	Te *2. You*	Se *3. S/he*	Nous *4. We*	Vous *5. You lot*	Se *6. They*
-ER	-e	-es	-e	-ons	-ez	-ent

Se réveiller *to wake up*	Se lever *to get up*	Se doucher *to have a shower*
Se peigner *to brush one's hair*	Se raser *to have a shave*	Se mettre* du gel *to put hair gel on*
S'habiller *to get dressed*	Se brosser les dents *to brush one's teeth*	se coucher *to go to bed*

Je quitte la maison	*I leave home*
Je rentre à la maison/chez moi	*I return home*
Tôt/tard/de suite	*early / late / straight away*

Year 11 - French - Jours ordinaires et jours de fêtes

I can describe a range of special days/events

Hier c'était...	*Yesterday was...*
Le bal d'étudiants	*The school prom*
Le jour de Noël	*Christmas Day*
Le dimanche de Pâques	*Easter Sunday*
La saint Valentin	*Valentine's Day*
la veille de Noël	*Christmas Eve*
le Réveillon du Nouvel An	*New Year's Eve*
Mon anniversaire	*my birthday*
La fête des Mères	*Mother's Day*
Le jour du Nouvel An	*New Year's Day*

On a ouvert les cadeaux	*we opened presents*
On a cherché les oeufs en chocolat	*we looked for chocolate eggs*
On a chanté des chants de Noël	*we sang Christmas carols*
On a mangé des chocolats	*we ate chocolates*
On s'est couchés très tard	*we went to bed very late*
On s'est levés très tôt	*we got up very early*
On a prié	*we prayed*
On est allés(ées) à la mosquée/l'église	*we wento to the mosque / church*
J'ai pris un bain et je me suis maquillée	*I had a bath and then did my make up*

C'était...	*It was...*
étonnant	*amazing*
génial	*great*
incroyable	*incredible*
inoubliable	*unforgettable*

amusant	*fun*
ennuyeux	*boring*
stressant	*stressful*
Fatigant	*exhausting*

I can compare different festivals

Ma fête préférée est...	*My favourite festivity is...*
J'aime beaucoup...	*I really like...*
J'adore...	*I love...*
Je n'aime pas du tout/je déteste	*I don't like... at all / I hate...*

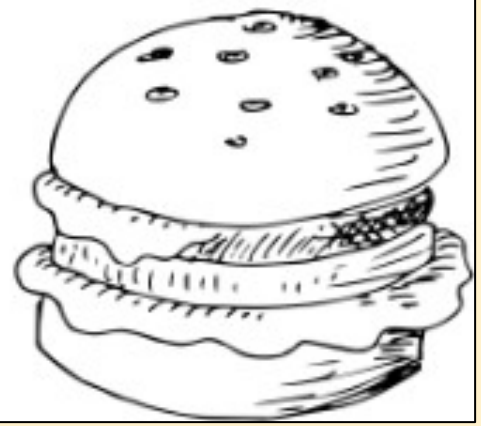
Le jour de Noël	Le dimanche de Pâques	La veille de Noël	Le Réveillon du Nouvel An	La Eid al-Fitr
Christmas Day	*Easter Sunday*	*Christmas Eve*	*New Year's Eve*	*Eid al-Fitr*

Parce que/car - *because* puisque - *since* étant donné que – *given that*

c'est plus...	*it's more...*
c'est moins...	*it's less...*

spécial	*special*
passionnant(e)	*exciting*
amusant(e)	*fun*
ennuyeux(euse)	*boring*
décevant(e)	*disappointing*

que...	*than...*



AO phrases

Quand j'étais petit(e) j'adorais

When I was small, **I used to** love

Auparavant, j'aimais

In the past, **I used to** like...

Si je pouvais, je voudrais...

If I could, I would like...

Selon mon prof...

According to my teacher

Quand je peux, j'aime + infinitive

= When I can, I like + infinitive

J'ai toujours aimé/voulu + infinitive

I've always liked/wanted + infinitive

AO1: Discuss issues, requests and topics spontaneously

AO1.1 - I can pose questions differently depending on formality	AO1.2 - I can express concerns that something is not available	AO1.3 - I can express there's à problem and request à solution	AO1.4 - I can give recommendations and solutions based on information given/known	AO1.5 - I can discuss an issue based on outsider information
Est-ce que vous aimez…?	il/elle/on manque de	Le problème qui me concerne le plus c'est	Selon ____ on doit...	Mon prof m'a montré en classe que...
Est-ce que tu aimes…?	J'ai besoin de il/elle/on a besoin de	J'ai un problème	Mon/ma ____ m'à dit qu'on devait...	_____ m'a expliqué le problème et je pense que...
Qu'est-ce que vous pensez de…?	Il n'y a plus de Il n'y a pas de	Pouvez-vous m'aider?	Mes amis m'ont dit qu'on devait...	J'ai fait des recherches et tout bien considéré...
Qu'est ce que tu penses de…?	On ne peut pas	Qu'est ce que tu me recommandes?	La recherche nous conseille de...	J'ai beaucoup réfléchi à propos de ce problème et...
Tu es d'accord? Vous êtes d'accord?	Il y a peu de	Qu'est ce que vous me conseillez?	Tout bien considéré, je te/vous conseille de	Après avoir lu la recherche, on ne peut pas nier que ce soit...

AO2: Describe events and the physical world around you

AO2.1- I can describe what i'm going to do using a future tense	AO2.2 - I can describe what I did in the past tense	AO2.3 - I can describe what I routinely do and compare it to past/future actions	AO2.4 - I can express doubt or uncertainty about actions	AO2.5 - I can narrate past events comfortably using the imperfect and perfect tenses
Je vais + [**verb**] Nous allons + [**verb**] Ça va être + [**adj**]	Je suis allé au/ à la/ aux + [**building**]	D'habitude j'aime + [**verb**] mais quand j'étais petit(e) je préférais +[**verb**]	Je doute qu'il/elle/ que ce soit + [**adjective**]	J'allais en ville quand mon ami m'a appelé au téléphone et m'a demandé si je voulais + [**verb**]
J'ai envie de + [**verb**] Je tiens à + [**verb**] Je veux + [**verb**]	Après avoir + [**past participle**] ...	Bien que j'adore + [**verb**] quand j'étais plus jeune j'adorais + [**verb**]	J'ai peur qu'il/elle que ce soit + [**adjective**]	Il faisait + [**weather**] donc je suis allé(e) + [**location**]
Si je pouvais, je voudrais + [**verb**]	Après être + [**past participle**]	D'habitude le lundi j'aime + [**verb**] mais la semaine prochaine je vais + [**verb**]	Je ne pense pas qu'il/elle que ce soit + [**adjective**]	Je regardais la télé lorsque + [**passé composé action**]
Si j'avais l'opportunité, j'aimerais + [**verb**]	J'ai décidé de + [**verb**]	Quand je peux, je préfère + [**verb**] mais demain je dois + [**verb**]	Je ne crois pas qu'il/elle que ce soit + [**adjective**]	Il n'y avait pas de + [**noun**] donc j'ai décidé de + [**verb**]
S'il fait + [**weather**], je + [**future verb**]	Vu qu'il faisait + [**weather**] j'ai décidé de + [**verb**]	D'habitude,, + [**present tense action**] mais avant j'aimais + [**verb**]	Je crains que le problème soit très/assez + [**adjective**]	Dans le passé j'aimais + [**verb**] donc hier + [**passé composé action**]

AO3: Justify your thoughts, feelings and ideas

AO3.1 - I can use "so that" phrases to express my intentions	AO3.2 - I can compare how I feel now to how I used to feel about a situation	AO3.3 - I can justify my opinion by including the opinions of others	AO3.4 - I can explain how a past or future event influences my opinion	AO3.5 - I can use idioms effectively to sound more authentic and fluent
Pour + [**verb**]	Avant, je pensais que c'était + [**adjective**] mais maintenant je pense que c'est + [**adjective**]	[**person**] m'a dit que...	Après avoir + [**past participle**]	Ça coûte les yeux de la tête
afin de + [**verb**]		Selon + [**person**]	Après avoir fait des recherches...	Je vais mettre mon grain de sel + [**opinion**]
Car ça me permet de + [**verb**] Car ça m'aide à + [**verb**]	Quand j'étais petit(e) ça avait l'air + [**adjective**] mais maintenant je le trouve + [**adjective**]	[**people/plural**] m'ont dit que...	à la lumière des événements récents	C'est dommage que ce soit +[**adjective**]
Car je veux + [**verb**]		[**person**] toujours m'a dit que...	De peur que la situation s'empire...	Je saute du coq à l'âne mais [+ **new topic**]
Pour que je puisse + [verb]	Je le trouvais + [**adjective**] mais maintenant je le	il/elle me dit que...	Après avoir discuté +[**noun**] avec + [**person**] ...	Appelons un chat un chat + [**opinion**]

Year 11 - French - All AO phrases

Year 11 – Spanish – Jobs and careers

I can describe different jobs

Actor / Actriz	Azafato/a Auxiliar de vuelo	Arquitecto/a	Artista	Panadero/a	Albañil / Constructor
Carnicero/a	Cajero/a	Funcionario/a	Cocinero/a	Dentista / Odontólogo	
Diseñador/a	Médico/a	Conductor	Electricista	Ingeniero/a	Agricultor/a Granjero/a
Bombero/a	Periodista	Mecánico	Enfermero/a	Farmacéutico/a	
Fontanero/a	Agente/ Oficial de policía	Profesor/a	Técnico/a	Camarero/a	Peluquero/a

I can describe a part-time job

Repartir periódicos *Deliver papers*	Cuidar a niños *Care for children*	Trabajar de cajero *Work as cashier*	Servir comida y bebida *Serve food and drink*	Trabajar como socorrista *Work as a lifeguard*

Trabajo	*I work*	**Antes del insti**	*Before school*
Lo hago	*I do it*	**Después del insti**	*After school*
Los domingos	*On Sundays*	**Cuando necesito dinero**	*When I need money*
Todos los días	*Every day*	**Cuando mi madre está trabajando**	*When my mum is working*
En verano	*In summer*	**Cuando me necesitan**	*When they need me*

Gano...	*I earn...*
Euros/libras	*Euros/pounds*
A la hora	*An hour*
A la semana	*a week*

Pasear al perro *Walk the dog*	Ser dependiente/a *Be sales assistant*	Lavar los coches *Work the cars*	Arreglar jardines *Sort out gardens*	Enseñar a personas mayores *Teach old people*

I can describe the chores at home

hacer de canguro *to babysit*	
	cocinar *to cook*
lavar los platos *to wash the dishes*	
	pasar la aspiradora *to pass the hoover*
planchar la ropa *to iron clothes*	

	poner/quitar la mesa *to set/clear the table*
pasear al perro *to walk the dog*	
	cortar el césped *to cut the grass*

Limpiar la casa	*Clean the house*
Quitar la mesa	*Clear the table*
Planchar la ropa	*Iron clothes*
Fregar los platos	*Wash up the dishes*
Pasar la aspiradora	*Do the hoovering*
Arreglar mi habitación	*Sort out my room*

Lo hago...	*I do it...*
antes del insti	*before school*
después del insti	*after school*
cuando necesito dinero	*when i need money*
cuando necesita que le ayude	*when she needs me to help*
los miércoles	*on Wednesdays*
todos los días	*every day*
una vez a la semana	*once a week*

Year 11 – Spanish – Jobs and careers

I can describe a range of workplaces

en el extranjero *abroad*	la oficina de mi madre *my mum's office*	la comisaría *police station*
la granja *farm*	Trabajo en.... *I work in...*	el taller *garage*
la universidad *university*	Trabaja en... *S/He works in...*	agencia de viajes *travel agents*
la peluquería *Hairdresser's*	el negocio/comercio *business*	el supermercado *supermarket*

I can describe and explain the benefits of learning languages

Los idiomas	*Languages*
Las lenguas	*Languages*
Vivimos en una sociedad global	*We live in a global society*
Aprender otro idioma es importante para....	*Learning another language is important to*

Mejorar tu carrera *Improve your career*	**Conseguir un trabajo más fácilmente** *Find a job more easily*	**Obtener un mejor salario** *Get a better salary*	**Trabajar como traductor** *Work as a translator*	**Disfrutar mejor tus viajes** *Enjoy your trips more*

Porque - *because*

Estimula el cerebro	*It stimulates the brain*	**Te abre la mente**	*It opens your mind*
Te hace parecer más atractivo	*It makes you appear more attractive*	**Mejorar tu lengua materna**	*Improve your first language*

Comunicarte mejor en otros países *Communicate better in other countries*	**Entender más del mundo** *Understand more of the world*	**Conocer más gente** *Get to know more people*	**Mejorar tu memoria** *Improve your memory*	**Aumentar tu confianza** *Increase your confidence*

I can describe my aspirations and explain why

Trabajaré como	*I'll work as*	**Seré rico/a**	*I'll be rich*
Ganaré la loteria	*I'll win the lottery*	**Viajaré mucho**	*I'll travel a lot*
Me casaré	*I'll get married*	**Tendré hijos**	*I'll have children*

porque *because*	**ya que** *because*	**dado que** *given that*
es un campo en el que me gustaría trabajar *it's a field in which I'd like to work*	**quiero tener mi propia familia** *I want to have my own family*	**me importa el éxito** *success is important to me*
me encanta visitar nuevos lugares *I love to visit new places*	**quiero comprar nueva ropa** *I want to buy new clothes*	**me interesa el conocimiento** *knowledge interests me*

Cuando sea mayor
When I am older

Cuando termine la educación
When I finish education

Cuando vaya a la universidad
When I go to univeristy

I can describe a work experience

Tengo que.... *I have to...*	**Suelo...** *I usually...*
Tiene que... *S/He has to...*	**Suele...** *S/He usually...*
Tenemos que... *We have to...*	**Solemos...** *We usually...*

Cuidar a los clientes/ pacientes / pasajeros	**Contestar llamadas telefónicas**	**Cuidar las plantas y las flores**
Look after the customers / patients / passengers	*Answer telephone calls*	*Look after the plants and the flowers*
Cortar el pelo a los clientes	**Enseñar / vigilar a los niños / alumnos**	**Hacer entrevistas**
Cut customers' hair	*Teach / supervise the children / pupils*	*Do interviews*
Preparar platos distintos	**Reparar coches**	**Servir comida y bebida**
Prepare different dishes	*Repair cars*	*Serve food and drink*
Trabajar en un taller / en una tienda	**Vender ropa de marca**	**Viajar por todo el mundo**
Work in a workshop / in a shop	*Look after the customers / patients / passengers*	*Answer telephone calls*

Year 11- Spanish - Global issues

I can describe environmental issues

El medio ambiente	*The environment*
Los problemas medioambientales	*Environmental problems*
El problema más grave	*The most serious problem*

La destrucción de la selva tropical *Destruction of the rainforest*	La destrucción de la capa de ozono *Destruction of ozone layer*	El cambio climático *Climate change*	El calentamiento global *Global warming*

La basura *Rubbish*	Los terremotos *Earthquakes*	El planeta *The planet*	Las inundaciones *Flooding*	La contaminación *Pollution*

El aumento de las sequías *Increase in droughts*	Las especies en peligro de extinción *Species in danger of extinction*	La falta de recursos naturales *Lack of natural resources*	La contaminción de los océanos *Pollution of the oceans*

I can describe different global issues

Los problemas globales	*Global problems*
Me preocupa (n)	*I'm worried about*
El mayor problema global es	*The greatest global problem is*

La guerra *War*	La pobreza *Poverty*	El paro *Unemployment*	El hambre *Hunger*	La deforestación *Deforestation*

I can recommend ways on how to support the environment

Proteger el medio ambiente	*Protect the environment*
Para salvar nuestro planeta	*To save our planet*
Se debe	*You must*
No se debe	*You must not*

En mi ciudad	*In my city*
Hay demasiada	*There is/are too many/much*
Basura en las calles	*Rubbish in the streets*
Gente sin especio para vivir	*People with nowhere to live*
Destrucción de los bosques	*Destruction of the forests*
Polución de los mares y ríos	*Pollution of the seas and rivers*

Es necesario que *It is necessary that*	Es importante que *It is important that*	Es increíble que *It is incredible that*
Followed by verbs conjugated in the present subjunctive		

	AR	ER/IR
1	E	A
2	ES	AS
3	E	A
4	EMOS	AMOS
5	ÉIS	ÁIS
6	EN	AN

Reducir *Reduce*	Malgastar *Waste*	Dedicarse a *Devote time to*	Intentar *Try to*	Lograr *Achieve*

Ocuparse de *Concerned with*	Ponerse a *Start*	Quejarse de *Complain about*	Usar *Use*

Para *In order to*	Limpiar las calles *Clean the streets*	Reducir la contaminación *Reduce pollution*
	Proteger el medio ambiente *Protect the environment*	Luchar contra el calentamiento global *Fight against global warming*

Commands

Negative – Present subjunctive, all lines *Positive – Present subjuntive, 3rd line*

No corte tantos árboles *Don't cut down so many trees*	No vaya en coche a todos los lugares *Don't go by car to everywhere*	Plante más bosques y selvas *Plant more woods and forests*	Introduzca leyes más estrictas *Introduce stricter laws*
No tire basura al suelo *Don't throw rubbish on the ground*	No malgaste energía *Don't waste energy*	Reduzca las emisiones de los vehículos *Reduce vehicle emissions*	Use energías renovables *Use renewable energy*
No construya tantas casas *Don't build too many houses*	No eche desechos químicos *Don't release chemical waste*	Recicle el papel y el vidrio *Recycle paper and glass*	Diseñe casas más pequeñas *Design smaller houses*

La drogadicción *Drug addiction*	La salud *Health*	La obesidad *Obesity*	La crisis económica *Economic crisis*	Los ninis *No studies, no work*	

Los desastres naturales *Natural disasters*	La falta de agua portable *Lack of drinking water*	El hambre mundial *World hunger*	Los derechos humanos *Human rights*	Los sin hogar / techo *The homeless*

AO phrases

(people/plural) opinan que…
(people/plural) think that…
Al escuchar lo que dice la gente, …
When listening to what people say, …
Lo malo/peor es …
The bad/worst thing is …
El problema más serio es…
The most serious problem is…
Lo que me preocupa más es
What worries me the most is

Year 11 - Spanish - Global issues

I can describe solutions for global issues

Desde mi punto de vista	*From my point of view*
Creo que	*I believe that*
Me parece que	*It seems to me that*

Es necesario que *It is necessary that*	Es importante que *It is important that*	Es increíble que *It is incredible that*
Followed by verbs conjugated in the present subjunctive		

	AR	ER/IR
1	E	A
2	ES	AS
3	E	A
4	EMOS	AMOS
5	ÉIS	ÁIS
6	EN	AN

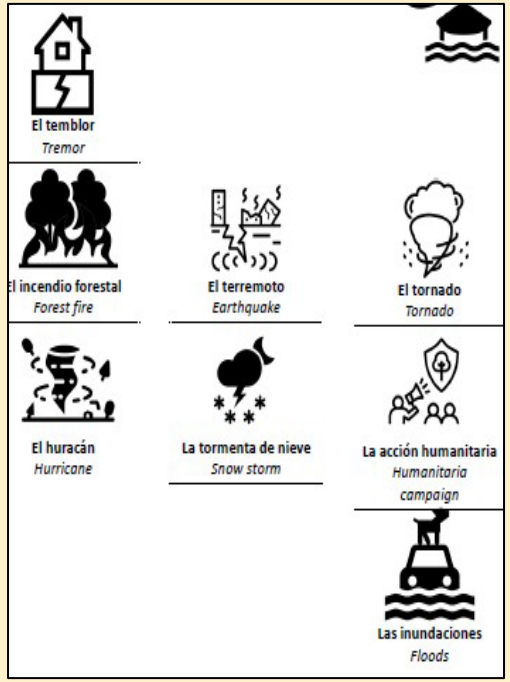
		
Cuidar el planeta *Look after the planet*	Hacer proyectos de conservación *Do conservation projects*	Usar productos de comercio justo *Use fair trade products*

				
Apoyar proyectos de ayudar *Support aid projects*	Crear oportunidades de trabajo *Create work opportunities*	Cambiar la ley *Change the law*	Recaudar dinero *Raise money*	Hacer campañas publicitarias *Do publicity campaigns*

No es justo que haya *It is not fair that*	tanta desigualdad socila *so much social inequality*	tanta contaminación *so much pollution*	tanta gente sin trabajo *so many people without a job*
Es terrible que haya *It is terrible that*	tanta gente sin techo *so many people homeless*	tanta gente obesa *so many obese people*	tantos drogadictos *so many drug addicts*

I can recommend ways on how to support after a natural disaster

Los desastres naturales	*Natural disaster*
Ocurió	*It happened/occurred*



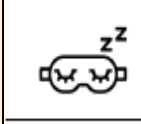
Compartir *To share*	Darse cuenta de *To realise*	Enseñar *To teach*	Investigar *To research*
Mostrar *To show*	Notar *To note*	Parar *To stop*	Tratar de *To try to*

		
Una organización de servicio voluntario *A voluntary organisation*	Una campaña para las víctimas *A campaign for the victims*	Recaudar fondos *Raise funds*
Una caja de supervivencia *A survival box*	Un concierto *A concert*	Solicitar donativos *Ask for donations*
		Organizar algunos eventos *Organise some events*

		
Un espectáculo de baile *A dance show*	Una carrera de bici apadrinada *A sponsored bike race*	Ser solidario *Showing solidarity*
 Una ventana de pasteles *A cake sale*	 Un lavado de autos *A car wash*	Te hace sentir más conectado *It makes you feel more connected*

I can describe ways to lead a healthy lifestyle

Para llevar una vida sana	*To have a healthy lifestyle*
Llevar una dieta sana	*To have a healthy diet*
Para estar en forma	*To keep fit/in shape*
Llevar una dieta equilibrada	*To have a balanced diet*
Se debe	*You must*
No se debe	*You must not*

			
Evitar comer comida basura *Avoid eating rubbish food*	Evitar beber alcohol *Avoid drinking alcohol*	Cambiar la dieta *Change diet*	Preparar con ingredientes frescos *Prepare with fresh ingredients*
 Dormir ocho horas al día *Sleep for eight hours a day*	 Hacer ejercicio cada día *Do exercise every day*	 Entrenar una hora al día *Train an hour a day*	 Fumar *Smoke*

Voy a	*I am going to*
Quisiera	*I would like to*
Tengo la intención de	*I have plans to*
Tendré que	*I will have to*

Year 11- Spanish –Healthy lifestyle

I can describe meal times and eating habits

Normalmente	*Normally*
Entre semana	*During the week*
De postre	*For dessert*
Por la mañana	*In the morning*
Por la noche	*In the evening*

desayunar	*to have... for breakfast*
comer / almorzar	*to have... for lunch*
merendar	*to have... for tea*
cenar	*to have... for dinner*
tomar	*to have (food/drink)*

algo ligero, como...	*something light, like...*
algo muy rápido	*something very quick*
algo dulce	*something sweet*
soy muy goloso/a	*i have a sweet tooth*
tengo mucha hambre	*i'm very hungry*
tengo mucha prisa	*i'm in sch a hurry*

I can describe types of food

I can compare my diet across three tenses

Antes	*Before*	Cuando era joven	*When I was younger*
Siempre	*Always*	Nunca	*Never*

Comía	*I/He used to eat*	Comía de todo	*I ate everything*
Bebíamos	*We used to drink*	No engordaba	*I didn't get fat*
Solía comer	*I/He used to eat*	Tenía energía	*I had energy*
Solíamos beber	*We used to drink*	Hacía ejercicio	*I did exercise*

Ahora	*Now*	Hoy en día	*Nowadays*
Normalmente	*Normally*	Cada día	*Each day*

Suelo comer	*I usually eat*	Tengo energía	*I have energy*
Solemos beber	*We tend to drink*	Tengo sueño	*I am tired*
Como	*I eat*	Tengo hambre	*I am hungry*
Bebemos	*We drink*	Tengo sed	*I am thirsty*
Desayuno	*I have breakfast*	Me engorda	*it makes me fat*

En el futuro	*In the future*	La semana que viene	*Next week*
Pasado mañana	*Day after tomorrow*	Cuando sea mayor	*When I am older*

Voy a comer	*I'm going to eat*	Quiero practicar más deporte	*I want to do more sport*
Vamos a beber	*We're going to drink*	No quiero engordar	*I don't want to get fat*
Comeré	*I will eat*	Quiero perder peso	*I want to lose weight*
Beberemos	*We will drink*		
Desayunaré	*I'll have breakfast*		

Year 11- Spanish – Hispanic festival

I can describe different Hispanic Festivals

La fiesta de...	*The festival of...*
Esta tradición antigua...	*This old tradition...*
se caracteriza por...	*is characterised by...*
se celebra en...	*is celebrated in...*
se repite...	*is repeated*

se queman figuras de madera	*wooden figures are burnt*
se construyen hogueras	*bonfires are built*
se disparan juegos artificiales	*fireworks are set off*
se lanzan huevos	*eggs are thrown*
Las calles se llenan de...	*The streets are filled with...*

los niños / los jóvenes...	*children / young people...*
los parientes / las familias...	*relatives / families*
comen manzanas de caramelo	*eat toffee apples*
decoran las casas / las tumbas	*decorate houses / graves*
con flores / velas	*with flowers / candles*
preparan linternas / altares	*prepare lanterns / altars*
se disfrazan de brujas / fantasmas	*dress up as witches / ghosts*
ven desfiles	*watch processions*

I can narrate a past celebration

I can describe a range of special days/events

Ayer fue...	*Yesterday was...*
el baile de fin de curso	*The school prom*
el Día de Navidad	*Christmas Day*
el Domingo de Pascua	*Easter Sunday*
el Día de San Valentín	*Valentine's Day*
la Nochebuena	*Christmas Eve*
la Nochevieja	*New Year's Eve*
mi cumpleaños	*my birthday*
el Día de la madre	*Mother's Day*
Año Nuevo	*New Year's Day*

Fue...	*It was...*		
estupendo	*amazing*	divertido	*fun*
genial	*great*	aburrido	*boring*
increíble	*incredible*	estresante	*stressful*
inolvidable	*unforgettable*	agotador	*exhausting*

abrimos los regalos	*we opened presents*
buscamos huevos de chocolate	*we looked for chocolate eggs*
cantamos villancicos	*we sang Christmas carols*
comimos dulces navideños / doce uvas	*we ate Christmas sweets / twelve grapes*
nos acostamos muy tarde	*we went to bed very late*
nos levantamos muy temprano	*we got up very early*
rezamos	*we prayed*
fuimos a la mezquita / iglesia	*we wento to the mosque / church*
me bañé y luego me maquillé	*I had a bath and then did my make up*

I ask and respond to questions in a Spanish restaurant

I can ask questions and answers for a role play in a restaurant.

¿Qué va a tomar...
What are you going to have...

de primer plato? *for starter?*	de segundo plato? *for main course?*	de postre? *for dessert?*	para beber? *to drink?*

Voy a tomar...
I'm going to have...

el filete de cerdo *pork fillet*	jamón serrano *Serrano ham*	merluza en salsa verde *hake in parsley and wine sauce*
sopa de fideos *noodle soup*	croquetas caseras *homemade croquettes*	tortilla de espinacas *spinach omelette*
trucha a la plancha *grilled trout*	natillas *custard*	chuletas de cordero asadas *roast lamb chops*

¿Qué me recomienda?
What do you recommend?

El menú del día – *The set menu* La especialidad de la casa – *The house speciality*

Está riquísimo/a – *It's extremely tasty*

¿Algo más?
Anything else?

Nada más, gracias	*Nothing else, thank you*
Soy vegetariano/a – alérgico/a a...	*I'm vegetarian – allergic to...*
¡Que aproveche!	*Enjoy your meal!*
¿Me trae la cuenta, por favor?	*Can you bring me the bill, please?*
Dejar una propina	*To leave a tip*
Equivocarse / pedir	*To make a mistake / to order*

AO1: Discuss issues, requests and topics spontaneously

AO1.1 - I can pose questions	AO1.2 - I can express concerns that something is not available	AO1.3 - I can extend my sentences with details and examples	AO1.4 - I can express there's a main problem	AO1.5 - I can suggest or pass on recommendation from others
¿Cuáles son las ventajas y desventajas de....?	Es una pena que no haya **[noun]** / no fuera **[adjective]**	Como si esto fuera poco	Lo peor es que	Si yo fuera **[noun/adj]** me gustaría **[verb]**
¿Qué se puede + **[verb]** ?	Ojalá hubiera+ **[noun]** Ojalá fuera+ **[adjective]**	Para colmo de males	Lo malo es que	Si pudiera, me gustaría **[verb]**
¿Cómo es + **[noun]** ?	No hay + **[noun]** Ya no hay + **[noun]**	O sea	El problema más serio es que	Según... hace falta más/menos **[noun]**
¿Cuál es tu opinión de **[noun/verb]**	No se puede + **[verb]**	Por ejemplo	Lo que me preocupa más es que	Mis ____ piensan que necesitamos más/menos **[noun]**
¿Qué hay en **[noun]**?	Hay poco/a **[noun]**	tal como	Lo que me molesta es que	Mi ____ dice que

AO2: Describe events and the physical world around you

AO2.1- I can describe a place, an event, a person	AO2.2 I can express preferences over time	AO2.3-I can compare what used to be and describe what I routinely do	AO2.4 - I can narrate past events comfortably using the imperfect and imperfect progressive	AO2.5 - I can express doubt or uncertainty about actions
Lo mejor de **[noun]** es que	Si pudiera elegir, me gustaría + **[verb]**	Cuando era pequeño/a me gustaba + **[verb/noun]** pero ahora prefiero + **[verb/noun]**	Estaba estudiando, cuando mi amigo me llamó para **[verb]**	No pienso que haga falta + **[noun]**
Lo bueno de **[noun]** es que	Voy a + **[verb]** Vamos a + **[verb]** Va a ser+ **[adjective]**	Aunque ahora no tengo mucho tiempo libre , antes solía + **[verb]**	Estaba yendo a + **[location]**, cuando +empezó a **[weather]** entonces decidí + **[verb]**	No creo que sea (tan/muy) + **[adjective]**
Es famoso/a conocido/a por + **[noun]**	Si tuviera la oportunidad, me gustaría + **[verb]**	En general me mola + **[verb]** pero este fin de semana voy a+ + **[verb]**	Empezó a +**[weather]**, entonces fui a **[location]** para + **[verb]**	Dudo que sea + **[adjective]**
Se puede + **[verb]**	Mi sueño es de + **[verb]**	Cuando puedo, suelo + **[verb]** pero lo que prefiero de verdad es **[verb]**	Como no podía + **[verb]** entonces decidí + **[verb]**	Tal vez sería mejor con más/menos sin **[noun]**
Hay/tiene + **[noun]** Es+ **[adjective]**	Quiero + **[verb]**	Aunque no sea + **[adjective]**, suelo + **[verb]**	En el pasado me gustaba + **[verb]** entonces ayer fui + **[verb]**	A lo mejor

AO3: Justify your thoughts, feelings and ideas

AO3.1 - I can use "so that" phrases to express my intentions	AO3.2 - I can compare how I feel now to how I used to feel	AO3.3 - I can justify my opinion based on the opinions of others	AO3.4 - I can justify how a past or future event influences my opinion	AO3.5 - I can use idioms effectively to sound more authentic and fluent
Para + **[verb]**	Si me hubiera preguntado hace 5 años, hubiera dicho que **[noun/verb]** era + adjective pero ahora diría que + **[verb]**	Al escuchar lo que dice la gente en general,	Después de haber considerado lo bueno y lo malo de **[noun]** diría que	¡Nadie está contento con su suerte!
Me ayuda a + **[verb]**	Siempre/nunca pensé que la idea de **[verb]** me habría gustado, sin embargo, ahora pienso que **[verb]**	En vista de la opinión general,	Considerando mis planes para el futuro,	¡Vale la pena!
me permite + **[verb]**	Antes me gustaba mucho + **[verb]** pero desde poco me interesa más + **[verb]**	**[people/plural]** opinan que...	Teniendo esto en cuenta	Sueño con + **[verb / noun]** pero ¡No hay tutía!
Si quiero + **[verb]**	Si pudiera elegir me gustaría + **[verb]**	**[person]** siempre dice que	Como ya he mencionado	¡Qué será será!
Si necesito + **[verb]**	Siempre me ha gustado la idea de **[verb]**	Según+ **[person]**	Que yo sepa	¡El tiempo lo dirá!

Year 11- Spanish - AO phrases

Year 11 - Dance - Developing Skills and Techniques in the Performing Arts

Unit 1 Performing Musicals

Chicago

Set in the 1920's Chicago is based on real life murders and trails

Chicago is a dazzling story of murder, greed, corruption, violence, exploitation, adultery, fame, media and treachery. It is jurisprudence-as-showbusiness and trial-by-publicity. It is a tale of the sensational murderess Velma Kelly, the reigning queen of the Cook County jail, and Roxie Hart, the newest of the merry murderesses, who, of course, haven't really committed any crime!

The original Broadway production opened on June 3, 1975 at the 46th street theatre Bob Fosse directed and choreographed the original production, and his style is strongly identified with the show. The music was by John Kander and the lyrics by Fred Ebb.

Bob Fosse **Robert Louis "Bob" Fosse** (June 23, 1927 – September 23, 1987) was an American dancer, musical theatre choreographer, director, screenwriter, film director and actor. He won 8 Tony Awards for choreography, more than anyone else, as well as one for direction, 3 Emmy and 1 Bafta awards, he was nominated for four Academy Awards, winning for his direction of *Cabaret.* In 1996 Chicago won an award for the best revival of musicals and in 1997 it won the Laurence Olivier award for outstanding musical production.

Musical credits: Kiss Me Kate, Pajama Game, Sweet Charity, Damn Yankees, Big Deal , Red Head, Little Me and Chicago.

Bob Fosse's Influences

- Began Tap dancing lessons as a child.
- Parents were vaudeville performers.
- Age 13 performing on a professional vaudeville stage.
- Fosse received formal training from Frederick Weaver ballet school
- Influenced by the work of Jack Cole, Fred Astaire and Jerome Robbins.
- Influenced by the dark humour and teasing of burlesque & vaudeville style.

Choreographic approach & Intension

- Fosses' routines must tell a story.
- Detailed isolated movements.
- Character driven dance, infused with a character and story.
- Created a number of climax within his choreography.
- Fosse used his imperfections to create his own technique & style such as,
- Pigeon toes, turned in knees
- Bad posture, rolled shoulders & back bends.
- Balding, wear bowler hats.
- Shaking hands, use a cane.
- Gaining weight, wear black.

Stylistic Features:

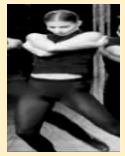
- Sound effects, clapping, stamping feet. Fsss sounds.
- Shoulder rolls.
- Finger stretching.
- Elements of surprise.
- Angular posturing.
- Percussive rhythms.

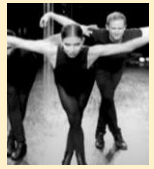
Fosse Action Words to describe his signature movements

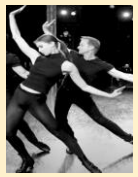
Pippin

Broken Doll

Me and My baby







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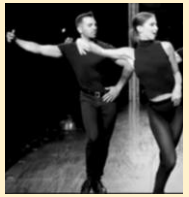


Crunchy Granola

Year 11 – Dance – Component 2 and Component 3

Physical Skills	Performance/Interpretative skills
Movement Memory – The automatic recall of learned movement material, without conscious thought **Accuracy- of movement** **Posture – The way the body is held** **Strength – Muscular power** **Stamina – Ability to maintain physical and mental energy over periods of time** **Balance - A steady or held position achieved by an even distribution of weight** **Control – The ability to start and stop movement, change direction and hold a shape efficiently** **Flexibility – The range of movement in the joints (involving muscles, tendons and ligaments)** **Coordination – The efficient combination of body parts** **Extension – Lengthening one or more muscles or limbs**	Eye focus - Use of the eyes to enhance performance or interpretative qualities Timing – The use of time or counts when matching movements to sound and/or other dancers Spatial awareness – Consciousness of the surrounding space and its effective use Emphasis – The accents provided by the dancer at different moments throughout the dance Projection – The energy the dancer uses to connect with and draw in the audience Facial expression – Use of the face to show mood, feeling or character Energy – the force applied to dance to accentuate the weight, attack, strength, and flow of a dancer's movement

Activity 1(written) Understand how to respond to a brief (LAA) 15 marks

Teaching content: Key requirements of performance e.g target audience, performance space, resources, style etc. Exploring starting points and response to a stimulus e.g theme, issue, prop etc. Developing ideas. Working effectively as a group

Assessment (1 hour to complete):

Ideas log up to 800 words which covers these points:

• the concept and style of performance, your choice of target audience, the resources needed during the development and performance for the exploration and development of ideas, how the ideas meet the requirements of the brief, how the work of practitioners has influenced your ideas, ideas you have contributed. how you explored ideas

Activity 2 (written) Select and develop skills and techniques in response to a brief (LAB) 15 marks

Teaching content: Demonstrate how to select and develop skills and techniques as individual performer and with a group. Selection of style of the work. The influence of selected practitioners. Developing skills through classes/workshops. Taking part in group rehearsals

Assessment (1 hour to complete):

Skills log up to 800 words which covers these points: your role in the group, the skills and techniques you selected, how your skills meet the requirements of the brief, how you developed your skills and techniques, your own contribution to the rehearsal/development process, how the work of practitioners has influenced your development of skills and techniques.

Activity 3 (practical) Apply skills and techniques in a workshop performance in response to a brief (LAC) 18 marks

Teaching content: Demonstrate effect use of physical & performance skills and techniques. Working effectively with others & taking part in performance preparation. Communicating ideas to an audience through performance

Assessment: Group workshop performance to an audience. Recording of performance must be between 7-15 minutes

Activity 4 (written) Evaluate the development process and outcome in response to a brief (LAD) 12 marks

Teaching content: Reflecting on rehearsal process and final outcome. Contribution to ideas and development process. Effectiveness of the response to the brief. Strengths & areas for improvement. Overall impact of the work of the group.

Assessment (1 hour to complete):Evaluation report up to 800 words which covers these points:• how the outcome met the requirements of the brief• the development process as an individual and as a group• the performance/design outcome. the key strengths of your work

• areas for further development

Year 11 – Dance – Job roles and responsibilities

Unit 3: For this unit you will receive a brief then have to come up with a performance idea for a event. You will need to plan this thoroughly, taking a range of industry factors into consideration, and pitch your idea to a panel

JOB ROLES & RESPONSIBILITIES

Costume

This person will be responsible for collecting everyone's size, designing the costume ideas and then sourcing them.
These might be brought, borrowed, hired or something that people already own. They will need to work within the overall budget for the show and make decisions based upon the money available for each area. There may be one person doing this per smaller group or one for he whole show, depending on what you decide as a class.

Props

This person may well have a team and will be responsible for deciding on what props are needed, finding or buying or making them and then organising them for the group before the show.
They will need to work with the other areas to decide on the budget available and make choices based upon this.

Lighting and Sound

There may be one person who does this for each group. They will not be operating the lights or sound as they will be acting on the night of the performance. Instead, they will have to find any sound effects or music they want to use and get it ready to be played at the show. They will need to produce a sound and lighting plan to give to the sound and lighting operators along with an annotated script for them to follow. The ideas for sound and lighting will be their own, and it will be their responsibility to communicate this with those operating the technology.

Scenery

Depending on which venue is decided and which stage configuration will determine what kind of scenery the performance want to use. If large items of staircases or scene changes are required, then these will need to be found/made. If scenery is to be painted then this team will be designing and painting it, as well as ensuring the paint is available. This could be a large or small job depending on what the groups and performance requirements are.

Tickets and Publicity

No audience will turn up if they don't know where or when the show is. This team of people will be responsible for designing and making posters and tickets, writing copy to go on school social media and ensuring that letters, Facebook posts, information on the website are all done early enough.
They will decide on the price of tickets along with the rest of the cast in order to cover the costs. This is a job for the organised!

Director

This person will run rehearsal schedules and rehearsals in lessons. It may be that there is one per smaller group. This person may also have an additional role supporting the other areas. This person should be tactful, have creative ideas and be able to offer suggestions on improving the overall performance.

Stage Manager

This person will probably be doing another preparation role before the show, but once the show gets nearer, they will need to be completely organised. On stage the show belongs to them. They are responsible for all the movements of set, scene changes and the smooth running of the show in tech and dress rehearsals and the final performance. They need to be cool under pressure but able to communicate quickly with others.

Front of House Manager

This is a role that can support others in getting ready for the show but on the night will need to be completely organised. They will need to gather a team of teachers and pupils who are not in the show to help with supervision of audience, getting audience seated and collecting tickets. Any refreshments needed? That's your job to get sorted. Health and safety, reserved seats, making sure all entrances are clear, access for disabled members of the audience and making sure the show is recorded all come under this job title.

Year 11 – Dance – Performing Arts in Practice

Unit 3: For this unit you will receive a brief then have to come up with a performance idea for an event. You will need to plan this thoroughly, taking a range of industry factors into consideration, and pitch your idea to a panel. Your pitch will include some practical work.

Assignment time

You must complete the assignment during the window January- April.

Unit 3:

For this unit you will receive a brief then have to come up with a performance idea for a event. You will need to plan this thoroughly, taking a range of industry factors into consideration, and pitch your idea to a panel. Your pitch will included some practical work

Task 1

You will outline the factors which have influenced the learner's ideas. 2 hours are allocated for this task, and it is worth 10 marks out of a total of 80 for this Unit. You will reflect on the choices they have made in response to the context of the work, the mood or style, the intended performance space, their own themes and ideas, the purpose of the piece, the target audience and the individual practitioners and organisations they have studied.

Task 2:

The second task is to produce the actual plan for the proposed event. This should include an introduction to the idea, a synopsis, and an appropriate selection of performance and production disciplines. So, for example it could be a new and exciting piece of choreography, but you must consider the importance of costume, make up, lighting and set design as well as the use of music. Again 2 hours are suggested for this task, and there are 10 marks available.

Task 3:

You will outline the timeline, personnel and resources required. You will describe the process you will need to go through to achieve your planned event. There are 5 marks available for this task which is allocated 1 ½ hours.

Task 4:

You will outline the marketing and PR strategy for the proposed event. You will incorporate a range of promotion activities which could include live events, social media and other means of raising awareness and interest.

Task 5 :

Practical Element – You will produce short snippets or examples from your overall idea to form part of a pitch they will give for Task 6. There are 8 hours allocated for producing the examples, and these are awarded up to 20 marks. You will give an idea of what the complete performance would be like, and should be recorded appropriately - audio and video recordings of actual performances, photographs, drawings, or models of costume, make up, set etc.

Task 6:

This is the recording of the pitch itself, for which there are 10 marks available, and a suggested 2 ½ hours. You must pitch their idea to a panel, including their practical examples, and gain feedback as well as answering questions. The panel will probably include the class teacher. It may be nice to include a senior member of the school staff to show them your fabulous learners, and possibly if you have links with a local theatre, dance body or other appropriate organisation to invite an external person to join you. You pitch will be video recording for evidence.

Task 7:

The final task of Unit 3 is an evaluation of the creative proposal itself, including reflecting on the feedback from the commissioning panel – which again highlights how important it is that the people involved are able to make useful comments. The evaluation is worth 20 marks, and there are 2 ½ hours suggested for this.

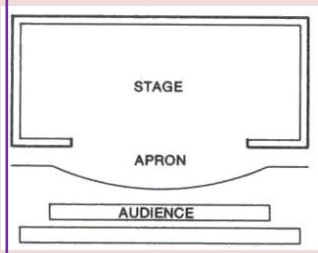
General Revision – Staging Types

In Component 1, Section A you could be asked questions about different staging configurations. You may also find it useful when creating your Component 2 & 3 performances to experiment with staging types.

Components 1, 2 & 3

Proscenium Arch: Common in large theatres and opera houses. The proscenium refers to the frame around the stage; the area in front of the arch is called the apron. The audience faces one side of the stage directly and may sit at a lower height or on tiered seating.

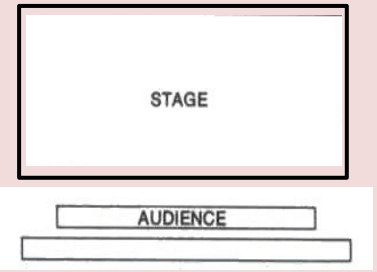
Advantages:
- Stage pictures are easy to create, as the audience look roughly at the same angle.
- Backdrops and large scenery can be used without blocking sightlines.
- There is usually fly space and wings for storing scenery.
- The frame around the stage adds to the effect of a fourth wall; creating a self-contained world.



Disadvantages:
- Some audience members may feel distant from the stage.
- The auditorium could feel formal and rigid.
- Audience interaction may be more difficult.

End On: This is similar to proscenium arch, as the audience faces one side of the stage directly and may sit at a lower height or on tiered seating. However, it doesn't have the large proscenium or apron. Our studio is set up as end on.

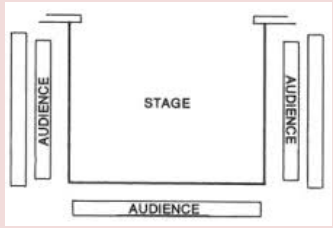
Advantages:
- The audience all have a similar view.
- Stage pictures are easy to create.
- Large backdrops or projections may be used.



Disadvantages:
- Audience members in the back rows may feel distant from the stage.
- It doesn't have the proscenium frame, which can enhance some types of staging.
- It may not have wings or a fly area.

Thrust: When the stage in front of the proscenium protrudes into the auditorium, so that the audience are sitting on three sides. This is one of the oldest types of staging; Greek amphitheatres and Elizabethan theatres like Shakespeare's Globe are both types of thrust stages

Advantages:
- As there is no audience on one side of the stage, backdrops, flats and large scenery can be used.
- The audience might feel closer to the stage – there are 3 front rows.
- Fourth wall can be achieved while having the audience close to the action.



Disadvantages:
- Audience members in the back rows may feel distant from the stage.
- It doesn't have the proscenium frame, which can enhance some types of staging.
- It may not have wings or a fly area.

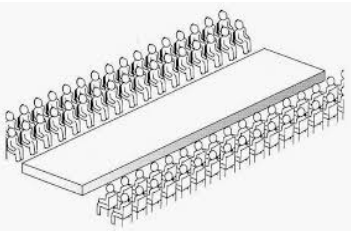
General Revision – Staging Types

In Component 1, Section A you could be asked questions about different staging configurations. You may also find it useful when creating your Component 2 & 3 performances to experiment with staging types.

Components 1, 2 & 3

Traverse: The acting area is a long central space and the audience sits on two sides facing each other. This type of staging can feel like a catwalk show.

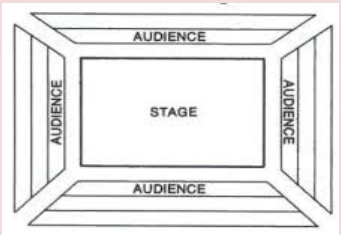
Advantages:
- The audience feel very close to the stage as there are two long front rows.
- Audience members can see the reactions of the other side of the audience.
- The extreme ends of the stage can be used to create extra acting areas.



Disadvantages:
- Big pieces of scenery, backdrops or set can block sightlines
- The acting area is long and thin, which can make some blocking challenging.
- Actors must be aware of making themselves visible to both sides of the audience.

In the Round: The stage is positioned in the centre of the audience and the audience are seated around all areas of the stage. The stage/audience can either be curved (creating a circle), or more like a square or rectangle. There are usually several 'tunnel-like' entrances, these are called vomitories.

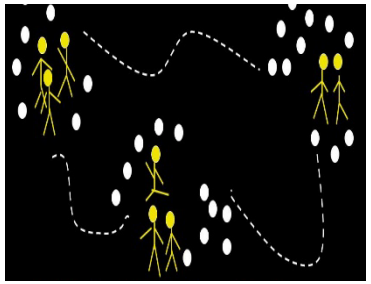
Advantages:
- The audience is close to the stage as there is an extended first row.
- The actors enter and exit through the audience which can make them feel more engaged.
- There is no easily achieved fourth wall separating the audience from the actors – it is easy to interact with them.



Disadvantages:
- Designers cannot use backdrops or flats as they would obscure the view of the audience.
- Stage furniture has to be chosen carefully so that audience sightlines aren't blocked.
- Actors must continually move around so that the audience can see them and critical interactions.

Promenade: The performance areas are set in various locations in a venue. Promenade means 'to walk' and the audience follows the action on foot, moving from one performance area to another. Promenade staging is often used in site specific performances (a performance in a location that is not a conventional theatre, e.g. a street, a warehouse)

Advantages:
- Interactive style of theatre where the audience feels involved.
- No set changes or need for movement of big bulky items.
- Enables audience to be more engaged as they move from one piece of action to the next.



Disadvantages:
- The audience may find moving around the space difficult or might get tired.
- Actors and or crew need to be skilled at moving the audience around and controlling their focus.
- There can be health and safety risks

General Revision – Performance Skills

For the GCSE course you are required to have a thorough knowledge of a wide range of performance skills, so that you can write about how they can/have been used as well as being able to use them yourself.

Components

1, 2 & 3

Vocal & Physical Skills

Projection
An actor uses projection to make sure they can be heard by the audience.

Volume
How loud or quiet a character speaks on stage. This can show how they feel through being loud or quiet

Pitch
How high or low you speak.
Low = angry or menacing. High = excited or afraid

Pace
is the speed at which a character speaks on stage. Fast pace = excited.
Slow pace = bored or angry

Tone
Is the expression in your voice to show how the character feels e.g. angry/ happy/sad

Emphasis
The use of emphasis/ stress on certain words in a line to create meaning

Pause
A gap or silence between characters talking or during a line a character is speaking

Intonation
The rise and fall of the voice. E.g asking a question makes the voice rise

Articulation
Using consonants and speaking clearly within speech

Accent
Distinctive sound in voice to place character from a region or place

Facial Expressions
Showing how a character feels on your face by use eyebrows/ mouth/ eye contact.

Body Language
Showing how your character feels through the way they position their body.

Gesture
A movement you do to share information e.g. shake your head to say no/ nod your head to say yes/ point to tell someone where to go

Gait/ Movement
the way a character moves on stage e.g stomping across the floor = angry. Fidgeting in a seat = nervous

Action
A movement where you mime out an action such as eating a sandwich/ throwing a ball

Stance and Posture
The way you stand or sit can show authority/ age/ reaction to an event or the character's situation

Stillness
A character's lack of movement, could show their reaction to a situation e.g. can't move through shock

Contact
Whether and how a character interacts with those around them physically

Eye-Contact
Eye contact with others. Do characters make eye contact or avoid it e.g. the character might be hiding something

Levels
Shows your power/ status. You could be above other characters (high status) or equal or Below (low status)

Proxemics
the distance between characters can show the audience their relationship (e.g. close = friends/ distance= enemies)

Dig Deeper Questions

How could you use vocal or physical skills to communicate subtle changes to a character's emotions?

Which do you think is the most important vocal and physical skill? Why?

COMPONENT 1 – THEATRE ROLES AND RESPONSIBILITIES

For Component 1, Section A, you need to be able to answer multiple choice questions about how a theatre works, identifying theatre roles and the responsibilities of different theatre makers.

Component 1 Section A

THEATRE CREATORS

Playwright

- Writes the script of the play, including dialogue and stage directions.

BEFORE REHEARSALS
- Prepares the script

Director

- Oversees the creative aspects of the production.
- Develops the 'concept' for the production.
- Liaises with designers & stage manager.
- Rehearses the performers – gives notes and agrees blocking.

BEFORE REHEARSALS
- Reads and studies the play – decides concept.
- Casts performers.

DURING REHEARSALS
- Rehearses performers.

Performer

- Appears in a production, e.g. as an actor, dancer, singer.
- Creates a performance or assumes a role on stage in front of an audience.

DURING REHEARSALS
- Learns lines and blocking

IN PERFORMANCE
- Appears before an audience and performs their role(s).

Understudy

- Learns a part, including lines and movements.
- Takes over a role if there is a planned or unexpected absence.

DURING REHEARSALS
- Learns the role(s) they are covering.

IN PERFORMANCE
- Is prepared to 'go on' in case of an absence.

CREW

Stage Manager

- Runs the backstage elements of the play and supervises the backstage crew.
- Organises the rehearsal schedule.
- Keeps a list of props and other technical needs.
- Creates a prompt book.
- Calls the cues for the performance.

DURING REHEARSALS
- Creates rehearsal schedules and props list.
- Notes blocking and creates prompt book.

IN PERFORMANCE
- Ensures the smooth running of the show.
- 'Calls' the show by announcing cues to cast and technicians.

Technician

- Operates the technical equipment, e.g. lighting and sound boards, during a performance.

DURING REHEARSALS
- Run the technical elements during technical and dress rehearsals.

IN PERFORMANCE
- Operates the technical equipment, e.g. sound board.

DESIGNERS

Set Designer

- Designs the set of the play and the set dressing (objects placed on the stage).
- Provides sketches and other design materials.
- Oversees the creation of the set.

BEFORE REHEARSALS
- Researches the play/context.
- Develops set design ideas.

DURING REHEARSALS
- Ensures the set is built and operates correctly.

Costume Designer

- Designs what the performers wear on stage.
- Makes sure that costumes are appropriate for the style and period of the piece.
- Ensures the costumes fit the performers.

BEFORE REHEARSALS
- Researches the play/context.
- Develops costume design ideas.

DURING REHEARSALS
- Organises costume fittings for performers.

Sound Designer

- Designs the sound required for the performance, this might include music and sound effects.
- Considers if amplification e.g. microphones are needed.
- Creates the sound plot.

BEFORE REHEARSALS
- Researches the play/context.
- Develops sound design ideas.

DURING REHEARSALS
- Creates plot sheets and cues for the sound.

Lighting Designer

- Designs the lighting effects and states that will be used.
- Understands the technical capabilities of the theatre.
- Creates the lighting plot.

BEFORE REHEARSALS
- Researches the play/context.
- Develops lighting design ideas.

DURING REHEARSALS
- Creates plot sheets and cues for the lighting.

Puppet Designer

- Designs the puppets for a production.
- Considers the style of the puppets and how they will be operated.

BEFORE REHEARSALS
- Researches the play/context.
- Develops puppet design ideas.

DURING REHEARSALS
- Makes and provides puppets for rehearsals.

THEATRE STAFF

Theatre Manager

- Runs the theatre building, including overseeing the Front of House staff.

IN PERFORMANCE
- Oversees the operation of Front of House and box office.

Front of House Staff

- Box Office: where audience members can buy/collect their tickets.
- Ushers: look after the audience inside the auditorium.

IN PERFORMANCE
- Sell programmes and show memorabilia.
- Show audience members to their seats.
- Assist audience members with any problems.

Component 1- Set Text – Blood Brothers

For Component 1, Section b, you need to show understanding of the play Blood Brothers through Performance and design skills

Component 1 Section B

Plot

Act 1: before birth

The play starts with the narrator talking about a 'story about the Johnstone twins' and two men laid dead on the stage. We go back in time where we learn Mrs Johnstone's husband has just left her; she is very poor and already has 7 children. She starts a new job cleaning Mrs Lyons' house and finds out she's expecting twins. She strikes up a deal with Mrs L as she can't afford to keep both so Mrs L convinces Mrs J to give her one of the babies as her husband is currently away on business and she can't have a child of her own. The babies are born and Mrs J begrudgingly hands one of the babies over for Mrs L to later fire her. The narrator states that one day the devil will punish the two women.

Act 1- 7 years old

Mickey and Eddie meet for the first time by chance at the park and become 'blood brothers' when they find out they share the same birthday. When Mrs J realise the two have met, she is horrified and sends Edward home. Mrs L reacts more violently and slaps Edward when he swears at her. She even contemplates uprooting her entire family in order to escape. Despite their mothers' disapproval, the boys continue to see each other and play lots of children's games with their friend, Linda. They play various pranks and end up getting caught by the police who threatens Mrs J but flatters Mr L. Mrs L decides they should move, before Edward leaves Mrs J gives him a locket with a picture of herself and Mickey. The Johnstones also find out they are being relocated.

Act 2- 14 years old

Both boys have become interested in girls but feel awkward. Edward attends boarding school. Mickey and Linda have romantic feelings for each other but Mickey's lack of confidence is getting in the way. Sammy attempts to rob a bus by holding the driver at knife point. Mickey and Eddie both struggle at school- Mickey insults a teacher and Edward refuses to take off the locket. When Mrs L finds out, she's appalled but is more upset when she sees the content of the locket. The narrator returns to remind the audience that the devil will come. Mickey and Edward meet, by circumstance again- Mickey takes Edward back to his but they are not aware that Mrs L is following them. Once the boys leave the house, Mrs L attacks Mrs J with a knife and curses her, calling her a witch. The boys meet with Linda and spend the summer together- an idyllic sequence follows as the trio age from 14 to 18.

Act 2- 18 years old

At 18 in the sequence, the narrator warns that soon, both their joy and childhood will end. Edward has developed feelings for Linda and is at university whilst Mickey works in a factory. Edward self-sacrifices his feelings and encourages Mickey to ask Linda to be his girlfriend and she accepts. In October, Mickey tells his mum that Linda is pregnant and the two will be getting married. Their wedding coincides with a huge economic downturn resulting in Mickey getting paid off. When Edward returns from Christmas, Mickey is downtrodden and claims 'blood brothers' is childish. Edward confesses his love to Linda but she tells him she is married and pregnant. A desperate Mickey participates in a burglary with Sammy that goes wrong resulting in Sammy killing a man. They are both sentenced to prison and Mickey becomes depressed and is prescribed antidepressants which he becomes addicted to, even after he's been released.

Act 2- the end

Mickey continues to take the pills despite Mrs J & Linda's pleas. Linda, desperate, asks Edward, now a city councilman, to find them an apartment and getting Mickey a job. Mickey is angry about this and a devastated Linda seeks comfort with Edward and begins an affair with him. The affair continues and Mickey stops taking his pills for Linda's sake. Mrs Lyons reveals Linda and Edward's affair to Mickey. Enraged, he takes Sammy's gun out of the floorboards and confronts Edward, with a distraught Mrs J and Linda trying to get him to stop. The narrator warns the devil has arrived. Mickey finds and confronts Edward at the town hall about the affair, as well as whether Mickey's daughter is actually his. Edward denies fathering Mickey's child. The police surround the area and Mrs J bursts in and tells the boys they are twins separated at birth. Mickey asks why he couldn't have been Edward and then accidentally pulls the trigger of the gun, shooting and immediately killing Edward, the police then shoot Mickey. The play ends with the boys led on the stage and the narrator wonders what really killed the twins: superstition or the class system?

Component 1- Set Text – Blood Brothers

For Component 1, Section b, you need to show understanding of the play Blood Brothers through Performance and design skills

Component 1 Section B

Characters	
Mickey Johnstone	The lower-class twin. He is honest, sincere and goodhearted. He impregnates Linda, gets laid off, is arrested for Sammy's crime and ends up in prison and addicted to anti-depressants. His rage at Linda & Edward for having an affair drives the play's finale.
Edward Lyons	Is also good-natured but the higher-class twin. His sheltered upbringing makes him innocent but because of class he gets good opportunities e.g. university and a good job. His good-natured manner leads to the play's final scene.
Mrs Johnstone	Biological mother of the twins and a horde of other children. Left by her husband she gets a job as a cleaner. She is the moral centre of the play; is tortured by guilt and regret.
Mrs Lyons	Opposite of Mrs J whom she employs as a cleaner. She adopts Edward as her own child. Is haunted by the original act of a mother giving up her child. The guilt turns into suspicion and paranoia. She announces the affair and contributes to the murder of her adopted son.
Linda	Begins as a tomboyish young girl but both twins have a crush on her from an early stage. She only has eyes for Mickey as a teenager but later turns to Edward for comfort and support, which turns into an affair. Despite this, she loves both twins and is a sympathetic character.
Narrator	All-knowing and always slightly menacing - takes many roles throughout the play. Narrator constantly reminds the audience of the terrible choice that began this chain of events. Frequent mentions of fate and superstition but the Narrator claims it was class, not fate.
Sammy	When they are younger, Mickey just wants to be like Sammy. Quickly becomes a juvenile delinquent; even attempting to rob a bus as a teenager - he ends up in prison with Mickey.
Mr Lyons	Married to Mrs Lyons – works away which is how Mrs Lyons can adopt Edward without him guessing. Grows increasingly concerned about his wife's mental health and wellbeing.

Context	
Marilyn Monroe	Famous and glamorous Hollywood movie star who Mrs J is compared to. Mickey is also compared to the actress as Mickey becomes addicted to antidepressants mirroring Monroe's own addiction struggles.
Margaret Thatcher	First female Prime Minister- responsible for lots of working class people (including miners) losing their jobs. During her time in power, unemployment rates were raised higher than ever before.
Single Parents	Single mothers were looked down upon in this era. Society expected people to marry before they had children and thought badly of those who didn't. Women were expected to give up work and look after the children.
Russell's Intentions	Russell was brought up in a working class family in Liverpool where his Dad had various jobs with one being a miner and was an alcoholic. Russell was interested in class as his mother aspired to be of a higher class. Russell feared he would end up like his father but felt saved by his in-laws who nurtured him, hence his interest of nature vs nurture.

Themes	
Education	Due to class, education is offered differently to the two boys- with Edward being in a private, boarding school and Mickey a comprehensive school where Mickey is poorly educated.
Superstition	The audience is constantly reminded of this, as well as the superstition Mrs Lyons creates. The narrator also refers to other superstitions throughout the various songs in the play.
Violence	The children play with toy guns and violent games out in the street. This foreshadows the violent path Mickey takes and the ultimate violent ending to the boys' lives.
Money	Mrs J can't afford to feed an extra two children and ends up getting her furnishings on the catalogue being taken away whilst pregnant. The children have broken toys which compares to Mrs L who can afford all of the luxuries when Edward is born.
Class	Mickey has less opportunities, poor education and an unsecure job- he is involved in drugs, depression and crime because of his poverty. Edward has all the opportunities: a good education, university and a good job. Both boys are also treated differently by society and authoritative figures.
Nature vs Nurture	Focuses on the idea of what will happen if a person's character is determined by their genetics or upbringing. In this case, it is their upbringing- Mickey wishes to have had Edward's life at the end of the play.
Fate	The idea that because of class, the boys' fate was always decided and instead it was fate, not superstition that caused their death.
Friendship	There are close friendships between the boys as well as Linda which strengthens and suffers at different times, specifically as the boys get older as one gets everything he wants and the other does not due to their social classes.

Movement

Gait – the way you walk.
Posture – the position you hold your body when standing or sitting.
Stance – the way you stand.
Body language – how you express your emotions through your body.

Expression

Facial expression – showing your character's emotion by using your face.

When describing, focus on the eyes, eyebrows and mouth.

Gesture

A movement, using the hand, that expresses an idea or communicates meaning.
When describing, describe in detail e.g. "I used a gesture where I outstretched my hand to show I wanted to ignore the other character"

Interaction

Eye contact (or lack of).

Proxemics – the distance between the characters that communicates their relationship/situation.

Voice

Pitch – how high or low your voice is.
Pace – how quickly you speak.
Volume – how loud you speak.
Use of pause – pausing before a line of speech.
Tone – showing your character's emotions through your voice.

Audience

What effect does this have on the audience?
What do you want the audience to see/feel?
How do you know your performance was successful? How did the audience react?

Component 1- Set Text – Blood Brothers

For Component 1, Section b, you need to show understanding of the play Blood Brothers through Performance and design skills

Component 1 Section B

Section B Study of Set Text – *Blood Brothers*
Total marks – 44
An extract from the play is printed in the question paper and you can have a copy of Blood Brothers during the exam.

You will answer **four** questions to answer in Section B. These will link to the extract and at times the whole text (read the question carefully to check for this.)

Question 6:1 (4 marks) - Compulsory
Design question – this could be on either Lighting, Sound, Set or Costume. It is focused on the extract given in the exam. You need to answer about the design element and your ideas. This needs to reflect the context of Liverpool from the 1960's-1980's.

Question 6:2 (8 marks) - Compulsory
Given line question – this question gives you a line from the extract to focus on and a set character. You need to answer this question by stating what performance skills you would use to play the part and the reasoning behind your choices

Question 6:3 (12 marks) - Compulsory
Interaction question – this question gives you a set area of the extract to focus on (the shaded section) and a set character. You needs to say how the stated character would interact with another character in the extract. You can discuss the stage relationship they would have with each other. You should also discuss the Vocal and Physical skills that let the characters interact with each other

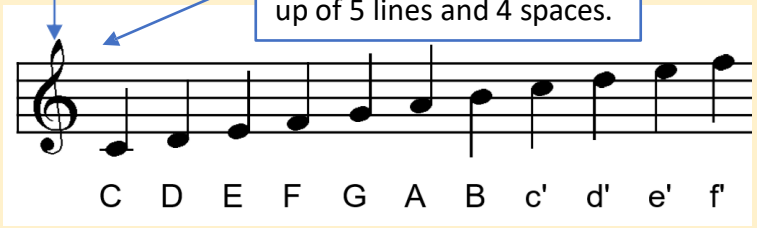
Choice of two questions – pick one
Question 6:4 (20 marks) – Choice 1
Interpretation question – you are given a set character to interpret based on the extract. You should describe the acting skills you would use to play the character and explain how these ideas are appropriate for the extract. You must also show your understanding of the whole play by discussing how your interpretation of the character could be used elsewhere in the play.
OR
Question 6:5 (20 marks) – Choice 2
Design skills question – you must choose **one** area of design (set, lighting, sound, costume) and describe how you would use this design area to support the action of the extract. You should also discuss how your design ideas are appropriate for the play as a whole. This could be a comparison to another moment in the play and the design used there.

Musical Notation

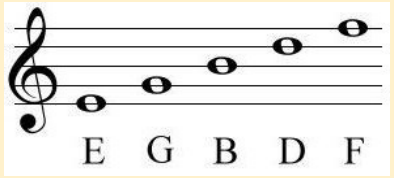
A STAVE or STAFF is the name given to the five lines where musical notes are written. The position of note son the stave or staff shows their pitch (how high or low a note is). The TREBLE CLEF is a symbol used to show high-pitched notes on the stave and is usually used for the right hand on a piano or keyboard to play the melody and also used by high pitched instruments such as the flute and violin. The '#' symbol means a SHARP which raises the notes by a semitone and the '*b*' symbol means a FLAT which lowers the pitch by a semitone.

Treble clef

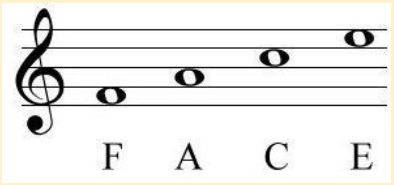
The stave or staff is made up of 5 lines and 4 spaces.



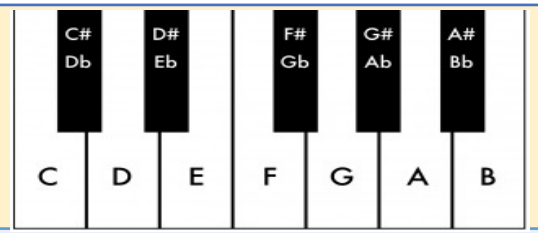
Every Green Bus Drives Fast



Notes in the spaces spell "FACE"



Each black key has 2 names e.g. C# is the same as Db!



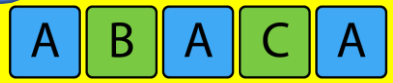
Different Sections

- intro
- verse
- pre-chorus
- chorus
- bridge
- outro
- middle 8
- refrain
- coda
- breakdown
- drop
- riser

Make sure you can describe the difference between each of these!

Binary Form

Ternary Form

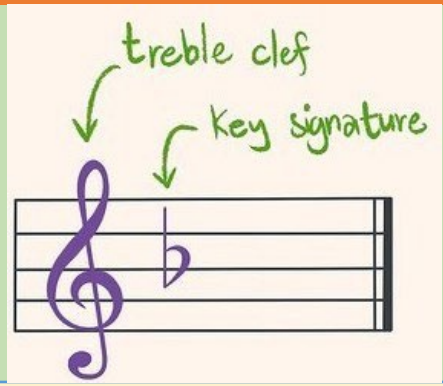


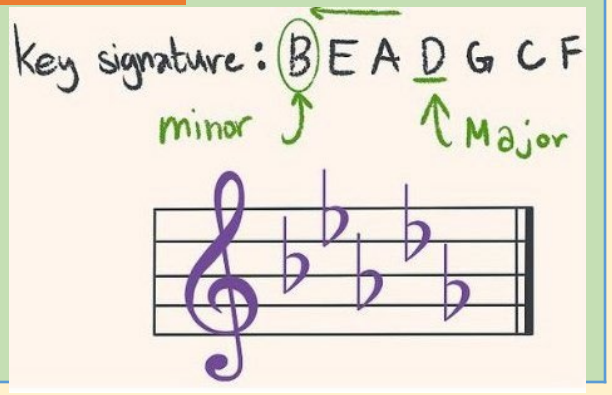
Rondo

Melody

T = TONE (two keys on a piano)
S = SEMITONE (one key on a piano)

Major (T, T, S, T, T, T, S)
Natural Minor (T, S, T, T, S, T, T)
Harmonic Minor (T, S, T, T, S, T+S, S)
Minor Pentatonic (T+S, T, T, T+S, T)
Major Pentatonic (T, T, T+S, T, T+S)





Musical Genres

Britpop

- **Instruments** – Vocals, acoustic guitar, lead guitar, bass guitar, piano, drums
- **Structure –** traditional verse/chorus structure (e.g. Verse, Chorus, Verse, Chorus, Bridge Chorus), sometimes with intros, outros and solos
- **Melody** – focus on "catchy" melody hooks in the vocals, sometimes with guitar riffs
- **Harmony** – Simple harmony, generally with diatonic chords
- **Rhythm –** mostly in 4/4 with simple pop rhythms

- **Notable Artists –** Oasis, Blur, Stone Roses

Blues

- **Instruments** – Vocals, acoustic guitar, lead guitar, bass guitar, piano, drums
- **Structure –** 12 Bar Blues, one lyric repeated 3 times, often with a solo
- **Melody** – often one line repeated, sometimes with call and response
- **Harmony** – Dominant Chords (7th chords) - Chord I, Chord IV and Chord V
- **Rhythm –** mostly in 4/4 or 12/8, generally swung rhythm

- **Notable Artists –** Robert Johnson, BB King, Stevie Ray Vaughan

Reggae

- **Instruments** – Vocals, electric guitar, bass guitar, piano, drums
- **Structure –** traditional verse/chorus structure
- **Melody** – simple, often "catchy" melodies, generally short motifs, riffs often on guitar or organ
- **Harmony** – Simple harmony, generally with diatonic chords
- **Rhythm –** mostly in 4/4 with simple pop rhythms, generally swung, accents on beats 2 and 4

- **Notable Artists –** Bob Marley, Desmond Dekker, Jimmy Smith

Minimalism

- **Instruments** – Often unusual combinations of instruments, many layers
- **Structure –** additive/subtractive structure, sometimes through-composed, very repetitive
- **Melody** – short, repeated motifs that can gradually change
- **Harmony** – Harmony often implied by interweaving melodies
- **Rhythm –** complex rhythms with lots of syncopation and cross-rhythms

- **Notable Artists –** Steve Reich, Philip Glass, Mike Oldfield

Hip Hop

- **Instruments** – Vocals (often rap), bass, drums and samples
- **Structure –** often the instrumental section is looped, however there is often a rap (verse) and a hook (chorus)
- **Melody** – mostly rapped (little range in pitch), but sometimes a "catchy" vocal hook
- **Harmony** – Simple harmony, very few chord changes
- **Rhythm –** mostly in 4/4 with simple pop rhythms, little variety throughout song

- **Notable Artists –** Eminem, Dr Dre, Kanye West

Jazz

- **Instruments** – Drums, double bass, piano, guitar, saxophone, trumpet, vocals
- **Structure –** often AABA, most jazz standards are 32 bars
- **Melody** – often a simple "head", but more complex melodies are improvised
- **Harmony** – Extended harmony, chord substitutions
- **Rhythm –** mostly in 4/4, generally swung, lots of syncopation

- **Notable Artists –** Miles Davis, Charlie Parker, Ella Fitzgerald

Y11 BTEC Music: Music Technology

Overview

Most commonly, remixes are a subset of audio mixing in music and song recordings. Songs may be remixed for a large variety of reasons, to:

- adapt or revise a song for radio or nightclub play
- create a stereo or surround sound version of a song where none was previously available
- improve the fidelity of an older song for which the original master has been lost or degraded
- alter a song to suit a specific music genre or radio format
- use some of the original song's materials in a new context, allowing the original song to reach a different audience
- alter a song for artistic purposes
- provide additional versions of a song for use as bonus tracks or for a B-side, for example, in times when a CD single might carry a total of 4 tracks
- create a connection between a smaller artist and a more successful one, as was the case with Fatboy Slim's remix of "Brimful of Asha" by Cornershop
- improve the first or demo mix of the song, generally to ensure a professional product.
- improve a song from its original state

Remember when you hit a creative block that DAWS are FULL of weird effects to get you thinking again!
Have you tried the following on your samples?:
-Automating your plug-in parameters?
-Reversing an audio file – try adding reverb to this and then turning back the correct way again!
-How about a Paulstretch in Audacity?
-If your music is really busy how about a breakdown section where everything mellows out again?

DAW = Digital Audio Workstation (e.g. Bandlab/Logic Pro)

MIDI Musical Instrument Digital Interface

Data recorded using a MIDI Keyboard

MIDI data read by a **SOFTWARE INSTRUMENT**

Software instruments can also be called Synthesisers

psst...

The sound selected is called a **VOICE**

Remember! MIDI has no sound it is only DATA

You are not a robot so make sure any music you play on the keyboard is put perfectly in time by using QUANTIZE

There are different types of track

-Audio
-Software instrument

Keywords

Loop: These can be MIDI or Audio and repeat without being rec-recorded or played again by the musician.

Sample: Small piece of audio used from something already existing

Stereo: Two output tracks – left & right

Mono: The same output whether there is more than one or not

Panning: Separating sounds so that they play more out of one stereo channel – for example panning the cymbals to the left

Everything created on a computer is **DIGITAL** the opposite of this is **ANALOGUE** (things created using real life objects like guitars and effects pedals!)

DANCE Music:

Influenced by **MUSIC TECHNOLOGY:** samplers, synthesisers, sequencers and drum machines.
Various genres: House, Techno, Drum and Bass, Garage, Trance, Ambient. Dancing in individual and **IMPROVISED.**
Use of **ELECTRONIC SOUNDS.**
A **STRONG BEAT** emphasised by the **DRUM** and **STRONG BASS LINES.**
SHORT PHRASES and **REPETITIVE SECTIONS.**
FAST TEMPO

Composer – Someone who writes music
DJ – Short for 'Disc Jockey' - can be someone who plays music using turntables mixing songs together in a live setting. Can also compose their own dance tracks.
Arranger – someone who takes existing music and recreates it in another way e.g., creating a string version of a pop song.
Technician – Someone who maintains and prepares equipment.

Reverb
The Wonder Plug-in

Reverb is the natural process by which sounds bounce around the spaces they are in. When we create music digitally we need also to create a 'space' for these sounds to exist in.
A long, big reverb can sound like you are in a cave or a cathedral whereas short reverb sound can make a sound much more natural.
Look out for the words DRY and WET. These refer to the original sound (dry) and how much reverb is put onto it (wet) - and ALWAYS experiment!

FOUR-ON-THE-FLOOR is a common rhythm in DISCO and more modern dance music:

Keyboard Shortcuts in Bandlab: Copy – ctrl+c : **Paste** – ctrl+v : **Cut** – ctrl+x : **Undo** – ctrl+z

Year 11 - Sports Science – Unit R180 Reducing the risk of sports injuries and medical conditions

Components of a Warm-Up

- **Pulse raising** – Exercises that slowly increase heart rate and body temperature: jogging around the pitch before a game of football
- **Mobility** – Exercises that take the joints through their full range of movement (ROM): a footballer performing arm swings and hip circles.
- **Dynamic stretching** – Dynamic stretches linked to the specific sport: 'open and close the gate' and groin walk before football.
- **Skill rehearsal phase** – Rehearsing common movement patterns and skills which will be used in the activity such as dribbling drills for football

Physiological benefits of a warm-up

- Increase in muscle temperature
- Increase in heart rate
- Increase in flexibility of muscles and joints
- Increase in pliability of ligaments and tendons
- Increase in blood flow and oxygen to muscles
- Increase in the speed of muscle contraction

Psychological benefits of a warm-up

- Heighten or control arousal levels
- Improve concentration/focus
- Increase motivation
- Increase confidence
- Mental rehearsal

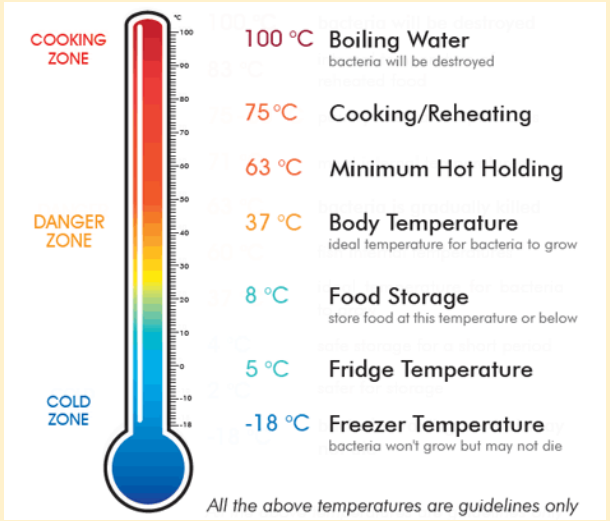
Keyword	Definition
Intrinsic factors	Intrinsic factors are those that are internal to the athlete. Some of the intrinsic factors come with the athlete and cannot be influenced
Extrinsic factors	Extrinsic factors are those that are external to the athlete.
Environmental factors	Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives.
Psychological	Relating to the mind
Physiological	Relating to the body
Arousal	the state of being physiologically alert, awake, and attentive
Direct aggression	an intentional act of foul play to injure another player
Channelled aggression	a forceful act within the rules of the game but with a secondary aim of injuring the player
Retaliation	the action of harming someone because they have harmed you
Mental rehearsal	Thinking about practising something rather than doing it
Imagery	Imagery is simply the formation of any mental pictures
Selective attention	Selective attention is the process of focusing on a particular thing and ignoring others
Individual variables	Individual difference variables are usually definable traits that can be measured, such as age, height, weight, sex, skin colour, etc
Severity	the condition of being very bad or serious
Human interaction	The way people communicate as they spend time together

Year 11 - Hospitality and Catering – Core Knowledge

Danger Zone | Bacteria | Hygiene | Preparation | Parthenogenic

Temperature Control

Temperature control: Buy, store, cook and prepare food.
Storing food correctly minimises the risk of food spoilage and food poisoning.



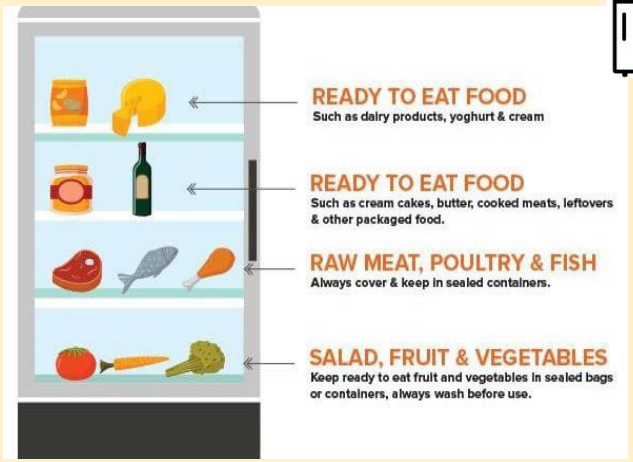
Bacteria grow best in the danger zone (between **5°C-63°C**:

- Below **5°C** they grow very slowly or are dormant.
- Above 63°C they are mainly destroyed by heat.

The 5 conditions for bacterial growth: **Warmth, food, moisture, time, correct PH.**

Fridge Safety

Some food needs to be kept in the fridge to stop bacteria contaminating food.



Cross-contamination: The transfer of pathogenic from raw to ready to eat foods, or one place to another.

The 4C's in Food Nutrition

Cooking
Cleaning
Chilling
Cross-contamination

Bacteria and Illnesses

Bacteria that make us ill are called **PATHOGENIC**.
Non-visible and visible symptoms are:

- Diarrhoea (visible)
- Being sick (visible)
- Nausea (non-visible)
- Stomach cramps (non-visible)
- Fever/temperature (non-visible)
- Headaches (non-visible)

Food poisoning: An illness caused by eating contaminated food.
Food spoilage: When food deteriorates so that its quality is reduced, or can no longer be eaten.
Bacteria: Microscopic living organisms, which are single-celled and can be found everywhere.
High-risk foods: Ready-to-eat moist foods, often high in protein.
Dormant: When bacteria are inactive and cannot grow at all.

Assessment
Unit 2- Examination Brief 2023-2024
MCQ's & Practical Work

Year 11 - Hospitality and Catering – Developing Planning Skills

Key Vocabulary

Hygiene | Cross - Contamination | Time Plan | Contingencies | Quality | Health and Safety

Hygiene

Check your time plan and ensure you have added the following throughout: Wearing an apron, washing hands with hot soapy water and drying with a blue paper towel, washing pots with hot soapy water, tying hair up, taking jewellery off, wiping down surfaces, using anti-bacterial spray on surfaces where there is no food, store food in the fridge.

Health and safety

Check your time plan and ensure you have added the following throughout:

- Oven gloves are being used.
- Checking oven settings are correct.
- Using knife correctly – bridge and claw.
- Checking electrical equipment for faults and following safety manual.
- Probing meat to check the correct temperature.
- Checking the fridge temperature is 0 - 4c
- Making sure hot food is served no lower than 63c
- Avoiding cross-contamination of raw/cooked food.

9.40	Collect a mixing bowl and begin to combine the cream cheese, tomato puree and chopped tomatoes for the chicken breast filling. Once mixed place in the centre of the chicken breast and gently fold in the sides and slowly roll it up ensuring the filling does not leak out. Place three rashers of bacon on a clean board and roll the bacon around the breast. Place on a baking tray. Remove the sponge from the oven once it is golden brown and ensure it is baked thoroughly, allow to cool. Wash and slice the vegetables and place into boiling water for seven minutes, drain and refresh.	Wash hands after handling raw meat. Use oven gloves, place on cooling rack. Put peelings in the bin.
10.00	Put the chicken breast into the oven and cook for 25-35 minutes 200 degrees. Once the sponge has been removed from the tray, get a pastry cutter and cut out circles of sponge. Wash up any equipment that is dirty and clear area and clean workspace. Place sugar and egg whites into a bowl and whisk until light and fluffy to create successful meringues. Place in fridge.	Set the timer Ensure work area and cutter are clean. Ensure bowl is clean and dry or meringue won't work. Make sure no yolk in mix.

Contingencies – these are steps you can put in place if your method is not quite right working. You must plan ahead and consider what may go wrong.

Check your time plan and ensure you add details that describe the correct procedures to make your dishes, for example using a hand whisk;

I will use a hand whisk, moving to an electric whisk if there are still lumps. I will add more flour if the mixture is too sticky or more liquid if the mixture is too dry.

You must also discuss:

Food provenance means where ingredients and the foods made from them originally come from. Many plant crops are grown in the UK. They are an essential part of our food supply. Some are grown on a large scale, this is called intensive farming.

Seasonality describes the best time to buy fruit, vegetables and some animal products. The foods are often cheaper and fresher when buying seasonally, and especially locally. This also supports British farmers and producers.

Year 11- Art -Core Knowledge

Key Vocabulary

Observe | **Refine** | **Record** | **Develop** | **Present** | **Personal**

Composition

Focus on developing a composition in a systematic way; not just one idea, but a series of ideas from a range of artistic sources, to refine the idea. Looked at both compositional and technical models to help develop your work. It is an excellent idea to use different artists and materials to help solve problems in your work.

Designing A Final Piece

The elements of final ideas pages:

- Don't just start with one idea. Draw them out carefully and annotate, linking back to the artists.
- You will probably know which one you want to use by the time you have finish.
- Use the media you plan chose on the final.
- Have some zoomed in areas to show the details.
- Plan your colour scheme.
- Make a step-by-step plan of how you will do it. **Don't forget to link it back to your artists.**

Reflect On Your Final Ideas

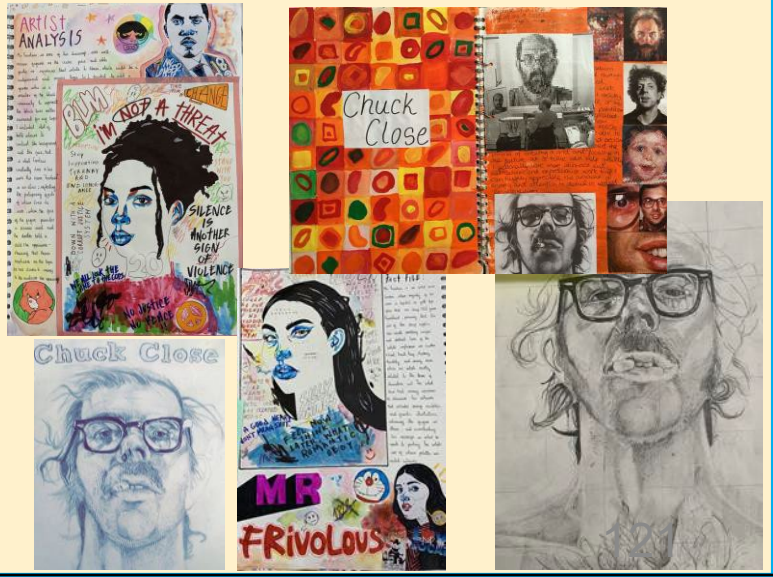
Self-Assessment of Ideas

- Which idea uses previously explored imagery the most successfully?
- Which idea combines previously experimented with techniques?
- Which is the most successful composition (Which idea will utilise your talents the best?
- Which will stretch your artistic ability the most?
- To you, now, which one do you prefer and why?
- Talk to a neighbour, which do they prefer and why?

Respond to artwork you have researched

Remember this is a **PERSONAL REPONSE** to the themes and the artists that you have researched.

How can you **CLEARLY** use the knowledge to present a final outcome, that shows an in-depth thoughtful understanding of the theme?



Year 11- Art - Final Piece

Key Vocabulary

Response | **Sophisticated** | **Composition** | **Design** | **Primary** | **Secondary**

Starting Point

How will you be assessed?

AO1 – Artist Research

You need to select at least three artists from your exam paper that has been provided. Each artist research should take up to a minimum of one double page spread in your sketchbook.

AO3 – Drawings, Ideas and Intentions

You will need to record your ideas through primary and secondary observations. You must have detailed, refined pencil drawings, photographs and written annotations, which support the development of your work?

AO2 – Exploring different mediums

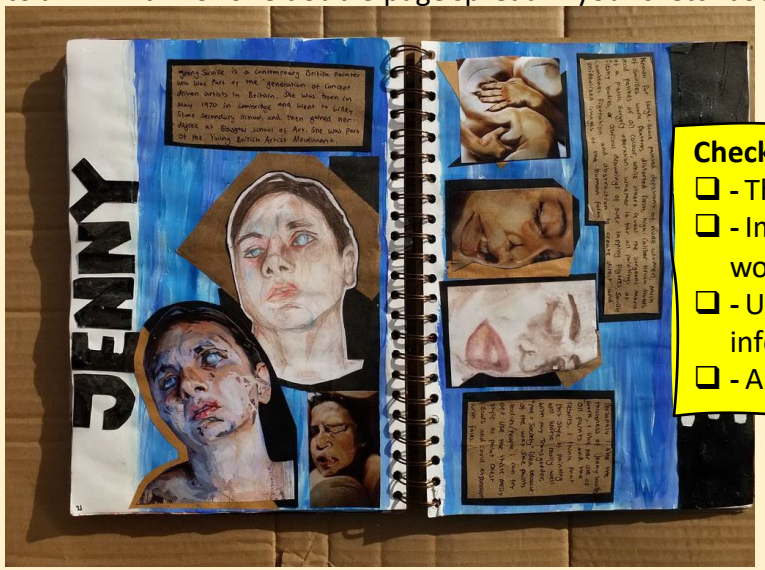
You now need to think about developing your ideas and experimenting with a range of media.

AO4 – Final Outcome

Final Piece: You need to use your artist research, your experiments and your recording to now develop and present a final piece. Try to create a minimum of 2 different designs and then carry out one in the 10 hours.

AO1 – Artist Research

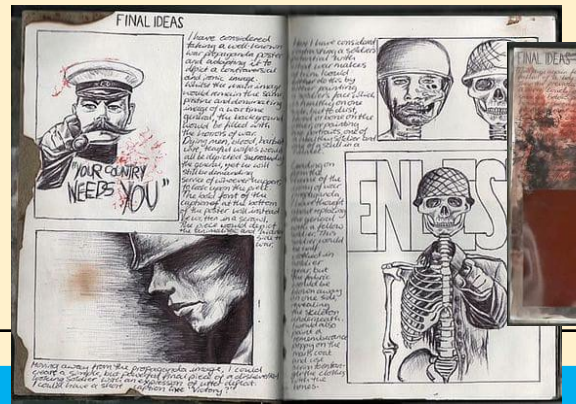
ARTIST RESEARCH: You need to EXPLORE at least three artists that reflect the theme Mixed Media 'Natural and Man made'. Each artist research should take up to a minimum of one double page spread in your sketchbook.

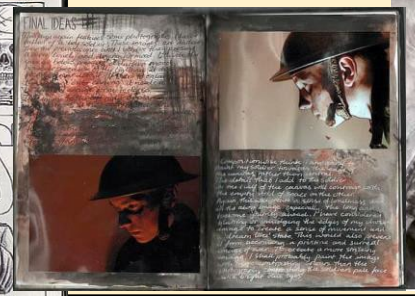


Check list:
- ❑ - Thematic Title
- ❑ - Images of the artist's work
- ❑ - USEFUL factual information
- ❑ - Artist's analysis

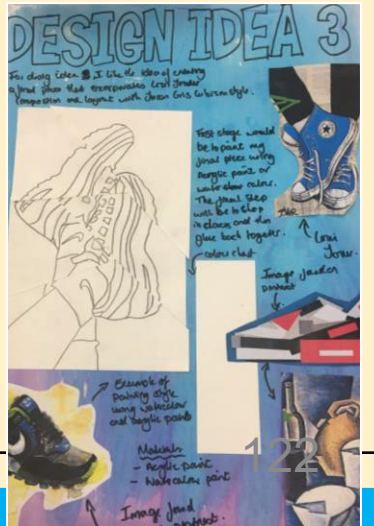
Final outcome

Final Piece: You need to use your artist research, your experiments and you're recording to now develop and present a final piece. Try to create a minimum of 2 different designs.





Design Ideas Check list	Tick
Title	
Notes, explaining your ideas	
Small Sketch A5 size	
First hand images	
Images of artist influence	
List of material	
Swatch, test out media and colours	

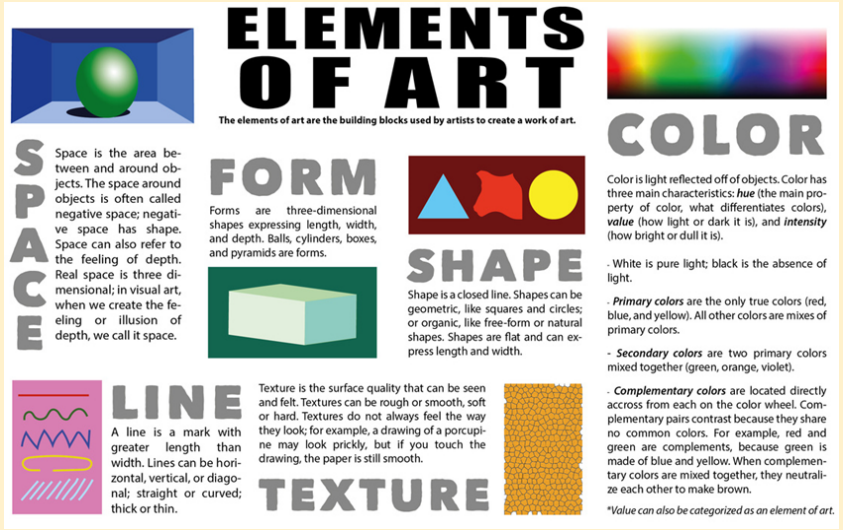


Year 11- Graphics -Core Knowledge

Key Vocabulary

Observe | Refine | Record | Develop | Present | Personal

Formal Elements



Formal Elements make up creative outcomes. Ensure you annotate your work, including The 6 Formal Elements of Art.

Discuss which are dominating your outcome(s) and identify where in your pieces they feature.

Creating an outcome

Self-Assessment of Ideas

- Which material did you work in previously that resulted in strong outcomes?
- Which idea combines previously experimented with techniques?
- Which is the most successful composition?
- Are you working in a physical or digital media?
- How are you going to show clear links to Artist/Designers?

Artist Links and Inspiration

Robert Indiana- Lino Print
PLUS
X2 selected Artist/Designers

- Inspiration
- Elements
- Materials/Media
- Processes
- Techniques
- Contemporary/Traditional
- Scale
- Colour

Digital and physical skills

***PHYSICAL** Outcome:*

- T-shirt/Tote Bag/Tags/Screen Print/Lino Print

***DIGITAL** Outcome:*

- Text & Image/Free Piks/Typography/CAD

Year 11- Graphics - Final Piece

Key Vocabulary

Response | **Sophisticated** | **Composition** | **Design** | **Primary** | **Secondary**

Starting Point

How will you be assessed?

AO1 – Artist Research

You need to select at least three artists from your exam paper that has been provided. Each artist research should take up to a minimum of one double page spread in your sketchbook.

AO3 – Drawings, Ideas and Intentions

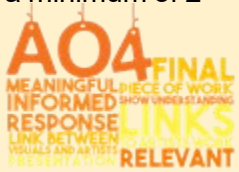
You will need to record your ideas through primary and secondary observations. You must have detailed, refined pencil drawings, photographs and written annotations, which support the development of your work?

AO2 – Exploring different mediums

You now need to think about developing your ideas and experimenting with a range of media.

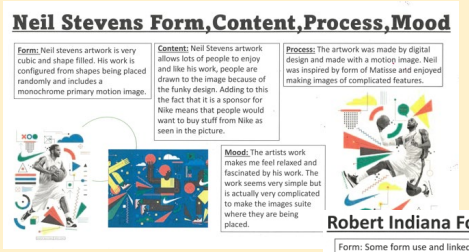
AO4 – Final Outcome

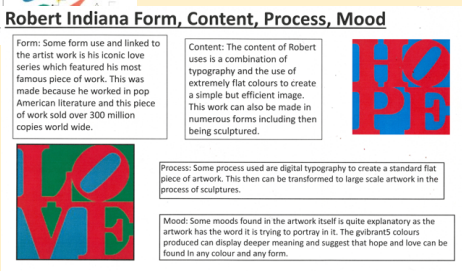
Final Piece: You need to use your artist research, your experiments and your recording to now develop and present a final piece. Try to create a minimum of 2 different designs and then carry out one in the 10 hours.



AO1 – Artist Research

ARTIST RESEARCH/Form, Content, Process, Mood: You need to EXPLORE at least 2 artists that reflect your chosen theme. Each artist research should take up to a minimum of one double page spread in your folder.



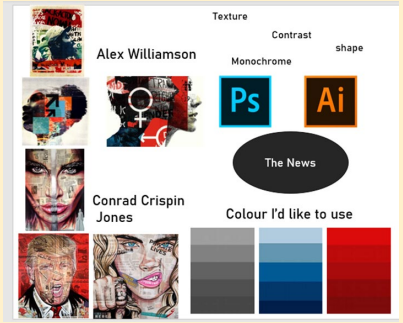


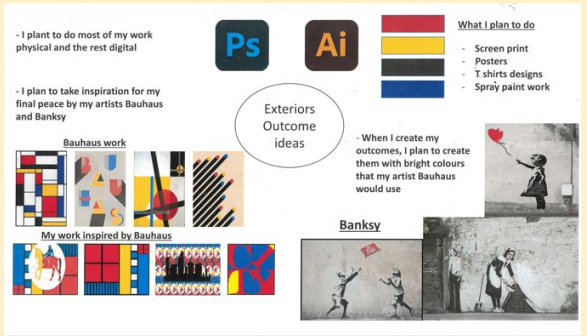
Check list:

- ❑ - Thematic Title
- ❑ - Images of the artist's work
- ❑ - USEFUL factual information
- ❑ - Artist's analysis

Final outcome

Final Piece Planning-
Final Piece Mind Map / 'Mini Mock - Up'





Communicating to a viewer/Examiner your initial thoughts for Final Outcome(s) in a visual format.

- New Primary Images
- Artist Images
- Media/Software

Year 11 - Computer Science - 2.1 Computational Thinking

Abstraction is the process of removing or hiding unnecessary detail to make a problem easier to understand and solve.

Decomposition is the process of breaking a problem down into smaller parts in order to make it easier to solve.

Algorithmic thinking is the ability to define a set of instructions that can be followed to solve a set of similar problems.

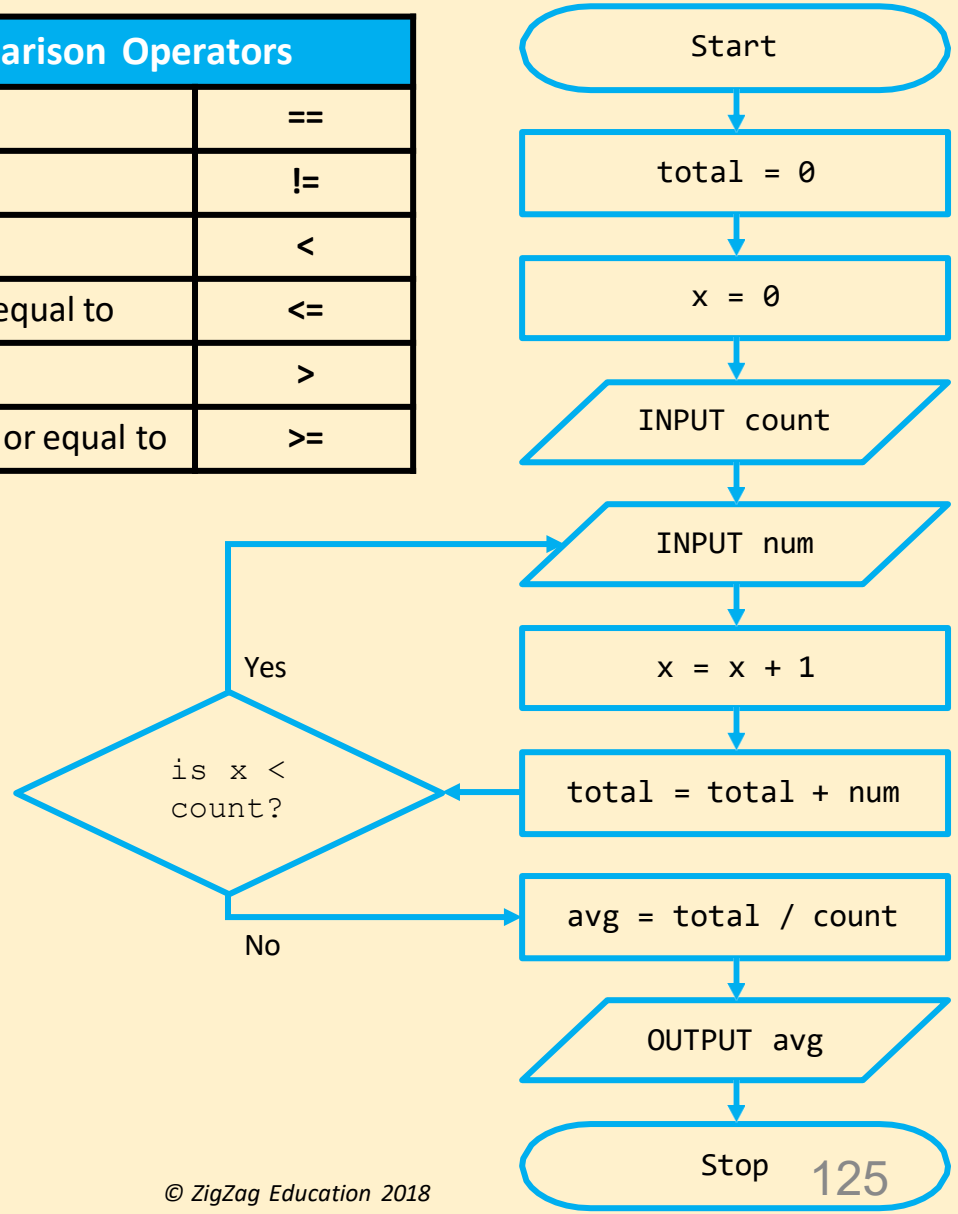
Flowcharts are used to represent algorithms in the form of a diagram.

Comparison Operators	
Equal to	==
Not equal to	!=
Less than	<
Less than or equal to	<=
Greater than	>
Greater than or equal to	>=

Flowchart Symbols

Start/Stop	Used to mark the start and the end of an algorithm.
Process	Used to indicate a process, such as a calculation.
Input / Output	Used when data is being inputted or outputted.
Decision	Used when an algorithm can take one of two paths based on a condition.
Subroutine	Used to call a self-contained algorithm.

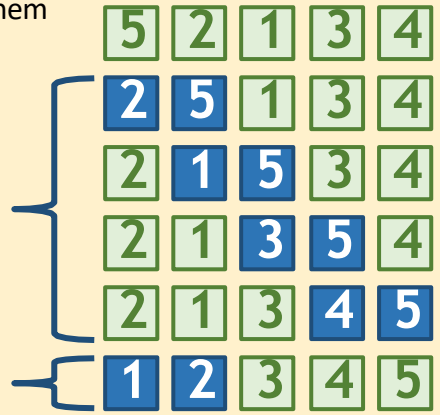
Data Types	
Character A single character (letter, number or symbol)	**"T"**
String A group of characters	**"Tom"**
Integer A whole number	**7**
Real/Float A number with a fractional part	**7.5**
Boolean Either TRUE or FALSE	**TRUE**

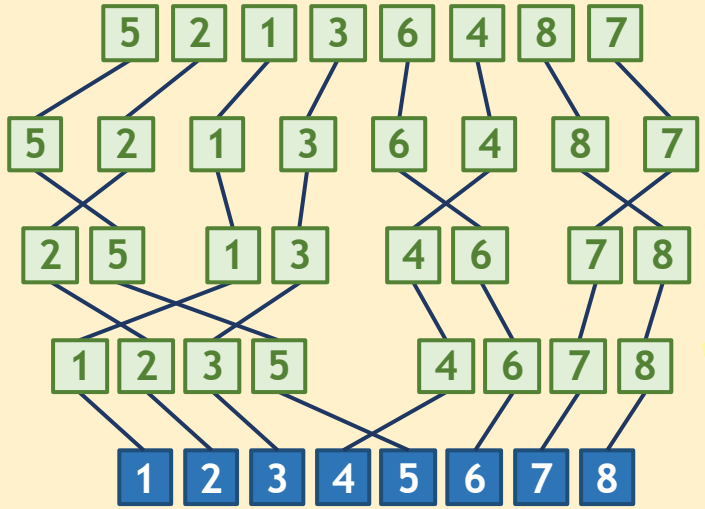


The **bubble sort** algorithm works through a list, comparing pairs of values and swapping them if necessary.

It keeps on passing through the list comparing values and making swaps until the list is sorted.

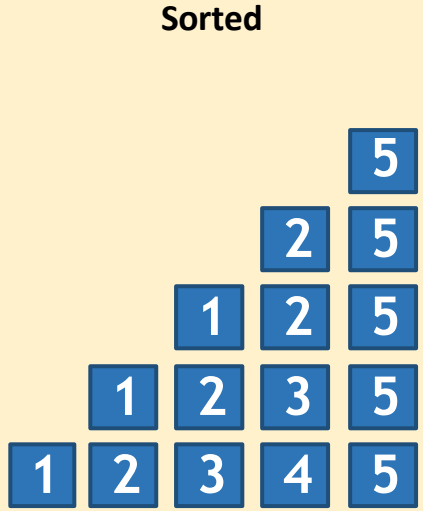
Easy to implement; however, it isn't very efficient.





The **merge sort** algorithm works by splitting a list into individual elements and gradually merging them into larger and larger sorted lists until they are in one sorted list.

Very efficient when used with both large and small lists.



Relatively efficient when used with small lists.

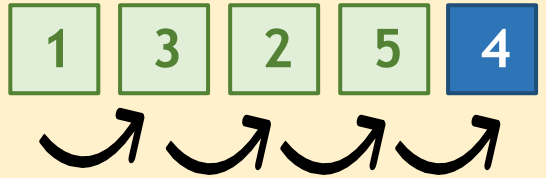
The **insertion sort** algorithm uses two lists, one sorted and one unsorted.

Elements are gradually moved from the unsorted list to the correct position in the sorted list.

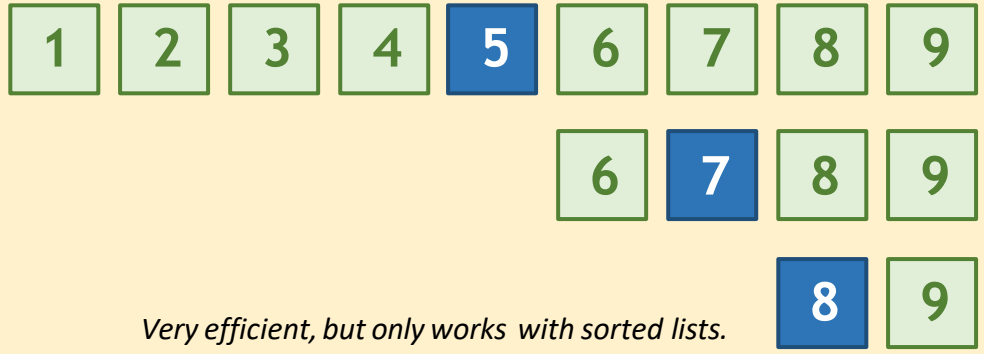
Linear Search

Searches for a value in a list by starting with the first element and *comparing each element* in turn *until the value is found*.

Very inefficient, but works with both sorted and unsorted lists.



Binary search works by *finding the middle value* in a list. If it is smaller than the value being searched for, the lower half of the list is discarded, if it is bigger the upper half is discarded. This process is repeated until the value is found.



Very efficient, but only works with sorted lists.

Variables & Constants

A **variable** is a *named location in memory* that can hold a value, which can be accessed or changed at any point in the program.

```
name = "Tom"
```

This example code creates a variable called '**name**', which contains 'Tom'.

A Constant are similar to a **variable** except the value is set at the start of the program and *can't be changed while the program is running*.

```
const vat = 20
```

This example code creates a **constant** called 'vat', which contains '20'. In Python: **vat = 20**.

The = sign is the assignment operator used to assign a value to a variable or constant.

Sequence

A **sequence** is a set of commands that are executed once in the order they appear.

```
name = input ("Enter name: ")
print ("Hello", name)

movie = input("Favourite movie? ")
print (movie, "is my favourite too!")
```

Selection

Selection uses a condition to decide the *path that will be taken through the program*.

```
num_1 = int(input("Enter a number: "))
num_2 = int(input("Enter a number: "))

if num_1 > num_2:
    print(num_1)
elif num_1 < num_2:
    print(num_2)
else:
    print("They are equal")
```

Casting

Casting is used to change from one data type to another. *E.g. from a string to an integer.*

num1 = int(input("Enter a number"))

Iteration

Iteration enables a group of commands to be repeated a set number of times or until a condition is met. There are two types of **iteration**:

- **Count-controlled loops** repeat a group of commands a *set number of times*.
- **Condition-controlled loops** repeat a group of commands *until a condition is met*.

This algorithm uses a **for loop** to output the numbers from 1 to 10. **For** loops have an inbuilt counter that increments automatically.

```
for i in range (1,11):
    print(i)
```

```
x = 1
while x <= 10:
    print(x)
    x = x + 1
```

This algorithm uses a **while loop** to output the numbers from 1 to 10. The **condition** in a **while loop** is tested at the start.

Data Types

Character - *A single character (a, 3)*
String - *Multiple characters (hello)*
Integer - *A whole number (7)*
Real - *A decimal number (3.5)*
Boolean - *True or False*

Comparison Operators

==	*Equal to*
!=	*Not equal to*
>	*Greater than*
<	*Less than*
>=	*Greater than or equal to*
<=	*Less than or equal to*

Year 11 - Computer Science - 1.4 Network Security

THREATS TO NETWORKS

Denial of Service: Flooding a system with traffic to prevent legitimate users from using it.

SQL Injection: Entering code into web forms in order to gain access to online databases.

Brute Force: Using software to try every possible password until the correct one is found.

Social Engineering: Attacks designed to trick people into giving away personal information.

Malware: Any form of malicious software that is designed to cause harm to a computer system.

Interception & Theft: Intercepting data being sent over a network.

IDENTIFYING AND PREVENTING VULNERABILITIES

Anti-malware Software

Scans incoming files to ensure they don't contain **malware**. Can also be configured to perform regular scans of the whole system.

Firewalls

Filter the data entering or leaving a network or system, designed to *prevent unauthorised access to systems and networks*.

Passwords

Using strong passwords can help prevent unauthorised access to a computer system.

Physical Security

Locking doors etc to prevent physical access to devices.

User Access Levels

Only giving users access to the parts of the system they need.

Penetration Testing

Ethical hackers are given permission to try to hack into an organisation's systems to *identify vulnerabilities*.

Encryption

Makes data unreadable without a specific **key**, do that even if it is intercepted it will be meaningless.

LEGISLATION

The Data Protection Act 1998 (DPA)

Outlines the responsibilities of organisations when dealing with your personal data.

Data must be:

1. Obtained and processed *fairly and lawfully*.
2. Used only for the *specified purpose*.
3. Relevant *for intended purpose* and *not excessive*.
4. *Accurate* and *up to date*.
5. Kept for no *longer than necessary*.
6. Processed in accordance with the *rights of the data subject* - individuals have the right to access and update their data.
7. Stored *securely* - preventing unauthorised access to data.
8. Not transferred to a country *without similar data protection laws*.

Computer Misuse Act 1990

Covers the use of technology to commit crimes such as hacking.

There are three levels of offence:

1. Unauthorised access to computer material.
2. Unauthorised access with intent to commit or facilitate a crime (*e.g. blackmail*).
3. Unauthorised modification of computer material (*e.g. distributing viruses.*)

Copyright, Designs and Patents Act 1988

Ensures that people are rewarded for their work and are given protective rights if someone tries to copy it.

Software Licences

Proprietary Software
Owned by the company that created it and the **source code** is usually not released. A licence key is often required to use it - you may have to purchase the software *'off the shelf'*. You can get *support* from the company and the user community.

Open Source Software
The **source code** is published for others *to use and modify*. Large groups of programmers often contribute to open source software. The software is usually free. You can only get *support* from the user community.

Year 11 - Computer Science - 1.6 Ethics, Culture, & Privacy

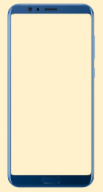
ETHICAL ISSUES

- Ethics refers to what is right and what is wrong. Ethics are not necessarily the same as legalities.
- When discussing ethics, it may be useful to consider different **stakeholders**, a stakeholder is anyone with an interest in the organisation/ technology etc. Stakeholders of Ellis Guilford include the: students, staff, governors, CET, the local community, uniform shops and caterers.

Worker Exploitation: Some companies may give their workers poor pay and conditions to maximise their profits by manufacturing abroad.

Digital Divide: With the increasing reliance on technology, those without access to technology can be at a disadvantage.

Accessibility: Many computer systems and software are not fully **accessible** to those with disabilities.



Building products to last: Many smart phones can only be used for a few years before breaking.

CULTURAL

Character Sets: The **ASCII** character set can only represent enough characters for the English alphabet. **Unicode** was developed to represent the characters used in all languages around the world.

Signs and Symbols: User interfaces make extensive use of icons and graphics. These can have different meanings in different cultures. For example, a tick indicates an error in many countries.

Social Media: Not every country allows access to **social media**. There are countries which have limited access or no access at all to **social media** sites.

PRIVACY

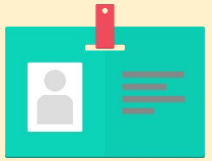
Technology makes it easy for governments to monitor their citizens in various ways. This raises many questions, including:

Is monitoring needed to keep us safe?

Is monitoring an invasion of privacy?

CCTV

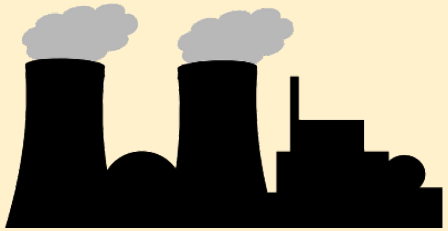
DNA Profiling



Identity Cards

ENVIRONMENTAL ISSUES

Manufacture



The manufacture of computer systems uses a lot of power. This is mostly generated by burning fossil fuels which produce *carbon emissions*. Computer systems require raw materials to be mined, harming the local environments, wildlife and communities.

Carbon emissions can be reduced through the use of renewables to generate electricity.

E-waste

A large number of electronic devices are dumped in landfills when they are no longer needed. These devices often contain *harmful substances* such as mercury which can leak into the soil.

E-waste can be reduced by recycling electronic devices rather than sending them to landfill.

Power Consumption

Digital devices require power to operate and most of this power is generated by burning fossil fuels which *release carbon into the atmosphere*.

Manufacturers are reducing power consumption by making devices that are more energy-efficient.

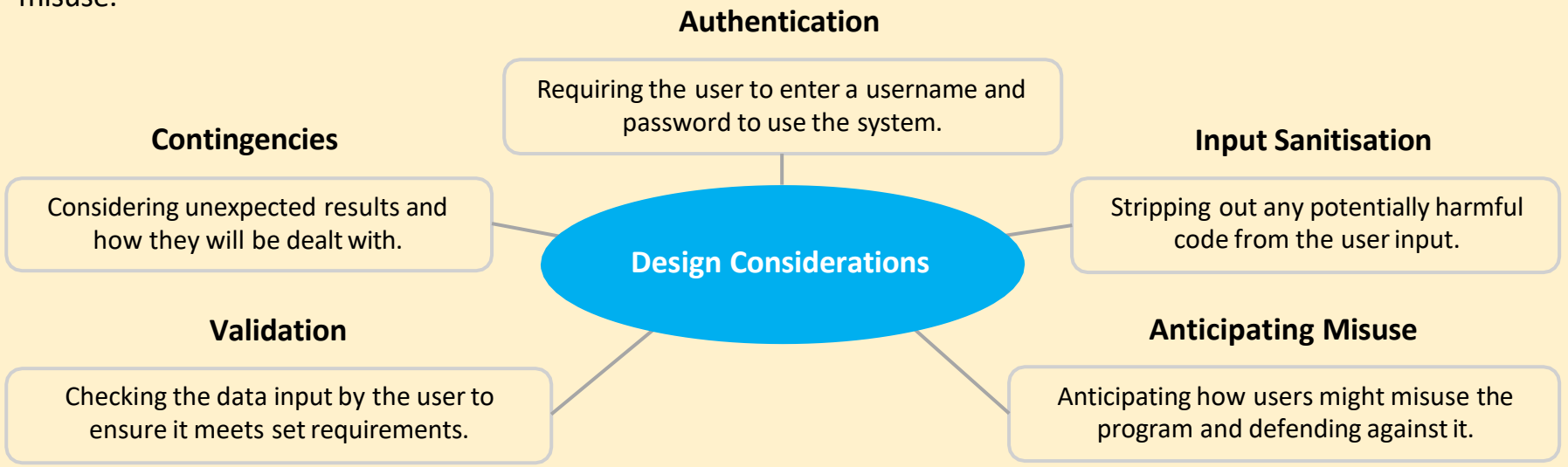
EXAM QUESTION

In the exam you will need to answer an **8 mark** exam question applying your learning to a scenario. To reach mark band three your answer should:

- Include a wide range of points (5+), ensuring each point is well explained and discussed in context to the question.
- Cover all areas of the question - *these will be bullet-pointed for you*.
- Discuss positive and negative impacts for each area (each bullet point).
- Be balanced - *aim for equal positive and negative points*.
- Include computing terminology and link to other specification theory *if necessary*.

DEFENSIVE DESIGN

A number of things need to be considered during the design stage of a program in order to prevent potential misuse.



MAINTAINABILITY

When writing code it is important to ensure that it will be easy to maintain for programmers. This means it will be easy for other programmers to understand what your code does. There are four main techniques that are employed to improve maintainability:

Comments: Used to provide an explanation of each section of code, allowing programmers to understand it.

Naming Conventions: Using sensible variable names which refer to the data being stored.

Indentation: Makes it clear where each block of code starts and finishes.

Sub programs: Can make it easier to see how different parts of the program work. These can also be re-used within the program.

```
//Asks the users to input a number
max = int(input("Enter the target number"))

//Counts up from 1 to the target number
for i = 1 to max
        print(i)
next i
```

In the exam you may need to complete a test plan so it is important you understand the differences between normal, boundary, invalid and erroneous data!

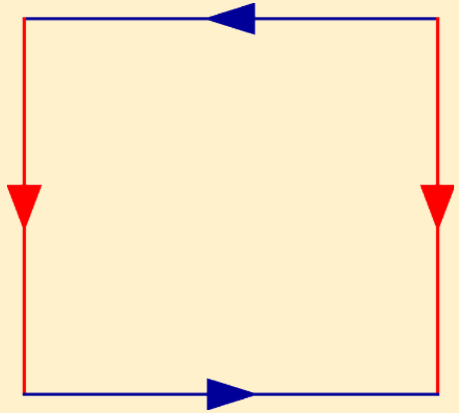
When programming using Python you may see other errors (such as name error, indentation error etc) but you don't need to remember these for the exam.

TESTING

Testing is an essential part of the development process. It is used to identify errors and ensure the final program meets the outlined success criteria.

Iterative Testing

Each part of the program is tested at every stage of the development process in order to identify and fix any potential errors.



Final/Terminal Testing

Carried out at the end of the development process in order to ensure the program meets the **success criteria** outlined at the start of the project.

Suitable **test data** must be selected for effective testing to be carried out. A range of **test data** should be chosen that covers these categories:

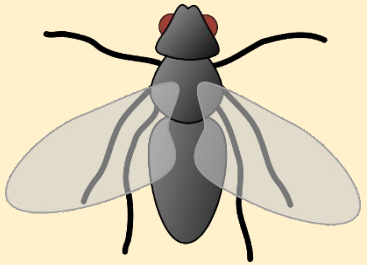
Normal	Data that is expected to work.
Boundary	Data that is at the upper and lower limits of what the program should expect as valid data.
Invalid	Invalid test data is data of the correct data type but should be rejected by a computer system.
Erroneous	Data that is the incorrect data type which should be rejected by a computer system.

TYPES OF ERROR

There are two main types of error:

Syntax Error

A **syntax error** is caused by code that *breaks the rules of the programming language*; for example, missing a closing bracket or a colon.



Logic Error

A **logic error** is caused by an error in the logic/design of the program. The program will run without an error message but *will produce the wrong result*.

LEVELS OF LANGUAGE

Low Level: Machine Code
*Each of these instructions is represented using a **binary** code.*
High level: *Closer to written English; this makes writing programs easier (Python).*

TRANSLATORS

The **CPU** can only understand instructions written in **machine code**. **Translators** are used to convert programs written in **High-level Languages** into **machine code** so that the computer is able to execute the instructions.

Compiler: Translates the *whole program* into **machine code** in one go. Creates an executable file and reports all errors at the end. Compiling can take a long time.

Interpreter: Translates and executes each line of the program *one at a time*. This has to be done every time the program runs. The interpreter will stop when it finds an error (good for debugging). Programs will run more slowly.

IDEs

An **Integrated Development Environment** (**IDE**) is used by programmers when writing code. It features a range of tools and features which are designed to make the process of software development easier.

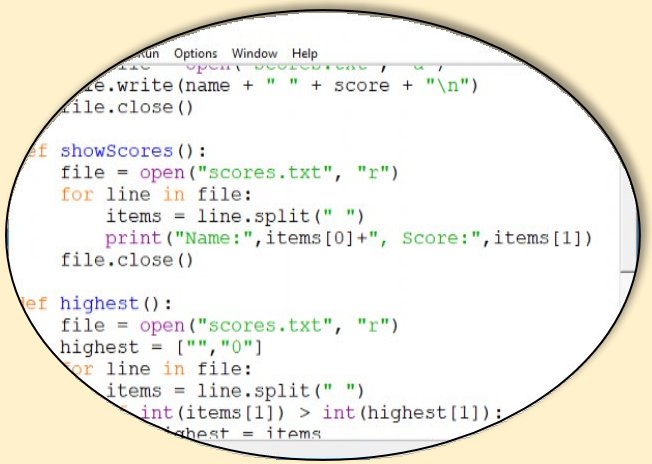
Editor

A text editor where the programmer writes their code. May include features such as **syntax highlighting** to make the code easier to read.

Translator

Converts the program into a **machine code**. A **compiler** or an **interpreter** would be used depending on the language.

In class we use a web based IDE to program (repl.it), this provides many of the features listed opposite: an editor, error diagnostics, translator, output window etc.



Output Window

This shows the output of the program when it is run.

Error Diagnostics

Used to help the programmer locate and fix errors in their programs. This process is called **debugging**.

Runtime Environment

Allows the code to run quickly within the IDE. This can help the programmer to identify logic errors.

```
while True:
  print("Welcome to the Magic 8-Ball")
  name = input("Please enter your name to begin > ")
  print ("Hello " + name + ", shall we begin?")

  question = input ("Please ask your question > ")

  outcome = random.choice(outcomes)
  print(outcome + "\n")
```

```
Welcome to the Magic 8-Ball
Please enter your name to begin >
```

GCSE Media – Audiences

eduqas

KEY TERMINOLOGY:

Mass audience: large group of people, not individualised.

Specialised audience: smaller/narrower group, defined by factors such as age, socio-economic group or interests.

Target audience: the specific group of people that a media product is aimed at.

Consumption: how a media product is used or experienced by an audience e.g. watched/ listened to/ played etc.

Response: how audiences react to a particular product.

Active audience: selects media to consume for a purpose, interprets/ responds to/ interacts with media products.

Passive audience: not active, e.g. accepts messages in media products without question.

KEY CONTENT:

How and why media products are aimed at a range of audiences, for example:

Small, specialised audiences: producers can target a very specific group to try to guarantee an audience for the product e.g. a specialist magazine might target people with an interest in gardening or heavy metal music.

Large, mass audiences: producers can reach more people, and possibly make more profit, by appealing to a mass audience. These products might include, for example, popular or 'universal' themes/ ideas, or include representations of different social groups to appeal to a wide range of people.

Apply it... identify which of the set products are aimed at a mass audience and which are more specialised.

KEY CONTENT:

How media organisations categorise audiences:

Media producers categorise audiences in order to target their products more effectively. They often use a combination of demographic categories (e.g. age, ethnicity, gender, socio-economic group) and psychographic factors (e.g. interests, lifestyle and values).

The ways in which media organisations target audiences through marketing:

Marketing is very important in appealing to and reaching the target audience for a product. Increasingly, digital technologies and social media platforms are used to target audiences. Media organisations might make **assumptions** about the target audience, e.g. that people in a certain age group and income bracket might share similar values/beliefs that are conveyed in the marketing.

Apply it... select one of the set products you have studied and research the marketing materials. Make notes on the ways in which these target the intended audience.

WHERE WILL I NEED TO STUDY/ APPLY AUDIENCES?

COMPONENT 1: Section B

Question 4 will assess knowledge and understanding of audiences in one of the forms studied: newspapers, radio or video games.

COMPONENT 2: Section A

Question 2 will assess knowledge and understanding of media industries, **audiences or** media contexts in relation to the television topic studied.

COMPONENT 2: Section B

Question 4 will assess knowledge and understanding of media industries, **audiences or** media contexts in relation to the music videos and online media products studied.

COMPONENT 3

Learners need to apply knowledge and understanding by creating a media production for an intended audience.

KEY CONTENT:

The ways in which audiences may interpret the same media products very differently:

Media products are polysemic (communicate multiple meanings), so different people are likely to find different meanings in the same text.

These differences may reflect both social and individual differences, e.g. the time/ place in which a product is consumed; a person's age, upbringing, education, where they live, their values and beliefs etc. E.g. *audiences might have very different interpretations of the confrontation between Luther and Madsen in the set episode of Luther.*

Apply it... choose a set product and consider how different audiences (e.g. older and younger age groups, or people who live in different countries) might interpret it in different ways.

KEY CONTENT:

The social, cultural and political significance of media products, including:

The themes or issues they address: media products often explore topics of current interest and importance, e.g. social issues relating to health or the environment, or political issues such as Brexit.

The fulfilment of needs and desires, e.g. for information, entertainment, artistic inspiration, sense of identity etc.

The functions they serve in everyday life and society:

The media fulfil many roles in society, e.g. reporting news/ factual information, discussing/ debating important issues, exploring aspects of human experience, providing entertainment and popular culture.

Apply it... identify the key themes and issues that are addressed in some of the set products you have studied. Think about how these themes reflect current social or political issues.

THEORETICAL PERSPECTIVES AND CONTEXTS:

Active and passive audiences:

In the past, audiences were assumed to be passive, with the potential to be negatively affected by media products (e.g. if the product contained violence). More recent theories argue that individuals actively choose, engage, respond to and interact with products.

Audience response and interpretation:

how audiences react to media products, e.g. they might respond in the way the producer intended (e.g. by agreeing with the viewpoints in a product), or question/ disagree with the intended meaning.

Apply it... consider how these ideas apply to the set products you have studied, e.g. through examples of audience interaction or actual responses.

Blumler and Katz's Uses and Gratifications theory:

States that audiences actively select media products to fulfil particular needs, or pleasures:

Information: to find out about the world.

Entertainment: pleasure of diversion/ escapism.

Personal identity: they can relate to the characters/ situations/ values and beliefs in a product.

Social interaction: pleasure of discussing products with others.

Apply it... consider how the Uses and Gratifications theory applies to all the products you have studied.

Other perspectives, e.g. Stuart Hall's Reception Theory (preferred, negotiated, oppositional readings) or the Effects Debate, may also be studied.

CONTEXTS: Historical, Social, Cultural, Political:

How products reflect the context in which they were made in terms of audience consumption.

How audience responses to/ interpretations of media products may change over time.

APPLYING AUDIENCES: PRACTICAL TASKS

1. **Research task**: look at a range of magazine covers (e.g. online). Identify the target audience for each and make notes on the methods used to appeal to this group.
2. Imagine you are creating a **magazine** in a genre of your choice for a young adult audience. Think of a title, a strapline and a topic for a feature article that would appeal to this audience.
   Consider how you would need to change your ideas if you wanted to appeal to an older audience.

GCSE Media – Media Industries

eduqas

KEY TERMINOLOGY:

Conglomerate: a very large organisation that owns different types of media company, e.g. Comcast or Newscorp.

Diversification: where a media company moves from producing one type of product to creating different media forms (e.g. a TV company moving into film production).

Vertical Integration: where one organisation owns more than one stage of the industrial process (production, distribution and circulation) of media product creation.

Convergence: making a product available across different platforms, in order to reach different audiences e.g. newspaper content is usually available in print form, on a website, via a digital app, on social media platforms etc.

Government funded: a product that is financed by government money, e.g. a public health campaign.

Not for profit: products that are made for a reason other than to make money e.g. the BBC is funded by the licence fee and its programmes need to fulfil a public service remit.

Commercial model: companies producing products in order to make a profit, often funded by advertising.

Regulation: the monitoring/ control of media industries by independent organisations such as Ofcom and IPSO.

KEY CONTENT:

The nature of media production, including by large organisations, and by individuals and groups:

Media products vary in the way they are produced, e.g. some are large scale productions (often high budget, mainstream) by large media organisations, while others are smaller productions (often lower budget, targeting specialised audiences) by independent companies or individuals.

Apply it... identify the companies involved in producing the set products; consider which are large organisations and which are smaller, independent companies.

KEY CONTENT:

The effect of ownership and control of media organisations, including:

Conglomerate ownership: these organisations have huge financial resources and a lot of power, e.g. they can control the messages communicated in many areas of the media.

Diversification: companies branch into different types of media to increase their chances of success / audience reach.

Vertical integration: these companies can control every stage and ensure that their products reach the audience.

Apply it... identify how one set product, produced by a media conglomerate, has been impacted by its ownership, e.g. in the budget/ production values or messages conveyed.

WHERE WILL I NEED TO STUDY/ APPLY MEDIA INDUSTRIES?

COMPONENT 1: Section B

Question 3 will assess knowledge and understanding of media industries in one of the forms studied: newspapers, radio, film or video games

COMPONENT 2: Section A

Question 2 will assess knowledge and understanding of media industries, audiences **or** media contexts in relation to the television topic studied.

COMPONENT 2: Section B

Question 4 will assess knowledge and understanding of media industries, audiences **or** media contexts in relation to the music videos and online media products studied.

COMPONENT 3

Media industries are not assessed in Component 3.

KEY CONTENT:

The impact of the increasingly convergent nature of media industries across different platforms which enable organisations to construct/reinforce a brand identity and maximise audience reach e.g. a film marketing campaign including posters, trailers, social media/ viral content and a website, where all of the different elements converge (especially in established franchises such as Bond).

Different national settings:

Many organisations operate on a global scale, distributing their products in many different countries, although elements such as the marketing might vary in each country.

Apply it... note examples of convergence in relation to the set products, e.g. how the products are made available on different platforms.

E.g. *The Spectre poster uses digital technology to construct an enigmatic layered main image in contrast to the montage of drawn images depicting narrative scenes in the historical poster.*

KEY CONTENT:

The functions and types of regulation of the media:

Regulation varies across different industries in the UK, but usually aims to protect people (especially children/ young people) from unsuitable, inaccurate or harmful media content.

Types of regulation include: establishing standards ('Code of Practice'); providing age ratings for a product and monitoring organisations to ensure they follow guidelines.

The challenges for media regulation presented by 'new' digital technologies:

The internet is very difficult to regulate as vast numbers of people can generate content. Some media products online are regulated by other industry bodies (e.g. the BBFC age rates some music videos). There is ongoing debate about how to regulate online and social media—but much of the internet remains unregulated.

Apply it... identify references to other texts in the set products you have studied and think about how these communicate meanings.

CONTEXTS: Historical, Social, Cultural, Political:

How a product reflects the contexts in which it was made through aspects of its production, distribution, marketing, regulation, circulation and audience consumption.

E.g. *The contemporary music artists reflect current cultural contexts in terms of the use of digital platforms and social media to market and distribute their products.*

How a product reflects the political contexts in which it was made through aspects of its ownership and political viewpoints.

E.g. *Newspapers are likely to reflect the political leaning of the organisations that produce them, in terms of the way in which they construct representations of issues and events, and versions of reality.*

Apply it... find examples of how the set products reflect their contexts in the ways they are produced, distributed and marketed.

KEY CONTENT:

The impact on the final product of:

Production processes: these will depend on the industry, but most involve content creation (filming, photography, written copy), editing etc. to construct the media product.

Personnel: the importance of key people; e.g. TV directors, journalists, designers, stars often have a signature 'style', or explore certain themes/ issues in their work. They might also attract an audience due to their past success/ status.

Technologies have a significant impact on media products and enable organisations to create exciting and cutting edge products that are likely to appeal to audiences e.g. CGI and special effects are important in many music videos and TV programmes, while video games use techniques such as augmented reality to engage users.

Apply it... select two different set products (e.g. a newspaper and a music video) and find out how they were produced e.g. the production processes (such as where, when and how the content was created), the people involved in production and the technologies that were used.

GCSE Media – Media Language

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KEY TERMINOLOGY:

Denotation: actual/literal meaning e.g. a candle.

Connotation: deeper meanings e.g. a candle might connote hope or light, or have religious connotations.

Codes and conventions: the elements of media language that usually occur in particular forms (e.g. magazines or adverts) or genres (e.g. sitcom).

Narrative: how stories are structured and communicated.

Genre: the type or category of product (e.g. crime, sitcom).

Intertextuality: where a media product refers to another text to communicate meaning to the audience.

KEY CONTENT:

The various forms of media language used to create and communicate meanings in media products, for example:

Visual codes: elements that relate to the look of a product, e.g. mise-en-scène, colour palette, layout and design.

Technical codes: e.g. camera shots/ angles, editing.

Audio codes: e.g. non-diegetic music, effects, dialogue.

Language codes: written or spoken words.

Apply it... analyse how these elements of media language are used in the set products e.g. *the red, white and black colour palette on the set GQ cover connotes masculine strength and power to appeal to the target audience.*

KEY CONTENT:

How choice (selection, combination and exclusion) of elements of media language influences meaning in media products, for example:

- How the selection and combination of camera shots **creates narrative** in the *set television episodes* or *music videos*.
- How the written text anchors meanings in the images on the *set newspaper front pages* to **portray aspects of reality**
- What has been excluded from the *set print advertisements*—and how the **point of view** might be different if alternative elements had been included.
- How the combination of design elements, images and cover lines **conveys messages and values** on the *set magazine front covers*.

Apply it... analyse how the choices producers make about media language communicates meanings in the set products.
E.g. *the combination of images and headline on the front page of The Sun (for assessment from 2021) conveys patriotic values and communicates a point of view that MPs should vote for the Brexit Bill.*
Give examples to support this point.

WHERE WILL I NEED TO STUDY/ APPLY MEDIA LANGUAGE?

COMPONENT 1: Section A

Question 1 will require analysis of one of the set products detailed on Page 11 of the Specification: magazine front covers , newspaper front pages, film posters and print adverts.

COMPONENT 2: Section A

Question 1 will require analysis of media language or representation in an extract from the set television crime drama or sitcom.

COMPONENT 2: Section B

Question 3 will require analysis of media language or representation **in the set music products detailed on page 19 of the Specification**: music videos and online media.

COMPONENT 3

Learners will be assessed on their ability to use media language to communicate meanings in the production work (Non-Exam Assessment).

KEY CONTENT:

Codes and conventions of media language: how they develop and become established as 'styles' or genres, for example:

How the conventions of a genre (e.g. crime drama or sitcom) have developed and solidified.

How they may vary over time, for example:

How the conventions of a form (e.g. print advertising) have changed, due to new technologies and changing social/ cultural contexts.

Apply it... analyse how the contemporary set print advert, film poster, television programme and music videos show developments from the older/ historical set products you have studied.

E.g. *The Spectre poster uses digital technology to construct an enigmatic layered main image in contrast to the montage of drawn images depicting narrative scenes in the historical poster.*

KEY CONTENT:

Intertextuality, including how inter-relationships between media products can influence meaning:

Several set products use intertextuality, for example the set music videos by Katy Perry and Taylor Swift are constructed as 'mini-films' and show the influence of other texts.

Apply it... identify references to other texts in the set products you have studied and think about how these communicate meanings.

E.g. *Roar includes intertextual references to the well known 1969 film, The Jungle Book, in the use of visual codes and elements of narrative. These familiar references can communicate meanings (e.g. about a human 'taming' the jungle) and create humour.*

THEORETICAL PERSPECTIVES AND CONTEXTS:

GENRE, including:

Principles of repetition and variation: products usually include typical genre conventions that audiences recognise, and also different elements to engage the audience/ keep the genre 'fresh'.

The dynamic nature of genre: genres are not 'set in stone', they change and develop over time.

Hybridity (combining elements of two or more genres in a product) and **intertextuality** provide further variation and offer something 'new' to engage audiences.

Apply it... consider how these ideas apply to the set products you have studied for Component 2.

NARRATIVE theories:

Propp's theory must be studied: the key character types (hero, villain, 'princess', father, donor, helper, dispatcher, false hero) and their role in the stages of the narrative.

Apply it... consider how Propp's character types could apply to the set products you have studied.

Other theories, such as Todorov's theory (equilibrium, disruption, resolution), Levi-Strauss' Binary Oppositions or Barthes' Action and Enigma codes may also be studied.

CONTEXTS: Historical, Social, Cultural, Political:

How the media language in the set products reflects the contexts of production in terms of:

- themes, values, messages, viewpoints
- genres, styles, technologies, media producers.

APPLYING MEDIA LANGUAGE: PRACTICAL TASKS

Art skills not important!

1. Choose a different song by Katy Perry or Taylor Swift: **storyboard 20 shots for a new music video.** Include some performance and narrative to reflect conventions. Think about the range of camera shots and the mise-en-scène to communicate the meanings in the lyrics to your audience.
2. **Design a front cover for a new magazine** in a genre of your choice. Sketch the layout and design, paying close attention to the colour palette, the font style and the main image.
   Write 5 cover lines, aiming to communicate messages and use language codes.

GCSE Media – Representation

eduqas

KEY TERMINOLOGY:

Representation: the way in which people, issues and events are depicted in media products.

Mediation: how media producers represent (rather than just present) the world to audiences.

Reality: 'real life', actual events, facts and truth - how aspects of reality and versions of reality are constructed.

Stereotype: an exaggerated, oversimplified representation, reducing a social group to a set of common characteristics e.g. grumpy older people or flat cap wearing northerners.

Feminist: supporting equal rights for women (society was traditionally male-dominated but there has been a move towards more equality, especially from the 1960s onwards).

KEY CONTENT:

The choices media producers make about how to represent:

Events: e.g. *how the set newspaper front pages combine images and text to convey information about the issues and events in the main splash (story).*

Social groups: categorised by age, gender and ethnicity.

Ideas: e.g. *how the set magazine front covers communicate ideas about gender/ identity in the use of media language.*

The ways aspects of reality may be represented differently depending on the purposes of the producers:

e.g. newspapers are informative and need to include factual detail, a sitcom might exaggerate/ subvert reality to entertain.

Apply it... select one set product and analyse how the representations of social groups (e.g. different ethnic groups, genders and/ or age groups) have been constructed.

KEY CONTENT:

How and why particular social groups may be under-represented or misrepresented:

Media products often feature representations of powerful social groups (who have traditionally controlled the media). Certain groups (e.g. minority ethnic or LGBTQ people) may be absent, or under/misrepresented (e.g. stereotyped).

How representations convey: viewpoints, messages:

The choices about how to represent a social group will communicate a point of view, e.g. *the set Pride cover conveys positive messages about black female empowerment.*

Representations also convey **values & beliefs**, e.g. *about diversity and human rights in the set video for Freedom.*

Apply it... identify the key messages in one of the set products. Try to find examples from other media texts that reinforce the same point of view.

WHERE WILL I NEED TO STUDY/ APPLY REPRESENTATION?

COMPONENT 1: Section A

Question 2b (extended response) will require comparison of the representations in one of the set products detailed on Page 11 of the Specification with an unseen resource in the same form.

COMPONENT 2: Section A

Question 1 will require analysis of media language **or representation** in an extract from the set television crime drama or sitcom.

COMPONENT 2: Section B

Question 3 will require analysis of media language **or representation in the set music products detailed on page 19 of the Specification**: music videos and online media.

COMPONENT 3

Learners will be assessed on their ability to use media language to construct representations in the production (Non-Exam Assessment).

KEY CONTENT:

The different functions and uses of stereotypes, e.g:

- to communicate meanings that audiences will easily recognise, e.g. products such as adverts need to convey a quick, clear message.
- to create humour, e.g. in the set episode of *The IT Crowd*.

Stereotypes become established when a social group (often a minority group) has been categorised repeatedly in the media and becomes recognised by a particular set of attributes.

How they may vary over time: stereotypes alter and develop over time, mainly due to changes in culture and society.

Apply it... identify examples of stereotypes in the set products and think about how and why they are used. Now, try to find examples of representations that challenge stereotypes and consider why the producers might have made this decision.

KEY CONTENT:

How representations reflect the contexts in which they were produced, e.g:

Social: reflecting society at the time/place of production e.g. in terms of issues such as gender or racial equality, or economic prosperity.

Historical: the time/ period in which a product is created, e.g. the 1950s (*Quality Street*), the 1970s (*The Man With the Golden Gun*).

Cultural influences on a product, e.g. current trends or direct references (such as representations of *Countdown* in *The IT Crowd*).

Apply it... analyse how the representations in the set products reflect the time and place in which they were made.
e.g. *the representation of the active female on the This Girl Can poster differs from the passive females in the historical Quality Street advert, as women now have more power and equality in society.*

THEORETICAL PERSPECTIVES AND CONTEXTS:

Representation, including processes of:

Selection: producers choose to include certain elements in a representation (and exclude others); this communicates meanings/ messages.

Construction: representations are 'built' by producers, using elements of media language.

Mediation: media producers construct their own 'version' of the world that is represented to audiences. We do not see the 'actual' world, but a producer's view of it.

Apply it... consider how these ideas apply to the set products; e.g. how representations are constructed to show a particular point of view.

Gender and representation, including feminist approaches:

Media industries have traditionally been male-dominated, with fewer opportunities for women.

Women have often been under-represented in the media; they also tend to be 'passive' in the narrative, and portrayed as 'objects' (Mulvey's Male Gaze theory could also be studied here).

Apply it... find examples of passive/ objectified females in the set products, and of women who are active/ empowered. Consider why these representations have been constructed.

Other perspectives on gender, such as hypermasculinity, may also be studied.

CONTEXTS: Historical, Social, Cultural, Political:

How these are reflected in terms of representations, themes, values, messages and viewpoints.

APPLYING REPRESENTATIONS: PRACTICAL TASK

Art skills not important!

1. Create profiles (written or drawn) for three characters from a new **TV programme** in a genre of your choice.
2. Create a **film poster** depicting 3 characters (hero, side kick and villain) for a new film in a genre of your choice. You could sketch or photograph your characters.

For each task: Consider how to construct representations using media language (e.g. dress codes, gesture codes and props) and what messages about age, gender and ethnicity to convey.

Year 11 - Business Studies - Operations

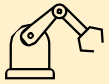
4.1 The Production Process & 4.2 Quality of Goods and Services

Job Production	Batch Production	Flow production	Automation	Quality Control	Quality Assurance	Recalls
Products are made individually.	One type of product is made and then production is switched to make a different product.	Production of one product takes place continuously using a production or assembly line.	Production process involves machinery that is not controlled by a person; usually controlled by a computer.	A system for inspecting the quality of products to ensure they are of a good standard.	The whole business focuses on quality, aiming to prevent quality problems.	Used when a fault occurs with a product, the business asks for the product to be returned so it can be repaired/replaced.
Returns	**Customer Engagement**	**After-sales Service**	**Product Knowledge**	**Consumer Law**	**Logistics**	**Procurement**
Goods which customers take back to the shop typically because of problems with quality.	Contact between the business and customer.	Advice and help given to a customer after they have bought a product or service.	The detailed knowledge of a product that staff within a business use to help persuade a customer to buy.	Law which protects the customers of a business - Consumer Rights Act 2015.	The management of the transportation and storage or goods.	The management of purchasing within a business.

1. The production process

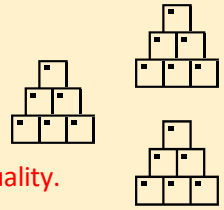
Job production
+ Products are usually high quality.
+ Products can be made to meet the needs of individual customers.
- Costs of production will be high.
- Labour costs may be high because production often requires skilled labour.

Batch Production



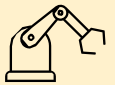
+ Needs of different customers can be met - making batches of different goods.
+ Batches are made to meet specific orders, this can reduce costs if goods don't need to be stored.
+ Specialist machines can be used to automate production, reducing costs.
- Takes time to switch production from one batch to another, increasing costs and reducing output.
- May need to hold materials for different batches - storage costs and materials need to be paid for.

Flow Production



+ Large amounts can be made.
+ Cost/unit is low due to economies of scale.
+ Machinery can be used to lower costs.
- Goods are mass-produced and may not be good quality.
- Jobs can be repetitive and boring.

1. Using technology in the production process - Automation, computers and robotics



+ Costs are reduced due to fewer workers being required.
+ Machines can be more accurate than human workers.
+ Machinery is never absent from work (*illness, holidays etc*) and work 24/7/365.
+ Machines can do dangerous and boring jobs that humans may be unwilling or unable to do.

- Workers may become redundant when new technology is used ➔ **redundancy** payments.
- New, skilled workers might be needed. Skilled workers have higher salaries.
- Existing workers may need to be retrained, increasing costs.
- Machines are expensive to purchase and can break down disrupting production.

4.2 Quality of goods and services

*Quality of production = product is fit for purpose. Reduces need to **recall** or **return** products.*

Quality control helps prevent faulty goods being sold, increasing the businesses reputation.
However, quality control costs money and does not prevent wasted resources.

Quality assurance is used to prevent problems with quality, therefore reduces wastage & cost.
However, it can disrupt production if workers are stopping to check quality regularly.

Year 11 - Business Studies - Operations

4.3 The sales process and customer service

Selling Methods

E-commerce - *Bringing a buyer and seller together electronically (online sales)*

Face to face - *Selling through a shop*. Opportunity for advice and questions.

Telesales - *Telephone sales.* Useful when people are uncomfortable buying online.

Changes to business activity due to e-commerce:

- Location - *Now almost anywhere!*
- New skill development - *Workforce will need different skills i.e. website developer.*
- Delivery options - *Speed of delivery could be a competitive advantage i.e. next day.*

E-Commerce advantages and disadvantages to businesses

✓ Sell worldwide, open 24/7/365, lower operating costs (doesn't require stores!)

× Worldwide competition, problems delivering goods, online security

E-Commerce advantages and disadvantages to customers

✓ Price comparison, available 24/7/365, wide range of products.

× Lack of personal contact, problems returning goods, can't see/touch the goods

The importance of good customer service - *helps to maintain or increase sales!*

- Good after-sales service for when things go wrong.
- Good product knowledge, especially if selling electricals!

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4.4 Consumer law

Consumer Rights Act 2015 - products must be:

- Of satisfactory quality - *not damaged or faulty when purchased*
- Fit for purpose - *goods must do what they are meant to do*
- As described

The impact of consumer law on business

- If goods aren't good quality, they will be returned which will increase business costs
- Poor quality and defective goods will harm the businesses reputation

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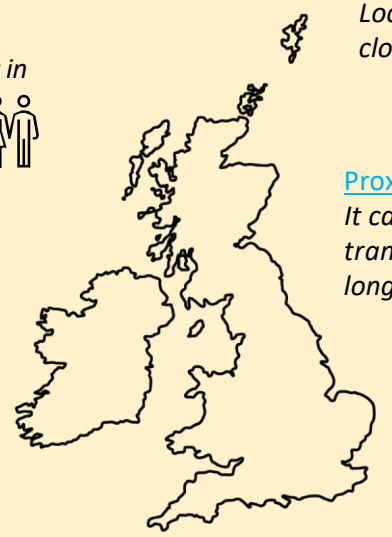
4.5 Business Location

Factors influencing the location of business:

Site and labour costs - *Price of land, rent & labour differs in different parts of the UK.*

Transport infrastructure - *Roads, rail, airports, ports & broadband.*

Government - *e.g. reduced business rates in areas with higher unemployment.*



Proximity to the market - *Locating shops and warehouses close to customers.*

Proximity to raw materials - *It can be very expensive to transport raw materials over long distances.*

Proximity to labour - *does the business require skilled or unskilled labour?*

4.6 Working with suppliers

The role of procurement

1. Identifying products to buy - *time of year; changes in technology, fashion, and lifestyle.*
2. Choosing suppliers - *quality of goods, reputation of suppliers.*
3. Ordering products - *including services provided to the business e.g. cleaners.*
4. Receiving deliveries from suppliers - *orders will need to be stored.*

Impact of logistical and supply decisions on a business

- Time - *goods need to arrive at the right time.*
- Reliability of supply - *poor reliability would impact a businesses reputation.*
- Length of the supply chain - *Shorter supply chains are typically more reliable.*
- Costs - *Lower costs may be from less reliable suppliers or from poor quality products.*
- Customer service - *Businesses may also be customers and will want to receive good customer service!*

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Year 11 - Business Studies - Finance

5 Finance

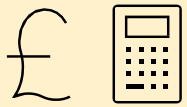
Interest	Loan	Overdraft	Trade Credit	Retained Profit	Crowdfunding	Revenue
Amount that has to be paid on borrowed money.	Sums borrowed for a certain period at an agreed rate of interest.	An arrangement with a bank that a business can spend more money than it has in its account.	When the business has the goods to sell and agrees to pay at a later time.	Profit that is **not** distributed to shareholders as a dividend.	Money raised through an appeal to the public - donations, loans, or become part-owners of the business.	Money from sales.
Fixed Costs	**Variable Costs**	**Break-even forecast**	**Cash Flow Forecast**	**Net Cash Flow**	**Negative Cash Flow**	**Liquidity**
Costs that stay the same as output changes e.g. rent.	Costs that change as output changes e.g. wages.	A prediction about the break-even quantity based on estimates of future sales revenues and costs.	A statement showing the expected flow of money into and out of a business over a period of time.	Total inflow minus total outflow.	When during one month, more cash is flowing out of the business than is flowing into it.	The ability of a business to turn assets into cash.

1. The finance function

- Large businesses will have a separate finance function.
- Small businesses, *sole traders* etc, would normally employ an accountant to check their finances.

The purpose of the finance function is to:

- Manage the money that businesses need to operate
- Provide financial information
  - Costs and revenues
  - Cash-flow & break-even output forecasting
  - Average rate of return (ARR)
  - Profitability
- Support business planning and decision making



Influence of the finance function on business activity - *examples*

- *A business that wants to be more environmentally friendly may have higher costs and need to monitor cashflow or find additional finance.*
- *Sales may be reduced and information would help the business to decide how to respond.*
- *A large business may decide to run a nationwide TV advertising campaign - information would be needed about the cost of this and any finance needed.*
- *A business may decide to change its production methods (e.g. job to batch) and would want information from the finance dept. showing how this would impact costs and revenues.*

5.2 Sources of finance

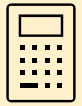
Businesses need finance to: start-up, expand, recruit, and run marketing campaigns.
Finance can be short term (< 12months), medium term (1-5 years), or long term (5+ years).

Owners capital - *Owners use their savings* - no need to repay the money and no interest to pay.
Retained profit - no need to repay and no interest to be paid
Sale of assets - *Sell a fixed asset i.e. machinery or premises*. Can take time to sell the asset.
Overdraft - Helps with short term cash flow problems. Interest is charged.
Trade credit - The business can sell goods before it pays the supplier.
New partner - The new partner could bring new skills but will be entitled to a share of profits.
Loan - Repayment is spread over time. Interest has to be paid.
Share Issue - *New shares are sold* - a lot of finance can be raised. Dividend payments.
Crowd funding - A lot of money can be raised. Takes time and effort to promote.

5.3 Revenue, costs, profit and loss

Total costs = fixed costs + variable costs
Gross Profit = Revenue - cost of sales
Net Profit = Gross profit - costs of running the business.
Gross Profit Margin = (Gross profit / sales) x 100
Net Profit Margin = (net profit / sales) x 100
Average Rate of Return (ARR) = (Annual average profit / cost of investment) x100

5.4 Break-Even



Break-even is when the total costs of production are equal to total revenue from sales.

- *If a business 'breaks even' it does not make a profit, nor does it make a loss.*

Break-even output = total fixed costs / *(price - variable costs per unit)*

Example:
Fixed costs = £10,000 per year
Selling price per unit = £50
Variable cost of each unit = £30

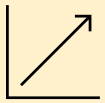
Total fixed costs / *Price - variable costs / unit*

Break-even output = £10,000 / £20
= 500 units

Margin of safety is the amount of sales that are greater than the level of sales needed for break-even.

Margin of safety = actual sales - break-even sales

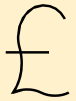
- In the example above, any sales less than 500 units would result in a loss.
- Any sales greater than 500 units would see the business make a profit.
- If the business sold 800 units, it would have a **margin of safety** of 300 units.



+ Break-even forecasts will tell a business how much they need to sell to make a profit
+ They can be used to help secure finance from the bank
+ They can help a business make judgements about selling prices and costs.
    - *Does the business need to increase revenues, by raising prices? Or lower costs?*
+ They can show the margin of safety.

Break-even forecast *figures may be different to those predicted.*

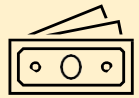
- The number of competitors may change, reducing sales or sales prices.
- Cost of materials could change, increasing costs.
- Price increases may not lead to increased revenue, instead it could lead to a fall in sales.



5.5 Cash and Cash Flow

A business needs cash to pay its expenses and meet its **short-term debts**, these include:

- *Wages and salaries*
- *Rent*
- *Suppliers*
- *Heating and lighting bills.*



Liquidity is the ability of the business to turn assets into cash in order to pay these expenses.
If stock is slow to sell, the business might not be able to pay its bills!

Cash = money in bank accounts and in cash on the premises.
Profit = total revenue - total costs
A business might have a lot of cash but not make a profit!

Cash flow forecast - *used as a planning tool, anticipates periods of cash shortages, and enables remedies to be put in place. Example* ➔

Inflow *- money coming into the business.*

Outflow *- money going out of the business.*

Net cash flow *= cash inflow - cash outflow*

Opening balance *- Amount of cash at the start of the month and is the same as the* ***closing balance*** *of the previous month.*

	October	November	December
	£	£	£
Cash inflow			
Sales	30,000	40,000	55,000
Total inflow	30,000	40,000	55,000
Cash outflow			
Wages	6,000	7,500	10,000
Loan repayments and interest	3,500	3,500	4,000
Stock	35,000	15,000	10,000
Total outflow	44,500	26,000	24,000
Net cash flow	−14,500	14,000	31,000
Opening balance	1,000	−13,500	500
Closing balance	−13,500	500	30,500

Is a negative cash flow a problem?

- May only be temporary.

- May require the business to get additional finance e.g. overdraft.

- May mean that the business has to delay payment of money owed e.g. to suppliers.

The business may be in trouble if it has a negative cash flow for a number of months!

Year 11 - Business Studies - Influences on Business

6 Influences on Business

Ethics	Ethical Marketing	Environmentally Friendly	Sustainable Production	Renewable Resources	Economic Climate	Gross Domestic Product
What is right and wrong.	Marketing is honest, truthful, legal and decent.	Consumers and businesses that act to make production *sustainable*.	When production does not lead to the depletion (using up) of natural resources.	Resources that can be used more than once - such as wind or water power.	How well a country is doing in terms of the levels of income and employment.	**GDP** is a measure of how much a country produces in a year. Influences income.
Recession	**Globalisation**	**International Branding**	**Free Trade**	**Tariff**	**Quota**	**Multinational Companies**
When **GDP** is falling, causing income and employment to fall.	Business activity around the world has become increasingly interconnected.	Creating an image / values for a product that are communicated in countries around the world.	No restrictions on trade between countries.	Tax on products that are imported.	Limit in either weight or value on the amount of a product that can be imported.	Businesses that operate in different countries around the world.

6.1 Ethical and Environmental Considerations

Unethical behaviour

Treatment of workers:
- *Using child labour*
- *Paying workers low wages*
- *Expecting workers to work very long hours*
- *Not providing safe working conditions*
- *Discrimination*

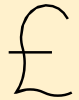
Treatment of suppliers:
- *Late payment of bills*

Treatment of customers:
- *Poor quality products*
- *Fake and/or dangerous products*
- *Increasing prices during difficult times*

Treatment of animals:
- *E.g. testing beauty products on animals*

Fairtrade promotes ethical business activities as it ensures that businesses pay fair prices to farmers.

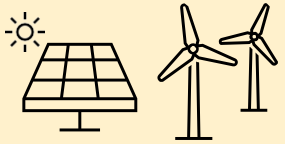
Impact of ethical considerations on businesses



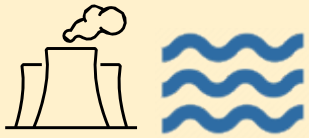
- Higher costs - *higher wages, safe environments etc.*
- Lost sales - *more sales from dishonest marketing*
- Reduced profits - *higher costs, lost sales*
- Poor financial figures - *paying suppliers on time*

- Improve motivation, productivity, loyalty, and retention of workers
- Good reputation - *Can lead to an increase in sales.*

Environmental considerations
- Sustainability - *making goods without depleting natural resources*
  - *Solar and wind*
  - *Using recycled resources*
  - *Saving water and electricity*

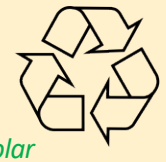


- Pollution
  - Air
  - Noise
  - Sea & rivers



- Climate change

Benefits to business of being environmentally friendly

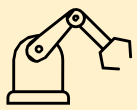


- Increased sales
  - *Consumers want environmentally friendly products*
- Reduced costs
  - *e.g. generate own electricity using solar*
- Reduced tax bills
  - *Businesses may poor more taxes if they cause environmental damage*

- Subsidies
  - *Government pays money to businesses*

- Increased raw material costs
  - *materials could cost more*

- Capital costs
  - *e.g. cost of buying and installing solar panels*
- Production methods may be more expensive



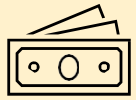
Year 11 - Business Studies - Influences on Business

6.2 The Economic Climate

Income and employment levels

Income is the amount of money people receive from work and assets (*such as shares and property).*

- Income influences the amount of money people can spend as customers.
- As income increases, so does spending and businesses sell more products!
    - Businesses will produce more and may need to employ more people



The level of employment is the number of people in work.

- Generally, when employment increases, so does income.
    - *This can make it difficult to find workers with the right skills!*
    - *Businesses will need to offer higher pay as competition for workers increases, which will increase costs and possibly prices.*

Gross domestic product (**GDP**) measures the amount of goods and services that a country produces per year.

- Higher **GDP** will lead to higher incomes

Economic growth refers to the **GDP** rising, and the speed of this is usually shown as a percentage.

- *0.5% would be slow, 3% would be very good*

Recession occurs when the **GDP** of a country falls.

- During recessions, incomes and therefore spending decreases
    - Businesses sell fewer products and decrease production
    - Workers lose jobs
    - Unemployment increases / employment decreases

International economic climate - if other countries enter recessions it could affect UK businesses exports and decrease sales.

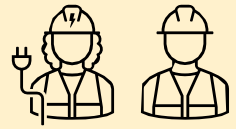
Business could respond to changes in the economic climate by reducing the costs of production, increasing **motivation** and **productivity**, improving **cash flow,** or changing the **marketing mix**.

6.3 Globalisation

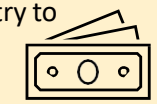
Globalisation refers to how business in different countries have become increasingly connected in their activities. It involves:

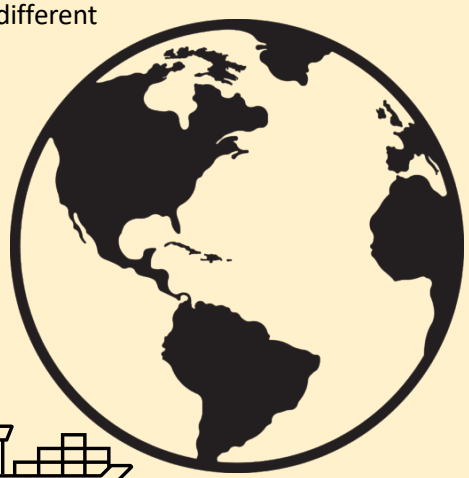
Buying and selling goods and services made in different countries.

The movement of workers from country to country.



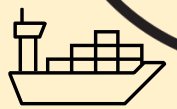
The movement of capital *(finance)* from country to country.





Globalisation has increased at a rapid rate due to improvements in:

- Transport *(ships, planes, rail, road)*
- Telecommunications & the internet
- Free trade agreements
    - No barriers
    - *No tariffs*
    - *No quotas*



Impact of globalisation on business

- Growth of multinational companies (**MNCs**)
    - *Increased sales*
    - *Local business closure*
- Influences business location
    - *Lower costs - labour, land, technology*
    - *Quality of products, communication*

Impact of globalisation on business

- International branding - *Businesses must be aware of cultural and religious differences.*
- International competition - *Increased competition due to selling in the UK and abroad.*

Brexit - *The UK is no longer a member of the EU.*

+ The UK is free to make trade deals with non-EUcountries, increasing export opportunities.
+ Some businesses may move production to the UK.
+ New businesses to help UK companies complete paperwork needed to export to the EU.
- Increased inspections and paper work when exporting from the UK to the EU
    - *Costs time and money.*
- Recruitment problems, *the freedom of movement has ended.*
- UK firms have relocated to the EU.

Year 11 - Health and Social Care - Services and Values

Episode One : The Care Values

Component 2Learning aim B: Demonstrate care values and review own practice

Person Centred Approach

The values can be seen when a person- centred approach to care is taken.

Empowering and promoting independence by involving individuals, where possible, in making choices about treatments they receive or about how care is delivered. This is important so a service user still feels they have control over their lives and that their wishes are being taken into account.

Respect for the individual by respecting service users' needs, beliefs and identity. If a service user has a particular cultural need or religious belief that should be respected and adhered to. Examples can include, dietary requirements, religious practices such as praying at certain times of the day or ritual washing.

Maintaining confidentiality: sharing the records of the service user appropriately with other staff and services as necessary and not gossiping about the service user. Service user's records should also be kept securely in a locked room.

Preserving the dignity of individuals to help them maintain privacy and self-respect during their time at the service user. Examples of this would be shutting the door when a service user needs to undress, using appropriate feeding equipment for adults and helping with personal hygiene.

Effective communication that displays empathy and warmth. This includes verbal, non- verbal communication and active listening.

Safeguarding and duty of care: maintaining a healthy and safe environment , keeping service users and staff safe from physical harm and abuse.

Promoting ant discriminatory practice by being aware of types of unfair discrimination and avoiding discriminatory behaviour.

Episode Two: Application of care values in a compassionate way.

Care-Should be tailored to each individuals needs.

Compassion: Understanding of what the service user is going through

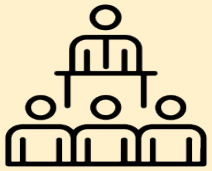
Competence: Safeguard and protect individuals.

Communication: Adapting to individual's needs.

Courage: Speaking out if witness to something wrong or have made a mistake.

Commitment: Work to the best of your ability.

- Working together:
- All members of staff within a
- service have a responsibility
- to uphold the care values.
- Staff training is important to
- keep all staff up to date with
- legislation, new practices and shared experiences. It is also an opportunity to share information , if applicable in order to get the service users the best care.



Episode Three: Reviewing own application of care values.

Mistakes happen!

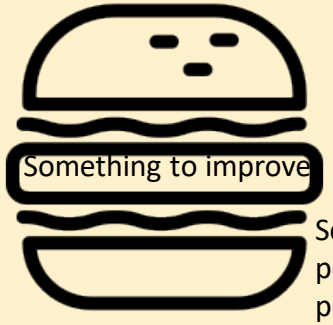
Own up – duty of care
Apologise- maintains trust and respect
Suggest ways to rectify the mistake
Work hard to prove your worth
Seek support from others if you need it.

Key aspects of a review

Identifying own strengths and areas for improvement against the care values

Receiving feedback from teacher or service user about own performance

First positive point



Second positive point

Responding to feedback and identifying ways to improve own performance

Year 11 - Health and Social Care - Services and Values

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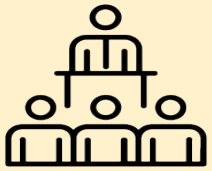

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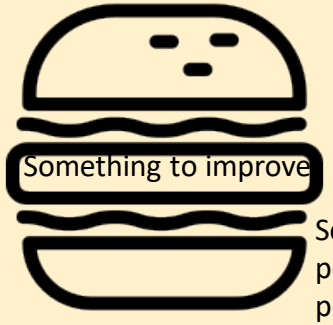


Second positive point

Responding to feedback and identifying ways to improve own performance

Year 11 – Health and Social Care - Health and Well Being

Component 2 Pearson Set Assignment

Task 1:
Task 1 – How healthcare services work together to meet the needs of an individual

Produce a report on how different healthcare services work together to meet the needs of a 74-year-old who has recently been diagnosed with arthritis
Outcome A: Understand the different types of health and social care services and barriers to accessing them

Task 2 – How social care services meet the needs of an individual Produce a report on how social care services can meet the needs of a given individual
. Your report must include:
• how social care services could meet the specific needs of the specified individual
• how voluntary care services could meet the specific needs of the specified individual
• how informal care options could meet the specific needs of the specified individual.
Learning outcome covered Outcome A: Understand the different types of health and social care services and barriers to accessing them
Checklist of evidence required
• a written response which can include supporting images Supervised hours to complete the task You will need approximately 1 hour to complete Task 2.

Task 3 – Barriers an individual could face when accessing services in health or social care
Produce a report on the barriers an individual could face when accessing services in health or social care and provide suggestions of how these could be overcome.
Your report must be based on a given individual with a health condition. You will be given additional information which will help you in this task. They will need to attend a health and social care service.
Your report must include:
• the barriers the specified individual may face when accessing the services
• for each barrier, make realistic suggestions for how the health or social care services could minimise or remove the barrier
• provide justifications to support each suggestion.
Learning outcome covered Outcome A: Understand the different types of health and social care services and barriers to accessing them Checklist of evidence required
Your report can take the following format
• a written response which can include supporting images • Supervised hours to complete the task Learners would need approximately 1 hour to complete Task 3.

Task 4 – How healthcare professionals demonstrate the skills, attributes and values required when delivering care to an individual
Produce a report to show how healthcare professionals might demonstrate the skills, attributes and values required when delivering care to given individual with a health condition and additional factor.

Your report should include:
• how the skills and values held by the health and social care practitioners can be demonstrated by the professionals supporting the individual
• reasons why the skills, values and attributes that you have included are important when providing the specified individual with care
Outcome B: Understand the skills, attributes and values required to give care
Checklist of evidence required Your report can take one of the following formats:
• a written response including supporting images
Learners would need approximately 1.5 hours to complete

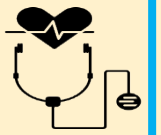
Task 5 – How the skills, attributes and values of care professionals can help an individual to overcome potential obstacles
Use the case study to produce a report on how the skills, attributes and values required of care professionals can help to overcome potential obstacles.
Your report must include:
• the potential obstacles that may faced
• how these obstacles impact on recovery
• how care professionals who show the care values can help – provide justification to support the reasons you have given
Outcome B: Understand the skills, attributes and values required to give care required
supporting images
You will need approx 1.5 hour to complete Task 5.

Year 11 – Health and Social Care - Health and Well Being

AO1 Demonstrate knowledge and understanding of factors that affect health and wellbeing

Episode One: Health and Well Being

Definition of health and wellbeing
Combination of physical health and social and emotional wellbeing, and not just the absence of disease or illness



The Holistic View of Health and Well-being is a combination of physical, emotional and social wellbeing.
Physical health – giving our bodies, water, shelter, warmth, clothing rest exercise and good personal hygiene.
Intellectual/ mental health: Keep brains working stimulated to keep us motivated and interested.
Social Aspects of wellbeing: Developing relationships and mix with other people appropriately.
Emotional aspects of welling: Meeting the needs we have to feel happy and relaxed, respected, secure, able to express ourselves and manage our emotions.

It is important to note that as we go through the different life stages the holistic view of health and wellbeing provided by health and social services will have to adapt to the differing needs of each life stage.

Episode Two: *Factors* that can have positive or negative effects on health and well being.

Physical and lifestyle factors

Genetic inheritance, inherited conditions and predisposition to conditions such as sickle cell anaemia and cystic fibrosis.

Ill health Acute ill health comes on quickly and can usually be cured.
Chronic illnesses develop
More gradually and can usually be treated not cured.

Diet Follow Eat Well Plate guidelines.
Amount of exercise: Regular exercise is a way of maintaining good health and well-being.
Substance use, Inevitable use includes, caffeine and prescribed medicines.

However, when the use becomes abuse, health and wellbeing will be negatively impacted including alcohol, nicotine, illegal drugs and misuse of prescribed drugs

Personal hygiene: Good hygiene limits the bacteria on us. Personal hygiene includes brushing teeth twice a day, washing daily, regular hair washing and keeping finger and toe nails clipped and clean.

Economic factors:

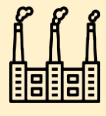
Financial resources: The ability to purchase healthy food, join a gym and take part in leisure activities will impact health and well- being.

Social, emotional and cultural factors :
Social interactions:
Supportive relationships, can affect health and well- being positively Isolation and unsupportive relationships can have the opposite impact.

Stress: Stress can have a big impact on a person's health and well-being.

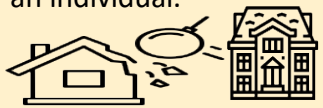
Willingness to seek help or access services and the impact of changes to personal circumstances:
Support from informal and formal Support will only have an impact if the person is willing to access the support. Factors that may hinder this are culture, education and fear.

Environmental factors:
Environmental conditions: The level of noise and pollution will have an impact on a person's health and well-being.



Pollution will negatively impact health and wellbeing.

Housing: The condition of the housing and the location will influence the health and well-being of an individual.



Good housing conditions will have a positive impact on health and wellbeing.

Year 11 – Health and Social Care - Health and Well Being

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Task 3 – Barriers an individual could face when accessing services in health or social care
Produce a report on the barriers an individual could face when accessing services in health or social care and provide suggestions of how these could be overcome.
Your report must be based on a given individual with a health condition. You will be given additional information which will help you in this task. They will need to attend a health and social care service.
Your report must include:
• the barriers the specified individual may face when accessing the services
• for each barrier, make realistic suggestions for how the health or social care services could minimise or remove the barrier
• provide justifications to support each suggestion.
Learning outcome covered Outcome A: Understand the different types of health and social care services and barriers to accessing them Checklist of evidence required
Your report can take the following format
• a written response which can include supporting images • Supervised hours to complete the task Learners would need approximately 1 hour to complete Task 3.

Task 4 – How healthcare professionals demonstrate the skills, attributes and values required when delivering care to an individual
Produce a report to show how healthcare professionals might demonstrate the skills, attributes and values required when delivering care to given individual with a health condition and additional factor.

Your report should include:
• how the skills and values held by the health and social care practitioners can be demonstrated by the professionals supporting the individual
• reasons why the skills, values and attributes that you have included are important when providing the specified individual with care
Outcome B: Understand the skills, attributes and values required to give care
Checklist of evidence required Your report can take one of the following formats:
• a written response including supporting images
Learners would need approximately 1.5 hours to complete

Task 5 – How the skills, attributes and values of care professionals can help an individual to overcome potential obstacles
Use the case study to produce a report on how the skills, attributes and values required of care professionals can help to overcome potential obstacles.
Your report must include:
• the potential obstacles that may faced
• how these obstacles impact on recovery
• how care professionals who show the care values can help – provide justification to support the reasons you have given
Outcome B: Understand the skills, attributes and values required to give care required
supporting images
You will need approx 1.5 hour to complete Task 5.

Episode One : Health monitoring and illness prevention

In order to detect any problems in health regular monitoring to check everything is as it should be is carried out. There are many ways health can be measured.

Observed Indicators of health:
A health practitioner will observe whether a person is pale, flushed, sweaty, clammy, breathless, limping, twitching, has a swelling , lump or rash. They will also observe behaviour for any odd occurrences.

Episode two: Physiological indicators

A measure of health is to compare a resting pulse rate with the rate after exercise and see how long it takes to return to normal. The quicker it returns to resting pulse rate the healthier a person is deemed to be.

Blood Pressure:
Normal blood pressure is between 90/60 and 128/80.

High blood pressure can lead to heart disease, strokes, blindness and vascular dementia.
Low blood pressure can lead to fainting, dizzy spells falls or an indicator of Parkinson's disease.

Peak Flow: A measurement of how fast you can blow air out of your lungs. It is regularly tested in people who have asthma. However, it can also be used to diagnose bronchitis, emphysema, cystic fibrosis or lung cancer.

BMI: Is a measure of how much fat is in the body in relation to height.

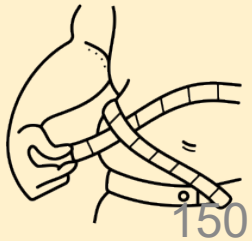
BMI=Weight in kg/ height in m2
High BMI can lead to diabetes, stroke, arthritis, high blood pressure and cardiovascular disease.
Low BMI can indicate issues such as undiagnosed illness or an eating disorder.

AO2 Interpret health indicators

Episode three: Using published guidelines to interpret data.

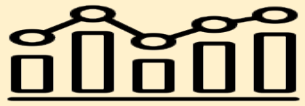
Published guidance can help the health practitioner to diagnose conditions.. Using baseline measurements (what is classed as normal) a comparison between the baseline and the person's readings can be made.
The readings should not be used in isolation ,different diagnostic assessments should be made to most accurately determine a person's health. In addition, multiple readings should be taken, and the highest reading noted . This will avoid inaccuracies.

Abnormal test results may mean that there is **a potential significance**- which means it could develop into something more. Of course, they could be abnormal through technical problems, or the reading was inaccurate- however it is very important to seek advice from a GP as to the next steps of action.
If an abnormal reading is taken a repeat test should be given before any assumptions can be made. The service user may have been stressed or it was faulty equipment.

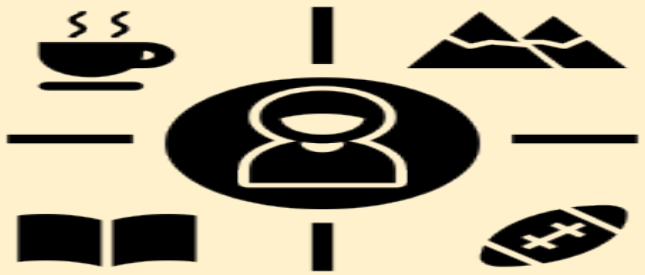


Episode 4 : Interpretation of lifestyle data.

The Office for National Statistics produces statistics for the UK on topics such as smoking, drinking, obesity and diet.
The data can be used to develop realistic health and wellbeing. It does this by accessing health status, setting targets for health practitioners to aim to improve the situation. Support will be provided in order to meet the targets, identify any difficulties that may arise and finally monitor and review progress.



As with any form of research Ethical considerations need to be taken into account. There are also strengths and weaknesses to statistics as a research methods.



Episode 5 : Smoking and Alcohol consumption

AS- Action on Smoking and Health receives funding from Cancer Research and The British Heart Foundation and the UK department of Health to carry out research to influence, inform and campaign for tighter control to the tobacco industry.

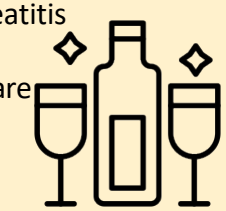
The data collected shows:

- 96,000 deaths a year are caused by smoking
- Smokers more likely to have dental issues and wrinkles
- Smoking can cause impotence
- Women smokers have a higher risk of osteoporosis
- More than 25% of cancer deaths are smokers
- 80% of lung cancer deaths are smokers

The ONS and the Drinkware Trust interpret data on alcohol consumption.

The data collected shows:

- Alcohol consumption is linked to 7 types of cancer.
- 3,000 cases of breast cancer in 2011 were directly linked to alcohol consumption.
- Each drink per day increases the risk of breast cancer in women between 7-13%
- Around 1,000 people die from acute pancreatitis
- in 2013.
- Two thirds of cases of chronic pancreatitis are
- causes by heavy drinking.



Cost of Alcohol and smoking:
Cost to personal health
Cost to the NHS

AO2 Interpret health indicators

Episode 6 : Inactive lifestyles

Data on regular exercise show that :
30% reduction of risk of early death
20% less risk of breast cancer
68% reduction in risk of hip fracture
Reduced risk of depression
30% lower risk of colon cancer
30-40% less risk of developing type two diabetes
20-35% lower risk of developing cardiovascular disease, heart disease and stroke

Recommendations from the Chief Medical Officers
Children 5-18 years should aim to be active every day
Less sitting for extended lengths of time
Moderate activity for 60 minutes per day and vigorous activity at least 3 days a week

Who uses data?
The British Heart Foundation
Public Health

Public Health England

Cost of inactivity
Health determination
Cost to the NHS
Lack of social skills
Increase the risk of people getting type 2 Diabetes , heart disease, strokes in later life

Year 11 – Health and Social Care - Health and Wellbeing

Treating people with dignity , compassion and respect
Care, support and treatment is coordinated
Care, support and treatment is personalised
Help people live independently by recognising strengths

AO3 Design a person-centred health and wellbeing improvement plan
AO4 Demonstrate knowledge and understanding of how to overcome obstacles relating to health and wellbeing improvement plans

Episode One : History of Person Centred Approach

Until 1960 care was done to the patient rather than with. Service users were expected to fit into what the health practitioners had in place. In 1960 Carl Rodgers , a psychologist, developed the person-centred approach to care saying that individuals should be trusted with making decisions about their treatment and care.

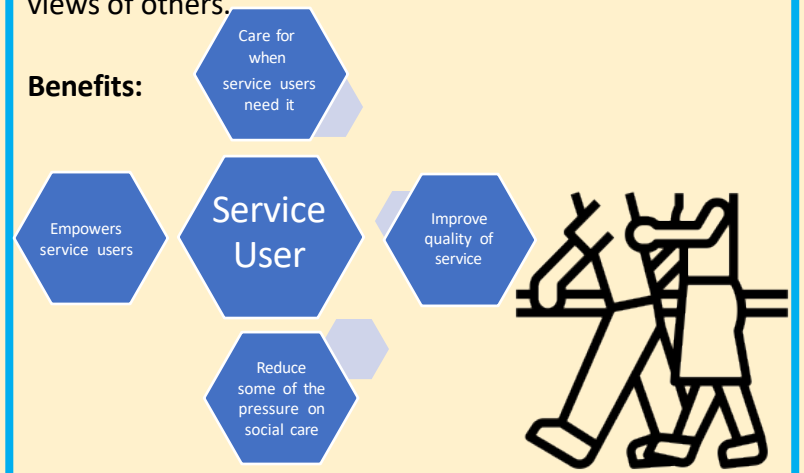
What is a person-centred approach?

The service user is at the centre of the care and support and is included in any discussions about the care. All involved services work **collaboratively** together showing **empathy** and willingness to see things from the service user's perspective.

Collaboratively: working well together

Empathy: Understanding and sharing the feelings and views of others.

Benefits:



Episode Two :Health Improvement Plans

Information to be included in plan:

Statement of intent and purpose.
An end goal
Recommended actions to improve health and wellbeing so health matches the norm based on physiological indicators
Recommended actions to improve health and wellbeing so health matches the norm based on lifestyle indicators

Specific
Measurable
Achievable
Realistic
Time related

Creating targets: A good plan has both short (less than 6 months)and long- term targets (6 months plus). Breaking targets down makes the end goal more manageable.

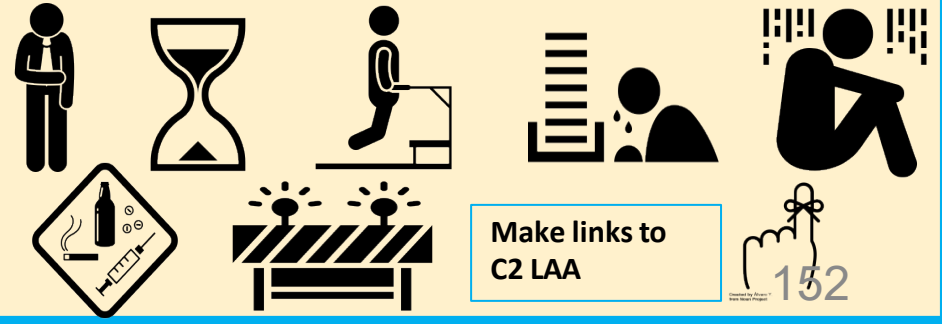
Monitoring targets: Targets need to be monitored to ensure they are working; adjustments should be made as necessary.

Appropriate sources of support (Formal and/ or informal)

Episode three :Obstacles for implementation of health plans

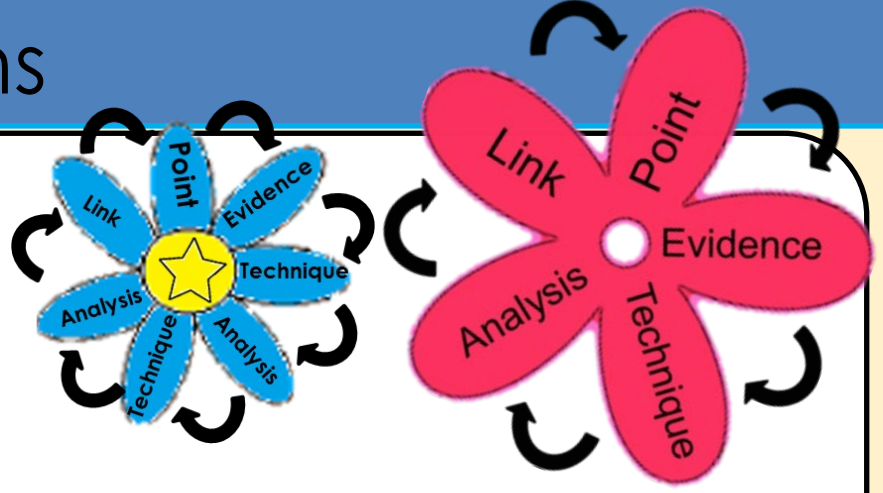
Potential obstacles

Emotional/ psychological – lack of motivation, low self-esteem, acceptance of current state will impact whether people stick to targets.
Time constraints – work and family commitments, appointment times
Availability of resources – financial, physical, e.g., equipment , membership to gyms and clothing.
Unachievable targets – unachievable for the individual or unrealistic timescale, this will demotivate people to carry on.
Lack of support, e.g., from family and friends
Other factors specific to individual – ability/ disability, addiction
Barriers to accessing identified services



Make links to C2 LAA

Perfect **PETAL** Paragraphs



WRITING FRAME

(Point – your idea in response to the question)
It is clear that…
The character ___ is portrayed as…
(The author) explores…
(The author) depicts _____ as…
(The author) figuratively describes…

(Evidence – choose a quotation to support your idea)
This can be seen particularly when (the author) describes… "_____"
The description of… "_____" here is…

(Technique – what kind of language is used here? Is there something in the structure to discuss?)
The use of _____ emphasises/suggests…
The metaphor figuratively describes…
OR
A particularly effective word/adjective/word type is ____

(Analysis) This gives the impression that…
Furthermore, the (author) implies...
The word "___" further emphasises...

FOR HIGHER LEVELS – discuss another word or feature from the SAME quotation to further support your point
In addition, the use of/reliance on **(pick a DIFFERENT technique)** compares/describes/suggests…
Furthermore, the use of the word(s) "___" is/are effective because…
This also makes the reader…

(Link to author's ideas/back to point/context/next point)
It is therefore clear that _____ is...
(The author) therefore portrays…

Descriptive Writing Devices

Basic	Advanced
Alliteration	Semantic Fields
Adjectives	Pathetic Fallacy
Adverbs	Foreshadowing
Metaphor	Show-not-tell
Onomatopoeia	Anthropomorphism
Personification	Symbolism
Simile	

How to plan

Write down your story chronologically in main events
Short character descriptions
Note down main themes
Note down spellings
Note down some devices you wish to include

Structure

Paragraphs – TiP ToP

Dialogue – start a new line for a new speaker even if they only say one word…

Punctuation – use a variety of punctuation for effect.

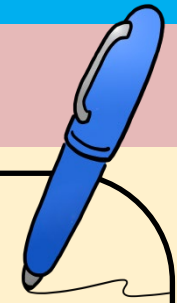
Sentence Types- Use a variety of sentence types for effect

- Simple
- Compound
- *Complex*

Being Concise

- Cut out any irrelevant connectives
- Have you used two synonyms where one would suffice?
- Can you rearrange the sentence in order to cut down words

Persuasive Writing Techniques



Personal Pronouns - address the reader, make them feel involved

Emotive language- using language to make the reader FEEL an EMOTION.

Rhetorical question- asking a question that doesn't need an answer.

Statistics and Facts- stating something that is unquestionably true. Using data and figures to support your point

Use of Expert Opinions- using opinions from experts in a relevant field to give your argument more weight

Anecdote – a short personal story that relates to your topic

Descriptive Imagery – use descriptive writing devices to make your argument more engaging (see other sheet)

Exaggeration – overstating information to make more of an impact

Repetition/Rule of 3 – repeating a point or listing in three to create impact

Note of Caution: Only use the verbs you're familiar with unless you take the time to examine the definition in the dictionary. This is **not** a list of synonyms. Each word has specific uses that are unique to its meaning.

Analytical verbs for writing about texts...

Advises
Affects
Alludes to
Argues
Articulates
Builds
Clarifies
Confirms
Connotes
Constructs
Conveys
Creates
Criticises
Demonstrates
Denotes
Depicts
Describes
Determines
Displays
Encourages
Emphasises
Establishes
Evokes
Exaggerates
Examines
Exemplifies
Expands
Explains
Explores
Exposes
Foreshadows
Foretells
Highlights
Hints
Illustrates
Impacts
Implies
Indicates
Informs
Introduces
Juxtaposes
Manifests
Narrates
Persuades
Portrays
Presents
Refers
Reflects
Relates
Remarks
Represents
Reveals
Shows
Signifies
Symbolises
States
Suggests
Supports
Tells
Typifies
Underlines

Sentence Starters

To describe:
- The diagram shows…
- The map shows…
- The picture shows…
- The graph shows…
- It shows…

To explain:
- This happens because…
- This demonstrates…
- The processes causing this are…
- Therefore…
- This maybe because…

To give opinions:
- I feel…
- I believe…
- In my opinion…
- It would seem that…
- I suggest…

To give examples:
- For example…
- Such as…
- For instance…
- To illustrate…
- …as an example…

To add ideas:
- Also…
- As well as…
- Furthermore…
- More importantly…
- Equally important…
- In addition…

To connect ideas:
- At first… then…
- Secondly…
- This is linked to…
- As a result…
- For that reason…
- The effect is…

To compare and contrast:
- Similarly…
- In the same way…
- However…
- Then again…
- In contrast…
- This is in contrast to…

To summarise
- In conclusion….
- In summary….
- In conclusion…
- Overall….
- Therefore….
- Ultimately….

To show sequence/process: Firstly… Secondly… Thirdly…
To start with… Lastly… Finally… Eventually… Next… Meanwhile… Afterwards… Results in…

Connectives

and but if yet so also like

therefore because however although whereas instead otherwise