



"Knowledge is
of no value
unless you put it
into practice"

Anton Chekov

YEAR 9 KNOWLEDGE ORGANISER

EDITION 1
2022 - 2023

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Knowledge is power.
Information is
liberating. **Education**
is the premise of
progress, in every
society, in every family.



THE MILTON
KEYNES ACADEMY
*Creative
Education
Trust*

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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.



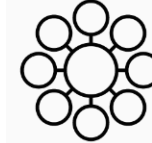
Use your knowledge organiser to condense and write down key facts and information on your flash cards



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 9 Maths - Quadratic Expressions and Quadratic Graphs

Expanding double brackets

To expand double brackets, we need to multiply 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	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

Factorising 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?

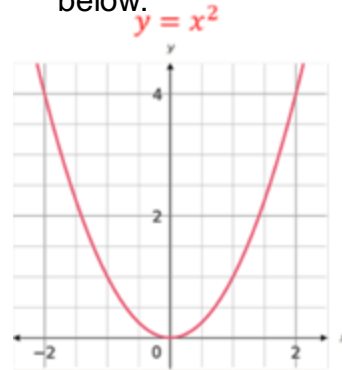
- 1 and 8
- 2 and 4

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

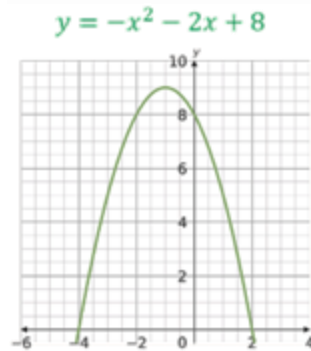
Quadratics Graphs

Quadratic graphs have the general form:
 $ax^2 + bx + c$

These form a U or n shape, examples are shown below:



When a (the coefficient of x^2) is positive, it produces a U shape

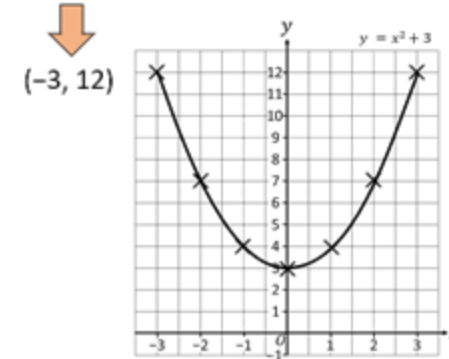


When a (the coefficient of x^2) is negative, it produces a n shape

Plotting quadratics graphs

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

x	-3	-2	-1	0	1	2	3
x^2	9	4	1	0	1	4	9
+3	3	3	3	3	3	3	3
y	12	7	4	3	4	7	12



- To plot quadratic we use a table of values just like with linear graphs.
- Break down each part of the equation into separate rows to make the calculation easier.
- Take care plotting positive and negative coordinate. Think about the general shape it should be making
- Connect the coordinates with **one smooth line**. Do not use a ruler as it is a curve not straight lines

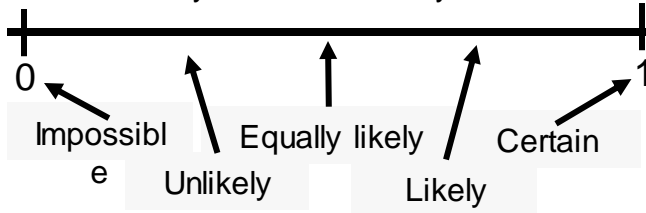
KEY VOCABULARY

Word	Definition
Quadratic	An expression or equation containing a squared term. E.g. x^2
Expression	A group of numbers, letters and mathematical operations
Coefficient	A number that multiplies an algebraic letter. E.g. $4x^2$ The coefficient of x^2 in this example is 4

Probability is the likelihood/chance of something happening, we can show the combinations of two or more events occurring using probability diagrams.

Probability Scale

Events can be placed on the probability scale. The scale represents how likely an event is to happen. E.g. flipping a coin = even chance. Monday will follow Sunday = certain.



Calculating Basic Probability

$$P(\text{event}) =$$

$$\frac{\text{number of ways the event can occur}}{\text{total number of outcomes}}$$

$$P(\text{event not happening}) =$$

$$1 - P(\text{event happening})$$

Theoretical Probability

What we expect the probability of an event to be e.g. the theoretical probability of rolling a 1 on a regular 6 sided dice is $\frac{1}{6}$.



Experimental probability

When you calculate the probability of an event based on data that has been collected.

Combined events

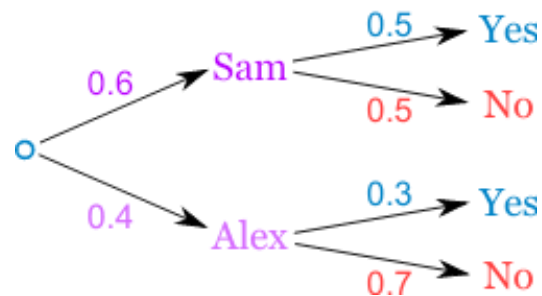
When multiple events occur we can calculate the probability of these combined events by finding their product if the events are independent.

Independent events

The outcome of one event does not affect the outcome of the other. If A and B are independent, the probability of both occurring is $P(A \text{ and } B) = P(A) \times P(B)$

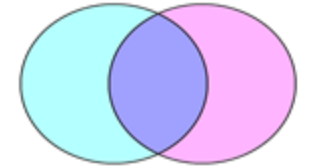
Tree diagrams:

A way of recording the outcomes of multiple events and calculating their probability. Multiply along the branches to calculate the probabilities of each outcome.



Venn Diagrams:

Shows the relationship between two or more finite sets. A finite set could be 'Even numbers between 1 and 9' i.e. {2, 4, 6, 8}.



Sample space:

A way of recording all the outcomes of two events. This sample space records all the possible outcomes when 2 four-sided spinners are spun and their totals multiplied together.

×	1	2	3	4
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16

Two-way tables:

Sorts data so that the frequency of each category can be seen quickly and easily.

	Console	Mobile	PC
English	3	7	5
French	1	6	5
German	12	3	8

KEY VOCABULARY

Word	Definition
Outcome	A result of a probability experiment.
Event	A set of outcomes of a probability experiment.
Bias	Unfair. On a biased dice, one number is more likely to come up than all of the rest.
Independent event	When the probability of one event does not depend on the outcome of another event.
Dependent event	When the probability of one event depends on the outcome of another event.

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.

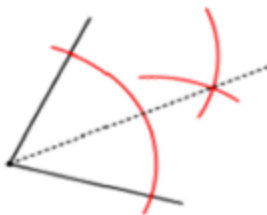
Step 1: Draw an arc from the point of the angle that cuts both of the lines.



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.

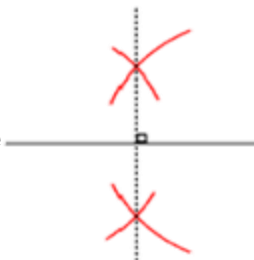
Step 1: Join the two points with a straight line. Draw an arc from one end point that is over half way (doesn't matter how much more than half).



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).

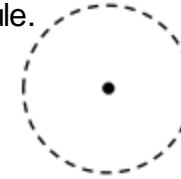


Step 3: Using a ruler, draw a line through each intersection of the arcs. This line can continue further than the arcs. This line will meet the first line at 90° (a right angle).

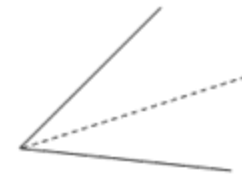


Loci

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



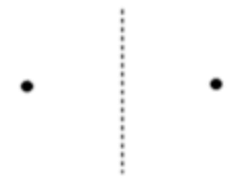
A circle is the locus of all points **equidistance** from a single point.



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



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

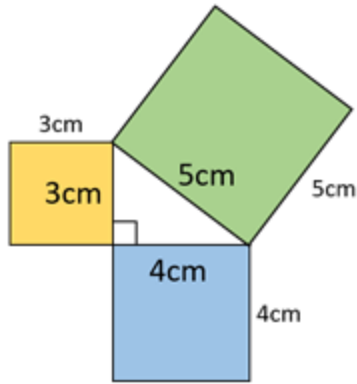


A perpendicular bisector shows us a locus of points half way between two points.

KEY VOCABULARY

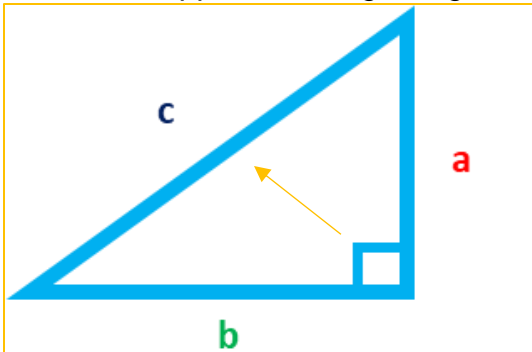
Word	Definition
Bisect	Cut in half
Perpendicular	At right angles
Equidistance	Equal distance
Perpendicular Bisector	The line that cuts another in half at right angles
Angle Bisector	The line that cuts an angle exactly in half
Loci	All the positions of points following a rule

Pythagoras' theorem is an equation that describes a relationship between the 3 sides of a right-angle triangle. We can use it to determine a missing length when given the two other lengths.



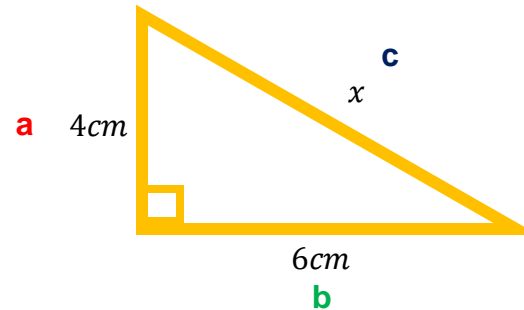
The equation is:
 $a^2 + b^2 = c^2$

Where c is the hypotenuse and a and b are the two other sides. The hypotenuse is always the longest side of the triangle and can be found opposite the right angle.



Finding the length of hypotenuse

Example: Find the length of side x . Give your answer in 3 significant figures



You should always label the hypotenuse first. This is the side facing the right angle.

$$a^2 + b^2 = c^2$$

1) Substitute your values into the formulae:

$$4^2 + 6^2 = x^2$$

2) Work out the values that you can:

$$16 + 36 = x^2$$

$$52 = x^2$$

3) Now use inverse operations to find the values of x :

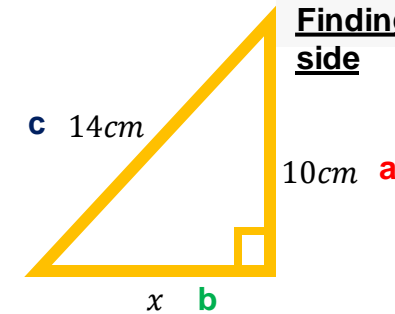
$$x^2 = 52$$

$$x = \sqrt{52}$$

$$x = 7.211102551 \text{ or } 7.21 \text{ (3 s.f.)}$$

Year 9 Maths - Pythagoras

Finding the length of a shorter side



Example: Find the length of side x . Give your answer in 3 significant figures

$$a^2 + b^2 = c^2$$

1) Substitute your values into the formulae:

$$10^2 + x^2 = 14^2$$

2) Work out the values that you can:

$$100 + x^2 = 196$$

3) Now use inverse operations to find the values of x :

$$100 + x^2 = 196$$

$$-100 \quad -100$$

$$x^2 = 96$$

$$\sqrt{\quad} \quad \sqrt{\quad}$$

$$x = \sqrt{96}$$

$$x = 9.797958971 \text{ cm or } 9.8 \text{ (3 s.f.)}$$

KEY VOCABULARY

Word	Definition
Hypotenuse	The longest side in a right angles triangle
Square number	The result when you multiply a number by itself
Right-angle triangle	A triangle in which one angle is of 90°
Square root	The reverse operation of squaring the number.

Percentage Increase and Decrease (Non-Calculator)

To find a percentage increase or decrease without a calculator first find the percentage and add or subtract it from the original amount.

Example 1: Increase 500 by 22%:

$$\begin{aligned} 10\% \text{ of } 500 &= 50, \text{ so } 20\% \text{ of } 500 = 100 \\ 1\% \text{ of } 500 &= 5, \text{ so } 2\% \text{ of } 500 = 10 \\ 500 + 100 + 10 &= 610 \end{aligned}$$

Example 2: Decrease 84 by 4%

$$\begin{aligned} 1\% \text{ of } 84 &= 8.4, \text{ so } 4\% \text{ of } 84 = 33.6 \\ 84 - 33.6 &= 50.4 \end{aligned}$$

Percentage Increase and Decrease (Calculator)

Find 15%	$\times 0.15$
Increase by 15%	$\times 1.15$
Decrease by 15%	$\times 0.85$

To increase, add the percentage on to the original 100% and convert to a decimal:

$$\begin{array}{r} 100\% \\ + 15\% \\ \hline 115\% \end{array} \rightarrow 1.15$$

To decrease, subtract the percentage from the original 100% and convert to a decimal:

$$\begin{array}{r} 100\% \\ - 15\% \\ \hline 85\% \end{array} \rightarrow 0.85$$

Remember, to convert a percentage to a decimal we divide by 100.

Calculating a Percentage Change

When you are given the new and original amount of something you can calculate the percentage increase or decrease that has taken place. To do this we need to memorise and use the following formula:

$$\% \text{ change} = \frac{\text{difference}}{\text{original}} \times 100$$

Example 1:

A games console was bought for £200 and sold for £250. Calculate the percentage change.

$$\% \text{ change} = \frac{50}{200} \times 100 = 25\% \text{ increase}$$

Example 2:

Christy buys a book for £17.40. A year later she sells the book for £9.57. Calculate the percentage change in the value of the book.

$$\% \text{ change} = \frac{7.83}{17.40} \times 100 = 45\% \text{ decrease}$$

Reverse Percentages

When given a percentage change and the new amount, the original amount can be calculated by dividing by the multiplier.

Example:

An object has increased in size by 7% to 53.5kg. **The multiplier for a 7% increase is 1.07, we divide the new amount by this**
 $53.5 \div 1.07 = 50\text{kg}$

Simple Interest

To calculate simple interest we start by calculating the percentage and multiplying it by the period of time.

Example 1:

£250 is in a bank account which is paying 5% simple interest per year. How much will be in the bank account at the end of 3 years?

$$\begin{aligned} 5\% &= 0.05 && \rightarrow \text{Convert the percentage to a decimal} \\ 0.05 \times 250 &= \text{£}12.50 && \rightarrow \text{Calculate the percentage of the amount} \\ 3 \times \text{£}12.50 &= \text{£}37.50 && \rightarrow \text{Multiply this by the amount of years} \\ \text{£}250 + \text{£}37.50 &= \text{£}287.50 && \rightarrow \text{Add the interest on to the original amount} \end{aligned}$$

Example 2:

Freddy opens a savings account and transfers £1400 into it. The account pays 1.2% simple interest per year. How much will be in the savings account at the end of 5 years?

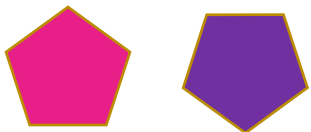
$$\begin{aligned} 1.2\% &= 0.012 && \rightarrow \text{Convert the percentage to a decimal} \\ 0.012 \times 1400 &= \text{£}16.80 && \rightarrow \text{Calculate the percentage of the amount} \\ 5 \times \text{£}16.80 &= \text{£}84 && \rightarrow \text{Multiply this by the amount of years} \\ \text{£}1400 + \text{£}84 &= \text{£}1484 && \rightarrow \text{Add the interest on to the original amount} \end{aligned}$$

KEY VOCABULARY

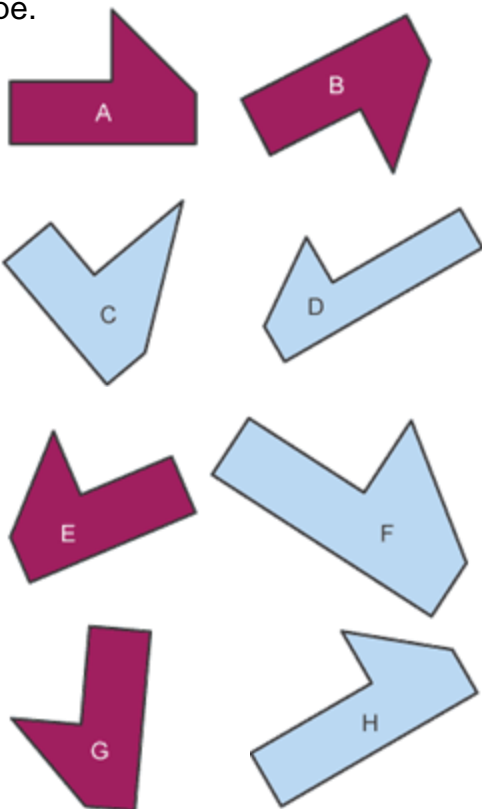
Word	Definition
Percentage	a proportion that shows a number as parts per hundred
Increase	when an amount goes up
Decrease	when an amount goes down
Multiplier	a more efficient method for calculating a percentage increase or decrease. I
Interest	a process in which an amount of money increases over time

Congruent Shapes

Shapes are congruent if they are identical – same shape and same size
Shapes can be rotated or reflected but still be congruent

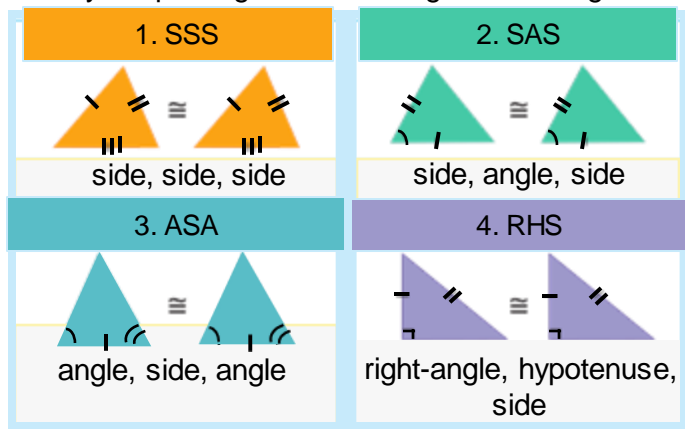


Example: Shapes A, B, E and G are congruent. They are identical in size and shape.

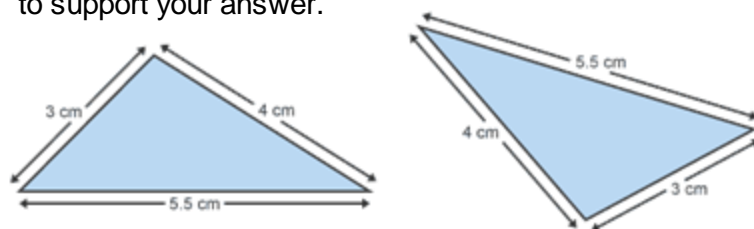


Congruent Triangles

4 ways of proving that two triangles are congruent:

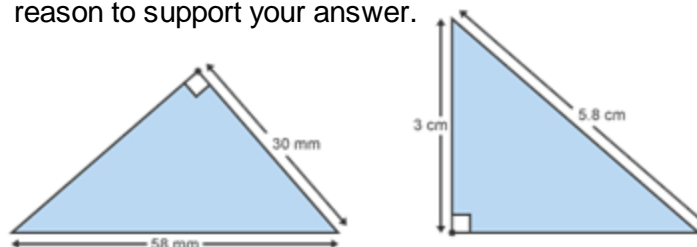


Example 1: Are these triangles congruent? Give a reason to support your answer.



Yes they are congruent as all 3 sides are equal (SSS)

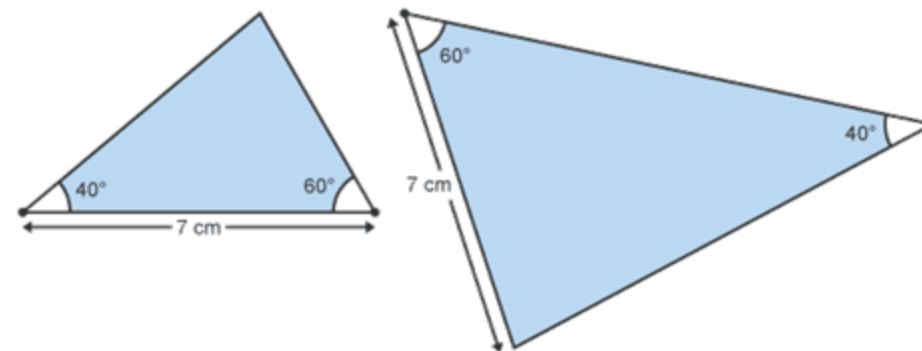
Example 2: Are these triangles congruent? Give a reason to support your answer.



Yes they are congruent as they share a right angle, an equal side and an equal hypotenuse (RHS)

Year 9 Maths - Congruency

Example 3: Are these triangles congruent? Give a reason to support your answer.



No they are not congruent. In the first triangle, the 7cm is between the 40° and 60° but in the second the 7cm is not between these two angles. **This is NOT an example of ASA.**

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.
Hypotenuse	The longest side of a right angled triangle. It is always opposite the right angle.

Simultaneous equations

Simultaneous equations are multiple equations that share the same variables and which are all true at 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) $\times 5 \rightarrow 20x + 15y = 70$
(2) $\times 4 \rightarrow 20x + 28y = 44$

Subtract the equations to eliminate x $20x + 15y = 70$
 $20x + 28y = 44$
 $-13y = 26$

Solve to find out y $-13y = 26$
 $y = -2$

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

$$\begin{aligned} 4x + 3y &= 14 \\ 4x + 3(-2) &= 14 \\ 4x - 6 &= 14 \\ 4x &= 20 \\ x &= 5 \end{aligned}$$

$$x = 5, y = -2$$

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...

This will form a quadratic. $x^2 + 2(x + 3) = 9$
 $x^2 + 2x + 6 = 9$
Remember to factorise to solve $x^2 + 2x - 3 = 0$
 $(x - 1)(x + 3) = 0$
 $x = 1 \text{ and } x = -3$

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 $x = -3$, $y = 0$

Year 9 Maths - Simultaneous Equations and Laws of Indices

Laws of Indices

Multiplication law: When multiplying with the same base (number/letter) we add the powers. General rule: $a^m \times a^n = a^{m+n}$

Examples:

$$2^5 \times 2^7 = 2^{5+7} = 2^{12} \qquad x^{-3} \times x^8 = x^{-3+8} = x^5$$

Division law: When dividing with the same base (number/letter) we subtract the powers.

General rule: $a^m \div a^n = a^{m-n}$

Examples:

$$2^{14} \div 2^7 = 2^{14-7} = 2^7 \qquad x^{10} \div x^8 = x^{10-8} = x^2$$

Brackets law: When raising a power to another power we multiply the powers together.

General rule: $(a^m)^n = a^{mn}$

Examples:

$$(5^{-4})^2 = 5^{-4 \times 2} = 5^{-8} \qquad (h^9)^3 = h^{9 \times 3} = h^{27}$$

Power of 1:

Any number to the power of 1 is just that number. e.g. $5^1 = 5$ and $a^1 = a$

Power of 0:

Any number other than 0, when raised to the power of 0 will equal 1. e.g. $5^0 = 1$ and $a^0 = 1$

KEY VOCABULARY

Word	Definition
Square number	the result of multiplying a number by itself
Cube number	the result of multiplying a number by itself 3 times
Power/Index	how many times to multiply the number by itself
Base Number	The number which is being raised to a power. For example in 2^3 , 2 is the base number
Coefficient	The number in front of an algebraic term. This multiplies the letter.

Definition of dystopian writing: literature that describes an imaginary society that is as dehumanising and as unpleasant as possible.

Typical genre features:	A Dystopian Protagonist:	Typical settings:
<ul style="list-style-type: none"> • Propaganda is used to control the citizens of society. • Information, independent thought and freedom are restricted. • A leader/concept is worshipped by the citizens of the society. • Citizens have a fear of the outside world. • Citizens live in a dehumanized state. • Citizens conform to uniform expectations. Individuality and dissent are bad. • The society is an illusion of a perfect utopian world. 	<ul style="list-style-type: none"> • often feels trapped and is struggling to escape. • questions the existing social and political systems and attempts to rebel but in a way that is still morally acceptable • believes or feels that something is terribly wrong with the society in which he or she lives. • Lacks the selfish nature of those in charge. 	<ul style="list-style-type: none"> • Futuristic, industrial cities • Destroyed natural habitat with little connection to nature • High levels of surveillance • Environments and weather that creates a strong sense of oppression or constraint

Social and Historical Context	Relevant vocabulary																										
<ul style="list-style-type: none"> • Dystopian ideas within literature have existed for a long time, but the genre itself is one of the newer genres within literature. <i>Utopia</i> written by Thomas More in 1516, which, despite its title, reflects a dystopian society. Although it's presented as an ideal world, we know that in reality, it would not successfully function. So even when trying to describe a utopia, writers may actually end up portraying a society that is flawed or dysfunctional. • With the increase of social media, public surveillance, fear over nuclear weaponry and an increased awareness of social issues such as racism, greed or poverty, writers have written about the extreme cases of controlling such issues. • BIG QUESTION: Orwell writes in 1984, "If you want a picture of the future, imagine a boot stamping on a human face – for ever." Is this the true depiction of human life? Does this lead us to assume that humans have an ingrained capability to be evil? • Several dystopian books have been adapted for film, fuelling our obsession with the imperfect society and 'what if' scenarios. However, some are less successful than we would expect. P.D. James, who wrote "The Children of Men", acknowledged that it could be seen as science fiction but was anxious that it was instead identified as dystopian to recognise the moral of the story. "The Children of Men" didn't sell nearly as well as her detective novels. Why might this be?) H.G. Wells abandoned his dystopian science fiction to write a different genre. Why might that be? 	<table border="0"> <tr> <td>Utopia</td> <td>Propaganda</td> </tr> <tr> <td>Dystopia</td> <td>Revolution</td> </tr> <tr> <td>Dehumanising</td> <td>Dissent</td> </tr> <tr> <td>Dictatorship</td> <td>Compliance</td> </tr> <tr> <td>Totalitarian</td> <td>Apocalypse</td> </tr> <tr> <td>Tyrannical</td> <td>Conformity</td> </tr> <tr> <td>Oppressive</td> <td>Free will</td> </tr> <tr> <td>Repressive</td> <td>Democracy</td> </tr> <tr> <td>Liberation</td> <td>Dysfunction</td> </tr> <tr> <td>Captive</td> <td>Omnipresent</td> </tr> <tr> <td>Constrained</td> <td>Dehumanisation</td> </tr> <tr> <td>Censorship</td> <td>Surveillance</td> </tr> <tr> <td>Compliance</td> <td></td> </tr> </table>	Utopia	Propaganda	Dystopia	Revolution	Dehumanising	Dissent	Dictatorship	Compliance	Totalitarian	Apocalypse	Tyrannical	Conformity	Oppressive	Free will	Repressive	Democracy	Liberation	Dysfunction	Captive	Omnipresent	Constrained	Dehumanisation	Censorship	Surveillance	Compliance	
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Notable Dystopian texts											
1984 George Orwell	Brave New World Aldous Huxley	The Giver Lois Lowry	Fahrenheit 451 Ray Bradbury	The Running Man Stephen King	The Maze Runner James Dashner	A Handmaid's Tale Margaret Atwood	I am Legend Richard Matheson	Delirium Lauren Oliver	Noughts and Crosses Malorie Blackman	More than This Patrick Ness	The Hunger Games Suzanne Collins

Utopia

- An imagined place or state where everything is perfect;
- a peaceful world;
- a happy and cared-for society;
- a place where people are listened to and their best interests and well-being are acted on.

Types of Government

Dystopia

- An imagined place or state in which everything is unpleasant or bad;
- a strict regime;
- an oppressed society;
- a place where people are controlled and treated unfairly.

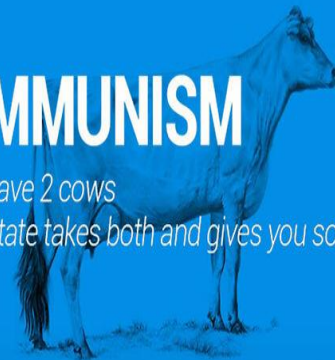
Socialism

- You have two cows. The government takes one of your cows and gives it to your neighbor.



COMMUNISM

You have 2 cows
The State takes both and gives you some milk.



Dictatorship

- You have two cows. The government takes both and shoots you.



Totalitarianism

- You have two cows. The government takes them and denies they ever existed. Milk is banned.



'The Adventures of Sherlock Holmes': Knowledge Organiser

Scandal in Bohemia – plot overview

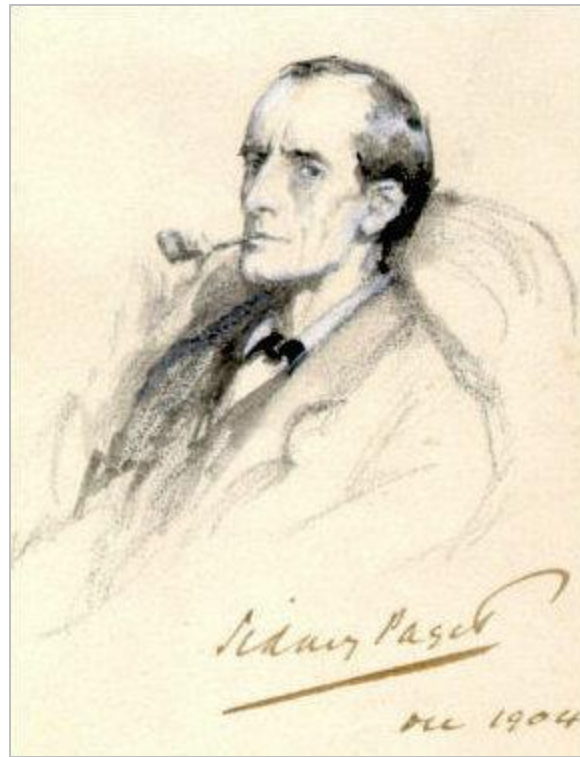
- The King of Bohemia plans to marry a Norwegian princess. However, he previously had a relationship with a woman called Irene Adler. Adler is threatening to ruin his engagement with a picture she has of herself and the king together.
- Holmes tricks Adler into revealing where she keeps the photograph, but she outsmarts Holmes and escapes with it. Adler decides not to use the picture against the king. She leaves a picture of herself in its place, which Holmes keeps as a reminder of her.

The Red-Headed League – plot overview

- Jabez Wilson gets a job with the mysterious 'Red-Headed League' because of his 'flame' coloured hair.
- One day, he is mysteriously told that he is no longer needed by the league so visits Holmes to ask him to investigate.
- Holmes discovers that his story reveals a plot to steal from a bank vault which is successfully prevented.

The Blue Carbuncle – plot overview

- A policeman named Peterson is left with a man's hat and Christmas goose.
- He takes the goose home to eat and discovers a blue carbuncle (a rare, and very valuable jewel) inside the goose!
- Holmes recognises the jewel as the one that was stolen from The Countess of Morcar. Using the hat as a clue, Holmes and Watson set off to discover how the blue carbuncle was stolen and how it ended up in a goose.



Background information

Sir Arthur Conan Doyle was the author of the Sherlock Holmes stories.

Sherlock Holmes' fictional home was 221B Baker Street, which is now a museum of Doyle's life and work.

Doyle's short stories were published individually in *The Strand Magazine* periodical and then collected to form *The Adventures of Sherlock Holmes* short story collection in 1892.

Before he became a writer, Doyle studied medicine.

Key words

enlighten – to provide someone with information and understanding. People come to Holmes so that they can be enlightened on a crime.

deduction – the process of reaching a decision by looking at the facts that are known. Holmes is able to use his skills of deduction to solve crimes.

scandal – a scandal is something that shocks people because they think it is morally wrong. The King of Bohemia fears that scandal of his relationship with Irene Adler being exposed.

periodical/serial – books, magazines or other entertainment that are released on a regular basis. *The Strand Magazine* was a periodical that published the Sherlock Holmes stories.

introspective – when you examine your own thoughts, ideas, and feelings. Sherlock Holmes can be **introspective**. This makes him a better detective.

dual nature – Holmes has a dual nature: his quiet introspective side, and his manic detecting side.

Context 19th Century



Modern day women find it hard to think about what their lives would be like if they lived 100 years ago. These days, modern women take for granted that they will be able to take any job they would, marry whomever they choose, and have a birth outside of marriage. Most Victorian woman however lived in a state little better than slavery. They had to obey men, because in most cases men held all the money and women had no independent means of wealth. A wealthy widow was an exception. A woman who remained single would be considered antisocial and was even pitied!

Poverty was a big thing in Victorian times. The industrial revolution meant machines could do all of the work that gave labourers work, food and shelter. This brought up crime levels, with poverty driving people to steal food, water, money and other valuable items. Arthur Conan Doyle lived in a time where there would be many beggars, orphans and street urchins. It was because of this that Sherlock Holmes helps lower middle class people with their problems, rather than rich people having trouble with racehorses and suchlike (apart from one exception in which he did exactly that!)

Characters

Sherlock Holmes – a fictional consulting detective created by Arthur Conan Doyle. He is known for his intelligence, introspection and dual nature. He is described as an 'observing machine' because of his ability to capture the essence of people with seemingly very little evidence.

Dr Watson – Holmes' former flatmate, a doctor and his closest companion. The stories are told from his perspective, working as Holmes' assistant.

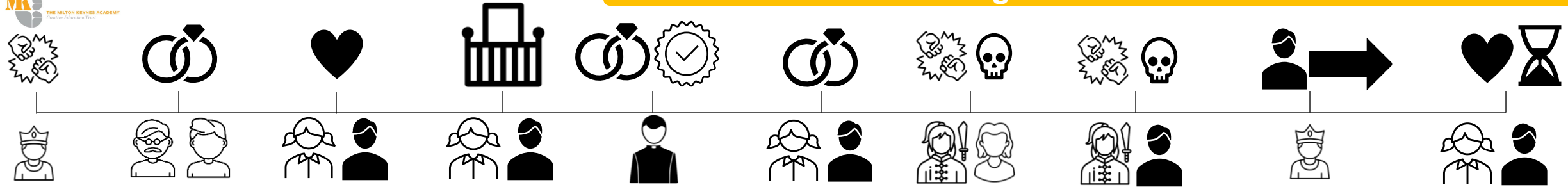
Irene Adler – a famous American opera singer who had a relationship with the future King of Bohemia. To Holmes, she is 'the woman' who outsmarted him.

King of Bohemia – in the Victorian era, Bohemia was an area of central Europe; today it is a region of the Czech Republic. The King is engaged to a Scandinavian princess but five years previously was madly in love with Irene Adler. Because of his status, he was unable to marry her at the time, which he regrets. The King still respects Adler.

James Ryder – head attendant of the hotel where the Blue Carbuncle goes missing. He works with his accomplice **Catherine Cusack** (the countess' maid) to steal the jewel and frame **John Horner** for the crime. He is racked with guilt and confesses when Holmes questions him.

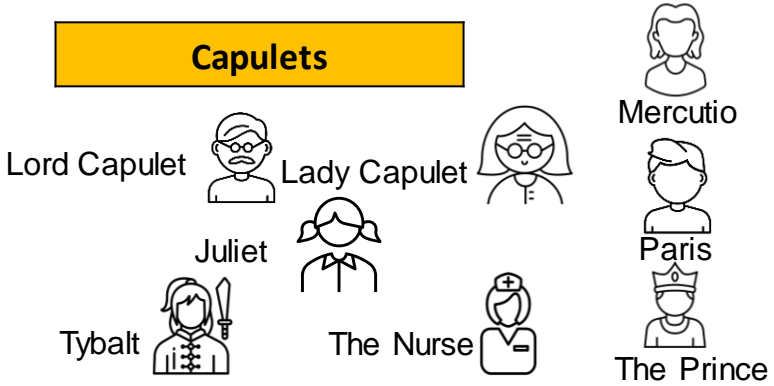
Jabez Wilson – a London pawnbroker who has distinctively red hair. His business is struggling so he takes the job working for The Red-Headed League. Wilson was tricked by his assistant Vincent Spaulding who worked alongside another criminal to use his shop to rob the bank next door.

Vincent Spaulding/John Clay – Jabez Wilson's assistant. This is actually a disguise for John Clay who attempts a bank robbery using Wilson's shop as an easy passage.

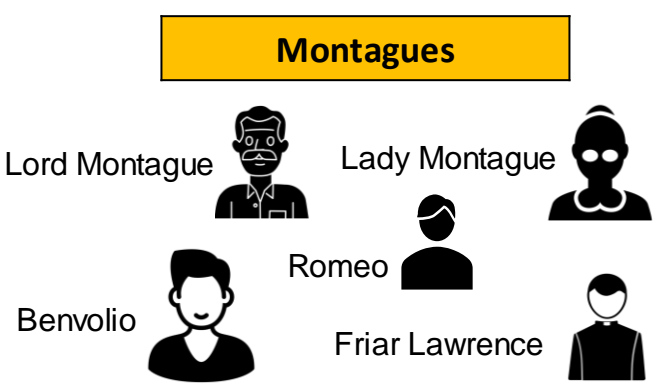


Characters

Capulets



Montagues

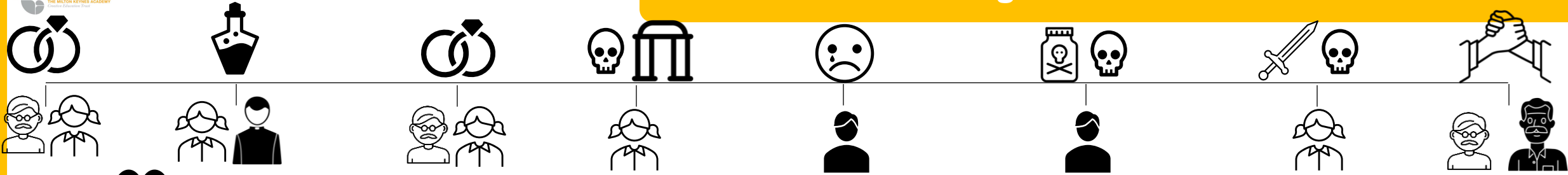


Key Vocabulary

Antithesis	the bringing of contrary ideas or terms in close opposition.
Dramatic Irony	A literary technique where the full significance of a character's words or actions is clear to the audience or reader but unknown to the character.
Iambic Pentameter	A line of verse with five metrical feet, each consisting of one short (or unstressed) syllable followed by one long (or stressed) syllable.
Juxtaposition	The act or an instance of placing two or more things side by side often to compare or contrast or to create an interesting effect.
Literary foil.	A literary foil is a character whose purpose is to accentuate or draw attention to the qualities of another character
Pathetic Fallacy	The attribution of human feelings and responses to inanimate things or animals.
Patriarchy	A system of society or government in which men hold the political and economic power and women are largely excluded from it.

Hinterland – real life events that inspire the story

Origins of the play	<ul style="list-style-type: none"> Based on the poem 'Romeus and Juliet' by Arthur Brookes (1562), which is an appropriation of other similar stories. Similar in plot to <i>Pyramus and Thisbe</i>, which is referenced in 'A Midsummer Night's Dream'.
The Renaissance	<ul style="list-style-type: none"> A period of European cultural, artistic, political and economic "rebirth" following the Middle Ages. It promoted the rediscovery of classical philosophy, literature and art.
Renaissance Italy	<ul style="list-style-type: none"> Set in Renaissance Italy, which was a freer society than Elizabethan England. Shakespeare possibly uses the setting to warn the English of the risks of having no single monarch.



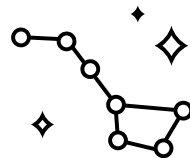
Love

Marriage was seen as a necessity, rather than an option. So, there was a lack of romantic love and more courtly love and arranged marriages. Because of this, parent/child relationships were often distant

Gender

Men and women exist in different parts of society – men are public figures, where women are domestic figures. Women are also subject to patriarchal beliefs.

Theme - an idea that runs through the text.



Fate

The concept that some things are destined to happen; It is decided by a higher power and is your destiny. It is driven by superstition.



Conflict

Conflict can be external and take the form of violence, revenge and causing suffering. Conflict can also be internal, which involves emotional turmoil.



Death

Death is the consequence of fate at the end of the play and the tragic resolution of various conflicts

Symbolism:

The use of objects to represent ideas or qualities.

Light

Light is typically linked to Juliet throughout the play. She shines a light into the darkness in Romeo's life, possibly his emotional darkness.



Darkness

Darkness, or night time, symbolises the chance for Romeo and Juliet to be together without inhibitions. It also allows them to express themselves fully.



Poison

Poison is used literally in the play by Romeo but is also symbolic of the feud between the Capulets and the Montagues.



Queen Mab

A small fairy who supposedly causes people to dream of their desires. Mercutio's rant about her suggests that dreams are false and insignificant.



Death

'Death is the great equaliser.' In death, everything becomes equal. The death of Romeo and Juliet symbolises the end of the conflict between the two families as both families have been made equal through the loss of the children. Tybalt's death is used to equalise Mercutio's death.



Before you start writing think about the GAPS!

Genre – what are you being asked to write?

Audience – who are you writing for?

Purpose – what are you trying to achieve?

Style – formal or informal?

Genre

Article

Leaflet

Letter

Review

Speech

Purpose

Persuade

Argue

Advise

Inform

Speech

- Think about the GAPS
- Open with a welcome/greeting – e.g. 'Good afternoon ladies and gentlemen' or 'Fellow classmates'
- Outline what the speech will be about: 'I will talk to you about...'
- Make 3/4 key points and expand on them.
- Conclusion to summarise ideas
- End acknowledging the audience: 'Thank you for listening.'
- AFOREST techniques

Article

- Headline and Strapline
- Introduction to create interest – (include who, what, where, when, how and why?)
- 3-4 middle paragraphs
- Short but effective conclusion
- Lively style
- AFOREST techniques

Leaflet

- Present information so it is easy to find using headings and sub-headings
- Lively and engaging
- AFOREST techniques

Letter

- Address and date in the top right of the page
- Address of the person you are writing to on the left.
- Dear Mrs Fletcher = yours sincerely or Dear Sir/Madam. = yours faithfully
- Short introductory paragraph
- 3-4 middle paragraphs
- Concluding paragraph summarising ideas.

Review

- Introductory paragraph stating what is being reviewed and provide an overview of film/product.
- Middle paragraphs provide positives and negatives.
- Conclusion to summarise ideas and give a recommendation
- Make your opinion clear
- Lively and engaging
- AFOREST techniques

Writing to persuade

When writing a speech, be persuasive; use A FOREST to help with this...

A

ALLITERATION (WORDS BEGINNING WITH THE SAME SOUND) **EFFECT:** EMPHASISES/FOCUSES ATTENTION ON POINT
"A really rich and rewarding opportunity"

ANECDOTE A SHORT PERSONAL STORY/MEMORY **EFFECT:** ADDS AUTHENTICITY/RELATABILITY. CAN BE EVOCATIVE
"I'll always remember year 7, because that was the year I was horrendously bullied. I know what it feels like to..."

F

FACTS (SOMETHING WE KNOW OR HAVE PROVEN TO BE TRUE) **EFFECT:** ADDS PLAUSIBILITY TO AN ARGUMENT
"We know/it has been proven/research has shown that... English is the best subject."

O

OPINION (ADVICE/PERSONAL VIEW) **EFFECT:** ADDS PERSONAL/RELATABLE EVIDENCE/INVESTMENT
"I strongly believe that we need to..."

R

RHETORICAL QUESTIONS (QUESTION ASKED FOR EFFECT). **EFFECT:** ENGAGE, PROVOKES THOUGHT
"How many more elephants have to die before we start enforcing harsher punishments on the ivory trade?"

REPETITION (REPEATING INFORMATION) **EFFECT:** EMPHASIS & CLARITY
"It is everybody's responsibility to keep our school clean, and everybody can do more."
"Research has found that 65% of girls..." "If 65% of girls are more likely too..."

E

EMOTIVE LANGUAGE (ENGAGES AUDIENCES/READER'S EMOTIONS) **EFFECT:** HELPS CREATE SUPPORT/OPPOSITION
"An innocent bystander was brutally attacked by a violent thug by Tesco's last Tuesday."

EXAGGERATION/HYPERBOLE (STATEMENTS/CLAIMS NOT TO BE TAKEN SERIOUSLY) **EFFECT:** DRAMATIC, HEIGHTENS EMOTIONS, MORE INTENSE
"I died from laughing when I learnt that..." "This week I had six tonnes of homework to do – it's too much!"

S

STATISTICS (PERCENTAGES, FRACTIONS) **EFFECT:** ADDS PLAUSIBILITY AND GARNERS SUPPORT FOR ARGUMENT.
"74% of people agree..."

T

THREE (RULE OF) (LISTING IN GROUPS OF THREE) **EFFECT:** MEMORABLE, CONCISE, EMPHASIS
"Fast, convenient and secure".

TONE (THE ATTITUDE OF A PIECE OF WRITING) **EFFECT:** DRAWS IN THE AUDIENCE
Sincere, ironic, sarcastic, sentimental, enthusiastic, apathetic, bossy, instructive, assertive, outraged...

Persuasive speech techniques: Martin Luther King - I have a dream

Say what your issue is and set out your argument.
I am here today to talk to you about why every person in our society should be a vegetarian. I know that not everyone will want to be a vegetarian, but I hope to explain why it would be better for society if we were.

Give two or three persuasive reasons why your argument is correct.

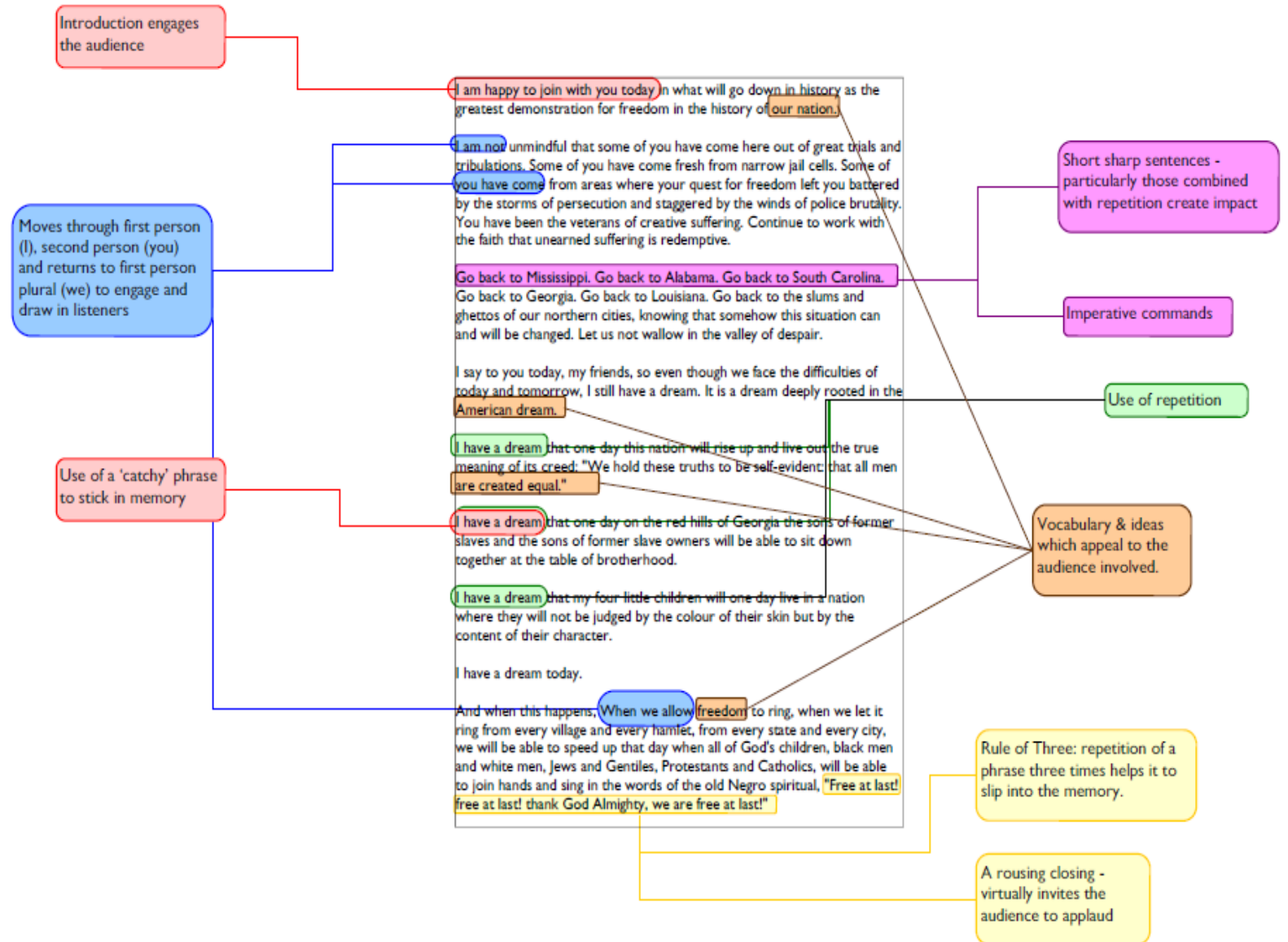
According to the U.N., it is estimated that the meat, egg, and dairy industries account for an astonishing 65 percent of worldwide nitrous-oxide emissions. Nitrous Oxide is a greenhouse gas for more potent than Carbon Dioxide. Surely nobody here is a climate change denier? Surely we all want to ensure we leave behind a world safe for our children and their children after them?

Give one reason why people might disagree with you, but ensure you then explain why this isn't correct.

Of course some people would argue that vegetarianism is a personal choice and we should not be forced to change our lifestyle. But I would remind these people that smoking in public places was once a personal choice. Fox hunting was once a personal choice. In fact, slavery was once a personal choice – would we ever suggest that these changes have made society a worse place?!

Thank your audience for listening and remind them what they should be thinking and feeling.

Thank you for taking the time to listen to me today, I am adamant that for intelligent people like yourselves, the conclusion is obvious: vegetarianism can save our planet from destruction.



Before You Were Mine by Carol Anne Duffy	
Themes: Parental bonds, Admiration, Nostalgia, Guilt	Tones: Personal, Possessive, Reflective
Content, Meaning and Purpose -The speaker describes the formative (young) years of her mother, before she gave birth to the speaker. -This ten-year period is described with the nostalgia of a vibrant youth. -The speaker has a deep admiration, with perhaps hints of jealousy, for her glamorous and fun-loving mother. -There are then hints of guilt as the speaker describes how her mother's life was never the same after she was born.	Context -Carol Anne Duffy was born in 1955 in Glasgow. The poem was published in 1993. I -It is an autobiographical poem and makes reference to the streets of Glasgow (George Square), conveying her nostalgia for her home city. -Duffy was made Poet Laureate in 2009.
Language - "the fizzy, movie tomorrow the right walk home could bring" : 'fizzy' conveys the excitement of the mother's youth, and the prospect of a date at the movies if she bumped into the right person. - "those high-heeled red shoes, relics" : imagery of shoes symbolise vibrancy of youth; they are now relics – a piece of history, perhaps with spiritual significance. -Possessive language: "mine" ; "whose small bites on your neck, sweetheart" inverts the maternal relationship; "my loud possessive yell" . Conveys how she owned, and perhaps hindered, her mother.	Form and Structure -The first three stanzas refer to the ten years prior to the speaker's birth. Each stanza opens with a reference to time. -Imagery of streets and pavements is repeated throughout the poem. This creates a personal and nostalgic effect, and conveys the mother as a streetwise and savvy young girl. -Enjambment, caesura and free verse create a conversational and anecdotal effect.

When We Two Parted by Lord Byron	
Themes: Loss, Heartbreak, Longing	Tones: Anger, Bitterness, Grief
Content, Meaning and Purpose -Speaker is directly addressing a former lover who no longer shows any affection for him. -He is clearly still affected by the relationship and angry at her coldness towards him and her continued promiscuity. -The poem conveys how the pain of a broken love affair is similar to grief: there is imagery of death in the poem.	Context -The poem is thought to be an autobiographical account of one of Byron's many affairs. -He claimed to have written it in 1808 but did not publish it until 1816 in order to hide protect the identity of the married woman in the poem. -The account of the love affair may be somewhat one-sided, and potentially an unfair portrayal of the woman. This might reflect his bitterness and pain.
Language -Recurring imagery of death (extended metaphor): 'Pale grew they cheek and cold', 'A knell to my ear', 'In silence I grieve.' - 'Half-broken hearted' : 'half' suggests they weren't fully in love, or that she didn't love him back. - 'I hear they name spoken/And share in thy shame' : she has a reputation for promiscuity, and he's ashamed to have known her. Sibilance of <i>sh</i> = secrecy. - 'I rue thee, Too deeply to tell' : he has deep regret for the affair and doesn't feel that the poem can fully convey the strength of his bitterness and anger.	Form and Structure -Shifting tense between past, present and future emphasises the speaker's persistent pain. -His rhetorical questions convey how he still requires closure on the relationship. -Consistent ABABCD rhyme scheme: highlights certain words (<i>tears, cold, kiss, broken, shame</i>) and creates the effect of fate and certainty – the relationship was always doomed. -Repetition of 'silence and tears' from first to last stanza: emphasises secrecy and pain.

Summer 1 year 9 Poetry

Poetic Techniques

LANGUAGE

Metaphor – comparing one thing to another

Simile – comparing two things with 'like' or 'as'

Personification – giving human qualities to the non-human

Imagery – language that makes us imagine a sight (visual), sound (aural), touch (tactile), smell or taste.

Tone – the mood or feeling created in a poem.

Pathetic Fallacy – giving emotion to weather in order to create a mood within a text.

Irony – language that says one thing but implies the opposite *eg. sarcasm*.

Colloquial Language – informal language, usually creates a conversational tone or authentic voice.

Onomatopoeia – language that sounds like its meaning.

Alliteration – words that are close together start with the same letter or sound.

Sibilance – the repetition of *s* or *sh* sounds.

Assonance – the repetition of similar vowel sounds

Consonance – repetition of consonant sounds.

Plosives – short burst of sound: *t, k, p, d, g, or b* sound.

Walking Away by C. Day Lewis

Themes: Parental love, Protectiveness, Loss

Tones: Anxious, Authentic, Melancholy

Content, Meaning and Purpose

-First person narrative where the poet reflects back on the anxiety of dropping his young son off for his first game of football at boarding school.
-Eighteen years on, he is still affected by the image of his son nervously walking away.
-The poem ends with the acceptance that this is a process that all parents must go through, and **"love is proved in the letting go"**.

Language

-Painful verbs convey the intensity of the experience: **"Wrenched", "scorching", "Gnaws"**.
-Images of nature convey how the father now realises that this is a natural process for parents: **"A sunny day with the leaves just turning", "nature's give and take"**. **"Into the wilderness"** also conveys anxiety.
-**"The touch-lines new-ruled"**: new boundaries were set for the father, symbolising the son's independence.
-**"Ordeals will fire one's irresolute clay"**: irresolute means 'uncertain'. He now accepts that the experience will make his son more solid and strong, like fired clay.

Context

-Cecil Day Lewis was an Irish poet who lived between 1904 and 1972. This poem was published about 1962 and is about his first son, Sean.
-He was the poet laureate for five years until his death.
-Day Lewis had himself attended boarding school and so could appreciate the anxiety and pain from both sides of the relationship: this is apparent in the descriptions of his nervous son.

Form and Structure

-First-person narration conveys personal nature of the poem.
-The use of enjambment and caesura create a conversational tone, further adding to the personal tone and authenticity of the poem.
-Steady rhyme scheme of ABACA reflects the consistency of the father's love for his son.
-First two stanzas describe the day (eighteen years ago) and the final two stanzas reflect on how the memory still pains him after so long.

Climbing My Grandfather by Andrew Waterhouse

Themes: Discovery, Family, Admiration

Tones: Firm, Loving, Nostalgic

Content, Meaning and Purpose

-The speaker used the **extended metaphor** of mountaineering to describe how he gets to know his grandfather: he is climbing up his body and trying to discover things about him (**"trying to get a grip"**).
-Like climbing a mountain, the journey is tiring and requires persistence, but holds great rewards.
-The message might be that we should work hard to invest in our relationships, and to create bonds.

Language

-**"I discover the glassy ridge of a scar"**: he is discovering previously unknown things about his grandfather; scar suggests a painful memory.
-**"his thick hair (soft and white at this altitude)"**: hair is compared a snowy mountain top: a place of beauty.
-**"I can only lie watching clouds and birds circle"**: symbolises the rewards of the relationship, once the mountain is climbed. Also links their bond to nature.
-**"to drink among teeth. Refreshed"**: the relationship nourishes him and re-energises him.
-**"knowing the slow pulse of his good heart"**: he has finally gained knowledge, and feels the steady and reliable love of his grandfather.

Context

-Andrew Waterhouse was a lecturer at an agricultural college.
-This was taken from his first book of poetry, published in 2000. He died in 2001.
-The poem seems to be autobiographical, with the poet reminiscing about his childhood – when perhaps everything seemed bigger, including his grandfather.

Form

-The poem is formed of one solid block of text, representing the solid structure and impressiveness of both a mountain and of his grandfather.
-Each line tracks the journey of the ascent, and charts the speaker's growing relationship with grandfather.
-The free verse and enjambment create an adventurous pace: the speaker barely pauses for breath in his pursuit of closeness and knowledge.
-Present tense adds to the sense of immediacy and adventure: the journey is unfolding before the reader's eyes.

Neutral Tones by Thomas Hardy	
Themes: Loss, Longing, Heartbreak	
Tones: Neutral, Pessimistic, Melancholic	
Content, Meaning and Purpose -The narrator recalls the day when he realised that a relationship had ended, and had to face the inevitable. -He and his lover were stood by a pond. He describes how her eyes and smile revealed her feelings: he believes that she had become bored and fallen out of love with him. -The final stanza is in the present, and conveys how he still thinks about that fateful day, and how he has lost faith in love.	Context -Thomas Hardy was a British poet known for his pessimistic and dreary poems. -Neutral tones, written in 1867, is no exception. -His pessimism may be linked to his unhappy first marriage, or perhaps his discontent with 19 th Century industrialisation and the loss of traditional country ways which he held so dear (he was from Dorset).
Language -"We stood by a pond that winter day": standing still and the cold set the tone of their relationship. -"tedious riddles" "played" "lost": imagery of love as a game – a game that he lost. -"Like an ominous bird a-wing...": bird represents the relationship flying away; ellipsis conveys passage of time leading to the current day in fourth stanza. -"love deceives, And wrings with wrong": he doesn't trust love as it has caused him so much 'wrong'. -"God-curst sun": the plosive 't' sound creates a harsh and bitter tone.	Form and Structure -The first three stanzas recall the day by the pond, whilst the final stanza jumps forward in time to show that the memory is still foremost in his mind – and has tainted his view of love. -The final line of each stanza is indented. This creates a pause which slows the pace and reflects his sadness. -The poem ends with imagery of the pond and surrounding leaves (as seen in the first stanza). Circular structure confirms the lingering, and inescapable, pain.

Summer 1 year 9 Poetry

Eden Rock by Charles Causley	
Themes: Memories, Family/Parents, Bonds	
Tones: Light, Ethereal, Nostalgic	
Content, Meaning and Purpose -The speaker is reminiscing about his parents as a young couple, as they picnic by a stream. It is written in the present tense to make the memory seem real. -They live a simple but happy life; conveying the importance of family and how wealth is not important. -They encourage him to cross the stream towards them, possibly symbolising his birth or his death as he joins them in the next life: "Crossing is not as hard as you might think".	Context -Charles Causley was (like Laura Dooley) from Cornwall. He lived from 1917-2003. -Published in 1988, the poem is thought to be autobiographical: he is perhaps talking about his parents. -Causley said that he had made-up the location of Eden Rock. It is a dream-like place, and perhaps reflects an idyllic life rather than his actual life.
Language -Everyday nostalgia: the parents are presented as living a simple but happy life. "She pours tea from a Thermos, the milk straight from an old H.P Sauce bottle", "tin cups". -"Eden Rock": Biblical reference to the Garden of Eden; he holds his parents and their idyllic life in very high regard. -Language of light, conveying images of hope and peace: "Her hair [...] takes on the light", "sky whitens as if lit by three suns".	Form -Each line of the poem has ten syllables, and most stanzas have four lines. This might reflect the secure and reliable nature of this parent's relationship. -The first three stanzas present his parents, portraying their idyllic existence. Fourth and fifth stanzas include the speaker as they encourage him to cross. -The poem uses half-rhymes to create a gentle, flowing rhythm, adding to the laid back and ethereal tone. -Enjambment after "Leisurely" slows pace, adding to the feeling of relaxation. -Monosyllabic final line is separated and the tone shifts to mundane and disappointment. Perhaps his own life failed to reflect this imagined/remembered existence.

Mother, Any Distance by Simon Armitage	
Themes: Bonds, Parental Love, Connections, Anxiety	
Tones: Apprehensive, Optimistic	
Content, Meaning and Purpose -The speaker describes how his mother helps him to move into a house, using the event as a symbol for his burgeoning independence. -The tape measure they use is an extended metaphor for their bond (and might symbolise an umbilical cord). -His mother is his "Anchor" but he gradually breaks away from her. He craves more freedom but is also anxious about exploring the world without the security of her support.	Context -The poem was published in 1993, when Armitage was 30 years old. -It was part of a collection called <i>Book of Matches</i> . The poems within this book were all short enough to be read within the time it takes a match to burn. This poem aims to convey a powerful parent-child relationship in a short space of time.
Language -Language of exploration conveys adventure but also anxiety about finding his independence: "the acres of walls, the prairies on the floors", "I space-walk through the empty bedrooms, I climb the ladder to the loft", "I reach towards [...] an endless sky to fall or fly". -Tape measure is an extended metaphor of an umbilical cord (support and nourishment): "the line still feeding out, unreeling years between us". -She must now let him go: "breaking point, where something has to give", "your fingertips still pinch".	Form and Structure -Sonnet-like structure (but with an extra line symbolising him breaking away), emphasises love for his mother. Irregular rhyme scheme symbolises his desire for independence conflicted with his anxiety over loosening their bond. -First two stanzas open with direct address, "Mother", "You" creating a personal tone with her as the subject. Final stanza shifts to "I": he is now the focus. -Single-word sentences ("Anchor. Kite") and regular caesura slow pace and convey apprehension. -Ellipsis in final stanza conveys uncertainty and how he finally reaches out towards the "endless sky".

STRUCTURE
Stanza – a group of lines in a poem.
Repetition – repeated words or phrases
Enjambment – a sentence or phrase that runs onto the next line.
Caesura – using punctuation to create pauses or stops.
Contrast – opposite concepts/feelings in a poem.
Juxtaposition – contrasting things placed side by side.
Oxymoron – a phrase that contradicts itself.
Anaphora – when the first word of a stanza is the same across different stanzas.
Epitrophe – when the final word of a stanza is the same across different stanzas.
Volta – a turning point in a poem.
FORM
Speaker – the narrator, or person in the poem.
Free verse – poetry that doesn't rhyme.
Blank verse – poem in iambic pentameter, but with no rhyme.
Sonnet – poem of 14 lines with clear rhyme scheme.
Rhyming couplet – a pair of rhyming lines next to each other.
Meter – arrangement of stressed/unstressed syllables.
Monologue – one person speaking for a long time.

Language for comparison
When poems have similarities Similarly, ... Both poems convey / address... Both poets explore / present... This idea is also explored in... In a similar way, ... Likewise, ...
When poems have differences Although... Whereas... Whilst... In contrast, ... Conversely, ... On the other hand, ... On the contrary, ... Unlike...



Summer 2

Play DNA

Narrative Structure	
Section One	Jan and Mark reveal that a deadly and serious event has occurred. The group react to the news Adam is dead.
Section Two	A complication is introduced: 'he's not going'. Phil suggests a solution. Leah and Phil. Leah has an epiphany, realising they are caught in a cycle of repeated behaviours. Phil's only word in the scene is 'No'.
Section Three	The plot is complicated further. Leah arrives with a suitcase and tells Phil she is 'running away'. Phil greets a tramp-like boy: Adam. They mistakenly thought he was dead. Phil responds to their growing hysteria with a 'game'.
Section Four A street A field	Mark reveals 'she's gone'. Jan asks 'does Phil know?' Phil remains silent. Richard brings news of the other teenagers' lives.

Key Quotations	Thematic link
Phil: 'What's more important; one person or everyone?' (p.58) Leah: 'Do you think it's possible to change things?' Phil: 'No.' (p.42) Phil: 'please keep up, I'm making this up as I go along.'	Power; ethics; gangs; responsibility
Leah: 'fear that everyone here lives in' (p.12) Leah: 'we can explain. We can talk. We can go through the whole thing and make them understand- ' 'What are we going to do?' repeated by nearly all the characters throughout the play	Gangs; fear; belonging; power; covering up; Responsibility; resourcefulness; human nature
Lou: 'we're screwed'. Repeated throughout the play Brian: 'I think we should tell someone' (p.19) Brian: 'She loves violence now.' (p.51) Talking about Cathy. Jan: 'Jesus Christ' (p.55) The first words spoken after Adam's monologue about his life in the woods.	Teenagers; lack of power; gangs; violence
Mark: 'And you shoulda seen his face, I mean the fear, the, it was so, you had to laugh, the expression, the fear...' (p.23) Jan and Mark: 'you know what he's like' (p.20-22) repeated	Bullying; gangs; crime; power
John Tate: 'Alright. New rule; that word is banned.' (p.15)	authority; leadership
Adam: 'dark' repeated throughout (pp.53-54); 'like a soft blanket' (p.54)	Gothic; death; re-birth; religion
Danny: 'Dentists don't get mixed up in things. I've got a plan.' (p.14)	Responsibility

Summer 2: Play DNA

Context	
1995	The Connections programme for young people starts running.
1999	The first Anti-Social Behaviour Order (ASBO) is used.
2000	Damilola Taylor (a ten-year-old boy) is murdered by members of a gang in Peckham, south London
2007	First production of DNA by youth theatre at the National Theatre as part of Connections Festival
2008	DNA staged professionally at the National Theatre, along with Roy Williams' Baby Girl and Lin Coghlan's The Miracle.
2011	London Riots and riots across the UK
2012	DNA becomes a set text on the curriculum



Form specific subject terminology

Beat	A stage direction that indicates a short pause (beat) of silence
Monologue	A speech given by one actor
Duologue	A speech shared by two actors
Colloquial	Everyday language (for example, slang or patterns of speech)
Ensemble	The entire cast of the play (the group)

- An average: A value to best represent a set of data
- Answers in science are usually asked for in decimal points or significant figures.
- In science you often have to convert units.

Mean, median and mode → Percentages → Estimates → Significant figures → Standard form → Rearranging equations → Unit conversions → graphs

1. Mean, median and mode

Mean – the sum of all the values
the number of values

Median – the middle value in a data set.

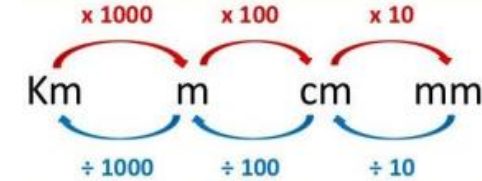
Mode – the most common value in a data set.

Anomalous result – a value that does not fit the pattern in the data set.

4. Significant figures

Rule	Example
Non-zero digits DO count	24 = 2 sf. 3.56 = 3 sf.
Captive zeros DO count	1502 = 4 sf. 1.08 = 3 sf.
Leading zeros DON'T count	0.0025 = 2 sf.
Trailing zeros SOMETIMES count	100 = 1 sf. 1200 = 2 sf. 2306.0 = 5 sf.

7. Unit conversions



Common Name	Billionth	Millionth	Thousandth	Hundred	Thousand	Million	Billion
Symbol	n	μ	m	c	k	M	G
Prefix	Nano	Micro	Milli	Centi	Kilo	Mega	Giga
Multiple	10 ⁻⁹	10 ⁻⁶	10 ⁻³	10 ⁻²	10 ³	10 ⁶	10 ⁹

2. Percentages

Percent means 'per one hundred'.

Percent → decimal = /100. E.g 60% = $\frac{60}{100} = 0.6$

Percentage of a number multiply the decimal by the number. E.g What is 60% of 200?

$60/100 = 0.6$ $0.6 \times 200 = 120$

5. Standard form

Standard form will always look like a $\times 10^b$

- Writing large numbers in standard form
 $300000 = 3 \times 10^5$
 $7400 = 7.4 \times 10^3$

- Writing small numbers in standard form
 $0.00023 = 2.3 \times 10^{-4}$ (4 places from the decimal point)
 $0.05 = 5 \times 10^{-2}$ (2 places from the decimal point)

8. Graphs (Part 1)

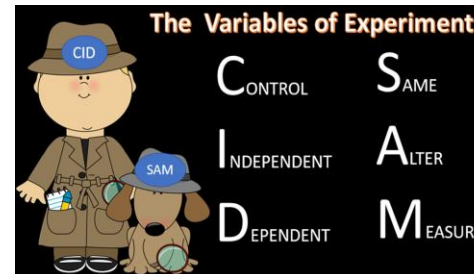
- T - Title
- A - Axis
- I - Increments/Intervals
- L - Labels
- S - Scale



3. DESCUS

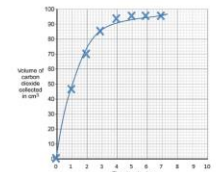
- D** = Data
- E** = Equation
- S** = Substitute
- C** = Calculate
- U** = Units
- S** = significant figures

6. Variables



9. Graphs (Part 2) - Line of best fit

- As many data points as possible on the line.
- Lines of best fit could be a straight line of best fit or a curve line of best fit.



- Energy can be transferred by conduction, convection and radiation
- Temperature is measured on the Celsius, Fahrenheit and Kelvin scales
- Energy transfer can be reduced using insulation.

Temperature → Energy transfer → Reducing energy transfer

1. Energy and Temperature

- Hotter object = more energy in its thermal energy store .
- Temperature = how hot a substance is – usually measured in degrees Celsius ($^{\circ}\text{C}$)
- Thermal equilibrium - greater difference in temperature = faster energy transfer

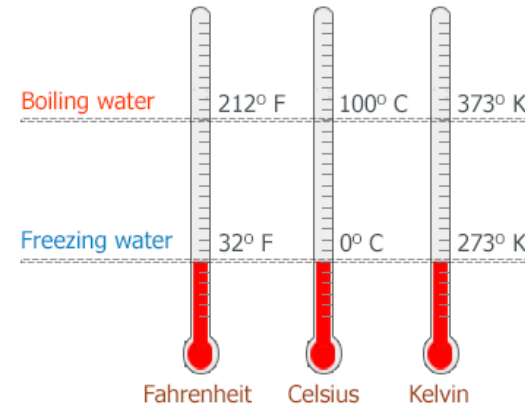
2. Temperature scales

Celsius scale - degrees Celsius ($^{\circ}\text{C}$)

No upper limit, lowest temperature is -273°C . (absolute zero)

Kelvin Scale - units are kelvin (K).

Begins at absolute zero and so no minus numbers.
An increase in one degree Celsius is the same as one kelvin.



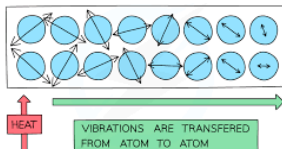
3. Expansion

↑ thermal energy of particles = ↑ in their kinetic energy and ↑ movement causes the particles to take up more space leading to **expansion**.

In a thermometer the liquid expands when heated which means that it rises up the glass to show a higher temperature.

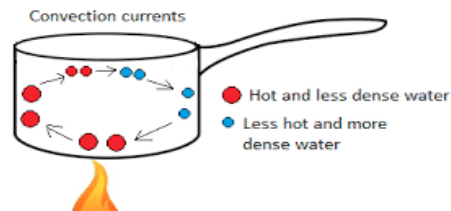
5. Conduction

- Energy transferred by vibrating particles.
- Transferred from a hotter to a cooler region.
- Faster in solids because particles are closer together.



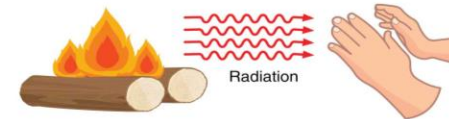
6. Convection

- Fluid = can flow e.g. liquid, gas
- Convection: Transfer of thermal energy when particles in a heated fluid rise.



7. Radiation

- All objects transfer energy to their surroundings by infrared radiation.
- No particles involved – so can transfer energy in a vacuum e.g. space.



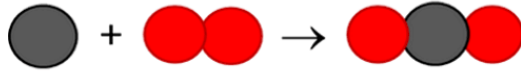
8. Reducing heat transfer

- Radiation: Use shiny white or silver surfaces
- Convection: Stop the fluid from circulating.
- Conduction: Use insulators
- Materials which do not transfer energy easily from hotter to cooler areas. Air and plastics are good insulators.

- Reactions can be reversible or irreversible.
- The pH scale is a measure of how acidic or alkaline a substance is.
- The reactivity series can be used to determine the reactivity of metals.

Chemical reactions → Acids and alkalis →
Reactions of Metals → The reactivity series

1. Chemical Reactions - In chemical reactions atoms are rearranged to make new substances.



Chemical change: new materials are formed. You can't go back to what you started with e.g. burning wood. It is an irreversible reaction.



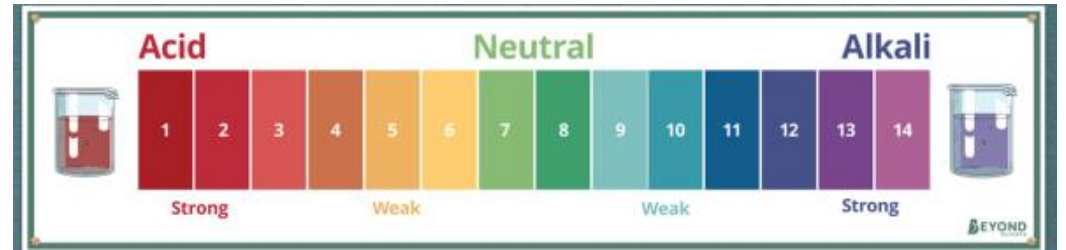
Physical change: you can get back the substances you started with e.g. ice cubes melting. It is a reversible reaction.

2. Acids and Alkalis

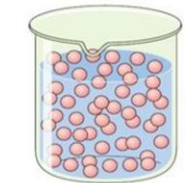
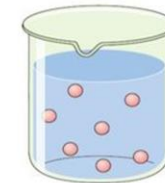
Acids – hydrochloric acid and sulphuric acid. Household acids are generally sour e.g. lemons.

Alkalis – sodium hydroxide and copper oxide. Household alkalis are generally soapy e.g. washing up liquid.

The pH scale tells you how acidic or alkaline a substance is.



Concentration: A measure of the number of particles in a given volume.



Dilute solution

Concentrated solution

Neutralisation equation : Acid + alkali → salt + water

Hydrochloric acid + sodium hydroxide → sodium chloride + water

3. Reactions of Metals

Metal + acid → salt + hydrogen

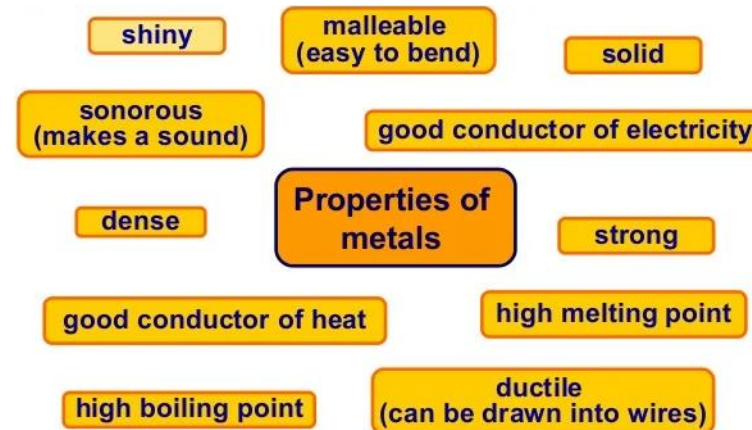
Sodium + hydrochloric acid → sodium chloride + hydrogen

Metal + water → metal hydroxide + hydrogen

Sodium + water → sodium hydroxide

Metal + oxygen → metal oxide

Sodium + oxygen → sodium oxide

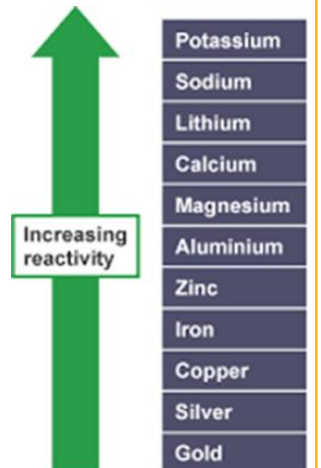


Copper is used to make cooking pots because it is strong, can be bent into shape (malleable) and can conduct heat.

4. The Reactivity Series - This shows the arrangement of metals from the most reactive to the least reactive.

Most reactive = potassium.
Least reactive = gold.

A more reactive metal can displace (kick out) a less reactive metal. Potassium can displace zinc from zinc chloride to form potassium chloride.

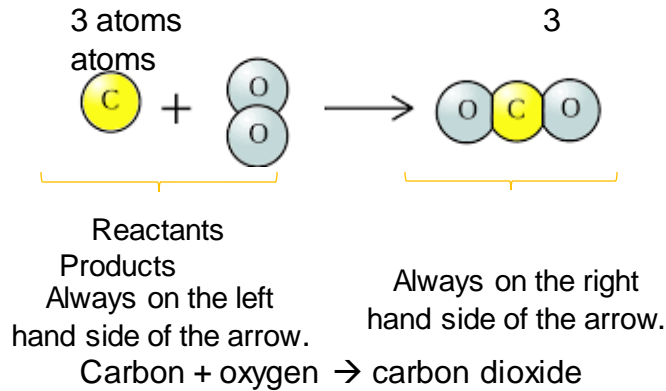


- Atoms are rearranged in chemical reactions.
- The number of atoms and the mass should be conserved.
- Thermal decomposition is takes in energy.
- Combustion gives out energy.

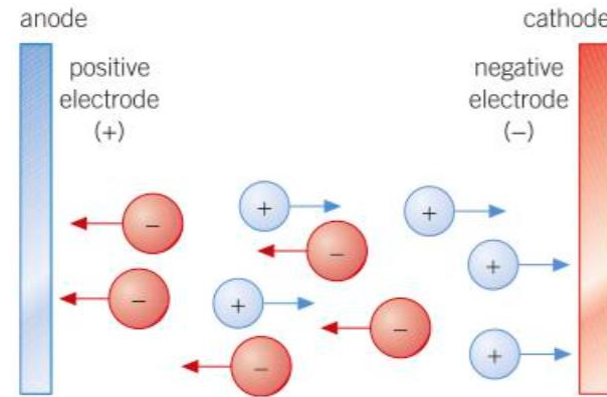
Year 9 Science - Types of Reactions

Chemical reactions → Electrolysis → Thermal decomposition → Combustion → Conservation of mass

5. Chemical Reactions - Atoms are rearranged to make a new product. The number of atoms on each side of the arrow stays the same.



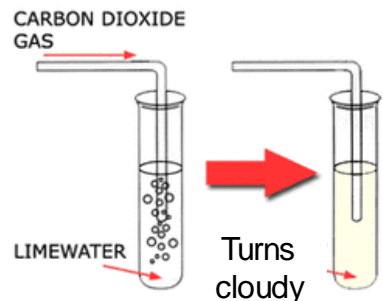
6. Electrolysis



Passing an electric current through electrolytes causes the ions to move to the electrodes. Positively charged ions move to the negative electrode, and negatively charged ions move to the positive electrode. Ions are changed at the electrodes producing atoms. This process is called electrolysis.

7. Thermal Decomposition - Reactants are broken down (decomposed) using heat (thermal energy).

Zinc carbonate can be decomposed using heat.
Zinc carbonate → zinc oxide + carbon dioxide.

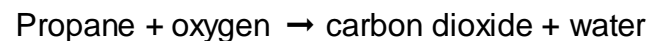


Testing for carbon dioxide:

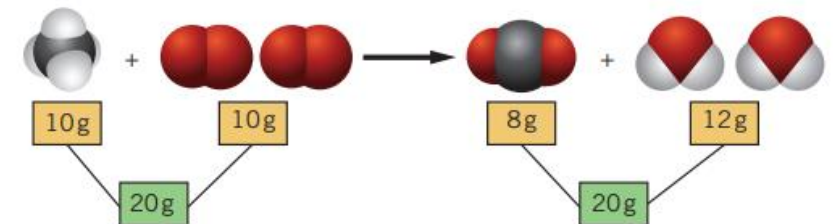
Bubble the gas through limewater, if the limewater turns cloudy, the gas is carbon dioxide.

8. Combustion - Combustion is the burning of a fuel in oxygen to transfer energy. A fuel is a substance which stores chemical energy.

Some examples of fuels:



9. Conservation of Mass - The total mass of the reactants will be equal to the total mass of the products.



Mass of the reactants = 20g
Number of atoms = 9

Mass of the products = 20g
Number of atoms = 9

- Good health is not just the absence of disease or illness, it is a state of complete physical, mental and social well-being.
- Smoking, alcohol and poor diet can lead to poor physical health

Physical health → Non-communicable disease → Mental health

Physical Health

Lack of exercise, poor diet and a combination of both can lead to serious health risks such as obesity, CHD and diabetes and depression.

If nothing is done to lead a healthy active lifestyle these health risks can lead to more fatal issues such as, cancer, heart attacks and strokes.



Mental Health

Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices.

Positive mental health allows people to:

- Realise their full potential
- Cope with the stresses of life
- Work productively



Smoking

- Tobacco kills up to **half** of its users (**8 million** people each year).
- Almost **50%** of children regularly breathe air polluted by tobacco smoke in public places.
- 65 000 children **die** each year from illnesses attributable to second-hand smoke.

Long Term Effects of smoking:

- Lung cancer
- Stroke
- CHD
- Fertility Problems



Alcohol

Alcohol is a depressant, that slows down the nerves and brain.

Short Term: Sleepiness, impaired judgement and balance and blurred vision and slurred speech.

Long Term: Liver and mouth cancer, cirrhosis, dementia, weakened immune system.



Diet

Your diet consists of the food that you eat.

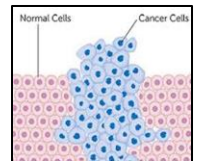
Having an unhealthy diet can result in obesity, tooth decay and high cholesterol.

A healthy diet can result in a longer life, less illness, stronger muscles and bones and better immunity.



Cancer:

Cancer is caused by uncontrolled cell division. This can form masses of abnormally growing cells called tumours.



Treatments:

Chemotherapy is a cancer treatment where medicine is used to kill cancer cells.



Radiotherapy is a treatment where radiation is used to kill cancer cells.

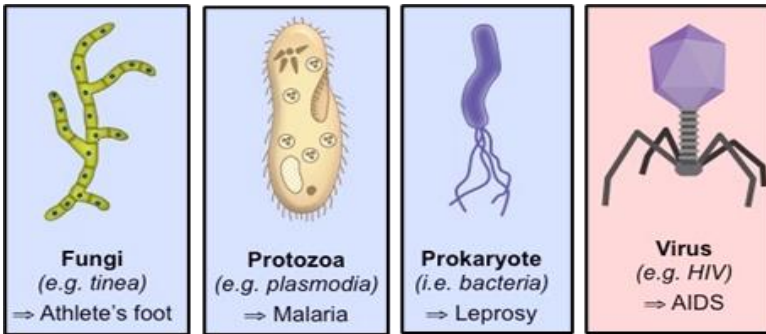


- Communicable diseases are caused by pathogens.
- Viruses, bacteria, fungi and protists can be pathogens.
- Humans have defence systems against pathogens.
- The immune system defends us against pathogens.

Pathogens → Body defences → Vaccines and immunity

Pathogens

Pathogens are microbes that cause communicable diseases. These are infectious and can be transmitted.

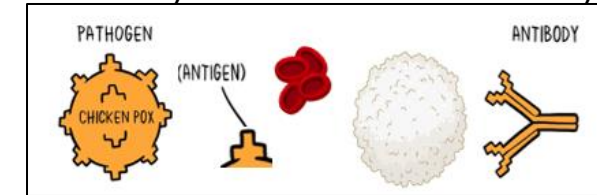


Body Defences

Skin	Scabs	Ciliated cells
Physical barrier	Protects & covers cuts	Carry pathogens out
Goblet cells	Stomach acid	Fever
Produce mucus	Kills pathogens	Destroys pathogen enzymes
WBC	WBC	WBC
Produce antitoxins	Produce antibodies	Engulf & digest pathogens

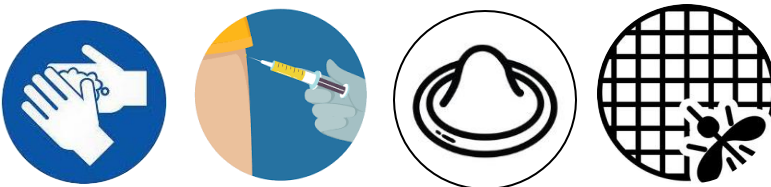
Vaccines:

1. Inject a dead or weakened version of the pathogen into the body.
2. White blood cells recognise the antigens.
3. WBCs produce antibodies specific to the antigen.
4. Memory cells are produced → specific antibody made faster → immunity



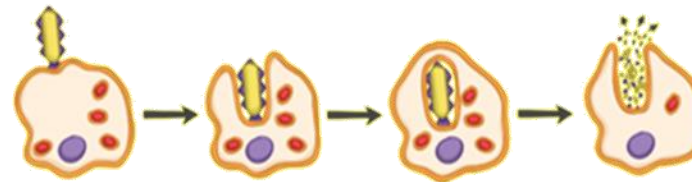
Prevention:

- Hand washing: MRSA, COVID.
- Vaccination: Measles, flu, meningitis, chickenpox, COVID.
- Condoms: Chlamydia, HIV, gonorrhoea.
- Cook food thoroughly: *Salmonella*.
- Mosquito nets: malaria.



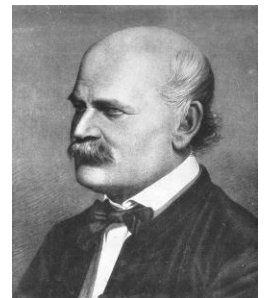
Immune System

WBCs detect proteins on the pathogens called antigens and produce antibodies. These cause pathogens to stick together and make it easier for WBC to engulf them. Memory cells keep copies of the antibodies for future infections.



Ignaz Philipp Semmelweis

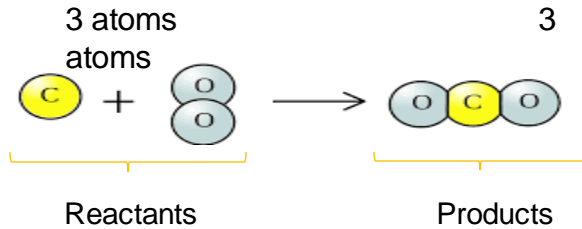
A Hungarian gynaecologist pioneered antiseptic procedures. He worked in a maternity ward which had an incredibly high death rate. He discovered that the incidence of puerperal fever could be drastically cut by the use of hand disinfection in the clinics.



- Atoms are rearranged in chemical reactions.
- The number of atoms and the mass should be conserved.
- Thermal decomposition is endothermic.
- Combustion is exothermic.

Chemical reactions → Conservation of mass → Thermal decomposition → Combustion → Exothermic and endothermic reactions

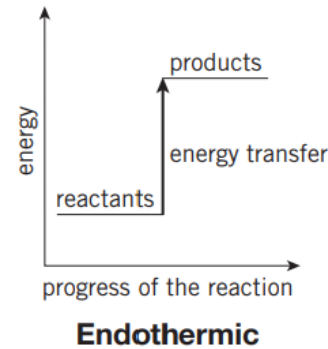
1. Chemical Reactions - Atoms are rearranged to make a new product. The number of atoms on each side of the arrow stays the same.



Always on the left hand side of the arrow. Always on the right hand side of the arrow.
Carbon + oxygen → carbon dioxide

5. Endothermic Reactions.

- Absorbs energy from the surroundings.
- Temperature of the surroundings decreases.

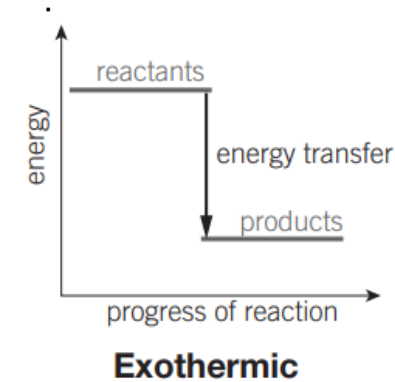


Examples: thermal decomposition and ice packs.

Endothermic: energy of the reactants is lower than the products.

Exothermic Reactions

- Releases energy to the surroundings.
- Temperature of the surroundings increases.

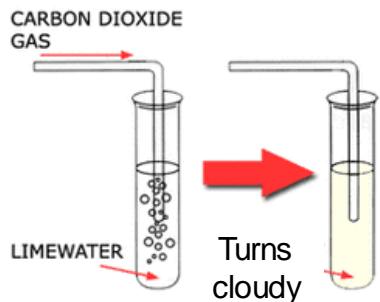


Examples: combustion and hand warmers.

Exothermic: energy of the reactants is higher than the products.

3. Thermal Decomposition - Reactants are broken down (decomposed) using heat (thermal energy).

Zinc carbonate can be decomposed using heat.
Zinc carbonate → zinc oxide + carbon dioxide.



Testing for carbon dioxide: Bubble the gas through limewater, if the limewater turns cloudy, the gas is carbon dioxide.

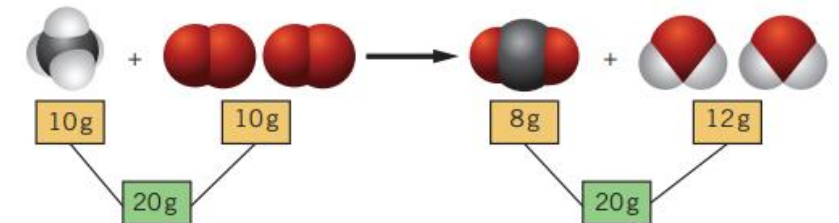
4. Combustion - Combustion is the burning of a fuel in oxygen to transfer energy. A fuel is a substance which stores chemical energy.

Some examples of fuels:



Propane + oxygen → carbon dioxide + water

2. Conservation of Mass - The total mass of the reactants will be equal to the total mass of the products.



Mass of the reactants = 20g
Number of atoms = 9

Mass of the products = 20g
Number of atoms = 9