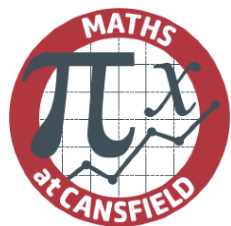




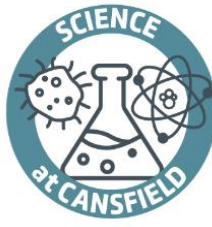
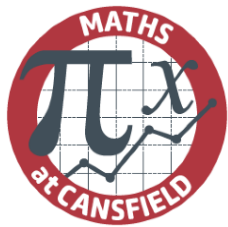
CANSFIELD
ACHIEVING EXCELLENCE TOGETHER

Year 9 Knowledge Organiser



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Y9 Maths 1.1

Definition of x^n

If n is a positive integer, you say that x^n is the index notation of:

$$\underbrace{x^n \times x^n \times x^n \times x^n \dots \times x^n}_{n \text{ factors}}$$

$$5^4 = 5 \times 5 \times 5 \times 5 = 625$$

$$(-5)^4 = (-5) \times (-5) \times (-5) \times (-5) = -625$$

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

$$5^{-4} = \frac{1}{5^4} = \frac{1}{625}$$

Standard Form

A number expressed in the form $A \times 10^n$

where $1 \leq A < 10$ and n is an integer. This is called the standard form of a number.

Examples:

The standard form of 4 700 000 is 4.7×10^6 .
The standard form of 0.0000965 is 9.65×10^{-5} .

Multiplying with Standard Form

We add the indices

$$\begin{aligned} &(3 \times 10^4) \times (6 \times 10^5) \\ &= (3 \times 6) \times (10^4 \times 10^5) \\ &= 18 \times 10^9 \\ &= 1.8 \times 10^{10} \end{aligned}$$

Direct Proportion

When two quantities, x and y , are in direct proportion:

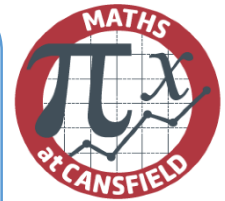
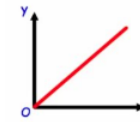
$$y \propto x$$

$$y = kx, \text{ where } k \text{ is a constant and } k \neq 0$$

$$\frac{y}{x} = k, \text{ where } x \neq 0$$

The graph of y against x is a straight line passing through the origin with gradient k .

$$y \propto x$$



Laws of Indices

If x and y are real numbers, $x \neq 0$ and $y \neq 0$, and m and n are integers:

Law 1: $x^m \times x^n = x^{m+n}$

Law 2: $x^m \div x^n = x^{m-n}$

Law 3: $(x^m)^n = x^{mn}$

Law 4: $(xy)^n = x^n y^n$

Law 5: $\left(\frac{x}{y}\right)^n = \frac{x^n}{y^n}$

Inverse Proportion

When two quantities, x and y , are in inverse proportion:

$$y \propto \frac{1}{x}$$

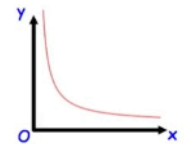
$$y = \frac{k}{x}, \text{ where } k \text{ is a constant and } k \neq 0$$

$$xy = k, \text{ where } x \neq 0$$

The graph of y against x is a curve.

The graph of y against $\frac{1}{x}$ is part of a straight line passing through but not including the origin, with gradient k .

$$y \propto \frac{1}{x}$$



Adding and Subtracting with Standard Form

If the indices are the same:

$$3 \times 10^4 + 4 \times 10^4 = 7 \times 10^4$$

If the indices are different, convert to ordinary numbers first:

$$\begin{aligned} &3.7 \times 10^3 - 2.1 \times 10^2 \\ &= 3700 - 210 \\ &= 3490 = 3.49 \times 10^3 \end{aligned}$$

Dividing with Standard Form

We subtract the indices

$$\begin{aligned} &(8 \times 10^9) \div (4 \times 10^3) \\ &= (8 \div 4) \times (10^9 \div 10^3) \\ &= 2 \times 10^6 \end{aligned}$$

For further revision use Corbett Maths. This contains videos, practise questions and answers.



Key Terms

1. Indices
2. Standard Form
3. Proportion
4. Reciprocal
5. Inverse

Y9 Maths 1.2

Changing the Subject of a Formula

The subject of the formula

$$y = a + bt \text{ is } y$$

$$y - a = bt$$

$$t = \frac{y - a}{b}$$

The subject of the formula has been changed to t .

Factorising

Factorising is the opposite of expanding. We put an expression back into brackets by taking out the HCF.

E.g..

$$12mn - 20mp = 4m(3n - 5p)$$

$$6x^2 + 3x = 3x(2x + 1)$$

Simplification of Quadratic Expressions

Apply the distributive law of multiplication over addition:

Example

$$\begin{aligned} & 4(3x^2 + 5x - 2) - (3x^2 - 2x) \\ = & 4(3x^2) + 4(5x) - 4(2) - (3x^2 - 2x) \\ = & 12x^2 + 20x - 8 - 3x^2 + 2x \\ = & 9x^2 + 22x - 8 \end{aligned}$$

Quadratic Expressions

Quadratics are written in the form $ax^2 + bx + c$, where a, b and c are constants and $a \neq 0$

Expanding Quadratic Expressions

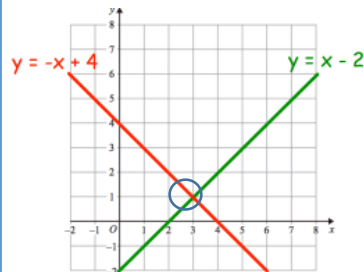
Apply the distributive law of multiplication over addition:

Expand $(x + 4)(2x - 3)$

	x	$+4$
$2x$	$2x^2$	$+4x$
-3	$-3x$	-12

$$\begin{aligned} & 2x^2 + 4x - 3x - 12 \\ = & 2x^2 + x - 12 \end{aligned}$$

Solving Simultaneous Linear Equations in Two Variables Graphically



The solution to $y = -x + 4$ and $y = x - 2$ is given where the lines intercept. Hence $x = 3$ and $y = 1$

Solving Simultaneous Linear Equations

Solve:

$$3x + 2y = 23$$

$$2x - y = 6$$

Multiply the second equation by 2 so we have the same coefficients of y .

$$3x + 2y = 23$$

$$4x - y = 12$$

The signs are opposite so we add our equations

$$7x = 35$$

$$x = 5$$

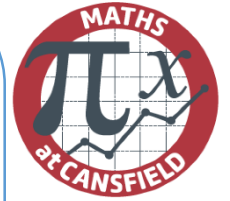
Now substitute $x = 5$ into one of the original equations

$$3(5) + 2y = 23$$

$$15 + 2y = 23$$

$$2y = 8$$

$$y = 4$$



For further revision use **Corbett Maths**. This contains videos, practise questions and answers.



Key Terms

1. Quadratic
2. Factorise
3. Expand
4. Gradient
5. Rate of change

Y9 Maths 2.1

Real Life Graphs

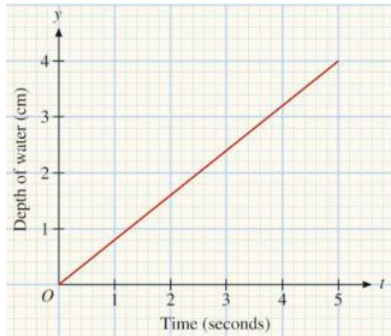
If the graph of a quantity, y against time t , is a straight line, then

The rate of change (gradient) of y with t is constant.

For example, the rate of change for

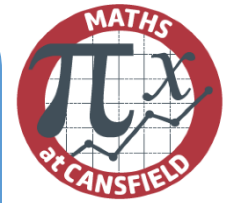
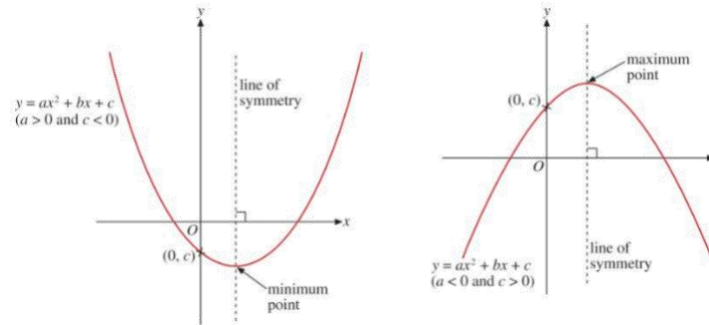
The depth of water in the diagram, shows that it increases

at a rate of $\frac{4}{5} = 0.8\text{cm/s}$

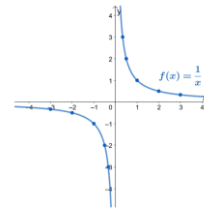


Quadratic Graphs

Quadratic graphs have the form $y = ax^2 + bx + c$



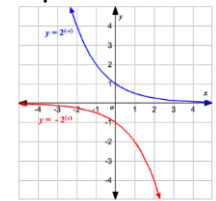
Reciprocal Graphs



Reciprocal graphs have the form $y = \frac{a}{x}$ where $a \neq 0$, $y \neq 0$ and $x \neq 0$

Exponential Graphs

Exponential graphs have the form $y = a^x$



Loci

The locus of a point is the path in which it moves under certain conditions.

Equidistant from a point = a circle

Equidistant from a line = 2 lines parallel to the line and semicircles at the ends

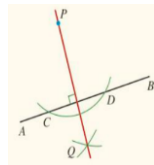
Equidistant from 2 points = perpendicular bisector

Equidistant from 2 lines = angle bisector

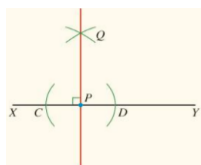
Equidistant from 2 parallel lines = line through the centre

Perpendicular Constructions

(a) From point P to the line AB



(b) Through point P on the line XY



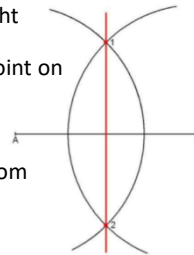
Perpendicular Bisector

This construction cuts a straight line exactly in half,

crossing at right angles. Any point on

the line is equidistant from

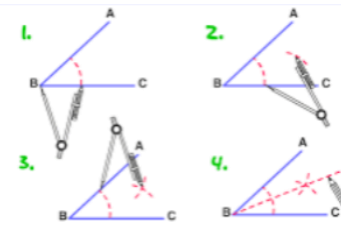
A and B.



Angle Bisector

This construction cuts an angle completely in half.

Any point on the line is equidistant from AB and BC.



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Key Terms

1. Equidistant
2. Reciprocal
3. Perpendicular
4. Bisector
5. Exponential

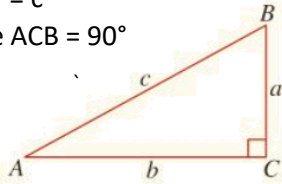
Y9 Maths 2.2

Pythagoras' Theorem

Finding the hypotenuse

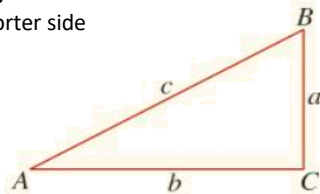
$$a^2 + b^2 = c^2$$

Where angle ACB = 90°



Pythagoras' Theorem in Converse

Finding a shorter side



$$c^2 - b^2 = a^2$$

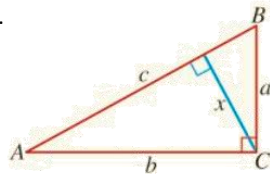
$$c^2 - a^2 = b^2$$

Where angle ACB = 90°

Shortest Distance from a Point to a Line

The shortest distance from a point to a line is the perpendicular distance from the point to the line.

In the diagram, x is the shortest distance from C to AB.



Similar Shapes

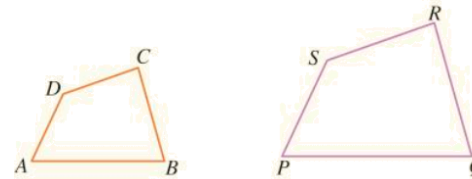
Two figures are similar if they have the same shape but not necessarily the same size, i.e.

- all the corresponding angles are equal, and
- all the ratios of the corresponding sides are equal.

ABCD is similar to PQRS

$\angle BAD = \angle QPS$, $\angle ABC = \angle PQR$

$\angle BCD = \angle QRS$, $\angle CDA = \angle RSP$

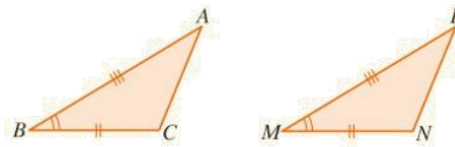


Conditions for Congruent Triangles

When two triangles are congruent,

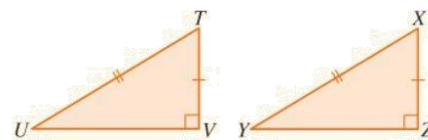
- All corresponding sides are equal, and
- All corresponding angles are equal.

Side – Angle – Side (SAS)



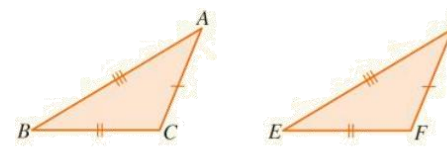
$\triangle ABC \cong \triangle LMN$ (SAS)

Right Angle – Hypotenuse – Side (RHS)



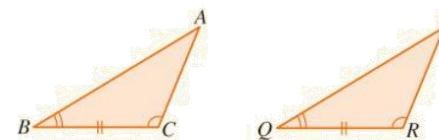
$\triangle TUV \cong \triangle XYZ$ (RHS)

Side – Side – Side (SSS)



$\triangle ABC \cong \triangle DEF$ (SSS)

Angle – Side – Angle (ASA)



$\triangle ABC \cong \triangle PQR$ (ASA)

Enlargement

When an object is enlarged, the image formed is similar to the object.

Scale factor of enlargement =

$$\frac{\text{side length of the image}}{\text{length of corresponding side on object}}$$

Scale Drawing

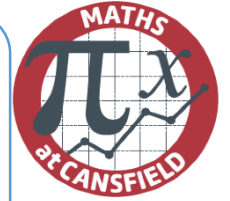
Scale factor =

$$\frac{\text{length in the drawing}}{\text{corresponding length of the object}}$$

Key Terms

1. Enlargement
2. Scale Factor
3. Similar
4. Congruent
5. Corresponding

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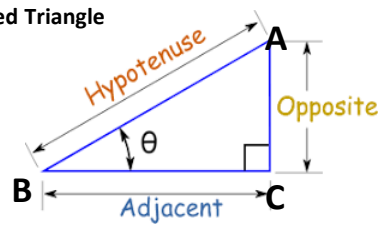
Y9 Maths 3.1

Trigonometric Ratios in a Right-angled Triangle

$$\sin\theta = \frac{\text{opposite side}}{\text{Hypotenuse}} = \frac{AC}{AB}$$

$$\cos\theta = \frac{\text{adjacent side}}{\text{Hypotenuse}} = \frac{BC}{AB}$$

$$\tan\theta = \frac{\text{opposite side}}{\text{adjacent side}} = \frac{AC}{BC}$$



Finding Unknown Angles

$$\tan(a) = \frac{3}{4}$$

$$a = 36.9^\circ \text{ (to 1 dp)}$$

Calculator key sequence:

$$\tan^{-1} 3 \div 4 =$$

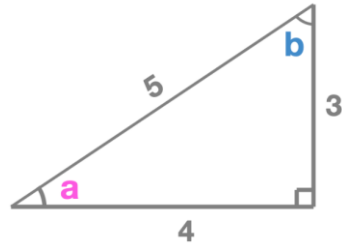
$$\sin(b) = \frac{4}{5}$$

$$b = 53.1^\circ \text{ (to 1 dp)}$$

Calculator key sequence:

$$\sin^{-1} 4 \div 5 =$$

$$\tan\theta = \frac{\text{opposite}}{\text{adjacent}}$$

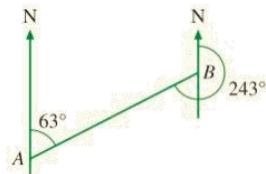


Bearings

A bearing measures direction in degrees. It is measured from the north, measured in a clockwise direction and written as a 3-digit number.

$$\text{Bearing of B from A} = 063^\circ$$

$$\text{Bearing of A from B} = 243^\circ$$



Finding Unknown Sides

$$\sin 31^\circ = \frac{y}{8}$$

$$y = 8\sin 31^\circ$$

$$= 4.12 \text{ (to 3 sf)}$$

Calculator key sequence:

$$8 \sin 31 =$$

$$\cos 31^\circ = \frac{x}{8}$$

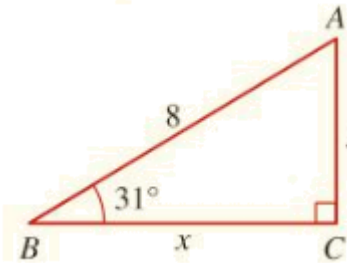
$$x = 8\cos 31^\circ$$

$$= 6.86 \text{ (to 3sf)}$$

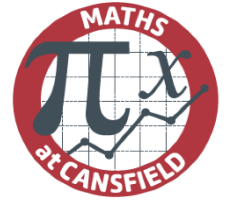
Calculator key sequence:

$$8 \cos 31 =$$

$$\sin\theta = \frac{\text{opposite}}{\text{hypotenuse}}$$



$$\cos\theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$



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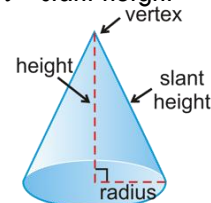
Cone

Curved surface area of a cone = πrl

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

Where r = base radius

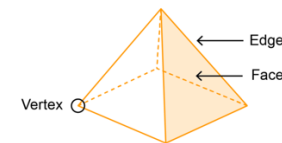
and l = slant height



Pyramid

To find the surface area of a pyramid you need to find the area of all the faces and add together.

area of pyramid = base area + area of all lateral faces



Key Terms

1. Trigonometry
2. Opposite
3. Adjacent
4. Hypotenuse
5. Bearing

Y9 Maths 3.2

The Basics of Probability

For a finite sample space S with equally likely outcomes:

$$\text{Probably of an event } E, P(E) = \frac{n(E)}{n(S)}$$

$n(E)$ is the number of outcomes in the event E and $n(S)$ is the number of outcomes in the sample space S

$$0 \leq P(E) \leq 1$$

$$P(\text{a certain event}) = 1, P(S) = 1$$

$$P(\text{an impossible event}) = 0$$

$$P(\text{not}) = 1 - P(E)$$

Averages

Mode - The mode of data set is the data value which has the highest frequency.

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

Median - When the data are arranged in ascending order, the median is the middle value of data.

Range - The range is a measure of spread
= *the largest value - the smallest value*

Sample Space Diagrams

The sample space of a two-stage process can be represented using a sample space diagram.

For example, in throwing two fair coins, the sample space can be represented as shown.

	Heads	Tails
Heads	H, H	H, T
Tails	T, H	T, T

There are 3 outcomes that have at least one tail: (H,T) (T,H) and (T,T). Hence, the probability of at least one tail = $\frac{3}{4}$.

Sets and Venn Diagrams

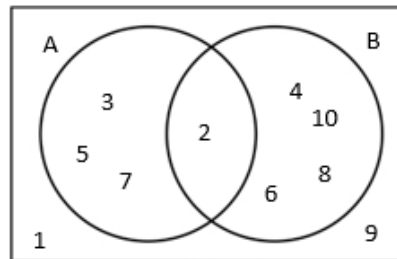
A set is a collection of well-defined objects.

For Example: $A = \text{even numbers between 3 and 11}$
= 4, 6, 8, 10

Sets can be represented on Venn diagrams.

For Example:

If $A = \text{prime numbers}$ and $B = \text{even numbers}$ then the integers from 1 to 10 are sorted in the Venn diagram as shown below.

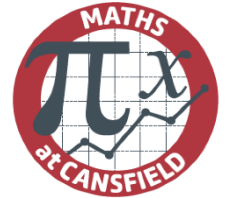


2 is an element of both sets, so it is placed in the part where the circles overlap.

Probabilities can be found from Venn diagrams.

For Example: If a number is selected at random from the Venn diagram above the

$$\text{probability of a prime number} = \frac{4}{10} = \frac{2}{5}$$



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Mutually Exclusive Events

Two events are mutually exclusive if they cannot occur at the same time.

If A and B are mutually exclusive events,

$$P(A \text{ or } B) = P(A) + P(B)$$

$$P(A \text{ and } B) = 0$$

Key Terms

1. Exclusive
2. Outcomes
3. Element
4. Random
5. Venn Diagram

William Shakespeare's *Romeo and Juliet*



Key methods used:

Prologue: sets up the story and foreshadows events.

Foreshadowing: when an author drops hints about what will happen through language or symbolism.

Dramatic irony: when an audience knows something, the characters do not.

Symbolism: when an image represents an idea, e.g. light symbolises happiness, flowers symbolise youth etc.

Rhyming Couplets: two lines next to each other that rhyme with each other, often used for dramatic impact.

Conflict in *Romeo and Juliet*:

Conflict is a central theme in Shakespeare's *Romeo and Juliet*. Shakespeare presents the theme of **conflict** through two warring families: the Montagues and the Capulets. The two families have been taught to hate each other, and this hatred impacts on the family members and the citizens of Verona. The theme of **conflict** is established from the very opening: we are told about the two families in the prologue and then Act 1 Scene 1 shows a fight that breaks out between the servants of both of these houses. All of the other problems in the plot stem from this feud, and the two lovers must keep their love a secret and go to great lengths to fight the greater forces against them. In the end, the families are able to make peace, but it came at a great price.

Key Context:

Shakespeare's Time: Shakespeare wrote his plays at the time of two monarchs: Queen Elizabeth I and James I. *Romeo and Juliet* was written relatively early in Shakespeare's career (the bulk of his tragedies were written in the 17th century) yet was extremely popular in his lifetime, as it is now.

Elizabethan England and Italy: Shakespeare frequently engaged with Italy in his plays, leading many to believe that he travelled there between the late 1580s and early 1590s. Italy was a place that Shakespeare's contemporaries would have had a keen interest in; it was already an advanced and beautiful place for travel. Shakespeare's depictions of many areas of Italian life at the time are deemed largely accurate.

Religion: The heavy religious presence is evident across several parts of *Romeo and Juliet*. This is reflective of a society across Europe that was deeply religious (predominantly catholic or protestant). Several characters demonstrate their commitment to the church, such as Romeo and Juliet who choose to marry and the Capulets, who are quick to contemplate that Juliet is in a better place (heaven) after she is found 'dead.'

Patriarchal Society: Society throughout the Middle Age and at Shakespeare's time was patriarchal – women were considered inferior to men. This was also the case in much of Europe, including Italy. Women belonged to their fathers (or brothers if their fathers had died) and then their husbands, so Juliet would be expected to obey her father. Women were not permitted to own land or enter most professions. They were instead expected to bear children, be gentle and womanly.

Astrology, Fate and the Supernatural: At the time of Shakespeare, the belief in both astronomy and the supernatural was far more preminent than in society today. The reference to 'star-cross'd lovers demonstrates the large role of horoscopes and planet positions in being used to predict fate. Also, Romeo and Juliet make reference to the fact that they feel they are being guided by a supernatural force (e.g. 'fortune's fool).

Healthcare and Medicine: Healthcare and medicine were not as advanced in Shakespeare's age as they are today – there were numerous ailments and diseases that were not yet understood. This makes it much more believable for both the Capulets and Romeo that Juliet could have died so suddenly and so young. The high death count in the play would seem slightly more common in those days!

Key themes:

Conflict, love, fate, honour, power, religion, hatred, violence, death, masculinity, family, feud.

Key Terms

1. Conflict
2. Patriarchal
3. Fate
4. Foreshadowing
5. Prologue

Steinbeck and 'Of Mice and Men'



1930s America

After the Wall Street Crash in 1920, the American economy was destroyed. This meant that companies had no money to employ people and, as a result, people became jobless.

In search of work, people migrated (moved) to the Golden State (California) in search of jobs. As workers found themselves in such dire straits, they began to dream of a better life. This became known as the American Dream.

Summaries of the sections of 'Of Mice and Men'

1

Introduction of characters George and Lennie and their Relationship.

2

George and Lennie reach the Ranch and meet the Boss. They also meet the character of Curley's wife for the first time.

3

Slim describes how Lennie is the best worker he has ever seen. Candy's dog is shot in this chapter by Carlson. Curley fights with Lennie and Lennie busts Curley's hand.

4

Everyone goes into town apart from Lennie. Lennie stumbles into Crook's room and interacts with him. Curley's wife later joins the conversation and threatens Crooks.

5

Lennie kills Curley's Wife and runs away. Curley starts a search party for him.

6

George finds Lennie and they talk through their dream for the final time.

Who was Steinbeck?

John Steinbeck, in full John Ernest Steinbeck, (born February 27, 1902, Salinas, California, U.S.—died December 20, 1968, New York, New York), was an American novelist who was best known for 'The Grapes of Wrath' (1939). This summed up the resentment of the Great Depression decade and aroused widespread sympathy for the plight of migratory farmworkers. He received the Nobel Prize for Literature for 1962.

Steinbeck wrote *Of Mice and Men* in 1937

Steinbeck's purpose in writing the text was to criticise the American Dream (the belief that someone can go from 'rags to riches'). The novella exposes how unlikely this dream is by focussing on the lives of two migrant workers (George and Lennie) and the hardships they encounter in the midst of the Great Depression.

Steinbeck also brings into focus other ugly aspects of American society like Race and the mistreatment of women, to further emphasise how the American Dream is impossible to achieve.



Key Terms

1. Prejudice
2. Symbolism
3. American Dream
4. Foreshadowing
5. Solidify

'Heroes' – a novel by Robert Cormier

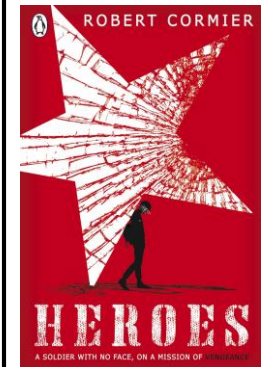


Robert Cormier

- Robert Edmund Cormier (January 17, 1925–November 2, 2000) was an American author, columnist and reporter, known for his pessimistic, downbeat literature.
- His most popular works include *I Am the Cheese*, *After the First Death*, *Heroes* and *The Chocolate War*, all of which have won awards.
- His books often are concerned with themes such as abuse, mental illness, violence, revenge, betrayal and conspiracy.
- In most of his novels, the **protagonists** do not win.

Why was it written?

Robert Cormier wrote *Heroes* based on his memories of the terrible fallout from World War Two. He saw many young men of his own age return from the war, having fought in either Europe or the Pacific. Many of them had dreadful physical injuries, but *all* of them were mentally affected as a result of their experiences. Of course, there were also numerous young men who were killed in action and never returned to the United States. Cormier felt that he should present war realistically, which is why he did not pretend that the characters' injuries were minor ones - Francis himself has horrific injuries to his face; Enrico Rucelli, Francis' friend, has lost both legs and his left arm; Arthur Rivier is a mental wreck. However, Cormier also wanted to convey the message that even in the darkest situations there is always hope for people who are sorry for what they have done wrong.



Key Terms

1. **Noble:** adjective - having or showing good personal qualities
2. **Duplicitous:** adjective - to have two sides to you, normally for evil purposes
3. **Traumatise:** verb - to go through a terrible event and not truly recover
4. **Innocent:** adjective - to be totally guilt free or not understand the evil things in society
5. **Regretful:** adjective - to be remorseful over the bad things you have done in your past



Major Characters

- Francis Cassavant** – A young boy who has just returned from fighting for the USA in WWII. He has significant injuries to his face and hiding his true identity in his hometown of Frenchtown
- Larry La Salle** – A youth worker with a mysterious past. He is loved by the teenagers of the town and turns Francis from an unassuming child to a confident youngster.
- Nicole Renard** – Francis' love interest. She moves into town and Francis becomes obsessed with her. He becomes close and eventually they start dating.
- Arthur Rivier** – An older soldier who takes Francis under his wing. One of the few people who knows who Francis is.

CONTEXT: The attack on Pearl Harbour was a surprise military strike by the Imperial Japanese Navy Air Service upon the United States against the naval base at Pearl Harbour in Honolulu, Territory of Hawaii, just before 08:00, on Sunday morning, December 7, 1941. This incident stopped the USA's isolationist attitude and brought them in on the side of the Allies (Britain, France etc) in World War 2.



Y9 English 3.1

Blood Brothers – Willy Russell

Context and literary tradition
Teenager became a properly recognised age group. It was widely accepted that young people had their own culture (music, fashion and hobbies) and ways of behaving, which made them different to adults and children.
Families were expected to have a 'nuclear' structure- a mother, a father and their children. Single-parent families like Mrs Johnstone were less common and were frowned upon by many.
There was a large gap between working and middle class in Britain, even before the industrial decline. The Johnstones and Lyonses are class stereotypes. A lot of working-class people struggled financially, even if they were in work or on the dole. The middle-class were largely unaffected by the industrial decline, as they had jobs like teaching or accountancy. There was also a class divide in education, whether you went to a public or private schools often decided your job in the future.
Tragic Conventions: Blood Brothers is a typical tragedy. The first part builds up the turning point (Mrs Johnstone giving up Edward and keeping Mickey), and the second part deals with the consequences of this, which leads to the main character's downfall.
Liverpool depended heavily on traditional industries, so it was badly hit by the industrial decline in the late twentieth century. The city's working-class areas were very poor and things went from bad to worse.
A prologue is an opening to a story that establishes the setting and gives background details. It gives clues to what is going to happen in the main story.
Marilyn Monroe was a famous Hollywood film actress in the 1950s. She was known for being glamorous, however, she tragically died young.
The play is a musical. Willy Russell uses songs to either reveal a character's thoughts and feelings (like a soliloquy) or to move the plot along. Songs can also highlight key motifs and themes.

Key characters	
Mrs Johnstone	Mickey, Edward and Sammy's mother. She gives up Edward so he'll have a better life.
Mrs Lyons	A middle-class woman who longs for a child. She manipulates Mrs Johnstone into giving Edward to her.
Mickey Johnstone	The twin Mrs Johnstone keeps. He's a friendly child but ends up unemployed and in trouble with the law.
Edward Lyons	The twin Mrs Lyons takes. He's well- educated and grows up to be a successful local councillor.
Linda	Mickey and Edward's friend. Both boys fall in love with her. She marries Mickey.
Sammy	Mickey's older brother. He's always in trouble as a child and ends up as a criminal.
Mr Lyons	A wealthy businessman who spends more time at work than with his family. He makes Mickey redundant.
Narrator	Helps to tell the story. He also plays several minor characters throughout the play.

- Key terms**
- 1) Tragedy
 - 2) Cyclical
 - 3) Stigmatised
 - 4) Prejudice
 - 5) Ominous

Quotes to consider			
'But y'know the devil's got your number, Y'know he's gonna find y', Y'know he's right behind y' (Narrator)	"No. I took him. But I never made him mine. Does he know? Have you told..." (Mrs Lyons)	I didn't sort anythin' out Linda. Not a job, not a house, nothin'. It used to be just sweets an' ciggies he gave me, because I had none of me own. Now it's a job and a house. I'm not stupid, Linda. You sorted it out. You an' Councilor Eddie Lyons." (Mickey)	And do we blame superstition for what came to pass? Or could it be what we, the English, have come to know as class?" (Narrator)

Martyn Pig



Unreliable narrator:

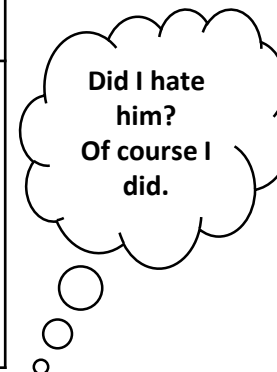
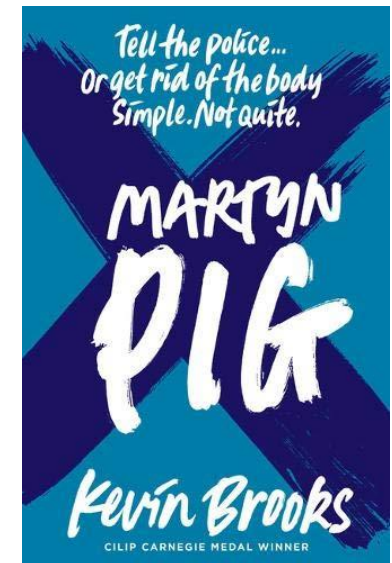
The entire story is told through the eyes of Martyn so we only see or hear his opinions and viewpoint. This can lead to us having an unreliable version of the story.

It also allows us to be shocked and surprised by the actions of characters as, again, we only experience each character from one single perspective.

Characters and key quotations

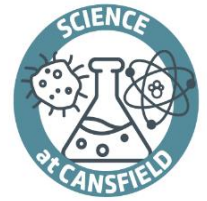
Martyn	'Martyn Pig. Martyn with a Y, Pig with an I and one G. Martyn Pig...Why? Why me? Why couldn't I have a normal name? Keith Watson, Darren Jones – something like that.'
Billy	Martyn's dad: 'He looked like what he was: a drunk. Fat little belly, florid skin, yellowed eyes, sagging cheeks and a big fat neck.'
Aunty Jean	Billy's sister: 'Furious is the first word that comes to mind. Mad, ugly and furious. An angular woman, cold and hard, with crispy blue hair and a face that makes you shudder. I don't know what colour her eyes are, but they look as if they never close. They have about as much warmth as two depthless pools. Her mouth is thin and pillar-box red, like something drawn by a disturbed child. And she walks faster than most people run. She moves like a huntress, quick and quiet, homing in on her pray. I used to have nightmares about her. I still do.'
Alex	Martyn's best friend: 'Her eyes shone like marbles, clear and round and perfect' 'Even through the fluted glass in the front door her face was beautiful. Beautiful in distortion, like an angel in a hall of mirrors.' 'I watched her from the corner of my eye. Her face was a mask.'
Dean	Alex's boyfriend: 'Dean, idiotically winked at me.' 'When she smiled at Dean I could tell she didn't really mean it.' 'He curled his lip, trying to look hard. It didn't work. He wouldn't look hard I he was dipped in concrete. His ill-fitting black leather jacket and black leather trousers looked as if they belonged to someone else. The skin of his face was loose and shineless, pale and puffy from long hours gawping at a computer screen, like a lump of raw dough. Doughboy.'

Fourteen-year-old Martyn Pig is faced with some difficult choices in the aftermath of his brutal father's accidental death.



Key Terms

1. Unreliable narrator
2. Deception
3. Morality
4. Legality
5. Isolation



Y9 Science I.1

Method	How it works
Selective breeding	Select male and female parents with desired characteristics, breed them, select the best offspring and breed again, repeat.
Cloning	Cells are replicated to produce genetically identical cells.
Genetic modification	Inserting the gene for a desired characteristic into another organism during development.

Extinction – when no more of a species is alive.

Causes – climate change, habitat destruction, new diseases, new predators, catastrophic event.

Biodiversity – number of all living organisms in a habitat/environment. Can be preserved by: protecting habitats, conservation programmes, captive breeding programmes.

Genetics

Allele – a different version of the same gene. Can be dominant (only one copy needs to be inherited and is always expressed) or, recessive (two copies must be inherited for the characteristic to be expressed).

A **Punnett square** is used to show the **probability** of which alleles are inherited.

Some diseases can be inherited such as, **cystic fibrosis** (recessive) and **polydactyly** (dominant).

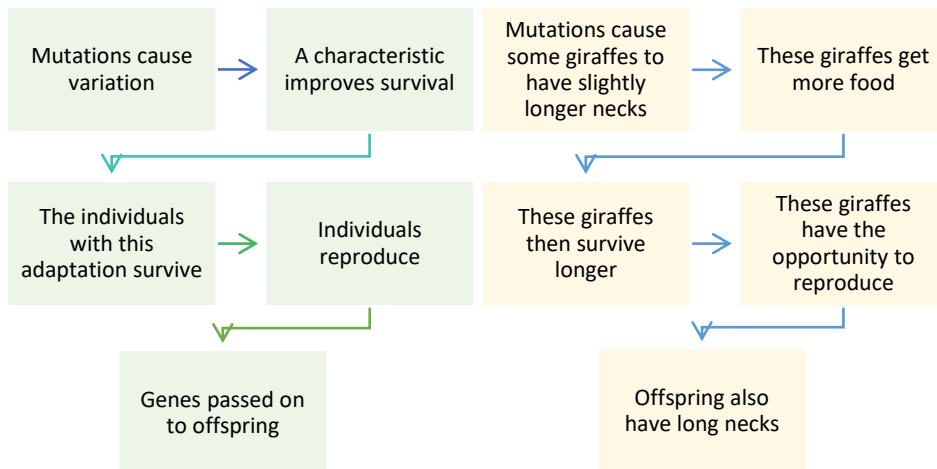
Mother	Father	
		B
b	Bb	Bb
b	Bb	Bb

Variation	
Species	Group of similar individuals that breed to produce fertile offspring.
Variation	Differences between individuals. Improves survival of the species.
Genetic variation	Caused by inherited genes e.g. eye colour, blood group.
Environmental variation	Caused by the environment e.g. scars, piercings.
Genetic + environmental variation	Caused by a combination of genes and environment e.g. height, body mass.
Continuous data	Can take any value within a range (e.g. height). Represented as a line/ scatter graph.
Discontinuous data	Either have the characteristic or not (e.g. blue eyes). Represented as a bar chart.

Fossils

- Hard body parts (e.g. bones & shells) are replaced by minerals.
- Parts haven't decayed due to conditions (e.g. preserved in amber).
- Traces of organisms (e.g. footprints, burrows) are covered by sediment which becomes rock.

Darwin's theory of evolution by Natural selection:



Reasons why Darwin's theory was initially not accepted:

- People believed **God created all life**.
- **Lack of evidence** (not no evidence).
- **DNA** had not been discovered.

Key Terms

1. Allele
2. Biodiversity
3. Cloning
4. Evolution
5. Variation

Y9 Science 1.2



Drugs – Key definitions

Drug; chemical substance that affects the way your body works.

Medicinal drug; drug that has a medical benefit to your health.

Recreational drug; drug that is taken for enjoyment.

Addiction; a need to keep taking a drug to feel normal.

Withdrawal symptoms; unpleasant symptoms a person with a drug addiction suffers from when they stop taking the drug.

Alcohol

Alcohol contains the drug **ethanol**. When you drink alcohol, ethanol is absorbed into your **bloodstream**. It then travels to the brain, where it affects your **nervous system**.

Alcohol is called a **depressant** because it slows down your reactions.

Smoking

Cigarette smoke contains different chemicals that are harmful to health:

Carbon monoxide: A poisonous gas that binds to red blood cells stopping them from carrying oxygen.

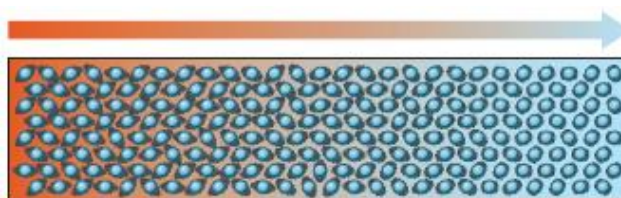
Tar: A carcinogen (chemical that causes cancer)

Nicotine: An addictive drug that affects the central nervous system.

Conduction

Conduction is the transfer of thermal energy by the vibration of particles. As the particles collide they transfer **thermal energy**. Conduction happens effectively in solids as the particles in a solid are close together.

Metals are good thermal conductors because they contain particles called **electrons** that are free to move and transfer energy. In conduction the thermal energy is transferred from an area which has a high thermal store, to an area where there is a low thermal store i.e high to low temperature.



Substances that are poor thermal conductors are called **insulators**.

Radiation

Radiation is a method of transferring energy without the need for particles. An example is thermal energy transferred from the Sun to planet Earth. This type of radiation is known as **infrared radiation**. The hotter an object the more infrared it will emit (give out). Darker, matt surfaces absorb more infrared radiation than light, shiny surfaces.



Convection

Convection is the transfer of thermal energy in a liquid or gas. As particles near the heat source are heated they spread out and the liquid or gas in this area becomes less dense. This causes the particles to rise. Cooler particles will take their place creating a flow of particles. This is known as **convection current**.



Key Terms

1. Drug
2. Depressant
3. Addiction
4. Conduction
5. Convection

Y9 Science 2.1



Reactions: Metals + acids

General equation: Metal + Acid \rightarrow Salt + hydrogen gas
 Example (words): Lead + Hydrochloric acid \rightarrow Lead chloride + Hydrogen
 Observation (What you see): Bubbles / Fizzing

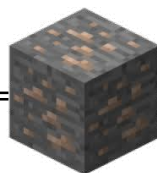
Reactions: Metals + Oxygen

General equation: Metal + Oxygen \rightarrow Metal oxide
 Example (words): Calcium + Oxygen \rightarrow Calcium Oxide
 Example (symbol): $2\text{Ca}_{(s)} + \text{O}_{2(g)} \rightarrow 2\text{CaO}_{(s)}$
 Observation (What you see): Metals with oxide layers can be dull not shiny and when reacting with oxygen they can glow bright and give off heat, e.g. Magnesium burning



Reactions: Metals + Water

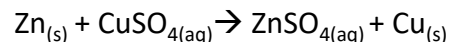
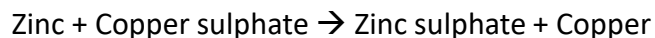
General equation: Metal + Water \rightarrow Metal hydroxide + hydrogen gas
 Example (words): Sodium + Water \rightarrow Sodium Hydroxide + Hydrogen
 Example (symbol): $2\text{Na}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow 2\text{NaOH}_{(aq)} + \text{H}_{2(g)}$
 Observation (What you see): Bubbles / Fizzing



Displacement reactions

Explanation:
 Using the **reactivity series** a more reactive metal will **displace** a less reactive metals from their compounds.

Example (words) / (symbol):



Observation (What you see): Iron metal forming

A reaction with a less reactive metal will not work.

Example: Thermite reaction mixes 2 powders and heating them strongly. It is a very exothermic reaction.

Reactivity series

REACTIVE
 Potassium
 Sodium
 Lithium
 Calcium
 Magnesium
 Aluminium
Carbon
 Zinc
 Iron
 Lead
Hydrogen
 Copper
 Silver
 Gold
UNREACTIVE



States of matter
 (s) = A solid
 (l) = A liquid
 (g) = A gas
 (aq) = Aqueous
 (dissolved in water)

When metals react they do so differently. The nearer the top of the reactivity series the more reactive they are.

Pretty / Jewellery = Bottom
 Old fashioned / traditional = Middle
 -ium = Top

Key Terms

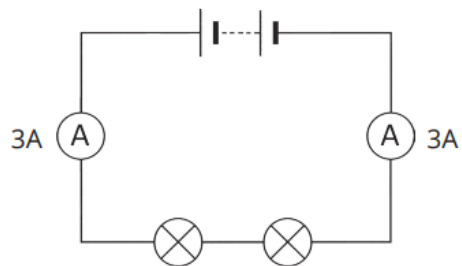
1. Displacement
2. Metal
3. Reactive
4. Reactivity series
5. State symbol

Y9 Science 2.2

Potential difference	The amount of energy provided by the battery to a moving charge
Current	The flow of electric charge
Independent variable	The variable you change in an investigation to see how it affects the dependent variable
Dependent variable	The variable you measure or observe
Control variable	A variable that could affect the dependent variable, so must be kept the same.

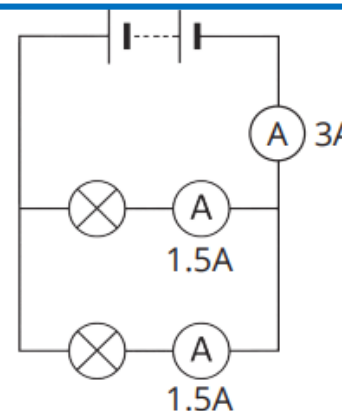
Series circuit

In a series circuit the components are connected end to end in a loop. If one bulb breaks, none of the bulbs will be lit as the circuit is not complete. The current is the same everywhere in a series circuit. The more cells or batteries you add, the greater the current.



Parallel circuit

In a parallel circuit, the components are connected on separate branches. This gives the current several paths to flow down. If one bulb stops working the other bulbs will remain lit. The current is split between the branches in a parallel circuit.



Resistance

Resistance is a measure of how difficult it is for the current to flow around a circuit.

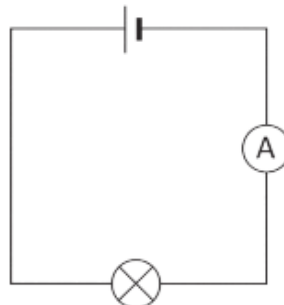
The higher the resistance, the less current will flow. The lower the resistance, the more current will flow around the circuit.

Resistance is measured in ohms (Ω). Resistance can be calculated using the equation:

$$\text{Resistance } (\Omega) = \text{potential difference (V)} \div \text{current (A)}$$

Current

Current is the flow of electrical charge around a circuit. The faster the flow of charge, the higher the current. Current is measured in amps (A) using an ammeter. An ammeter is connected in series with the component.



Key Terms

1. Potential difference
2. Current
3. Resistance
4. Series
5. Parallel

Y9 Science 3.1

Work done

Work is **energy** that is **transferred** to an object. The unit for work is the **Joule (J)**.

You can calculate work done using the equation:

$$\text{Work done} = \text{force} \times \text{distance}$$

Simple machines such as **levers** *increase distance* so *less force* is needed for the same quantity of **work done**.



Spring extension

Elastic materials, and objects such as springs, change shape when a force is exerted on them:

- Stretching happens when the material or object is pulled.
- Compression happens when the material or object is squashed.
- A change in shape like this is called deformation. In general, the greater the force exerted, the greater the amount of deformation.

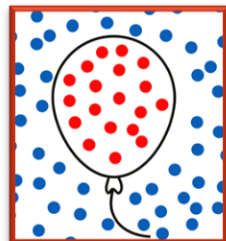


Exceeded limit of proportionality (LOP) Within limit of proportionality

An elastic object stretched beyond the LOP does not return to its original shape/size

Key Terms

1. Work done
2. Friction
3. Pressure
4. Newtons
5. Meters squared (m²)



Gas pressure

$$\text{Pressure (N/m}^2\text{)} = \frac{\text{Force (N)}}{\text{Area (m}^2\text{)}}$$

- A gas exerts pressure on the walls of its container because the particles collide with the walls. The pressure is exerted in all directions.
- Air exerts pressure on our body all the time. This is called **atmospheric pressure**.
- As you go deeper into a fluid, the pressure increases. To calculate fluid pressure you need to know the force and the area.

Friction and Drag

Friction and drag are two types of **contact forces**.

Friction acts between two solid objects that are in contact with each other and sliding across one another. The **smoother** the surface, the **smaller** the friction force.

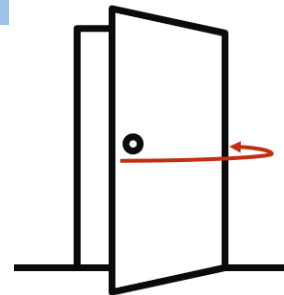


Water resistance

Air resistance

Drag

Calculating moments



The turning effect of a force is known as a **moment**.

$$\text{Moment} = \text{Force (N)} \times \text{distance from the pivot (m)}$$

So, the unit of moment is **newton metres (Nm)**.

Y9 Science 3.2

TOPIC: Atoms, elements & compounds

The **Periodic Table** is made up of elements.

Elements are substances that are made up of only one type of **atom**.

Compounds are pure substances which are made up of 2 or more different elements chemically combined together.

The periodic table consists of metals and non-metals. Elements are different due to their properties – these describe what an element is like.

Properties of metals:

- Shiny and strong, good conductors of heat and electricity
- Malleable (they bend without breaking)
- Sonorous (make a sound when hit)
- High density (they feel heavy for their size)
- Solid at room temperature (except mercury, which is a liquid)

Some metals react with oxygen to produce a metal oxide. The word equation is:



The metal oxide forms a layer on the outside of metal and makes the metal appear dull. This reaction is called **oxidation** as oxygen has been added to form a compound.

Some metals react with water to produce a metal hydroxide and hydrogen. The word equation is:

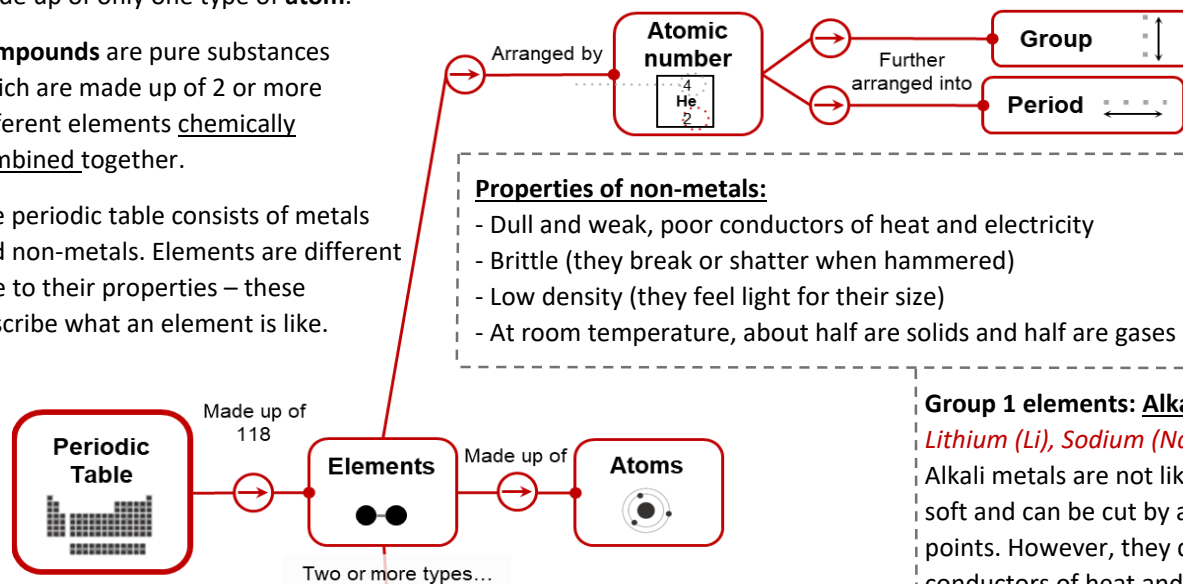


Group 1 metal hydroxides are soluble. Transition metal hydroxides are insoluble.

The gas test for hydrogen is a lit splint and the result is a squeaky pop.

Properties of non-metals:

- Dull and weak, poor conductors of heat and electricity
- Brittle (they break or shatter when hammered)
- Low density (they feel light for their size)
- At room temperature, about half are solids and half are gases



Group 1 elements: **Alkali metals**

Lithium (Li), Sodium (Na), Potassium (K), Rubidium (Rb), Caesium (Cs), Francium (Fr).

Alkali metals are not like the typical, transition metals, like iron or copper. They are soft and can be cut by a knife. They have a low density and low melting and boiling points. However, they do share a few properties with typical metals: they are good conductors of heat and electricity and are shiny (if you cut into them).

Group 7 elements: **Halogens**

Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Astatine (At).

The halogens share similar properties to each other and there are trends as you go down the group. For example, the reactivity decreases as you go down the group. They are non-metals and so do not conduct electricity, they are brittle and crumbly when solid, they are toxic and smelly and are found mainly as compounds.

Group 0 elements: **Noble gases**

Helium (He), Neon (Ne), Argon (Ar), Krypton (Kr), Xenon (Xe), Radon (Rn).

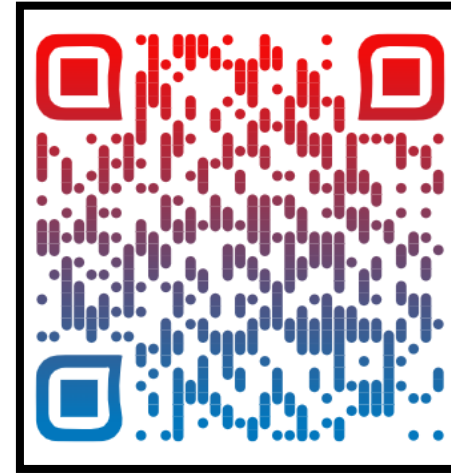
All the elements in Group 0 are non-metals. They are colourless, odourless and tasteless gases. They are monatomic (molecules with just one atom) and very unreactive (inert).

Key Words for this Half Term

1. Atom
2. Element
3. Compound
4. The Periodic Table
5. Oxidation

Y9 Art 1.1 & 1.2

Ethnographic Art – Ethiopia



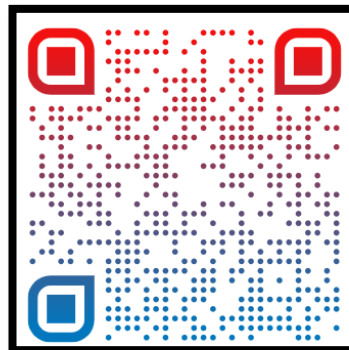
The Mursi is one of the most aesthetically captivating Ethiopian tribes. When they turn 20 their wives wear clay or wooden plates embedded in their lips and ears: the bigger the plate, the greater the likelihood that they will marry as these accessories are a form of seduction. Contrary to popular belief, Mursi women do not wear the plates all the time, as they make it uncomfortable for them to eat and talk. However they always wear wooden earrings, many bracelets, stylish haircut, scarification and colourful fabrics that make them look incredibly striking.

Men paint their bodies with natural pigments extracted from rocks, minerals and cow dung, which protects the skin from sun and thorns in addition it serves as both a dramatic way to attract their future wives and to command respect from their opponents in festive battles as a demonstration of their courage and aggressive warrior spirit. Scarification — permanent modifications made by scratching, etching, burning, branding or cutting designs into the skin — across the entire body are also seen as hallmarks of strength.

Watch and learn: Natural Fashions of the Omo Valley, Ethiopia



Watch and Learn: Influential African Painters You Need To Know Today.



Watch and Learn: The Colour and Culture of Ethiopia.

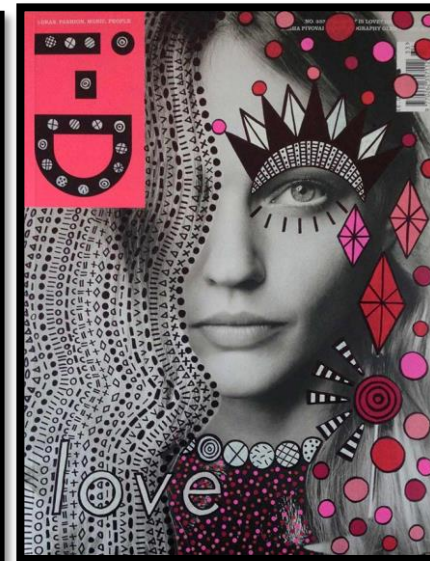
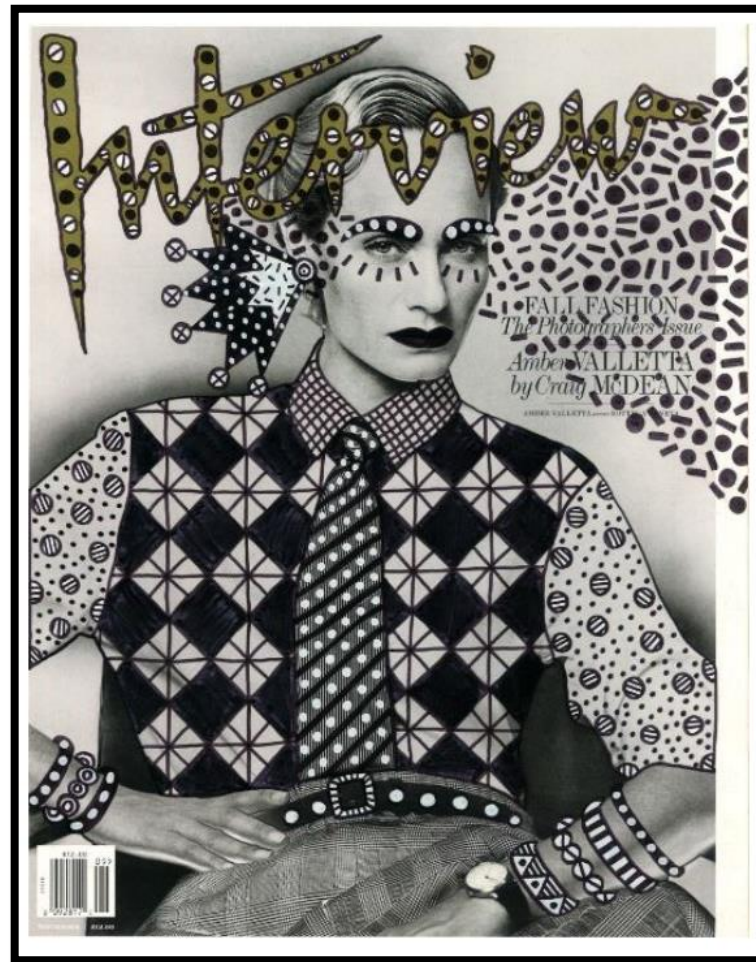
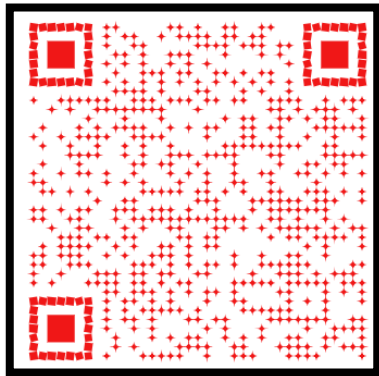
Key Words for this Half Term

- 1 Ethnographic.
- 2 Tribal.
- 3 Pattern.
- 4 Construct.
- 5 Organic/Floral.

Y9 Art 2.1 & 2.2



Read and discover:
The art of drawing on photographs.

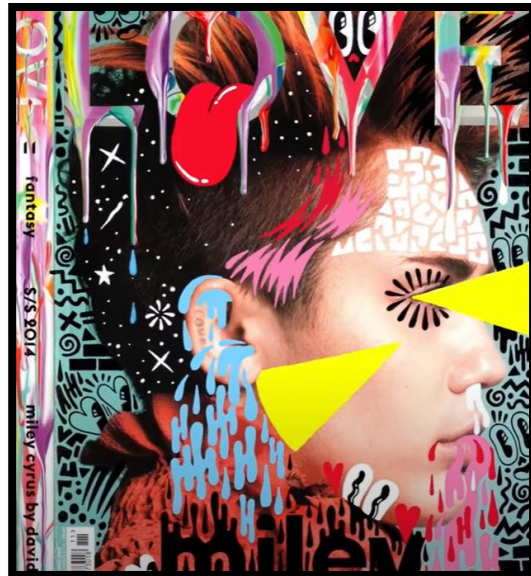


Watch and discover : The graphic work of Ana Strumpf.

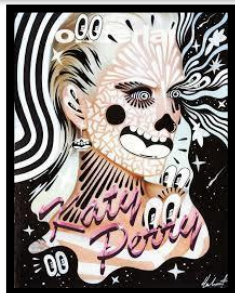


Key Terms

1. Expressive.
2. Combinations.
3. Identity.
4. Graphic.
5. meaning.



Watch and discover: The graphic work of Hattie Stewart



Y9 Art 3.1 & 3.2

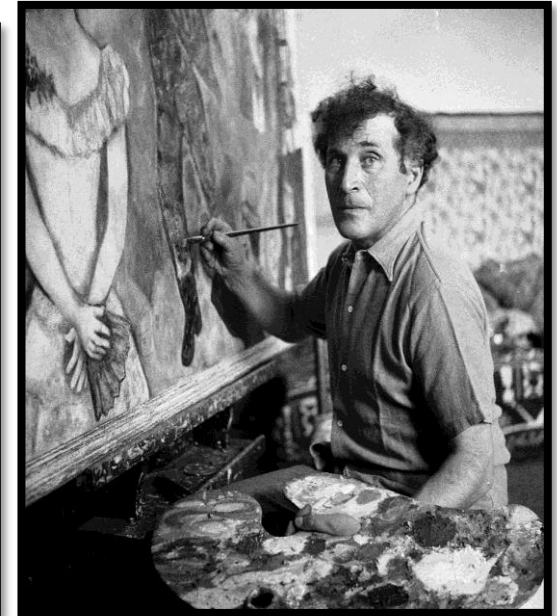
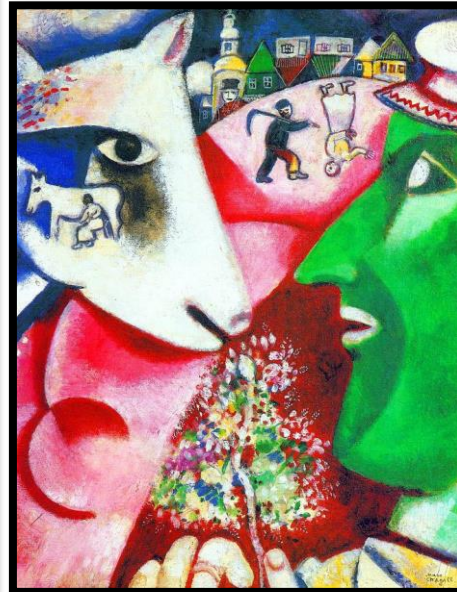


Marc Chagall, The Green Donkey While living in Paris between 1910 and 1914, Chagall made many works based on **nostalgic** memories of his Russian homeland. The **naïve style** and curious subject of this painting reflect the artist's **preoccupation** with **folk** traditions, particularly those of his Jewish **heritage**. At one time the painting was known as 'Village Scene', the colouring and strange **arrangement** of figures **evoke** a **fantastical** scene. While this may relate to a folktale, no specific **narrative** for the green donkey has been identified.

Task: Read the text about the **Green Donkey** and make sure you understand the meaning of the words in **RED**. Now draw this image to practice Chagall's arrangement of images, but switch the main colours (green, blue, yellow and red) within the picture. So, the background could be red and the donkey yellow! It's your creative decision!



Watch the above film about the famous artist and storyteller Marc Chagall.



**Baba Yaga & Vasilisa the Beautiful:
Confronting the Unknown in Russian Folktales**



Watch this film about this famous Russian folktale.



Key Terms

1. Narrative.
2. Nostalgic.
3. Arrangement.
4. Fantastical.
5. Folktale.

Y9 Food and Nutrition 1.1

Food Safety!

- ✓ Use the correct coloured chopping boards.
- ✓ Always use equipment safely and correctly.
- ✓ Ensure all food is cooked fully and to above 75°C.
- ✓ Store raw and cooked foods separately.
- ✓ Do not allow cross contamination to take place.

PREVENT CROSS CONTAMINATION
Use the correct colour coded cutting boards & knives at all times

RAW MEAT
RAW FISH
COOKED MEATS
SALADS & FRUITS
VEGETABLES
DAIRY PRODUCTS
ALLERGENS

Alliance
FOR ALL YOUR CATERING & CHEF SUPPLIES NEEDS
www.allianceprofs.co.uk or call 0844 409 4300

**Key abbreviations:
Weights and Measurements**

L	Litres	
g	Grams	
ml	millilitres	1000ml=1 litre
Kg	kilograms	1000g
Tbsp	tablespoons	15ml
Tsp	teaspoon	5ml
1pt	1 pint	568ml



Personal Safety in the kitchen!

- ✓ Long hair must be tied back neatly.
- ✓ No jewellery to be worn.
- ✓ Aprons must be worn.
- ✓ No nail polish or false nails.
- ✓ Hands must be washed with antibacterial soap and hot water.

Special Diets

Lactose intolerant

Lactose – sugar in milk. Sufferers are intolerant to this. (causes adverse effects). Must substitute milk for alternatives (i.e. soya, almond) & dairy products



Celiac

Gluten (in wheat, barley, rye) which produces bread, biscuit, cake, pasta, sauces. Substitute– coconut, rice, corn turn into flour. Check label



Nut allergy

Fatal reactions if nuts are eaten so must be careful. Adapt recipes i.e. for cake & biscuit. Labels MUST state if they contain nuts.



Diabetic

Glucose isn't used up by body for energy so it stays in the body. Regular meals, include carbohydrates, cut down the 3 S's



Allergens. 14 common allergens are:

1. Gluten
wheat, rye, oats
2. Crustaceans:
prawns, crabs
3. Eggs
4. Fish
5. Peanuts
6. Soybeans
7. Milk (lactose)
8. Mustard

9. Nuts;
almonds, hazelnuts, walnuts
10. Celery
11. Sesame,
12. Sulphur dioxide
used as a preservative
13. Lupin,
can be a flour
14. Molluscs
(mussels, oysters, squid)



What does EHO stand for in food?

Anywhere that serves food needs to comply with food safety law. An Environmental Health Officer (EHO) inspection will determine whether you're doing this, and award you accordingly with a hygiene score.

WHAT GOES INTO A FOOD HYGIENE RATING?

<p>Hygienic Food Handling</p> <ul style="list-style-type: none"> - The preparation & cooking of food - Reheating, cooling & storing of food 	<p>Physical Condition of the Premises & Facilities</p> <ul style="list-style-type: none"> - Appropriate layout, lighting & ventilation - High standards of cleanliness & pest control 	<p>Food Safety Management</p> <ul style="list-style-type: none"> - Evidence of precautions to keep food safe - HACCP systems & training records
--	--	--



food hygiene



Y9 Food and Nutrition 1.2

Cakes, Sponges and Biscuits

There are four different methods of making:



Rubbing-in



Creaming



Whisking



Melting

Four main types of pasta:

- Durum wheat
- Egg
- Semolina
- Whole wheat

Made from a dough of flour, water, olive oil and egg.



Fish Types



Oily fish are round in shape (e.g. herring, mackerel, salmon, tuna).



White fish are either round (e.g. cod, hake) or flat (e.g. plaice, sole, turbot).

- Fish provides as much **protein** as **meat**.
- The flesh of **white fish** contains **no fat**.
- The livers contain **vitamins A and D**.
- The flesh of **oily fish** contain **vitamins A and D**, and **omega-3** (unsaturated fatty acids, essential for health).
- **Small bones** in sardines, herring and tinned salmon provide **phosphorous** and **calcium**.
- **Oily fish** is **less digestible** than white fish, because it **contains fat**

Shell fish types

- **Crustaceans**, e.g. lobsters, crabs, crayfish, prawns, shrimps.
- **Molluscs** (bivalves), e.g. mussels, oysters, scallops.



Alternatives to meat

How to get protein without the meat

- Pulses. Pulses are an inexpensive protein choice, are high in fibre and a source of iron. ...
- Soya beans. ...
- Quinoa. ...
- Nuts. ...
- Seeds. ...
- Cereals and grains. ...
- Quorn™ ...
- Dairy.



Key Terms

1. Crustaceans
2. Molluscs
3. Quorn
4. Protein
5. Whisking



Y9 Food and Nutrition 2.1

How Does Cooking Affect Nutrition in Food?



Food provenance



Boiling

- Up to 50% of vitamin C is lost when boiling green vegetables in water.
- The vitamin B group is damaged and lost in heat.

Poaching

- The vitamin B group are damaged in heat and dissolve in water.

Roasting

- Roasting is a method of cooking in high temperatures and so this will destroy most of the group C vitamins and some of the group B vitamins.

Frying

- Using fat whilst frying increases the amount of vitamin A the body can absorb from some vegetables
- Cooking in fat will increase the calorie count of food e.g deep fat frying foods.

Stir-frying

- The small amount of fat used whilst stir-frying increases the amount of vitamin A the body can absorb from some vegetables.
- Some vitamin C and B are lost due to cooking in heat for a short amount of time.

Steaming

- Steaming is the best cooking method for keeping vitamin C in foods.
- Only up to 15% of vitamin C is lost as the foods do not come into contact with water.

Grilling

- Using this cooking method can result in losing up to 40% of group B vitamins.
- It is easy to overcook protein due to the high temperature used in grilling foods.

Baking

- Due to high temperatures in the oven, it is easy to overcook protein and damage the vitamin C and B group vitamins.

Vegetables are an important part of a balanced diet.



Root vegetables: starch or sugar (energy), some mineral salts and vitamins; cellulose; water.



Green vegetables: mineral salts, particularly calcium and iron, and vitamins, particularly vitamin C and carotene. The greener the leaf, the larger the quantity of vitamins.

Food provenance is where our food 'originates' from before it reaches the food industry; manufacturers, retailers (supermarkets), restaurants and our plates! It is important to know where food comes from so that we know it is;

- Safe to eat (free from disease)
- To know it is of high quality (red tractor scheme)
- Been stored/cooked correctly Animal and people welfare (Fairtrade/RSPCA assurance scheme) has been observed.

Food is sourced by 4 methods:

- **Caught** (fish/wild animals)
- **Reared** (sheep/cattle/pigs/poultry/duck)
- **Grown** (crops – fruit/veg/herbs/ cereals)
- **Foraged or gathered** (edible fungi/berries/seaweed)

Key Terms

1. Provenance
2. Originate
3. Vitamins
4. Minerals
5. Dissolve



Y9 Food and Nutrition 2.2

Macronutrients
 Macronutrients are needed in large amounts to make the body function properly.

Key Terms
 Protein Saturated
 Obesity Deficiency
 Disease

Protein:

These are made up of **essential amino-acids** and **non-essential amino-acids**. (Our bodies can make non-essential amino acids, but we need to get essential amino acids from our food).

Source

HBV – these have all the essential amino acids
 • Meat, fish, dairy, eggs (animal sources)
 • Tofu
 LBV – these are missing at least one essential amino acid
 • Seeds, nuts, beans, pulses, cereals, Quorn (plant sources)

Function

Growth
 Repair
 maintenance

Dietary Reference Values		Not enough	Too much
Age	Amount	Kwashiorkor Oedema Anaemia Slow growth in children	Excess protein can be converted to energy. If unused turns to fat.
1-3	15g		
4-6	20g		
7-10	28g		
11-14	42g		
15-18	55g		
19-50	55g		
50+	53g		

Complementary actions

Combining 2 or more LBV proteins helps get a balance of essential amino acids.
 e.g. beans on toast.

Fats, oils and lipids:

Too much fat is bad for you, but so is not enough.

Source

Saturated Fats
 (From Animal sources. They are also called unhealthy fats. They are generally solid at room temperature)
 Sausages / Bacon / Lard / Dairy

Unsaturated Fats
 (These are healthier. They are often liquid at room temperature.)
 Monounsaturated fats – olive oil / avocados
 Polyunsaturated fats – sunflower oil / seeds

Omega-3. These are Polyunsaturated and called "healthy" fats as your body needs them but can't make them. They are good for your heart.
 – Oily fish / Nuts / Seeds

Function

Energy
 Warmth
 Protection of organs
 Source of fat soluble vitamins
 Hormone production

Dietary Reference Values			Too much	Not enough
DRI	Men	Women	Obesity Heart disease Type 2 diabetes Stroke Cancer	Vitamin deficiency (fat soluble) Unprotected organs
Total fat	95g	70g		
Sat fat	30g	20g		

Carbohydrates

There are 2 kinds, simple or complex.

Source

Simple – these are sugars (monosaccharides, disaccharides)
 Cakes, jam, soft drinks
 Complex – these are starches (polysaccharides)
 Bread, potatoes

Function

Simple
 Quick burst of energy

Complex
 Longer lasting energy

Free sugars

These give you no nutritional benefit other than energy.

Dietary advice		Not enough	Too much
<ul style="list-style-type: none"> Reduce the amount of sugar that we eat, no more than 5% of our diet. Complex Carbohydrates should make up half of the energy we eat. Wholegrain cereals are a good source of fibre 	Can make blood sugar level drop	Excess is turned into fat	
	• hunger, • dizziness, • Tiredness • Lack of energy	• Can cause obesity • Too much sugar leads to dental problems	
	Our body will use protein for energy (leads to loss of muscle)	• Can lead to type 2 diabetes	

Y9 Food and Nutrition 3.1



Micronutrients

Needed in small amounts to help the body to function properly

Vitamin	Sources	Function
Vitamin A	Fish, eggs, oranges	Helps us to see well
Vitamin C	Oranges, tomatoes, vegetables	Helps to heal cuts, helps the immune system.
Vitamin D	Eggs, the sun	Helps our bones to grow
12 B Vitamins	Cereals, meat, fish	Helps to keep us healthy

Mineral	Sources	Function
Iron	Red meat, spinach, beans and lentils	Helps our red blood cells carry oxygen so that we are not anaemic.
Calcium	Milk, cheese and some cereals	Help us to have strong bones and teeth.

Foods Rich In Soluble Fibre:



Legumes – dried lentils, peas, beans



Fruits – especially berries, citrus, pears, apples (pectin), mushrooms (beta glucan)



Vegetables – particularly brussel sprouts, broccoli, potato, carrots, kumara



Grains – Oats



Others - guar gum, psyllium



Fibre helps to keep our digestive system healthy and helps to prevent constipation. A high fibre diet may help to reduce our risk of heart disease and stroke, type 2 diabetes and colorectal (bowel) cancer.

Water
Keeps us hydrated.

Micronutrients

Source
Drinks, fruit and vegetables, soup.



Function

- Normal physical and cognitive functions,
- Normal regulation of the body's temperature.
- Gets rid of waste substances in the body.

Deficiency

- Even mild dehydration can lead to headaches, irritability and loss of concentration.
- Groups at risk include children, old people and active people.

Key Terms

1. Iron
2. Calcium
3. Micronutrients
4. Vitamin
5. Mineral

Y9 Food and Nutrition 3.2

Deficiency diseases

•A person may be getting enough food to eat, but sometimes the food may not contain a particular nutrient. If this continues over a long period of time, the person may suffer from its deficiency.

•Deficiency of one or more nutrients can cause diseases or disorders in our body. Diseases that occur due to lack of nutrients over a long period are called deficiency diseases



Vitamin/Mineral	Deficiency disease/disorder	Symptoms
Vitamin A	Loss of vision	Poor vision, loss of vision in darkness (night), sometimes complete loss of vision
Vitamin B1	Beriberi	Weak muscles and very little energy to work
Vitamin C	Scurvy	Bleeding gums, wounds take longer time to heal
Vitamin D	Rickets	Bones become soft and bent
Calcium	Bone and tooth decay	Weak bones, tooth decay
Iodine	Goiter	Glands in the neck appear swollen, mental disability in children
Iron	Anaemia	Weakness

Some people make a choice not to eat certain foods. Reasons include:



➤ Religious beliefs



➤ Medical reasons



➤ Taste/texture of food



➤ Ethical beliefs

Religious/cultural reasons

Muslims



- Do not eat pork
- Meat must be halal
- No alcohol or shellfish

Jews



- No pork or shellfish
- No milk and meat together
- Meat must be kosher



Deficiency diseases

Key Terms

1. Deficiency
2. Diabetes
3. Anaemia
4. Intolerance
5. Religious

Name of medical condition	Food/drinks to avoid	Reason to avoid
Diabetes	Starchy food/ high in sugar	High in saturated fat. Can lead to heart disease, while excess sugars can cause unwanted weight gain and blood sugar spikes
Nut allergy	Nuts, blended cooking oil, margarine with nuts oils and often seeds	the immune system overreacts to proteins in these foods
Lactose intolerance	Milk, cheese, yogurt, processed food	cannot metabolize lactose properly; they lack lactase, an enzyme required in the digestive system to break down lactose . Patients typically experience bloating, flatulence, and diarrhoea
Gluten intolerance (coeliac)	Wheat, wholemeal, bran, pasta, rye, beer	Celiac disease is caused by a reaction to a gluten protein found in wheat, barley, rye, and sometimes oats. Symptoms include chronic diarrhoea , weight loss and fatigue

Useful Websites:



Synthetic fibres

Synthetic fibres are human-made fibres produced in a laboratory. They are made from either polymers that are derived from , or naturally sourced materials which undergo a chemical process.



Properties

Material are vital to consider when creating a textiles product, as the functionality of a fabric can make it a success or a failure. For example, a non-absorbent bath towel or a warm sundress would not be .

Natural fibres

Natural fibres are all derived from vegetation, cellulose-based materials, as well as products that are made from animals.

Natural fibre	Properties	Use
Cotton	Cool, cheap, strong, renewable, comfortable to wear, can withstand high temperatures	Denim jeans, shirts, lightweight clothing
Bamboo	Cheap, renewable, soft, absorbent, comfortable	Knitwear, socks
Linen	Renewable, strong, creases easily	Lightweight clothing
Wool	Soft, hardwearing, renewable	Knitwear, carpets
Silk	Expensive, drapes (hangs) well, renewable, good insulation properties (cool in summer, warm in winter)	Wedding dresses, ball gowns

Synthetic fibre	Properties	Use
Polyester	Cheap, durable, non-renewable	Shirts, school uniform
Acrylic	Warm and soft, non-renewable	Bedding, clothing
Viscose	Cheap, lightweight, versatile, renewable	Clothing, underwear
Acetate	Resistant to degradation, cheap, no elasticity, renewable	Shiny, reflective clothing and curtains
Elastane	Stretchy, retains shape well, cheap	Sportswear, leggings
Kevlar	Five times stronger than steel, uses chemical bonds and weave patterns for strength	Bulletproof vests, car tyres
Nomex	Heat resistant and lightweight	Firefighters' outfits

Blended fabrics

Fabrics can be blended to improve their properties.

Blended fabric	Properties	Use
Polycotton	Cheap blend of polyester and cotton, crease resistant	Shirts, bedding
Sympatex	Breathable and waterproof	Sportswear and outdoor equipment



Holly Level, and **Lucy Sparrow** are both Textile artists who create sculptures using felt.

Felt is a textile that is produced by matting, condensing, and pressing fibres together. Felt can be made of natural fibres such as wool or animal fur, or from synthetic fibres such as petroleum-based acrylic or acrylonitrile or wood pulp-based rayon.

Useful Websites:**Key Terms**

Fibre, synthetic fibre, natural fibre, needle, thread, stitch.

**Textiles and Fabrics****Function**

How a textile behaves is vital to the selection of fabric. Fashion fabrics are usually lighter weight and more decorative than furnishing fabrics. Other such as warmth, strength and may all need to be considered when selecting the right textile for a job.

Aesthetics

Textiles used for and clothing need to be attractive to look at to attract the consumer and keep up with fashion. Decoration can be , knitted, printed and on to create a particular style with thickness, and colour all contributing to the overall look.

Environmental issues

Textiles made from plant or animal fibres, such as wool or cotton, are and easily . Man-made textiles are made from oil-based materials, which are and harder to when put into . Some may wish to consider the environmental impact when buying products.

Social factors

Some textiles products may not be made in good working conditions. There may be issues with child labour, poor working conditions and the use of hazardous chemicals. Selecting textiles from a background can help ensure that the producers have maintained standards of fair wages and conditions for the employees making the product.

Cultural factors

When choosing fabrics, it is important to consider elements that might cause offence. The use of fur or animal skins may upset some people, while certain colours have different meanings around the world. The use of symbols and writing needs to be carefully checked for any mistranslation.

Availability

Many textiles are available in , which means they can be ordered in bulk to arrive at a manufacturer quickly. Stock textiles will generally be cheaper to buy than specialist materials. Other textiles may need specially decorating or weaving for a particular design, so would need to be ordered in advance from a specialist manufacturer.

Calculation of material costs

Fabric is sold by the metre. When making garments the length needed is worked out using the pattern pieces in their , which ensures there is minimum waste while still keeping with the direction of the . When using a bought pattern, the lengths of fabric for different sizes of the finished garment is written on the back of the envelope.

Example

When cutting material for a T-shirt with nap, more material is needed as the pattern must be cut for the front and back, either side by side or one above the other, rather than having patterns at right angles to each other.

If 4 m of fabric is needed for one dress with nap, how many metres would be needed for five dresses from material without a nap - provided that the pattern for non-nap material requires 25 per cent less fabric?

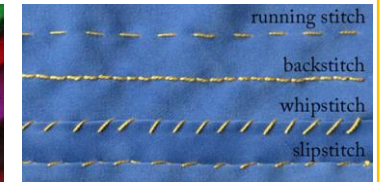
$$4 \times 5 = 20 \text{ m with nap}$$

$$25\% = 20 \times 0.25$$

$$= 5$$

$$\text{Without nap} = 20 - 5$$

$$= 15 \text{ m}$$

**Sources and origins**

The sources of materials can be either natural or synthetic. These sources are or into shape to create the fibres that make up fabrics.

Natural fibres

These are fibres that are obtained from natural sources such as plants and animals.

Plant-based

- Cotton** - harvested from cotton plants from China, USA and Pakistan, the fibres are cleaned, between wire brushes to lie in the same direction and spun into yarn
- Bamboo** - grown in China and Japan and is and crushed, softened and carded before being spun into yarn
- Lin** - made from the flax plant grown in Canada, France and Russia, and processed in the same way as bamboo

Animal-based

- Wool** - fleeces are sheared from animals such as sheep, alpaca and goats in UK, Australia and New Zealand; the short, are cleaned, carded and spun into a yarn
- Silk** - silkmoth cocoons are harvested in China and India, heated to undo the bonds and then spun into a filament fibre

Y9 DT

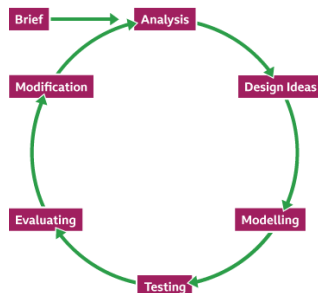
Useful Websites:



The iterative design process

Iterative design is a cycle of designing, prototyping and testing to develop an idea and achieve the best possible outcome.

- Each sketch or prototype in the process is called an **iteration**.
- Each cycle is used to inform and improve the next iteration.
- Failure is viewed as a positive step towards a better final product.



User Centred Design:

Designing a product that is intended to meet the needs of the user.

Inclusive Design:

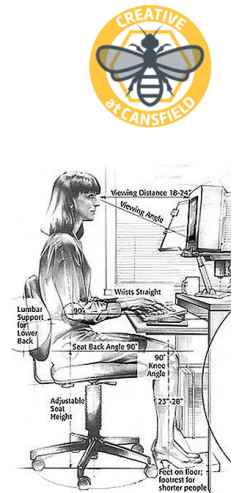
Designing a product that can be used and accessed by as many people as possible.

Ergonomics

Ergonomics (aka Human Factors) is about designing things to suit people such that chairs are comfortable to sit on, scissors easy to hold and worktops at the right height for example.

Ergonomics in its broadest sense includes also adapting things to the way we think, remember and organise things but in Design and Technology we are most concerned with designing to suit the size and shape of the human form. This is known as Physical Ergonomics

The collection and collation of measurements to do with our height, weight and reach, etc. is known as Anthropometrics and this is used to feed data into Ergonomics.



Key Terms.

Analysis - starting with a context or **design brief**, a designer may explore the design issue and generate ideas to solve the design problem

Design ideas - create a series of **freehand sketches** of design ideas that may help to solve the problem

Modelling - **modelling** ideas in card, paper, clay or other materials can create a cheap and quick way to do initial trials with a product

Testing - once a model has been made it can be tested in a variety of ways:

1. **destructive testing** - tests the product to its extreme to see what conditions it can tolerate before being destroyed to help decide on the best materials and construction methods to use

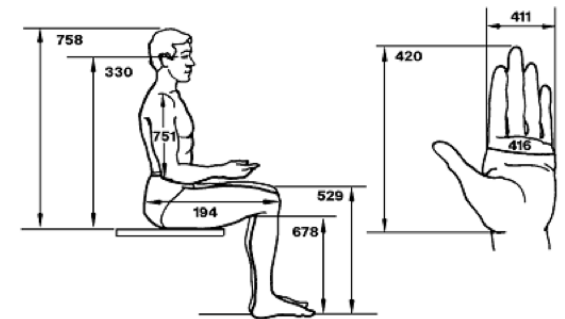
2. **non-destructive testing** - tests the model to identify areas of weakness without destroying it to test the function of the product and highlight any unexpected design flaws

3. **market testing** - tests the product with its **target market** to give feedback on performance and design

Evaluating - the data gathered from the testing of a model should be evaluated to highlight any modifications that need to be made at the next stage

Modification - from the evaluation, a designer can revisit the models and design ideas to make improvements

User - the person who buys the final product.



Anthropometrics

Anthropometrics is the practice of taking measurements of the human body. Anthropometric data can be used to work out the dimensions and load stresses of a product. Anthropometrics help designers collect useful data, e.g. head circumferences when designing a safety helmet. Anthropometry plays an important role in industrial design, clothing design, ergonomics and architecture

Y9 DT



Useful Websites:



Tinker Cad tutorial



How 3D printing works.



3D printing body parts.

What is 3D printing?

- 3D printers can create physical forms from a 3D digital model.
- 3D printing is an 'additive' method of manufacture.
- 3D printing is often described as a 'Disruptive Technology'
- A disruptive technology is one that displaces an established existing technology.
- It might be a ground-breaking product that creates a completely new industry or just a new way of doing something.

The advantages of 3D printing include:

- Quick manufacture of objects or parts
- Single step manufacture process
- Freedom to create complex designs
- Easy customisation and personalisation

Disadvantages include:

- Build size is often restricted to smaller items
- Relatively high cost
- Resolution can be poor on some machines
- Post-processing can be required
- Complex jobs can take a long time to build.

Brief History of 3D printing.

- 1980 saw Dr Kodoma attempt the first layer by layer 3D printing
- 1983 sees Charles Hull use UV light to harden resins and register the first successful stereolithography patent
- 1989 witnessed Scott Crump patent Fused Deposition Modelling
- 1999 brings medical advances with 3D printed organs
- 2008 unveils the first 3D printed car
- 2009 allows the FDM patent to be available to the public, triggering a surge in companies producing 3D printers
- 2013 and the first transplantable 3D printed kidney is created
- 2014 and NASA create the first 3D printed parts in space.

Which materials print?

Many materials can be 3D printed

- Concrete
- Metals (powdered)
- Chocolate and other foods
- Even living tissue

The most common materials used are polymers.

Filament based printers.

- FFF stands for Fused Filament Fabrication
- FFD stands for Fused Deposition Modelling

Other 3D printing methods

SLA printing (Stereolithography)

A laser traces the model into a 'bath' of liquid resin

- The resin solidifies creating the model as it is lifted out of the resin.

SLS stands for Selective Laser Sintering

- SLS involves a laser 'melting' powdered Nylon
- Some SLS printers can even print metal
- This is mainly used in industry and is not a desktop 3D printing method and is an expensive way to print.



Polymers

The polymers can be in different forms Most common is a roll or reel of filament Other forms are liquid resin and powder Some polymers are made from fossil fuels, in particular oil. Biopolymers, such as PLA (Polylactic acid), are plant based and are biodegradable.

Key Terms

CAD
CAM
Tinker CAD
Disruptive Technology
Polymers
Filament based printers
STL file
Filament printers



Post-processing software

The .stl file is post-processed through special software, which cuts the model into slices or layers

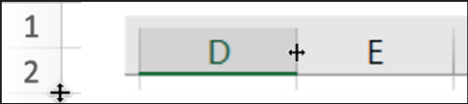
- This 'slicing' software also allows you to scale, rotate and position the model on the bed of the 3D printer exactly where it is required
- **G-code** is generated for each layer, which guides the print head to make the model
- The 3D printer prints one layer at a time.

CAD models need to be saved as a special file type which can be printed. This is known as an **.STL** file



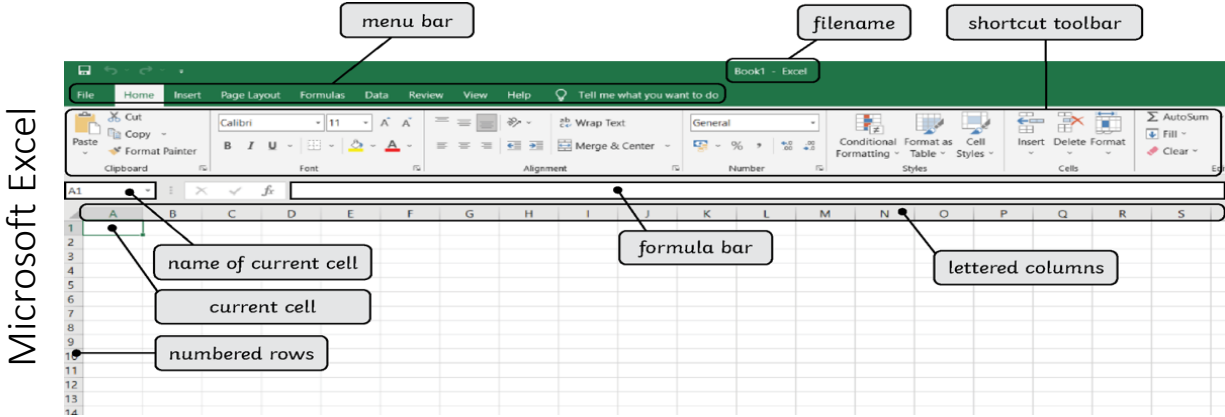
Y9 Computing I.1

Rows and columns can be resized by hovering the cursor between the column letters or row numbers. The cursor will change to a double line. Clicking and dragging will increase or decrease the size of the rows or columns.



A spreadsheet is a grid made up of separate boxes called **cells**. The cells are arranged in **rows** and **columns**. Each cell can be identified by the row letter and the column number, e.g. A1.

	A	B	C
1	A1		
2			
3			
4			
5			
6			
7			
8			
9			



Write **=SUM(** then click and drag to select the cells you want to add together. Sum from the list of commonly used functions.

The function in a cell will appear in the formula bar when the cell is clicked on.

	A	B	C	D	E
1	Gourmet Express				
2	Day	Breakfast	Lunch	Dinner	Total
3	Monday	40	35	78	=SUM(B3:D3)

To find the largest number in a list use the **=MAX(** (highlight the cells to compare). To find the smallest number in a list use the **=MIN(** (highlight the cells to compare)

Click and drag across the cells to choose the range of data to be shown as a chart. Click on Insert on the menu bar, and choose the chart type. Click on the arrow at the end of each chart type to see the different styles.

	A	B	C	D	E	F	G
1	Gourmet Express						
2	Day	Breakfast	Lunch	Dinner	Total	Price	Gross profit
3	Monday	40	35	78	153	£10.00	=E3*F3
4	Tuesday	35	23	56	114	£10.00	

Write **=** then click the cell which you wish to multiply together then write ***** before clicking the next number.

Key Terms	
Spreadsheet	A spreadsheet is a software application used to organise, analyse, and manipulate data, typically in tabular form.
Worksheet	The working document is also known as a worksheet
Cell	A single square within the spreadsheet is known as a cell.
Row	These run horizontally across the worksheet and are identified by a number.
Column	These run vertically down the worksheet and are identified by a letter





Y9 Computing 1.2

How pixels are drawn on a screen All digital images are output to the screen as pixels. This is because the screen itself is made up of loads of pixels; each pixel can be a particular colour from millions of possible colours. The digital image is drawn on the screen in the form of a grid; the computer will instruct each pixel on the screen to display a certain colour. Millions of coloured pixels create a digital image on the screen for you to view. Resolution The quality of a digital image is determined by the resolution. Resolution is a measure of how many pixels are used in a given area (e.g. 1 square inch). The resolution of a digital image can tell you how detailed the image is and whether it's a good quality image or not.

Bitmap graphics are made up of pixels. Each pixel is stored on the computer as a series of 1s and 0s. When you take a photo with your smart phone it stores the digital image as a bitmap.



Vector graphics do not have any pixels. Instead they are made up of lines and shapes. When a vector is enlarged the lines and shapes are redrawn; making them great for resizing.

Key Terms

Pixel	A pixel is the smallest unit of a digital image that represents a single point of colour.
Layers	The different levels on which you place objects.
Magic Wand Tool	The Magic Wand tool automatically selects an object or area of your image.
Canvas	A canvas is a heavy, durable fabric used as a surface for painting or drawing. It is typically made of cotton or linen and is stretched tightly over a wooden frame. Canvases provide an ideal surface for artists to create their artwork.
Marquee Tool	The marquee tool is a set of tools that allow you to quickly select parts of a digital graphic

Adobe Photoshop—This is an image editing software, which allows users to edit, crop, resize and correct colour on digital photos.

- Rectangular marquee tool**
Selects a rectangular area.
- Lasso tools**
Selects a shape or area.
- Crop tool**
Crops an image to a particular area or size.
- Spot healing brush**
Removes unwanted areas such as blemishes.
- Brush tool**
Freely draw using colours.
- Clone stamp tool**
Copies areas of an image
- Eraser tool**
Removing unwanted areas
- Gradient and paint bucket**
Fills large areas with colour or gradient
- Blur, smudge, sharpen tools**
- Dodge and burn tools**
Lightens and darkens areas.
- Magnifying tool**
Zooms in and out of document
- Text tool**
Adds text boxes

Layers—Show the order of items in a document.

KEYBOARD SHORTCUTS

- Ctrl + D = Deselect
- Ctrl + S = Save
- Ctrl + Z = Undo
- Ctrl + A = Select all
- Ctrl + T = Transform

Y9 Computing 2.1

What is social engineering?

Social engineering is a non-technical strategy cyber attackers use that relies heavily on human interaction and often involves tricking people into breaking standard security practices.

The success of social engineering techniques depends on attackers' ability to manipulate victims into performing certain actions or providing confidential information. Today, social engineering is recognized as one of the greatest security threats facing organizations. Social engineering differs from traditional hacking in the sense that social engineering attacks can be non-technical and don't necessarily involve the compromise or exploitation of software or systems. When successful, many social engineering attacks enable attackers to gain legitimate, authorized access to confidential information.

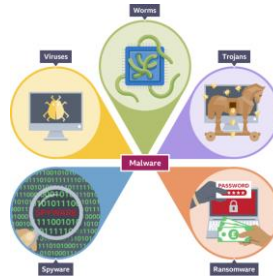
How to avoid Viruses and malware:

Here are some top tips to protect your devices from a malware attack:

- Don't download any software or apps from the web, unless you have **checked with an adult** that it's safe.
- Never click on an **email attachment**, unless **you know who it is from** and what they are sending.
- If you get a strange or unusual message from a friend, let them know that they might be the **victim of a malware attack**.
- It's wise to cover your webcam when you are not using it.
- There is a type of program called anti-virus software.
- It **checks** and **scans** your device regularly for malware and helps to **remove** any it finds.
- It's a good idea to use anti-virus software and run regular checks on your devices

Malware:

Malware is malicious software that is designed to hack a system. Malware can take many different forms



Malware threat	Description
Viruses	Programs embedded (hidden) within other files. They replicate themselves and become part of other programs. Viruses often cause damage by deleting or modifying data.
Worms	Programs similar to viruses except that they are not hidden within other files. Worms often spread through emails.
Trojans	Programs which pretend to be legitimate but in reality are malware. They are often disguised as email attachments. Trojans cannot spread by themselves - instead they deceive a user into installing the program.
Spyware	Programs that monitor user activities (such as websites visited, usernames and passwords used) and send the information back to a hacker.
Ransomware	Programs that attempt to blackmail a user into making a payment to a hacker. Some types of ransomware do little but try to scare users into paying, while others go further - they encrypt documents and will not decrypt them until a ransom is paid.

Other threats	Description
Phishing	Emails that try to trick users into giving away personal details. The phishing email pretends to be a genuine message and tries to deceive the user into following a link to a website that looks like the real company, for example, a bank. However, it is a fake website designed to catch data such as bank account numbers and security codes.
Brute force	Where a program is used to find a password by trying all possible combinations of characters until the correct one is obtained.
Denial of service (DOS)	Where a computer (or many computers) is used to prevent a server from performing its tasks. This is done by bombarding the server over and over again with requests. Eventually the server is tied up trying to handle all the DOS requests, making it very difficult for it to respond to legitimate requests.
Data interception and theft	Where data is intercepted during transmission. This is done using software called a packet sniffer, which examines data packets as they are sent around a network, or across the internet. The information gathered is sent back to a hacker.
Structured query language (SQL) injection	Where SQL code is entered as a data input. Many databases use SQL code to interrogate the data and maintain the structure. SQL code can be inputted as data, which can cause errors or unintended operations.
Poor network policy	Where a network does not have security rules in place for users to follow.
People	Where users do not adhere to network policy. People frequently ignore rules, or accidentally or deliberately break them. For example, many users choose easy to guess passwords, or send and receive personal emails which may contain viruses. This behaviour increases the chances of a network being compromised and its data being accessed by unauthorised users. This is sometimes called social engineering.



Y9 Computing 2.2



Symbol	Explanation
	Start or stop
	Decision
	Process
	Input or output

Pseudocode command words

- INPUT** – indicates a user will be inputting something
 - PRINT** – indicates that an output will appear on the screen
 - WHILE** – a loop (iteration that has a condition at the beginning)
 - FOR** – a counting loop (iteration)
 - REPEAT – UNTIL** – a loop (iteration) that has a condition at the end
 - IF – THEN – ELSE** – a decision (selection) in which a choice is made
- Use of **KEYBOARD** and **DISPLAY** are suitable for input and output.
- SEND** - Sends output to the screen.
- RECEIVE** - Reads input of specified type.
- Any instructions that occur inside a selection or iteration are usually indented.

Data types and Maths	
Data type	What they mean
String	This means any combination of keyboard characters (letters, numbers symbols)
Integer	This means any whole number. If the computer knows the data is an integer it can do maths with the data
Real/Float	This means any decimal (fractional) number
Character	This means any single character that you might find on a keyboard.
Boolean	This data type has just two values: True & False.

Key term	Definition
Python	A programming language which is quite close to English!
Programming	The process of writing computer programs.
Code	The instructions that a program uses.
Sequence	Parts of the code that run in order.
Selection	Selects a pathways through the code based on whether a condition is true
Iteration	Code is repeated (looped), either while something is true or for a number of times
Algorithm	A set of rules/instructions to be followed by a computer system
Variable	A value that will change whilst the program is executed. (e.g.. temperature, speed)
Function	A collection of code that works outside the main program. These are created to speed up programming. They can be called from a single line of code at any time.
Comparative/relational Operator	When comparing data, an operator is used to solve the equality such as <>, != or ==
Syntax	The punctuation/way that code has to be written so that the computer can understand it. Each programming language has its own syntax.
Data Type	This indicates how the data will be stored.

Relational Operators	How They Compare
= (or ==)	Is equal to
<> (or !=)	Is not equal to
<	Is less than
>	Is greater than
<=	Is less than or equal to
>=	Is greater than or equal to



Y9 Computing 3.1/3.2

Project Management:

Project management is about applying knowledge, skills, tools and techniques to various activities in order to meet the project requirements.

The project management process can be seen as making up five stages or processes.



Effective Planning:

Planning and organising are important skills. Effective planning means being able to use time, energy and resources to help you achieve your goals.

Benjamin Franklin, one of the Founding Fathers of the US, believed that the better the planning, the less likelihood of failure to achieve the intended outcome.



If you fail to plan, you are planning to fail.

— Benjamin Franklin, one of the Founding Fathers of the US

What is a design Brief?

A design brief is the statement a client gives to a designer outlining what they want their product to be like, eg 'Design a drinks bottle holder for use while riding a bicycle'. The designer could also produce a brief on behalf of the client, as the client might have a problem but not know how to proceed.

A design specification is a list of criteria your product needs to address. Using the brief as a starting point for research, a specification can be written when more facts are known. Information needs to be found through research to help produce early design solutions and improvements.

If the criteria are measurable, it makes it easier to later measure how effective the design ideas are, eg 'How much will the design cost to produce?' The specification should be constantly referred back to at the design stage to ensure the designer is taking into consideration the wants and needs of the client it is designed for

Design Specification:



Identifying problem and need:

Research before and after the design brief can identify any limitations to ideas and help with initial designs. Analysis of research and user feedback can lead to changes being made to the brief, such as a change in timescale or budget. The results of feedback, testing and product analysis should give the designer a good starting point to adapt, test, evaluate and improve their product.

Y9 Geography I.1

Key Words...

Development – A process that creates growth, progress, positive change socially, economically and environmentally.

LIC – Low Income Country.

NIC – Newly Industrialising Country.

HIC – High Income Country.

Global City – Cities that are well connected by the process of globalisation (e.g. trade, business, media, culture).

Megacity – Cities that have a population greater than 10 million people.

Urbanisation – Physical and human growth of cities.

Counter urbanisation – The movement of people and businesses from large cities to smaller towns and rural areas.

Re-urbanisation – People are choosing to move back to the city.

What is a Global City and a Megacity?

Mega-cities are cities that have a population greater than 10 million people. Global Cities interact with each other at a global scale – the UK has 13 Global Cities including London, Manchester and Cardiff. Through Globalisation cities can connect through migration, banking and finance, transport, business and media.



What are the reasons for Cardiff's growth?

1850-1920 – Urbanisation – The growth of the Coal Industry

- Rapid growth between 1850-1920 in search of jobs from the sale of coal from the docks – urbanisation
- Terraced housing used in inner urban areas to provide housing for dock workers

1930-1980 – Counter urbanisation – The Growth of the Suburbs

- People no longer had to live near the CBD due to better transport and more car ownership
- Housing was built further away from the inner urban zone causing the city to spread outwards (suburban sprawl)

1980-2018 – Re urbanisation – Urban Renewal

- New housing built on Brownfield Sites (old industrial site) in in the Inner Urban area of Cardiff.
- As Inner Urban areas become more attractive, more people move back to the city – reurbanisation.

What are the features of the urban zones?

Central Business District (CBD) - office blocks, banks, restaurants, large department stores, good access (roads / trams), expensive parking. Groups = young professionals

Inner City – old factories (early 1900's, terraced houses, high rise flats, cheap housing, limited space, near services. Groups = unemployed / ethnic minority groups / students

Inner Suburbs – semi-detached housing, houses with gardens, more space. Groups = working families

Outer Suburbs = detached houses, large gardens, bungalows. Groups = working families / retired and elderly

Rural-Urban Fringe – high cost housing, fields, farms, forest, greenbelt areas. Groups = wealthy families

What problems do Global Cities like Cardiff face?

Affordable Housing – Rising population has led to a housing shortage due to limited space, cost and lack of housing.

Transport – Rising car ownership and more commuters has led to increasing levels of congestion, parking issues and pollution.

Waste – Produce more than 290 million tonnes of waste every year creating shortage of landfill sites and pollution.

Y9 Geography 1.2

Key Terms...

LIC – Low Income Country

NIC – Newly Industrialising Country

Humanitarian Crisis – A group of people in a region, which involves high levels of mortality or malnutrition, the spread of disease and epidemics and health emergencies.

Emerging Middle Class – The growing number of people in developing countries who are well educated and reasonably well paid.

Informal Sector – Irregular jobs that is not taxed or monitored by any form of government (e.g. street vendor, waste collector).

Sustainable Community – Community designed to have minimum impact on the environment – renewable energy, public transport.

What is Somalia (LIC) like?

The Horn of Africa is a distinct region of the north west of the continent of Africa. It is a semi-arid country and the landscape includes mountains in the north, flat semi-desert plains in the interior and a subtropical region in the south. The climate in Somalia is predominantly desert. Somalia has irregular rainfall patterns with recurring droughts.

What are the challenges in Somalia?

Ongoing armed conflict, insecurity, lack of state protection, and recurring humanitarian crises exposed Somali civilians to serious abuse. There are an estimated 2.6 million internally displaced people (IDPs), many living unassisted and vulnerable to abuse this is due to terrorism and piracy.



What is Mumbai (NIC) like?

Mumbai is located on a peninsular on the Western coast of Maharashtra state in western India. A mega-city, there are 18.4 million people and it continues to grow. A Global City, the headquarters of a number of global financial institutions such as the Reserve Bank of India and Tata Group. Mumbai is a city of contrasts, being one of the richest cities in Asia but also home to some of the world's poorest people.

What problems does Mumbai face?

Transport: Mumbai is India's largest city with a population of 18.4 million people. With only 4 railway crossings onto the island creating a number of problems for 7.5 million commuters including overcrowding, poor rail safety and delayed trains.

Housing: Bhandi Bazaar is a mixed area of chawls and 1,250 shops. This area is overcrowded, there is no waste disposal system and limited water supply.

Why can Dharavi (slum in Mumbai) be seen as a Sustainable Community?

- People live in low-rise self built homes close to where they work so no need complex and expensive urban transport.
- The residents are hard working and most work in the informal sector (e.g. pottery, recycling)
- Ragpickers recycle 80% of Mumbai's waste.

Y9 Geography 2.1

Key Terms...

Fetch – The distance over which wind has blown to create waves on the sea.

Erosion - Wearing away of the landscape (e.g. rivers / coasts).

Weathering - The breaking down of rocks, soils, and minerals through contact with water, atmospheric gases, and biological organisms.

Transport – The movement of material through the landscape.

Deposition – Laying down of material in the landscape when the energy carrying the material reduces (e.g. rivers / coasts).

Longshore Drift – A process where beach material is moved along the coast by waves that approach the shore at an angle.

Swash – The flow of water up the beach as a wave breaks on the shore.

Backwash – The flow of water back into the sea after a wave has broken on a beach.

How do waves erode the landscape?

The size and energy of a wave is influenced by the 'fetch' (i.e. how far the wave has travelled) how long the wind has been blowing the strength of the wind. There are two types of waves:

Constructive Waves:

They are created in calm weather and are less powerful than destructive waves. They break on the shore and deposit material, building up beaches. They have a swash that is stronger than the backwash. They have a long wavelength, and are low in height.

Destructive Waves:

Created from strong waves when the wind is powerful and blowing for a long time. They occur when wave energy is high and the wave has travelled over a long fetch. They tend to erode the coast. They have a short wave length and are high and steep



How is material moved along the coastline?

- Solution – Minerals are dissolved in sea water and carried in solution (not visible)
- Suspension – Small particles are carried in the water without touching the sea bed
- Saltation – Sand-sized particles bounce along the river bed in the flow of the water
- Traction – Pebbles are rolled along the sea bed

How is material moved along the coastline?

- Solution – Minerals are dissolved in sea water and carried in solution (not visible)
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How are coastal areas being eroded?

- Hydraulic Action – Waves crash against cracks of the cliff forcing rocks apart
- Abrasion – Waves pick up rocks and rub them against the cliff causing the cliff to wear away
- Attrition – Pebbles hit against each other and break down into smaller, rounded particles
- Corrosion – Minerals are slowly dissolved in water

Depositional Landform: How are Spits formed?

1. Longshore drift moves material along the coastline through swash and backwash
2. Spits form when material is deposited as cliffs change direction
3. The spit grows and develops a hook if wind direction changes
4. Waves cannot get past a spit, creates a sheltered area called a salt marsh

Y9 Geography 2.2

Key Terms...

Shoreline Management Plan (SMP) – The plan that details how a local authority will manage each stretch of coastline in the UK

Cost/Benefit Analysis – Assessment of the cost of a defence with the value of the land and properties that it protects

Soft Engineering – Method of reducing floods by planting trees or allowing areas to flood naturally

Hard Engineering – Artificial structures to defend against flooding such as sea walls or concrete river embankments

Groyne – Type of coastal defence consisting of low walls built along the coast to trap sediments that is moved by longshore drift

Postglacial Rebound – Adjustment in the level of the Earth's crust. Crust was depressed by a mass of ice, as the ice melted the crust is rising to the original level

How can coasts be managed?

Managing the coastline is very expensive and it is the responsibility of the local councils to prepare a Shoreline Management Plan (SMP) for their section of the coast (i.e. Management Units). A cost/benefit analysis is completed to decide on the best strategy where they may consider a number of questions – How many people are threatened by erosion? What are the buildings worth? How much would it cost to replace roads or railways if damaged? Are there historic / natural features?

What are the management options for the Shoreline Management Plan (SMP)?

Option	Description	Comment
Do Nothing	Do nothing and allow gradual erosion	Suitable for land with lower value than cost of defences.
Hold the Line <i>(maintain shoreline)</i>	<u>Groynes</u> – reduce longshore drift allowing beach to build and reduce erosion	<u>Groynes</u> need to be maintained regularly and may affect areas further up the beach.
Retreat the Line <i>(move shoreline backwards)</i>	Punch a hole in existing coastal defences to allow the land to flood naturally.	Sand dunes / salt marshes natural barrier to flooding help absorb wave energy.
Advance the Line <i>(move shoreline forwards)</i>	Build new coastal defences further out to sea to prevent the sea eroding the coast	Requires high level of engineering and most expensive out of all options.

How can climate change affect UK coasts?

The Thames Gateway, east of London is one of the most vulnerable coastlines in the UK as it is at risk of 'storm surges' that push sea into the narrow funnel-like coastline between Essex and Kent. This coastline is also sinking 2mm per year due to postglacial rebound. As sea levels are rising 3mm per year due to climate change, the Thames Gateway is seeing sea levels rise by 5-6mm per year.

The Thames Flood Barrier protects London from tidal surges. However it is now thought the barrier is not large enough to protect London from future floods – flood defences need to protect London from floods 2.7m higher due to climate change.

How can climate change affect the Maldives?

Sea Walls – all islands remain vulnerable to flooding as sea walls are not large enough to withstand rising sea levels, need constant repair.

Drinking Water – Groundwater stores have been contaminated by salt water and are now undrinkable.

Tourism – Rising sea levels may destroy many prize beaches and ruin luxury resorts, which was seen during the 2004 tsunami, causing tourist numbers to decline and affecting the economy significantly.



Y9 Geography 3.1

Key Terms...

Desertification – Dry region receives less rainfall – soil is open to erosion and vegetation dies.

Sahel – semiarid region of western and north-central Africa, extending from Senegal eastward to Sudan.

Soil Erosion – Wearing away of the upper layer of soil (topsoil) by water, wind, and mass movement.

Overgrazing – a situation in which there are too many cows or other animals eating grass in an area, which damages the environment.

Climate Change – a change in global or regional climate patterns.

Infertile Soils – the result of a physical or chemical problem in the soil that inhibits or prevents the growth of plants.

What is Desertification?

Desertification is the process where fertile land becomes more like desert. Features of desertification include low rainfall levels as less moisture in the air, little vegetation cover as less moisture/nutrients in soils, dry and exposed soils as little vegetation cover. Areas at risk include the Sahel in Central Africa:

- The Sahel in central Africa has a long dry season of nine months and a short wet season of three months.
- Wet seasons have become unpredictable – much of the rainfall runs over the land failing to soak into the soil and recharge the soil moisture.



What are the causes of desertification?

Population growth - The population in some desert areas is increasing. In places where there are developments in mining and tourism, people are attracted by jobs. An increased population is putting greater pressure on the environment for resources such as wood and water.

Removal of wood – In LICs, people use wood for cooking. As the population in desert areas increases, there is a greater need for fuel wood. When the land is cleared of trees, the roots of the trees no longer hold the soil together so it is more vulnerable to soil erosion.

Overgrazing - An increasing population results in larger desert areas being farmed. Sheep, cattle and goats are overgrazing the vegetation. This leaves the soil exposed to erosion.

Soil erosion - This is made worse by overgrazing and the removal of wood. Population growth is the primary cause of soil erosion.

Climate change - The global climate is getting warmer. In desert regions conditions are not only getting warmer but drier too. On average there is less rain now in deserts than 50 years ago.

What are the impacts of desertification?

- **Environmental** – As vegetation is removed the roots are no longer able to bind the soil together and the soil becomes vulnerable to wind erosion. The fertile topsoil is easily blown away. Land becomes infertile, turning to desert – expansion of the Sahara desert.
- **Social** – People are forced to migrate, with many people - young men in particular, leaving to work in cities and towns. This puts pressure on already limited urban resources.
- **Economic** – Land becomes unproductive, farm income falls, which leads to poverty and an increased reliance on overseas aid.

Y9 Geography 3.2

Key Terms...

Desertification – Dry region receives less rainfall – soil is open to erosion and vegetation dies.

Afforestation – the act or process of establishing a forest especially on land not previously forested.

Rainwater Harvesting – collection and storage of rainwater into natural reservoirs or tanks.

Terraces – make or form (sloping land) into a number of level flat areas resembling a series of steps.

Top-down Development – When decisions about development are made by governments or officials rather than by ordinary people within the community.

How can desertification be managed locally?

Afforestation: This is replanting of trees, which would protect it from soil erosion and retain moisture in the soil.

Rainwater Harvesting: These simple systems connect downspouts (gutters) to a central water tank capable of holding about 100,000 litres of water or more.

Terraces: To combat lack of irrigation for crops build terraces on the land to help conserve water and reduce the amount of water / nutrients being lost in soils.

Stone Bunds: Rocks are placed along the contours (end of a slope). Sometimes the stones are reinforced by planting tough grasses along the lines. The stones and grass encourage rainwater to infiltrate the soil (i.e sink into the soil) and reduce the amount of water lost as 'run-off'.

How can desertification be managed nationally?

The 'Great Green Wall' is one example of an initiative where countries are working in partnership with one another. Eleven countries signed an agreement in 2010 to begin planting this 'wall'. The plan is to plant a 15km-wide strip of land with trees and shrubs across the width of Africa. It is hoped this wall of vegetation will help prevent further soil erosion from the Sahel and improve incomes.

Huge progress has been made by Niger. But Niger had a head start. It began its tree-planting programme 25 years before the 2010 international agreement was signed. Five million hectares of land in the Zinder region of Niger have been planted.

The Food and Agriculture Organisation (FAO) of the United Nations (UN) claims that tree-planting in these two countries has been a success as crop yields have increased, livestock is better fed and the trees are providing medicines and firewood.

Progress has been slow in the nine other countries that signed the agreement. This may be due to local communities not feeling involved in the decision making process. This is an example of 'top-down development' and some communities are disappointed because they have not been consulted. They cannot imagine how their own community might benefit.



Y9 History I.I

Militarism – the idea of building up your country’s military (armed forces); army, navy, air force, **Alliances** – when different countries form friendships with other countries, **Imperialism** – the idea of building up your country’s empire, **Nationalism** – the idea that your country is better than other countries



Alliances	<ul style="list-style-type: none"> • <u>Triple Entente</u> – Britain, France, and Russia • <u>Triple Alliance</u> – Germany, Austria-Hungary, and Italy
Morocco 1905	<ul style="list-style-type: none"> • By 1905. Morocco was the only independent African country • France wanted to take over Morocco, but Germany was wary of France becoming more powerful • The Kaiser went over to Morocco, and declared that he supported Moroccan independence - an insult to France • As a result, a conference was called, and Germany was made to feel humiliated by Britain, France, and Russia, who ganged up against them, and formed the <u>Triple Entente</u> soon after
Morocco 1911	<ul style="list-style-type: none"> • In 1911 a rebellion broke out against the Sultan of Morocco • The Sultan asked the French for help, and the French sent 20,000 soldiers • The Kaiser accused the French of invading Morocco, and sent a warship (Panther) to Morocco as a show of strength • Again, meetings were held, and again, Britain and France stood firm against Germany • The Kaiser was again humiliated, and Britain and France grew even closer
Balkans Crisis	<ul style="list-style-type: none"> • The Balkans was a highly unstable area – there were over 15 different languages spoken and several different cultures • However, the major powers in Europe were still hungry for more power, and in 1908. Austria-Hungary took control of Bosnia, which also angered neighbouring Serbia • Serbia asked Russia to take action, and Russia asked for an international conference • Germany supported Austria-Hungary, and Russia were forced to back down, Russia were humiliated.
Assassination of Franz Ferdinand	<ul style="list-style-type: none"> • Franz Ferdinand visited Bosnia in an attempt to improve relations with the population • The Black Hand Gang (Bosnian Serbs) plotted to kill Franz Ferdinand • Franz and his wife Sophie rode through Sarajevo in an open-top car (their route had even been printed in the paper!) • They survived a bomb attempt by another member of the gang, but one of their company was injured • They went to visit him in the hospital, but due to a miscommunication with the driver, Gavrilo Princip was able to fire two shots...

Key Words for this Half Term

- Militarism
- Imperialism
- Nationalism
- Alliances
- Empire



July Crisis:

- Not long after, Austria-Hungary gave Serbia a ten-point ultimatum – Serbia agreed to all but one, leading to war being declared.
- Russia came to Serbia’s aid, and Germany came to Austria-Hungary’s
- Germany then invoked the Schlieffen Plan to avoid a war on two fronts by invading France through Belgium, defeat the French in six weeks and then move the main bulk of the German army to the east to meet the slow mobilising Russian army.

Y9 History 1.2



Why were trenches built?	<ul style="list-style-type: none"> Neither side had managed to outflank each other in the 'race to the sea', so both sides just dug down instead, creating opposite sets of trenches Both sides would occasionally attack each other for nearly four years, but the amount of territory controlled and gained hardly changed! Although many lives were lost, most battles ended in 'stalemate' (where no side can make progress or win)
The trench system	<ul style="list-style-type: none"> The artillery cannons would be the furthest back in the trench system – they could fire for miles, over their own troops, into the enemy trenches The reserve trench was the next forward, then the support trench, then the frontline (these were all linked by communication trenches) No Man's Land was in between the two sets of trenches, and normally measured from 50m to 200m Sandbags and barbed wire were used for defence
Over the top	<ul style="list-style-type: none"> The way a battle would take place was normally as follows: the artillery would attack the enemy for a prolonged period of time (to destroy the enemy trenches) – then, soldiers would go 'over the top' into No Man's Land to reach the enemy trench – if they were successful, then they would attempt to capture the trench using hand-to-hand combat Artillery shells rarely worked as effectively as planned! Attacking soldiers were often shot down very easily by machine guns The war was seen as a 'war of attrition' – simply, the first side to give up loses!

Battle of Verdun:

-The French were defending against a major German attack at Verdun
 -The battle lasted from February 1916 to December 1916 (the longest battle of WWI)
 -There were no real military gains (stalemate!), but both sides lost over 300,000 soldiers
 Many German soldiers were intentionally diverted to the Battle of the Somme to relieve the French.

Conditions.

-Shellshock – a mental illness due to all the trauma of battle, soldiers would be unable to function – in modern times, this is referred to as Post-Traumatic Stress Disorder!
 -Hygiene – cramped conditions and poor sanitation made for poor hygiene
 -Food – there was plenty of food, but very basic (bread, stew, corned beef, etc.)
 -Health – due to the cramped conditions, disease spread very easily in the trenches (also spread by rats)
 -Gas and tanks were also new weapons used very effectively for WWI

Key Words for this Half Term

- Trench
- Offensive
- Artillery
- Tactics
- Blockade

The Battle of the Somme:

-The British advance on the Somme was a successful attempt to help the French by drawing some Germans away from Verdun
 -This battle was the bloodiest, and largest battle of WWI
 -The British executed a week-long artillery bombardment on the German trenches (this failed, mainly because the artillery shells were faulty)
 -There were 60,000 British casualties (deaths, injured, missing) on the VERY FIRST DAY, 20,000 of which were deaths!
 -Sir Douglas Haig (British commander) was much criticised after the battle for his refusal to change tactics, and was labelled by many as 'The Butcher of the Somme'
 The battle ended in stalemate, with over 500,000 lives lost on each side.

The Battle of Passchendaele: The Muddiest battle of WWI (the thick mud caused major issues for the soldiers – some even drowned in it!). The ten-day long British artillery bombardment created a huge amount of mud around the battle area – this caused huge problems and made the fighting extremely difficult.

Y9 History 2.1

Changes to the Allies	<ul style="list-style-type: none"> Russia dropped out of the war in 1917, due to a communist revolution in their own country – a blow to the Allies! However, the USA finally joined on the side of the Allies in the same year – with over 2 million fresh soldiers and supplies coming in from the USA, this was a huge blow to the Germans.
The Ludendorff Offensive	<ul style="list-style-type: none"> Also known as the Spring Offensive – do not get confused! Germany’s last push (in 1918) to defeat the Allies before the bulk of the USA’s troops joined the war. Germany poured all their efforts into this offensive, and had some early success (managing to get into artillery range of Paris). However, the Allies unified under the new leadership of Supreme Commander Foch, and gained the upper hand. When it became clear that Germany simply did not have the troops to continue, they were forced into mass retreat (The Hundred Days) and eventually surrender.
British blockade of Germany	<ul style="list-style-type: none"> From the early stages of the war, the British Navy had been blocking supplies from coming into Germany – this hit them hard. Both the war effort and the lives of normal Germans were damaged massively. As more and more Germans starved, there was increasing pressure to surrender to the Allies – there were riots in many parts in Germany over the lack of food! By 1918, nearly 500,000 Germans had starved to death.
Armistice	<ul style="list-style-type: none"> Primarily as a result of the above factors, Germany was in no state to continue fighting by November 1918. The Kaiser abdicated on 9 November. On 11 November, German representatives were told to sign a piece of paper that would officially end the war at 11am that day – the war was over.

French President, Georges Clemenceau: Most of the fighting took place on French soil. The French people lost 750,000 homes and more than 1,500,000 (one and a half million) men. **The French wanted to punish Germany** and make sure that Germany was too weak to fight another war.

British Prime Minister: David Lloyd George: Wanted Germany to be punished but also wanted Germany to remain quite strong.

Woodrow Wilson, American President: Had a plan to form a ‘League of Nations’, which would help countries to solve problems by encouraging them to talk together.



- Key Words for this Half Term
1. Artillery
 2. Capitalism
 3. Communism
 4. Armistice
 5. Blockade

Y9 History 2.2



Historical persecution of Jewish People

- **Anti-Semitism (discrimination/racism specifically against Jewish People) is not a modern invention.**
- **There are multiple examples throughout history of this, including; Jewish People suffering violence during the Crusades, Jewish People being expelled from England in 1290, being the scapegoats for the Black Death, etc.**
- **Anti-Jewish prejudice and discrimination did not begin with the Nazis in Germany!**

The treatment of Jewish People by Nazi Germany

- After Hitler and the Nazis came to power in Germany in 1933, they began a state-organised campaign of persecution against Jewish People.
- This mainly started off in a non-violent way (boycotting of Jewish shops, legal rights removed), but the level of violence increased steadily as time went on.
- The Nazis used a range of propaganda (media meant to influence) to brainwash Germans into believing that Jewish People were the enemy. This was done in a very organised and sophisticated manner, including the use of cinema, posters, mass rallies, speeches, etc.
- After WWII began, the countries that were invaded by Nazi Germany fell under their control. This also included countries with large Jewish populations, such as Poland. Jews started to be rounded up into ghettos, where many would die of disease.

The 'Final Solution'

- In 1941, a meeting was held by leading Nazis regarding the 'Final Solution to the Jewish Question'.
- It was decided that the Nazis would work to 'exterminate' the Jewish population of Europe.
- At first, Jewish People were murdered by firing squads, but the Nazis decided that the economic cost (of bullets, weapons, manpower, etc.) was too great, and the method of execution was changed to gas.
- Jewish People were rounded up in large numbers and sent to purposefully-built death camps, where they would await their murder.
- Over the remaining years of WWII (up until 1945), over 6,000,000 Jewish People were murdered in this way – what is particularly horrendous is the systematic (organised) manner in which Nazi Germany carried this out.
- There is still debate regarding the terminology of this horrific event: it is often referred to as the 'Holocaust' (sacrifice), but most Jewish People would use the term 'Shoah' (catastrophe) instead.

Key Words for this half-term

1. Anti-Semitism
2. Persecution
3. Genocide
4. Holocaust
5. Shoah



Y9 History 3.1

- | | |
|------------|---|
| NHS | <ul style="list-style-type: none">• After the hardships of World War II, British people started to demand improvement on their healthcare system. At this time, if you were poor and ill, it was your own responsibility and your own problem.• In 1948, the Labour British Government introduced the National Health Service – healthcare and medical treatment free to all.• The NHS is paid for via workers' taxes, so is not strictly 'free', and today does not include medicines and dental treatment. However, anyone that needs any vital services is entitled to it under the NHS. |
|------------|---|

Why was there a 'Cold War'?

- After WWII, Germany (and its capital city of Berlin) was divided into two – East Germany and West Germany. West Germany (and Berlin) was controlled by the British, French, and Americans, and East Germany was controlled by the communist USSR.
- Europe became divided by the 'Iron Curtain': the countries to the west of the curtain were capitalist and had close relationships with the USA, whereas the countries to the east became 'communist' and were heavily influenced by the USSR.
- This was solidified when two rival defence organisations were set up: the North Atlantic Treaty Organisation (NATO) linked major Western powers, whereas the Warsaw Pact linked the USSR with their allies.
- Despite all the tension, there was no actual fighting between the American and Soviet troops, hence the 'Cold War'.

Key Words for this half-term

1. Welfare
2. Superpower
3. Ideology
4. Segregation
5. Boycott

The Civil Rights Movement

- Despite the Emancipation Proclamation of 1863 (which banned slavery in the USA), African-Americans were not truly free. Facing many aspects of discrimination in their lives, including; healthcare, education, employment, transport, etc.
- This was particularly true in the southern states of the USA (known as the Bible Belt), e.g. Mississippi, Alabama, Georgia, etc. The 'Jim Crow Laws' enforced segregation between black and white Americans, as long as the facilities were 'Separate but equal' – they were not equal. Extreme violence towards African-Americans was also common.
- The Civil Rights Movement began to gather momentum in the 1950s, with the Montgomery Bus Boycott (led by Martin Luther King) of 1955/1956 proving that equality could be fought for without retaliation of violence.
- The key work of King, as well as other significant events and people, e.g. Malcolm X, the murder of Emmett Till, The Birmingham Campaign, King's 'I have a Dream' speech were all vital to the passing of the Civil Rights Act of 1964, which was followed by the Voting Rights Act and the Fair Housing Act.
- Discrimination towards African-Americans were now illegal in law, but does this reflect reality to this day?



Y9 History 3.2

Key events of the Cold War

- **Korean War (1950-1953)**: From 1950, Korea was divided in two: a USSR-friendly communist government in North Korea, and an American-friendly capitalist government in South Korea. The two sides went to war but were fairly evenly matched and had reached stalemate by 1953. A ceasefire was agreed, North Korea remained communist and South Korea remained capitalist.
- **Cuban Missile Crisis (October 1962)**: The world came close to nuclear war in 1962. After a failed invasion of (newly-communist) Cuba by the USA, the USSR supplied nuclear weapons to Cuba (very close to the USA). The world held its breath as the leaders of the USA and USSR negotiated, and after two weeks of tension, a compromise was reached. The world breathed a sigh of relief.
- **Vietnam War (1955-1975)**: In a very similar situation to the Korean War, the south-east-Asian country of Vietnam had been split in two in the 1950s: North Vietnam was ruled by communists, and South Vietnam was ruled by capitalists supported by the USA. Again, the two sides went to war and there was intense fighting for many years. The war eventually became too costly (both financially and in body count) for the Americans, who were forced to withdraw. Vietnam unified into a communist country.

Decline of the British Empire

- At one point, the British Empire controlled around $\frac{1}{4}$ of the world's land, and $\frac{1}{4}$ of the world's population – the largest empire that the world has ever seen. Britain's colonies included Australia, New Zealand, Canada, South Africa, Ghana, Nigeria, Uganda, Kenya, Zimbabwe, and the 'jewel in the crown', India.
- However, after WWII and the emergence of the world superpowers (the USA and the USSR), Britain was no longer as important on the world stage, and many of her colonies started to demand independence.
- After a long drive movement under the leadership of Mohandas Gandhi, India (and the new country of Pakistan) declared their independence from the British Empire in 1947. They were later followed by many African nations, including Ghana (1957), Nigeria (1960), Uganda (1962), Kenya (1963), and Zimbabwe (1980). The empire had taken centuries to build up, but only decades to lose.

Key Words for this half-term

1. Communism
2. Capitalism
3. Independence
4. Immigration
5. Multicultural

British multiculturalism

- After WWII, large groups of immigrants came to Britain. Some came as refugees from war-torn Europe, and others came to Britain to find work and build a better life. Many were strongly encouraged to come by the British Government, due to the shortage of workers after the war in mining, building, transport, healthcare, farming, etc.
- The first immigrants to Britain were often treated like outsiders, but over the years they became an important part of, and made large contributions to British society, culture, food (Britain's national dish is chicken tikka masala!), sport, music etc.
- The NHS is seen by many as one of Britain's greatest achievements, but this might not be possible to sustain without the help of immigrants. About 37% of the NHS' doctors trained abroad before moving to Britain, and around 13% of all NHS employees were born abroad.



Key words	Definition
Coercive control	Coercive control is an act or a pattern of acts of assault, threats, humiliation and intimidation or other abuse that is used to harm, punish, or frighten their victim.
Consent	Giving permission for something to happen or agreement to do something.
Contraception	Methods used to prevent pregnancy.

Useful sites to find out more:

<https://www.brook.org.uk/your-life/courses/consent/>

<https://www.safe4me.co.uk/portfolio/sexual-consent/>

What are the red flags when it comes to coercive control?

- Isolated from friends and family
- Under financial control
- Humiliating behavior
- Lack of privacy
- Making threats
- Destruction of property



Forms of contraception

CONTRACEPTION METHODS



CONDOM



FEMALE CONDOM



DIAPHRAGM



HORMONAL RING



IUD



CONTRACEPTIVE INJECTION



IMPLANT



CONTRACEPTIVE PATCH

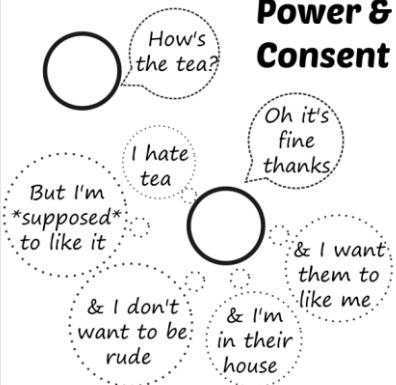


ORAL CONTRACEPTION



SURGICAL STERILIZATION

Power & Consent



Key Terms

1. Coercive control
2. Consent
3. Contraception
4. Control
5. Pregnancy



Key terms	
Role model	A person looked to by others as an example to be imitated.
Negative role model	A negative role model is any person who influences others in a negative way. Negative role models can be public figures, such as celebrities, who's poor behaviour and decisions set a negative example for children.
Positive role model	A positive role model carries out a role demonstrating values, ways of thinking and acting, which are considered good in that role.
FOMO	Fear Of Missing Out.
Self-esteem	Describes a person's overall sense of self-worth or personal value.
Self-confidence	A feeling of trust in one's abilities, qualities, and judgement.

Statistics	
Social media influencers	The influencer marketing industry could be worth £8 billion.
Primary social media platform	78% of social influencers worldwide use Instagram as their primary social media platform to promote any brand collaborations.
FOMO	FOMO is especially common in people ages 18 to 33. In fact, one survey found that about two-thirds of people in this age group admitted to experiencing FOMO regularly.
Girls and self-esteem	61% of 10 to 17-year-old girls in the UK have low self-esteem according to new research.
Girls and self-esteem	92% of teen girls would like to change something about the way they look, with body weight ranking the highest.



Useful websites and campaigns

<p>The Dove Self Esteem Project https://www.dove.com/uk/dove-self-esteem-project.html Provides support to increase self-worth in teens & young women, helping them feel more body confident</p>	<p>Young Minds https://youngminds.org.uk If you're a young person experiencing a mental health crisis, you can text our messenger for free 24/7 support.</p>
<p>Whizz-Kid http://www.whizz-kidz.org.uk/about-us Celebrities join forces with disability charity to help to promote positive role models.</p>	<p>The Be Real Campaign https://www.berealcampaign.co.uk A campaign to change attitudes towards body image and help all of us put health above appearance by feeling confident in our bodies.</p>



Key Terms	
1.	Role model
2.	FOMO
3.	Self-esteem
4.	Self-confidence
5.	Influencer

Understanding democratic processes

Main political parties in England



Recap: What are the Fundamental British Values?



Democracy



Rule of Law



Individual Liberty



Respect & Tolerance

Key terms

Democracy	A system of government whereby the whole population (those that are eligible) are included in the election process.
Government	A group of people with authority to control and make laws within a state.
Member of Parliament (MP)	A person elected to represent people from a particular area known as a constituency.
Prime Minister	The head of an elective government.
Cabinet	Group of senior ministers responsible for controlling government policy
House of Commons	An elected body of 650 MPs who hold their place until Parliament is dissolved.
House of Lords	Members are appointed to the House of Lords. It checks government bills and questions decisions.
Devolution	The transfer of power e.g. the Welsh assembly.
First past the post	A system of voting where the voter picks one candidate from a list. The candidate with the most votes overall is elected and becomes a MP.



Y9 Life Studies 2.2

Apprenticeship

Apprenticeships combine practical on-the-job skills training and off-the-job learning at a college or training centre. There are multiple levels you can start at depending on your confidence and previous experience. Around 80% of your time will be on-the-job, and 20% off-the-job. Apprenticeships last a minimum of 1 year, but can be longer.

You can start one at any age, and the qualifications you need varies depending on the job. Usually you will need English and maths, as well as related subjects.

Apprenticeships lead to full time employment, the next level of apprenticeships, or further/higher education



A-Level

A-Level's allow you to continue studying the subjects you took at GCSE, or pick entirely new ones. They allow you to gain deeper knowledge of those subjects and keep your career options very open, or choose wisely to gain the depth needed for a career you have in mind. You will usually do three A-Levels. A-Levels last for 2 years and are taught in sixth-forms and colleges.

Usually, you will start A-Level's straight after high school, and you will need 5 GCSE's (Grade 4-9), including English and maths.

A lot of people continue study at university, but can also lead to higher level apprenticeships and full time work.



Key Terms

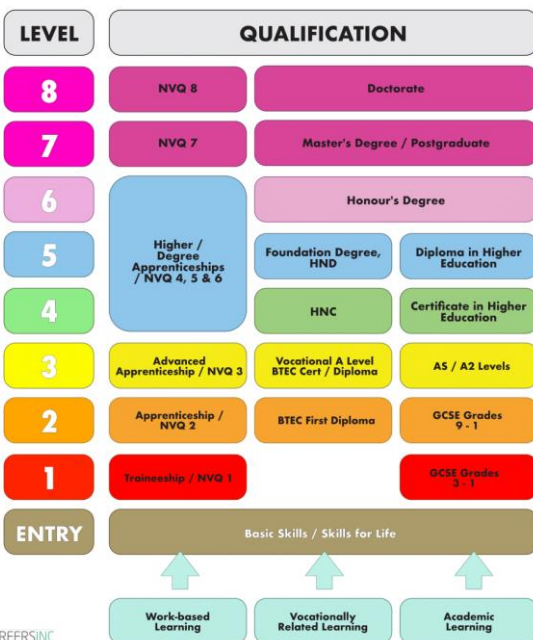
- 1.Apprentice
- 2.Traineeship
- 3.BTECH
- 4.Qualification
- 5.Post-16

BTEC

Courses that teach you practical skills for a particular area of employment. They can either be very broad such as 'engineering' or 'travel and tourism', or can be more specific such as 'hairdressing'. They are either 1 or 2 years depending on the level you study, and most of your time will be in real situations, but in college e.g. college restaurant, college salon.

Every BTEC has different requirements, but usually will expect English and maths GCSE's.

Can lead to apprenticeships, other college courses and full time work.



You will then get a choice of what to do at level 3

You will leave high school with level 1 and 2 qualifications (GCSE's and BTEC's)

You currently have 'Entry' level qualifications

What are T-Levels?

EQUIVALENT TO 3 A LEVELS

T Levels are an alternative to A levels, apprenticeships and other 16 to 19 courses. Equivalent to 3 A levels, a T Level focuses on vocational skills and can help students into skilled employment, higher study or apprenticeships.

A 45-DAY INDUSTRY PLACEMENT

Each T Level includes an in-depth industry placement that lasts at least 45 days. Students get valuable experience in the workplace; employers get early sight of the new talent in their industry.

80% CLASSROOM, 20% WORK

T Level students spend 80% of the course in the classroom, learning the skills that employers need. The other 20% is a meaningful industry placement, where they put these skills into action.





Y9 Life Studies 3.1

Living independently

Living expense	Yearly average household cost
Renting	£3,006
Food and drink	£5,808
Gas and electricity	£1,180
Holidays and entertainment	£3,999
Water	£421
Transport	£4,170
Phone and broadband	£1,108
Council Tax	£1,274
Insurance	£1,045
Toiletries	£676
Total	£22,688
Average UK wage	£25,780



Credit Cards

- Line of credit offering borrowed funds that must be repaid
- Helps build credit history
- Not liable for more than \$50 if credit card is lost or stolen due to the Fair Credit Billing Act
- May have to pay fees for foreign transactions, late fees, and cash advances
- A debt instrument for financial transactions instead of cash

VS.

Debit Cards

- Best for people trying to budget or prevent debt accumulation
- Linked to a checking account
- May have to pay fees when using an ATM out of network or an overdraft
- Liability of losing funds is tied to how quickly you act to report stolen card
- Funds pulled directly from your bank account
- Can be used anywhere credit cards are permitted

Investopedia

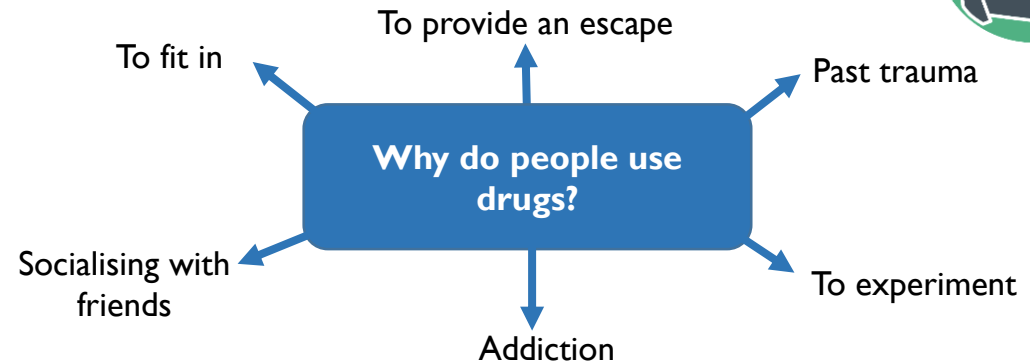
*Information from the Office for National Statistics

- Key Terms**
1. Debt
 2. Debit
 3. Credit
 4. Credit score
 5. Budget

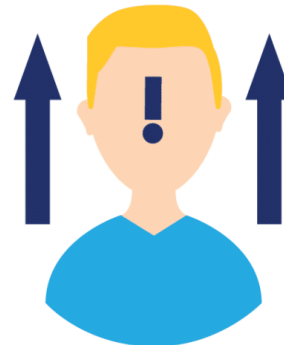
Need someone to talk to? **kooth**



Key terms	
Illegal	Something that is against the law.
Legal	Something allowed by the law.
Stimulants	Drugs which make you more energetic and increase your heart rate.
Depressants	Drugs which make you more relaxed and slow down your heart rate.
Peer pressure	Direct influence on people by peers, to follow by changing their attitudes, values, or behaviours to conform to those of the influencing group.
Polydrug use	The mixing of different drugs.
Addiction	The fact or condition of being addicted to a particular substance or activity.
Come down	The negative after effects experienced as drugs wear off.
Criminal gangs	A close group, usually of people under 35, who commit crimes and display signs of common identification.
County lines	Where illegal drugs are transported from one place to another. This often involves Child Criminal Exploitation
Turf war	War over territory between rival gangs.



STIMULANTS



DEPRESSANTS



Want to know more? Visit:
www.nhs.uk
www.talktofrank.com

- Key Terms**
1. Stimulant
 2. Depressant
 3. Withdrawal
 4. Come down
 5. County lines

Y9 RWP 1.1

What are the aims of punishment?

People are punished for a purpose. Often the aims of a punishment overlap, eg the death penalty acts to deter people from committing similar crimes and it aims to protect the public from the individual who is guilty of the crime. There are six recognised aims of punishment:

- **deterrence** - punishment should put people off committing crime
- **protection** - punishment should protect society from the criminal and the criminal from themselves
- **reformation** - punishment should reform the criminal
- **retribution** - punishment should make the criminal pay for what they have done wrong
- **reparation** - punishment should compensate the victim(s) of a crime
- **vindication** - the punishment makes sure that the law is respected

What is the current UK law about capital punishment?

Capital punishment is illegal in the UK. It was abolished for murder in 1965 and abolished for all crimes in 1998. In 2004 the UK agreed not to restore the death penalty for as long as it is part of the [European Convention](#).

Which of the aims of punishment are met by capital punishment?

Capital punishment aims to protect society, deter others from committing crime, and compensate the victims of the crime (reparation).

You have heard that it was said, 'Eye for eye, and tooth for tooth.' But I tell you, do not resist an evil person. If anyone slaps you on the right cheek, turn to them the other cheek also.

Matthew 5:38-39

Christians do not believe in taking revenge when they have been wronged. They believe that they should forgive the sins of others, in the same way that they believe God forgives them for their sins.

Christians look to the example of Jesus, who taught the importance of forgiveness.

But if there is serious injury, you are to take life for life, eye for an eye, tooth for a tooth.

Exodus 21:23-24



There are many theories to explain why people commit crime, but there is general agreement on how people become criminals. Criminal behaviour fits into one, or more than one, of these categories:

- criminal behaviour can be caused by a person's free choice
- criminal behaviour can be caused by a person's environment, eg a broken home or failure at school could be a catalyst for the change to becoming a criminal
- criminal behaviour can seem like the only option for a person if they are unable to conform to society
- criminal behaviour can develop through being associated with other criminals

Then Peter came to Jesus and asked, "Lord, how many times shall I forgive my brother or sister who sins against me? Up to seven times?" Jesus answered, "I tell you, not seven times, but seventy-seven times.

Matthew 18 21-22



Key Terms

1. Capital
2. Punishment
3. Corporal Punishment
4. Redemption
5. Atonement

Y9 RWP 1.2

Life after death is a fundamental belief in most religions. What form life after death takes is different in each religion and sometimes there is a difference of belief between members of the same religion. Some people without a religious belief also believe in life after death while others believe that there is no sort of existence after death.

Ways of thinking about life after death include:

- Reincarnation
- Resurrection
- Rebirth
- Immortality as a legacy
- Immortality as a memory of others
- Nothing

There is no scientific evidence for life after death, but the belief in an afterlife is strong among religious and also some non-religious people.

Not all people who believe in life after death would call themselves 'religious'. For example, some people believe in the concept of reincarnation but are not necessarily Buddhist, Hindu or Sikh. Others feel natural justice requires good to be rewarded and evil punished but do not hold one of the traditional faiths that promise an afterlife.



Is abortion an issue of life and death?

Law: The Abortion Act 1967.

Under the Act an abortion must be carried out in a hospital or specially licensed clinic.

- The woman is less than 24 weeks pregnant, and
- It is necessary to prevent grave damage to the woman's physical or mental health, or any of her existing children.

When does an embryo become life?

Religious and non-religious people have different ideas about this question.

Christian: The Church says that human life begins when the woman's egg is fertilised by a male sperm.

Islam: Most Muslim scholars would say that a foetus in the womb is recognised and protected by Islam as a human life. But would agree that it is necessary to save the mother.

Buddhists are totally divided. They avoid suffering over all else.

Christian beliefs about the afterlife

Although physical death still happens, those who believe in Christ and live good lives will be given eternal life in Heaven.

Many Christians believe that after death, they will be taken into the presence of God and they will be judged for the deeds they have done or failed to do during their lifetime. Some of the guiding principles for what will happen upon death include:

Judgement

Some Christians believe that this judgement will happen when they die. Others believe that there will be a **Day of Judgement** at the end of time, when everybody will be judged at the same time.

Hell

Since God has given human beings free will, there must be an opportunity for people to reject God. This is the basis of the idea of Hell. Hell has traditionally been depicted as a place of eternal fire that symbolises **pain** and **suffering**. This is seen as the result of the refusal to accept the happiness that God wants people to share with him.

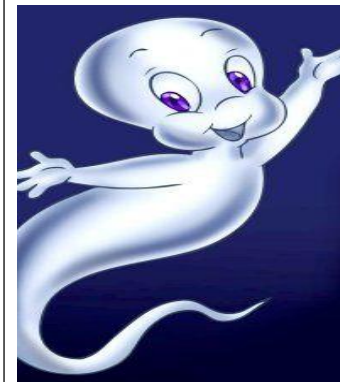
Euthanasia

Euthanasia means 'gentle and easy death'. The term is used to describe the deliberate ending of a person's life for compassionate reasons because they are suffering, e.g. from a painful or incurable disease.

In UK law it is illegal.

Most religions agree in the '**sanctity of life**'. Life is precious and a gift, so do not harm it.

- In Islam, it is believed that Allah has a masterplan, so do not meddle with it.
- In Christianity it is also believed that it is 'playing God'.
- Buddhists believe in stopping suffering.



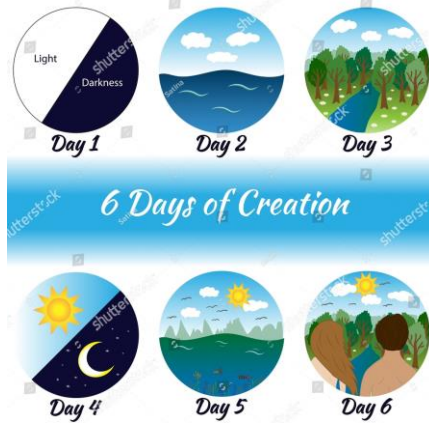
Key Terms

1. Paradise
2. Reincarnation
3. Afterlife
4. Judgement day
5. Sin

Y9 RWP 2.1

Christian creation story

- Genesis: God created the world in 7 days. Humans are created in the image of God.
- God is the only creator.
- God existed before he created the world.
- The world was well planned and is sustained by God.
- God blessed creation, which means that all creation is **holy**.
- God created everything in Heaven and on Earth in six days.
- On the seventh day, God rested



In the Hindu creation story, the big bang theory can exist.
 Brahman created the world.
 Vishnu looks after the world and maintains it.
 Shiva destroys the world and the whole process starts again. Meaning that the world could be millions of years old.



In Islam, it is a very similar story to Christianity. Allah created man and woman and asked them to populate the earth.

Religious truth

- Religious truth comes from holy books.
- We read it and are taught it, or some people feel that that have been taught by god personally. This is called **divine intervention**
- The words in religious truth do not change, but they are open to **interpretation**. People need to be careful as they all disagree on what the truth is. Some religions or religious interpretations agree with science.

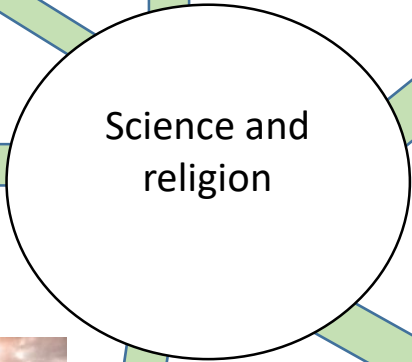
Scientific truth

- This comes about after making a **hypothesis** (which is an idea about if something works).
- Once you have your hypothesis you need to test it out. Think about the experiments that you do in science.
- You will do a test in science multiple times to make sure that it is correct.
- Science teaches things that it can prove. For example it is proven that the sun is the centre of the universe and that the planets orbit (move around it).



The design argument
 Design argument. Some believe that the world is too perfect to have been created by accident. They use the snowflake, the human eye, beautiful scenery to explain this.

The Big Bang theory
 Some believe in the 'big bang theory' This is where the universe was created by a huge explosion of materials. They believe human life has evolved from cells since then.



- Key Terms**
1. Miracle
 2. Truth
 3. Design
 4. Hypothesis
 5. Theory

Y9 RWP 2.2

What is evil? Immoral, wicked, wrong.

2 types are:

- Moral evil** - actions performed by humans that cause suffering e.g. The Holocaust
- Natural evil** - things that cause suffering but have nothing to do with humans e.g. Natural disasters

Christians believe suffering comes from:

The Devil - the Story of Job
Free choice - free will

Why does God allow suffering?

Test of faith - Lessons can be learned
Natural laws
Part of God's plan
Created man with free will

What good can come from suffering?

- It allows people to show love and compassion
- Suffering helps people learn what is important
- Some suffering can be a punishment for wrong choices e.g. prison
- It helps people appreciate goodness

Christian views about God

Omnipotent - God is all powerful

Omnibenevolent - God is all loving

Omniscient - God is all knowing

Omnipresent - God is everywhere
God created a perfect world.

How do Christians respond to suffering?

Pray

Help - Volunteer

Strengthen their faith

Know God has a plan

Doubt the existence of God



Hitler's views on Jews and Germany

"The Jew today is the great agitator for the complete destruction of Germany. Wherever in the world we read of attacks against Germany, Jews are their fabricators."

"Nine tenths of all literary filth, artistic trash, and theatrical idiocy can be set to the account of a

people constituting hardly one hundredth of all the country's inhabitants."

Key words

Perpetrator: Someone who commits the act of harm/violence.

Bystanders: Does not speak, says nothing.

Anne Frank's faith through persecution

'He who has courage and **faith** will never perish in misery!'

"People who have a religion should be glad, for not everyone has the gift of believing in heavenly things. You don't necessarily even have to be afraid of punishment after death; purgatory, hell, and heaven are things that a lot of people can't accept, but still a religion, it doesn't matter which, keeps a person on the right path.'



Key Terms

1. Genocide
2. Anti-Semitism
3. Holocaust
4. Prejudice
5. Discrimination

Y9 RWP 3.1



What does Christianity teach about war and peace?

The Bible does not give Christians a clear answer about whether war is permitted or not, but it has a lot to say about justice, the sanctity of life, the importance of resolving conflict and working for peace.

Most Christians believe that war should be avoided if possible, and should only be undertaken if all efforts to resolve an issue by peaceful means have failed. Many Christians see war as the result of a failure to live by God's standards.

There are many promises in the Old Testament that war will come to an end in the perfect Kingdom of God.

What is a just war?

A just war is a war which is declared for right and noble reasons and fought in a certain way. A just war is not a war that is 'good' as such – it is a war that Christians feel to be necessary or 'just' in the circumstances, when all other solutions have been tried and have failed. It is a necessary evil and a last resort.



What does pacifism mean in Christianity?

Pacifists reject all violence. They do not think that conflict should be dealt with by resorting to war. They think that other peaceful methods should be used.

The early Christians interpreted Jesus' commandments to mean that they could not fight in wars or be violent. In the Gospel of Matthew, Jesus said:

Blessed are the peacemakers: for they shall be called the children of God. Matthew 5:9

What is Prevent?

Prevent is one part of the UK's Contest Counter Terrorism Strategy. It includes four sections:

- **Pursue:** to stop terrorist attacks
- **Prevent:** to stop people becoming terrorists or supporting terrorism
- **Protect:** to strengthen protection against a terrorist attack, and
- **Prepare:** to mitigate the impact of a terrorist attack.

1) Challenging the ideology that supports terrorism and those who promote it.

All terrorist groups have an ideology. Promoting that ideology, frequently on the internet, facilitates radicalisation and recruitment. A fundamental part of Prevent lies in challenging their ideology and disrupting the ability of terrorists to promote it.

2) Protecting vulnerable people

Radicalisation is usually a process not an event. During that process it is possible to intervene to prevent vulnerable people being drawn into terrorist-related activity. There are some analogies between this work and other forms of crime prevention.

3) Supporting sectors and institutions where there are risks of radicalisation

A wide range of sectors are helping to prevent people becoming terrorists or supporting terrorism. The way Government works with particular sectors will vary. Priority areas include education, faith, health, criminal justice and charities. The internet is also included as a theme running through the Strategy.

Fritz Haber

Villain: He is recognized for his supervision of the German poison gas program during The First **World War**, being known as the "father of chemical warfare".

Hero: His scientific work created a capacity to sustain the world's need for food production.

Key Terms

1. Pacifist
2. Terrorism
3. Just war
4. justice
5. Sanctity of life

Y9 RWP 3.2

The Westboro Baptist Church

The Westboro Baptist Church is a small church that became well known for its opposition to homosexuality and the LGBTQ+ as expressed on picket signs carried by church members at funerals and other events. The church also demonstrated against other religions, most notably Judaism. It also supported tragedies such as the 11th September attack (2001) and the mass shooting at a school in 2012, arguing it is God's punishment for sin. The church's statements were widely condemned as hate speech and some watchdog organizations branded the church as a hate group.

Despite claiming to be a branch of Christianity, Christians from around the world disapprove of the Westboro Baptist church and its actions as they are not in line with the teachings of Jesus and the bible. The Westboro Baptist church has been described by its critics as "one of the most extreme and obnoxious hate groups in America".

The Suffragettes

Thousands of women fought for the right to vote in the 1900s. Emmeline Pankhurst, born in Manchester is one of the most famous Suffragettes, working towards women getting the vote in the UK. Unlike the suffragists who took a peaceful approach to protest, the suffragettes were known for their violent approach to protest including chaining themselves to railings, smashed windows and used letter bombs to gain attention for their cause.

Suffragettes were quite happy to go to prison. Here they refused to eat and went on a hunger strike. The government was very concerned that they might die in prison thus giving the movement martyrs. Prison governors were ordered to force feed Suffragettes but this caused a public outcry. The suffragettes achieved their goal in 1928 when all women could vote like men.

Controversial figures

Malcolm X

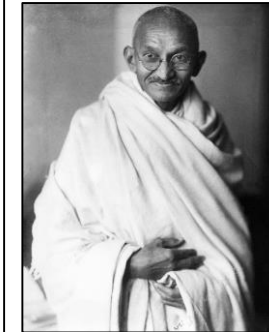
When he was younger Malcolm and his family suffered racist abuse from a group called the Ku Klux Klan - they had to move around a lot to avoid this racist, violent group to avoid getting hurt. When he was six years old his father was killed in what many believe was a deliberate racist attack. These childhood experiences inspired him to join the civil rights movement.

Malcolm wanted to fight for the rights of black people because of the racist abuse he and his family had suffered. Unlike Martin Luther King, who encouraged non-violent protests, Malcolm X said that black people should protect themselves "by any means necessary". He also disagreed with Martin Luther King Jr's ambition of an America where black and white people lived together - Malcolm didn't believe in that vision and wanted a separate nation just for black people.



Jim Jones

Jim Jones attracted a large following to his Peoples Temple through sermons on tolerance, social responsibility and community. As the church grew, however, the sermons on equality and tolerance were belied by his own increasing demands for personal loyalty and obedience. The extent of his authority meant that his eventual breakdown transformed a personal tragedy into one of the largest mass deaths in American history.



Ghandi

India used to be part of the **British Empire**. Gandhi wanted India to rule itself. In the 1930s Gandhi led a famous protest called the **Salt March**. Afterwards, he was arrested. Some people think that they should fight if they feel something is unfair. Gandhi didn't believe in fighting. He showed his **peaceful actions** could work.

Key Terms

1. The suffragettes
2. Ghandi
3. Civil rights
4. Protest
5. Cult

Y9 PE

Assessment in PE



Term 1 Activities



Head

(What you think/know)

Rules
Regulations
Tactics
Skills
Analysis
Decision Making
Problem Solving



Hands

(What you do)

Technique
Fitness
Skills
Control
Fluency
Precision
Fundamental Movements



Heart

(How you act)

Resilience
Leadership
Communication
Dealing with Conflict
Positivity
Persistence
Confidence

Develop, using a range of tactics and strategies to overcome opponents through:

Rugby / Netball / Basketball / Volleyball / Badminton

Develop my technique and improve my performance through:

Trampolining / Gymnastics



Our Vision in performance is to

'Inspire students to develop their confidence and expression, through artistic and physical literacy, instilling lifelong skills'



Leadership Responsibilities



Key Concepts:

Setting an example – As a leader, you are the role model and need to demonstrate the behaviours and attitudes you expect to see from your participants. E.g. – dressing appropriately, using appropriate language.

Developing team expectations – As a leader, it is important to have high expectations in order to achieve and be the best you can be.

Supporting others – You can support others in many ways as the leader to help them improve, achieve their goals. E.g. Provide feedback on how to improve, give them demonstrations, break down skills for them to practice

Health & Safety – It is the leader's role to ensure that the performing environment is safe to play on such as removing any glass or rubbish so nobody slips. Other ways that you can ensure the safety of your participants is of it's highest standard is making sure first aid is always available in case of any injury and to ensure you know all the medical needs of the people you are delivering your sessions to.

Organisation – Sport that consists of structured competition, follows a defined set of rules and is governed and officiated by an organised body. As a leader you also have to organise your sessions so that participants are safe to take part.

Procedures - The process is the set of steps that will create the outcome. The procedure you follow when leading a session so warm up first, then drills, then progressions, then conditioned games and competitive situations.

Y9 PE



Head

(What you think/know)

Rules
Regulations
Tactics
Skills
Analysis
Decision Making
Problem Solving

Assessment in PE



Hands

(What you do)

Technique
Fitness
Skills
Control
Fluency
Precision
Fundamental Movements



Heart

(How you act)

Resilience
Leadership
Communication
Dealing with Conflict
Positivity
Persistence
Confidence



Term 2/3 Activities



Develop, using a range of tactics and strategies to overcome opponents through:

Football/ Table-Tennis / Badminton / Handball

Develop my team work and problem solving skills through:

O.A.A



Our Vision in performance is to
'Inspire students to develop their confidence and expression, through artistic and physical literacy, instilling lifelong skills'



Leadership – Leading Others

Key Concepts:

Barriers – Cost – e.g. not being able to afford to attend classes, pay fees. **Access** – e.g. not being able to physically get to the activities due to transport issues. **Time** – e.g. not having the time to attend any physical activity sessions, sports clubs due to work commitments, childcare.

Barriers – Personal – e.g. body image issues so not confident to join sessions. **Cultural** – e.g. due to religious beliefs.

Addressing Barriers to Participation – Cost: discounted pricing o hiring of equipment o free car parking. Access: public transport discounts o cycle hire to access the facility o free parking o taster days o staff training to support all types of participant and their needs o increased range of provision of sports and physical activities o ramps o assistive technology to include pool hoist, Braille information and signage, hearing loops. Time: creche facilities o extended opening hours. Personal Barriers: private changing rooms o allowing participants to wear clothing they feel most comfortable in o use of variety of images of people with different body shapes o parent and child activity sessions to create familiar culture of sport o campaigns to increase participation. Cultural Barriers: women only physical activity sessions staffed by females o diversity of staff working at sport or physical activity facility o staff training in cultural awareness

Demonstrations - A visual image of how to perform a skill, technique so that people can learn and develop.

Coaching Points – The key points that help an individual to understand how to perform something e.g. chest pass in Netball – both hands on the ball in front of the chest, step into the pass, extend the arms, push with fingers.

Effective Feedback to Participation – Supporting others on how to improve their performance, identifying areas to work on and areas to further improve. Identifying strengths to use as a motivational tool.

Y9 Music 1.1

Origins of Britpop

- **Time period:** Early 1990s (around 1992–1993).
- **Reaction against grunge:** Britpop arose as a response to American grunge and alternative rock, aiming to create a distinctly **British identity** in music.
- **Musical roots:** Influenced by **1960s British pop and rock bands** like *The Beatles*, *The Kinks*, *The Who*, and *The Small Faces*, as well as *The Smiths* from the 1980s.
- **Cultural background:** Part of a broader celebration of British life and pride known as “**Cool Britannia**”, which included art, fashion, and film.
- **Key early bands:** *Suede*, *Blur*, *Oasis*, and *Pulp* defined the genre in its early years.



Britpop



🎵 Features of Britpop

• Sound:

- Catchy **melodic guitar pop** with a blend of **rock and alternative influences**.
- Less heavy and darker than grunge; more upbeat and tuneful.

• Themes & Lyrics:

- Focused on **British life, everyday experiences, working-class culture, and humor**.
- Often contained **social commentary** and a sense of national identity.

• Style & Image:

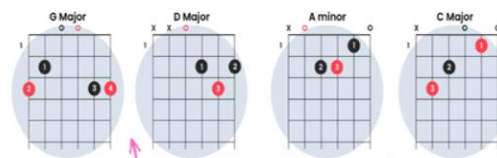
- Influenced by **mod fashion, retro British aesthetics, and youth culture**.
- Musicians often presented themselves as relatable, witty, and unpretentious.

• Cultural impact:

- Fueled intense **media rivalries** (especially *Blur vs. Oasis*).
- Symbolized 1990s British confidence in music, art, and culture.

[Verse 1]

G D
Maybe I don't really wanna know
Am
How your garden grows,
C D
'Cause I just wanna fly.
G D
Lately did you ever feel the pain
Am
In the morning rain
C D
As it soaks you to the bone.



Notice that you can keep your ring finger on between G and D!

And you can keep your index finger on between A minor and C!

Rap and Hip-hop



Origins of Rap Music

• **Time period:** Rap (or hip-hop music) originated in the **early to mid-1970s**.

• **Place:** It began in the **Bronx, New York City**, particularly in African American and Latino communities.

• Cultural roots:

- Developed from **block parties** where DJs (like **DJ Kool Herc**) used two turntables to extend breakbeats from funk, soul, and disco records.
- MCs (Masters of Ceremony) began **talking rhythmically** over these beats to hype up the crowd — this evolved into **rapping**.
- Influenced by **African oral traditions, spoken word poetry, Jamaican toasting, and funk music**.

• Early pioneers:

- **DJ Kool Herc, Afrika Bambaataa, Grandmaster Flash and the Furious Five, and later Run-D.M.C., Public Enemy, and Sugarhill Gang** helped define the genre.

Gangsta's Paradise

(from "Dangerous Minds")

Words and Music by
Artis Ivey Jr., Stevie Wonder,
Doug Rasheed and Larry Sanders

Moderately



DJ

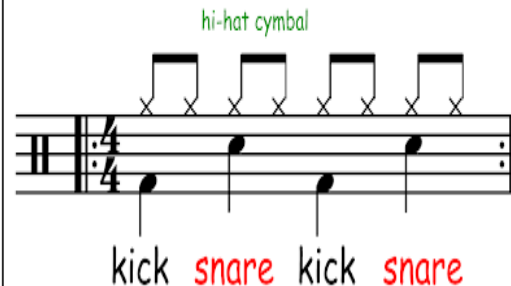


MC
(Rapping)



Break
Dancing

Rap Song Structure



Key Features of Hip-Hop Music

1. Rapping (MCing)

- The **vocal style** of hip-hop, where artists **rhythmically speak or chant lyrics** over a beat.
- Focuses on **rhythm, rhyme, flow, and wordplay**.
- Can be **storytelling, boastful, socially conscious, or political**.
- Emphasizes **personal expression** and lyrical skill rather than melody.

Y9 Music 2.1

Reggae is a unique form of rock music which originated in Jamaica. It has its roots in a number of other musical styles. You can hear the influence of traditional Jamaican music as well as American rhythm 'n' blues, which would have been easily picked up in Jamaica in the early days of radio. Music has always had a big role in the lives of Jamaican people. The roots of traditional Jamaican music can be traced back to African music due to number of Jamaicans who are descendants of Africans brought to the West Indies to work as slaves on sugar plantations.

Reggae

3 Little Birds

Chorus:
 C
 Don't worry about a thing
 F C
 'Cause every little thing is gonna be all right
 C
 Singin' don't worry about a thing,
 F C
 'Cause every little thing gonna be all right

Verse:
 C
 Rise up this mornin'
 G
 Smiled with the risin' sun
 F
 Three little birds
 C
 By my doorstep
 C
 Singin' sweet songs
 G
 Of melodies pure and true
 F G C
 Sayin' this is my message to you-ou-ou

First strumming patterns

↓	↓	↓	↓	D	D	D	D				
↓	↓	↓	↑↓	D	D	D	D	U			
↓	↑↓	↓	↑↓	D	D	U	D	D	U		
↓	↑↓	↓	↑↓	D	D	U	D	U	D	U	
↓↑	↑↓	↑↓	↑↓	D	U	D	U	D	U	D	U
↓	↑↓	↑	↑↓	D	D	U	D	U			

🎵 Musical Features of Reggae Music

🎧 1. Rhythm and Tempo

- **Steady, laid-back tempo** — typically **slow to medium pace (around 70–90 BPM)**.
- Characterized by the **“one drop” rhythm**, where the **snare or kick drum hits on the 3rd beat** of each bar instead of the 1st.
- Creates a **relaxed, syncopated groove** that gives reggae its signature swing.

Syncopation is a large part of reggae music!!



Reggae – BBC Bitesize



Y9 Music 2.2

Dance Music



Building a chord progression - D minor example

5th	A	Bb	C	D	E	F	G
3rd	F	G	A	Bb	C#	D	E
Root	D	E	F	G	A	Bb	C
Chord Name	D minor	E dim	F major	G minor	A major	Bb major	C major
Chord No.	(i) 1	(ii) 2	(III) 3	(iv) 4	(V) 5	(VI) 6	(VII) 7

Famous dance music artists



David Guetta



Skrillex



Calvin Harris

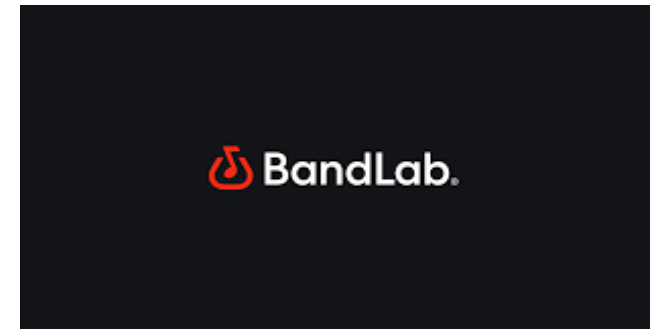


Martin Garrix

Creating an EDM drum pattern

	x		x		x		x
		x				x	
x		x		x		x	
1	+	2	+	3	+	4	+

Midi Keyboard



- Key Terms**
1. Key
 2. Tempo
 3. Record
 4. Filter
 5. Loop

BandLab for beginners



Music Technology /STEMS



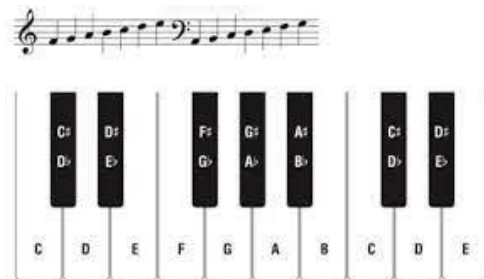
Song stems are individual musical elements that, when layered together, make a song. A stem can be a single instrument, like a snare drum or a bass line, or a collection of multiple elements combined as one track, like a group of vocal harmonies. Stems can be created from recordings or digital instruments

Music Technology Key Terms	Definitions
Balance	The Volume between parts
Bouncing Down	Process of mixing down several tracks and re-recording it onto one
Chord	Two or more notes played at the same time
Chorus	The section of the song that repeats
Compression	Squeezing the dynamic range of a signal by reducing the signal level
Delay	The original sound is repeated one or more times
EQ	Equalisation – a method of compensating for deficiencies in the frequency response
Expander	The opposite of a compressor
Flange	Forms of modulation, similar to chorus but the original and delayed signals are combined.
Gain	Volume boost
Loop	Repeated passage
Mixing	Combining sound
Mono	One instrument /signal
Panning	Placing a sound in a speaker (left or right)
Quantise	Adjusting data to fit within defined limits
Sample	Short pre-recorded sound

Key Terms

1. Pitch
2. Tempo
3. Bandlab
4. Software
5. Instrumentation

Composing used the keyboard



Composing using Band Lab



Just Play



Blinding Lights



Uptown Funk



This Is Me



Band / Ensemble Skills:

- Self confidence
- Coordination
- Teamwork
- Problem Solving
- Discipline
- Appreciation for music
- Communication
- Engagement
- Practice!!!

Key Terms

1. Confidence
2. Expression
3. Notation
4. Fluency
5. Instrumentation

Vocals

The vocals will be used to sing the melodies to the songs. The vocals will need to be sung with confidence and technique.



Drums

The drums will be used for playing specific beats to songs. The drums are played to keep the band in time.



Ukulele

The ukulele will be used for playing chords through TAB music. These chords will be played with a variety of strumming patterns and different finger placements.



Bass Guitar

The bass guitar will be used to play root notes through TAB music. These root notes will be played in a variety of different finger placements.



Electric Guitar

The electric guitar will be used to play chords through TAB music. These chords will be played with a variety of strumming patterns and different finger placements.



Keyboard

The keyboard will be used for playing chord chords. These chords must be fluently and with specific rhythms.





Y9 French Assessment A Knowledge Organiser

Holiday Destinations

la France	France
le Portugal	Portugal
l'Espagne	Spain
l'Italie	Italy
le Pays de Galles	Wales
les États-Unis	USA
L'Écosse	Scotland
la Turquie	Turkey
l'Australie	Australia
l'Allemagne	Germany
l'Angleterre	England
la Majorque	Majorca
les Îles Canaries	The Canary Islands
Cornouailles	Cornwall
la Nouvelle-Zélande	New Zealand
les Maldives	The Maldives

Transport

en voiture	by car
en avion	by plane
en train	by train
en bateau	by boat
en (auto) bus	by bus

Key Phonemes

é	ay
è	eh
e	uh
ch	sh
qu	k
gne	nyuh
i	ee
oi	wah
ç	ss
ill	eey
an	on
eau	oh
en	on
in	an
ique	eek
eux	uh

Make sure you know the alphabet in French too!

Introductions & Basics

Bonjour!	Hello!
Je m'appelle...	I'm called..
J'ai ... ans	I'm ... years old
J'habite à	I live in...
Merci!	Thank you!
De rien!	You're welcome!
Oui / Non	Yes / No
Au revoir!	Goodbye!

Weather

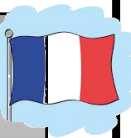
il y a du soleil	it's sunny
il pleut	it's raining
il fait froid	it's cold
il fait chaud	it's hot
il neige	it's snowing
Il fait beau	it's nice
Il fait mauvais	it's bad
Il y a de l'orage	it's stormy

Holiday Activities etc

je joue au mini-golf	I play min-golf
je mange la cuisine locale	I eat local cuisine (food)
je loge dans un hôtel	I stay in a hotel
je vais à la plage	I go to the beach
je fais du ski nautique	I do water skiing
je visite des musées	I visit museums
je bois de la sangria	I drink sangria
je nage avec les dauphins	I swim with dolphins
demi-pension	half board
tout compris	all inclusive
une villa	a villa
une caravane	a caravan
un camping	a campsite
un parc aquatique	a water park

Likes and Dislikes (PANDA)

Je préfère	I prefer
J'adore	I love
Je n'aime pas	I don't like
Je déteste	I hate
J'aime	I like



Tenses and other structures

Je suis allé(e)	I went
Il/Elle est allé(e)	He/She went
Nous sommes allé(e)s	We went
Je vais visiter	I'm going to visit
Je voudrais loger	I'd like to stay
On peut nager	You can swim
Il y a	There is
Il y avait	There was
l'année dernière	last year
l'année prochaine	next year
dans le futur	in the future
toujours	always
quelquefois	sometimes



Y9 French Assessment B Knowledge Organiser



Town vocabulary	
Dans ma ville ...	in my town...
il y a ...	there is/are...
Il n'y a pas de ...	There isn't...
Les montagnes	mountains
un stade	a stadium
un cinéma	a cinema
un château	a castle
une patinoire	an ice-rink
où	where
on peut faire de la natation	you can go swimming
on peut manger	you can eat
on peut danser	you can dance
on peut regarder	you can watch
une ville historique	an historic town
une ville touristique	a tourist town

Key Phonemes	
é	ay
è	eh
e	uh
ch	sh
qu	k
gne	nyuh
i	ee
oi	wah
ç	ss
ill	eey
an	on
eau	oh
en	on
in	an
ique	eek
eux	uh
<i>Make sure you know the alphabet in French too!</i>	

Introductions & Basics	
Bonjour!	Hello!
Je m'appelle...	I'm called..
J'ai ... ans	I'm ... years old
J'habite à	I live in...
Merci!	Thank you!
De rien!	You're welcome!
Oui / Non	Yes / No
Au revoir!	Goodbye!

Other useful vocabulary	
très / assez	very / quite
quelquefois/ souvent	sometimes / often
grand(e) / petit (e)	big / small
il fait chaud / il pleut	it's hot / it rains or it's raining
Angleterre/ Espagne	England / Spain
Suisse / Belgique	Switzerland / Belgium
mon frère / ma sœur	my brother / my sister

School	
mon collège	my school
les élèves	pupils
ma matière préférée	my favourite subject
mon prof	my teacher
une bibliothèque	a library
la cantine	the canteen
j'étudie	I study
l'histoire	History
les sciences	Science
les maths	Maths
le français	French
le dessin	art
l'E.P.S	P.E
sympa	nice
ennuyeux (se)	boring

Likes and Dislikes (PANDA+2)	
Je préfère	I prefer
J'adore	I love
Je n'aime pas	I don't like
Je déteste	I hate
J'aime	I like
(Je ne supporte pas)	I can't stand
plus/moins	more/less

Tenses and time phrases	
Je suis allé(e)	I went
Il/Elle est allé(e)	He/She went
J'ai visité	I visited
Nous avons visité	We visited
J'ai mangé	I ate
J'ai joué	I played
Je vais aller	I'm going to go
Je vais regarder	I'm going to watch
l'année dernière	last year
l'année prochaine	next year
la semaine dernière	last week
la semaine prochaine	next week
le mois prochain	next month

The Cardinal points	
le nord	North
le sud	South
l'est	East
l'ouest	West
le sud-ouest...	South West