YEAR 8 - REPRESENTATIONS

@whisto maths

Representing Data

What do I need to be able to do?

By the end of this unit you should be able to:

- Draw and interpret scatter graphs
- Describe correlation and relationships.
- Identify different types of non-linear relationships.
- Design and complete an ungrouped frequency table.
- Read and interpret grouped tables (discrete and continuous data)
- Represent data in two way tables.

Keywords

Variable: a quantity that may change within the context of the problem.

Relationship: the link between two variables (items). Eq. Between sunny days and ice cream sales

Correlation: the mathematical definition for the type of relationship. Origin: where two axes meet on a graph.

Line of best fit: a straight line on a graph that represents the data on a scatter graph.

Outlier: a point that lies outside the trend of graph.

Quantitative: numerical data

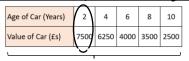
Qualitative: descriptive information, colours, genders, names, emotions etc.

Continuous: quantitative data that has an infinite number of possible values within its range.

Discrete: quantitative or qualitative data that only takes certain values.

Frequency: the number of times a particular data value occurs

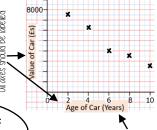
Draw and interpret a scatter graph.



- This data may not be given in size order
- The data forms information pairs for the scatter graph
- Not all data has a relationship

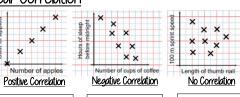
The link between the data can be explained verbally

"This scatter graph show as the age of a car increases the value decreases*



The axis should fit all the values on and be equally spread out

Linear Correlation



Os one variable.

increases the

other variable

decreases

Os one variable increases so does the other variable

100

80

60

40

There is no relationship between the two variables

The line of best fit

The Line of best fit is used to make estimates about the information in your scatter graph

The line of best fit DOES NOT need to go through the origin (The point the axes cross)

- There should be approximately the same number of points above and below the line (It may not go through
- The line extends across the whole



It is only an estimate because the line is designed to be an average representation of the data

It is always a **straight line**.

Using a line of best fit

Interpolation is using the line of best fit to estimate values inside our data

e.g. 40 hours revising predicts a percentage of 45.



**This is not always useful — in this example you cannot score more that 100%. So revising for longer can not be estimated **

This point is an "outlier" It is an outlier because it doesn't fit this model and stands apart from

Ungrouped Data The number of times an

event happened '

The table shows the number of siblings students have. The answers were

3,1220,34,1120,2

2 people had 0 siblings. This means ther are 0 siblings to be counted here

lumber of siblings	Frequency	
0	2	0 -
1	3	3
2	4.	2+2+2+2OR2x4=8
3	2	3+30R3x2= 6
4	1	4

Best represented by discrete data (Not always a number)

2 people have 3 siblinas so there are 6 siblinas in total

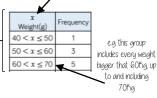
> OVEROLL there are 0+3+8+6+4 Siblings = 21 siblings

Grouped Data If we have a large spread of data it is better to group it. This is so it is easier to look for a trend. Form groups of equal size to make comparison more valid and spread the groups out from the smallest to the largest value.

	-		
ot _	Cost of TV (£)	Tally	Frequency
Data cb not	101 - 150	7HL 11	7
Discrete Data Re groups do m overlap	151 - 200	7HL 7HL I	Ш
Siscr Siscr	201 - 250	THL	5
<u>م</u> کے	251 - 300	111	3

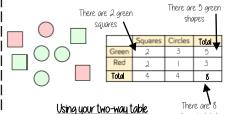
We do not know the exact value of each item in a group — so an estimate would be bused to calculate the overall total (Midpoint)

ncluded inequalities represent the subgroups



Representing data in two-way tables

Two-way tables represent discrete information in a visual way that allows you to make conclusions, find probability or find totals of sub groups



Using your two-way table

To find a fraction eg. What fraction of the items are red? **3 red items**

but 8 items in total = $\frac{3}{9}$

Time spent practising (hours

hterleaving: Use your fraction, decimal percentage equivalence knowledge

YEAR 8 - REPRESENTATIONS... Tables and Probability

What do I need to be able to do?

By the end of this unit you should be able to:

- Construct a sample space diagram.
- Systematically list outcomes.
- Find the probability from two-way tables.
- Find the probability from Venn diagrams.

Keywords

Outcomes: the result of an event that depends on probability.

Probability: the chance that something will happen.

Set: a collection of objects.

Chance: the likelihood of a particular outcome.

Event: the outcome of a probability - a set of possible outcomes. Biased: a built in error that makes all values wrong by a certain amount.

Union: Notation 'U' meaning the set made by comparing the elements of two sets.

Construct sample space diagrams

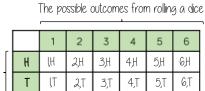






Sample space diagrams provide a systematic way to display outcomes from events

from tossing a coin



This is the set notation to list the outcomes S =

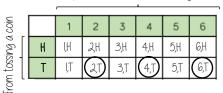
In between the { } are a, the possible outcomes

S = { IH, 2H, 3H, 4H, 5H, 6H, IT, 2T, 3T, 4T, 5T, 6T}

There are three

Probability from sample space

The possible outcomes from rolling a dice



This is the set notation that

represents the question P

P (Even number and Tails)

What is the probability that an outcome

has an even number and a tails?

In between the () is the event asked for

The event

even numbers with Numerator: tails the event

Denominator:

the total number

There are twelve of outcomes possible outcomes

Probability from two-way tables

	Car	Bus	Walk	Total
Boys	15	24	14	53
Girls	6	20	21	47
Total	21	44	35	100

P (Girl walk to school) = 21 The total in the

The total number of items

Product Rule

The number of items in event a

The number of items in event b

Probability from Venn diagrams

100 students were questioned if they played badminton or went to swimming club. 40 went swimming, 25 went to badminton and 11 went to both.

This whole curve includes everyone that went Swimming Badminton swimming. Because II did both we calculate just swimming by 40- 11 29 14 \parallel The intersection 46 🔻 represents both. Swimming **QND** badminton

This whole curve includes everyone that went to badminton. Because II did both we calculate just badminton by 25 - 11

P (Just swimming) = 100

Χ

The number outside represents those that did **neither** badminton or swimming

100 - 29 - 11 - 14

YEAR 8 - ALGEBRAIC TECHNIQUES

@whisto maths

Brackets, Equations & Inequalities

What do I need to be able to do?

By the end of this unit you should be able to:

- Form Expressions
- Expand and factorise single brackets
- Form and solve equations
- Solve equations with brackets
- Represent inequalities
- Form and solve inequalities

Keywords

Simplifu: grouping and combining similar terms

Substitute: replace a variable with a numerical value

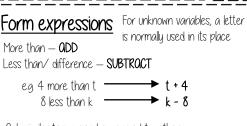
Equivalent: something of equal value

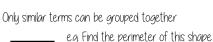
Coefficient: a number used to multiply a variable

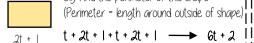
Product: multiply terms

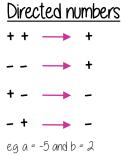
Highest Common Factor (HCF): the biggest factor (or number that multiplies to give a term)

Inequality: an inequality compares who values showing if one is greater than, less than or



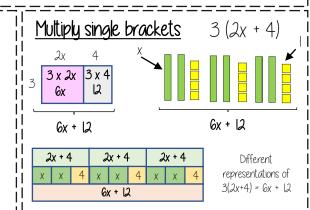


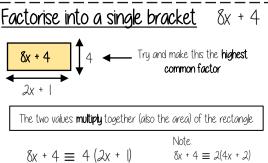




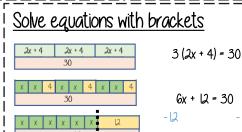
$$a^2 = a \times a = -5 \times -5 = 25$$

 $b + a = 2 + -5 = -3$

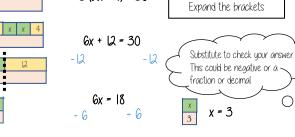












Simple Inequalities

< less than < Less than or eaual to > More than ≥ More than or equal to x < 10Sau this out loud

"x is a value less than 10" 10 > xNote: Say this out loud x<10 and 10>x 10 is more than the value' represent the same

x + 2 < 20"my value + 2 is less than or equal to 20"

Form and solve inequalities

number is greater than 11 Find the possible range of values Form

Two more than treble mu

Solve

¹¹ Check

This would suggest any value bigger than 3 satisfies the statement 3 x 3 + 2 = 11 ✓ 10 x 3 + 2 = 32 V

<u>Olgebraic</u> constructs

Expression

a sentence with a minimum of two numbers and one maths operation

3(2x + 4) = 30

Equation

a statement that two things are equal

a single number or variable

Identitu

On equation where both sides have variables that cause the same answer includes ≡

Formula

a rule written with all mathematical symbols e.g. area of a rectangle $Q = b \times h$

The biggest the value can be is 18

Year 9 Knowledge organiser Changing Substances

Ke	y Vocabulary:		10	Chemical and Physical Changes	13	Reactions of Metals with Acid		
1	Atom	The smallest particle of an element that can exist. The element magnesium is made up of only magnesium atoms.	physical change no new substance is produced. A chemical change is irreversible whereas a physical change is reversible.			Acids react with some metals to produce salts and hydrogen Metal + acid → salt + hydrogen This can be remembered by MASH: Metal + Acid → Salt + Hydrogen		
2	Chemical formula	The symbols that show how many of each type of atom are present in an element or compound. The chemical formula for water is H_2O_{\bullet}	Melting, evaporating, condensing, freezing and sublimation are examples of physical changes because they only change the <u>state</u> (solid, liquid or gas) of the substance. These processes only change the energy that each particle has (how much it moves) and <u>not</u> its arrangement or properties (e.g. its boiling or melting point).		Example 1: Copper + Hydrochloric acid → copper chloride + hydrogen Example 2: Sodium + Nitric Acid → sodium nitrate + hydrogen 14 Reactions of Acids with Alkalis, Bases and Metal Carbonates Acids are neutralised by alkalis (e.g. soluble metal hydroxide			
3	Chemical change	A chemical reaction where a new substance is formed. A chemical change is irreversible.			to pr Acid Acid	pases (e.g. insoluble metal hydroxides and metal oxides) oduce salts and water, + alkali →salt + water + base → salt + water s are neutralised by metal carbonates to produce salts,		
4	Combustion	A high temperature reaction with oxygen (burning). The combustion of magnesium produces magnesium oxide.		chemical Reactions emical change can also be called a chemical reaction. number and type of atoms do not change in a	wate Acid The p and a	er and carbon dioxide. + metal carbonate > salt + water + carbon dioxide coarticular salt produced in any reaction between an acid a base or alkali depends on the acid and metal in the		
5	Compound	A substance made up of two or more elements chemically bonded together. Carbon dioxide is a compound because it is made up of carbon and oxygen chemically bonded together.	chemical change and are only rearranged.		base, alkali or carbonate Hydrochloric acid produces chloride salts, nitric acid produces nitrate salts, and sulfuric acid produces sulfate salts			
6	Conservation of mass	The law that says atoms cannot be created or destroyed in a chemical reaction so the total mass of products is equal to the total mass of reactants. According to the law of conservation of mass, the mass of magnesium oxide product will be equal to the mass of oxygen and magnesium reactants.		g NaOH + 10g HCl → 15g NaCl + 5g H ₂ O	surro temp neut	Exothermic and endothermic reactions chemical reaction, when energy is transferred to the bundings, this is called an exothermic reaction, and the perature of the surroundings increases. Eg combustion, ralisation and oxidation. In energy is taken in from the surroundings, this is called indothermic reaction and the temperature of the		
7	Oxidation	The gain of oxygen. When magnesium burns in oxygen, it is an oxidation reaction.		Reactions of Metals with Oxygen Is react with oxygen to produce metal oxides. eneral equation is: Metal + oxygen à Metal oxide	surro phot 16	oundings decreases. Eg thermal decomposition and osynthesis. Catalysts		
8	Reduction	The loss of oxygen.	Example 1: Copper + oxygen → copper oxide Example 2: Lithium + oxygen → lithium oxide		• ir	calyst is a substance that:		
9	Thermal decomposition	Thermal means heat. Decomposing is the process of breaking down. Thermal decomposition is a chemical reaction that happens when a compound breaks down when heated.	meta Redu	Example 2: Lithium + oxygen → lithium oxide These reactions are oxidation reactions because the metals gain oxygen Reduction is the loss of oxygen Oxidation is the gain of oxygen		loes not alter the products of the reaction is not chemically changed or used up at the end of the eaction		

Year 8 Science Knowledge organiser- Magnetism

Magnetic Force

21

Induced Magnetism

18

Key Vocabulary:

,	,			magnetic force is a non-contact force.	•	The strength of the magnetic field depends on the current through the wire and the distance from the wire.	
1	Attract	A pulling force causing objects to move towards each other.	their	some metals are magnetic: iron, cobalt, nickel and alloys (such as steel).	•	When a wire is wrapped around into a coil shape, we call it a solenoid.	
2	Bar magnet	A permanent magnet with a North pole and South pole.	_	Magnets nets have a north and a south pole.	•	Shaping a wire to form a solenoid increases the strength of the magnetic field created by a current through the	
3	Coil	A length of wire wrapped to form a spiral.	the s	poles of a magnet are where the magnetic force is strongest.	•	wire. The magnetic field inside a solenoid is strong. The magnetic field around a solenoid has the same	
4	Core	The centre of an object.		osite poles attract and like poles repel (remember, osites attract!)	pattern as the magnetic field around a permanent bar magnet.		
5	Current	The rate of flow of charge.		S N N S	2		
6	Electromagnet	A solenoid (coil of wire) with a current flowing through it, containing an iron core.	• Dorm	nanent magnets are magnetic all the time. Bar	•	An electromagnet is a solenoid with an iron core. We can make an electromagnet by wrapping a wire around an iron nail and turning on the current.	
7	Field Lines	Imaginary lines running from the North to South pole of a magnet, showing the direction and strength of the magnetic field.	magr	nets are permanent magnets. netic materials, including the Earth, create magnetic s.		Duthery control transactor wire	
8	Geographical Pole	Either of the two points on Earth where the axis of rotation meets		Magnetic Fields netic field lines are used to describe the strength	•	The strength of the magnetic field around a solenoid is	
		the surface.	_	direction of the magnetic field.		increased by adding more turns in the coil, adding a	
9	Induced	When something is caused or produced as a result of being near		direction of the magnetic field at any point is given	2	magnetic material as a core or increasing current.	
		something else.	•	ne direction of the force that would act on another no pole placed at that point		3 Earth's Magnetic Field The Earth has a magnetic field.	
10	Magnet	A material that produces a magnetic field, causing other magnetic materials to be attracted or repelled.	The a the NMag	arrows on the magnetic field lines always point from North pole to the South pole. netic field lines never cross or touch.		North magnatic pole	
11	Magnetic	Relating to magnetism and magnetic fields.		lines flow from the North pole to the South pole. er field lines demonstrate that the magnetic force is	•	A compass will point to Earth's North "magnetic" pole	
12	Magnetic Field	The area around a magnet that is	stror	~		which is different to Earth's geographic North pole which	
		affected by the non-contact magnetic force.	21	Induced Magnetism		is also different to the true North pole of the Earth's magnetic field.	
13	Permanent	Lasting forever or indefinitely.	wher	ced magnets are materials that become magnetic n placed in a magnetic field and when removed, lose magnetism.	•	The Earth behaves like it has a giant bar magnet inside it, because of currents of molten iron and nickel in its core.	
14	Repel	A pushing force causing objects to move away from each other.	• Whe	n a current flows through a conducting wire a	•	Molten means melted. The Earth's magnetic field has the same pattern as a	
15	Solenoid	A coil of wire with a current flowing through it.	magnetic field is produced around the wire. I			permanent bar magnet.	
16	Steel	An alloy made up of iron and other substances.		R			
17	Temporary	Lasting for a limited period of time, not permanent.					

Year 8 ART HT3 & HT4 Knowledge Organiser

KEYWORDS

<u>Graffiti</u> - Graffiti art refers to images or text painted usually onto buildings, typically using spray paint.

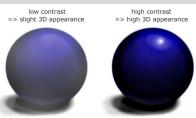
<u>Stencilling</u> - A technique for reproducing designs by passing ink or paint over holes cut in cardboard or metal onto the surface to be decorated.

<u>Three-dimensional -</u> A picture that has or appears to have height, width and depth is three-dimensional (or 3-D).

Anonymous – A person who is not identified by name, the state of being unknown.

<u>Political</u> – This relates to the governing and public affairs of a country.





BANKSY - ARTIST INFORMATION

BACKGROUND

Banksy is a street artist known for his controversial, and often politically themed, stencilled pieces. Banksy, whose identity remains unknown, is believed to have been born in Bristol, England, around 1974. From a recorded voice interview, it is believed Banksy started doing graffiti arts when he was 14 and reported that he struggled at school but graffiti made him feel better about himself and gave him a voice. He started off by cutting stencils for his early work as he struggled with a spray cans to produce the work free hand.

CRIMINAL?

Many people question Banksy's art pieces. He is described as one of Britain's most important working artists and one of the world's elusive criminals. As graffiti is illegal, Banksy competes his work undercover but yet does not seem to have a criminal offence on his record!

TIPS FOR CREATING THREE-DIMENSIONAL ART

- Identify the areas of light and dark.
- Add both clear shadow and highlights so that certain areas stand out.
- Include a variety of tones.
- Make sure you have a strong contrast between your colours, and tones.
- Remember colour theory.

WHERE?

Although
Banksy's work
is spread
across the UK
his works can
mainly be
seen on the
streets of
Bristol,
Brighton and
London.

SUBJECT MATTER

- Rats & apes
- His opinions
- People, including policemen, children, royal family
- Political themes
- War
- Capitalism
- Hypocrisy
- Greece











Year 8 Subject Term Knowledge Organiser: The World Wide Web

The Internet:

The internet is a worldwide network of computers. It is the physical hardware, i.e. the cables, the routers, and other pieces of hardware used to connect devices together.

Packets:

Networks send and receive messages in small units of data known as 'packets'.

A single message may be too large to fit in one packet. It is often split into many packets.

Each packet contains a part of the message, an address of where it came from, and an address of where it is going. These addresses are known as 'IP addresses', and they are unique.

IP Address:

An IP address is made up of 4 groups of numbers between 0 and 255, each separated by a full stop.

These are unique for every device on the internet.

Protocol:

A set of rules that must be followed.

Transmission Control Protocol:

Splits the messages sent across the internet into smaller pieces called 'packets'

Assembles the packets in the correct order at the receiver end

IP:

A protocol to route the packets. Each device on the internet has an IP address that uniquely identifies it from all other devices

The World Wide Web:

A collection of webpages found on the internet

Web Browser:

A piece of software (code) used to view information on the World Wide Web

Search Engine

A website that allows you to look up information on the World Wide Web.

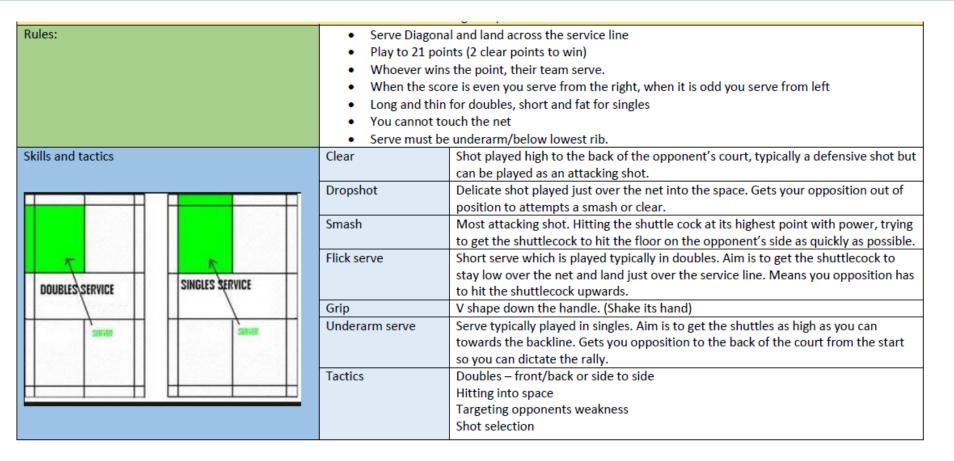
HTML:

HTML stands for **H**yper **T**ext **M**arkup **L**anguage and is the **standard markup** language for Web pages

HTML Tags:

Opening Tag	Closing Tag	Structure Specified		
		Paragraph Text		
<h1></h1>		Main heading		
<h2></h2>		Sub heading		
		Hyperlink		
< i>		List item		
		Bulleted (unordered) list		
<0 >		Numbered (ordered) list		
	None	Image		

Year 8 PE Knowledge Organiser- Badminton



KEYWORDS		
Let	sideline	Rally
Drop shot	tramlines	
Back boundary line	Long service line (for doubles)	
Long service line (for singles)	Scoring	
Centre line	Umpire	

Year 8 Subject Term Knowledge Organiser: Computing: Computer Systems

Embedded Computer

A computer system that is designed for a specific and dedicated purpose.

Personal Computer

A small computer with a microprocessor, designed for use by an individual.

Portable Computer

A computer designed to be easily moved from one place to another.

Super Computer:

An extremely powerful computer that operates at the fastest possible speed.

Artificial Intelligence:

The development of computer systems that can perform tasks that usually require human intelligence

Hardware

This is the physical parts of the computer which you can touch, for example monitors, keyboard, printers, wiring etc.

Software

This is the set of instructions for the computer to run a particular task or boot up, for example a word processor will be used to create documents and a virus checker can be used to check and clear viruses on the system

Input Devices

These are used to control the computer and are used to put data into the system. E.g. Keyboard and Mouse

Output Devices

These get something out of the computer for instance data or sound. E.g. Monitor, Speaker, Printer

Storage Devices

These are used to save data onto and can be inside the computer or portable so the data can be taken with the user.

Magnetic Storage Devices

These uses a magnetised surface area in order to hold bits of information. E.g.

- · Fixed Hard Disk Drive
- Portable Hard Disc Drive
- Floppy Disc Drive

Optical Storage Devices

Optical Storage Devices use light sources to read/write data onto a disc. Data is stored using a series of dots that is read using the light.

- CD-ROM
- CD RW
- DVD ROM
- DVD RW
- BlueRay

ROM - READ ONLY MEMORY

Can't be written over or added too. Can only be READ

RW - READ ONLY MEMORY

Can be written over and read

Solid State Memory

These have no moving parts e.g. no spinning discs or laser beams. E.g.

- Memory Stick/Pen
- Flash Memory Cards

Year 8 Subject Term Knowledge Organiser: Computing: Computer Systems

A peripheral device

This is a computer component that is not part of the computer.

They are external devices and are attached to the outside of a computer

The Central Processing Unit

The CPU is often called the "brains of the computer." The purpose of the CPU is to process data. The CPU is where processes such as calculating, sorting and searching take place. Anything that is done on our computers, such as checking emails, playing games and doing homework, the CPU has processed the data we use.

ROM: Read Only Memory

Read-Only Memory can not be changed. This means it is also an example of **non volatile memory as it doesn't get deleted when the computer is switched off**.

A computer will have a ROM chip that usually stores the data the manufacturer has put on there. It contains all of the data to get a computer running

RAM: Random Access Memory

This is 'Short Term' memory of a computer which is very fast. It gets deleted when the computer is switched off and it contains the information the computer needs whilst it is running.

It is known as volatile memory as it can be changed.

Operating systems

These are pieces of software that manage everything that happens in your computer and they instruct the hardware on what to do.

The operating system makes your system useful. Without it your computer would sit there and do nothing.

Network

A **network** is where devices are connected together usually by cable or Wi-Fi. This could be a few computers in a room, many computers in a building or lots of computers across the world.

Type of Network	Description	Example
Local Area Network (LAN)	Connect computers over a building or a site.	School network
Wide Area Network (WAN)	Connect computers over a larger area such as a town, city or country.	The internet or a businesses that has locations all over the world

Year 8 HT3 & 4 Drama Knowledge Organiser

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 Johnstone	Mickey's older brother. He's always n 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.
The	Helps to tell the story. He also plays several minor

characters throughout the play.

Key Words

Narrator

1. Antagonist 5.

2. Protagonist3. Working Class

4. Superstition

5. Scouse Accent

6. Thatcher

7. Themes

8. Musical Theatre

Aims of the topic

To explore the set text in detail to complete a performance and written exam.

Blood Brothers Y8

Knowledge Organiser

Summary of topic

To explore key extracts from the iconic musical 'Blood Brothers' by Willy Russell with the aim to understand the Thatcher era and consider the difficulties within society during the 1960-1980s in Liverpool.

After exploring the play-text, develop a section to performance standard making key decisions about character and artistic intentions.





KEY THEMES

Money
Social Class
Fate
Superstition
Friendship
Coming of age
Identity Gender

Skills & Definitions

HOT SEATING – Asking interesting questions and answering them in character to discover more about your character

FREEZE FRAMES – Frozen images that represent a story/message

MIME – Planned movement involving no speech or vocals

IMPROVISATION – Drama/Performance made up on the spot with no time to plan

NATURALISM – Acting that is true to real life and natural. Uses real emotions.

Assessment & Performance Tips

- Face the audience at all times
 - Speak loud and clear so everyone can hear you
- Remember its naturalism
- Try not to laugh and stay focused
- Bring props and costume in to enhance your character
 - Use an accent or voice to differentiate your character from yourself
 - Try your best
 - Use the Liverpudlian accent

		/ - Knowledge Organiser	
Simple sentence: Contains only one main clause. It <u>must</u> have a subject and a verb, and <u>may</u> have an object.	Authorial intent: What the writer's purpose is and why they wanted to write the piece.	Analysing an Extract Write as succinct lots of wasteful was a Try to ambod you	
Compound sentence: Has two main clauses, joined by a co-ordinating conjunction.	Thesis statement: An argument to introduce and outline the main points of an essay.	 Try to embed you phrase from the to paragraph you're Zoom in to key well 	
Complex sentence: consists of a main clause plus one or more subordinate clauses.	Appositive: An appositive is a noun or a noun phrase that sits next to another noun to rename it or to describe it in another way.	semantic field. • Don't rely on knoworking out whate • Refer to the structure.	
Periodical sentence: placing the main clause at the very end.	Personification: Describing a non-living thing with living qualities.	that type of sente	
Cumulative sentence: are long sentences which place the main clause at the start of the sentence with the modifiers following after.	Juxtaposition: Two or more things being seen or placed close together with contrasting effect.	 Analysing using a Thesi Use the text to continuous Use an appositive Refer to an argument want to explore Try to explore continuous piece on and horse 	
Minor sentence: An incomplete sentence. It may lack a subject or a main verb but nevertheless we understand what is meant.	Alliteration: The same letter or sound at the beginning of words next to one another or closely connected words.		
Exclamatory sentence: making an exclamation of shock, horror, anger, delight, excitement using an exclamation mark!	Oxymoron: Two words next to each other that are opposite and contradict one another.	Use evidence from the Use evidence from Use evidence from Creative Writing You can control vocabulary with Use of imagery, creates a visua Write a piece to Create pathos, of language and Use a variety of Proof reading is	
Imperative sentence: Featuring an imperative verb, an imperative sentence gives an instruction or a command	In medias res: Starting in the action.		
Interrogative sentence: A sentence which interrogates, or questions, ending in a question mark. Remember that a rhetorical question is a different kind of question.	Pathetic fallacy: Where the mood and emotions are attributed to non-human things.		
Declarative sentence: The most commonly used sentence type, simply stating or declaring information.	Syntax: The way in which such as words are put together to form clauses in sentences.	anything! Check that your sentenc	

Analysing an Extract

- Write as **succinctly** as you can, without letting your **point** get lost in lots of wasteful words.
- Try to **embed** your **quotations**, choose the shortest, most **precise** phrase from the text as you can and try to let it flow naturally in the paragraph you're writing.
- Zoom in to **key words**, particularly explaining **connotations** and the semantic field.
- Don't rely on knowing what the text means, focus instead on working out what the writer is implying.
- Refer to the **structure** of the **sentences** and why the writer has used that type of sentence.

Analysing using a Thesis Statement

- Use the **text** to convey your understanding of **authorial intent**.
- Use an **appositive** to detail knowledge on the **author**.
- Refer to an **argument** based on the question and the **ideas** you want to explore in your essay.
- Try to **explore connection** to the **time** the writer has based their piece on and how this reflects their intentions.
- Use **evidence** from the text to prove your ideas.

Creative Writing

- You can control the mood and tone of your writing by choosing vocabulary with the right connotations.
- Use of imagery, pathetic fallacy, alliteration and personification creates a visual image for the reader.
- Write a piece to match the purpose, audience and format.
- Create pathos, ethos and logos within your piece through the use of language and structure.
- Use a variety of **sentence types** to emulate 19th century writing.
- **Proof reading** is a key skill; no writer publishes their first draft of anything! Check your punctuation, particularly capital letters and that your **sentences** are complete.

MFL Knowledge Organiser

KO. Yr 8 Food and Mealtimes

Tenses-Present

Prendre = to take			
Je prends	I eat breakfast		
Tu prends	You eat breakfast		
II/Elle/On prend	He/She/It east breakfast		
Nous prennons	We eat breakfast		
Vous prennez	You all eat breakfast		
Ils/Elles prennent	They eat breakfast		

REGULAR **PRESENT TENSE**

	-ER	-IR	-RE
Je	е	is	S
Tu	es	is	S
II/Elle/On	е	it	
Nous	ons	issons	ons
Vous	ez	issez	ez
Ils/Elles	ent	issent	ent

Opinions & Pronouns

J'aime

J'aime beaucoup

Je n'aime pas

Je n'aime pas du tout

J'adore



Connectives





Mais= but

• Ce pendant = however

• Parce que = because

Adjectives

Savoureux	tasty
Degôutant	disgusting
Tôt	early
tard	late
Delicieux	delicious
Saine	Healthy
Juteux	juicy
Corsé	Strong-flavoured



Je prends le petit dejeuner = I eat breakfast Je prends le dejeuner = I eat lunch Je grignote = I eat a snack Je dine = I eat tea

À ... heure = At... o'clock

Climate Change Knowledge Organiser

Key terms

Atmosphere - a layer of gases that surrounds the planet

Weather - the current conditions in the atmosphere

Climate - the average weather conditions in an area over a period of time **Greenhouse effect** - the process by which CO² and other gases prevent the Earth's heat escaping into space

Greenhouse gas - a gas, present in the atmosphere, which reduces the loss of heat into space (carbon dioxide, methane, nitrous oxide, water vapour, CFCs).

Global warming - the slow increase in the earth's average temperature

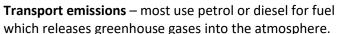
Carbon emissions - CO2 added to the atmosphere by burning fossil fuels

Enhanced Greenhouse effect - the effect of increased levels of CO² and other gases in the atmosphere to prevent more of the earth's heat from escaping into space

Causes of climate change

Human causes

Burning fossil fuels – fossil fuels like coal and natural gas contain high amounts of carbon; burning them for energy releases this carbon into the atmosphere



Deforestation - trees absorb carbon and transform it into oxygen during photosynthesis; if they are cut down there will be more carbon in the atmosphere

Dumping waste in landfills - when waste is left to decompose in a landfill it produces and gives off methane, another greenhouse gas like carbon **Agriculture** - agricultural practices lead to the release of nitrogen oxide & methane into the air

Natural causes

Orbital changes - the Earth has natural periods (like ice ages) where the average temperature changes a lot due to changes in the tilt, wobble and shape of the orbit.

Solar output - the amount of solar radiation from the sun changes; if it is stronger, Earth's temperatures will rise

Volcanic eruptions – during a volcanic eruption carbon dioxide is released.

What is the greenhouse effect?

Solar radiation (the sun's rays) power the climate system. Some solar radiation is reflected by the Earth and the atmosphere. About half the solar radiation is absorbed by the Earth's surface and warms it. Infrared radiation is emitted from the Earth's surface. Some of this infrared radiation passes through the atmosphere, but most is absorbed and reemitted in all directions by clouds &

greenhouse gases. The effect of this warms the earth's surface and lower atmosphere. Human activities can impact the amount of greenhouse

Outgoing energy

Atmosphere, containing greenhouse gases
energy

Trapped energy

Earth

gasses in the atmosphere, and can therefore increase global temperatures.

Impacts of climate change

Climate change affects the whole planet but looks different in different places or seasons. Below are some examples of positive **and** negative effects of climate change.

Positive	Negative
 Longer growing season for agriculture Energy consumption may decrease due to warmer climate Frozen regions like Northern Canada may be able to grow crops As ice melts in the Arctic, faster shipping routes may open up, helping trade Increase in fish stocks in some areas 	 Malaria and cholera increase due to temperature increase Increase in climate change refugees as areas become unsuitable for human life Sea level rise will affect ~80 million people Coral reefs damaged as a result of increased ocean/ sea temperatures Tropical storms will increase in magnitude (strength) Species in affected areas (i.e. Arctic) may become extinct Ski resorts may lose business as snow cover decreases

Climate Change Knowledge Organiser

Reducing emissions

Individuals can reduce their emissions by:

- Driving electric cars
- Using renewable energy sources e.g. solar panels
- Eating less meat
- Planting more tress
- Using public transport or walking/cycling
- Insulating houses
- Buying local produce.
- Reducing waste and recycling

Governments can reduce emissions by:

- International agreements such as the Kyoto Protocol or Paris agreement
- Investing in renewable technology such as wind energy
- Investing in public transport or cycling infrastructure e.g. cycle lanes







Renewable and non-renewable energy sources

We harvest energy from many different sources. These sources are either **renewable** (meaning they can be used over and over again without running out) or **non-renewable** (meaning they can only be used once and will eventually run out). Renewable energy sources are more sustainable because we never have to worry about future generations running out.

UK electricity generation
Proportion of total electricity generated from different sources in the
12 months ending September 2017

Coal Bioenergy	5% Oth	41%	Gas
Wind 13%	22%		
	Nuclear		

Donouvohlo	Non renewable
Renewable	Non-renewable
Wind power	Coal
Hydro-electric power	Natural gas
Wave & tidal energy	Oil
Solar power	Nuclear power
Geothermal energy	

Nuclear Power

Nuclear power is created from the release of energy from nuclear reactions (**fission** or **fusion**). These reactions usually use uranium or plutonium.



Advantages	Disadvantages
- Does not release much	- Non-renewable
carbon	- Produces dangerous
- Can provide cheap	waste to be disposed of
power to LICs	- Accidents and leaks can
- Only small amounts of	be deadly and last for a
fuel needed to produce	long time
lots of energy	
compared to fossil fuels	

Wind Power

Wind energy is produced when the blades of the turbine spin and thus turn the generator which produces electricity.

	1	9	bla
nacelle containing		1	
generator		1	
			- tower
foundations			tower
	_	_	

Advantages	Disadvantages
- Produce very little	- Wind is unreliable and
pollution	may not always blow
- Renewable	- They can injure birds
- Land beneath them can	flying past
be used for other things	- Difficult to store excess
e.g. farming	energy

Hydro-Electric Power

Fast flowing water is used to turn the turbines, thus generating energy. Water is often stored behind a dam in deep valleys.



Advantages	Disadvantages
- Dams can manage	- Can damage wetland
flooding and water	and aquatic ecosystems
resources	downstream
- Reservoirs can be used	- Expensive to build
for water sports	- Large areas of land
- Can be used for	must be flooded to
irrigating crops	create reservoirs

Year 8 History Term 2 Knowledge Organiser: India & Empire

<u>Interpretations of the British Empire</u>

People disagree about how we should remember the Empire. These are two viewpoints;

"The violence of the British Empire has long been forgotten. We need to face up to this history and education is crucial if we are to do so."

Dr Esme Cleall, Historian

"I think there's an enormous amount to be proud of in what the British Empire did and was responsible for"

David Cameron, British Prime Minister 2010-2016

The British Empire



Key Words

	T
EMPIRE	a group of countries ruled over by a single powerful country.
COLONY	a place controlled by another powerful country as part of an empire.
COLONISATION	the process of invading or taking over other countries and controlling them.
CIVILISED	when humans are educated and refined, not impulsive or destructive.
MUGHALS	the Muslim rulers of India between c.1600 & 1850.
TRADE	the buying and selling of goods and services.
EAST INDIA COMPANY	a private company of British merchants and traders who sometimes acted on behalf of the government.
INTERPRETATION	an opinion or version of past events, based on evidence.
MUTINY	disobeying the people in charge. Refusing to follow orders.
REBELLION	to fight against those in charge.
THE BRITISH RAJ	the period of history between 1858 and 1947, when the British government ruled India directly.
FAMINE	An extreme shortage of food, often resulting in a large number of people starving.
MASSACRE	the unnecessary killing of a large number of people

TIMELINE OF THE EMPIRE IN INDIA

Year 8 PE Knowledge Organiser- Orienteering

The main aim of orienteering is to complete the set course by finding control markers in the correct order in the shortest time.

Skills and Techniques

Orienteering is a sport that require **navigational skills** using a **map and compass** to **navigate** from point to point in **diverse** and often unfamiliar **terrain** whilst moving at **speed.** Participants are given a **topographical map**, usually a specially prepared orienteering map, which they use to find **control points**.

<u>Running activities</u>: All lessons start with running activities to encourage pace and speed. Cardiovascular fitness is required over different types of terrain.

Observing surroundings: Look at your surroundings (playground/ cage/ grass areas/ tree) and identify key features that help you find your precise location. You need to observe your surroundings before looking for markings on a map.

<u>Orientating a Map.</u> You need to orientate your map (move it) to line up with the key features on the ground and check it is the correct way round to the direction you are facing.

<u>Directions:</u> - understand the Cardinal Markers – North, South, East and West and their relation to features on the ground and to places beyond the school site.

<u>Map Reading</u> – Recognise symbols on a map, be able to use a key to recognise symbols and colours on an orienteering map.

<u>Human features</u>: Know that a human feature is influenced by man (buildings, benches, fences, walls)

<u>Physical Features</u>: Know that a physical feature is natural (rivers, beaches, hills, forests)

Tactics

A key tactic to use is pace. You must make sure that you don't sprint off too quickly without orientating yourself and your map. You need to be able to keep a steady pace up all the way round the course. You need to be able to orientate your map quickly by finding key features on the ground and then lining yourself and your map up to face the same direction Each time you change direction whilst you are running you should change your grip on the map so that the map is re-orientated and remains facing the same direction as the features on the ground. Star exercises: In a start exercise you have to run out from a central start point to a control and remember the answer on the control marker, if you are in a team you should each remember a different answer if you have to run to more than on control marker. Courses, sometimes you will be given more than one control to find at a time which makes up a course. You may do a different course to another team and as it's a race you should not shout out your answers.



MFL Knowledge Organiser

KO. Yr 8 Food and Mealtimes

Tenses-Present

Desayunar = to eat breakfast	
Desayuno	I eat breakfast
Desayunas	You eat breakfast
Desayuna	He/She/It east breakfast
Desayunamos	We eat breakfast
Desayunaís	You all eat breakfast
Desayunan	They eat breakfast



Opinions & Pronouns

Me gusta

Me gusta mucho

No me gusta

Me encanta

No me gusta nada

Me chifla

Odio

Me flipa

Detesto



Connectives



- También= also
 - Y= and
- Pero= but
- Sin embargo = however
 - Porque = because

Adjectives

Rico/a	tasty
Asqueroso/a	disgusting
Temprano	early
Tarde	late
Sabroso/a	tasty
Delicioso/a	delicious
Saludable	Healthy
Sano/a	Healthy
Jugoso	juicy
De sabor fuerte	Strong-flavoured



Desayuno = I eat breakfast

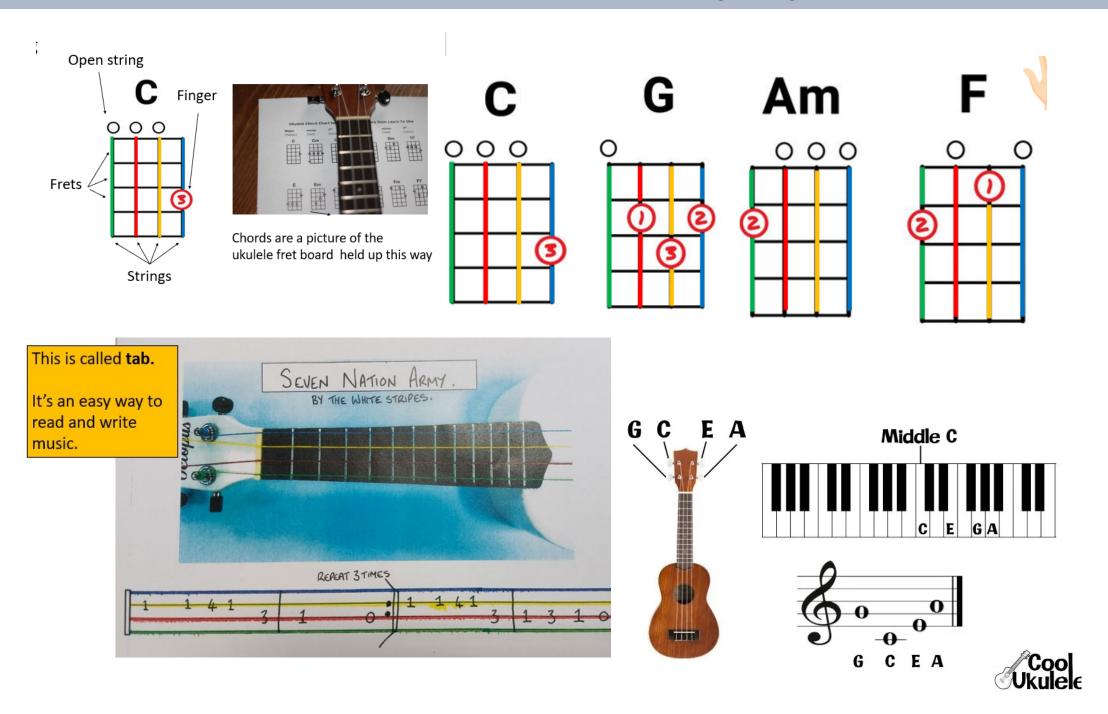
Almuerzo = I eat lunch

Meriendo = I eat a snack

Ceno = I eat tea

A las... = At... o'clock

Year 9 MUSIC HT3 Knowledge Organiser



Year 8 Design Knowledge Organiser



CAD / CAM

CAD and CAM are a really important part of designing products and manufacturing them. They're used in lots of different industries from food packing to component manufacture.





CAD stands for computer aided design. It involves designing products on a computer rather than using a pencil or paper. CAD software packages allow you to make 2D or 3D designs.

CAM stands for computer aided manufacture. It's the process of manufacturing products with the help of computers.

Health and Safety



or drinking







Wear goggles



Sustainability & The 6 R's



Recycle **Products** converted back into their basic materials and then remade into new products.



Reuse Think of another use for a product before throwing it away.



Repair Fix broken products instead of throwing them away.



Refuse We should decide not to buy products that harm the environment.



Rethink Decide whether you actually need that product before you buy it.



Reduce We should decrease the amount of finite materials that we use

Symmetry





Symmetrical design, or symmetrical balance, is a concept where both sides of something mirror one another.

If you cut a symmetrical design in half, one side would be identical to the other side.

When you create symmetrical art, all areas attract an equal amount of attention.

Cardboard



Cardboard is a specially engineered material made from paper pulp. It can be strong, lightweight and versatile.

You might recognise the wayy shape of its distinctive fluting (or corrugation). This is often sandwiched between two layers of board.

Eco-friendly



It consists of integrating environmental protection criteria over a service or a product's lifecycle.

The main goal of eco design is to anticipate and minimize negative environmental impacts (of manufacturing, using and disposing of products)

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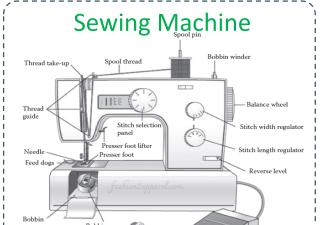


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Year 8 Textiles Knowledge Organiser





- 1. Needles are sharp. Keep fingers away.
- 2. Avoid distractions.
- Switch off your sewing machine when you're away from it.
- 4. Be cautious of cords and foot pedal.
- 5. Avoid sewing over pins they can fly out and hurt you if the needle sews over them.
- Don't make your machine sew through thick or tough materials.

Sewing a Button



Step 1

Step 5



Step 6



Step 3

Step 7







Step 8

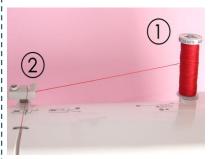
Velcro is a material consisting of two strips of nylon fabric which you press together to close things such as pockets and bags.

Velcro

It is a type of hook and loop fastening.

Health & Safety

Threading a Sewing Machine



Step 1

Put the cotton on the spool at the top of the machine at (1). Pull the thread through the thread guide on the top at (2).



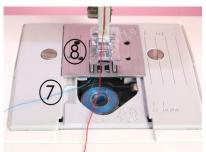
Step 2

Pull the thread down towards you and loop it around the tension discs below at (3). Then pull the thread back up again into the second thread guide (4).



Step 3

Bring the thread down to the needle, following any hooks to hold the thread (5). Then thread the needle from the front to the back (6).



Step 4

Check that your bobbin is inserted correctly (7). Turn the flywheel towards you so the needle hooks up the top thread with the bottom thread. The Sewing machine is now ready.

Marbling

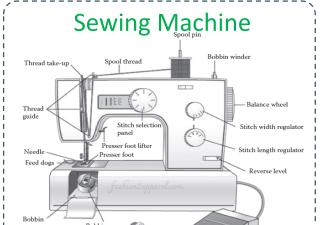


Marbling is a centuries-old technique that involves paint, adhesives or any dispersant and water to create unique patterns on fabric, paper or any object.

Paint is added to thickened water and allowed to float for some time. It is then swirled into designs and then transferred to the object.

Year 8 Textiles Knowledge Organiser





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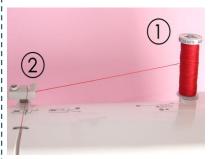
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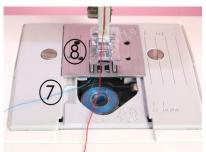
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RE 8.2 Christianity

Key terms

- 1. Christianity- The religion based on the person and teachings of Jesus Christ, or its beliefs and practices.
- 2. Monotheistic The belief that there is only one God.
- 3. Holy Trinity The three persons of the Trinity teach Christians better about the nature of God and the roles he plays (The Father, The Son, The Holy Spirit).
- 4. **Heaven** The place or state of sanctuary, peace and happiness after death for those who were 'good' on Earth.
- **5. Hell** The place or state of punishment of people who have done wrong after death.
- 6. **Denomination** A particular religious group which has slightly different beliefs from other groups within the same faith.
- 7. Miracles An event that appears unexplainable by the laws of nature and so is thought to be an act of God.
- **8.** Evangelism The spreading of the Christian gospel by public preaching in an effort to convert people to Christianity.
- 9. Sacrifice Making an offering to God.

Crucial Commands:

Describe: Say in detail what something or someone is like, and the impact it has. E.g. Describe Hajj.

Explain: Say why something or someone is important, and the impact it has. E.g. Explain why Zakat is important...

Discuss: Write about at least two points of view and explain why these points of view are valuable or not. E.g. ""Zakat is the most beneficial of the Five Pillars of Islam" Discuss.

Nature of Christianity

Christianity is focussed on the life and teachings of Jesus Christ, who Christians believe to be the Son of God. Jesus was born in Bethlehem in the Middle East over 2,000 years ago. Christians model themselves on the life and

teachings of Jesus Christ. Jesus taught people to love God and love their neighbour. Christians believe that God sent Jesus to live as a human being in order to save humanity from the consequences of its sins - the bad things humanity had chosen to do which had separated them from God.

Jesus

Christians believe that Jesus is God made flesh. (A third of the HOLY Trinity). Christians believe that Jesus sacrificed himself so that humankind can be freed from their sins and have a special relationship with God. Jesus is also a role model to Christians and taught many moral lessons in his lifetime, through telling Parables, like the Parable of the Good Samaritan and the Parable of the Lost Son, and through his actions such as the performance of miracles.

Jesus was actually Jewish.

Christmas

Christmas is a Christian holy day that marks the birth of Jesus, who Christians believe to be the Son of God.

Christmas is celebrated each year on 25 December. Christian church services at Christmas include carol singing and a service called a midnight mass).

There is a discussion surrounding Christmas as it is debated that the Christian foundations in Christmas are clouded by societies' influence.

The Bible

The Bible is the holy book for Christians. It has two parts: The Old Testament and the New Testament. The Old Testament was written before Jesus was born and comes from Jewish scriptures. The New Testament was written after Jesus died and contains stories of Jesus' life and accounts of Jesus' friends and followers in the early years of Christianity. There are many books in the Bible, and word Bible comes from the Greek word 'biblia' which means 'books'.

Evangelism

Evangelism involves converting people to Christianity. (Activities of missionaries). Some Christians feel that they should take on this role as they believe that they can help people to discover their real purpose in life. While some evangelists tell people directly about God, others try to show God's love through their actions. For example, Gideons International, an association of evangelical Christians, donates copies of the Bible to hotels and hospitals in the UK and around the world.

The Good Samaritan

The parable of the Good Samaritan is told by Jesus in the Gospel of Luke. It is about a Jewish traveller who is stripped of clothing, beaten, and left to die. First a Jewish priest and then a Levite (judge) comes by, but both avoid the man. Finally, a Samaritan happens upon the traveller. Although Samaritans and Jews despised each other, the Samaritan helps the injured man. The message of this Parable is as relevant today as it was more than two thousand years ago.