Year 9

Knowledge Organiser

Spring Term 2017

Year 9 Knowledge Organiser: Power and Conflict Poetry

The poems you will be studying include:

London by William Blake
The speaker wanders through the streets of London and comments on his obser
sees despair in the faces of the people he meets and hears fear and repression i

Bayonet Charge by Ted Hughes
The poem depicts the thoughts and feelings of one soldier as he charges at the e
begins to question his role in the war.

Remains by Simon Armitage
The poem is about a soldier who has a violent past. It is told anecdotally and begins
another occasion', implying that this account is not the only unpleasant account the s
his memory.

Kamikaze by Beatrice Garland
The poem vividly explores the moment that the pilot's decision is made and sketches
consequences for him over the rest of his life. Not only is he shunned by his neighbo
wife refuses to speak to him or look him in the eye. His children, too, gradually learn t
to be spoken to and begin to isolate and reject him.

Checking Out Me History by John Agard
The poet uses non-standard phonetic spelling (written as a word sounds) to repre
accent, and writes about what it is like being black to challenge racist attitudes, es
those which are unthinking.

Vocabulary

- Dialect
- Rhythm
- Rhyme Scheme
- Culture
- Conflict
- Hierarchy
- Status
- Power/ Status
- Character/ Voice
- Irony
- Symbolism
- Contrast
- Identity

When writing about poetry remember to do the following:

Talking about People

Avoid using vague pronouns **such as** 'us'/'them' **and** 'you'.

Instead use specific terms such as 'the audience' **or** 'the poet'.

Using evidence

Use **precise** evidence from a poem. Make sure you use the exact words from the poem and **quotation marks** ('') around your evidence.

Be as specific as possible about how the poetic choices used affects the reader.
Avoid using these phrases:

Gives the reader an image' 'Sticks in the reader's head'

TRY

Develops an image of... because....' 'makes the reader feel....' 'creates the sense of....'

Specific language when zooming in

Break down longer quotes to explore individual words and zoom in on specific techniques. *'Bent over like beggars'*

-The use of 'bent' establishes a sorrowful mood by..

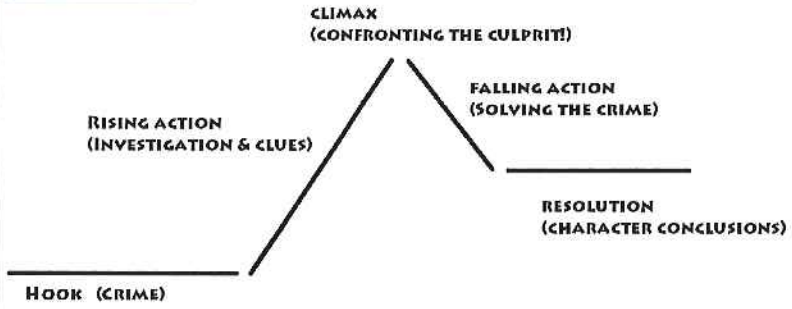
Yr9 The Speckled Band

Vocabulary

Plot
Hook
Rising Action
Climax
Falling Action
Resolution
Detective Genre
Characterisation
Culprit
Victim
Protagonist
Antagonist
Foreshadowing
Flashback

Character Name	Who are they?
Sherlock Holmes	The detective who is hired to solve the mysterious crime
Dr John Watson	Sherlock Holmes assistant and trusted friend
Helen Stoner	Holmes client and the only surviving member of the Stoner family
Julia Stoner	Helens sister who has mysteriously died
Dr Grimby Roylett	Final heir of an old Anglo-Saxon family who is vicious.

Plot diagram



Plot:

Holmes wakes Watson early because he has a client he wants Watson to see. She's a lady of about thirty with prematurely white hair who's shaking with terror. The situation is this:

The lady's name is Helen Stoner. She has a stepfather, Dr. Grimesby Roylott, who is the last representative of a great family that has utterly used up all of its resources.

Flashback to two years ago when Julia, Helen's sister, gets engaged. She complains to Helen that her sleep is being disturbed by a strange whistling sound in the middle of the night.

Helen hears a horrible scream. It's Julia in the bedroom next door. Helen runs over to find Julia looking terrified and ill. Julia slips into convulsions, but before she falls unconscious (never to awaken), she makes reference to "a speckled band."

Now Helen herself has become engaged to a nice young fellow, Percy Armitage. Like her sister before her, she has begun to hear a low whistle in the middle of the night.

As soon as Stoner leaves Holmes's office, Dr. Grimesby Roylott announces himself. He threatens Holmes if he gets involved.

Holmes and Watson manage to sneak into Julia Stoner's old room. It has some weird features: a bell-pull that's not actually attached to a bell, a ventilator that connects Julia's room with Roylott's, and a bed that's nailed to the floor.

At around 3am, Holmes and Watson hear an eerie low whistle. Holmes strikes a match and starts beating the bell pull with his cane. Suddenly, they hear a yell from the next room. It's Roylott, and he's stone dead. He's been killed by ....?

When writing about a character or theme remember to…

Analysing a character:

Look at the choice of words used to

Describe their appearance

What they say

How they say it

How they are viewed by others

Talking about People

Avoid using **vague pronouns** such as **'us'/'them'** and **'you'.**

Instead use specific terms such as

'the audience' or **'Doyle'.**

Capital Letters

Use **capital letters** for the **names** of **author** and **lexical words** in a poems title e.g.

Doyle's 'The Speckled Band'

Using evidence

Use **precise evidence** to support your ideas, **avoiding** using the word **'quote'.**

Try and **embed quotations** where possible.

Be as specific as possible about how the Morpurgo's choices affects the reader.

Avoid using these phrases:

'Gives the reader an image' ***'Sticks in the reader's head'*** ***'Has an effect on the reader'***

Try

'develops an image of… because….' ***'makes the reader feel….'*** ***'creates the sense of….'***

Golden Rules

1) Make one point per paragraph

2) Use quotation marks (' ') when selecting evidence from a text

3) Develop your explanations by using the word because.

4) Use connectives such as *'Furthermore…' 'In addition…'* to develop

Specific language when zooming in

Break down longer quotes to explore individual words and zoom in on specific techniques.

'Bent over like beggars'

-The use of 'bent' establishes a sorrowful mood by…

Tentative Language when zooming out

Use **modal verbs** like **'might'** and **'perhaps'** to explore the poet's choices when **zooming out.**

-Perhaps the writer is implying…

-The author may be attempt-

Building on your ideas

Look for evidence which supports your interpretation.

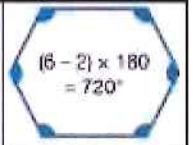
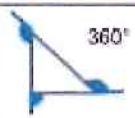
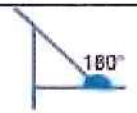
The effect is accentuated later by…

-Building on from this…

-In addition to this..

Key facts to memorise- polygon angle facts

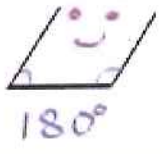
Polygon names	
3 sides	Triangle
4 sides	Quadrilateral
5 sides	Pentagon
6 sides	Hexagon
7 sides	Heptagon
8 sides	Octagon
9 sides	Nonagon
10 sides	Decagon

Polygon angle facts	
Sum of interior angles in a polygon with n sides = $(n - 2) \times 180$	
Sum of exterior angles in a polygon = 360°	
Interior angle + exterior angle = 180°	

Angle Facts

Important vocabulary	
Polygon	A **2D shape** made from 3 **straight sides** or more
Regular polygon	A **polygon** with **all sides equal** in **length** and **all interior angles equal** in size
Isosceles triangle	A triangle with **two equal length sides**. The two **base angles are equal** in size
Equilateral triangle	A triangle with **three equal length sides**. The **three interior angles** are **equal** in size
Interior angle	An angle between **two adjacent sides inside** a **polygon**
Exterior angle	An angle between a **side of a polygon** and an **adjacent side extended outward**
Parallel	**Lines** that have the **same distance continuously between** them. They **never intersect**

Basic angle facts	
Angles around a point add up to 360°	
Angles on a straight line add up to 180°	
Vertically opposite angles are equal	
Angles in a triangle add up to 180°	
Angles in a quadrilateral add up to 360°	
Base angles in an isosceles triangle are equal	
Angles in an equilateral triangle are all 60°	
The exterior angle of a triangle is equal to the sum of the two opposite interior angles	

Angles in parallel lines facts		
		
Corresponding angles are equal	Co-interior angles add up to 180°	Alternate angles are equal

Mathematics Knowledge Organiser

Averages and Range

Types of data:

Qualitative: Data which is descriptive, uses words not numbers. E.g: Green, blue, orange.

Quantitative: Measures quantities using numbers. E.g: Shoe sizes, Heights.

Continuous: Data that can take any numerical value in a range. E.g: Time, Weight, Distance, Money

Discrete: Data which can only take specific values. E.g: Rolling a dice, flipping a coin.

Mean, Median, Mode and Range:

5, 3, 9, 1, 3, 2, 7, 2, 3

Median: The middle value when values are in numerical order:

1, 2, 2, 3, 3, 3, 5, 7, 9

If there are an even number of pieces of data, then the median will be the **MIDPOINT** of the two middle pieces of data:

2, 3, 5, 7, 9, 10 Midpoint of 5 and 7 = 6

Mode: Most frequent piece* of unique data:

1, 2, 2, 3, 3, 3, 5, 7, 9

*You can have more than 1 mode.

Mean: Sum of data ÷ Total pieces of data.

(5+3+9+1+3+2+7+2+3) ÷ 9 = 3.9 (to 1dp)

Range: Difference between the biggest and smallest

9 – 1 = 8

Linked Prior Topics:
- Basic calculations
- (+, −, ×, ÷)
- Ordering numbers.

Vocabulary:
Averages, Data, Discrete, Continuous, Qualitative, Mode, Mean, Median, Range, Stem and Leaf.

Linked Future Topics:
(Grouped) Frequency tables, Cumulative frequency, frequency polygons, box plots, histograms.

Mathematics Knowledge Organiser

Frequency Tables:

We use a frequency table when we have to interpret a large set of data.

Number of Goals	Frequency
0	5
1	11
2	9
3	3
4	0

The frequency column tells us the total number of that result.

Mode: The result with the highest frequency (e.g. 1 goal)
Range: Difference between the largest and smallest **results** (not the frequency). $4 - 0 =$ **4** goals

Median: To find the median result we must work out which piece of data is the middle value. We use the equation $\frac{n+1}{2}$, where "n" is the total frequency, to find the middle value.

$$\frac{(5 + 11 + 9 + 3 + 0) + 1}{2} = 14.5$$

We then count down the frequency column to the 14.5th piece of data and read across its corresponding result.
Median = 1 goal.

Mean:
Multiply the result by the frequency: ("$f \times x$")
Then total the frequency and "$f \times x$".
Mean = Total "$f \times x$" ÷ Total frequenc
Mean = 31 ÷ 20 = **1.55 goals.**

Number of Goals		Frequency		$f \times x$
0	✖	5	=	0
1	✖	6	=	6
2	✖	4	=	8
3	✖	3	=	9
4	✖	2	=	8
Total =		20		31

(+, −, ×, ÷), Mean, Median, Mode, Range, Discrete, Continuous.	Averages, Data, Discrete, Continuous, Qualitative, Mode, Mean, Median, Range, Frequency.	Frequency polygons, box plots, histograms, collecting data, grouped frequency tables.

Simultaneous Equations

EXAMPLE: Solve the simultaneous equations $2x = 6 - 4y$ and $-3 - 3y = 4x$

1. Rearrange both equations into the form $ax + by = c$, and label the two equations ① and ②.

   a, b and c are numbers (which can be negative)

   $2x + 4y = 6$ — ①

   $4x + 3y = -3$ — ②

2. Match up the numbers in front (the 'coefficients') of either the x's or y's in both equations. You may need to multiply one or both equations by a suitable number. Relabel them ③ and ④.

   ① × 2: $4x + 8y = 12$ — ③

   $4x + 3y = -3$ — ④

3. Add or subtract the two equations to eliminate the terms with the same coefficient.

   ③ − ④ $0x + 5y = 15$

   If the coefficients have the same sign (both +ve or both −ve) then subtract.
   If the coefficients have opposite signs (one +ve and one −ve) then add.

4. Solve the resulting equation.

   $5y = 15 \Rightarrow y = 3$

5. Substitute the value you've found back into equation ① and solve it.

   Sub $y = 3$ into ①: $2x + (4 \times 3) = 6 \Rightarrow 2x + 12 = 6 \Rightarrow 2x = -6 \Rightarrow x = -3$

6. Substitute both these values into equation ② to make sure it works. If it doesn't then you've done something wrong and you'll have to do it all again.

   Sub x and y into ②: $(4 \times -3) + (3 \times 3) = -12 + 9 = -3$, which is right, so it's worked.

   So the solutions are: $x = -3$, $y = 3$

You need to learn the 6 steps on this page. When you think you've got them, try them out on these Exam Practice Questions.

Q1 Issy buys two cups of tea and three slices of cake for £9.
Rudy buys four cups of tea and one slice of cake from the same cafe for £8.
Find the cost of one cup of tea and the cost of one slice of cake. [3 marks]

Q2 Find x and y given that $2x - 10 = 4y$ and $3y = 5x - 18$. [3 marks]

Q1 One cup of tea costs £1.50 and one slice of cake costs £2

Q2 $x = 3, y = -1$

Biology

Keyword	Definition
Resolution	Smallest change that can be measured by an instrument.
Stain	A dye used to colour parts of a cell to make them easier to see.
aerobic respiration	A type of respiration in which oxygen is used to release energy from substances.
cell (surface) membrane	The membrane that controls what goes into and out of a cell.
cell sap	Liquid found in the permanent vacuole in a plant cell.
cell wall	A tough layer of material around some cells, which is used for protection and support, made of cellulose in plant cells.
chlorophyll	The green substance found inside chloroplasts. It traps energy transferred by light.
chloroplasts	A green disc containing chlorophyll, found in plant cells.
chromosome	A structure found in the nuclei of cells.
cytoplasm	The watery jelly inside a cell where the cell's activities take place.
DNA	A substance that contains genetic information. Short for deoxyribonucleic acid.
eukaryotic	A cell with a nucleus is eukaryotic. Organisms that have cells like this are also said to be eukaryotic.
field of view	The circle of light you see looking down a microscope.
mitochondrion	Found in the cytoplasm of eukaryotic cells, where aerobic respiration occurs.
aerobic respiration	A type of respiration in which oxygen is used to release energy.

Keyword	Definition
Acrosome	A small vacuole in the tip of the head of a sperm cell, which contains enzymes.
Diploid	Describes a cell that has two sets of chromosomes.
Gamete	A cell used for sexual reproduction.
Haploid	Describes a cell that has one set of chromosomes.
Plasmid	A small loop of DNA found in the cytoplasm of bacteria.
Prokaryotic	A cell with no nucleus is prokaryotic eg. Bacteria.
Active site	The space in an enzyme where the substrate fits during an enzyme-catalysed reaction.
Denatured	A denatured enzyme is one where the shape of the active site has changed so much that its substrate no longer fits and the reaction can no longer happen.
Lock-and-key model	Model that describes the way an enzyme catalyses a reaction when the substrate fits within the active site of the enzyme.
Active transport	The movement of particles across a cell membrane from a region of lower concentration to a region of higher concentration (*against* the concentration gradient). The process requires energy.
Diffusion	When particles spread and mix with each other without anything moving them.
Osmosis	The overall movement of solvent molecules in a solution across a partially permeable membrane, from a dilute

Combined Science

Chemistry

Keyword	Definition
Atom	The smallest natural part of an element that can take part in a chemical reaction.
Forces of attraction	Weak forces of attraction between molecules
Crystallisation	Separating a solute from a solvent by evaporation
Saturation	The maximum amount of a solute that can dissolve in a given solvent at a specific temperature.
Chromatography	A technique involved in separating the components of a mixture eg. Food colouring agents
Stationary Phase	The surface through which a solvent and dissolved substances move in chromatography.
Mobile Phase	In chromatography the solvent that moves along the paper carrying the dissolved sample with it.
Chromatogram	A piece of paper showing the results of chromatography
Rf Value	The ration of the distance travelled by a solute on a chromatogram.
Aquifier	Underground layer of rock containing groundwater
Chlorination	The process of adding chlorine to water
desalination	Produces drinking water by separating salt from water in salty water.
Precipitate	Insoluble substance formed when two soluble substances react together.
Sedimentation	The process when rock grains fall to the bottom of a liquid

Physics

Keyword	Definition
Acceleration	A measure of how quickly the velocity of something is changing.
Displacement	The distance travelled in a particular direction. Displacement is a vector, distance is not.
Magnitude	The size of something, such as the size of a force or the measurement of a distance.
Mass	A measure of the amount of material that there is in an object. Mass is a scalar quantity.
Momentum	A measure of motion, mass multiplied by velocity. Momentum is a vector quantity.
Scalar quantity	A quantity that has a magnitude (size) but not a direction. Examples include mass, distance, energy and speed.
Speed	A measure of the distance an object travels in a given time. Usually measured in metres per second (m/s). It is a scalar quantity.
Vector quantity	A quantity that has both a size and a direction. Examples include force, velocity, displacement, momentum and acceleration.
Velocity	The speed of an object in a particular direction.
Weight	The force pulling an object downwards, Weight is a vector.
Acceleration	A measure of how quickly the velocity of something is changing. Acceleration is a vector quantity.
Instantaneous speed	The speed at one particular moment in a journey.
Gradient	A way of describing the steepness of a line on a graph in numbers. It is calculated by taking

Key Words

	What this means
Amplification	to increase the loudness of (**sound**), esp. by mechanical or electronic means.
Volume	the degree of loudness or the intensity of a sound
Reverberation	A reverberation is an echoing sound. When you bang on a big piece of metal, you can hear the reverberation even after you stop banging. (reverb for short).
Electronics	Electronics is the branch of science that deals with the study of flow and control of electrons (electricity. Circuits or devices using transistors, microchips, and other components.
Soldering	A method of joining metal and/or electronic components together to create a circuit.
Hole saw	A hole saw, also known as a hole cutter, is a tool for making circular holes, consisting of a metal cylinder with a toothed edge.
L.E.D	A light-emitting diode (LED) is an electronic component that emits visible light when an electric current passes through it.
Resistor	Resistors determine the flow of current in an electrical circuit. Where there is high resistance in a circuit the flow of current is small, where the resistance is low the flow of current is large
Slide switch	Slide switches are mechanical switches using a slider that moves (slides) from the open (off) position to the closed (on) position. They allow control over current flow in a circuit.
Conical	having the shape of a cone.
Speaker	A device that converts electrical signals (electric current) into sound waves (acoustic energy) for the production of sound. Used to make sound or music louder.

Y9 Sp1 – Exploring the Holocaust

THE BIG PICTURE

In 1933, the Jewish population of Europe stood at over nine million. Most European Jews lived in countries that Nazi Germany would occupy or influence during World War II. By 1945, the Germans and their collaborators killed nearly two out of every three European Jews as part of the "Final Solution," the Nazi policy to murder the Jews of Europe. Although Jews, whom the Nazis deemed a priority danger to Germany, were the primary victims of Nazi racism, other victims included some 200,000 Roma (Gypsies). At least 200,000 mentally or physically disabled patients, mainly Germans, living in institutional settings, were murdered in the so-called Euthanasia Program.

It is important to understand that the Holocaust, and the systematic killing of Jews, did not suddenly begin when Hitler took control of Germany in 1933. Treatment of Jews gradually got worse. As WW2 progressed, with more Jews now living under Nazi control, for the Nazis a 'Final Solution' to the Jewish problem had to be found.

My learning journey

- **What was the Holocaust and who were its victims?**
- **How and why were the Jews of Germany persecuted before 1939?**
- **How did persecution increase during the war? (Ghettos)**
- **How was the Holocaust perpetrated? (Final Solution)**

Auschwitz and victims

Timeline

March 1933	April 1933	September 1933	January 1934	September 1935	January 1936	July 1938	August 1938	November 1938	December 1938	April 1939	September 1939
All Jewish lawyers and judges sacked	All Jews banned from any sports clubs. All Jewish teachers sacked	'Race studies' introduced in German schools	All Jewish shops marked with a yellow star of David – a symbol of the Jewish religion – or the word Juden (German for 'Jew'). Soldiers to stand outside shops turning people away	Jews not allowed to vote. Marriages betweens Jews and non-Jews banned. These were known as the **Nuremberg Laws**	No Jew allowed to own any electrical equipment (including cameras), bicycles, typewriters or music records	Jewish doctors sacked	Male Jews must add the name 'Israel' and female Jews must add the name 'Sara' to their first names	Jewish children banned from German schools. Jewish homes, synagogues and businesses attacked all over Germany and Austria. About 100 Jews killed and 20,000 sent to concentration camps. Known as **Kristallnacht** (Night of Broken Glass)	Jewish and non-Jewish children forbidden to play together. Jews banned from using swimming pools	Jews can be evicted from their homes for no reason	Jews no longer allowed out of their homes between 8:00pm and 6:00am

Pre-war timeline – how life for Jews in Germany got increasingly more difficult

Useful websites: http://www.bbc.co.uk/newsround/16690175

http://spartacus-educational.com/GERholocaust.htm

KEY TERMS/KNOWLEDGE	
Holocaust	A mass killing in which Adolf Hitler's Nazi Germany and its collaborators murdered about six million Jews. The victims included 1.5 million children and represented about two-thirds of the nine million Jews who had resided in Europe. Some definitions of the Holocaust include the additional five million non-Jewish victims of Nazi mass murders, bringing the total to about 11 million. Killings took place throughout Nazi Germany, German-occupied territories and territories held by allies of Nazi Germany.
Genocide	The deliberate killing of a large group of people, especially those of a particular nation or ethnic group.
Anti-Semitism	Hostility towards Jews.
Jews	People of Jewish faith/religion. The Nazis also considered the Jews as a racial group over which they were superior. Hitler believed that the Jewish race were impure.
Persecution	Hostility and ill-treatment, especially because of race or political or religious beliefs. The Jews, as a religious/racial group, have been persecuted throughout history.
Nuremberg Laws	From 1935, These laws excluded German Jews from German citizenship and prohibited them from marrying or having sexual relations with persons of pure German blood.
Kristallnacht	Also known as the 'night of broken glass'. On the night of 9th/10th November 1938, Jewish businesses, homes and synagogues (places of worship) were attacked (windows smashed, buildings set on fire etc). It is often thought to be the start of the real violence against Jews.
Ghettos	The Germans aimed to control this sizable Jewish population by forcing Jews to reside in marked-off sections of towns and cities where living conditions were terrible. The largest and most famous Ghetto was in Warsaw, Poland.
Concentration Camps	Between 1933 and 1945, Nazi Germany established about **20,000 camps** to imprison its many millions of victims. These camps were used for a range of purposes including forced-labour camps, transit camps which served as temporary way stations, and killing centres built primarily or exclusively for mass murder.
Death Camp	Extermination centres were established in occupied Poland with special apparatus especially designed for mass murder (gas chambers that looked like shower blocks). Giant death machines. Six such death camps existed: Auschwitz-Birkenau, Belzec, Chelmno, Majdanek, Sobibor, and Treblinka. The organised killing took place from 1942.
Final Solution	From 1942, following a conference in Wannsee, Germany, it was decided that a 'Final Solution' to the 'Jewish Problem' would be organised killings at designated Death Camps. The Nazis could no longer afford to 'store' the Jews in the lands they had occupied.
Auschwitz	The most famous of all the concentration/death camps. There were three main Auschwitz sites, and numerous smaller 'satellite' sites.
Einsatzgruppen	Mobile units of the Security Police and SS Security Service that followed the German armies to Poland in 1939 and to the Soviet Union in June, 1941. Their charge was to kill all Jews as well as communists, the handicapped, institutionalized psychiatric patients, Gypsies, and others considered undesirable by the Nazi state. The victims were executed by mass shootings and buried in unmarked mass graves; later, the bodies were dug up and burned to cover evidence of what had occurred. Often, volunteers from the occupied nations helped assist them in the killing of their own people.

THE BIG PICTURE

After WW2, it soon became clear that Europe was still divided. Tension between the USSR (United Soviet States of Russia) and other allies over how Germany should be governed after the war was a particular area of disagreement. The USSR/Russia (after the war, under the leadership of Stalin) was a communist country, and wanted to expand its communist rule across Eastern Europe. Rivalry with capitalist USA looked set to eventually descend into nuclear war, over the following decades. Whilst the threatened nuclear war never happened (it was a COLD WAR), lots of world conflicts and key historical events in the later parts of the twentieth century relate back to the rivalry between communist and capitalism, and the USA and USSR.

After World War II, Germany was broken into four "zones of occupation"

Each of the major Allies, was given one piece.

Berlin, the capital, was also split into four pieces.

Y9 Sp2: What were the most significant events of the Cold War?

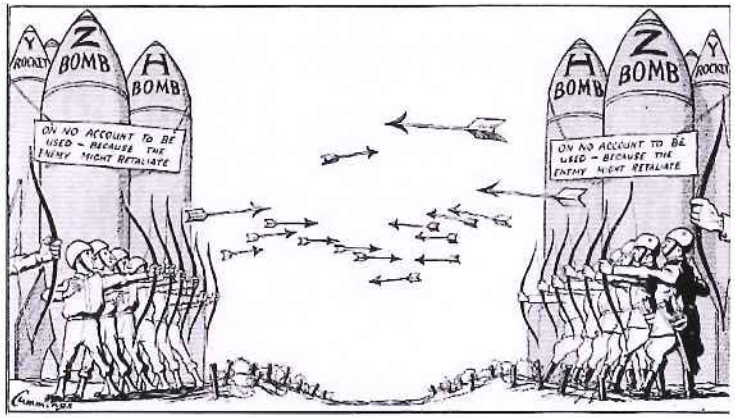
My learning journey

- What is the difference between Communism and Capitalism?
- What was meant by the term Cold War?
- What was McCarthyism?
- How was Germany divided and ruled after WW2?
- Why was the Berlin Wall built and what was its impact in Germany?
- Why was the Berlin Wall torn down?
- What was the history of aggravation between Cuba and the USA?
- How close did the USA and USSR come to nuclear war in 1962?

Useful websites:

www.historylearningsite.co.uk/modern-world...cold-war/what-was-the-cold-war/

www.bbc.co.uk/history/worldwars/coldwar/



KEY TERMS/KNOWLEDGE	
Communism	A system of social organisation in which all property and business is owned by the community/state, and each person contributes and receives according to their ability and needs. Communist countries tend to be poorer overall, but there is less of a divide between rich and poor. There is only one political 'Communist' party to rule the country, which has to keep tight control over freedoms to maintain the communist system.
Capitalism	An economic and political system in which a country's trade and industry are controlled by private owners for profit, rather than by the state. In theory, anyone can work hard and aspire to achieve a large wage, own a house or business, be a business owner, etc. There are many political parties in capitalist countries.
Potsdam	The Big Three—Soviet leader Joseph Stalin, British Prime Minister Winston Churchill (replaced on July 26 by Prime Minister Clement Attlee), and U.S. President Harry Truman—met in Potsdam, Germany, from July 17 to August 2, 1945, to negotiate terms for the end of World War II. Despite numerous disagreements, the Allied leaders did manage to conclude some agreements at Potsdam. For example, the negotiators confirmed the status of a demilitarized and disarmed Germany under four zones – each controlled by one of the allies (Britain, France, USA and USSR/Russia).
Cold War	The Cold War is the name given to the relationship that developed primarily between the USA and the USSR after World War Two. The Cold War was to dominate international affairs for decades and many major crises occurred – the Cuban Missile Crisis, Vietnam, Hungary and the Berlin Wall being just some. For many, the growth in weapons of mass destruction was the most worrying issue.
Iron Curtain	The **Iron Curtain** was the name for the boundary dividing Europe into two separate areas from the end of World War II in 1945 until the end of the Cold War in 1991. The term symbolised efforts by the USSR/Russia to block itself and its satellite states from open contact with the West and non-Soviet-controlled areas. On the east side of the Iron Curtain were the countries that were connected to or influenced by the Communist ruled USSR/Russia.
Red Scare	As the Cold War between the Soviet Union and the United States intensified in the late 1940s and early 1950s, hysteria over the perceived threat posed by Communists in the U.S. became known as the Red Scare. (Communists were often referred to as "Reds" for their allegiance to the red Soviet flag.) The Red Scare led to a range of actions that had a profound and enduring effect on U.S. government and society.
McCarthyism	"Are you now, or have you ever been, a member of the Communist party?" In the 1950s, thousands of Americans who worked for the government, served in the army, worked in the movie industry, or came from various walks of life had to answer that question under interrogation. **SENATOR JOSEPH MCCARTHY** rose to national fame by initiating the effort to find out who were communists holding prominent positions in the USA. During his investigations, he often went too far, accusing the innocent.
Berlin Airlift	At the end of the Second World War, U.S., British, and Soviet military forces divided and occupied Germany. Also divided into occupation zones, Berlin was located far inside Soviet-controlled eastern Germany. The United States, United Kingdom, and France controlled western portions of the city, while Soviet troops controlled the eastern sector. As the wartime alliance between the Western Allies and the Soviet Union ended and friendly relations turned hostile, the question of whether the western occupation zones in Berlin would remain under Western Allied control or whether the city would be absorbed into Soviet-controlled eastern Germany led to the first Berlin crisis of the Cold War. The crisis started on June 24, 1948, when Soviet forces blockaded rail, road, and water access to Allied-controlled areas of Berlin. The United States and United Kingdom responded by airlifting food and fuel to Berlin from Allied airbases in western Germany. The crisis ended on May 12, 1949, when Soviet forces lifted the blockade on land access to western Berlin.
Berlin Wall	The official purpose of this Berlin Wall was to keep Westerners from entering Communist East Germany – however, its real purpose was to prevent those who wanted to flee communist rule from being able to do so. The Berlin Wall stood until November 9, 1989, when the head of the East German Communist Party announced that citizens of the GDR could cross the border whenever they pleased. That night, ecstatic crowds swarmed the wall. Some crossed freely into West Berlin, while others brought hammers and picks and began to chip away at the wall itself. To this day, the Berlin Wall remains one of the most powerful and enduring symbols of the Cold War.
Bay of Pigs	The Bay of Pigs Invasion was a failed military invasion of Cuba undertaken by a US CIA-sponsored para-military group. They aimed to overthrow the Communist regime, led by Fidel Castro, in Cuba (only 90 miles from the Florida/USA coastline).
Cuban Missile Crisis	A 13-day political and military standoff in October 1962 over nuclear-armed Russian/USSR missiles on Cuba, just 90 miles from U.S. shores. In a TV address on October 22, 1962, President John Kennedy notified Americans about the presence of the missiles, explained his decision to enact a naval blockade around Cuba and made it clear the U.S. was prepared to use military force if necessary to end this threat to national security. Following this news, many people feared the world was on the brink of nuclear war. However, disaster was avoided when the U.S. agreed to Soviet leader Nikita Khrushchev's offer to remove the Cuban missiles in exchange for the U.S. promising not to invade Cuba. Kennedy also secretly agreed to remove U.S. missiles from Turkey.

Knowledge Organiser: Year 9, Spring 1 – Australia The Land Down Under

Lesson Timeline

1.Travelling Around Australia

Australia is an incredibly large country and people often underestimate how big it really is. In this lesson you will explore how long it takes to travel from one side to the other. You will think critically to plan a road trip around Australia deciding on which forms of transport to use when and where. All in order to make the most of your trip, save money and time and still have a great experience.

2.Getting to Know Australia

Map skills is predominant in this lesson. You will create a large A3 map of Australia to stick into your books so that it can be used as a point of reference for the remainder of the topic. Time will be spent plotting, labelling and highlighting onto your map Australia's key physical and human features.

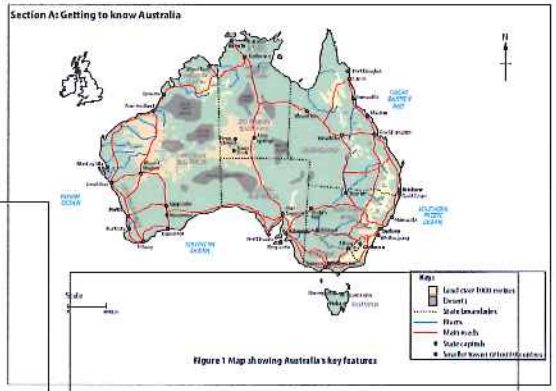
3.Australia's Climate

This varies considerably across Australia. You will be reminded of the difference between weather and climate and investigate how and why there is a desert in the centre of the country, but green rainforests in the North East. You will also develop the skills necessary to plot a climate graph successfully.

4.Australia's Population

For a country so large, it has a very small population. You will learn why Australia's population has been traditionally so low, but also what the country is doing to increase it. How can we become an Australian citizen? You will also analyse ways population structure can be shown for a country, by investigation population pyramids.

Key Figures to be used throughout SP1



Keywords

SPRING

Lesson Timeline

6. Why move to Oz?

Migration is a very interesting topic and in this lesson you will learn about the concept of Push and Pull factors when discussing migration. Why may people choose to leave their home country in order to migrate to Australia? What is so great about it? Why is the UK losing some of its best and youngest workers to this place?

7.Great Barrier Reef – Part 1

It is one of the 7 natural wonders of the world and home to an abundance of plants and animals that are unique to that particular environment. In this lesson you will learn exactly what coral is and how reefs are formed. You will also begin to consider their place within a wider world.

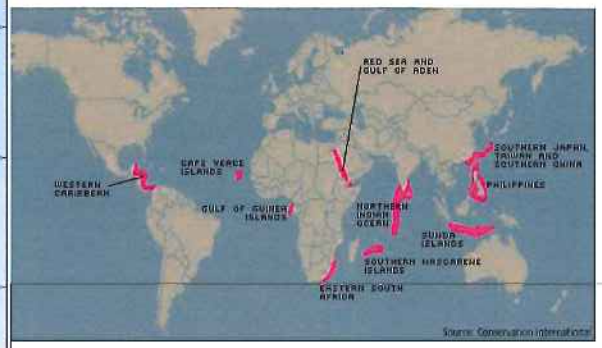
8.Coral Reefs – Part 2

This lesson does link to the previous and it is in relation to the concept of sustainability. Why must we protect our coral reefs? Now you know exactly what they are and the role they have to play within earth's ecosystems – what could be the global impacts if all reefs were to be destroyed? You will look at the biggest threats that exist to them and come to a mature judgement on which threat is the biggest and what we could do to tackle it.

9-11. Extended Research Project

This is the assessed piece of work for this topic. Students will have three lessons to complete as much of it as they can and the remainder is to be set as independent study. The research task will ask students to consider everything they have learnt so far in the topic, on top of new themes associated with Australia to produce a report style piece of work. It will challenge their research ability but also how they condense information to answer a specific question.

Key Figures to be used throughout SP1



Keywords

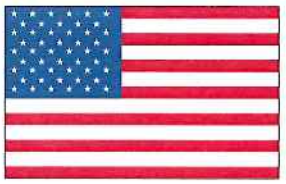
SPRING

Knowledge Organiser: Year 9, Spring 2 – The USA

Lesson Timeline

1.Mexico to USA

As it is one of the most guarded and protect borders in the world, it is important to understand why this is the case. In this lesson you will learn why people are so desperate to leave South America in the hope of a "better life" in the USA. You will also discover the risks people take to secure a place in the states.



2.What do TNCs Mean to Me?

Transnational Companies are an important part of today's global company and the role the USA has to play in this is quite significant. You will explore the meaning of this term and how TNCs impact the way you live your life without really knowing how. The lesson will also touch upon the advantages and disadvantages of these global companies.

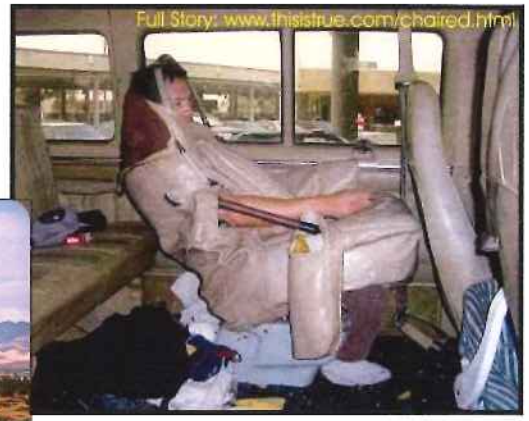
3.The Rise of Ronald McDonald

This lesson links to the previous. McDonalds is one of the world's most well-known TNCs. You will learn exactly how they became so big and the positive and negative impacts this is having upon society. Examples of this include how it is diluting certain cultures.

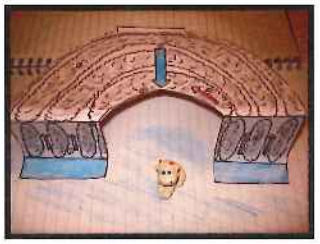
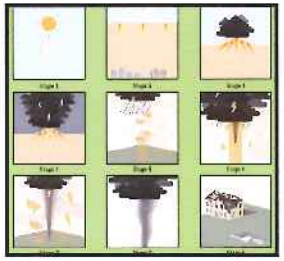
4.Las Vegas – A Thirsty City

Water shortages are a massive global problem. In South West USA they are currently experiencing one of their worst droughts on record. You will research Las Vegas climate and the amount of rainfall it receives and compare these values to the amount of water the city actually uses.

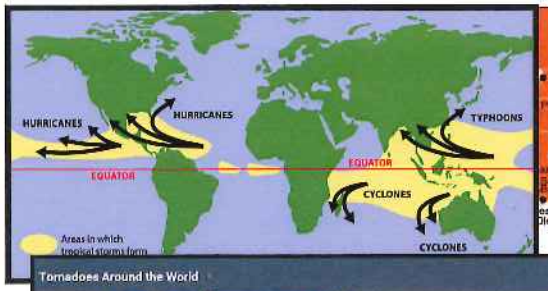
Key Figures to be used throughout SP2



Keywords

Lesson Timeline	6. Hurricane Katrina The USA can be quite a hazardous country. In this lesson you will learn how hurricanes are formed and study a case study example of one that dramatically impacted the south east coast of the USA.  
	7.Oklahoma Tornado A second hazard that the USA faces is tornadoes. Certain areas of the USA are known as tornado hotspots and due to their climate, they are extremely vulnerable. You will learn how tornadoes form and the weather conditions associated with this. Impacts of recent tornadoes will also be explored.  
	8.LA Murder Mystery LA is also a very hazardous place as it is vulnerable to earthquakes, landslides and drought. You will be presented with a scenario in which a person has died. You will need to read through the crime scene report and piece together the clues to try and identify how the person died. This will challenge your ability to think critically, alongside applying your geographical knowledge.
	9. Assessment
	10. The San Andreas Fault What is the San Andreas Fault? You will explore the complex tectonic scenario that exists along the west coast. You will see how the fault line has changed the landscape and the risks it poses to the people of the USA.

Key Figures to be used throughout SP2



Keywords

Year 9 Spring term – Is Religion a Power of Peace or a Cause of Conflict in the World Today?

THE BIG PICTURE

There have been over 250 major wars in the world since World War II, in which 23 million people have been killed, tens of millions made homeless, and countless millions injured and bereaved.

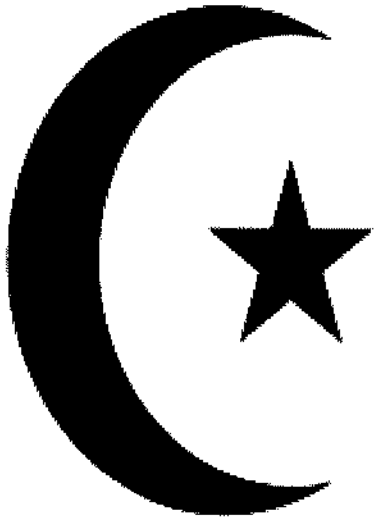
There are over 35 major conflicts going on in the world today.

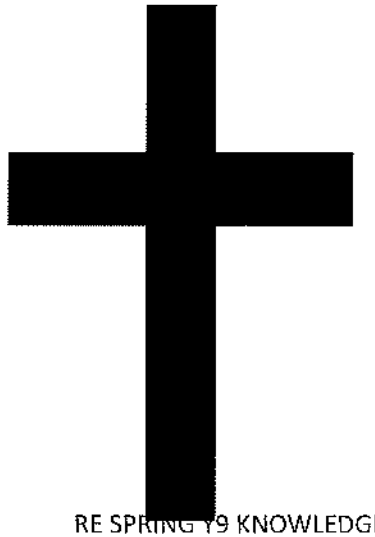
Why have these wars occurred? For some people religion is believed to be a major cause of conflict. You will evaluate whether this is a fair judgment.

KEYTERMS	
Peace	A state or period in which there is no war or a war has ended.
War	A state of armed conflict between different countries or different groups within a country.
Conflict	A serious disagreement or argument.
Sikhism	A monotheistic religion founded in Punjab in the 15th century by Guru Nanak.
Mool Mantar	Is the first hymn in the Sikh holy text and Great Living Guru, the Guru Granth Sahib, written in Punjabi
Sewa	Seva means service. Sikhs have a tradition of seva.
Langar	Term used in the Sikh religion for the common kitchen/canteen where food is served in a Gurdwara to all the visitors, without distinction of faith, religion or background, for free.
Guru Granth Sahib	Is the holy book of the religion Sikhism. It contains prayers, hymns and songs of Sikh religion.
Bhagat Puran Singh	Gave a selfless service to terminally ill / mentally ill patients who had been abandoned by their family. He would also bury / cremate abandoned corpses.
Prophet Mohammed (PBUH)	The last of the prophets to the Muslims.
Quran	The Islamic sacred book, believed to be the word of God as dictated to Muhammad by the archangel Gabriel and written down in Arabic
Hadith	A collection of traditions containing sayings of the prophet Muhammad.
Jihad	The spiritual struggle within oneself against sin
Prejudice	Preconceived opinion that is not based on reason or actual experience
Islamophobia	Dislike of or prejudice against Islam or Muslims, especially as a political force.
Bible	Christian Holy Book
Activism	The policy or action of using vigorous campaigning to bring about political or social change
Atheist	A person who disbelieves or lacks belief in the existence of God or gods.

My learning journey

- The starting point for this module is to understand what we mean by peace and conflict. What does peace mean to us in terms of our soul and conscience? What does peace mean to us in terms of current worldly affairs? What is the definition of conflict? We will discuss examples of peace and conflict.
- We then look at Sikh teachings on peace and conflict. We explore evidence from Sikh scriptures and Sikh figures. We go on to investigate if we can apply their teachings to our lives.
- We then move onto peace and conflict from a Muslim / Islamic perspective. We will briefly discuss media representations of Muslims and their beliefs and then we will move onto looking at key Muslim figures and scriptures and their teachings on peace and conflict. We will look at key themes such as Jihad and Islamophobia and Prejudice and how they are linked to peace and conflict.
- The final religious perspective we will explore, is on Christianity on peace and conflict. We will analyse key Christian figures and scriptures as well as some Christian charities and how the work that they carry out is linked to peace and conflict.
- Following the studies of the 3 religions we will then move onto investigate iof religious communities intend to make peace or war.
- Finally, we will complete an assessment on peace and conflict and the various teachings from Sikhism, Islam and Christianity.





Year 8 French Spring 1 GCSE Theme: Current and future study and employment

This half term I will learn to discuss:

Expressions of time

Subjects and times

What you wear for school

Opinions about school subjects

Your timetable

Daily routine

Schools in England and in France

Further education plans

J'ai fait un cours de (français).	I had a (French) lesson
la récré(ation)	break time
le lundi matin	Monday morning
ce matin	this morning
suivi(e) par	followed by…
cet après-midi	this afternoon
puis	then
après	after
ensuite	next
Quelle heure est-il?	what time is it?
Il est …	it is…
trois heures et quart	quarter past three
quatre heures et demie	half past four
cinq heures moins le quart	quarter to five
midi	midday
Aimes-tu …?	do you like?
j'adore	I love
j'aime (bien)	I like (a lot)
je n'aime pas	I don't like
je préfère	I prefer
je déteste	I hate
c'est (très/trop) …	It's (very/too)
difficile	difficult
ennuyeux	boring
facile	easy
intéressant	interesting
utile	useful
Je suis fort(e) en …	I am good at…
Je suis faible en …	I am bad at…
On a trop de devoirs.	we have too mush homework
Le prof est (très sévère).	the teacher is (very strict)
Ma matière préférée, c'est …	my favourite subject is…

je me reveille	I wake up
je me lève	I get up
je me douche	I have a shower
je m'habille	I get dressed
je me lave	I have a wash
je me précipite	I rush
je me couche	I go to sleep
je prends mon petit déjeuner	I eat my breakfast
je finis mes devoirs	I finish my homework

à mon avis	in my opinion
selon moi	in my opinion
je trouve que	I find that
je pense que	I think that
pour	for
contre	against
C'est plus grand	the biggest.
C'est moins grand.	the least big
C'est mieux.	it's better
C'est pire.	it's the worst

Grammar I will learn:

Referring to the past the present and the future

Present tense –er verbs

Adjectives of colour

Using the verbs: adorer, aimer, detester

Using reflexive verbs

Negative expressions

Using the near future

Your plans

School rules and pressures

Good and bad aspects of school

Il faut …	you must…
être à l'heure	be on time
apporter son matériel	bring your equipment
bien se tenir en classe	behave yourselves in class
faire ses devoirs	do your homework
apprendre ses leçons	learn in lessons
cacher ses tatouages	cover tattoos
Il est interdit de/d'…	it is forbidden to…
porter des bijoux et du maquillage	wear jewellery or makeup
utiliser son portable en classe	use your mobile in class

Plus tard, …	later on…
Je vais …	I am going to…
Je veux …	I want to…
Je voudrais …	I would like
apprendre un metier	learn a job
avoir des enfants	have children
avoir beaucoup d'argent	have lots of money
avoir un magasin	have a house
continuer mes études	continue my studies
être (garagiste)	to be (a mechanic)

Il faut porter …	you have to wear
un chandail	cardigan
un chemisier	blouse
un collant	tights
un jean	jeans
un maillot de foot	football top
un pantalon	trousers
un polo	polo shirt
un pull	jumper
un short	shorts

Ma matière préférée c'est ….	
le français	French
le théâtre	Drama
la biologie	Biology
la chimie	Chemistry
la physique	Physics
la technologie	Technology
les maths	Maths
l'histoire-géo	History-Geog

Using 'je vais, je veux, je voudrais' + infinitive

Using il faut and il est interdit de + infinfitive

Using je voudrais and j'aimerais

Year 9 French Spring 2 GCSE Theme: 2 Identity and culture

This half term I will learn to discuss:

Free-time activities: Discussing Music Cinema and TV

Arranging to go out

Why you can't do something

Opinions about things you did

A sporting event

The past, present and future

New technology

A film review

Tu veux aller ... ?	You want to go ... ?
au cinéma/au théâtre	To cinema / theatre
à un concert/en ville	At a concert / in town
Je veux bien.	I want.
Ça commence à quelle heure?	When does it start?
Ça commence à (19h30).	It starts at 7:30 pm.
Ça coûte combien?	How much does it cost?
Ça coûte (10) euros.	It costs (10) euros.
On se retrouve où?	Where do we meet?
À quelle heure?	At what time?
chez moi	home
chez toi	at your home
D'accord.	Okay.
Tu veux ... ?	You want ... ?
aller en ville/au cinéma	Go to town / cinema
faire du bowling/de la natation	Bowling / swimming
jouer au tennis/au foot	Play tennis / soccer
venir à ma fête	Come to my party
aujourd'hui	today
ce matin	this morning
cet après-midi	this afternoon
ce soir	tonight
demain (matin/soir)	Tomorrow (morning / evening)
samedi (soir)	Saturday night)

le feuilleton	soap
la comédie	comedy
les films de guerre	war films
les films d'horreu r	horror films
les films de science-fiction	science fiction films
les films policier s	detective films
les films romantiques	romantic films
les films d'amour	romantic films
la vedette	star
les actualités	news

(Je suis) désolé(e).	I'm sorry).
Excuse-moi.	Excuse me.
Je ne peux pas.	I can not.
Je ne peux pas venir à ta fête parce que ...	I can not come to your party because ...
Je dois ...	I must ...
aller voir ma grand-mère	Go see my grandmother
faire mes devoirs	Do my homework
garder mon petit frère/ma petite sœur	Look after my little brother / sister
promener le chien	walk the dog
ranger ma chambre .	tidy my room
rentrer avant 22h	return before 10pm
rester à la maison/au lit	Stay at home / in bed

Grammar I will learn:

Using plural nouns with likes and dislikes

Using object pronouns

Using question words

Using modal verbs

Revision of past tense

Saying what other people did in the past

Using different tenses

Using the comparative

C'était ...	It was ...
assez/tout à fait/très/trop/un peu	Quite / quite / very / too / somewhat
amusant	amusing
chouette	great
extra	extra
génial	awesome
drôle	funny
marrant	funny
ennuyeux	boring
intéressant	interesting
lent	slow
long	long
nul	rubbish
passionnant	exciting
Ce n'était pas mal.	It was not bad.
Qu'est-ce que tu as fait ... ?	What did you do ... ?
hier	yesterday
samedi dernier	last Saturday
pendant les vacances	during the holidays
Je suis allé(e) au cinéma.	I went to the cinema.
Je suis resté(e) à la maison.	I stayed at home.
J'ai regardé Shrek en DVD.	I watched Shrek on DVD.
J'ai vu un film d'action au cinéma.	I saw an action movie at the cinema.
J'ai lu un livre de Lemony Snicket.	I read a book by Lemony Snicket.

Qu'est-ce que tu vas faire ... ?	What are you going to do ... ?
dimanche prochain	next Sunday
demain	tomorrow
Je vais/On va ...	I go / We go ...
acheter un CD	Buy a CD
aller au cinéma/à une fête	Go to the cinema / party
aller voir mes grands-parents	Go see my grandparents
écouter de la musique	listen to music
faire les magasins	to shop
jouer à l'ordinateur/au foot	Play on computer / soccer
lire un livre	read a book
manger une pizza	eat a pizza
regarder la télé	Watch the television
rester à la maison	stay at home
retrouver mes copains/copines	Find my buddies / girlfriends
voir un film	To see a film

Ma passion, c'est ...	My passion is ...
Je suis supporter/supportrice de ...	I am a supporter of ...
Je suis fan de ...	I am fan of ...
J'ai regardé le match (Angleterre–Brésil) à la télé.	I watched the match (England-Brazil) on TV.
Je suis allé(e) au match.	I went to the game.
J'ai vu le match au stade.	I saw the match at the stadium.
Il a marqué ...	He scored ...
un but/deux buts	One goal / two goals
un essai/deux essais	One test / two tests
L'Angleterre a gagné le match 3–1.	England won the match 3-1.
L'Italie a perdu la finale 2–0.	Italy lost the final 2-0.
La France a fait match nul contre l'Écosse.	France tied against Scotland.
Elle a gagné le championnat/la course.	She won the championship / race.
C'était ...	It was ...
extra/génial/chouette	Extra / great / great
passionnant	exciting
nul	rubbish
Ce n'était pas mal.	It was not bad.

Je surfe sur l'Internet.	I surf the Internet.
Je fais des achats sur le Net.	I make purchases on the Net.
J'envoie des e-mails à mes copains.	I send e-mails to my friends.
Je regarde des vidéos.	I watch videos.
Je tchate dans des forums.	I chat in forums.
Je joue à des jeux.	I play games.
Je télécharge de la musique.	I download music.
Je vais sur les blogs de mes copains.	I go on the blogs of my friends.
J'aime télécharger.	I like to download.
Je préfère surfer.	I prefer surfing.
Je n'aime pas acheter ...	I do not like to buy ...

Year 9 Spanish Spring 1 GCSE Theme: Current and future study and employment

This half term I will learn to discuss:

- Expressions of time
- Subjects and times
- What you wear for school
- Opinions about school subjects
- Your timetable
- Daily routine
- Schools in England and in France
- Further education plans

el comercio	Business
el dibujo	art
el español	Spanish
el francés	French
el inglés	English
el teatro	drama
la educación física	PE
la geografía	geography
la historia	history
la religion	RE
la tecnología	technology
los idiomas	languages
las ciencias	science
las matemáticas	maths

me gusta(n)	I like
me encanta(n)	I love
me gusta(n) mucho	I like a lot
no me gusta(n) nada	I don't like at all
odio	I hate
me interesa(n)	I am interested in
Mi asignatura preferida es…	my favourite subject is..

porque es…/son…	because it is/they are
aburrido/a(s)	boring
difícil(es)	difficult
divertido/a(s)	fun
entretenido/a(s)	Entertaining
fácil(es)	easy
guay(s)	great
interesante(s)	interesting
práctico/a(s)	practical
útil(es)	useful

Se debe…	You must…
escuchar en clase	listen in class
hacer los deberes	do your homework
llegar a tiempo	arrive on time
llevar uniforme	wear a uniform
No se debe…	you mustn't…
comer chicle	chew chewing gum
correr en los pasillos	run in the corridoor
escuchar música en clase	listen to music in class
llevar maquillaje	wear makeup
joyas/piercings	jewellery/piercings
zapatillas de deporte	trainers
leer correos electrónicos	read emails
en la sala de informática	in the ICT room
mandar mensajes en clase	send messages in class
ser desobediente	be disobedient
usar el móvil en clase	use your mobile in class
Los alumnos tienen que	pupils must
ser puntuales y amables.	be punctual and nice

¿Cómo vas al colegio?	How do you get to school
Voy al colegio/instituto…	I go to school…
Vuelvo del colegio/instituto…	I return from school…
a pie/andando	on foot/walking
encoche/autobús	by coach/bus
metro/tren	by metro/train
bicicleta/moto/autocar	bike/moped/bus
Me gusta ir (en autobús)…	I like to go (by bus)
Prefiero ir (en coche)…	I prefer to go (by car)
cuando hace buen/mal tiempo	when it's bad weather

Grammar I will learn:

- Referring to the past the present and the future
- Present tense –er verbs
- Adjectives of colour
- Using reflexive verbs
- Negative expressions
- Using the near future
- Using voy a + infinitive

School rules and pressures

Good and bad aspects of school

Quiero…	I would like…
Voy a…	I am going to…
Me gustaría…	I would like…
seguir estudiando	keep studying
encontrar trabajo	find a job
ir a la Universidad	go to university
trabajar como voluntario/a en…	work as a volunteer in…
vivir en el extranjero	live abroad
formar una familia	have a family

En el cole…	in school…
llevo/tengo que llevar…	I wear/ I have to wear
me gustaría llevar…	I would like to wear
un jersey	a jumper
un vestido	a dress
una blusa	a blouse
una camisa	a shirt
una camiseta	a t-shirt
una chaqueta de punto	a knitted jacket
una corbata	a tie
una falda	a skirt
una gorra	a hat
una sudadera	a sweatshirt
unos pantalones	trousers
unos vaqueros	jeans
unos calcetines	socks
unos zapatos	shoes
unas botas	boots
unas zapatillas de deporte	trainers
unas medias	stockings

En mi cole/colegio/instituto	in my school
(no) hay…	there is (isn't)
(no) tenemos	we (don't) have
un campo de fútbol	a football pitch
un comedor	a canteen
un gimnasio	a gym
un patio	a yard
un salón de actos	an auditorium
una biblioteca	a library
una piscine	a swimming pool

Using se debe + infinfitive

Using quiero/me gustaría

Year 9 Spanish Spring 2 GCSE Theme: 2 Identity and culture

This half term I will learn to discuss:

TV programmes

Types of film

Hobbies and pocket money

Sports and sporting events

Making arrangements to go out

Writing reviews
New technology

el telediario/las noticias	The news / news
los programas de deportes	Sports programs
los documentales	the documentaries
los concursos	competitions
las series de policías	The police series
los programas de tele-realidad	The reality TV programs
las telenovelas	soap operas
¿Qué ponen en la tele hoy/esta tarde/mañana?	What do they put on the TV today / this afternoon / tomorrow?
¿Quieres venir a mi casa a ver (una telenovela)?	Do you want to come to my house to see (a telenovela)?
¿Quieres ver (el telediario) conmigo?	Do you want to watch (the news) with me?
A la una...	At one...
A las dos/tres...	two / three o'clock
...y cuarto/veinte/media	quarter / twenty / half past
...menos cuarto/veinte/media	Less quarter to twenty to
entretenido/a(s)	Entertaining
educativo/a(s)	Educational (s)
curioso/a(s)	Curious,
lento/a(s)	Slow (s)
largo/a(s)	Long (s)
malo/a(s)	Bad
tonto/a(s)	Fool (s)
emocionante(s)	Exciting
genial(es)	Great
guay(s)	Cool
Me gusta mucho (Hollyoaks).	I really like (Hollyoaks).
Es una telenovela/un concurso...	It's a telenovela / a contest ...
Me gusta porque es muy/un poco/bastante...	I like it because it is very / a little / quite ...

las películas...	the movies...
de ciencia-ficción	of Science fiction
del Oeste	from West
de guerra	of war
románticas	romantic
de terror	Horror
de acción	of action
de artes marciales	Martial arts
las comedias	the comedies
los dibujos animados	the cartoons
porque...	why...
son las mejores	Are the best
me gustan los caballos	I like horses
me interesa la historia	I am interested in history
me hacen feliz	They make me happy
me dan miedo	they scare me
son muy emocionantes	They are very exciting
son muy guays	They are very cool
me hacen reír	You make me laugh
son muy graciosos/as	They are very funny
Me gustan más...	I like more...
Prefiero...	I prefer...
Me encantan...	I love...
Me gustan...	I like them...
Me interesan...	I'm interested in...
No me gustan...	I do not like...

Grammar I will learn:

•Using articles and adjectives correctly

•Using a range of opinions

•Using conjugated verbs and infinitives

•Understanding direct object pronouns

•Using tenses referring to the past and the present

•Using the present continuous tense

•Using absolute superlatives
•Acabar de

•Revising comparatives

Me gusta…	I like to…
hacer esquí	do skiing
jugar al billar/fútbol/tenis de mesa	Play billiards / football / table tennis
nadar	swim
patinar	rollerblading
salir con amigos	go out with friends
escuchar música	listen to music
leer libros/revistas	Read books / magazines
ver la tele	watch TV
hago, juego, nado, patino, salgo, escucho, leo, veo	I play, I swim, I skate, I leave, I listen, I see, I see
¿Cuánto dinero te dan tus padres?	How much money your parents give to you?
¿Tus padres te dan paga?	Do your parents give you pocket money?
Mis padres me dan…	My parents give me
euros/libras…	euros/pounds …
al día	per date
a la semana	a week
al mes	a month
¿Cómo lo gastas?	How do you spend it?
¿Qué haces con tu dinero?	What do you do with your money?
Lo gasto en…	I spend it on …
Compro…	I buy…
Ahorro para comprar…	I'm saving to buy …
caramelos	sweets
crédito para mi móvil	Credit for my mobile
maquillaje	makeup
revistas	journals
ropa	clothes
videojuegos	video game
una moto	a motorcycle
un iPod	an iPod

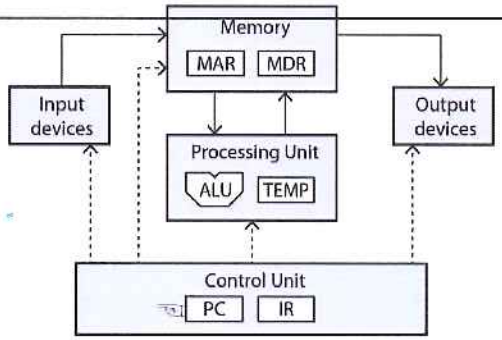
Es…	Is…
misteriosa	mysterious
bonita	pretty
original	original
emocionante	exciting
extraña	strange
fea	ugly
mágica	magic
terrorífica	terrifying
sorprendente	surprising
impresionante	Awesome
triste	sad
feliz	happy
Admiro a…	I admire…
Adoro a…	I love…
Odio a…	I hate…
películas son…	

porque sus películas son…	Because his movies are …
porque sus libros son…	Because their books are …
porque su música es…	Because his music is …
interesantísimo/a(s)	Very interesting
divertidísimo/a(s)	Hilarious
feísimo/a(s)	Ugly
bellísimo/a(s)	Beautiful (s)
buenísimo/a(s)	Great (s)
aburridísimo/a(s)	Boring

Lo siento, pero (Miguel) no está en casa porque…	Sorry, but Miguel is not at home because …
está trabajando	is working
está jugando al fútbol/tenis/rugby	Is playing soccer / tennis / rugby
está haciendo sus deberes en casa de (Juan)	Is doing his homework at (Juan)
¿Puede decirle que voy a ir…	Can you tell him that I'm going …
al cine /al parque/	To the cinema / to the park /
al polideportivo/a la bolera?	To the sports center / the bowling alley?
Tengo que…	I have to…
hacer de canguro	Babysit
limpiar mi dormitorio	Clean my bedroom
hacer los deberes	do homework
salir con mis padres	Go out with my parents
lavarme el pelo	Wash my hair
trabajar	to work
¿Quieres ir al/a la…?	Do you want to go to the …?
No puedo ir porque…	I can not go because …
…no tengo dinero	…I have no money

Systems architecture

- **The purpose of the CPU**
- **Von Neumann architecture**
  - Memory Address Register [MAR]
  - Memory Data Register [MDR]
  - Program counter
  - Accumulator
- **Common CPU components and their function**
  - Arithmetic Logic Counter [ALU]
  - Control unit [CU]
  - Cache
- **Function of the CPU as fetch / execute instructions stored in memory**
- **How common characteristics of CPUs affect their performance:**
  - Clock speed
  - Cache size
  - Number of cores
- **Embedded systems:**
  - Purpose
  - Examples of embedded systems.



Memory

- **Random Access Memory [RAM]**
  - Purpose of RAM in a computer system.
- **Read Only Memory [ROM]**
  - Purpose of ROM in a computer system.
- **The difference between RAM and ROM.**
- **Virtual Memory**
  - How it works
  - The need for VM
  - How to prevent the need for VM
- **Flash memory**
  - How it is constructed
  - Appropriate use

Storage

- **Secondary Storage**
  - The need for secondary storage
  - Data capacity / calculation of data capacity requirements.
- **Common types of storage**
  - Optical
    - Different examples of optical storage
  - Magnetic
  - Solid State
- **Suitable storage devices / media for a given application**
  - Advantages / Disadvantages using the following characteristics:
    - Capacity
    - Speed
    - Portability
    - Durability
    - Reliability
    - Cost

Wired & Wireless networks

- **Types of network**
  - Local Area Network [LAN]
  - Wide Area Network [WAN]
- **Factors that affect the performance of networks:**
  - Bandwidth
  - Latency
  - Error rate
  - Transmission media

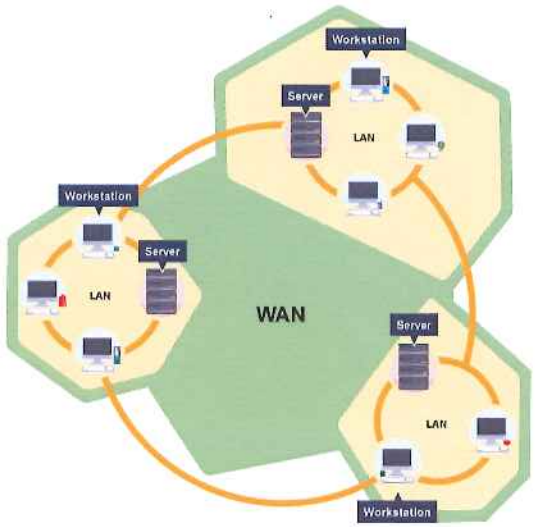
- **Different roles of computers in a network:**
  - Client-server network
  - Peer-to-peer network

- **Hardware needed to connect standalone computers into a Local Area Network:**
  - Wireless Access Points
  - Router
  - Switch
  - Network Interface Card (NIC)
  - Transmission Media

- **The Internet**
  - Definition
  - Domain Name Server [DNS]
  - Web hosting
    - Benefits / Drawbacks
  - The cloud
    - Benefits / Drawbacks
  - Virtual networks

Network topologies, protocols & layers

- **Topologies**
  - Star
  - Mesh
  - Bus / Ring – why are these no longer used?
- **Wi-Fi:**
  - Frequency & channels
  - Encryption
- **Ethernet**
  - Definition



Computer Systems

- **Computer Systems**
  - Inputs
  - Processes
  - Outputs
  - Importance of computer Systems
  - Examples of computer systems

- **Types of computer systems:**
- **Advantages/disadvantages**
  - General purpose systems
  - Dedicated systems
  - Control Systems
  - Embedded Systems
  - Expert Systems
  - Management information systems

- **Reliability of computer Systems**
  - The need for reliable systems
    - examples
  - Data integrity
  - Reliability and testing

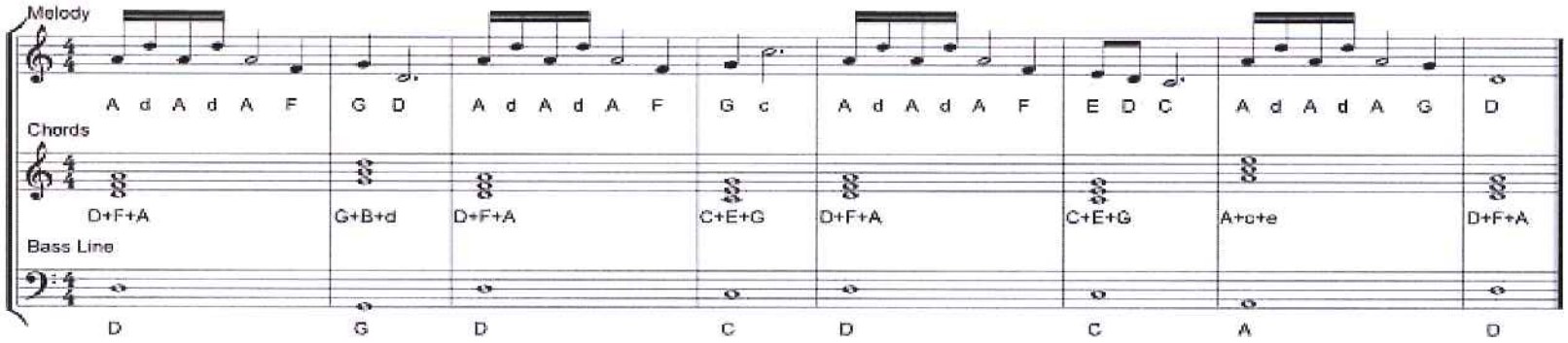
- **Standards of computer systems**
  - Importance of standards
- **General purpose systems**
  - De facto standards
  - De jure standards
  - Proprietary standards
  - Industry standards
  - Open Standards

LEITMOTIF : this is music that represents a character or a situation in a film

You need to perform the melody with your right hand and chord with your left hand.

THE GOOD, THE BAD & THE UGLY PERFORMING SHEET

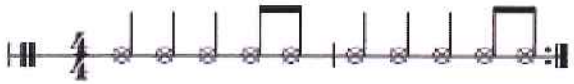
Perform the theme to the Western film "The Good, The Bad & The Ugly" in pairs, one person performing the **MELODY** and the other the **CHORDS** and **BASS LINE** together. Choose a **VOICE/TONE/SOUND** that is suitable for a 'Western Film' – no "Grand Pianos!!!"



EXTENSION WORK

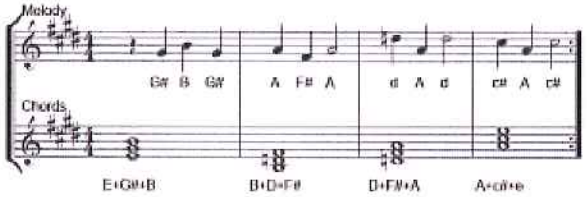
1. Add the following **OSTINATO** on a suitable drum/instrument: (slow-slow-slow-fast-fast or 1...2....3...4 and)
2. Create an **INTRODUCTION** and an **ENDING** – this can use "parts" of the melody, chords or bass line or use other percussion instruments
3. Add some **SOUND EFFECTS** – perhaps "Gunshots" from your keyboard?
4. Rehearse and practice your piece remembering how important it is to keep the "mood" of a 'Western Film'

PERCUSSION/DRUM OSTINATO

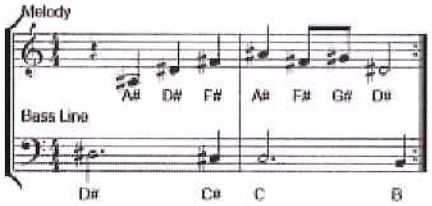


Riffs & Hooks from Popular Songs

1. **"Bitter Sweet Symphony" – The Verve**
Learn to play this riff from "Bitter Sweet Symphony" using a **STRING** sound from a keyboard.



2. **"Glory Box" – Portishead**
This riff from Portishead's "Glory Box"(*shown below right*) is to be played slowly. It uses a lot of black notes (the melody is made entirely of black notes) while the bass line moves down in pitch gradually.



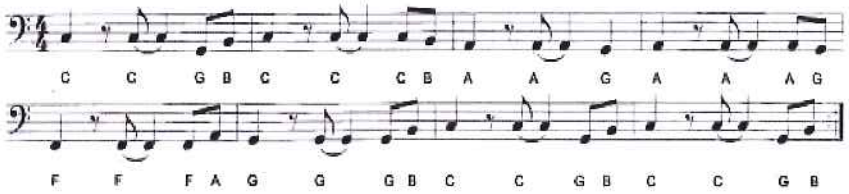
A **RIFF** is a short repeated phrase used in popular music which is very often performed on the guitar or bass.

There are many famous riffs which you can listen to on YouTube:

Riff	Artist/group
Back in Black	AC/DC
Johnny B Goode	Chuck Berry
Rebel, Rebel	David Bowie
Smoke On The Water	Deep Purple
Take Me Out	Franz Ferdinand
Voodoo Child	Jimi Hendrix
Beat It	Michael Jackson
You Really Got Me	The Kinks
Smells Like Teen Spirit	Nirvana
Killing In The Name	Rage Against The Machine
7 Nation Army	The White Stripes

Stand By Me Bass Riff:

BASS LINE



YEAR 9 MUSIC

POPULAR SONG GENRES

60'S POP	By the end of 1962, the British rock scene had started with beat groups like The Beatles drawing on a wide range of American influences including soul music, rhythm and blues and surf music.
Folk Song	A song belonging to the folk music of a people or area, often existing in several versions or with regional variations. A song of which the music and text have been handed down by oral tradition among the commonpeople
Rock n Roll	a type of popular dance music originating in the 1950s, characterized by a heavy beat and simple melodies. Rock and roll was a mix of black rhythm and blues and white country music, usually based around a twelve-bar structure and an instrumentation of guitar, double bass, and drums.
Punk Rock	a loud, fast-moving, and aggressive form of rock music, popular in the late 1970s..
Dance Remix	To create a new version of a recording by recombining and re-editing the elements of the existing recording andoften adding material such as new vocals or instrumental tracks.
Indie	Indie emerged from post-punk, new wave and "alternative" music released on late-1970s UK independent labels.
Hymn	This is a religious song or poem of praise to God or a god.
Reggae	A style of popular music with a strongly accented off beat, originating in Jamaica. Reggae evolved in the late 1960s from ska and other local variations on calypso and rhythm and blues, and became widely known in the 1970s through the work of Bob Marley, its lyrics are much influenced by Rastafarian ideas.
Ballad	A light and simple song, especially one of sentimental or romantic character which has two or more verses all sung to the same melody.
80's POP	One important element of 80's music became the visual aspects of the song's promotional video. In fact, many of the genre's hits can be identified just as easily by the images in their videos as they can by the artists or song lyrics.

CHORD SEQUENCES USED IN POPULAR MUSIC:

Many popular songs use the same chord sequence. It is the melody line that is changed to make a song sound different.

YouTube the group Axis of Awesome (student version) and notice how many popular songs have the exact same chord sequence.

Following are the chord sequences that you will learn.

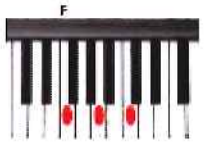
YEAR 9 MUSIC

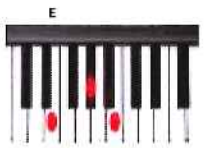
Love is All Around : C Dm F G **C= CEG Dm = DFA F=FAC G =GBD**

Stay : Bb F Eb F **Bb= Bb DF F= FAC Eb= Eb G Bb F =FAC**

LATIN MUSIC

The musical sequence used in "Latin" music is typically based around a repeating chord progression. The term used to describe a repeating pattern is OSTINATO.





Learning Activity: On the keyboards, learn the four chords as shown on the right of this sheet and play them in order.

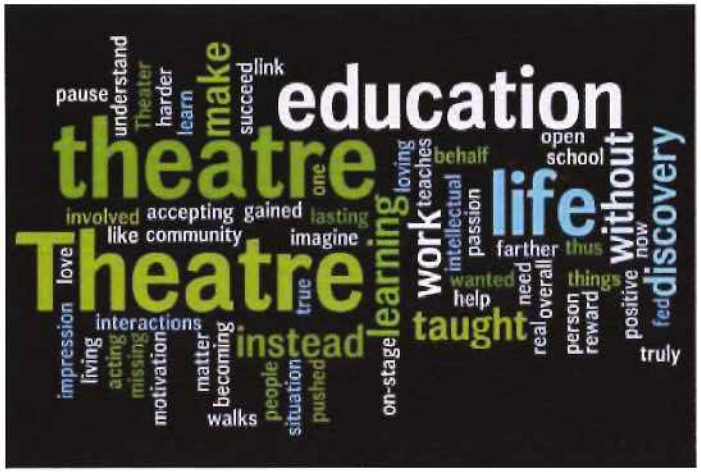
They are: AM – G – F – E

EXTENDED LEARNING:

1. Compose a bassline based around these chords
2. Add a melody over the top of the chord progression

KS3 Year 9 Drama

Topic 1- Theatre in Education



'Theatre In Education' is when you teach the audience about a topic, theme or issue through theatre.

Genres used in Theatre in Education:

Gameshow

Advert

Courtroom Drama

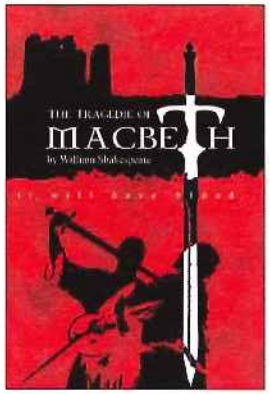
News report

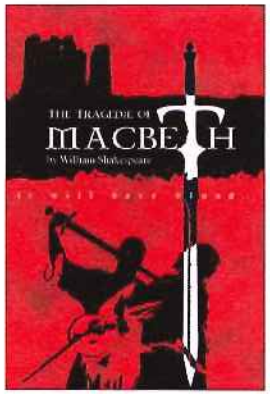
Topic 2- Blood Brothers

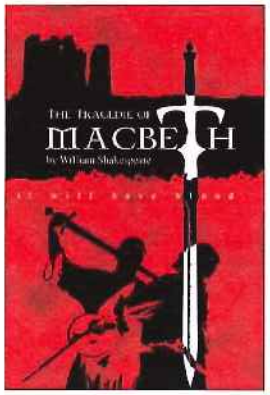
Plot: The story is a contemporary nature versus nurture plot, revolving around twins Mickey and Eddie, who were separated at birth and one raised in a wealthy family while the other raised in a poor family. The twins' different backgrounds take them to opposite ends of the social spectrum, one becoming a councillor and the other unemployed and in prison. They both fall in love with the same girl, causing a tear in their friendship and leading to the tragic death of both brothers.

Character	Description
Mickey Johnstone	He likes to play adventure games with others and sneak off to pull pranks. He is very shy about his emotions and takes years to ask Linda out even on a date. He finds it hard to tell Linda that he loves her. He tries to prove himself to her through working hard but becomes even more withdrawn after becoming unemployed.
Edward Lyons	He is raised in a middle-class home and is educated at a private school. He feels restricted and this is one of the reasons he likes the company of Mickey. He revels in Mickey's liveliness, bad language and risky games. He is shown to be an impulsive character and one who doesn't think too deeply about the consequences of his actions.
Mrs Johnstone	She is 25 years old at the start of the play and has already had seven children. She has a strong, generous character knowing almost instinctively what's right and wrong, although her circumstances make it hard for her to be a straightforwardly 'good' person.
Mrs Lyons	a cold character who finds it difficult to be affectionate towards others. This may be her natural personality, but circumstances certainly haven't helped: she and her husband are unable to have children naturally and her husband spends long periods at work away from home.

Topic 3- Macbeth







This drama is one of the great tragedy themed plays by William Shakespeare. The themes illustrated in the play include ambition, fate, deception and treachery. Three witches decide to confront the great Scottish general Macbeth on his victorious return from a war between Scotland and Norway. The Scottish king, Duncan, decides that he will confer the title of the traitorous Cawdor on the heroic Macbeth. Macbeth and another General called Banquo, happen upon the three witches. The witches predict that he will one day become king. He decides that he will murder Duncan. Macbeth's wife agrees to his plan. He then murders Duncan assisted by his wife who smears the blood of Duncan on the daggers of the sleeping guards. A nobleman called Macduff discovers the body. Macbeth kills the guards insisting that their daggers smeared with Duncan's blood are proof that they committed the murder. The crown passes to Macbeth. More murders ensue and the bloodied ghost of Banquo appears to Macbeth. Lady Macbeth's conscience now begins to torture her and she imagines that she can see her hands covered with blood. She commits suicide. Macduff kills Macbeth and becomes king.

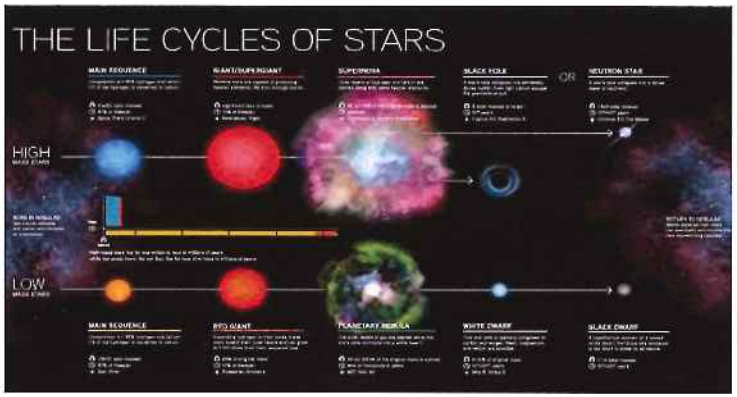
Topic 4- Alcohol Awareness

What is a unit and how much is too much?

Beer and Cider A pint of *lower strength* (4%) lager, beer or cider 2 UNITS	A pint of *medium strength* (5%) lager, beer or cider 3 UNITS	A 440ml can of *medium strength* (5%) lager or beer or cider 2 UNITS	A 500ml can of *high strength* (7.5-9%) lager or beer or cider 4 UNITS
Alcopops A small bottle (275ml) of lower strength (4%) alcopop 1 UNIT A large bottle (700ml) of higher strength (5%) alco-pop 3.5 UNITS	**The UK Chief Medical Officers recommend that adults do not regularly exceed:** 2-3 units a day for women 3-4 units a day for men		**Spirits** A single measure of spirit (40%) 1 UNIT A double measure of spirit (40%) 2 UNITS
Wine A *standard* glass (175ml) of *lower* strength (12%) wine or champagne 2 UNITS	A *small* glass (125ml) of *higher strength* (14.5%) wine 2 UNITS	A *large* glass (250ml) of *lower strength* (12%) wine 3 UNITS	**Find the number of units in other drinks by visiting the drinkaware unit calculator** drinkaware.co.uk/tips-and-tools/drink-diary/

Year 9 Art. To Infinity and Beyond

Your job is to engage in outer space, to research the planetary surfaces of our planets and recreate them in a series of textural and experimental work surfaces in and out of your sketch book. During this project you will:
Learn about how to research and generate ideas for a project.
You will learn how artists create images for a specific audience's
You will translate your learnt knowledge and skills and skilfully produce textural representations of planetary surfaces and stars.
You will experiment with layering and texturing techniques in your work.



The Life Cycle of Stars

You will look deeper into the life of stars and the anatomy of space.
This will form a strong basis of knowledge to go further and create beautiful galactic pieces of artwork.

Mixed Media

You will use many different materials to create planetary surfaces and galaxy style artwork.
You will use glue, acrylic paints, wax resist, and bleach and ink. These techniques will help you to further understand how to research and develop your artistic skills

Keywords:

- Galaxy
- Nebula
- Mixed Media
- Experiment
- Texture

Liz Walker

You will look deeper into the work of Liz Walker, analysing how she works and what you think of this process.
You will relate this back to your own study and use her as inspiration for your own galactic pieces.

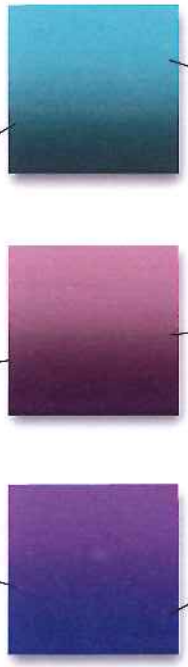
The colours she uses represent outer space and galaxies in her work and her dream-like images are very fluid and free.

Think about...
Line, tone, form, colour, pattern, subject matter, composition and texture.

Texture
The galaxy images you see here all contain lots of lines an texture.
These can be represented by layering paints, inks and 3D materials such as fabric and fibres, to create nebula style patterns.

Colour
Common colours for galaxies are shown here and can be used within your work to represent space appropriately.

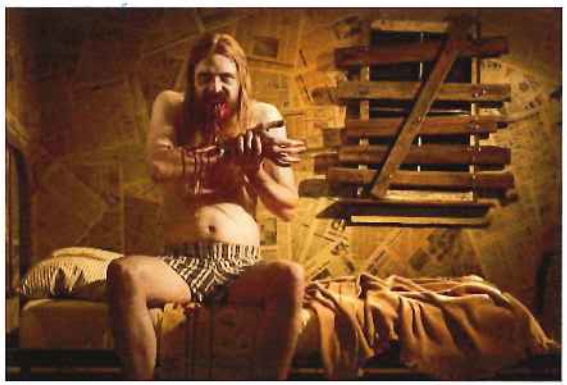
Think about using colours that compliment or contrast to create fantastic pieces of outer space artwork.



Year 9 Horror Project

During this project you will:
Generate ideas through research, looking at horror photographers and movie posters.
Design horror fonts and typefaces using photoshop and hand drawn to add to your final design of a promotional poster.

Photographer - Danielle Tunst



Photographer - Joshua Hoffine

Keywords

- Fear
- Gore
- Horror
- Death
- Scared

ITV are launching a new series called 'The Fear." They would like you to research horror by looking at films, typefaces, stories and producing a series of posters for their new show.

Look at different horror artists/photographers, films, youtube videos and stories to better understand the genre of horror and the emotions it can provoke in yourself. Use this inspiration to influence your journey through the Horror unit of work and encourage a stimulating final piece.

Typeface

Decide on your typeface to emphasise horror within your final advert design. You can design your own or use a font in Photoshop.

MOTHMAN

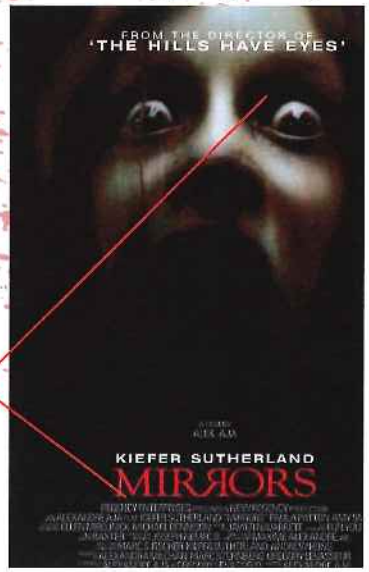
HORROR

NIGHTMARE

You will begin to think of composition of your advert

—

Use the title appropriately so it can be seen.
Think about your font, there are some examples on this page to make it look as scary as possible.
Position your chosen image in the centre or slightly off to the right or left to make the advert interesting.



Year 9 Horror Project

Photoshop

During this project you will be using photoshop to create and edit your final images. Here are some key words and commands you will need to know as you use this.

- **Photoshop**

The photo editing programme in which you will learn to alter your images by layering then, reducing the opacity and drawing/'painting' on top of them.

- **Crop**

A tool in photoshop that allows you to trim your image to the desired size - cutting off any edges that are not wanted for the final image.

- **Layer**

The layer is simply each section of your image. This could be the original image — or background — a layer of text or some added colour that can be merged together.

- **Type Tool**

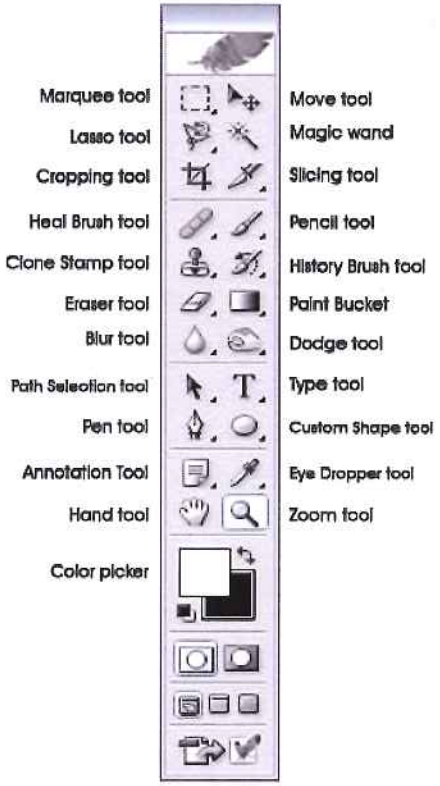
You will select this tool and click where you want to add any text. It can then be altered by changing font, size and placement.

- **History Palette**

This palette will show you every modification you have made in photoshop since you opened your document. You can simply click back onto a previous command to undo any unwanted changes.

- **Move Tool**

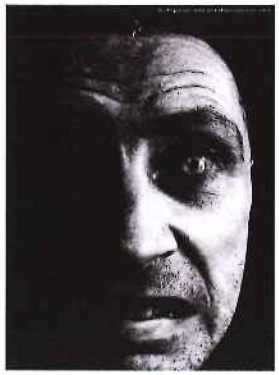
When this tool is selected you can click and drag any layer around to place it somewhere different on the document, Ensure this tool is selected when you want to move something.



Lighting

When you shoot your images for your advert, think carefully about how you are going to light your image.

This image is lit from the front to create shadows around the back of the hands. This creates drama in the front of the face.



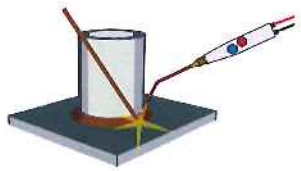
This image is lit from the side - this creates very harsh shadows and dark space on one half of the face. Use this to make your face seem scarier.

This image is lit from underneath. You can see it distorts the face and creates shadows where there usually isn't any. This creates a dramatic, scary look.

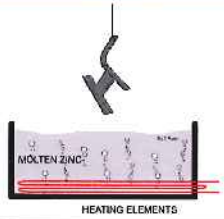
Year 8 Technology Knowledge Organiser – Forging

Designing	
Design Brief	A written document that outlines the design task and the required outcome
Analysing	Explaining in detail the important parts, features or information relating to something specific e.g. analysing the design task.
Researching	Investigate pictures, products, processes, documents etc. to find out important information that can be used in your work
Product Analysis	Examining in detail an existing product so that you can develop a detailed understanding about what it is made from, how it works etc.
Annotation	The detailed notes made alongside research materials, design ideas, development drawings etc. These should describe, explain and evaluate.
Target Market	Who is the product aimed at, who will buy it, who will use it?
Design Specification	A detailed list of the things that a product needs to do, have, look like, be made from etc.
Initial Designs/ideas	The first ideas that are drawn in order to provide possible solutions to the design brief
Development	Changes that are considered to an initial idea to make it work and look better.
Final Design idea/proposal	Once all development has taken place this is the actual product that will be made, the one that solves the design problem the best, the one that will be made.
Working Drawing	A detailed drawing that shows the dimensions or sizes; may also contain materials and parts lists.
Self-Evaluation	Personal reflection of your own work to say what is good/bad and how it could be made even better; or how it could be done a different way.
Peer Evaluation	Evaluation from others in the class or friends and family about the effectiveness of the final product – how it looks and how it works.

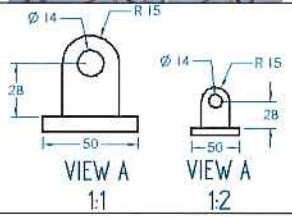
Year 8 Technology Knowledge Organiser – Forging

Manufacturing Processes		
Fabrication	Making an object from different parts that have been made then assembled together.	
Forging	Taking flat materials and twisting, bending, curving or folding into the shape that is needed by heating.	
Fabrication	Making an object from different parts, or components, that are then fixed together to form the final product.	
Scrolling	Curling or rolling flat materials such as metal or plastic into a curly shape	
Spiral Twisting	Twisting metal or plastic along its length	
Brazing	A method used to join metal together by heating and melting brass or bronze around the different parts (where they touch each other).	BRAZE WELDING / BRONZE WELDING 
Surface Finishes	A process used to make a material surface more aesthetically pleasing (nice to look at) and/or to protect it from the weather and other contamination or damage.	

Year 8 Technology Knowledge Organiser – Forging

		
Plastic Dip coating	Coating a metal in melted plastic.	
Powder Coating	Electrically charged powdered enamel is sprayed onto a metal object and it sticks due to static electricity. This is then put into an oven and baked to form a smooth and hard coloured surface over the metal.	
Painting	Brushing or spraying paint onto a metal	
Galvanising	Dipping a metal (usually steel) into a tank of molten zinc in order to coat the metal.	
Fluidised Bath	A tank with plastic powder in the bottom. A metal object is heated and hung in the tanks, and then air is blown through the bottom. This makes the powdered plastic 'bubble' around the hot metal object and the plastic sticks to the surface creating a plastic coating.	
Baking	Putting a metal object into an oven in order to heat it 'uniformly' (evenly) throughout – usually done before plastic dip coating or as part of powder coating.	

Year 8 Technology Knowledge Organiser – Forging

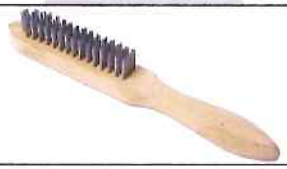
		
Structures	An object constructed from several parts in such a way that it is strong.	
Scale	The relationship between a small sized drawing or model and the real thing. E.g. the drawing is ¼ the size of the real thing so the scale is 1:4	
Quality	How good something is.	

Materials	
Ferrous Metals	Pure metals that contain Iron
Non Ferrous Metals	Pure metals that do not contain Iron
Alloys	A combination of two or more metals (or elements)
Ferrous Alloys	A metal made from two or more metals (or elements), one of which is Iron
Non Ferrous Alloys	A metal made from two or more metals (or elements), none of which are Iron
Flux	A chemical cleaning agent used to prevent oxidisation of the materials when heated to a high temperature.
Mild Steel	Iron and carbon (with a small amount of copper and manganese) are made into a Ferrous Alloy that is stronger than Iron and which is fairly easily shaped and formed.
Brass	A non-Ferrous Alloy made from combining Copper and Zinc together – can be used for Brazing

Year 8 Technology Knowledge Organiser – Forging

Tools and Equipment		
Hacksaw	A saw with a blade that is made from hardened steel. These have small teeth and are designed primarily for cutting metal	
Anvil	Large metal block with a pointed end, used for striking metal on when forging in order to deform or shape the metal.	
Files	Made from high carbon steel and used for smoothing and shaping softer metals like Steel, Copper, Brass and Aluminium.	
French Chalk	A chalk used for marking steel.	
Centre Punch	A round tool with a hard point. This is hit with a hammer to create an indentation at the point where a hole will be drilled in metal. Doing this makes it easier to locate the drill point accurately on the metal when creating the hole.	
Ceramic Chip Forge	A fire that is used to heat metal to a high temperature so that it can be shaped, the chips do not burn like coal would.	
Brazing Hearth	A heat proof area with a blow torch used to heat metal up for the purpose of brazing parts together.	

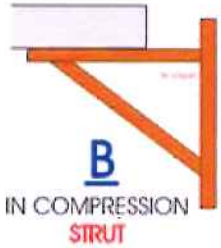
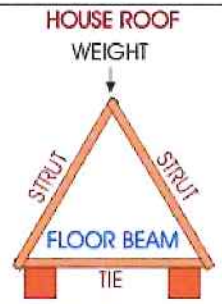
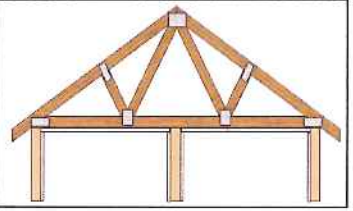
Year 8 Technology Knowledge Organiser – Forging

		
Wire Brush	A wooden brush with short hard wire bristles, used for cleaning metal.	
Emery Cloth	Like sand or glass paper but instead has small particles of emery (a naturally occurring rock of aluminium oxide). Used to sand/clean metals.	
Pillar Drill	A drill used for creating holes that is floor mounted and has a long metal pillar holding it up.	
Spot Welder	A machine that passes a high electrical current through two pieces of metal at a precise location. This heats the metals and welds (melts) them together.	
Scrolling Iron	A scroll made from a heavier/thicker piece of metal that is used a template for making other scrolls.	
Vice or Mole Grips	A tool (like pliers) that can apply a large amount of pressure in the jaws when these are clamped shut. Can be used to hold objects or temporarily clamp things together.	

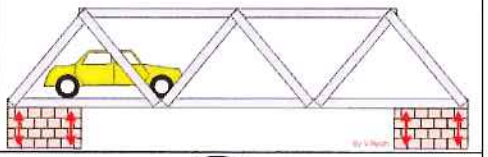
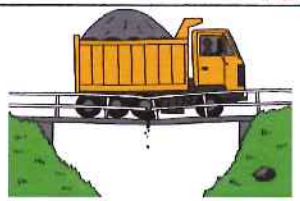
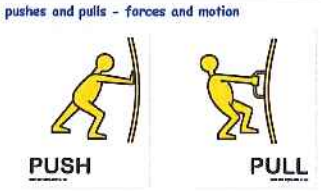
Year 8/9 Technology Knowledge Organiser – Structures

Structures		
Structure	Something that is made up of a number of parts that are held or put together in a particular way. Something constructed, such as a building.	
Natural Structures	Structures that occur naturally e.g. Feathers, shells, spiders web	
Man Made Structures	Structures made by humans, building, cars, planes etc.	
Frame Structures	Structures made from different parts and the frame is usually the thing that holds the rest of the structure together – e.g. a building, tent	
Shell Structures	Structures that have no frame in them. The parts hold themselves together or it may be made from one single piece of material. E.g. a coke can, an Igloo	
Beam	A beam is a part of a structure that is capable of withstanding load, primarily by resisting against bending. Beams are normally found horizontally or at angles, but not vertically.	
Column	Columns stand vertically and are normally the part of a structure (like a bridge or building) that carries the horizontal beams.	

Year 8/9 Technology Knowledge Organiser – Structures

		
Strut	A strut is the part of a structure used to hold other parts up, and resist compression (squashing) forces.	
Tie	A tie is part of a structure that will hold different parts together and resist tension (pulling) forces.	
Deck	A deck is the flat area constructed on a structure to be the floor, road or other flat surface e.g. balcony.	
Triangulation	Triangulation is where a frame structure is made strong by splitting it into triangles. The triangle is the most rigid frame structure. Engineers have known for a long time that whenever they need a light, strong, rigid structure they cannot do better than use a framework of triangles.	

Year 8/9 Technology Knowledge Organiser – Structures

Loads and Forces		
Load	Structural loads are forces applied to a structure or its components, by adding weight.	
Static Loads	Static loads are loads that are not moving and therefore transmit forces to specific parts of the structure e.g. car parked on a bridge.	
Dynamic Loads	Dynamic loads are loads that move and therefore the force is transmitted to different parts of the structure as the load moves e.g. car moving over a bridge.	
Force	Forces are described as a push or pull on an object. They can be due to things such as weight, wind, gravity or anything that might cause a structure to be damaged.	
Tension (Tensile Forces)	Tensile forces are ones that act in opposite directions away from each other, trying to stretch the part/s of the structure.	
Compression (Compressive Forces)	Compressive forces are ones that act in opposite directions towards each other, trying to squash the part/s of the structure.	

Year 8/9 Technology Knowledge Organiser – Structures

		 compression
Torsion (Torsional Forces)	Torsional forces are ones that try to twist or rotate parts of the structure.	 torsion
Bending Forces	Bending forces are ones that push down on parts of the structure and make them bend.	 bending
Shear Forces	Shear forces are cutting forces where two parts of a structure try to move past one another – anything trapped in between may be cut (such as a bolt that is being used to hold the structure together).	 shear

ACCESS FM - Helpsheet

We use **ACCESS FM** to help us write a **specification** - a list of requirements for a design - and to help us **analyse and describe** an already existing product.

A is for **Aesthetics**

Aesthetics means **what does the product look like?**
What is the: Colour? Shape? Texture? Pattern? Appearance? Feel? Weight? Style?

C is for **Cost**

Cost means **how much does the product cost to buy?**
How much does it: Cost to buy? Cost to make?
How much do the different materials cost? Is it good value?

C is for **Customer**

Customer means **who will buy or use your product?**
Who will buy your product? Who will use your product?
What is their: Age? Gender?
What are their: Likes? Dislikes? Needs? Preferences?

E is for **Environment**

Environment means **will the product affect the environment?**
Is the product: Recyclable? Reuseable? Repairable? Sustainable?
Environmentally friendly? Bad for the environment?
6R's of Design: Recycle / Reuse / Repair / Rethink / Reduce / Refuse

S is for **Size**

Size means **how big or small is the product?**
What is the size of the product in millimeters (mm)? Is this the same size as similar products? Is it comfortable to use? Does it fit?
Would it be improved if it was bigger or smaller?

S is for **Safety**

Safety means **how safe is the product when it is used?**
Will it be safe for the customer to use? Could they hurt themselves?
What's the correct and safest way to use the product? What are the risks?

F is for **Function**

Function means **how does the product work?**
What is the products job and role? What is it needed for? How well does it work? How could it be improved? Why is it used this way?

M is for **Material**

Material means **what is the product made out of?**
What materials is the product made from? Why were these materials used? Would a different material be better? How was the product made? What manufacturing techniques were used?

Product specification

A designer must make sure products meet the product specification. The product specification should be directly influenced by the analysis of research. This will ensure quality of design and that the end product is fit for purpose.

A specification is a statement that tells the designer exactly what the product has to do and what the design requirements are. A specification should include:

- product function
- Target market
- overall dimensions
- materials
- an outline of the appearance of the product
- user requirements
- details of the source of power (if needed)
- anthropometrics and ergonomics
- possible production levels
- legal requirements
- environmental considerations and requirements

This is an example specification:-

1. The materials I will use will be polystyrene, pine and MDF because my research clearly shows that this combination will improve my solution.

2. The overall shape will depend on the ergonomics of the hand. I will base the dimensions on statistics worked out as part of my research.

3. I intend to use a colour scheme based on red and blue because the questionnaire I carried out shows these are the most popular colours.

4. The solution will have the following functions: (List exactly what the solution will do).

5. The solution will stand on a desk / fixed on a wall.

6. I will need the following tools/machines to manufacture my solution: a lathe, drilling machine, hand files, a vacuum former etc.....

7. The solution is aimed at the 12-15 age group as my research suggests this would be the most successful market.

Workshop safety

Equipment

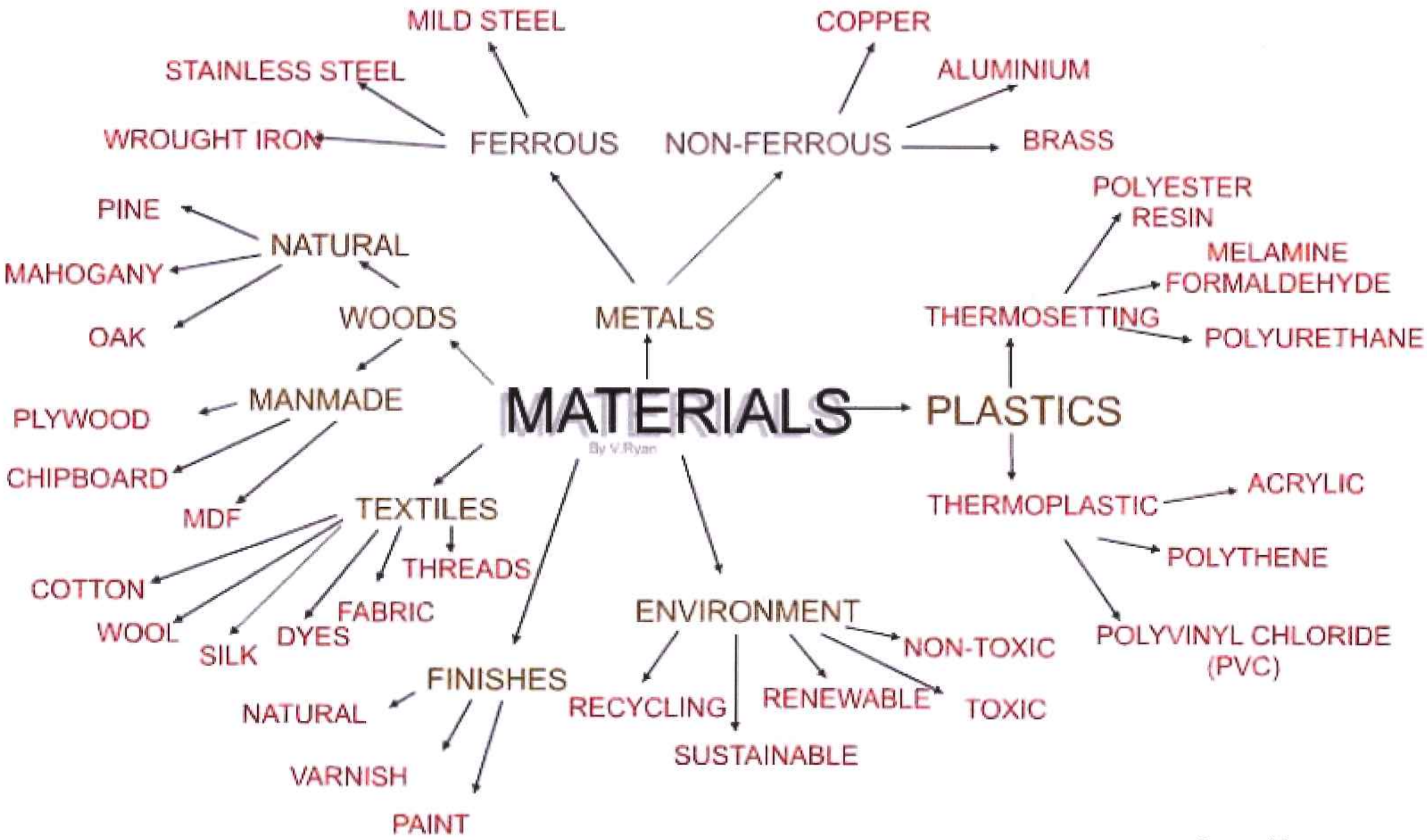
Eyes

Body

Safety rules

1. Always listen carefully to the teacher and follow instructions.
2. Do not run in the workshop, you could 'bump' into another pupil and cause an accident.
3. Know where the emergency stop buttons are positioned in the workshop. If you see an accident at the other side of the workshop you can use the emergency stop button to turn off all electrical power to machines.
4. Always wear an apron as it will protect your clothes and hold loose clothing such as ties in place.
5. Wear good strong shoes. training shoes are not suitable.
6. When attempting practical work all stools should be put away.
7. Bags should not be brought into a workshop as people can trip over them.
8. When learning how to use a machine, listen very carefully to all the instructions given by the teacher. Ask questions, especially if you do not fully understand.
9. Do not use a machine if you have not been shown how to operate it safely by the teacher.
10. Always be patient, never rush in the workshop.
11. Always use a guard when working on a machine.
12. Keep hands away from moving/rotating machinery.
13. Use hand tools carefully, keeping both hands behind the cutting edge.
14. Report any damage to machines/equipment as this could cause an accident.

KEY ASPECTS OF MATERIALS RESEARCH



Materials Research—Wood

Timber is the general name for wood there are three main types:

1.) Softwoods

Softwoods come from coniferous trees which have needles instead of leaves. Softwoods grow faster than hardwoods and so are cheaper and are easier to work with because they are softer than hardwoods. Theses are supplied in standard sections sawn and planned smooth.

- Evergreen trees are special because they don't lose their leaves.
- Softwoods grow faster than hardwoods so are cheaper.
- Often used as building material.
- Trees grow tall and straight so giving long planks of wood.

2.) Hardwoods

Hardwoods come from deciduous or broad-leafed trees. They are generally slow growing which tends to make them harder but more expensive. Please note though that not all hardwoods are hard, Balsa which is very soft and is often used for model planes is in fact a hardwood! Some timber is machined into many sections called mouldings for example, dowel, beading, etc.

- Hardwoods usually have a broad leaf shape.
- Hardwoods are deciduous which means they lose their leaves.
- You can distinguish hardwoods by the structure of the wood grain.

3.) Manufactured Boards

Manufactured boards are timber sheets which are produced by gluing wood layers or wood fibres together. Manufactured boards have been developed mainly for industrial production as they can be made in very large sheets of consistent quality. Boards are available in many thicknesses.

- Manufactured boards often made use of waste wood materials.
- Saw dust is used to make MDF and hardboard.
- The saw dust is held together with glue.
- Manufactured boards are cheap so are often used as instead of real woods.
- Manufactured boards do however do not look as good as real woods look.
- Manufactured boards are often covered with a thin layer of real wood which is called veneer this improves their appearance.

Conclusion points

- Different woods have different grain patterns these are the rings marks that are on present on the wood.
- Different woods come in different colours and textures as all trees are different.
- Different woods are used for different purposes as all woods have different characteristics such as strength, resistant to moisture, etc.

Hardwood types	Grain image	Harwood uses	Example product
Beech - A straight-grained hardwood with a fine texture. Light in colour. Very hard so is ideal to be used where it is being bashed around and used often. Beech is also very easy to work with.		Used for furniture, toys, tool handles. Can be steam bent.	
Oak - A very strong wood which is light in colour. Open grain. Hard to work with. When treated it looks very classy and elegant. A hardwood.		Used for high class furniture, boats, beams used in buildings, veneers.	
Mahogany - An easy to work wood which is reddish brown in colour. This wood is very expensive. A hardwood.		Used for expensive indoor furniture, shop fittings, bars, veneers.	
Teak - A very durable oily wood which is golden brown in colour. Highly resistant to moisture and outdoor weather. A hardwood.		Used for outdoor furniture, boat building, laboratory furniture and equipment.	
Balsa - is a pale white to gray. It has a distinct velvety feel. It has exceptional strength to weight properties. It is the lightest and softest wood on the market. A hardwood.		Used for light work such as model making and model airplane construction.	

Memory tip: Remember BAD HOTEL!

B - Balsa
A - Ash
D - Deciduous

H - Hardwood
O - Oak
T - Teak
E - Expensive
L - Loses leaves

Softwood types	Grain image	Softwood uses	Example product
Scots pine - A straight-grained softwood but knotty. Light in colour. Fairly strong but easy to work with. Cheap and readily available. A softwood.		Used for DIY and cheap quality furniture. Mainly used for constructional work and simple joinery.	
Parana pine - Hard and straight-grained. Almost knot free. Fairly strong and durable. Expensive. Pale yellow in colour with red/brown streaks. A softwood.		Used for good quality knot free pine red / brown furniture such as doors and staircases.	
Spruce - Creamy-white softwood with small hard knots. Not very durable. A softwood.		Used for general indoor work, whitewood furniture used in bedrooms and kitchens.	
Yellow cedar - A pale yellow-coloured softwood with a fine even texture. Light in weight but stiff and stable.		Used for furniture, boat building, veneers, and model making.	
European redwood - Quite strong, Lots of knots, durable when preserved. cheap		Used for general woodwork, cupboards, shelves, roofs.	

Memory tip: Remember Pincers!

P - Pine
I - Indicates
N - Needles
C - Cedar
E- Evergreen
R -Redwood
S- Softwood

Manufactured board types	Grain image	Board Uses	Example product
MDF - Smooth, even surface. Easily machined and painted or stained. Also available in water and fire resistant forms. A manufactured board.		Used mainly for furniture and interior panelling due to its easy machining qualities. Often veneered or painted.	
Plywood - A very strong board which is constructed of layers of veneer or piles which are glued at 90 degrees to each other. Interior and exterior grades are available. A manufactured board.		Used for strong structural panelling board used in building construction. Furniture making. Some grades used for boat building and exterior work.	
Chipboard - Made from chips of wood glued together. Usually veneered or covered in plastic laminate. A manufactured board.		Used for kitchen and bedroom furniture usually veneered or covered with a plastic laminated. Shelving and general DIY work.	
Blockboard - Similar to plywood but the central layer is made from strips of timber. Good for shelves and worktops. A manufactured board.		Used where heavier structures are needed. Common for shelving and worktops.	
Hardboard - A very cheap particle board which sometimes has a laminated plastic surface. A manufactured board.		Used for furniture backs, covering curved structures, door panels.	

Memory tip: Remember SLIM CHIMP!

S- Squashed
L- Layers
I- Industrial
M- Manmade

C- Chipboard
H- Hardboard
I- Inexpensive
M- MDF
P - Plywood

Materials Research—Metal

How are metals made?

Metals are made by mining ore from within the earth. Metal is then extracted out of the rocks in an extremely large scale industrial process. There are three main types of metals ferrous metals, non ferrous metals and alloys.

Ferrous metals

Ferrous metals are metals that consist mostly of iron and small amounts of other elements. Ferrous metals are prone to rusting if exposed to moisture. Ferrous metals can also be picked up by a magnet. The rusting and magnetic properties in ferrous metals are both down due to the iron. Typical ferrous metals include mild steel, cast iron and steel.

Non-ferrous metals

Non-ferrous metals are metals that do not have any iron in them at all. This means that Non-ferrous metals are not attracted to a magnet and they also do not rust in the same way when exposed to moisture. Typical Non-ferrous metals include copper, aluminium (coke cans), tin and zinc.

Metal Alloys

Alloys are substances that contain two or more different metals and occasionally other elements. The metals are carefully chosen and mixed to achieve specific properties these include reducing the melting point making the alloy light weight, etc.

Metal properties

There are a lot of properties which need to be thought of when deciding what metal to use:

Property

Hardness – resistance to scratching, cutting and wear.

Elasticity – the ability to get back to its original shape after it has been misshapen.

Malleability – the ability to be easily pressed, spread and hammered into shapes.

Work hardness – when the structure of the metal alters as a result of consistent hammering or strain.

Ductility – the ability to be stretched without breaking.

Brittleness – it will break easily without bending.

Compressive strength – very strong when under pressure.

Tensile strength – very strong when stretched.

Toughness – resistance to breaking, bending or deforming.

Materials Research—Plastic

What are plastics?

Plastics are the most widely used material in commercial production. Plastics can be created from two main sources which are natural and synthetic materials.

Natural plastics: include amber which is fossilised tree resin, latex which is a form of rubber.4

Synthetic plastics: are chemically manufactured from carbon based materials such as crude oil, coal and gas.

What groups of plastics exist?

There are two main groups of plastic which are thermosetting plastics and thermoplastics.

Thermoplastics

Thermoplastics can be heated and shaped many times. Thermoplastics will soften when it is heated and can be shaped. The plastic will harden when cooled, but can be reshaped because their is no links between the polymer chains. Some common thermoplastics are ABS (acrylonitrile butadienestyrene), Nylon (polyamide), acrylic (polymethyl methacrylate), uPVC (polyvinyl chloride), polystyrene, polypropylene and cellulose acetate.

Thermoplastic	Thermoplastic properties	Thermoplastic uses	Example product
Polymethyl methacrylate (Acrylic)	Stiff, hard but scratches easily, durable, brittle in small sections, good electrical insulator, machines and polishes well.	Used for signs, covers of storage boxes, aircraft canopies and windows, covers for car lights, wash basins and baths.	
High impact polystyrene (HIPS)	Light but strong plastic. Widely available in sheet softens at about 95 degrees.	Used for vacuum forming. Common for school projects which include products outer casings or packaging.	
Polypropylene (PP)	Light, hard but can scratch easily, tough, good resistance to chemicals, resists work fatigue.	Used for medical equipment, laboratory equipment, containers - especially with built-in hinges, 'plastic' seats, string, rope, kitchen equipment.	
Polythene: - low density (LDPE)	Tough, good resistance to chemicals, flexible, fairly soft, good electrical insulator.	Used for packaging, especially bottles, toys, packaging film and bags.	
Polythene: - high density (HDPE)	Hard, stiff, able to be sterilised.	Used for 'plastic' bottles, tubing, household equipment and milk crates.	
PVC	Stiff hard wearing. Plasticiser can be added to create a softer more rubbery material.	Used for air and water pipies, shoe soles, blister packaging.	

Memory tip: Remember Paps Hat !

P - Polythene
A - Acrylic
P - Polypropylene
S - Shaped many times

H- HIPS
A - ABS (acrylonitrile butadienestyrene)
T- Thermoplastics

Thermosetting plastics

Thermosetting plastics can only be heated and shaped once. If re-heated they cannot soften as polymer chains are interlinked. Separate polymers are joined in order to form a huge polymer. The main thermosetting plastics are epoxy resin, melamine formaldehyde, polyester resin and urea formaldehyde.

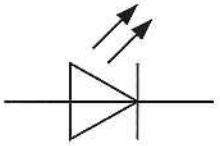
Thermosetting plastics	Thermosetting plastic Properties	Thermosetting plastic uses	Example product
Epoxy resin (Epoxide, ER)	Good electrical insulator, hard, brittle unless reinforced, resists chemicals well.	Used for casting and encapsulation, adhesives, bonding of other materials. Used for printed circuit boards (PCB's) and surface coatings.	
Melamine formaldehyde (MF)	Stiff, hard, strong, resists some chemicals and stains.	Used for Laminating work surfaces, electrical insulation, tableware.	
Polyester resin (PR)	Stiff, hard, brittle unless laminated, good electrical insulator, resists chemicals well.	Used for casting and encapsulation, bonding of other materials, car bodies, boats.	
Urea formaldehyde (UF)	Stiff, hard, strong, brittle, good electrical insulator.	Used for electrical fittings, handles and control knobs, adhesives.	
Phenol formaldehyde (PF, Bakelite)	A colourless polymer - coloured with artificial pigments to produce a wide range of different colours.	Used for dark coloured electrical fittings and parts for domestic appliances, bottle tops, kettle handles, saucepan handles.	

Memory tip: Remember Bets Pup!

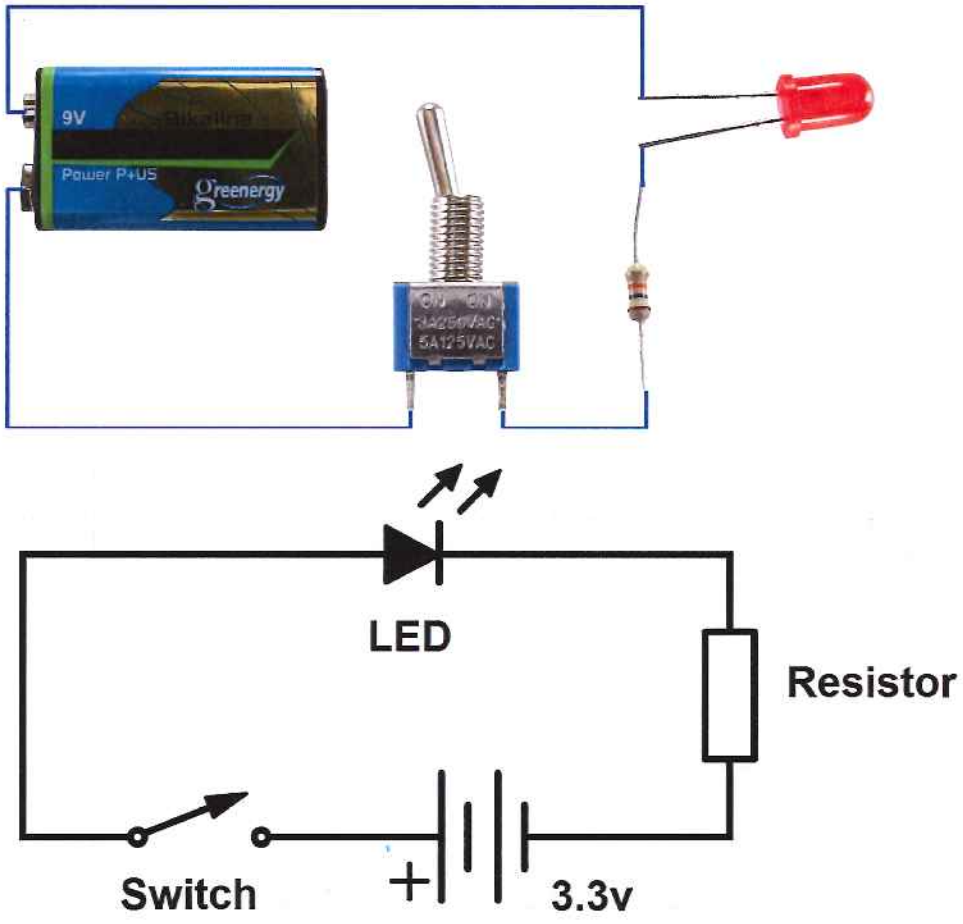
B - Bakelite
E - Epoxy resin
T - Thermosetting
S - Shaped once

P- Polyester resin
U - Urea formaldehyde
P- Plastic

Electronics

Component Name	Picture	BS Symbol	Description of component
Battery			They store electrical charge and when they are put into an electronic device , they provide the power. The usual battery sizes are seen opposite. These are the type used in school projects
Resistor			Resistors are used for regulating current and they resist the current flow. This is measured in ohms (Ω). Resistors are found in almost every
Slide Switch			Slide switches are mechanical switches using a slider that moves (slides) from the open (off) position to the closed (on) position. They allow control over current flow in a circuit. This type of switch is best used for controlling current
Light Emitting Diode (LED)			A light-emitting diode (LED) is an electronic component that emits visible light when an electric current passes through it.

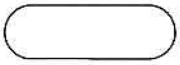
Circuit Diagram



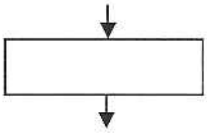
Plan of making

Before you begin making you need to plan how you will make your product. The easiest way to do this is to use a flowchart

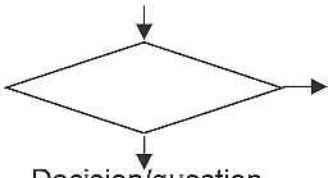
Flowchart symbols



Start/stop

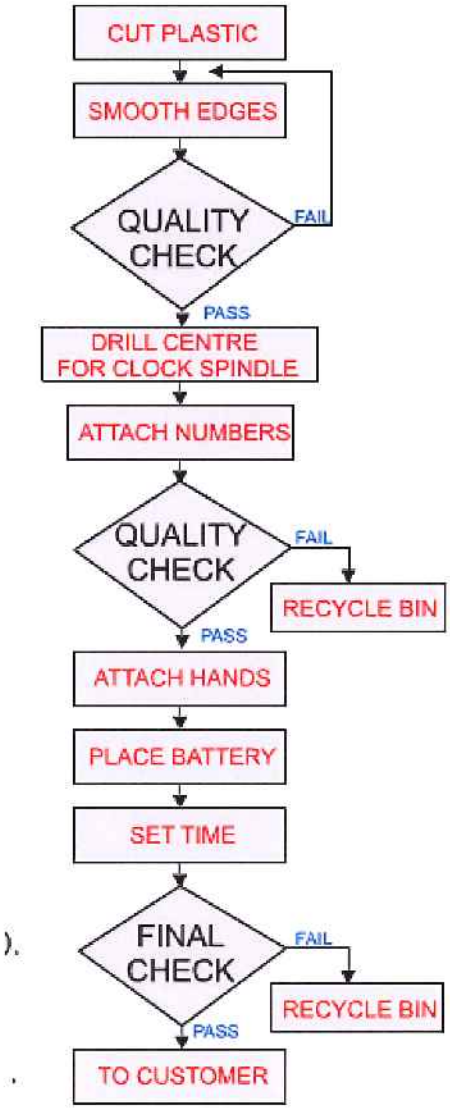


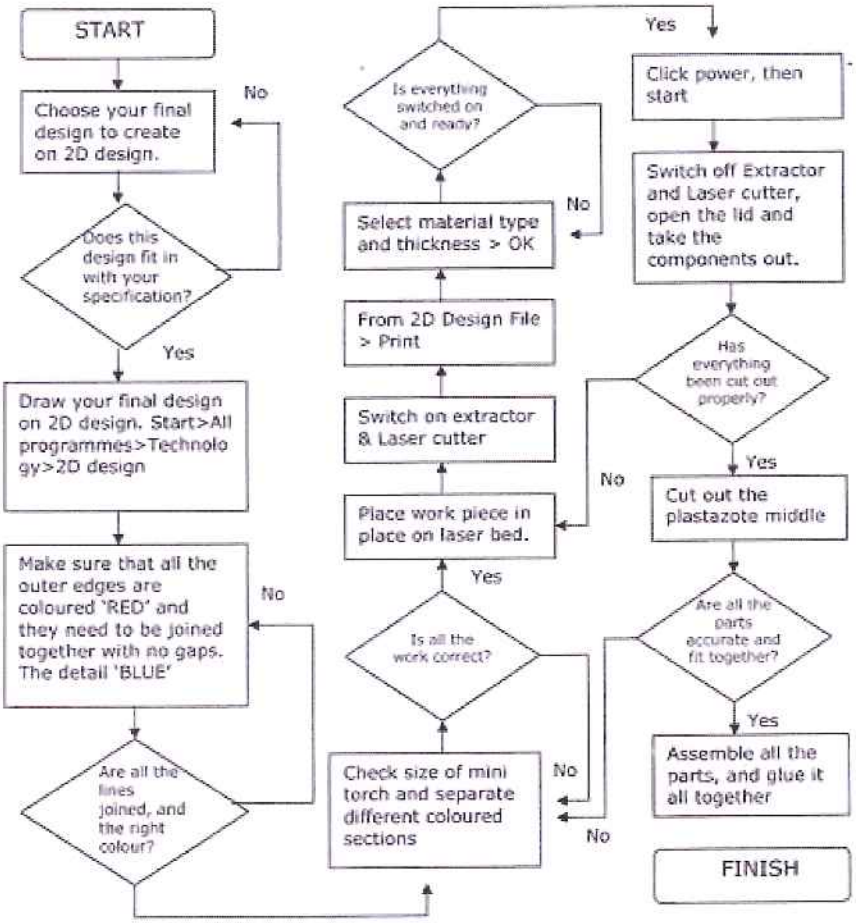
Process (doing)



Decision/question

Examples of a plan of making



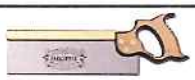


Tools and equipment

Measuring and marking out

Tool	Picture	Purpose
Steel Rule		Have accurate divisions marked on them. Used to measure and mark out work.
Safety Rule		Used when cutting with a craft knife. It has a groove on the top to keep fingers away from the cutting blade.
Try Square		Help you to get materials square by providing an accurate 90°
Dividers		Used to mark out circles or arcs and transferring measurements from rules to your work.

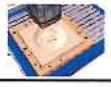
Cutting and Shaping

Tool	Picture	Purpose
Coping saw		Uses to cut curved shapes in wood and thin plastics. The blade can be rotated
Tenon Saw		Used to cut straight, accurate lines in wood
Junior hacksaw		Used to cut straight lines in plastics and metal
Glass Paper		Used to remove small quantities of wood and to smooth the surface. Available in different grades from rough to smooth
Wet and Dry		Used to remove small quantities of acrylic after filing to give a smooth finish. Available in different grades from rough to smooth.
Flat File		Used in between sawing and glass paper to remove waste material and finish edges of wood or plastic
Round file		Used to finish the edges of a drilled hole.
Half round file		Use to finish a curved edge on wood or plastic
Needle File		Very small files for delicate or intricate cuts

Drilling and cutting holes

Tool	Picture	Purpose
Twist drill/drill bit		A small hardened metal rod with a spiral groove and a ground angled point. Used to cut a hole in wood, metal or plastic
Hole saw		Used to cut much larger holes in wood, metal or plastic. They are used in conjunction with a twist drill
Chuck		Is the part of the drill which holds the drill bit.
Chuck Key		Used to tighten the chuck to hold the drill bit securely
Pillar Drill		A drill that is on a stand

Holding Materials

Tool	Picture	Purpose
Vice		Used to hold wood, metal or plastic when you are cutting on a work bench or to hold work secure whilst gluing
Machine/hand vice		Used to hold small pieces of material when using a pillar drill
G cramps		Used to hold larger pieces of material when drilling
Jig		A device to hold odd shaped work

Joining materials

Tool	Picture	Purpose
PVA glue		Used to permanently stick wood together
Liquid Cement		Used to permanently stick acrylic together
Nut and bolt		A nut is a type of fastener with a threaded hole. Nuts are almost always used in conjunction with a bolt to fasten two or more parts together. The two partners are kept together by a combination of their threads' friction.
Screw		A metal fastener with a tapered body and slot or cross at the top . A thread runs around the outside, it is rotated into woos using a screw-driver
Nail		a small metal spike with a broadened flat head, driven into wood to join things together or to serve as a hook.

Electronics

Tool	Picture	Purpose
Soldering Iron		Heats up to
Soldering iron holder		Used to hold the soldering iron whilst it is hot
Solder		An alloy used in electronics. It has a low melting point and is used to join wires/components to a circuit board.
Wire strippers		Used to strip the plastic insulation off wires
Wire cutters		Are used to cut wires and component legs
Pliers		Used to cut and hold wires and components when soldering

PHYSICAL CONTAMINATION

Contamination of food by a physical item, for example an earring, a fingernail, a shard of metal, a paperclip, a plaster,

BIOLOGICAL CONTAMINATION

Contamination of food by bacteria, virus, or bodily fluid such as saliva or blood.

CHEMICAL CONTAMINATION

Contamination of food by CHEMICALS such as washing up liquid, bleach, antibacterial spray etc

HOW TO PREVENT CONTAMINATION OF FOOD

STORAGE OF FOOD

Ensure high risk foods are kept in airtight/sealed packaging
Keep raw foods underneath cooked foods in the refrigerator
Keep raw and cooked food separately
Ensure fridge temperature is between 1-5°C to prevent growth of bacteria

PREPARATION OF FOOD

Use separate utensils and equipment to prepare raw and cooked food
Wash hands after handling raw meat, fish
Throw away raw meat and fish packaging immediately

COOKING OF FOOD

Cook meat until juices run clear
Cook all food until piping hot in the centre (or over 75°C)

FRIDGE

Correct temperature 1-5°C

FREEZER

Correct temperature -18°C or below

BACTERIA BITES!

Name of bacteria	Source
Campylobacter	Raw Chicken, raw meats
E.Coli	Raw Chicken, raw meat, unwashed salads, vegetables, soil, animal and human faeces
Salmonella	Raw Chicken, raw meats
Bacillus Cereus	Cooked rice
Staphylococcus Aureus	Human skin, hair, nails

HIGH RISK FOODS

Foods which are high in protein and moisture

They include:

Cooked rice, cooked meats, eggs, custards, gravies

HIGH RISK FOODS MUST BE KEPT IN THE REFRIGERATOR!

THE REFRIGERATOR!

COOKING FOOD

Correct temperature 75°C or above

8 Tips for Healthy Eating!

1. Eat more fibre
2. Eat more fruits and Vegetables
3. Eat more oily fish
4. Eat less salt
5. Eat less fat
6. Eat less sugar
7. Choose wholegrains
8. Drink 6-8 glasses of water per day

Key Terminology	
Weigh	To check the weight of something using a set of scales
Measure	To check the volume of liquid using a measuring jug, measuring spoon or measuring cup.
Simmer	To heat a liquid until it is just under 'boiling point' - the point at which the liquid turns to a gas. There will small bubbles in a liquid that is simmering. **REMEMBER! SIMMER = SMALL BUBBLES**
Boil	To heat a liquid until 'boiling point' - the point at which the liquid turns to a gas. There will be big bubbles in a liquid that is boiling. **REMEMBER! BOILING = BIG BUBBLES**
Dice	To cut with a knife into cube shapes
Slice	To cut with a knife into long strips
Fry	To cook on the hob, by conduction
Bake	To cook in the oven, by convection
Grill	To cook under a grill, by infra-red radiation
Grate	To cut something into small pieces using the blades of a grater
Nutrient	A component of food which is used by the body MACRONUTRIENTS (carbohydrate, fat, protein, fibre) are needed in large amounts daily and are measured in grams MICRONUTRIENTS (vitamins and minerals) are needed in smaller amounts every day and are measured in micrograms and milligrams

Preventing Accidents in the kitchen	
Slips, Trips, Falls	• Keep the floor clear of bags - put all bags, blazers in the designated area • Clean up any dropped food or spillages immediately • Wear sensible shoes with non-slip soles
Burns	• Keep pan handles directed away from the flame • Make sure you use oven gloves when handling baking trays/ handle grill pans by the handle
Cuts	• Always use the bridge and claw grip when cutting food • Make sure knives are not left on the edge of a table/work surface • Never catch a falling knife • Keep knives away in a safe place when not in use • Never put a knife into the washing up bowl - keep out and rinse carefully to clean

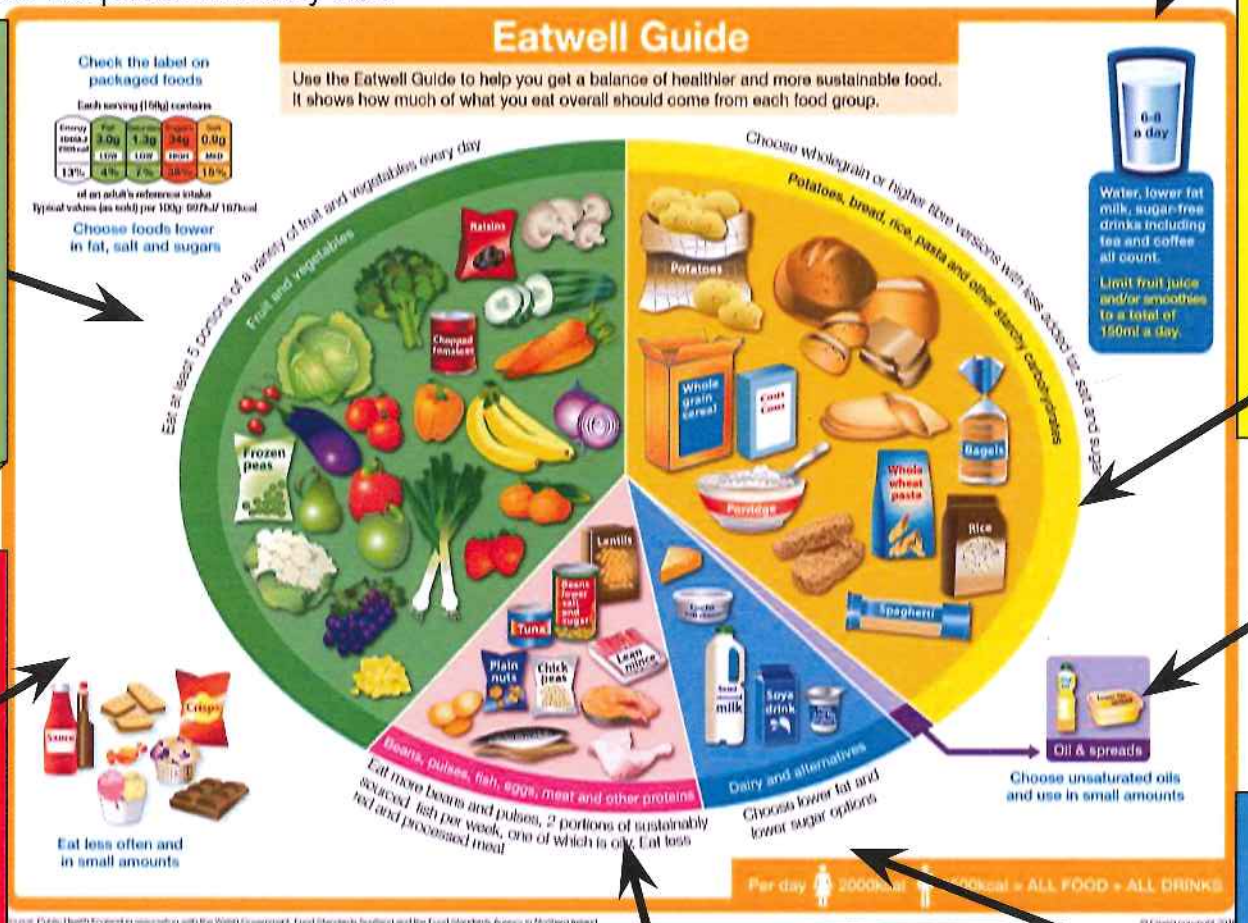
Safe Use of Kitchen Equipment	
Grill:	• Keep door open when grilling • Keep watch of your food to prevent it burning • Don't have heat too high/food too close to heat source • Switch off when finished
Oven:	• Use oven gloves to put in/remove food • Use an 'oven buddy' to hold the door for you - Don't open the door until both of you are totally ready • Check you have the oven set to correct temperature • Switch off when finished
Hob	• Keep pan handles directed away from the flame • Don't use a flame which is bigger than the pan; use the correct size hob ring • Don't have the heat up too high

THE EATWELL GUIDE and THE NUTRUENTS

The Eatwell Guide is the UK Healthy Eating Model. It shows what we should eat as a balanced diet. The size of the sections represents the proportion of our diet that particular food group should make up. The Eatwell Guide was updated in 2016 to take into account scientific opinion and public opinion. The main change was that sugary and fatty foods are shown off the plate as they are **not** part of a healthy diet.

Water
Is essential for brain and other bodily functions
Dehydration reduces performance

Fruits & Vegetables
- Eat 5 portions s a day!
- Choose a variety
- Provides fibre for healthy digestion
- Provides vitamins and minerals for healthy body functions and immune system



Starchy Foods
- Provide slow release carbohydrate used by the body for energy
- Choose wholegrains for increased fibre (good digestion, reduced risk of heart disease)

Fatty and Sugary Foods
- These are the danger foods!
- Eat them only occasionally
- Eating too much fatty and sugary processed food is linked to increased risk of weight gain/obesity, diabetes , tooth decay and cardiovascular disease

Fats, Oils & Spreads
Provide fat soluble vitamins A,D,E & K
Are high in calories & energy so keep use to a minimum

Beans, Pulses, Eggs, Meat, Fish
- Provide protein for growth, repair and maintenance of body cells
- Choose a combination of plant proteins
- Avoid eating too much processed meat like bacon and sausages as these are linked with increased risk of bowel and stomach cancer

Dairy Foods
- Provide calcium for healthy bones, teeth and nails
- The body needs Vitamin D to absorb calcium effectively