



Yate Academy

High Expectations, High Achievement

Year 8

Knowledge
Organisers

Module 4

Yr 8 Art. Technique and skills. Module 4 Knowledge Organiser

List of practiced techniques

- Paper cuts
- Stencilling
- Ink experiments
- Mono Print
- experimental title page
- Title and annotations
- 10 experimental backgrounds for Art journaling
- collagraphs
- Drawing basics
- Portrait drawing

Improvement lessons

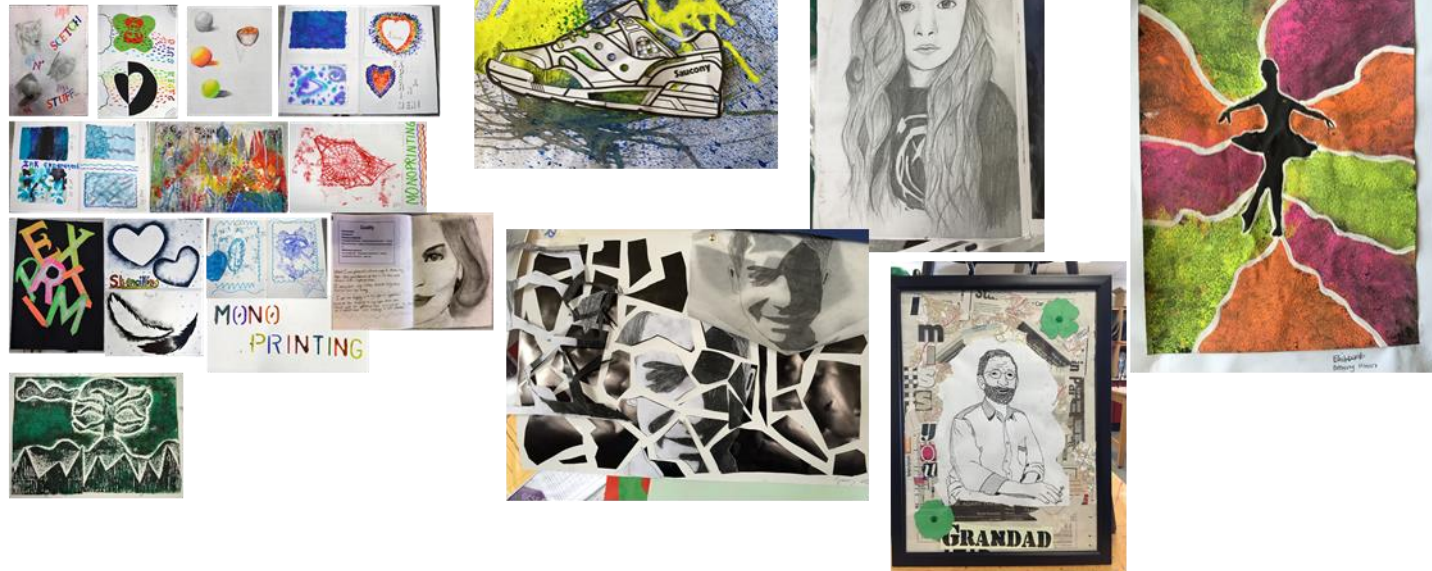
Learners will demonstrate that they can complete a proposal that lays out what they plan to do for your final piece. To be presented in an exhibition of year 8 Art work.



Planning final piece

Chose a technique the one that you were most successful at.

Chose an image that you would like to reproduce.



KS3 Year 8 Design and Technology - Module 4 Knowledge Organiser

METALS

Metals are hard and usually shiny, containing one or more elements dug and refined from the ground

Ferrous metals are any metal that contains iron and will rust

Non-Ferrous metals do not contain iron and will not rust

Alloys are metals made from a mix of 2 metals – e.g. brass is made of copper and zinc

FERROUS METALS	NON-FERROUS METALS	ALLOY METALS
Contain Iron.	Do not Contain Iron.	A Mixture of two or more metals.
Corrode	Non-Corrosive	Can be both
Magnetic	Non-Magnetic	Can be both
High Melting Points	Lower Melting Points	Can be both
Cast Iron, Mild Steel, High Carbon Steel, Stainless Steel	Aluminium, Copper, lead, tin.	Brass, Zinc, Copper

Keyword	Description
Strength	<i>Withstanding a constant force without breaking</i>
Hardness	<i>To resist scratching</i>
Toughness	<i>To withstand impact</i>
Ductility	<i>To be drawn in wire</i>
Malleability	<i>To be shaped without fracture</i>
Durability	<i>To be long lasting</i>
Conductivity	Thermal – how easily heat can pass through a material Electrical – how easily electrical current can pass through a material
Resistance	Chemical – to resist damage from contact with chemicals Corrosion - to resist damage through oxidation

Plastics– Acrylic

Acrylic is a *thermoplastic* – this means we can melt and reshape it with heat, unlike *thermosetting* plastic

It's cheap, multi-coloured and easy to work with.

There are 2 main categories of plastics (or polymers)

- **Thermoplastics:** Can be re-melted and recycled easily, are usually easy to work with.
 - Eg: Acrylic
- **Thermosetting plastics:** Cannot be easily melted, often have high melting points. Usually more difficult to work with, but are developed for specific properties or strengths
 - Eg: Polyester



Used to mark a small dent in metal to allow for more accurate hole to be drilled.



Used to mark circles on metal.



Used to create a range of different sized holes in materials.



Used to mark out on metal by scratching onto the metal.



Used to create simple cuts in metal.



Used to remove sharp edges and smooth materials to improve it's quality.



Used to measure materials and draw straight lines.

Year 8 Drama Knowledge Organiser

Commedia Dell'Arte

14th Century Italian Theatre

Very old type of theatre which can be traced back to 16th century in Italy.

Troupes of actors would travel around the country performing plays in market squares.

The plays were often comedies and topics included:

- Mistaken identities
- Servants tricking their masters
- Love triangles (e.g. girl loves boy, boy loves girl, old man loves girl, girls father wants her to marry old man etc...)
-

Plays contain 'STOCK' characters who the audiences would be familiar with. These characters wore masks and their movements were very physical and over the top.

Commedia was the origin of 'Slapstick' such as Charlie Chaplin, the Chuckle Brothers and Tom and Jerry cartoons. Modern versions of Commedia include Pantomime and Punch and Judy.

Key Characters

Low Status

Zanni: High Energy, talks directly to the audience, boisterous, confident, loud

Arlecchino: Trickster, Nimble, Quick, Full of energy, Master of Disguise and mimics other people.

Columbina: Wife of Arlecchino, Confident, Womanly, Boisterous, walks like she is dancing

High Status

Il Dottore: The Doctor, very Pompous, Arrogant and Stupid

Pantalone: Tight Fisted, Sleazy old man, very Rich and Greedy

Isabella: Beautiful and ditzy

Key Skills

Mime: The actor uses movement, gestures, facial expressions and body language to communicate meaning to the audience. Uses gestures to suggest handling objects

Comedy: A genre of theatre intended to make the audience laugh at the performance

Duologue: Two actors on stage during a scene

Masks: Often used to show Stock characters

Physicality: Over the top and exaggerated gestures and body language

Status: Rank or Social standing often relating to Power and Confidence

Characterisation

- **Body Language:** The way the actor uses posture, stance and gestures to communicate meaning.
- **Facial Expressions:** The use of expression on the actors face to communicate emotions to the audience
- **Voice:** The way the actor uses pitch, tone, volume and accent to communicate character and meaning for the audience.
- **Movement:** The use of pace, staging, space and levels

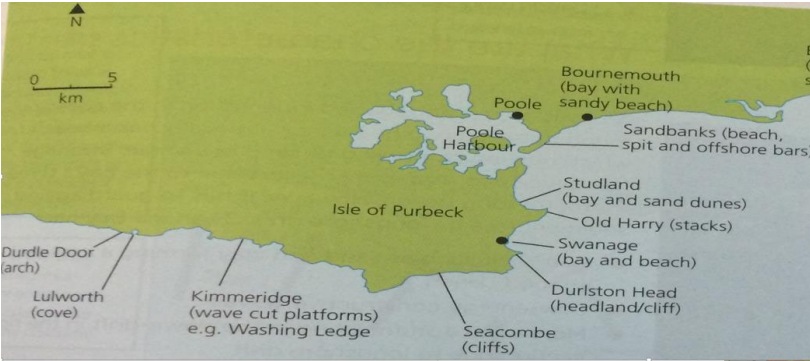
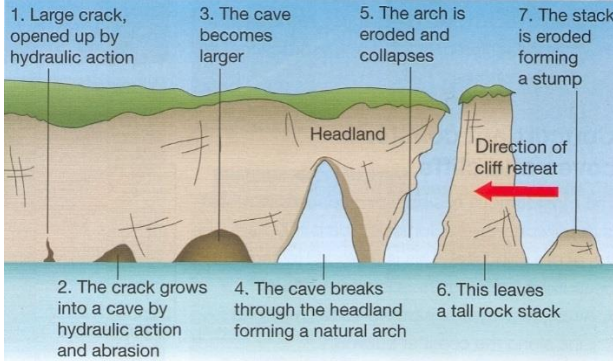
<p>Limbo Edward Kamau Braithwaite</p> <p>Set on a slave ship, it describes the experiences of a slave above and below decks as they approach their destination. (Caribbean)</p> <p>Limbo is a term which refers to both a dance/game and the feeling of being stuck between two places.</p> <p>Slave ships – white slave owners captured black Africans and transported them to the Caribbean to force them to work on sugar plantations.</p> <p>‘Stick is the whip/ and the dark deck is slavery’</p>	<p>Nothing’s changed Tatam Khulu Afrika</p> <p>A speaker walks through District 6, and he looks at two restaurants, one for white and one for blacks. He realises that racism still exists.</p> <p>Set in Cape Town, South Africa, a formally tolerant multi-cultural area which was segregated by the white government and turned into a whites-only area.</p> <p>‘District Six./ No board says it is:/ but my feet know/and my hands...’</p>	<p>Island Man Grace Nichols</p> <p>A man wakes up from dreaming about his home in the Caribbean. As he wakes, the sounds of London mix with his dream.</p> <p>Grace Nichols, from the Caribbean writes the poem to a friend living in London, who is also Caribbean.</p> <p>‘Comes back to sands/of a grey metallic soar/to surge of wheels/to dull North Circular roar’</p>	<p>Blessing Imtiaz Dharker</p> <p>Description of the explosion of a water pipe in a dry, Indian village. People rush from everywhere to collect the water.</p> <p>India is an extremely dry country which has very little water. This is based on a true story.</p> <p>‘Skin cracks like a pod/there is never enough water.’ ‘The blessing sings over their small bones’</p>	<p>2 scavengers Lawrence Ferlinghetti</p> <p>Two cars stop at a red light in traffic. The speaker notes the differences between the wealthy upper class architects and the working class garbage collectors.</p> <p>Ferlinghetti was writing in the 1960s in San Francisco – known for its openness and challenge to the status quo. He questions the reality of the American Dream.</p> <p>‘The older of the two with grey iron hair/ and hunched back/looking down like some/ gargoyle Quasimodo’</p>	<p>Key vocabulary</p> <p>Segregation Apartheid Identity Culture Tradition Heritage Communism Dictatorship/dictator Status quo American Dream Gargoyle Quasimodo Peasant Amiable Congregation Brash Municipal Haute cuisine Incipient</p> <p>Defiant Scavenger Skeptic Rationalist Diabolic Incantation Hybrid Paraffin</p>
<p>Connectives</p>	<p>Night of the Scorpion Nissim Ezekiel</p>	<p>What were they like Denise Levertov</p>	<p>Not my Business Niyi Osundare</p>	<p>Presents from my Aunts Moniza Alvi</p>	<p>Technical Vocabulary</p> <p>Alliteration Assonance Colloquial language Dramatic monologue Enjambment First person Imagery Persona Chorus Narrative Repetition Irony Juxtaposition Language Metaphor Monologue Mood Onomatopoeia Oxymoron Personification Tone</p> <p>Phonetic spellings Rhyme –couplet/internal/half Rhythm Sibilance Simile Stanza Rhetorical question Verse Symbolism Third person Hyperbole</p>
<p>Likewise In the same way Similarly Equally As with Comparatively</p> <p>However On the other hand Conversely Alternatively In contrast Contrastingly</p> <p>The writer uses... The (verb etc)...implies... Suggests/emphasises/means The speaker...</p>	<p>The story of a woman who is stung by a scorpion. Her family and community do everything they can to remove the poison, including chants, potions and prayers. At the end, the mother is glad that the scorpion stung her and not the children.</p> <p>Set in India, this culture/religion believes in reincarnation. The people live in close communities. The poem uses lots of religious language and references beliefs.</p> <p>‘Parting with his poison – flash/of diabolic tail in the dark room-’</p>	<p>The poem is set out in a series of questions and answers where the questioner asks about what the culture of Vietnam was like before the war.</p> <p>Vietnam War – 1960’s. American forces led an attack against communism Which resulted in the devastation of traditional Vietnamese culture.</p> <p>‘It was reported that their singing resembled/ the flight of moths in moonlight/ who can say? It is silent now.’</p>	<p>Tells the story of several families in Nigeria whose houses were raided; people were taken and tortured.</p> <p>The poem describes the dictatorship of Osani Abacha . The poet wants to challenge those who sit back and do nothing while people are being tortured in their own country.</p> <p>‘They picked Akanni up one morning/ Beat him soft like clay/and stuffed him down the belly of a waiting Jeep.’</p>	<p>The speaker describes traditional Pakistani gifts from her Aunts but when trying them on, she feels lost trying to fit into both English and Pakistani culture.</p> <p>Explores ideas of identity and belonging – reflects the lives of many Pakistani people going to live elsewhere and trying to maintain culture and tradition.</p> <p>‘I tried each satin-siken top-/was alien in the sitting room. / I could never be as lovely/ as those clothes-’</p>	
<p>Themes</p> <p>Modern vs tradition</p> <p>Family relationships</p> <p>Difference</p> <p>Conflict</p> <p>Identity .</p>			<p>Key quotes: Blessing</p> <p>‘Skin cracks like a pod’ ‘The voice of a kindly God’ ‘Silver crashes to the ground’ ‘Roar of tongues’ ‘Pots, brass, copper, aluminium, plastic buckets, frantic hands’ ‘Liquid sun’ ‘Polished to perfection’ ‘The blessing sings over their small bones’</p>		

FRENCH YEAR 8 MODULE 4 – EN BONNE SANTÉ

MO 1 – 10 : (KPI 1 Know the key vocabulary for the module)

La forme	Fitness	Les maladies	Illnesses	Les activités	Activities
Je mange beaucoup de fruits/légumes.	<i>I eat a lot of fruit/vegetables.</i>	J'ai mal ... au dos.	<i>I've got ... backache.</i>	le canoë-kayak	<i>canoeing</i>
Je ne fais pas assez d'exercice.	<i>I don't do enough exercise.</i>	au ventre.	<i>stomachache.</i>	le canyoning	<i>canyoning</i>
Je bois beaucoup d'eau.	<i>I drink a lot of water.</i>	au pied.	<i>a bad foot.</i>	le judo	<i>judo</i>
Je vais à la gym.	<i>I go to the gym.</i>	au bras.	<i>a bad arm.</i>	le kickboxing	<i>kickboxing</i>
Je fume.	<i>I smoke.</i>	à la tête.	<i>a headache.</i>	le ski	<i>skiing</i>
souvent	<i>often</i>	à la gorge.	<i>a sore throat.</i>	la musculation	<i>weightlifting</i>
ne ... jamais	<i>never</i>	à la main.	<i>a bad hand.</i>	la natation	<i>swimming</i>
ne ... plus	<i>no more, no longer</i>	à la jambe.	<i>a bad leg.</i>	la salsa	<i>salsa dancing</i>
bon pour la santé	<i>good for your health</i>	à l'oreille	<i>earache.</i>	la voile	<i>sailing</i>
mauvais pour la santé	<i>bad for your health</i>	aux dents.	<i>toothache.</i>	l'aérobic	<i>aerobics</i>
malheureusement	<i>unfortunately</i>	J'ai mal au cœur.	<i>I feel sick.</i>	l'équitation	<i>horse-riding</i>
				l'escalade	<i>rock-climbing</i>
		Les conseils	Advice	Les symptômes	Symptoms
		Mangez moins gras!	<i>Eat less fatty food!</i>	J'ai ...	
		Mangez moins de sucreries!	<i>Eat less sweet food!</i>	chaud.	<i>I'm hot.</i>
		Buvez beaucoup d'eau!	<i>Drink a lot of water!</i>	froid.	<i>I'm cold.</i>
		Dormez huit heures par nuit!	<i>Sleep eight hours a night!</i>	soif.	<i>I'm thirsty.</i>
		Évitez le stress!	<i>Avoid stress!</i>	faim.	<i>I'm hungry.</i>
		Faites de l'exercice!	<i>Do some exercise!</i>	de la fièvre.	<i>I've got a temperature.</i>
		Ne fumez pas!	<i>Don't smoke!</i>	la grippe.	<i>I've got flu.</i>
				Je suis ...	
				fatigué(e).	<i>I'm tired.</i>
				enrhumé(e).	<i>I've got a cold.</i>
				malade.	<i>I'm ill.</i>

Year 8- UK Geography

Key words		KPI4- identify why tourists visit the UK and explain why it is important Britain will have a tourism industry worth over £257 billion by 2025 – just under 10% of UK GDP and supporting almost 3.8 million jobs, which is around 11% of the total UK number	KPI5- evaluate the impact of tourism on the Lake District National Park			
Geology	The type of rock the land is made up of..		Location	Why visit?	Benefits	Problems
Sparsely	Small numbers of people living in one area		The Lake District National Park	People come to the Lake District for many reasons, including hill walking, rock climbing, mountain biking, fishing and boating. They also come to visit historical buildings, or just to enjoy the beautiful lakes and mountains	Tourism provides employment and income of local people (12 million people visit each year)	Farmers are concerned about damage to fences and livestock by walkers and their dogs.
Densely	Large numbers of people living in one area				People choose to stay in the area, which maintains other essential services such as schools and hospitals.	Local residents are worried about congestion, littering, noise pollution and the erosion of footpaths
Relief	Refers to the way the landscape changes in height.				Services provided for tourists e.g. leisure faculties, also benefit local people.	Employment can be seasonal and wages are low.
National Parks	An area as of natural beauty and which is protected to ensure that everyone could enjoy them today and in the future.					
Erosion	The wearing away of rock by the sea.					
KPI6- describe the key features of the Dorset Coastline			KPI7 explain the formation of Durdle Door and Old Harry Rocks			
						
KPI8- use named examples to explain the importance of two contrasting tourist destinations						
Location	Why visit?	Benefits	Problems			
National Marks	People come to the Lake District for many reasons, including hill walking, rock climbing, mountain biking, fishing and boating. They also come to visit historical buildings, or just to enjoy the beautiful lakes and mountains	Tourism provides employment and income of local people (12 million people visit each year) People choose to stay in the area, which maintains other essential services such as schools and hospitals. Services provided for tourists e.g. leisure faculties, also benefit local people.	Farmers are concerned about damage to fences and livestock by walkers and their dogs. Local residents are worried about congestion, littering, noise pollution and the erosion of footpaths Employment can be seasonal and wages are low.			
Dorset Coastline Lulworth Cove to Old Harry Rocks	UNESCO World heritage site. Explore the coastline and the unique landforms found in the area.	Tourism provides employment and income of local people People choose to stay in the area, which maintains other essential services such as schools and hospitals. Services provided for tourists e.g. leisure faculties, also benefit local people.	Employment can be seasonal and wages are low. Tourist cause footpath erosion which can reduce biodiversity and cause cliff instability. During peak season, traffic congestion, littering and noise pollution affects local residents.			

Y8 HISTORY : The Long History of Anti-Semitism in Europe		KPI 1 Medieval Anti-Semitism		KPI 2 19 th Century Anti-Semitism		KPI 3 Impact of World War I	
Medieval Period		Jewish Life in the Middle Ages:		Jewish Life in the 19 th Century		Jewish Life after World War I	
1066	William I brings 200 Jews to England	Money Lenders William I brought 200 Jews to England in 1066 to act as moneylenders because the bible said that usury was a sin. William protected the Jews in England. In 1182, when Jews were expelled from France, many came to England.		Assimilation In Western Europe, Jews were assimilated and many grew rich. For example, Benjamin Disraeli converted to Christianity and became British prime minister in 1874.		Soldiers 100,000 Jews fought for Germany during World War I, although rumours spread suggesting they were not fighting hard enough.	
1182	Jews are expelled from France and come to England	Pogroms Jews were often the victims of violent pogroms. In 1255, Jews were accused of crucifying a boy named Hugh from Lincoln. 90 Jews were arrested and 18 executed.		Segregation In Eastern Europe, Jews were segregated from society. Most lived in Jewish villages called shtetls and spoke their own language called Yiddish.		Weimar Republic After World War I, Germany was ruled by the Weimar Republic. During this period, Jews were very successful. 5 German Jews won Nobel prizes, including Albert Einstein.	
1255	Jews accused of crucifying Hugh of Lincoln	Reasons for Anti-Semitism:		Reasons for Anti-Semitism:		Reasons for Anti-Semitism:	
1348	Jews blamed for the Black Death	Religion The Catholic Church blamed Jews for the murder of Jesus Christ. During the Middle Ages, Christians also believed in the 'Blood Libel': the belief that Jews used the blood of Christian children as part of their religious rituals. When Martin Luther began the Protestant Reformation in 1517, he welcomed Jews as long as they converted to Christianity. When Jews didn't convert, Luther ordered their homes to be burnt down.		Scapegoats In 1881, Tsar Alexander II of Russia was assassinated. The government blamed the Jews and over 200 pogroms took place. In France in 1894, a Jewish soldier - Captain Alfred Dreyfus - was accused of passing secrets to the Germans. Angry crowds shouted 'Death to the Jews'. This was known as the Dreyfus Affair.		Scapegoats Rumours spread that Jews had made the Weimar Republic surrender at the end of the war. This was called the 'stab in the back' myth.	
19 th Century		Scapegoats Medical knowledge was poor and people looked for scapegoats for problems. Many people believed that the Black Death, a disease that killed 50% of the population of England in 1348, was caused by Jews poisoning wells.		Lies In 1900 Russian secret police released a fake document called <i>The Protocols of the Elders of Zion</i> . This fake document was supposed to be proof that Jewish leaders were trying to take over the world.		Communism In 1917 there was a revolution in Russia which made Russia a communist country. In 1919, there was a communist uprising in Germany called the Spartacist Uprising. Rosa Luxemburg, the leader of the Spartacist Uprising, was Jewish and this led to Germans blaming Jews for communism.	
1874	Benjamin Disraeli becomes prime minister	Segregation Because Jews were usually segregated from the rest of the population, people did not know much about them. It was easy for rumours like the 'blood libel' to spread.		Pseudoscience In the late 19 th Century, people came to believe that Jews were a separate race. They used pseudoscientific theories to show that Jews were biologically inferior to non-Jews.			
1881	200 pogroms after assassination of Tsar Alexander II						
1894	The Dreyfus Affair						
1900	<i>Protocols of the Elders of Zion</i> published						
Impact of World War I							
1917	Russian Revolution						
1918	WW1 ends; start of Weimar Republic in Germany						
1919	Spartacist Uprising						
Anti-Semitism Aryan Assimilation Boycott Blood libel Communist Citizenship Crucifying Expelled Holocaust Inferior Moneylenders Nobel prize Persecution Pogroms Propaganda Pseudoscience Scapegoat Segregation Shtetls Untermenschen Usury Weimar Republic Yiddish	Racism towards Jews The Nazi master race Becoming similar to everyone else To stop using a service/shop Idea that Jews killed Christian children Belief in equality + government control Belonging to a country Nailing to a cross Sent out Mass murder of Jews after 1942 Worse then People who give out loans for interest Prize for ground-breaking science Attacking / targeting Violent attacks on Jews Posters etc designed to persuade Science that is actually false Someone to blame Separation Jewish villages Not human, inferior Lending money for interest German government 1919-33 Jewish language	KPI 4 Nazi Anti-Semitism					
		When Adolf Hitler was elected in 1933, he wanted to create a pure country based on the Aryan race. Nazis viewed Jews and other minorities as <i>untermenschen</i> . The Nazi Minister for Propaganda Josef Goebbels used propaganda to indoctrinate the German people into anti-Semitic ideas. The Nazis used Jews as a scapegoat for the complicated problems that Germany faced, including:		1933: One Day Boycott		One month after he was elected, Hitler encouraged all Germans to boycott Jewish shops. However, this only lasted for one day as Germans continued to use the shops.	
		<ul style="list-style-type: none"> The threat of communism Economic problems The loss of World War I Their enemies in World War II Although at first Hitler did not plan to murder the Jews, his idea led to the Holocaust.		1935: Nuremburg Laws		The Nuremburg Laws removed the rights of Jews and took away their German citizenship. Jews were banned from voting or marrying a non-Jewish German.	
				1936: Berlin Olympics		Thousands of foreign spectators visited Germany for the Olympics. The Nazis wanted to give a good impression so they paused their persecution of the Jews.	
				1938: Kristallnacht		On 9 November 1938, Nazis attacked Jewish shops and synagogues. So many windows were smashed that this became known as 'Kristallnacht' or 'Night of Broken Glass'. 100 Jews were killed and 20,000 sent to concentration camps.	
				1941: Operation Barbarossa		There were less than a million Jews in Germany. However in 1941, Hitler invaded Russia - codenamed Operation Barbarossa. This brought the 7 million Jews living in Eastern Europe under Hitler's control. A special army unit, called <i>Einsatzgruppen</i> , was responsible for shooting Jews in the land that the Nazis took over.	
				1942: Wansee Conference		In 1942 Nazi leaders met to discuss a 'final solution' to the 'Jewish Question'. They agreed to set up death camps where gas chambers could be used to kill Jews quickly. 6 million Jews were killed including over 1 million at one camp: Auschwitz. This was the Holocaust.	

Year 8 Module 4- Did Martin Luther King's dream come true?

Key Terms		KPI1- describe and explain Christian teachings on prejudice and discrimination	
Prejudice	Believing some people are inferior or superior without evening knowing them (pre-judging)	Do not ill-treat foreigners who are living on your land	Don't treat people badly if they come from a different country than you
Discrimination	The treatment or people less favourably because of their gender/ethnicity/sexuality/age	For you are all one in Christ Jesus	Everyone is equal regardless of gender, race or age
Racism	Prejudice or discrimination, directed against someone of a different race based on the belief that one's own race is superior.	Do to others as you would have them do to you	Treat others as you would like to be treated e.g. be kind and respectful
Parable	A simple story used to illustrate a moral or spiritual lesson, as told by Jesus in the Gospels	The Story of the Good Samaritan The story of the Good Samaritan, as told by Jesus in one of the gospels of the New Testament. A traveller is beaten up and robbed, and left for dead along the road. A priest comes by, but deliberately avoids the man. A lawyer also comes by but he too avoids the injured. Finally, a Samaritan comes by, and he helps the injured man, in an act of mercy and compassion. https://www.bbc.co.uk/education/clips/zcyr87h	
Civil Rights Movement	Struggle by African Americans in the mid-1950s to late 1960s to achieve Civil Rights equal to those of whites		
KPI 2- describe who MLK is and explain how he is similar to Jesus		KPI3- evaluate whether MLK's dreams came true	
Martin Luther King, Jr. an American Baptist minister changed history through his non-violent approach to tackling race issues in America. He was a key player in the Civil Rights Movement and his campaigns improved the lives of Black citizens of America and the world. His famous "I have a dream" speech still continues to inspire today.			
Jesus	Martin Luther King	Evidence for	Evidence against
Fought against injustice through his teachings	Fought against racism	1. It is illegal in the USA to discriminate against someone because of their race	1. Police in USA have been accuse of treating black people as inferior
Lived in a war torn country where his people were being oppressed	Lived in a country where blacks and whites were segregated (separated)	2. There are many examples of people of different races living together peacefully	2. There are still many reports of racial incidents amongst citizens
Received threats by the authorities	Received threats from racists, police officers and local government	3. People of different races attend the political rally where MLK gave his famous speech.	3. There are still repost of people facing racism in society
Had hundreds of followers	Had thousands of followers		
Was arrested for standing up against the Romans and the Jewish authorities	Was arrested for campaigning against racism		
Was crucified	Was assassinated in 1968		
Was resurrected	His legacy lives on after death – people still remember him		
Teacher	Preacher of Christianity		
Taught his followers to turn the other cheek rather than fight with violence	Told his followers never to use violence, even when they being attacked		

Important Ideas

Averages: Are used to summarise a set of data by identifying a central or typical value. There are three different averages we use – the mean, mode and median.

Spread: Is used to represent how far apart the smaller and larger values in a set of data are from each other. The range is a measure of spread.

Frequency: The number of times something occurs. In data it refers to the number of pieces of data in the set.

Probability: The measure of chance that an event will occur. Probability is given as a fraction or decimal in the range 0 to 1 or a percentage in the range 0 to 100%.

Probabilities can be shown on a **probability scale**.

Randomness: When something happens with no pattern and can't be predicted.

Key Words

Mean: Is a calculated central value. To find it we add together all the values and divide by the number of values.

Mode: Is the most typical or most commonly occurring value in a set of data.

Median: The central or half-way value when the data is put into size order.

Quartile: In a set of data in size order the Lower quartile is half way between the smallest value and the median and the Upper Quartile is halfway between the median and the highest value.

Range: The difference between the lowest and highest value.

Fair: An experiment is fair when every outcome has an equal probability.

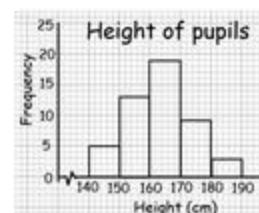
Biased: when all outcomes do not have an equal probability.

Sample space: The set of all possible outcomes from an experiment or event.

Set: A well-defined collection of distinct objects. For example, the set of numbers between 0 and 4 are 1, 2 and 3.

Key Facts

Types of graphs and their features:



Bar Charts

- Frequency on the vertical axis
- Bars touch for continuous data (left)
- Bars do not touch for discrete data (right)
- Dual bar charts need a key (right)

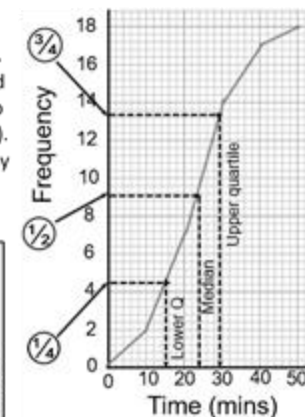


All charts should have labelled axes. Frequency always starts at zero, but other numbered axes do not have to. All numbers should form an evenly spaced scale.

Cumulative frequency graphs

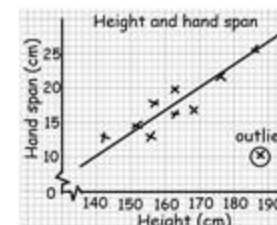
- Grouped data is turned into a cumulative frequency table (below).
- The cumulative frequency is plotted against the end value of each group and joined with straight lines (right).
- The half-way value on the frequency axis relates to the median on the bottom axis.

time	Freq	Cum Fr
$0 < t \leq 10$	2	2 (10,2)
$10 < t \leq 20$	5	7 (20,7)
$20 < t \leq 30$	7	14 (30,14)
$30 < t \leq 40$	3	17 (40,17)
$40 < t \leq 50$	1	18 (50,18)

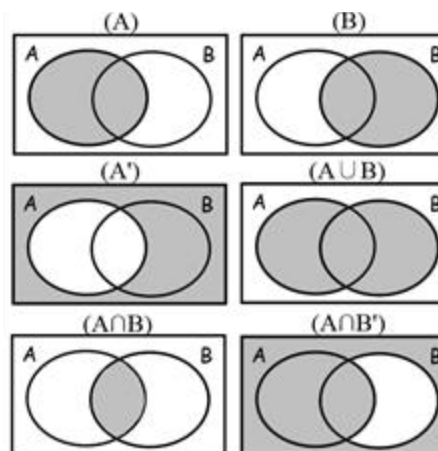


Scatter graphs

- Plots two sets of variables.
- Axes do not need to start at zero.
- A line of best fit should go through the centre of the data.
- Sloping upwards is a **positive correlation**, downwards is a **negative correlation**.
- Outliers do not follow the trend of the rest.



Venn diagram set notation:



Special numbers:

Prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29...

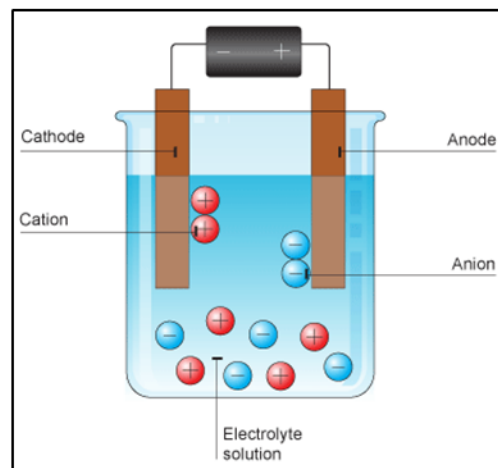
Square numbers: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100...

Cube numbers: 1, 8, 27, 64, 125, 216, 343, 512, 729...

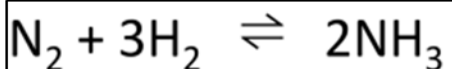
Triangle number: 1, 3, 6, 10, 15, 21, 28, 36, 45, 55...

KPI: 1: Electrolysis and Extracting Metals

Electrolysis	Breaking down (decomposing) ionic substances into simpler substances using electricity
Electrolyte	Liquid in which electrolysis occurs; dissolved in water or melted
Electrode	Metal rods attached to a circuit
Cathode	Negative electrode
Anode	Positive electrode
Oxidation	Loss of electrons
Reduction	Gain of electrons
Ion	Charged atom/molecule
Extraction	Used to remove metals from compounds if metals are more reactive than carbon


KPI: 2: Reversible Reactions

\rightleftharpoons reactions are **reversible** (shown by); reactions occur in both directions at the same time and don't stop.


KPI: 4: Analysing Chemicals

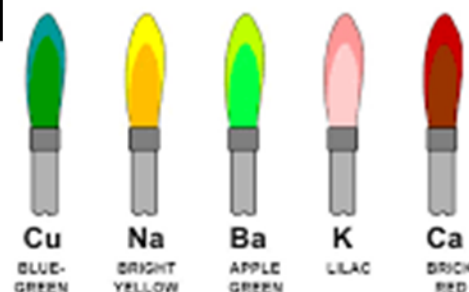
Chlorine bleaches damp litmus paper white

Oxygen relights a glowing splint

Carbon dioxide turns limewater cloudy

Hydrogen "squeaky pop" with a lit splint

Ammonia makes damp red litmus paper turn blue


KPI: 5: Isotopes & Radiation

	Structure	Charge	Distance in air
Alpha	2 protons + 2 neutrons	2+	Few cm
Beta	Electrons	-ve	Up to 2m
Gamma	wave	No charge	Several 100m

Isotopes: Naturally occurring; have different number of neutrons to atoms, e.g. C^{13}

Ions: either gained or lost electrons; charged. The **nucleus** of an unstable isotope gives out the radiation (**decays**)

If the radiation hits surrounding atoms, they can be **ionised**

Radiation exists in space, rocks, organisms, etc. This is called **background radiation**

Half life of isotopes shows how long it takes for half the radioactive count to be emitted (time for the count to go down by half)

Alpha; highly ionising but low penetrating power. Used in smoke alarms

Beta; moderately ionising & penetrating; used for testing paper thickness & for cracks in pipes

Gamma; low ionising but highly penetrating; used for destroying cancer and sterilising medical equipment

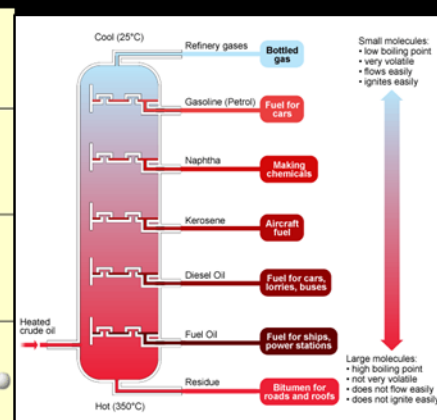
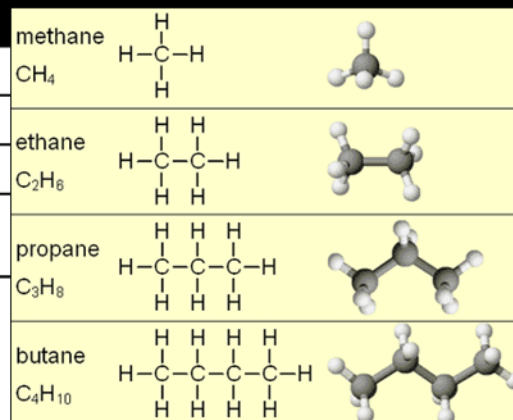
KPI: 3: Polymers

Hydrocarbons	Molecules of only Carbon (C) & Hydrogen (H)
Polymers	Long chain molecules, made of small monomers
Alkanes	Polymers made of C & H, single bonds only
Fractional distillation	Method of separating different hydrocarbons based on boiling points

As **ALKANES** gets longer: **Boiling point** increases. **Viscosity** increases. **Density** increases.

All alkanes react with oxygen to produce **carbon dioxide** and **water**

Have general formula of $\text{C}_n\text{H}_{(2n+2)}$



SPANISH YEAR 8 MODULE FOUR : MIS VACACIONES

MO 1 – 13 : (KPI 1 Know the key vocabulary for the module)

¿Adónde fuiste?	Where did you go (to)?
el año pasado	<i>last year</i>
Fui a ...	<i>I went to ...</i>
Alemania	<i>Germany</i>
Argentina	<i>Argentina</i>
Cuba	<i>Cuba</i>
Escocia	<i>Scotland</i>
España	<i>Spain</i>
Francia	<i>France</i>
Gales	<i>Wales</i>
Grecia	<i>Greece</i>
India	<i>India</i>
Inglaterra	<i>England</i>
Irlanda	<i>Ireland</i>
Italia	<i>Italy</i>
México	<i>Mexico</i>
Pakistán	<i>Pakistan</i>
Portugal	<i>Portugal</i>
República Dominicana	<i>Dominican Republic</i>
¿Cómo fue?	<i>What was it like?</i>
Fue ...	<i>It was ...</i>
estupendo	<i>fantastic</i>
genial	<i>brilliant</i>
guay	<i>great, cool</i>
aburrido	<i>boring</i>
horrible	<i>awful</i>
un desastre	<i>a disaster</i>
¿Con quién fuiste?	<i>Who did you go with?</i>
Fui ...	<i>I went ...</i>
con mi familia	<i>with my family</i>
con mis padres	<i>with my parents</i>
con mis amigos	<i>with my friends</i>

¡Buen viaje!	Have a good trip!
¿Adónde fuiste de vacaciones?	<i>Where did you go (to) on holiday?</i>
Fui a Madrid.	<i>I went to Madrid.</i>
¿Cómo fuiste?	<i>How did you go?</i>
Fui ...	<i>I went ...</i>
a pie	<i>on foot</i>
en autocar	<i>by bus</i>
en avión	<i>by plane</i>
en barco	<i>by boat</i>
en bicicleta	<i>by bike</i>
en coche	<i>by car</i>
en monopatín	<i>by skateboard</i>
en tren	<i>by train</i>
El invierno pasado ...	<i>Last winter ...</i>
El verano pasado ...	<i>Last summer ...</i>

Mis vacaciones	My holidays
Generalmente ...	<i>Usually ...</i>
Normalmente ...	<i>Normally ...</i>
me quedo en casa	<i>I stay at home</i>
salgo con mis amigos por la noche	<i>I go out at night with friends</i>
vamos a la cafetería	<i>we go to the café</i>
voy a España	<i>I go to Spain</i>
Pero el año pasado ...	<i>But last year ...</i>
fui a Cuba	<i>I went to Cuba</i>
fuimos en avión	<i>we went by plane</i>
fuimos a un restaurante italiano	<i>we went to an Italian restaurant</i>
hice excursiones muy interesantes	<i>I went on very interesting outings</i>
jugué al fútbol	<i>I played football</i>
pinté	<i>I painted</i>

¿Qué hiciste?	What did you do?
Bailé.	<i>I danced.</i>
Descansé.	<i>I had a rest/break.</i>
Escuché música.	<i>I listened to music.</i>
Fui de excursión.	<i>I went on an outing.</i>
Jugué al voleibol en la playa.	<i>I played volleyball on the beach.</i>
Mandé mensajes.	<i>I sent messages.</i>
Monté en bicicleta.	<i>I rode my bike.</i>
Saqué fotos.	<i>I took photos.</i>
Tomé el sol.	<i>I sunbathed.</i>
Visité monumentos.	<i>I visited monuments.</i>
¿Qué tal lo pasaste?	<i>What sort of time did you have?</i>
¡Lo pasé bomba!	<i>I had a fantastic time!</i>
¡Lo pasé fenomenal!	<i>I had a wonderful time!</i>
¡Lo pasé guay!	<i>I had a great time!</i>
¡Lo pasé bien!	<i>I had a good time!</i>
¡Lo pasé mal!	<i>I had a bad time!</i>
¿Cuándo?	<i>When?</i>
El año pasado ...	<i>Last year ...</i>
El invierno pasado ...	<i>Last winter ...</i>
El verano pasado ...	<i>Last summer ...</i>
¿Cuánto tiempo pasaste allí?	<i>How much time did you spend there?</i>
Pasé ...	<i>I spent ...</i>
diez días	<i>ten days</i>
una semana	<i>a week</i>
dos semanas	<i>two weeks</i>
un mes	<i>a month</i>
Palabras muy útiles	Very useful words
a	<i>to</i>
con	<i>with</i>
en	<i>in, by</i>
¿cómo?	<i>how?, what ... like?</i>
¿adónde?	<i>(to) where?</i>
¿quién?	<i>who?, whom?</i>
¿qué?	<i>what?</i>

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.