PUDSEY
GRAMMAR SCHOOL

EST.1905

KNOWLEDGE ORGANISER

YEAR 9

BE JUST AND FEAR NOT

Student Name: ....

Year and Form: ....

★ RESPECT   ★ RESILIENCE   ★ INTEGRITY   ★ COMPASSION   ★ AMBITION

KNOWLEDGE ORGANISER

INDEX

Fragmentation and Distortion

Line	Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.
Shape	A shape is an area enclosed by a line. It could be just an outline or it could be shaded in.
Form	Form is a **three dimensional shape**, such as a cube, sphere or cone. Sculpture and 3D design are about creating forms.
Tone	This refers to the lightness or darkness of something. This could be a shade or how dark or light a colour appears. The parts of the object on which the light is strongest are called **highlights** and the darker areas are called **shadows**.
Texture	This is to do with the **surface quality** of something, the way something feels or looks like it feels. **Actual texture** really exists, so you can feel it or touch it; **Visual texture** is created using marks to represent actual texture.
Media	The materials and methods used to produce a piece of art or design.
Composition	How the elements of the work are put together.
Annotation	Key information alongside your work. A record of your experiences, thoughts and emotions connected to an image.
Refinement	Developing and modifying to improve and adapt your work. Not just repeating using a different media.

Composition

The term composition means 'putting together,' and can apply to any work of art or photography, that is arranged or put together using conscious thought. There are numerous approaches or "compositional techniques" to achieving a sense of unity within an artwork, depending on the goals of the artist.

For example, a work of art is said to be aesthetically pleasing to the eye if the elements within the work are arranged in a balanced compositional way. However, there are artists such as Salvador Dali whose sole aim is to disrupt traditional composition and challenge the viewer to rethink balance and design elements within art works.

Rule of thirds

The rule of thirds is a guideline followed by some visual artists. The objective is to stop the subject and areas of interest from bisecting the image, by placing them near one of the lines that would divide the image into three equal columns and rows, ideally near the intersection of those lines.
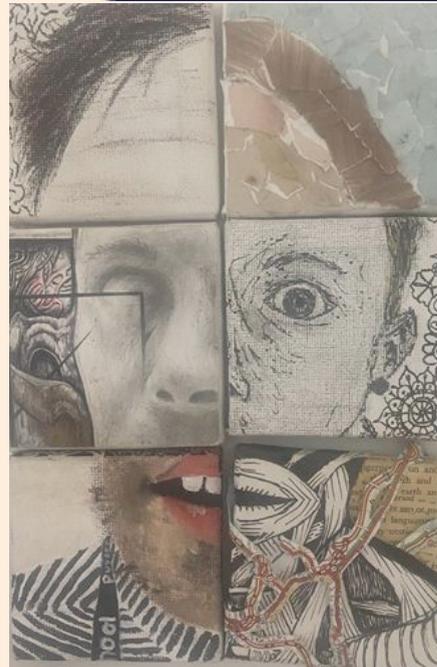
Brief Overview of Project Learning Intentions

During this project you will develop your skills from year 8 on how to draw facial features and portraits using detail and tone. You will look at a variety of very different techniques for making art, including pointillism (which will also improve your patience skills), expressive watercolour painting, and how cubism can create unique compositions. You will create a concertina and an A3 final piece. This must include, everyday objects, landscapes and portraits

Techniques and Processes

Manipulation
Image manipulation involves transforming or altering a image using various methods and techniques to achieve desired results.

Collage
Collage is a technique used in the visual arts, but in music too, by which art results from an assemblage of different materials such as newspaper and paint.

Tessellation
A tessellation of a flat surface is the tiling of a plane using one or more geometric shapes, called tiles, with no overlaps and no gaps.

Positive and Negative space
Positive space refers to the main focus of a picture, while negative space refers to the background. When used creatively and intelligently, positive and negative space together can tell a story using visual composition alone.

ANNOTATIONS

As a general rule, always try to say:
- **WHAT** you have looked at
- **WHO** made it
- **WHEN** it was made
- **WHY** it is inspiring to you
- **HOW** it will effect your own work

When talking about your own work, try to say:
- **WHAT** you have done
- **HOW** have you done it
- **WHAT** inspired you
- **WHAT** else did you try
- **WHY** is it successful
- **IS** there anything you would change

ALWAYS TRY TO BE POSITIVE!

Artists:
Brno Del Zou
Patrik Bremer
Samuel Rodriguez
ROSANNA JONES
Andy Butler
Jeremy Olson
Christine Kim
Richard Phillips
Andrew Salgado
Aldo Tolino
Andy Butler
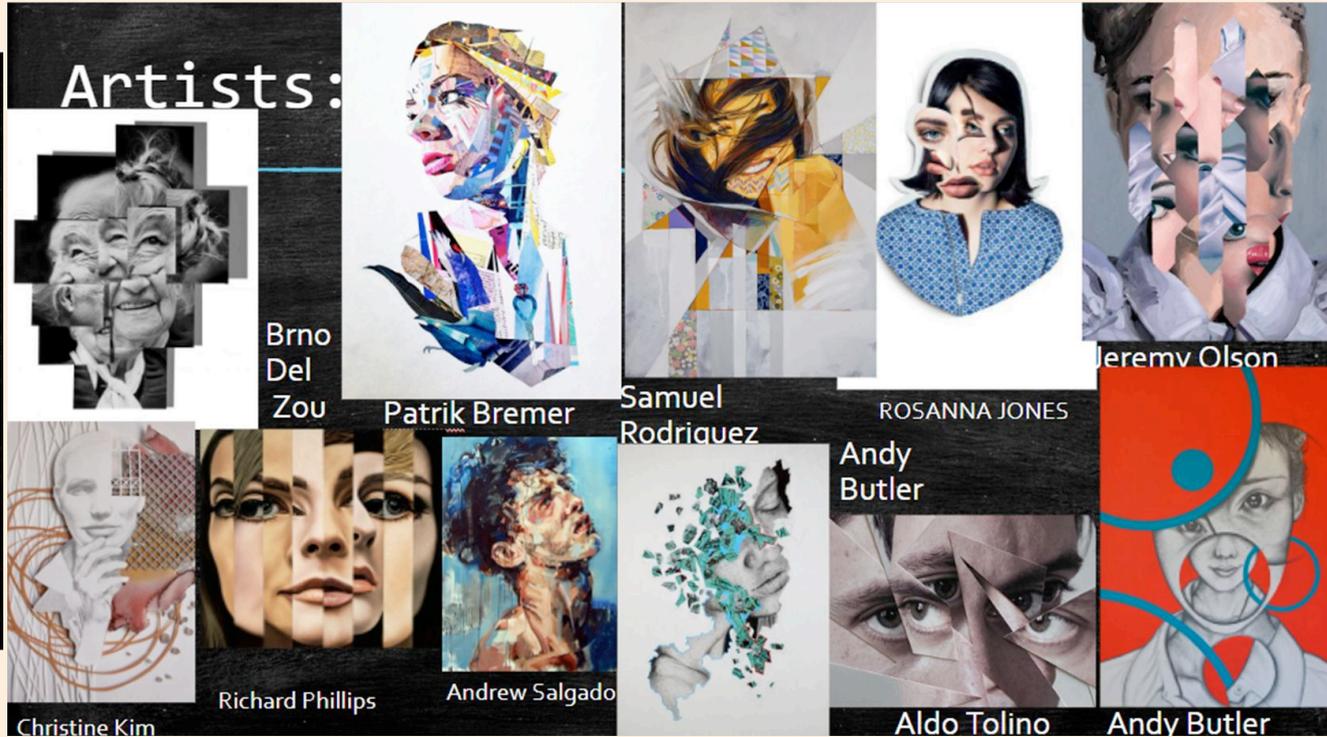
Artist Research
- Artist analysis of work
- Images of artists work
- Artist copy
- Primary Photographs
- Artist response

Fragmented
A portion of a whole, a fragment is often what remains of a damaged or ruined object. A fragment of pottery is called a shard.

Distorted
In the art world, a distortion is any change made by an artist to the size, shape or visual character of a form to express an idea, convey a feeling or enhance visual impact

Art & Design Key Words and Definitions

Key Words	Definitions
Pointillism	A style of art that is built up using dots.
Tone	How light or dark something is.
Cubism	An art movement that happened in the early 1900's. Cubist paintings show objects from many angles at once. Artists believed painters should not just present realistic views of the subject.
Portrait	A piece of artwork that depicts a face.
Composition	Where you place the objects on the page.
Proportion	How the sizes of different parts of an object relate to each other.
Contrast	Contrast is the arrangement of opposite elements (ie- light v dark).
Emotive Art	A piece of artwork that is able to express an emotion.
Abstract	Abstract Art is a style of art that does not represent anything but instead uses shapes, colour and mark-making to create a piece of artwork.
Grid Method	A technique for copying an image. You draw a grid over the image you want to copy, then draw the same grid on a blank piece of paper. You can then draw the shapes each square at a time. This is often easier than trying to draw the entire subject all at the same time.
Content	The subject matter of the artwork (what the image is of).
Form	How the work has been arranged.
Process	How a piece of artwork has been made.
Mood	The mood (feeling) that is created by the artwork.

INTERNATIONAL TRADE

Drawbacks of globalisation

- Whilst globalisation has brought many global benefits such as increasing standards of living and increased innovation, it also has created many global challenges. Below is a list of problems caused by globalisation.
- **Environmental damage-** Irreversible damage to ecosystems, land degradation, deforestation, loss of bio-diversity and fears of permanent water shortage.
- **Inequality**- Globalisation has been linked to rising inequalities in income and wealth.
- **Inflation**- Strong demand for food and energy has caused a steep rise in commodity prices.
- **Labour exploitation**- Nations desperate to attract foreign investment may be tempted to lower corporate taxes, allow lax health and safety laws and limit basic welfare safety nets with damaging social consequences

Trading Blocs

- **EU**- European Union
- **NAFTA**- North American Free Trade Association
- **ASEAN**- Association of Southeast Asian Nations
- **MERCOSUR**- Southern Common Market
- **SADC-** Southern African Development Community

Enterprise skills

- Leadership
- Team work
- Problem solving,
- Decision making
- Initiative
- Risk taking
- Planning

Globalisation

In the past countries relied heavily on their domestic markets to buy and sell their products. However, improving infrastructure has meant now we have a global economy and countries rely on each other for businesses to be successful. To encourage international trade, there are a number of trading blocs. These blocs allow countries to trade with each other freely without having to pay tariffs or quotas. The aim of all countries is to increase their GDP. With increasing GDP, countries see increasing standards of living for their citizens

Ways to compete

A business must be able to compete against its competition in order to succeed. If a business does not have a competitive advantage then customers will choose to use competitors instead. The main ways a business can compete include:

- Quality eg Emirates
- Price eg Aldi
- Having a unique selling point eg GHD's
- Branding eg Nike

- **Branding**- Creating a unique image in a customers mind for a product
- **Entrepreneur**- Someone who takes a risk to start a business
- **Enterprise skills-** Skills commonly shared by successful entrepreneurs
- **Competitive advantage-** Something a business can do than allows it to compete with others
- **Private sector businesses**- Those that exist to make a profit
- **Public sector businesses**- Those owned and operated by the government that exist to provide a service to citizens
- **Globalisation-** A process in which economies have become increasingly integrated and interdependent
- **Tariff-** A tax on goods bought abroad
- **Quota-** A limit on the number of goods that can be bought in from abroad
- **GDP-** Gross domestic product. This is the amount of money in a countries economy
- **Ethics**- Doing what is morally right or wrong in a business situation
- **Domestic market-** The home market of a business ie the country it operates in
- **Infrastructure-** the basic physical and organisational structures and facilities (eg buildings, roads, power supplies)
- **Product**- Something tangible. This means it can be touched
- **Service**- Something intangible like a bus ride
- **Primary sector**- Remove raw materials such as coal and potatoes
- **Secondary sector**- Turn products from the primary sector into goods. Examples include manufacturing and construction
- **Tertiary sector**- Provides services such as hotels

CHINA

Chinese business practices

Always introduce yourself using your full name and your job role

Wait to be introduced and shake hands

Always have a business card available

The place of honour at a meeting is at the host right hand side.

If it is a large meeting the person will be sat opposite the host

During meetings Chinese people will nod and appear to indicate their agreement. This is a sign of acknowledging what has been said but not a sign that the person agrees.

Government intervention in economies
Subsidies- Make manufacturing cheaper
Trade agreements- Help firms to sell abroad
Grants- Money from the Government which is not repaid to encourage innovation

The stock market
Public limited companies are listed on the stock market. This means anyone can buy shares in those companies. Shareholders are paid a dividend payment usually every six months

Shares are an investment. Their owners hope the value of their shares will increase.

ASEAN
China is part of the trading bloc ASEAN. This is made up of Asian countries that share mutual trade. China is the main manufacturing country and many of the other ASEAN countries provide China with the raw materials to do this. These products are then exported to Europe, the USA and Japan.

The impact of Chinese industrialisation

Movement of people from rural to urban areas
Huge growth in manufacturing industry
Increase in the number of skilled workers
Increase in capital intensive production
Increasing standards of living
Higher levels of innovation

Price- The pricing strategy a company uses to promote its brand image. Examples include psychological pricing, destroyer pricing and penetration pricing
Promotion- The mixture of advertising, public relations, sales promotion and personal selling a business uses to gain brand recognition
Place- Where the product is distributed to customers either through a physical location or online.
Product- The design and usability of the product itself

Global superpowers

1. United states
2. China
3. European Union
4. India
5. Russia

The impact of technology on marketing
The internet has had a huge impact on how goods are marketed to customers. Advertising through social media and tracking through cookies has allowed businesses to collect data on customers which lets them target customer needs on a much more individual basis.

Global superpower-A state with a dominant position characterised by its extensive ability to exert influence or project power on a global scale.
Manufacturing industry- The industry that makes products. **Skilled workers**- Workers that hold qualifications
Standards of living- How well a person is able to live often related to their disposable income and access to education and healthcare
Innovation- Inventing new products or processes and developing them so they are ready for market
Business cards- Contain details of how to contact a business
Export- A good made (manufactured) in one country and sold to a different one
Trading bloc- A group of countries who choose to trade freely with one another
Shareholder- A part owner in a business
Dividend payment- A shareholders share of the profits
Public limited company- A business owned by shareholders which is traded on the stock exchange
The marketing mix- Price, product, promotion, place
Brand recognition- the ability of a consumer to recognise one brand over other brands
Social influencers- a user on social media who has established credibility in a specific industry. They have access to a large audience and can persuade others by virtue of their authenticity and reach.
Global brand- One that operates around the world. One example is McDonalds.
Developed economy- are the economies of countries that enjoy certain high standards. Such countries generally have a good infrastructure, stable economy with very high per capita income.
Developing economies- Economies where the average income is much lower than in industrial nations. The economy often relies on exporting crops and other natural resources

PERSONAL FINANCE

Personal finance and avoiding unmanageable debt

Personal finance is about managing your money to make sure that you can pay for all of your outgoings. If a person cannot repay what they owe, they are said to have unmanageable debt. This could lead to their items being repossessed or could lead to them being forced into declaring bankruptcy.

Budgeting

Budgeting is about planning the money you have coming in and the money that you think you will pay out. It is essential to budget so that you avoid getting into unmanageable debt. Budgets also help us to save for large items, like a car, that we might want to buy.

Interview do's and dont's

Do make eye contact, nod to show that you are listening, lean forward to show active listening, research the company before you arrive, and ask thoughtful questions.   **Don't** arrive late, dress inappropriately with clothes that are too casual or too revealing, play on your mobile phone, use jargon, chew chewing gum or appear disinterested.

Top tips for filling in an application form
Check your punctuation and grammar
Always write in a formal manner
Include a covering letter that compliments your application for
Where possible type the application form, if not possible use black pen
Sell yourself and give examples of when you have used important qualities

Tax
Tax is paid on earnings or the profits of the self employed to the Government. This tax is then used to fund public spending.   In the UK you can earn £12,570 before you pay any tax. You will pay 20% tax on earnings between this and £37,500. If you earn over this you will pay tax at 40% up to £150,000 and 45% on any amount above that.

Tax and business
Self employed people pay income tax on their profits at the same rate as employees however they have tax deductibles, e.g. vehicle mileage. Limited companies such as Costa pay corporation tax at a rate of 17% however these global businesses are often criticised for not paying any UK tax. Methods of reducing tax bills include:
Making less profit one year so paying less the next year
Paying huge franchise fees to parent companies in offshore tax havens which wipes out UK profit
Getting high interest loans from parents companies and having the huge repayments wipe out profits

Interest rates- The Bank of England sets the interest rate in this country.

Low interest rates encourage people to spend because savings rate are low and people can borrow money cheaply. The Government does this to stimulate economic growth.

High interest rates encourage people to save their money rather than spend it. It also means that people pay more for finance such as mortgages and credit cards and therefore have less disposable income to spend.

Debt- Money owed to other people
Mortgage- Money borrowed to buy a property with the property being used as security
Debit card- A card which you can use to spend money in your bank account
Credit card- A card used to spend money that you have borrowed
Current account- An everyday bank account that allows you pay money in and out of your bank
Overdraft- An agreed sum that the bank will allow you to spend over the money in your account. The bank charges high rates of interest for this
Loan- Money borrowed from the bank over a fixed period of time that is paid back in equal monthly instalments
Interest- Money paid to banks for lending or to customers for saving
Bankruptcy- A legal event where it is acknowledged that you have more debts than assets to pay them back
Repossession- When assets are seized to repay a debt
Psychometric testing- Tests done by an employer to see if you have the correct skills for the role
Application form- Given to you by the employer, a form that provides a set way to apply for a job
Curriculum Vitae (CV)- A document you create to apply for a job
Income tax- Money paid out of your wages to the Government. It is used to fund public services like the NHS.
National insurance- Monday paid from your wages that is used for some state benefits such as pensions
Corporation tax- Tax on the profits of limited companies
Tax havens- Countries where businesses or citizens are not required to pay tax to the Government

Programming & Operating Systems

Key Vocab	
Python	A programming language used to write programs.
Shell	The place where code is run.
Code	The instructions that a program uses.
Code Editor	The place where code is written.
Programming	The process of writing computer programs.
Algorithm	A set of rules/instructions to be followed by a computer system.
Flowchart	A visual method of planning an algorithm using symbols.
Pseudocode	A language similar to English which is used to plan algorithms.
Sequence	Parts of the code that run in order and the pathway of the program reads and runs very line in order.
Selection	Selects a pathways through the code based on whether a condition is true.
Iteration	Code is repeated (looped), either while something is true or for a number of times.
Variable	A value that will change whilst the program is executed. (eg. temperature, speed)
Function	A collection of code that works outside the main program. These are created to speed up programming. They can be called from a single line of code at any time.
Syntax	The punctuation/way that code has to be written so that the computer can understand it. Each programming language has its own syntax.
Syntax Error	An error produced when the computer cannot understand the code which has been written.
Logic Error	An error produced when a program is understood by the computer but does not perform as the programmer expects.

Python > English	
`print("hello!")`	Prints a value on screen (in this case, hello!)
`x = input("")`	Inputs a value and stores it into the variable x.
`answer = x + y`	Saves the result of x and y added together in a variable named answer.

`age = 12`
`print("Age: " +`
`str(age))`
	The + joins together two variables when printing. Str has to be used to cast age to be a string. This code will output "Age: 12".

`if name ==` `"Fred":`	Decides whether the variable 'name' has a value which is equal to 'Fred'.
`else:`	The other option if the conditions for an if statement are not met (eg. name = 'Bob' when it should be Fred)
`elif name ==` `"Tim":`	elif (short for else if) is for when the first if condition is not met, but you want to specify another option.

Roles of an operating system
Managing hardware & peripherals
Managing programs installed and being run
Managing data transfer between memory locations, the CPU and secondary storage
Providing the interface between the hardware and the applications
Providing an interface between the computer and user, managing display to the screen
Managing security and organising data so that it is not overwritten
Providing a file system for the storage and retrieval of files

Ethical Hacking & Cybersecurity

Malware Key Vocab

Malware	Software that can harm devices, which is installed on someone's device without their knowledge or consent.
Virus	Viruses attach (by copying themselves) to certain files. Viruses are self-replicating meaning that they can copy themselves across files or other computers without consent.
Worm	Similar to a virus but targets large networks. They will spread amongst devices connected to that network.
Trojan	Trojans are malware disguised as legitimate software. Unlike viruses and worms, Trojans don't replicate themselves – users install them not realising they have a hidden purpose.
Spyware	Secretly monitors user actions (eg. key presses) and sends info to a hacker. They can discover passwords, credit card details, and other personal information
Ransomware	A type of malware which hijacks files and encrypts them. It will demand money from a victim in exchange for the password to decrypt files.
Adware	A type of malware which floods a victim with unwanted adverts and pop-ups on their device.
Hacker	A person who unlawfully gains access to a computer system.

Hacking Key Vocab

Phishing	To obtain people's information illegally online by pretending to be someone else.
Hacking	To gain unauthorized access to data in a system or computer.
Digital forensics	The process of uncovering and interpreting electronic data for the purpose of reconstructing past events.
Pen testing	A method of trying to infiltrate a network to check for flaws in security methods.
Ethical Hacker	A hacker who claims to practice hacking to highlight security concerns.
Network Policies	Guidelines set in place by a company or organisation, which all members agree to, so that the network is as protected as possible.
Username	Identification used by a person with access to a computer, network, or online service. (eg. 17B1...)
Password	A secret word, phrase, or string of characters that allows access to a computer, interface, or system.

Caesar Cipher Example

A translation of the Caesar cipher using the rule +3 is shown below

Plaintext	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Ciphertext	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C

Using this encryption, the message "Computing is fun"
Would be encoded as

C	O	M	P	U	T	I	N	G		I	S		F	U	N
F	R	P	S	X	W	L	Q	J		L	V		I	X	Q

Spreadsheet Key Terms

Key Vocab	
Absolute Cell Reference	An absolute cell reference is one that does not change when it is copied. To make a cell reference absolute, you must include a $ before the reference (ex: C4).The other type of reference is a Relative Reference..
Active Cell:	The active cell is the cell in the spreadsheet that is currently selected for data entry. The current active cell can be identified as being the one that has a darker black border around it.
Bar / Column Chart:	A bar or column chart is a style of chart that is used to summarize and compare categorical data.. Bars run horizontally and columns run vertically.
Cell:	A cell is a rectangular area formed by the intersection of a column and a row. Cells are identified by the Cell Name (or Reference, For example the cell in Column "C" in Row "3" would be cell C3
Columns and Rows	Columns and Rows refer to how your cells are aligned. Columns are aligned vertically while rows are aligned horizontally.
Merged Cell	When two or more cells are combined, it's become what is known as a merged cell.
Workbook	The workbook refers to an Excel spreadsheet file. The workbook houses all of the data that you have entered and allows you to sort or calculate the results
Worksheet	Within the workbook is where you'll find documents called worksheets. Also known as spreadsheets, you can have multiple worksheets nestled in a workbook.
Labels	Labels refer to text that is typed into the cells of a spreadsheet. Labels have no numeric value and cannot be used in a formula or function.
Pie Chart	A pie chart is a circular chart that is divided up into sections, each of which represents the numerical proportion of the whole.
Gridlines	Gridlines are the horizontal and vertical lines on the screen that separate cells in a spreadsheet.
Fill handle	The fill handle is the small bold square in the bottom right corner of a cell that can be used to copy (fill) data to adjacent cells in the same row or column.

Key Vocab	
Formula	A sequence inside a cell that is used to produce a value. It must begin with an equal (=) sign. This could be a mathematical equation, cell references, functions or operator. A formula is also known as an expression.
Function	Functions are formulas that are pre-built into Excel. They are designed to help simplify potentially complex formulas in a worksheet. Eg, SUM, MAx, MIN, AVERAGE
Conditional Formatting	Formatting is applied only when the cell meets determined criteria such as duplicate values or values above or below a threshold.
Data Validation	This feature helps to prevent incorrect data from being entered into your worksheet. This most commonly used to create drop-down lists for common terms. Data validation promotes consistency and accuracy in the data to be entered.
Auto SUM	This feature will add up the numbers you have entered in your sheet and displays the total in a cell of your choosing.
Filter	filters are rules that you can employ to decide which rows in a worksheet to display. These filters can use data such as conditions or values.
SUM	Sum function adds a range of cells: eg =sum(A1:A10)
MAX	Max functions identifies the highest number from a range of cells, eg =max(D1:D10)
MIN	Min function identifies the lowest number from a range of cells, eg =min(D1:D10)
COUNTIF	Countif functions counts text in a range of cells and gives the total, eg =countif(D1:D10,"pay") - Counts the word pay in the range and gives a total.
COUNT	COUNT(A:A) – Counts all values that are numerical in A column. However, you must adjust the range inside the formula to count rows.
If Statement	Statement checks condition of values, if its true or false and returns the value set. For example, IF(C2>B2,"Over Budget","Within Budget")

Year 9 Design and Technology

Energy Source	Process	What are the advantages?	What are the disadvantages?
Solar	Electricity and hot water are generated via solar cells.	Large amounts of energy available from solar farms. Contributes to heating water, is inexpensive to set up.	Solar cells are expensive. Demand in winter when heat from the sun is at its lowest.
Wind	Wind power turns turbines.	Low cost power after initial set up.	Contributes small amount to energy needs. Set up costs high.
Tides	Turbine blades are reversible and can harness the tide in both directions.	Has the potential for large scale energy production, is available throughout the day and does not pollute.	Very high set up costs. Could cause flooding of estuary borders, which may damage wildlife and natural habitat.
Water	The fall of water - turns turbines, for hydroelectric power.	Clean quick and efficient at peak times.	Contributes only a small amount to the needs of manufacturing. High set up costs. Suitable sites can be in remote areas.
Geothermal	Holes in the earth's crust produce steam to generate electricity.	Provides power and hot water.	On a large scale, it is only effective in countries such as Iceland where the crust is thin.
Biomass	Wood, plant matter & waste is burnt & generates heat.	Low cost power is produced.	Potential for deforestation – and transportation of timber to biomass sites. Environmental pollution.

The difference between **active** and **passive speakers**:
Active **speakers** have an in-built power amplifier and just need a power source (or battery) to operate, where **passive speakers** require an external power amplifier to operate. In short, you need an amplifier for **passive speakers**, you don't with active **speakers**.

Developing sustainable products by:
•reversing the trend for more lifestyle products.
•designing to use recycled materials in production.
•designing products that can be reused / recycled easily.
•using low-impact materials: non-toxic, sustainably-produced or recycled materials which require little energy to reprocess.
•being energy efficient: using manufacturing processes and production which require less energy.
•designing for quality and durability: longer-lasting and better-functioning products which have to be replaced less frequently, reducing the impact of producing replacements.
Develop the use of Sustainable manufacturing technologies that:
•use less energy
•use fewer of the limited resources
•do not deplete natural resources,
•do not directly or indirectly pollute the environment
•can be reused or recycled at the end of their useful life

Design Focus

Philippe Starck – product designer of furniture, kitchenware

Airbus –aeronautical designer and manufacturer

Speakers

An effective speaker enclosure is one that achieves minimal distortion and efficient amplification of sound from the loudspeaker driver.
The enclosure forms part of the design of a loudspeaker and is just as important as the driver itself. The characteristics of a speaker are driven by materials and design equally. The 'best' material for making any speaker will be:
1.**Dense** (or heavy) – this is so that any vibrations or mechanical pressures are simply absorbed, and do not result in additional sounds, or losses of energy at certain frequencies.
2.**Rigid** (or stiff) – Particularly for bass frequencies, a stiffer cabinet means higher efficiency and less distortion.
3.**Non resonant** – something that if you knock it, sounds 'dead'. The opposite would be metal (which is why they make bells and tuning forks from it!). Ringing sounds mean distortion for your music.

Year 9 Textiles

1. Fashion Fad Cycle

Fads can be products that have achieved short-lived popularity, but then fade away. A fashion fad is introduced, and experiences a very sudden rise in popularity, saturates the market to the extent that it rapidly declines as quickly as it appears. As a result the fashion fad is very unlikely to reappear in the future.

2. Fashion and Style Features Cycle

The style relating to a fashion and textiles product is introduced by designers at international fashion shows; it rises steadily until it saturates the market. The fashion trend or style suddenly dips due to a reduction in demand. However in contrast to the fashion fad it may reappear a season or two later, or a few years later. An example of a fashion or style such as this is "nautical, peasant or military trend", bobbed or fringed hairstyles, the mini skirt or thigh high boots.

3. Classic Fashion Cycle

The third type of cycle is the classic fashion; this can be a style of fashion but is usually a fashion item or garment. It is introduced by designers at international fashion shows, worn by "fashionistas" and celebrities and can appear in fashion publications and the media.

TEAMMFC

Target Market - who it is aimed at
Ergonomics - how it is designed for human use
Aesthetics - what it looks like
Materials - What it has been made from
Manufacture - the process used to make it
Function - what is its job
Cost - how much it costs to make/sell
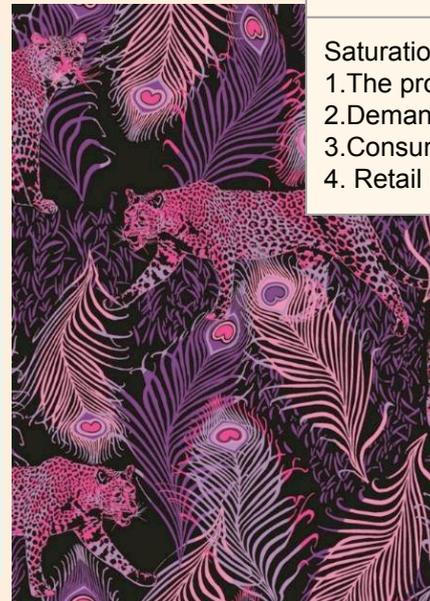
Decorative Techniques

Applique
Patchwork
Embroidery
Beading/ Beadwork
Couching
Screen printing
Reverse Applique
Felting
Tucks
Sewing Machine Embroidery
Sequins work
Dyeing
Embossing
Stitch and Slash technique

PRODUCT LIFE CYCLE

Market Introduction Stage
1. Introduction of style of product on catwalk
2. Limited numbers will be produced
3. Fashion leaders publicise the look
4. Available to a select few, high prices

Growth Stage
1. Product is watered down/simplified
2. Product is mass manufactured, low cost materials
3. Product becomes more affordable
4. Product widely available, low cost
5. Product accepted by many people

Maturity Stage
1. Multiple variations of product available
2. Product/fashion most popular stage
3. Available in a variety of price levels
4. Its popularity and life span depend on the product or fashion becoming a classic

Saturation and Decline Stage
1. The product/fashion has swamped the market
2. Demand for the product has disapeared
3. Consumer will not pay a premium for product
4. Retail reduction and markdowns' in shops

SUSTAINABLE TEXTILES

* The textiles industry has a massive effect on the environment.
• Energy is used when producing textiles.
• The process of fabric construction pollutes the air and water.
• Growing Cotton produces the most pollution, it is responsible for using 40% of the world supply of insecticides and as a result damages the environment.
• There is also the problem of waste disposal which ends up in landfill sites.

Food Preparation and Nutrition

eatwell guide

Hob = Conduction & Convection

Grill = Radiation

Oven = Conduction & Convection
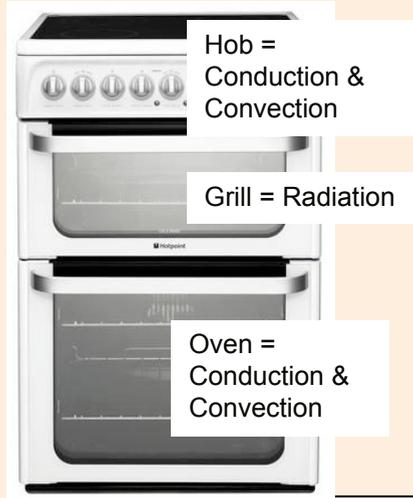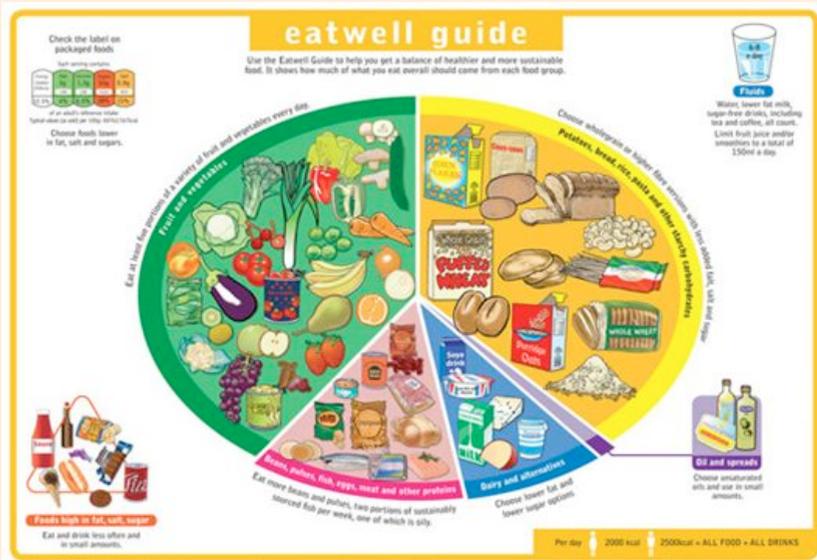
Heat Transfer Methods
There are **three methods** of heat transfer we use when using the oven.
Conduction: transferring heat through a solid object into food.
Convection: transferring heat through liquid or air into food.
Radiation: when heat rays directly warm and cook food. Heat travels from one place to another.

Sensory evaluation is a scientific discipline used to measure, analyse and interpret responses to products that are perceived by the senses.

Appearance		Taste/flavour		Aroma/smell		Texture	
appetising	large	acidic	savoury	cheesy	perfumed	chewy	hard
clean	lumpy	bitter	soggy	fishy	pungent	creamy	liquid
colourful	messy	bland	sour	floral	rotten	crisp	moist
dull	rough	citrus	spicy	fragrant	scented	crumbly	mushy
fizzy	round	fruity	strong	fresh	stinky	crunchy	slimy
flat	rustic	mild	sour	herby	sweet	dry	smooth
fresh	smooth	rich	tangy	musty		firm	soft
golden	stringy	rotten	tart			flaky	sticky
		salty	weak			fluffy	

Specific Groups…
- Vegetarian / vegan diet
- Coeliac diet
- Lactose intolerance diet
- High fibre diet
- Low sugar diet
- Fat reduced diet
- Low salt diet

Diet-Related Diseases…
- Obesity
- Cardiovascular disease
- Coronary heart disease
- Skeletal disease
- Tooth decay
- Iron deficiency (anaemia)
- Type 2 diabetes

RAISING AGENTS

Raising agents are used to make mixtures rise. A raising agent is an ingredient or process that incorporates a gas (normally co2) into a mixture. Chemical raising agents are raising agents that produce carbon dioxide when they are heated with a liquid. Chemical raising agents can be bicarbonate of soda or baking powder. Mechanical raising agents are air or steam, for example whisking or sieving adds air. Yeast is a biological raising agent, it is a living organism that produces carbon dioxide due to fermentation.

Food Science
*Denaturation - Chemical bonds in the protein food have broken, causing the protein molecule to unfold and change shape.
*Coagulation - The setting or joining together of lots of denatured protein molecules during heating or change in PH. An irreversible change to the appearance and texture of protein foods.
*Gelatinisation - When starch granules swell when cooked with liquid, then burst open and release the starch, causing the liquid to thicken.
*Shortening - The ability for fat to shorten the length of the gluten molecules in pastry or shortbread, for example butter, lard or other fat that remains solid at room.
*Aeration - Incorporating air into a mixture.

Fair Trade	Producers receive a fair price for the goods that they produce.
Food Miles	The distance between the place where food is grown or made and the place where it is eaten.
Carbon Footprint	The amount of carbon dioxide released into the air because of your own energy needs.
Seasonality	The times of year when a given type food/fibre is at its peak, either in terms of harvest or its flavour.

ACTIONS & CONSEQUENCES

PGS theatre

Key knowledge

Key Word	Definition
Cliffhanger	A dramatic and exciting ending to a performance, leaving the audience in suspense
Context	The situation or circumstances in which a piece of drama is set or devised, including historical, cultural or social influences. In simple terms: Who? What? Why? Where? & When?
Devising:	To create a performance from a stimulus.
Evaluation	To reflect on the performance, commenting on the strengths and areas for improvement
Flashback	A moment during the action of a play when the natural flow of time is interrupted so that a moment from the past can be presented
Hot seating	Actors are asked questions while in character to develop a deeper understanding of their characters personality and thoughts
Inferring	To deduce or conclude (something) from evidence and reasoning rather than from explicit statements

Key knowledge

Key Word	Definition
Mime	An acting technique of showing action, emotion and character without using words
Rehearse:	To practice your performance till it is a 'polished' piece of drama
Split Scene	Performing two locations that are happening at the sametime within one scene
Split dialogue:	When two people speak directly to the audience and the last word of their sentence links to the first word of the others
Stimulus:	A starting point for devising drama
Structure:	The order in which action and scenes are placed
Scene by Scene plan:	A plan showing the order of the scenes and what the intention of each scene is

Character skills

Key Word	Definition
Facial Expressions:	How you communicate your character's emotion using your face.
Vocal Skills:	The way you use your voice to communicate your character's emotions
Body Language:	How you communicate your character's emotions through the use of your body
Physicality:	How actors use their facial expressions, body language, walk amd stanze to show emotion, characteristics and age of their character
Red Cross:	An actor facing forward so the audience can see their facial expression and body language
Staying in Role:	Being fully committed to your character throughout the whole performance
Levels:	To show the status of the character through actors being at different heights
Proxemics:	The distance between the actor & actor, actor & audience or actor and object and what that communicates
Character intention:	What you want the audience to think or feel about your character

Theatre makers roles

Key Word	Definition
Actor	The person that takes on a character in a performance
Choreographer	The person that creates and instructs on the dance or movement of a performance
Costume Designer	The person that decides and imagines the costumes worn by characters in the play
Director	The person that is steering and leading the performance, they contribute to each element and work with both the creative and performance elements of the play
Lighting designer	The person that decides what lighting the play needs to show the correct meaning
Set designer	Decides what scenery and backdrops will feature on the stage
Sound designer	Responsible for everything related to sound for a given production. This includes pre-recorded music, sound effects, live voices, musical instruments.
Stage managers	Provide practical and organisational support to the actors, crew and director

Written structure

Key Word	Definition
Point	What was done? (Example of what happened in the moment)
Evidence	How was it done? (What skills & techniques were used?) Why was it done like that? (Justify & analyse your choices)
Evaluate	What was successful and why? (Reflect on the success of this moment) How could it be improved and why? (Give a suggestion of improvement. Justify your answer)
Audience	What was the impact on the audience? (What was your intention? How did the audience react?)

Lighting

Key Word	Definition
Gobo	A thin metal plate with specific shapes cut out to produce a design which can then be projected by a spotlight
Backlit	Light coming from upstage, behind scenery or actors, to sculpt and separate them from the background
Blackout	The act of turning off (or fading out) stage lighting
Gel	The coloured 'filters' placed in front of theatre lights to colour the beam
Flood	A lantern that produces a broad spread of light across the stage
Spotlight	A lantern projecting a narrow, intense beam of light directly on to a place or person
Crossfade	Bringing another lighting state up to completely replace the current lighting state

Of Mice and Men

John Steinbeck
John Steinbeck was born in Salinas, California in 1902. Although his family was wealthy, he was interested in the lives of the farm labourers and spent time working with them. He used his experiences as material for his writing.

The Great Depression:
The Great Depression was a period of poverty and unemployment across the USA. It started in 1929 when millions of dollars were wiped out in the Wall Street Crash. It led to people losing their life savings and a third of America's population became unemployed and many suffered from poverty, hunger and disease.

The Dust Bowl states:
A series of droughts in southern mid-western states like Kansas, Oklahoma and Texas led to failed harvests and dried-up land. Farmers were forced to move off their land: they could not repay the bank loans which had helped buy the farms and had to sell what they owned to pay their debts.

The American Dream:
A set of ideals in which freedom includes the opportunity for prosperity and success, as well as an upward social mobility for the family and children, achieved through hard work in a society with few barriers.

Racism and Sexism:
Racism was a problem in America and racial segregation was still common. In the 1930s married women had to give up their jobs and were treated as inferior to their husbands.

	Skill	**Definition**	**Example**
Word Level	**Conjunction**	Words used to connect clauses or sentences	'but', 'although', 'and', 'despite'
Word Level	**Adjective**	A descriptive word used to modify a noun	'tall', 'emerald', 'miniscule'
Word Level	**Adverb**	Give additional information about a verb	'cautiously', 'nervously'
Word Level	**Verb**	A word describing an action or a state	'shout', 'believe'
Sentence Level	**Adjective phrase**	A phrase where the adjective is the head word	'fond of chips', 'very happy'
Sentence Level	**Prepositional phrase**	A phrase that tells you **where** or **when** something is in relation to something else	'Across from the river', 'Beneath the canopy of trees'
Sentence Level	**Compound sentence**	A sentence made up of two main clauses.	'The trees stood proudly by the river but the dark water swirled ominously.'
Sentence Level	**Subordinate clause**	A clause, usually introduced by a conjunction, that is dependent on a main clause	Despite the hot weather, the men wore their denim jackets.
Sentence Level	**Mitigated imperative**	A command or instruction that is softened or made less direct	'Would you mind not doing that?' 'Would you like to get your exercise books out please?'

Of Mice and Men

Vocabulary	Definition
Migrant	A person who moves from one place to another in search of better living conditions
Hierarchy	A system where members are ranked according to their authority or status
Segregation	Setting someone or something apart from others
Companionship	A feeling of friendship or fellowship

Characters
Lennie: A physically strong man who travels around to find ranch work with his only friend George. Lennie has learning difficulties.
George: Lennie's guardian and best friend. He is 'small and quick' with 'sharp, strong features'.
Crooks: Crooks, the black stable-hand, gets his name from his crooked back. He is isolated from the other men because of the colour of his skin.
Curley's Wife: She is a young, pretty woman who recently married Curley. She cares about her appearance and wears nice clothes and make-up. She has failed dreams of being a star.

	Skill	Definition	Example
Whole Text	**Cyclical structure**	When a text begins and ends in the same place or with the same idea	Description of the Salinas Valley in Chapter One and Chapter Six.
Punctuation	**Colon**	A sentence followed by extra information.	'Lennie wanted one thing: his puppy.'
Punctuation	**Semicolon**	Used to link two main clauses in place of a coordinating conjunction or a full stop	'Lennie was afraid; he didn't know what to do without George.'
Literary Device	**Symbolism**	Something representing something else	A poppy symbolises remembrance
Literary Device	**Figurative language**	Words or expressions used to suggest a meaning that is different from the literal interpretation e.g. a metaphor or simile	'The ground was covered by a twinkling white blanket.'

Travel and Exploration

Robert Scott and the Antarctic expedition:
In 1911, British explorer Robert Falcon Scott and Norwegian explorer Roald Amundsen both aimed to be the first to reach the South Pole. Scott had attempted to reach the South Pole once before in 1902 but his party were forced to turn back due to ill health and sub-zero conditions. He set sail on his second expedition in 1910. Amundson and his Norwegian team were better prepared than Scott and his team, and they reached the Pole 33 days before Scott's team. Scott reached the South Pole on 17 January 1912, and the return journey was difficult. Weak from exhaustion, hunger and extreme cold, his last diary entry is dated 29 March 1912. He died in his tent alongside two of his men.

British Colonialism:
By 1913 Britain had colonized a lot of countries. It held power over 412 million people, making up 23% of the world's population.The British Empire was at its peak and this contributed to a desire to explore and conquer further territories. It is partly as a result of this that Scott's Antarctic expedition was so well supported by the country.

Travel writing:
Travel writing as a genre has been popular for centuries. Wollstonecraft in the 18th century was keen to document her personal experiences of travel abroad, and modern writers such as Bryson continue to write about their experiences in other countries.

	Skill	**Definition**	**Example**
Word Level	**Temporal connective**	Connectives linked to time	'Before', 'After', 'Later', 'Yesterday', 'Next', 'Tomorrow'
Word Level	**Modal verb**	An auxiliary verb that expresses necessity or possibility	'may', 'will', 'could', 'should'
Sentence Level	**Simple sentence**	A sentence made up of one main clause	'Robert Scott was an explorer.'
Sentence Level	**Compound sentence**	A sentence made up of two main clauses	'Robert Scott was brave and he travelled to the South Pole.'
Sentence Level	**Complex sentence**	A sentence made up of a main clause and subordinate clause	'Despite the terrible conditions, Scott and his men tried to reach the Pole.'
Sentence Level	**Compound complex sentence**	A compound sentence made up of two main clauses, and a subordinate clause	Despite the terrible conditions, Scott and his men tried to reach the Pole and they were successful.'
Sentence Level	**Sentence fragment**	An incomplete sentence that does not contain both a subject and a verb.	'Ice everywhere.'
Sentence Level	**Embedded clause**	A clause embedded in to a main clause	'Robert Scott, who many considered to be a hero, actually failed his men.'

Travel and Exploration

Vocabulary	Definition
Chronological	A record of events following the order in which they occurred
Patriotism	Devotion to and vigorous support of one's country

Nationalism	Support for the interest of your own country, often to the exclusion or detriment of other countries
Colonialism	Acquiring control of another country, occupying it with settlers and exploiting it economically

	Skill	Definition	Example
Whole Text Level	Structure of a formal letter	Sender address in top right corner with date below; recipient address on left beginning below date; formal greeting	'Dear Sir/Madam' or 'Dear Mr/Ms/Mrs…'; introductory paragraph; topic paragraphs; concluding paragraph; formal sign off e.g. 'Yours sincerely' or 'Yours Faithfully'.
Punctuation	Dashes	Used to add extra information and as a way of showing parentheses	'The mountain - a huge, towering presence - loomed in the distance.'
Punctuation	Semicolons	Used to link two main clauses in place of a coordinating conjunction or a full stop	'Llandudno was dilapidated; paint flaked from the guest house walls.'
Punctuation	Colons	A sentence followed by extra information.	'I love North Wales: the people are incredibly friendly.'
Literary Device	Jargon	Special words or expressions used by a profession or group that can be difficult for others to understand	'stopover', 'red-eye flight', 'all inclusive'
Literary Device	Parody	Imitation of the style of a writer or genre for comic effect	'As you may know I used to make a programme called 'Top Gear'. Now I just hang around the house doing nothing.'
Literary Device	Omniscient narrator	A narrator who knows what is happening at all points of the story at all times	'The young woman was confident; it would have been impossible for her to know what was coming.'
Literary Device	Subjective narrator	Focusses only on the thoughts, feelings and experiences of one character at a time	'Jack sighed deeply and allowed his mind to wander back to those years.'

Generations and Ageing

Vocabulary	Definition
Sympathy	Feeling pity or sorrow for someone else's misfortune
Empathy	The ability to understand and share another's feelings

Colloquial	Ordinary or everyday language
Unconventional	Doing something different to what is usually done

	Skill	Definition	Example
Word Level	**Affixation**	Prefix or suffix added to a root word	prefix 'un' and suffix 'al' to root word 'convention' becomes 'unconventional'
Word Level	**Comparative connective**	Connectives used to make comparisons	'similarly', 'in contrast', 'on the other hand'
Whole Text Level	**Topic sentence**	Tells the reader what the paragraph is going to be about	'Older people are often labelled with unhelpful stereotypes.'
Whole Text Level	**Topic paragraph**	A paragraph in which a particular topic or idea is explored.	Full paragraph detailing some of the stereotypes older people are labelled with
Punctuation	**Brackets**	Used to add extra information to a sentence	'My house was warm (in parts) and cleanish.'
Punctuation	**Question mark**	Used to form a direct or rhetorical question	'What's happened to me?'
Punctuation	**Colon**	A sentence followed by extra information.	'But then, the worst moment came: someone expressed her outrage.'
Literary Device	**Speech**	Words spoken sit inside speech marks, along with punctuation.	'Barbara said, 'Everyone dresses so well here!'
Literary Device	**Monologue**	A speech or entire performance by one actor	Doris delivers a monologue 'A Cream Cracker'.
Literary Device	**Enjambment**	The continuation of a sentence without a pause beyond the line, stanza or couplet	'I am startled by/The rapid clouds''
Literary Device	**Caesura**	A pause that occurs within a line of poetry	'Nothing beside remains. Round the decay…'

Voices

Vocabulary	Definition
Refugee	A person forced to leave their country to escape war or persecution
Immigration	Going to live permanently in another country
Identity	Parts of a person that make them who they are
Dialect	Form of language characteristic of a particular area

The Vietnam War
The United States and Vietnam were at war from 1955-1975. After the war, some Vietnamese citizens from south of the country faced political persecution, and became refugees who escaped to the United States and made their lives there.

The Windrush
People from Caribbean countries (which were still under British rule) came to Britain in 1948 to help rebuild the Britain. The first ship to arrive was called 'The Windrush'. Many people settled and made their lives in Britain.

Accent and dialect
The U.K. has a wide variety of accents and dialects that vary according to geographical location, social groups and class. Accent and dialect can form an integral part of a person's identity.

	Skill	Definition	Example
Word Level	**First person inclusive pronoun**	Creates a link between reader and writer	'we', 'us', 'our'.
Word Level	**Second person pronoun**	A narrative method to directly position a reader within a text	'You hear the music blaring and walk out of the door.'
Sentence Level	**Non-standard word order**	Used to represent accent and dialect	In 'Invisible Mass' the protagonist says, 'Come, let we beat her up'.
Sentence Level	**Multi-clause complex sentence**	Used to add detail to description	'I saw the sprawling slums, the shanties housing entire families, the trash piled in the streets, and also the gorgeous beach and the staff in uniforms who brought us Coca-Cola in glass bottles.'
Punctuation	**Ellipsis**	Used to denote a pause or create suspense	'They reminded me who I was…and who I wasn't.'
Whole Text Level	**Informal letter**	Your address in the top right hand corner; informal or colloquial greeting	'Hi Helen'; topic paragraphs; colloquial sign off e.g. 'Hope to hear from you soon' followed by your first name.
Linguistic term	**Standard and Non-Standard English**	A form or English widely spoken and accepted nationwide, and English that doesn't follow these standard patterns e.g. dialect	'I didn't do anything.' 'I never done nothing.'
Linguistic term	**Neologism**	A newly coined word or expression	'woke', 'pingdemic', 'zoombombing'
Linguistic term	**Portmanteau**	Neologisms that combine two words	Hungry + angry = 'hangry'

Africa & Resource Management

Natural Resource - A product with value that can be extracted from our physical environment.

Colonisation - The action or process of settling among and establishing control over the indigenous people of an areas.
The Slave Trade - The process in which Europeans took West African people to the Americas to trade them for resources.
The Berlin Conference - A meeting of 16 European nations who divided Africa between themselves, not caring about ethnic groups.

Development - The action of growing and improving, creating positive change and progressing.
Gross National Income (GNI) - The value of a country's income, divided by the number of people in that country.
Human Development Index (HDI) - A composite indicator that shows how developed a country is by considering it's wealth, education and life expectancy.
Poverty - Not having enough money to be able to meet basic needs, such as food, water and shelter.

Drought - A period of abnormally dry weather that lasts long enough to lead to a serious lack of water and crop failure.
Desertification - The process by which fertile land becomes desert, typically as a result of drought, deforestation or inappropriate agriculture.
Great Green Wall - A 7,775 km wall of trees that have been installed to try to stop the spread of the Sahara desert further south.

Renewable resource - A resource that has an unlimited source, can be replaced within a human's lifetime and causes no environmental damage.
Non-Renewable resource - A resource that has a limited source, cannot be replaced in a human's lifetime and will cause environmental damage.

Igneous rock - Formed from molten rock from volcanoes and is hard and durable. Examples include granite and basalt.
Sedimentary rock - Formed from compacted material under the sea and contains fossils. Examples include chalk and limestone.
Metamorphic rock - Formed by extreme heat and pressure transforming existing rocks. Examples include marble and slate.

Soil - This is the thin layer on the Earth's surface of minerals, water and organic material that formed from the weathered rock and decaying vegetation.

Atmosphere - The thin, fragile layer of gases that surround the Earth.
Biosphere - All life on Earth, including all plants and animals. life.
Hydrosphere - The water on the surface of the Earth in oceans, rivers, etc.
Lithosphere - The Earth's crust, including landforms, rocks and soils.

Water scarcity - Where more water is needed than is available.
Water surplus - Where more water is available than is needed.

Controversial Geography & The Middle East

Borders - A real or artificial line that separates geographic areas. They outline the area that a particular governing body controls.
Physical border - The first type of border that would have separated tribes via rivers, mountain ranges, oceans etc.
Cultural borders - These separate people based on their ethnicity, religion or language.

Positives of electric cars - They are zero emissions, quiet, cheaper to run, the government provides grants to buy and there are increasing charging stations.
Negatives of electric cars - The cars can take a long time to charge and have a limited range and there are ethical issues with the minerals for the batteries.

Tension - A feeling of fear or anger between two groups of people who do not trust each other.

Fast Fashion - A term to describe a highly profitable business based on copying catwalk trends and high-fashion designs, and mass producing them at a low cost.
Negatives of fast fashion - The goods are often produced in sweatshops meaning that they are low quality and the product of forced or poorly paid labour. It also contributes hugely to landfill as the clothes are thrown away by consumers.

Racism - When a person is treated worse, excluded, disadvantaged, harassed, bullied, humiliated or degraded because of their race or ethnicity.

Location - The Middle East is located where the continents of Europe, Asia and Africa meet.

Physical Features - The main physical features are mountains in the north of the region (Pontic and Taurus ranges) and deserts to the south (Arabian and Rub' Al Khali deserts). There are also 3 major rivers, the Nile, Euphrates and Tigris.

Climate - The conditions in the atmosphere at a given place over a long period of time such as 30 years.
Southern climate - Desert climates with temperatures reaching 52°C in the day. This can create water shortages across the region, especially with demand increasing due to a higher population.
Northern climate - Mediterranean climate with hot dry summers and warm wet winters.

Population density - In the Middle East the highest population density is around the River Nile and the North of the region, focused around Turkey. Less than 1 person lives per square kilometer in most of Saudi Arabia and Oman.

Economy - The Middle East is the world's largest source of fossil fuels with 48% of the world's oil and 43% of the gas. It exports 20 million barrels of oil every day.
Export - To send products to other countries for profit. The Middle East exports oil to Europe, North America, Asia and Oceania which helps them make money.

Living World

What is an ecosystem?

An ecosystem is the **(biotic)** <u>living</u> and **(abiotic)** <u>non-living</u> parts of an environment and the relationships that exist between them.

Biotic	Animals, plants, trees, insects, bacteria, fungi
Abiotic	Soil, rock, water, air, sun

Rainforest climate

Very wet with over 2,000 mm of rainfall per year. Very warm all year round with an average daily temperature of 28°C.

Case Study – Malaysian Rainforest

Causes of deforestation	Impacts of deforestation	Sustainable Management
• **Logging** – the business of cutting down trees to sell for their wood. • **Energy development** – flooding of land to power hydro electric dams. • **Mineral extraction** – gold, tin and drilling for oil.	• Loss of species • Loss of nutrients in soils • Disruption of the food web • Loss of indigenous people's traditional way of life • Pollution of water sources • Loss of medicine • Tourists decrease	Eco-tourism creates jobs for local people. The money is used to protect and conserve the tropical rainforest.

Hot Desert climate

The climate is very **hot**. Day time temperatures can exceed 40°C. At night it can drop below 0°C. The climate is very **dry** with less than 250 mm of rainfall a year.

Desertification - causes	Reducing the risk of desertification
Population growth - the population in some desert areas is increasing. In places where there are developments in mining and tourism, people are attracted by jobs.	**Planting more trees** - the roots of trees hold the soil together and help to reduce soil erosion from wind and rain. (The Sahel desert and Great Green Wall)
Overgrazing - an increasing population results in larger desert areas being farmed. Sheep, cattle and goats are overgrazing the vegetation. This leaves the soil exposed to erosion	**Improving the quality of the soil** - this can be managed by reducing the number of grazing animals.

Case Study – The Thar desert (India)

| Development Opportunities	Challenges of developing hot deserts
•Farming: Using water from irrigation, commercial farming is possible. •Energy: Coal and oil has transformed the local economy. The Thar desert also provides wind and solar power. •Tourism.	•Temperatures reach up to 50°C. •Lack of roads means limited access.
	Adapting to live in the hot deserts
	Irrigation – The Indira Gandhi Canal, provides drinking water for many people in the desert.

Women throughout History

Period	Role of women	Position of women
Prehistoric	Gatherers , Worshiped for fertility , equal, change after agricultural revolution	🙂
Celtic Britain	Men have greater power and status , Strong leaders (Boudicca) , Legals rights , Women important to religion	😐
Roman Britain	No legal rights , beauty celebrated , intelligence seen as dangerous	🙁
Medieval	Legacy of Eve (Women seen as sinful) , Second class citizens , Nuns greatest access to education	🙁
Tudor	Queens (Mary I and Elizabeth I) , limited access to education , No rights to money or property , Widows have a greater level of independence	🙁
Age of enlightenment	Limited access to education for majority of women ,dependent of Husband or male relative for money, Blue stockings challenged these ideals	🙁
Early 20th century	Suffrage movement , Nancy Astor , All women the right to vote (1928)	😐
WWI & WWII	Joined the workforce , nontraditional roles , after war ended expect to return to pre war roles	🙂
Post war Britain	Women's liberation movement , changes in fashion and music , Sexual revolution and the introduction on the Pill	🙂
Present day	More women in education and in the workforce , Growth of Feminism and activism	🙂

USA 1919-1929 and the Cold War

America in the 1920s

40 million immigrated (1850-1919)

Immigration

Cultural revival of African-American music, dance, art

Harlem Renaissance

Was a Land of opportunity

Roaring twenties

Flappers

Credit allowed people to buy new consumer goods

Economic Boom

Mass production

Henry Ford - Model T

Cycle of prosperity

Increase in popularity of the KKK

Xenophobia

Red scare

Position of women

Not seen/treated as equal

Was not a Land of opportunity

Economic Bust

Great Depression after the crash.

Wall Street Crash October 1929

Alcohol banned between 1920-1933

Prohibition and organised crime

Al Capone

Cold War

1940's: Conferences, Truman Doctrine/Marshall plan, Berlin Blockade
Tensions grows over disagreements with Post WWII policies and communist expansion

1960's: Berlin Wall and Cuban Missile crisis
Tension grows over division of Berlin (no free movement between E and W) and potential Nuclear war

1980's: Fall of Berlin Wall/ Gorbachev new thinking
Tension decrease move to modernise Russia and improve relations. Reform movements in Soviet Bloc countries

1950's: Arms Race/ NATO/ Warsaw Pact
Tension grows over competition and threat of nuclear weapons and conflicting alliances

1970's: Detente, 1979, revolution, coups and Afghanistan
Tension seem to decrease and attempt at cooperation. But America and USSR support opposite sides of a number of conflicts (Proxy wars)

Civil Rights

Civil Rights - the rights of citizens to political and social freedom and equality.

Protest - expressing disapproval of or objection to something, can be non-violent/violent.

Segregation - the separation of people into different racial groups.

Slavery 1776-1861
North/South divide

Rosa Parks, Boycott 1955
Segregation on buses, 381 days, MLK support.

MLK/Malcolm X
Non violent direct action versus Black Power.
Style of protest differ.

Life after Slavery
Pros: Freedman Bureau, land to farm. Cons: KKK, Jim Crow Laws.

Little Rock 1957
9 students, Governor v President - education focus.

Post War Britain (1945-1990s)

The 1950s: Cities were bombsites, rations still in force; yet the economy soon boomed. Wages soared, new council estates were built, supermarkets changed shopping habits. TV formed part of daily life, a new teenage culture was developing (rebellion), clothing for women and young men shifted and mass migration diversified Britain (set against Empire decline).

The 1960s: New technology, new city tower blocks, comprehensive schooling and nuclear power! Low unemployment, music of the Rolling Stones and the Beatles set against new food styles e.g. tikka masala and Spag Bol. Fashion changes saw the mini skirt introduced alongside the hippy. Abortion and homosexuality were legalised.

The 1970s: Discontent, strikes and shrinking economy. 91% had a TV, but only 3 channels. Punk and Glam Rock developed, people wore flares and platform shoes - women wore maxi shirts. The Queen celebrated her Silver Jubilee and we joined the early version of the EU - an opportunity for increased trade. (problems in NI)

The 1980s/90s: Thatcher era - clashes with coal miners. Mobile phones and channel 4 launching. American influences and power dressing took hold. In 1997, Blair came to power with New Labour. The Channel tunnel opened and the COE allowed female priests. We rejected joining the Euro, saw the end of Empire with Hong Kong handed over to China and lived through the Spice Girl, game console, DVD, shell suit fame and fun.

REASONING WITH ALGEBRA

Gradient	The steepness of a line	**Solve**	Find a numerical value that satisfies an equation
Intercept	Where two lines cross. The y-intercept: where the line meets the y-axis	**Multiples**	Found by multiplying any number by a positive integers
Parallel	Two lines that never meet with the same gradient	**Factor**	Integers that multiply together to get another number
Co-ordinate	A set of values that show an exact position on a graph	**Prime**	An integer with only 2 factors
Linear graphs	Linear graphs (straight line) - linear common difference by addition/subtraction	**HCF**	Highest common factor - biggest factor two or more numbers share
Asymptote	A straight line that a graph will never meet	**LCM**	Lowest common multiple - the first time the times table of two or more numbers match
Reciprocal	A pair of numbers that multiply together to give 1	**Verify**	The process of making sure a solution is correct
Perpendicular	Two lines that meet at right angles	**Proof**	Logical mathematical arguments used to show the truth of a statement
Inequality	An inequality compares two values showing if one is greater than, less than or equal to another	**Binomial**	A polynomial with two terms
Variable	A quantity that may change within the context of the problem	**Quadratic**	A polynomial with four terms (often simplified to three terms)
Rearrange	Change the order	**Substitute**	Replace a variable with a numerical value
Inverse operation	The operation that reverses the action		

CONSTRUCTING IN 2 AND 3 DIMENSIONS

2D	Two dimensions to the shape e.g. length and width	**Arc**	Part of a curve
3D	Three dimensions to the shape e.g. length, width and height	**Bisector**	A line that divides something into two equal parts
Vertex	A point where two or more line segments meet	**Locus**	A set of points with a common property
Edge	A line on the boundary joining two vertex	**Equidistant**	The same distance
Face	A flat surface on a solid object	**Discorectangle**	(shape of a stadium) a rectangle with semi circles at either end
Cross-section	A view inside a solid shape made by cutting through it	**Perpendicular**	Lines that meet at 90 degrees
Plan	A drawing of something when drawn from above (sometimes birds eye view)	**Protractor**	A piece of equipment used to measure and draw angles
Perspective	A way to give illustration of a 3D shape when drawn on a flat surface		

Circle   Square   Rectangle   Triangle   Rhombus   Trapezium   Parallelogram   Hexagon

Cone   Cylinder   Sphere   Cube   Triangular Prism   Tetrahedron   Cuboid   Square based Pyramid
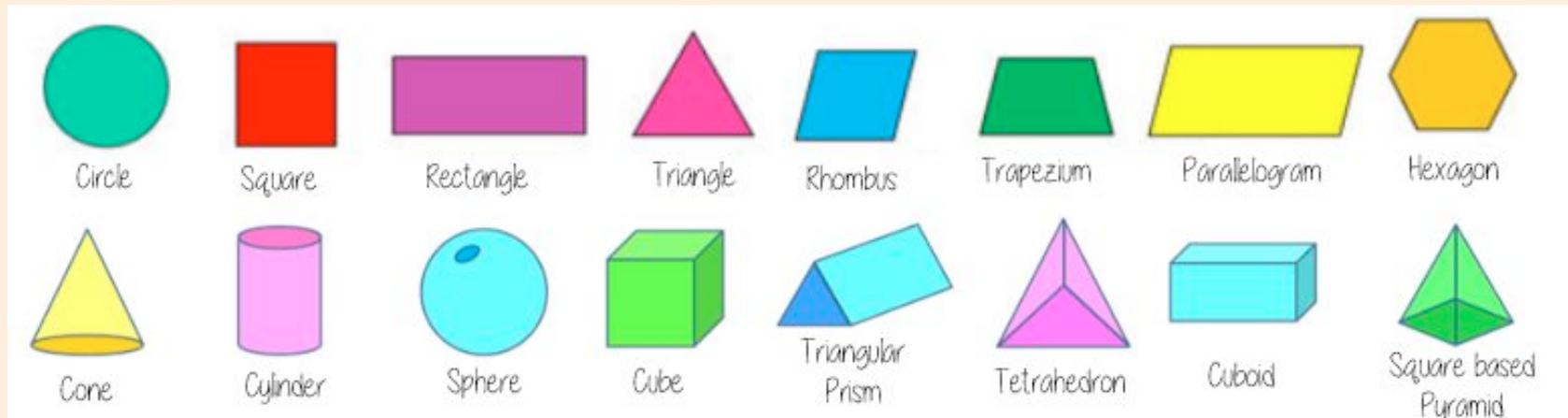
REASONING WITH NUMBERS

Integer	A whole number that is positive or negative or zero	**Growth**	To increase/ to grow
Rational	A number that can be made by dividing two integers	**Invest**	Use money with the goal of it increasing in value over time (usually in a bank)
Irrational	A number that cannot be made by dividing two integers	**Multiplier**	The number you are multiplying by (more than 1 = increasing, less than 1 = decreasing)
Inverse operations	The operation that reverse the action	**Profit**	The income take away after any expenses/costs
Quotient	The result of a division	**Credit**	Money being placed into a bank account
Product	The result of a multiplication	**Debit**	Money that leaves a bank account
Multiples	Found by multiplying any number by positive integers	**Balance**	The amount of money in a bank account
Factor	Integers that multiply together to get another number	**Expense**	A cost or outgoing
Percents	Parts per 100 - written using the % symbol	**Deposit**	An initial payment (often a way of securing an item you will pay for later)
Decimal	A number in our base 10 number system. Numbers to the right of the decimal place are called decimals	**Per annum**	Each year
Fraction	A fraction represents how many parts of a whole you have	**Currency**	The type of money a country uses
Equivalent	Of equal value	**Unitary**	One - the cost of one
Reduce	To make smaller in value		

REASONING WITH GEOMETRY

Parallel	Two straight lines that never meet at the same gradient	Horizontal	From side to side
Perpendicular	Two straight lines that meet at 90 degrees	Vertical	From up and down
Transversal	A line that crosses at least two other lines	Square number	The output of a number multiplied by itself
Sum	The result of adding two or more numbers	Square root	A value that can be multiplied by itself to give a square number
Conjecture	A statement that might be true but it not proven	Hypotenuse	The largest side on a right angled triangle. Always opposite the right angle
Equation	A statement that says two things are equal	Opposite	The side opposite the angle of interest
Polygon	A 2D shape made from straight edges	Adjacent	The side next to the angle of interest
Counterexample	An example that disproves a statement	Invariant	A point that does not move after a transformation
Rotate	A rotation is a circular movement	Vertex	A point where two edges meet
Symmetry	When two or more parts are identical after a transformation	Regular	A regular shape has angles and sides of equal lengths

Alternate angles
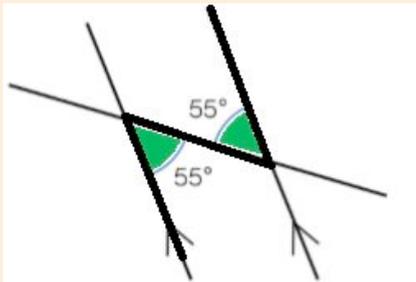
Corresponding angles
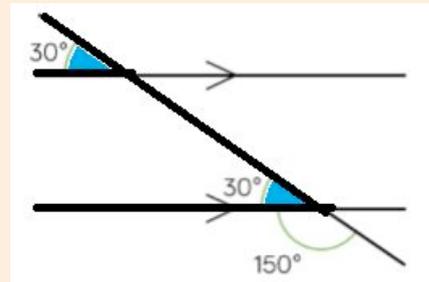
Co-interior angles
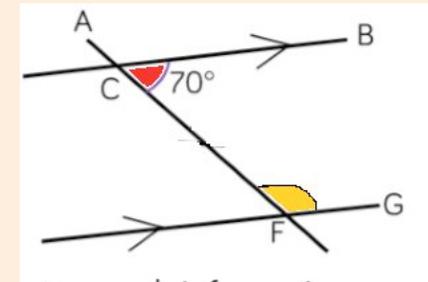
REASONING WITH PROPORTION

Similar shapes	Shapes of different sizes that have corresponding sides in equal proportion and identical corresponding angles	**Substitute**	Putting numbers where letters are - replacing numbers into a formula
Scale factor	The multiple describing how much a shape has been enlarged	**Direct proportion**	As one variable is multiplied by a scale factor, the other variable is multiplied by the same scale factor
Enlarge	To change the size of a shape (enlargement is not always making a shape bigger)	**Inverse proportion**	As one variable is multiplied by a scale factor, the other is divided by the same scale factor
Corresponding	Objects (or sides) that appear in the same place in two similar situations	**Convert**	Change
Image	The picture or visual representation	**Mass**	A measure of how much matter is in an object. Commonly measured by weight
Proportion	A comparison between two numbers	**Origin**	The coordinate (0,0)
Ratio	A ratio shows the relative size of two variables	**Volume**	The amount of 3D space a shape takes up
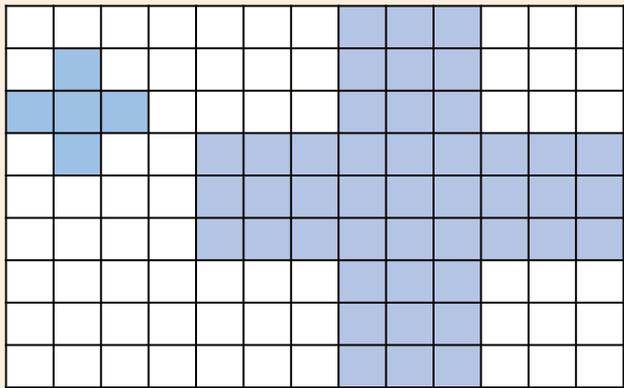
$$speed = \frac{distance}{time}$$

$$density = \frac{mass}{volume}$$

$$time = \frac{distance}{speed}$$

$$volume = \frac{mass}{density}$$

$$distance = speed \times time$$

$$mass = volume \times density$$

REPRESENTATIONS

Probability	The chance that something will happen	Quadratic	A curved graph with the highest power being 2 - square power
Relative frequency	How often something happens divided by the outcomes	Inequality	Makes a non equal comparison between two numbers
Independent	An event that is not affected by any other event	Reciprocal	A reciprocal is 1 divided by the number
Chance	The likelihood of a particular outcome	Cubic	A curved graph with the highest power being 3 - cube power
Event	The outcome of a probability - a set of possible outcomes	Origin	The coordinate (0,0)
Biased	A built in error that makes all the values wrong	Parabola	A 'u' shaped curve that has mirror symmetry

$y = x^2 + 4x + 3$
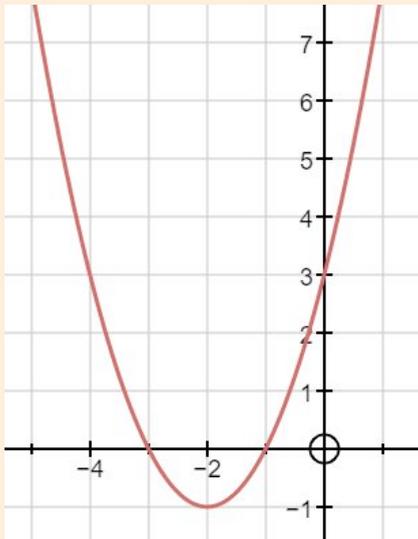
$y = x^3 + 2x^2 - 2x + 1$
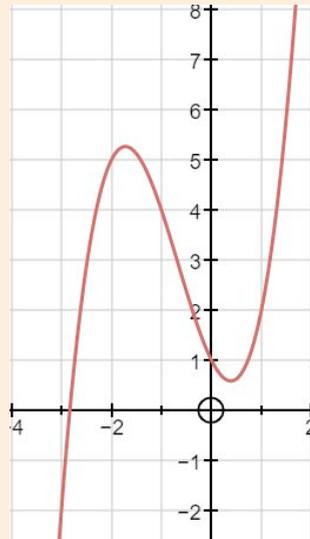
$y = \dfrac{1}{x}$
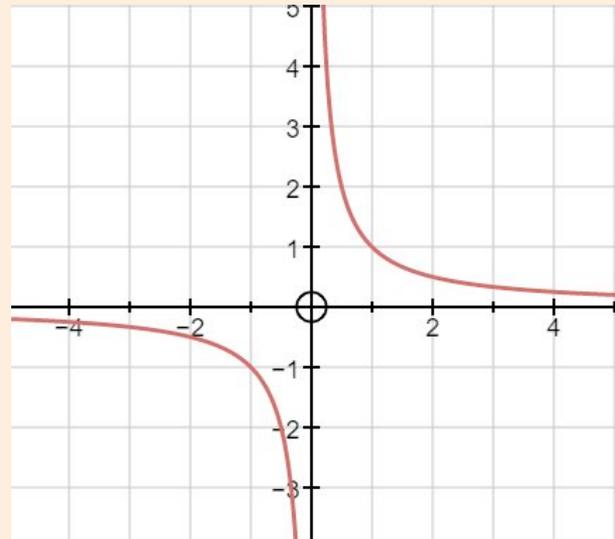
$y = 2^x$
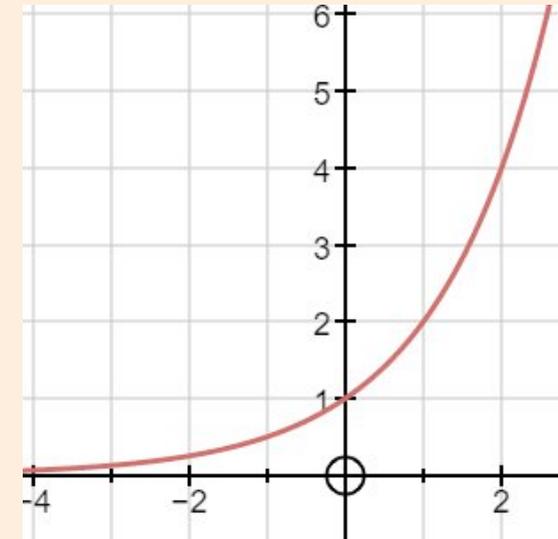
TECHNICAL AND SYMBOLIC CODES

TYPOGRAPHY

SERIF SANS SERIF SCRIPT

Formal.
Fancy.
Traditional.
Printed.

Informal.
Casual.
Modern.
Screen.

Personal.
Handwritten.
Unique.

I am serif. **I am sans.**

KEY TERMS

MODE OF ADDRESS is the way in which the text or images engages the audience.

DIRECT is speaking directly to the audience or the image is looking directly at the audience.
INDIRECT is when text and images are passive and not personal.

COLOUR THEORY

ANALOGOUS are three colours that would be next to each other on the colour wheel.
COMPLIMENTARY are two colours opposite to each other on the colour wheel
HUE is another word for colour.
SATURATION is the intensity of the colour or hue.

Examples
BLUE authority, trust, science.   **GREEN** nature, calm, environment.
RED power, passion, courage.   **YELLOW** optimism, youth, fresh.
BLACK mystery, sophisticated. **WHITE** purity, clean, innocent.

Analogous   Complementary
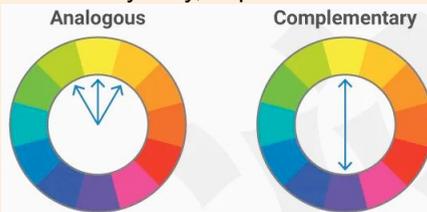
TECHNICAL CODES

CAMERA

EDITING

LIGHTING

SOUND

SPECIAL EFFECTS

SYMBOLIC CODES

ACTING

SETTING

MISE EN SCENE

COLOUR

VISUAL COMPOSITION

Extreme Wide Shot   Wide Shot   Medium Shot

Medium Close up   Close up   Extreme Close up

Bird's-eye view

High angle

Eye level

Low angle

Worm's-eye view
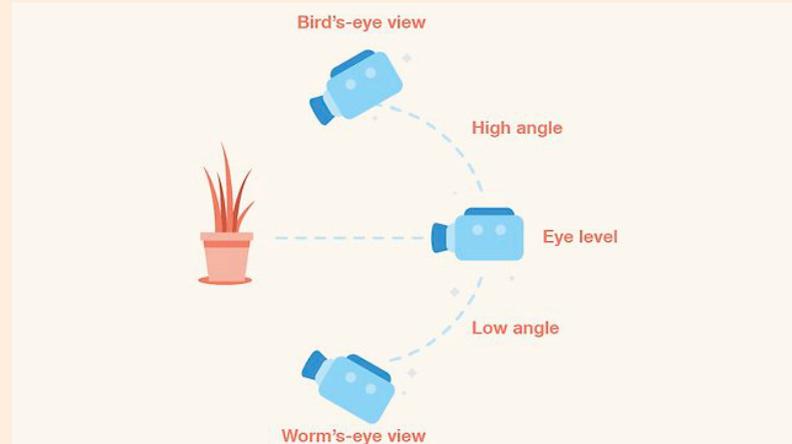
SOUNDWORK VOCABULARY	
DIEGETIC	Sound you can see the source of or it is implied e.g. police siren
NON DIEGETIC	Sound you cannot see and is not implied e.g. narrator
INCIDENTAL MUSIC	Music that emphasises an action or event
THEME MUSIC	Music that reinforces a brand identity
AMBIENT SOUND	Naturally occurring sounds in the environment e.g. plates clattering in cafe

CORE MEDIA THEORIES

GENRE	A category of media product
HYBRID	A combination of genres e.g. romantic comedy
SUB GENRE	A genre with a sub category e.g. action -> superhero
CONVENTIONS	Typical things that reoccur within similar genre, like a template

DENOTATION	What you can literally see or hear e.g chicken (animal)
CONNOTATION	The implied meaning e.g. chicken (someone who is afraid)
STEREOTYPE	Characterising groups under labels
SEMIOTICS	The study of signs and symbols
REPRESENTATION	The understanding that everything in the media is constructed/designed. Information is **selected**, **omitted** and new meanings are **constructed**

SELECTION

OMISSION

CONSTRUCTION
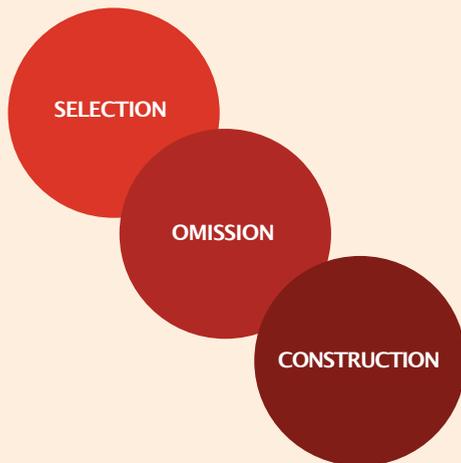
TARGET AUDIENCE
(must be specific)

- **Age Range** (e.g. 18-24)
- **Social Class** (see below).
- **Gender** (e.g. one, both).
- **Psychometrics** (e.g. Explorer).

SOCIAL CLASSES

A	UPPER MIDDLE CLASS	Top level executives, celebrities, heirs, politicians.
B	MIDDLE CLASS	Highly educated, professionals, management roles
C1	LOWER MIDDLE CLASS	Semi-professionals with an average standard of living, good level of education
C2	SKILLED WORKING CLASS	Skilled manual jobs, average standard of living, some higher education
D	WORKING CLASS	Low job security, casual work
E	CASUAL/LOW GRADE WORKERS	Rely on government support, occupy poorly-paid jobs

PSYCHOMETRICS

MAINSTREAMERS	Seek security. Tend to be domestic, conformist, conventional. Favour value for money brands. The largest group.
ASPIRERS	Seek status. Materialistic, oriented to image and appearance, persona and fashion. Typically younger people.
SUCCEEDERS	Seek control. Strong goals, confidence, work ethic and organisation. Typically higher management and professionals.
RESIGNED	Seeks survival. Rigid beliefs. interested in past and tradition. Typically older people.
EXPLORERS	Seeks discovery. Energy, individualism, and experience. Values difference and adventure. Typically a younger demographic (students)
STRUGGLERS	Seeks escape. Disorganised, few resources. Buys lottery tickets. Typically lower demographics.
REFORMERS	Seeks enlightenment. Freedom from restrictions and personal growth. Social awareness and independent judgement. Anti-materialistic but aware of good taste.

POWER OF MEDIA

LEFT — SOCIALISM / RIGHT — CAPITALISM

COLLECTIVISM
The idea of the population **working together for the common good.**

INDIVIDUALISM
The idea that **each person rises or falls on their own merits** alone.

DIVISION OF WEALTH
The idea that all benefits from land development or material goods produced are **divided equally among the population to ensure no poverty** e.g.
Public Health,
Public Ownership of utilities
Public Education

RETENTION OF WEALTH
The idea that the land, and anything within it or upon it, and all the means of productions)like factories), **belong entirely to their owners** e.g.
Private health,
Private ownership of utilities
Private Schools

CLASS DIVISION
The ideal that **all people should be equal.** No working class, no middle class, no rulers.

CLASS RETENTION
The idea that there should be a **ruling class who make the decisions**, and a **working class who do the work.**

LANGUAGE USED IN THE NEWS

SENSATIONALISM	Controversial, provocative, attention-grabbing. Engages the audience but isn't always factual. Can be considered biased. Stories may be manipulated. May offend people.
PUNS	Play on words to create a humorous impact. Catches attention. People might discuss/share it.
ALLITERATION	Repeating the same sound at the beginning of two or more words. To attract the audience..
HYPERBOLE	Over exaggerated. Blown out of proportion. To attract attention.
PERSONALISATION	Typically used with celebrities. Uses their first or last names in the headline. Creates a sense of personal involvement.

IDEOLOGY — A system of ideas and ideals, especially one which forms the basis of economic or political theory and policy.

AUDIENCE THEORIES

HYPODERMIC NEEDLE MODEL	Audience receive and accept messages **without challenge**.
TWO STEP FLOW	People form opinions influenced by **opinion leaders**, who in turn are influenced by mass media.
USES & GRATIFICATION	Audience consumes media products to fulfill one of four needs; **Diversion** (escape from reality), **Personal Relationships** (create emotional interactions), **Personal Identity** (reflecting yourself in media), **Surveillance** (Information useful in life)
RECEPTION THEORY	Producer's **encode** meaning and audience **decode** meanings.

ANARCHISM   COMMUNISM   SOCIALISM   LIBERALISM   CONSERVATISM   AUTOCRACY   FACISM

LEFT WING   **RIGHT WING**

HOW TO SPOT FAKE NEWS

CONSIDER THE SOURCE
Click away from the story to investigate the site, its mission and its contact info.

READ BEYOND
Headlines can be outrageous in an effort to get clicks. What's the whole story?

CHECK THE AUTHOR
Do a quick search on the author. Are they credible? Are they real?

SUPPORTING SOURCES?
Click on those links. Determine if the info given actually supports the story.

CHECK THE DATE
Reposting old news stories doesn't mean they're relevant to current events.

IS IT A JOKE?
If it is too outlandish, it might be satire. Research the site and author to be sure.

CHECK YOUR BIASES
Consider if your own beliefs could affect your judgement.

ASK THE EXPERTS
Ask a librarian, or consult a fact-checking site.

Using verbs, talking about gender & the future

Être (the long form) - to be, being
Je suis- I am **tu es** - you are
Il est - he is   **elle est** - she is
Nous sommes- we are
Vous êtes - you (all) are
Ils sont - they are (masc)
Elles sont - they are (fem)

C'est - it is (also he is /she is with a job)

French long form verbs ending in ER
Je - take off ER and add **e**

Tu (means you) - take off ER and add **es**

Il (means he) take off ER and add

Elle (means she) take off ER and add **e**

Nous (means we) take off ER add **ons**

Vous (means you all) take off ER add **ez**

Ils (means they,m) take off ER add **ent**

Elles (they,f) take off ER add **ent**

Useful adjectives and nouns to use with être
chanteur/chanteuse - singer (m/f)
bon/bonne - good (m/f)
Femme - woman   fille - girl timide-shy
Homme- man
modern(e) - modern   mauvais(e) - bad
travailleur/travailleuse - hard working
français(e) - French   amusant(e) - funny
ouvert(e) - open
Beau/belle - beautiful (m/f)
**You can add pas in front of adjectives to
mean 'not…'** Eg: pas timide - not shy

Useful verbs   aller - to go   voyager- to travel
Aimer- to like acheter- to buy   marcher - to walk
Travailler - to work chercher - to look for
Traverser - to cross regarder- to watch
Manger - to eat   utiliser - to use   visiter- to visit
Trouver - to find porter - to wear/ to carry
Étudier - to study emporter - to carry
Emprunter - to borrow   partager - to share

Reminder of subject pronouns
Je- I   tu - you   il - he   elle - she Nous - we   vous
- you all   ils- they (m) Elles - they (f)

Making negatives

Ne---- pas go around the verb
Eg: Je suis - I am
       Je **ne** suis **pas** - I am not
       Elle est - she is
       Elle **n'est pas** - she is not

Sans - without   **pour**- for

Question words   qui - who/which
Où- where   quand- when   quoi - what
Comment - how
Est-ce que - changes any statement into
a question when added at start.

Talking about the future Verb **aller** (to
go/going)   **Je vais** - I go/ I am going
tu vas - you go/you're going
Il va- he goes/ he's going
elle va - she goes/she's going
nous allons -we go/we're going
Ils vont- they're going (m)
Elles vont - they're going (f)

Using adverbs, modal verbs and talking about intentions

Remember: adverbs give information about how a verb is done.

In French **many** adverbs end in **-ment**
Normalement - normally
Heureusement - happily
Rarement - rarely
Absolument - absolutely
Lentement- slowly
Facilement -easily
Joyeusement - joyfully

Adverbs which do not end in -ment:
Vite - quick/quickly
seul(e) - alone   tout(e) - all
Souvent - often mal - badly
parfois- sometimes
Maintenant - now tôt- soon
Bien - well   plus - more
Dur - hard

Modal verbs (give more information about another verb)

Devoir-to have to /must
Je dois - I have to/ must
Tu dois- you have to / must
Il/elle/on doit - he/she/one has to/must

Vouloir - to eant
Je veux- I want   tu veux - you want
il/elle/on veut - he/she/one wants

Pouvoir - to be able /can
Je peux - I'm able/can
Tu peux - you're able/can
il/elle/on peut - he/she/one is able/can

Savoir -to know
Je sais - I know   tu sais - you know
il/elle/on sait - he/she/one knows

To use modal verbs:
Use the subject pronoun+ modal verb + second verb in the long form
Eg: je veux manger - I want to eat

Time expressions and sentence starters

À l'avenir - in the future
Il y a - there is (can also mean ago)
Pour + long form of verb - in order to…

Question words
qui - who/which   Où- where   quand- when
quoi - what   Comment - how   Pourquoi - why

Est-ce que - changes any statement into a question when added at start. Can be used **after** other question words.
C'est mardi - it's Tuesday
Est-ce que c'est mardi - is it Tuesday?

Tu manges dans un restaurant - you eat in a restaurant
Où est-ce-que tu manges- where do you eat?

Tu es content - you are happy
Pourquoi est-ce que tu es content- why are you happy?

What you are doing today vs what you did yesterday

Perfect tense
A common past tense in French is called the perfect tense. This is for a single action in the past. Perfect tense phrases are often longer and have more parts than a present tense sentence.

Faire - to do /make
Eg: je fais - I domake
J'ai fait - I did/made

Tu as fait- you did made
Il a fait - he did/made
Elle a fait - she did/made
Nous avons fait - we did/made
Vous avez fait - you all did/made
Ils ont fait - they did/made (m)
Elles ont fait - they did/made (f)

Dire - to say
Eg: je dis- I say
J'ai dit - I said

To say 'said' for other people replace the fait in the list above with dit.

Eg: nous avons dit- we said

ER verbs (long form verbs ending in ER) **in the perfect tense**

Subject pronoun + auxiliary verb + past participle (remove **er** add é)
Eg: penser - to think

J'ai pensé -I thought
Tu as pensé -you thought
Elle a pensé - she thought
Il ai pensé -he thought
Nous avons pensé - we thought
Vous avez pensé- you all thought
Ils ont pensé - they thought (m)
Elles ont pensé - they thought (f)

These verbs work in the same way (with é at end in perfect tense)
Chanter- to sing   regarder- to watch   demander - to ask
Travailler - to work préparer - to prepare gagner- to win/to earn
Habiter - to live   frapper - to hit   utiliser - to use   étudier - to study
Manger - to eat   envoyer - to send   voyager - to travel
Jouer - to play   donner - to give   écouter - to listen
Parler - to talk   chercher - to look for   montrer - to show

Verb with a different auxiliary verb
Some verbs have a different auxiliary verb in the perfect tense.
Aller - to go   je suis allé - I went   je suis resté - I stayed

Past time expressions

Hier - yesterday
La semaine dernière - last week
L'année dernière- last year

Le week-end dernier- last weekend

Opinions in the past tense

C'était - it was
Ce n'était pas - it wasn't

J'étais - I was
Je n'étais pas - I wasn't

Marrant(e) - fun
Cher/chère - expensive
Lent(e) - slow
Palpitant - thrilling
Nul - rubbish

Describing family and saying what people do

Verb TENER (to have, having)

Tengo I have **tienes** you have **tiene** - he/she/it has
Tenemos - we have **tienen** - they have

Use with TENER:
El perro - the/a dog
la abuela - the grandmother
El abuelo - the grandfather
El primo - the male cousin
la prima - the female cousin

Verb PODER (to be able/can)
Puedo - I can/I'm able
Puedes - you can / you're able to
Puede - he/she can / he/she is able to

Verb DEBER (to have to/must)
Debo - I have to/I must
Debes - you have to /must
Debe - he/she has to/must

Adjectives (usually follow noun)
hermosa/o - pretty   activo/a - active
Verde - green amarillo/a - yellow
Azul - blue   rojo/a- red

Saying what people DO
Hacer - to do/to make   **hago -** I do/make **Haces** - you do/make   **hace-** he/she/it does/makes

Use with forms of HACER: la actividad - the activity   el deporte - sport
El dibujo - drawing   los deberes - homework
Cuándo - when   para - for   la noche - night   la mañana- morning
La tarde - afternoon/evening   por la tarde - in the afternoon/evening

Use with forms of PODER & DEBER
 cambiar - to change   jugar - to play   lavar - to wash   limpiar - to clean
Participar- to participate   pedir - to ask for   preguntar - to ask (question)
el compañero - the classmate (m)   la compañera- the classmate (f)
El / un favor - the/a favour   el material - the material   algo - something
El coche - the car   la ropa - the clothes   el suelo - the floor   si- if
Otro - another   aunque - although
Eg: Puedo pedir papel - I can ask for paper   debe preparar la comida - He/she must prepare the food

AR verbs (verbs ENDING in AR)

To mean 'I' with a verb- change ending to **'o'**

To mean he/she/it with a verb- change ending to **'a'**
Escuchar - to listen
Escucho - I listen
Escucha - he/she/it listens

Question words:
¿Dónde? - where?
¿Qué? - what? / which?
¿Cómo? - how?
¿Cuánto? - how much?
¿Cuántos/as? - how many?
¿Quién(es)?- who?
¿Cuál(es)? - which one?

Talking about LOCATION
Debajo de - under delante de- in front of   Detrás de - behind
fuera de - outside of   El este - the east   el oeste- the west

Talking about now and the future

AR verbs (verbs ENDING in AR)

To mean 'I' with a verb- change ending to **'o'**

To mean he/she/it with a verb- change ending to **'a'**

Escuchar - to listen
Escucho - I listen
Escuchas - you listen
Escucha - he/she/it listens

Cantar - to sing
Canto - I sing
Cantas - you sing
Canta - he /she /it sings

The verbs below work in a similar way:
Hablar - to talk   llegar - to arrive
Comprar - to buy   bailar - to dance
Necesitar- to need   llevar - to wear
usar - to use   caminar - to walk
Estudiar -to study

The future tense- the verb IR (to go, going)
Voy - I go   *Voy a - I'm going*
Vas - you go   *Vas a - you're going*
Va- he/she/it goes
Va a - he /she/it's going
Vamos - we go
Vamos a - we're going
Vaís- you all go
Vaís a - you're all going
Van - they go
Van a - they're going

The future tense- the verb QUERER - to want
Quiero - I want   Quieres- you want
Quiere - he/she/it wants
Queremos- we want
Queréis - you all want
Quieren - they want

SSC reminder (phonics)
Qu- sounds like 'keh'
O - oh
V- sounds like a B

To talk about the future, and say what is GOING to happen, use the *italic phrases* **on the left with one of the** LONG FORM verbs
at the bottom of the red box.

For example:

Voy a caminar - I'm going to walk
Van a hablar - they're going to talk
Vamos a comprar - we're going to buy
Va a cantar - he/she's going to sing

To say what you WANT to happen use one of the phrases in the yellow box on the left and one of the LONG FORM verbs from the bottom of the red box.

For example:

Quiero estudiar - I want to study
Quiere bailar - He/she wants to dance
Quieren llevar - they want to wear
Quieres llegar - you want to arrive

Talking about the past

The past tense that describes single completed actions is called the PRETERITE TENSE in Spanish.
AR verbs (verbs ENDING in AR)

Cantar - to sing (remove the AR)

Canté - I sang
Cantaste - you sang
Cantó - he/she/it sang
Cantamos - we sang
Cantasteis - you all sang
Cantaron - they sang

The verbs at the bottom of the red box on term 2 also share the same endings.

IR and ER verbs (verbs ENDING in IR and ER)

Describir - to describe (remove last 2 letter)

Describí - I described
Describiste - you described
Describió - he/she/it described
Describimos - we described
Describisteis - you all described
Describieron - we described

The verb HABER to do,doing or making
Hago - I do/make
haces - you do/make
Hace - he/she/it does/makes
Hacemos - we do/make
Hacen - they do/make

Other ir & er verbs:
Permitir - to let/allow
Cubrir - to cover
Decir - to say
Salir - to go out
Perder - to lose

Use these nouns with forms of the verb hacer
Ruido - noise
Esfuerzo - effort
(un) Viaje - (a) journey
Gesto - gesture

Subject pronoun
In English subject pronouns are always used, for example I, he, you, she etc.

In Spanish subject pronouns are rarely used. Instead you can tell the subject by looking at the end of the verb
Yo - I   tú - you   él- he ella- she
Nosotros - we
  ellos/ellas - they (masc or mixed and feminine)

Quick reminder about nouns
Nouns which have 'ty' at the end in English will often end in **dad** in Spanish.
Realidad- reality   sociedad- society
Universidad- university

Verb PODER (to be able/can)
Puedo - I can/I'm able
Puedes - you can / you're able to
Puede - he/she can / he/she is able to

Verb DEBER (to have to/must)
Debo - I have to/I must
Debes - you have to /must
Debe - he/she has to/must

Compositional Devices and Musical elements

Instrumentation

Brass: trumpet, tuba, trombone, french horn
Woodwind: flute, clarinet, saxophone, bassoon, bass clarinet, piccolo, oboe
Strings: violin, viola, cello, double bass, harp
Percussion: drums, tambourine, xylophone, glockenspiel, piano,
Technology - turntable, synthesiser

Instrument techniques
Strings: plucking (pizzicato), arco (playing with a bow), strumming, slap bass
Percussion: drum rolls, shaking, plucking, scraping, striking
Woodwind: pitch bend, flutter tongue, double tonguing
Brass: playing with a mute, hand slide, double tonguing,
Vocals: vibrato, scat singing, pitch bend,

Ensemble types:
Duet - 2 performers
Trio - 3 performers
Quartet - 4 performers
Band - lead guitar, rhythm guitar, bass guitar, drums, vocalist
Jazz band - rhythm section (drums, piano, guitar etc) and melodic section (brass, vocals, saxophone)

Timbre: the sound/tone of an instrument

Electronic sound effects
Reverb: electronically produced echo effect
Phaser: electronic sound processor used to filter a signal by creating peaks and troughs in the frequency
Delay: time based audio effect creating a repetition of the original
Distortion: modifying the original sound and altering the quality

Texture

Solo: 1 performer
Homophonic: same rhythm, different pitches (harmony)
Monophonic: 1 part/all doing the same thing
Polyphonic: playing different pitches and rhythms together
Unison: everyone doing the same thing at the same time

C D E F G A B C D E F G A B
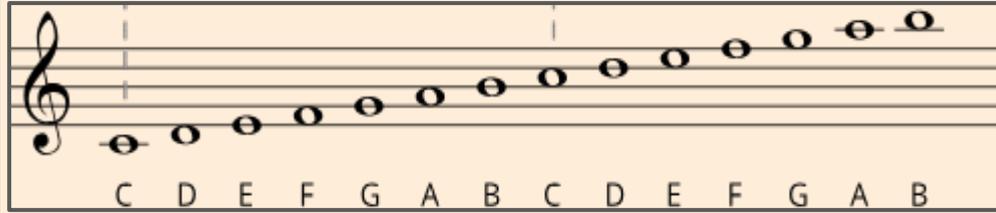
Structure/Form

Strophic form: song structure - e.g. verse, chorus etc.
12 bar blues: chord pattern of I I I I, IV IV I I, V IV I I
Through-composed: all verses have a different melody
ABACADA: returning to the original section each time
AB: Binary form - 2 contrasting sections
ABA: Ternary form - 3 sections, repeat of section A
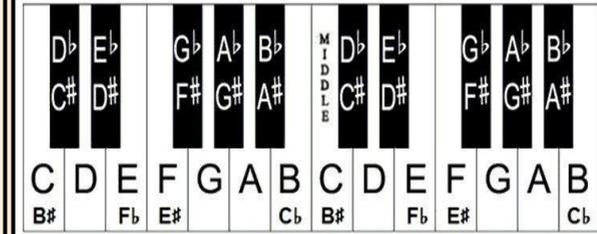
Melody - main tune in a piece of music

Tonality - key of the music
Major: happy/cheerful/positive feel
Minor: sad/sinister/dark feel
Atonal: no sense of key

Scales
Semitone (S): closest distance between two notes C-C# or E-F
Tone (T): 2 semitones e.g. C-D or E-F#
Major scale: 8 notes in the pattern of T T S T T T S
E.g. C D E F G A B C
Minor scale: 8 notes in the pattern of T S T T S T½ S
E.g. A B C D E F G# A
C major blues scales: C Eb F Gb G Bb C
Pentatonic scale: 5 notes in the pattern of 1st 2nd 3rd 5th 6th

Melodic techniques
Conjunct: melody that moves stepwise (notes close to one another)
Disjunct: melody that moves in leaps (notes not next to each other)
Chromatic: music created with notes outside the key of the music
Diatonic: music created using the notes from the key of the music
Repetition: using the idea again
Ostinato: continuously repeated pattern of notes
Sequence: same thing repeated at a higher/lower pitch
Ornamentation: decorations to a melody, e.g. trill
Motif: a short musical idea on which a piece can be built
Riff: repeated pattern that forms the basis for a piece
Hook: catchy and memorable part of a song
Improvisation: making the music up as you go along

Rhythmic techniques

Metre: how many beats in a bar
BPM: Speed - beats per minute
Syncopation: emphasis on the off beat in a bar
Polyrhythms: different rhythms playing together
Hemiolas: playing 3 beats in the time of 2
Rhythmic displacement: repeating an idea, but putting emphasis on different beats each time

Harmony
Major triad: 3 notes of a major chord (Root + 4st + 3st)
Minor triad: 3 notes of a minor chord (Root + 3st + 4st)
Power chord: 2 note chord (root and 5th)
7th chord: triad + 7th note of the scale
Broken chords: notes of the chords play separately
Arpeggios: 1st, 3rd, 5th, octave

Musical Styles

1940's - Jazz
Instruments: Trumpet, Saxophone, Double Bass, Piano, Drums

BPM: 120 - 130

Features: Improvisation, Call and Response, syncopation, swing and creative freedom

Influences: Ragtime & Blues

Influential Artists: Duke Ellington, Ella James

1950's - Rock & Roll
Instruments: Electric guitar, bass, drums, vocals

BPM: 160+

Features: Verse and chorus structure, 4/4 beat

Influences: Jazz, Blues & Gospel

Influential Artists: Elvis Presley, Little Richard, Chuck Berry

1960's - Psychedelia
Instruments: Mellotron, Sitar, Harpsichord

BPM: 55 - 80

Features: Experimental record techniques, long hypnotic melodies, absurdist lyrics

Influences: Folk, Jazz and Blues

Influential Artists: The Beatles, Jimi Hendrix Experience

1970's - Disco
Instruments: brass, electric piano, synthesizers, and electric rhythm guitars

BPM: 110 - 135

Features: Syncopation, Four on the floor beats, falsetto vocal lines

Influences: funk, psychedelic soul, pop

Influential Artists: The Bee Gees, ABBA, Gloria Gaynor

2000's - EDM
Instruments: bass drum, turntables, sampler, keyboards, guitar, synthesizers, keyboard

BPM: 115 (House) - 140 (Dubstep)

Features: deliberately inorganic sounds and timbres, rhythmic pulse, and high and steady tempo, building to a drop

Influences: Disco, Funk and Soul

Influential Artists: Daft Punk, Avicii

1990's - Britpop
Instruments: Acoustic guitar, piano, drums, bass, vocals

BPM: 100 - 120

Features: distorted guitars, a lack of lead guitar , simple vocal lines, lyrics about everyday life.

Influences: Alternative rock, British Invasion

Influential Artists: Oasis, Blur, Suede & Pulp

1980's - New Wave
Instruments: Electric guitar, bass guitar, drums, synthesizers, vocals, cowbell

BPM: 110 - 145

Features: electronic sounds, distinctive visual style, hoppy rhythm guitars, fast tempos keyboards, stop-start song structures

Influences: Glam Rock, Disco, Pop

Influential Artists: Talking Heads, A-HA

1980's - Rock
Instruments: lead guitar, rhythm guitar, bass guitar, and drums

BPM: 90 - 120

Features: guitar-led, with a fairly simple chord progression, Overdriven guitars, Personal lyrical content

Influences: Rhythm and blues, rock and roll

Influential Artists: AC-DC, Guns & Roses, Aerosmith

Genre: a style or category of art, music, or literature
Trend: what is popular at a certain point in time
Influence: to affect or change someone or something in an indirect but usually important way
Tonality: whether music sounds happy or sad
Structure: how a piece of music is arranged

Music and the Media

Considerations when creating a music product
Tonality - what is the product meant to make the listener think? Should it be happy (major) or sad (minor)?
Instrumentation - which instruments create the right mood/emotion for the product?
Melody - is the melody memorable to make the listener think about the product once they're finished hearing it?

Musical Products
Film Music - music that accompanies scenes in films. It's important to consider the genre of the film and what emotion the scene is trying to portray.
Adverts - music to accompany showcasing of a product or service. A catchy melody can be useful as it ensure that the product sticks in the audiences head.
Video Games - music to go along with the gameplay of a computer game. Ostinato is often used in this to link the music to a specific level. Increasing tempo while increasing danger or difficulty is also a good technique

Considerations when reviewing a live performance
The Performance of the Band or Artist
This means how well the band performed - the quality of music (the pitch, tempo, dynamics and overall appeal of the music)
The Visual and Audio Elements of the Show
This means how well the tech creates an interesting show to accompany the music
The Crowd Reaction and Engagement
How the artist or band interacts and engages the audience within their performance and how much the audience gets involved in the performance.

Considerations when reviewing a piece of recorded music
Musical Makeup (Instruments used, tempo/dynamics/pitch, vocals)
What is the music about?
Is it similar to music they've released previously?
What are the best bits / What are the worst bits?
What is unique or different about this piece?

Key Terms:
Motif - a small collection of notes that captures the essence or idea of the piece
Leitmotif - short, recurring musical phrase" associated with a particular person, place, or idea
Thematic Development
Layering - Adding a new part on each repetition evenly
Augmentation - Lengthening the value of a note (doubling)
Diminution - Shortening the value of a note (halving)
Ostinato - Continuously repeated pattern of notes
Metamorphosis - changing one note of the melody each time
Sequence - Same thing repeated at a higher or lower pitch
Imitation - One part copying another
Pedal Note - A long held low pitched note
Inversion - Repeating the pattern using opposite intervals, e.g. if originally your first two notes went up by 3 notes, when inverting you would go down by 3 notes
Retrograde - A pattern of notes played in backwards
Phasing - having a slightly longer and shorter version of the same melody repeating until they are back in sync with one another.

Careers in the Music Industry:
Performer: Sing, play instruments or record their own music this can be as part of a band or a solo act
Composer: Write music for TV, film or live performance. Composers will often work alone and be hired by media companies to create music for their film/tv show or advertisement.
Songwriter: Create music and lyrics for other artists to record. They can sometimes work with composers to create full tracks together.
Music Therapist: use music to help their clients achieve therapeutic goals
Producer: Mix, edit and lead the creative and technical aspects of recordings. They are in charge of the recording studio and edit the recordings to make the song sound polished and fully formed.
Session Musician: expert studio players who are hired on a short-term basis to record backing tracks for recording artists
DJ: play a mix of preexisting music to a live crowd or on a radio station
Music Teacher: teach students how to understand, create and perform music
Peripatetic Teacher: teach one specific instrument to a high standard
Talent Relations: Engage with musicians to get the to perform at your event or for your cause/employer
Sound Engineer: assembling, operating and maintaining the technical equipment used to record, amplify, enhance, mix or reproduce sound
Event Manager: plan and organise live music events e.g. gigs & festivals
Publicist: promote and market a band or artist
Music Journalist: write for media about new releases or live performances, this can be in a blog or social media post, a magazine or in formal print media.

Health And Wellbeing

Definitions
Fitness – The body's ability to function <u>efficiently</u> and <u>effectively,</u> to meet the demands of the environment. **Positive well-being** – Positive, mental state of being <u>positive</u> and <u>happy</u>. **Sedentary** – Inactive, Spending a large proportion of the day <u>sitting down</u> or <u>not exercising</u>

Rules/regulations	
Netball	1. **Over the third –** The ball cannot be thrown over a complete third of a court without being touched or caught play a player. 2. **Replaying the ball –** Once the ball has been fully controlled, a player cannot regain possession of the ball.
Football	1. I**ndirect free kick** - Is awarded for less serious infringements such as offsides, back pass picked up by the goalkeeper and dissent. 2. **Direct free kick** - Is awarded for serious infringements such as fouls, violent conduct and handball
Rugby	1. **Offside -** If the defending team is not 10M back from the player playing the ball 2. **Penalty** - A penalty is given for a number of different offences such as a dangerous play, high tackle, offside.

Sporting contexts	
<u>Key term</u>	<u>Definition</u>
Crossing the ball	Using a lofted pass from the **side of a football pitch** with the aim to get the ball into the 18 yard box
Dribbling skill	Performing a kill while dribbling the ball to outwit an opponent - **step over/ turn/ spin**
Sidestep	**Changing direction quickly** when running with the ball in rugby,
Dummy	**Intending to pass the ball** one way to **deceive** the defensive team and not passing at all
Net shot	A shot played that lands **close to the opponents net** when competing in a rally
Disguise of shot	**Intending to play one shot** and then playing **another shot** that goes to a different area of the court
Defending the D	As a defending team, organising a **structured line** around the outside of the area you are defending which is a **D shape**
Overarm pass	Arm movement **above the shoulder**, this is used for passing the ball over **longer distances**
Back spin	Placing a **backwards spinning motion** on the ball to **increase the probability of success** when shooting

Types Of Training

Flexibility training	Balance training	Resistance training
Steady state, low moderate intensity exercise for a prolonged period of time. ● **Practical example-** Yoga positions, general stretching of muscles groups ● **Sports -** Gymnast, dancer, diver. ● **Fitness benefits –** Improves range of movement at muscles and joints	**A series of exercises that strengthen key muscles to allow an athlete to stay upright - this is usually the muscles found in your legs and abdominals.** ● **Practical example** – Single leg balance, balance boards, single leg lunges ● **Sports -** Gymnasts, triple jumper, dancer ● **Fitness benefits -** Improves balance and core strength	**Series of exercises organised in to sets of repetitions** **Use of free weights or machine weights.** ● **Practical example –** Bicep curls, bench press, shoulder press ● **Sports -** Rugby players, Weight lifter, shot putter, discus thrower ● **Fitness benefits –** Increases strength, power and muscular endurance.

Sporting contexts			
Key term	**Definition**	**Key Term**	**Definition**
Incline Changes	This is when the **terrain changes**. For example from **flat** terrain to **hilly** terrain.	*Standing Long Jump*	A fitness test used to **measure power**. The performer will stand behind line and **jump as far forward as possible** landing on two feet. The measurement is taking from the line to the back of the performers feet.
Balance	This is an individual's ability to **maintain** their line of **gravity** within their **base of support**	*Standing vertical Jump*	This is another fitness test to **measure power**. The performer will **stand sideways** next to a wall. They will **extend their arm** above their head. They will **jump** as high as possible touching the wall. The measurement is the distance between where the hand started and where the hand touched during the jump.
Resistance Training	This is any form of exercise where you **lift or pull against a resistance.**	*Standing Stork*	This is a fitness test to **measure balance.** The performer **puts** one **foot on the outside of their knee**. They then stand on their **tip toes** raising their **heel off the ground**. As soon as the heel is raised the timer is started and stops when the performer puts their heel back on the ground.

Effects Of Exercise On The Body

Muscular System	Cardiovascular System	Respiratory System
Increased <u>muscle temperature</u> **increased** <u>muscle fatigue.</u> **Hypertrophy of muscles** - increase in size and strength - Muscular strength, power and endurance improves	- Increased **heart rate** (bpm) **Max Heart Rate** = 220 - age **Hypertrophy** of the heart - the heart muscle <u>increases</u> in size and strength.	**Increased** <u>breathing rate</u> **Increased strength** of respiratory muscles (diaphragm and intercostal muscles)

Rules/regulations	
Cricket	1. **Leg Before Wicket (LBW) -** A batter can be out if the ball hits their pad when the ball is pitched in line with the wickets 2. **6 runs scored** - When the ball is struck by a batsman and reaches the boundary having not bounced before getting there
Rounders	1. **Backwards Hit -** When the ball is hit behind the line the batter is allowed to run to the 1st post but is not allowed to continue until the ball is back in play 2. **Innings** - The game is usually played over 2 innings for 15 good balls
Athletics	1. **Lane running -** in a 100m, 200M and 400M race all athletes must stay in their lanes for the whole race

Sporting contexts	
Key term	**Definition**
One handed pick up	This is where the **fielder picks the ball up** using their **throwing hand**. This allows them to throw the ball as soon as they have picked it up.
Paired cricket	Batting with a **partner.**
Spin to the ball	**Twisting** the wrist **clockwise** when **releasing** the ball.
Hitting into space	The batter **strikes** the ball in the direction where there is **no fielder**s.
Drive phase	This takes place at the **beginning of the race** in the first **8-10 step**s. The sprinter **stays low** and **generates** as much **power** as possible using their legs
Acceleration	This comes after the drive phase and the **body straightens up** and the sprinters **stride lengthens**. This helps **increase** the sprinter's **speed.**
Power	The ability to perform strength based movements quickly. **Power = Strength x Speed**
Measuring	The throw will be measured to see the **distance** it has travelled.

THE BASICS part 1 - Year 9 Photography

PHOTOGRAPHY GLOSSARY - WORD BANK

COMPOSITION / TEXTURE / GRAIN / TONE / CROPPING / CONTRAST / FOCUS / DARK / SPACE / MACRO / FOREGROUND / BLUR / TRIPOD / SHUTTER SPEED / GRADIENT / RESOLUTION / RULE OF THIRDS / F-STOP / DEPTH OF FIELD / SATURATION / LENS / APERTURE / MIDDLEGROUND / EXPOSE / CONTACT SHEET / FOCAL POINT / PAN / PANORAMIC / UNDER EXPOSED / WIDE - ANGLE / PHOTOSHOOT / EXPERIMENTAL / VISUAL ANALYSIS / BACKDROP / SCOPE

UPLOADING PHOTOGRAPHS TO GOOGLE DRIVE

STEP 1 - Download the App from your phones app store

STEP 2 - Open the App and sign in using your school login credentials

STEP 3 - Press on the files icon at the bottom and then on the + icon

STEP 4 - Create the folders you need

STEP 5 - Click on the + again and then choose 'upload photos'

STEP 6 - Allow drive access to your photos

VISUAL ELEMENTS

LINE - vertical, horizontal, diagonal, or curved. Short or tall, thick or thin. Lead you away, or move you forward in an image.

LIGHT & SHADOW - create abstract or anonymous silhouettes. Especially in monochrome with high contrast lighting.

TEXTURES - accentuated by the side light of early mornings or early evenings, or by overhead light when the sun is high in the sky.

SHAPE - Needs to be in strong contrast with its surroundings so that it is detached from the clutter

COLOUR - value, hue, and saturation. Different colours can send out different messages.

DEPTH - Depth of field is the distance between the closest and farthest objects in a photo that appears sharp.

COMPOSITION

GROUPING
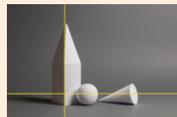
BALANCING ELEMENTS
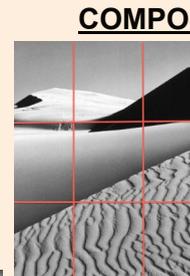
RULE OF THIRDS

LEADING LINES

S SHAPE

VIEWPOINT

DIAG-ONALS

DEPTH

SYMMETRY

L - SHAPE

RADIATING LINES

FRAMING
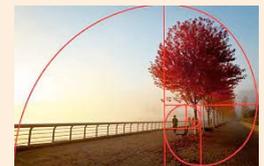
GOLDEN RATIO

THE BASICS part 2 - Year 9 Photography

USING A CAMERA

1) Shutter Release button
2) Mode Dial (for Auto/Manual)
3) Settings Dial
4) On/Off switch
5) Flash Button

6) Display button (look at settings)
7) LED screen view (for TRIPOD)
8) Viewfinder
9) Playback button
10) Menu button

UPLOADING PHOTOGRAPHS

1) Download App
2) Open App / Login
3) Files then Plus icon
4) Create folder

5) Click upload - Photos
6) Allow access to photos
7) Change to JPEG

CREATING CONTACT SHEETS - ADOBE BRIDGE
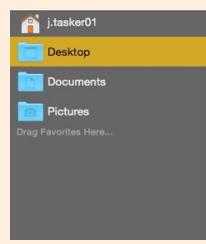
1) Having successfully downloaded your pictures from your Camera. Load up **Adobe Bridge** and select your **Desktop** (on the left hand side)

2) Once you have selected your **Desktop**, find the **folder** containing your images from your shoot. Hold down **cmd and click** on the images you want in your contact sheet
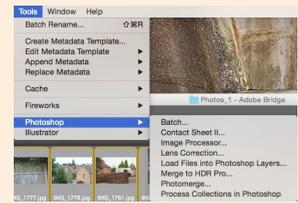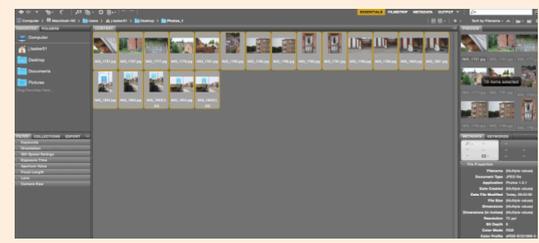
3) On the top bar go up to '**Tools**' > '**Photoshop**' > '**Contact Sheet II**' and click (this will load up Photoshop)

4) On Photoshop, this message will come onto your screen. Halfway down just make sure you change **the Resolution** to '**pixels/inch**'

Units > cm / Width: 20.32 / Height: 25.4 / Resolution: 300 pixels/inch
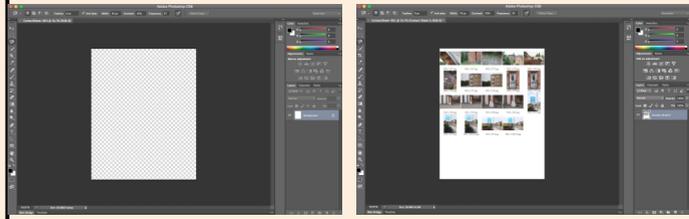
2) Be patient; this screen will start to load up. **Do not click anything** until you can see your image thumbnails.
This is what your contact sheet should eventually look like
Save to **Desktop** and the **Format should be JPEG**.

PSHE- Equality in the UK & Financial consumerism

Term 1a: Behaving to Achieve	
Prejudice:	judging someone without knowing them, on the basis of what they look like or what group they belong to, for example all black people are good dancers
Discrimination:	the unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, or sex
The Equality Act 2010:	an Act of Parliament of the United Kingdom with the primary purpose of consolidating, updating and supplementing the numerous prior Acts and Regulations, that formed the basis of anti-discrimination law in Great Britain
Fixed Mindset:	when people believe that qualities like intelligence and ability are essential, stable and do not change over time
Growth Mindset:	when people believe that qualities such as intelligence and ability are not fixed and can grow over time in the right conditions.

Term 1b: Finance and Being a Consumer	
Interest:	the extra amount you pay on the money you have borrowed (according to a set interest rate)
Short-term Loans:	tend to be easy to take out by have higher interest rates as you are supposed to pay them back quickly
Long-term Loans:	hard to take out but generally better deals with lower interest rates and are paid back over months or even years
Credit Score:	a number, available to all lending companies, which indicates how reliable you are to lend money to
Debt:	a sum of money that is owed or due
Consumer Rights:	the rights you are entitled to as a consumer of goods or services. For example, the right to a refund on faulty goods
Sustainability:	the idea of living in a way that can maintained in the long term. We talk about 'sustainability' in terms of looking after our environment
Consumer:	is a person or a group who intends to order, or use purchased goods, products, or services primarily for personal, social, family, household and similar needs, who is not directly related to entrepreneurial or business activities.
Influencer endorsements:	when an influencer promotes a certain product or business. An influencer is an individual with an extensive following on the internet and in the public eye which gains them popularity.

Term 1a: The Equality Act 2010

9 protected characteristics:
- Age
- Disability
- Gender Reassignment
- Race
- Religion & Belief
- Sex
- Sexual Orientation
- Marriage & Civil Partnership
- Pregnancy and Maternity

Term 1a: You're protected from discrimination:

- at work
- in education
- as a consumer
- when using public services
- when buying or renting property
- as a member or guest of a private club or association

You're legally protected from discrimination by the Equality Act 2010.

You're also protected from discrimination if:
- you're associated with someone who has a protected characteristic, for example a family member or friend
- you've complained about discrimination or supported someone else's claim

PSHE- Personal Safety & Relationships

Term 2a: Our Health and Personal Safety:	
Alcohol:	a chemical which is put in drinks and changes how people behave
Legalisation:	the process of making something legal to use
Possession:	where you get caught with drugs that you're going to use yourself
Supply (Dealing):	if you're caught with drugs and it looks like you've bought them to sell, or give to your friends, you could be charged with 'possession with intent to supply' or 'supplying drugs'
Self-harm:	deliberate injury to oneself, typically due to an overwhelming negative mental state
Online grooming:	is when someone uses the technology or the internet to build a relationship with a young person, with the intention of tricking, pressuring or forcing them into doing something sexual, like sending images or videos of themselves.
Vaccine:	a substance created and given to people that will provide immunity from a specific infection or disease
Vaccination:	the means of giving a person a vaccine, most commonly injected
Immunity:	the ability to resist infections and diseases
Anti-vaxxer:	someone who argues against the use of vaccinations
Term 2b: Relationships with ourselves and others	
Body Image	is how you see yourself when you look in the mirror or when you picture yourself in your mind.
Eating Disorder:	is a mental health condition where you use the control of food to cope with feelings and other situations
Coercion:	the action or practice of persuading someone to do something by using force or threats
Cosmetic procedures:	is where a person chooses to have an operation, or invasive medical procedure, to change their physical appearance for cosmetic rather than medical reasons.
Peer Pressure:	the pressure felt to do what people in your age group are doing and to do what they want you to do
Abusive Relationships:	Is treating someone with violence, disrespect, cruelty, harm, or force. When someone treats their partner in any of these ways, it's called an abusive relationship. Abuse in a relationship can be physical, sexual, or emotional. Or it could be all of these.

Class	Drug	Possession	Supply
A	Crack cocaine, cocaine, ecstasy (MDMA), heroin, LSD, magic mushrooms, methadone, crystal meth	Up to 7 years in prison, unlimited fine, or both	Up to life in prison, unlimited fine or both
B	Amphetamine, barbiturates, cannabis, codeine, ketamine, methylphenidate (Ritalin), synthetic cannabinoids, synthetic cathinones (mephedrone, methoxetamine)	Up to 5 years in prison, unlimited fine, or both	Up to 14 years in prison, unlimited fine, or both
C	Anabolic steroids, benzodiazepines (diazepam), gamma hydroxybutyrate (GHB), gamma butyrolactone (GBL), piperazines (BZP, khat	Up to 2 years in prison, unlimited fine, or both (except anabolic steroids - it's not an offense to possess them for personal use)	Up to 14 years in prison, unlimited fine, or both
Temporary Class Drugs*	Some methylphenidate substances and their simple derivatives	None, but police can take away a suspected temporary class drug	Up to 14 years in prison,

Cycle of Abuse

1 Tensions Building — Tensions increase, breakdown of communication, victim becomes fearful and feels the need to placate the abuser.

2 Incident — Verbal, emotional, and physical abuse. Anger, blaming, arguing. Threats. Intimidation.

3 Reconciliation — Abuser apologizes, gives excuses, blames the victim, denies the abuse occured, or says it wasn't as bad as the victim claims.

4 Calm — Incident is "forgotten." No abuse is taking place. The "honeymoon" phase.

PSHE TERM 3: Risk & UK Society

Term 3a:Risk	
Risk:	Risk is the possibility of something bad happening.
County Lines:	Used in reference to a form of criminal activity in which drug dealers in major cities establish networks for the supply and sale of drugs to users in towns and rural areas, using other people (typically those who are young or otherwise vulnerable) to carry, store, and sell the drugs.
Trafficking:	Involves the recruitment or movement of people for exploitation by the use of threat, force, fraud, or the abuse of vulnerability. Trafficking is a crime that can occur across international borders or within a country.
Young Offenders	A young person who has been convicted or cautioned for a criminal offense.
Knife Crime:	Any crime involving a Knife
Exploitation:	The action or fact of treating someone unfairly in order to benefit from their work.
Coercion:	The practice of persuading someone to do something by using force or threats.
Peer Pressure:	Influence from members of one's peer group

| Term 3b: UK Society	
Identity:	Who a person is, or the qualities of a person or group that make them different from others.
British Values:	Democracy, The rule of law, Individual liberty, Mutual respect, Tolerance of those of different faiths and beliefs.
Ethnicity:	The fact or state of belonging to a social group that has a common national or cultural tradition
Diverse:	Including or involving people from a range of different social and ethnic backgrounds and of different genders, sexual orientations, etc
Immigration:	Immigration is the international movement of people to a destination country
Tolerance:	the ability or willingness to tolerate the existence of opinions or behaviour that one dislikes or disagrees with.

Term 3a: What makes us take a risk

- peer groups
- the media
- culture
- movies

Term 3a: Help and Support

- The police
- A family member
- A friend
- A teacher you feel able to talk to
- Child line
- www.thehideout.org.uk
- www.refuge.org.uk
- https://www.womensaid.org.uk/

Term 3a: Identity
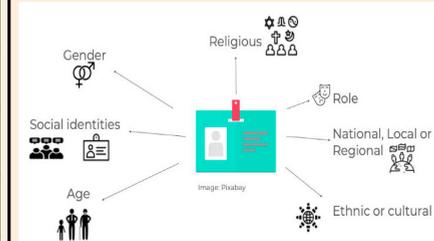
Term 3a: British Values

Term 3b: County Lines

RELIGION, PEACE AND CONFLICT

Key Concepts	
Just War	A war which meets internationally accepted criteria for fairness
Israel	A country in the Middle East which declared its independence in 1948
Nuclear Weapons	Weapons that work by a nuclear reaction. A weapon of mass destruction
Palestine	An area in the Middle East which is recognised as a nation by some other nations but not others.
Peace	An absence of conflict, which leads to happiness and harmony
Reconciliation	When individuals or groups restore friendly relations after conflict or disagreement
'The Troubles'	The period in the 20th Century where groups used violence to pressure others into making changes in Northern Ireland
War	FIghting between nations to resolve issues between them
Weapons of mass destruction	Weapons that can kill large numbers of people and/or cause great damage
Zionism	A movement for (originally) the re-establishment and (now) the development and protection of a Jewish nation in what is now Israel.

| Conditions for a Just War	
Just Cause	The war must have a just cause. This may include self-defence or defending someone else. It must not be to gain territory or resources, or in retaliation.
Correct Authority	The war must be declared by the correct authority. This should be the government or lawful rulers of the country.
Just intention	The intention of the war has to be to defeat wrongdoing and promote good. The good achieved by the war must outweigh the evil that led to it.
Last Resort	Fighting must be a last resort. All other ways of resolving the issues such as diplomacy, must have been attempted before war can be declared.
Chance of success	There must be a reasonable chance of success. It is unjust to ask people to fight a war if it is probable that the war will be lost and they will be killed.
Proportional	The methods used to fight the war must be proportional to achieve success. Excessive force should not be used.
Just Means	The war must be fought but just means. Innocent people and civilians must not be targeted or harmed.
Appropriate Force	Only appropriate force may be used. This includes the type of force and how much is used.
Conventions	Internationally agreed conventions on the conduct of war must be obeyed.

"Non-violence is the greatest force at the disposal of mankind. It is mightier than the mightiest weapon of destruction devised by the ingenuity of man."
*Gandhi*

ETHICS

Key People	
Hannah Arendt	20th-century German philosopher who attended the trial of Adolf Eichmann in 1961 and wrote about the 'banality of evil'.
Jeremy Bentham	18th-century English philosopher, regarded as the founder of utilitarianism, who argued that pleasure and pain are the same as good and bad.
Philippa Foot	20th-century English philosopher who designed the runaway train thought experiment in 1967
Friedrich Nietzsche	19th-century German atheist who expressed his belief that humans no longer needed the idea of God by saying 'God is dead and we have killed him'.
Peter Singer	20th-century Australian philosopher and utilitarian who popularised the word 'speciesism', which describes prejudice and discrimination against animals
Robert Nozick	20th-century American philosopher who used the example of an imaginary 'experience machine' to show that humans value more than simply pleasure

| Key Concepts	
Absolutism	The view that certain actions are inherently good and bad
Altruism	Selfless actions done without thought or expectation of a reward
The banality of evil	A phrase used by Hannah Arendt to describe how evil can result from ordinary, thoughtless behaviour
Ethics	The philosophy study of right and wrong
Hedonic calculus	Jeremy Bentham's way of calculating which actions are right and wrong
Holocaust	The killing of six millions Jews and two millions others by the Nazis in Europe between 1933 and 1945
Relativism	The view that whether an action is good or bad depends on the situation
Speciesism	A term popularised by Peter Singer to describe prejudice or discrimination towards animals
Thought Experiment	A mental test in which people think through the consequences of different actions, often in scenarios that can't be tested out in real life.
Utilitarianism	The theory that the best action in any situation is the one which creates the greatest happiness for the greatest number.
The will to power	A term used by Nietzsche to describe a natural human desire for strength and power.
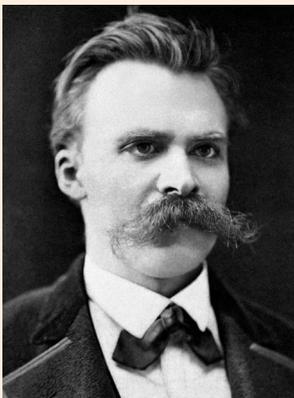
Nature has placed mankind under the governance of two sovereign masters, pain and pleasure.
Jeremy Bentham
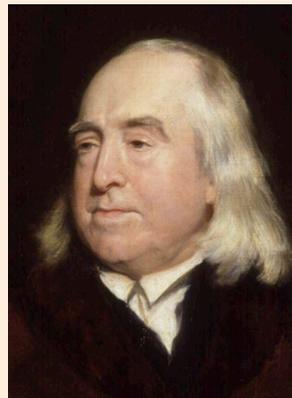
"God is dead, and we have killed him"
Friedrich Nietzsche

PHILOSOPHY OF RELIGION

Key People	
Thomas Aquinas	13th-century Italian philosopher and priest whose *Summa Theologica* outlines his 'Five Ways' of demonstrating that faith in God is reasonable, including the First Cause argument
Charles Darwin	19th-century scientist and author of *On the Origin of Species* in 1859, which outlined his theory of evolution by natural selection
Sigmund Freud	19th/20th-century Austrian psychologist who claimed in his wish-fulfilment hypothesis that humans invent religion to satisfy their desires for a father, fairness and immortality.
David Hume	19th-century Scottish philosopher who criticised the first cause and design arguments and belief in miracle.
Karl Marx	19th-century German philosopher who described religion as the 'opium of the people', used by the ruling class to exploit and oppress the working class.
New Atheists	Four modern thinkers and writers from the UK and USA who criticise faith and argue that science and reason can answer all questions about the universe.
William Paley	18th-century English philosopher and priest who compared the world to a watch in his version of the design argument

Key Concepts	
Agnostic	Someone who does not know whether there is a god or gods.
Apophatic Theology	The view that God cannot be accurately described in positive language, only by saying what God is not.
Atheist	Someone who does not believe in the existence of a god or gods
Class consciousness	A term used by Marx to mean the working class becoming aware they are being oppressed
Creationist	Someone who believes that God created the world in six days, as described in Genesis (the first book of the Bible)
Design Argument	The argument that the world looked designed and so has a designer - God
Evolution by natural selection	The theory that all life evolved from a common ancestor through gradual changes over millions of year
False consciousness	A term used by Marx to describe a way of thinking that stops the working class from seeing how they are being oppressed
Infinite regress	An endless sequence of causes with no beginning
Omnibenevolent	All-loving
Omnipotent	All-powerful
Omniscient	All-knowing
Problem of evil	The argument that evil and suffering shows that an omnipotent, omniscient, omnibenevolent god does not exist

"Religion is the opium of the people" *Karl Marx*

"Religions are illusions" *Sigmund Freud*

Climate and Forces

Key Definitions - Climate

Climate - The weather conditions prevailing in an area in general or over a long period

Climate Change - A sustained change in global or regional climate patterns

Greenhouse Gas- A gas that contributes to the greenhouse effect by absorbing infrared radiation.

Carbon Footprint- The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization, or community.

Endangered Species -a species of animal or plant that is seriously at risk of extinction.

Extinction - When a species has no living members remaining

Fossil Fuels - fuels which formed over millions of years from ancient biomass. Eg. Coal,Oil,Natural Gas

Carbon Neutral - A process which either produces no carbon dioxide or takes in as much carbon dioxide as it produces.

Deforestation - cutting down trees

Habitat loss - Use of space that once provided a home to other species

Overfishing - Fish are caught faster than they can reproduce

Unsustainable use of finite resources - mining and use of crude oil, which will run out as it cannot be created in our lifetime

Incoming solar radiation

Radiated out to space

Absorbed in atmosphere by greenhouse gases

Infrared radiation from surface
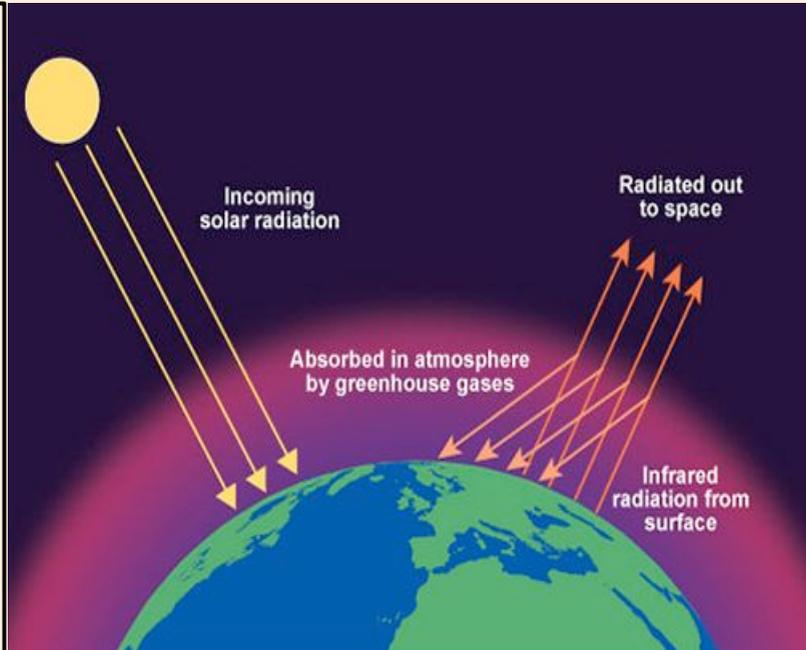
Pressure in gases

▲ If there are more collisions on the inside than the outside the balloon gets bigger.

▲ In a smaller volume gas molecules will collide more often with the walls of the container.

Concept	Unit
Pressure	N/m
Force	N
Area	m^2

Distance = Speed x Time

$$Time = \frac{Distance}{Speed}$$

$$Speed = \frac{Distance}{Time}$$

Key Definitions - Forces

Forces - can change the direction, speed or shape of an object.

Contact force - A force that can be exerted between two objects when they touch.

Non -contact force - A force that can sometimes be exerted between two objects that are physically separated.

Resultant force - A number of forces acting on an object may be replaced by a single force that has the same effect as all the forces acting together. This single force is called the resultant force.

Balanced - Two forces are equal and opposite (resultant force = 0 N)

Unbalanced - Two forces are opposite but not equal (there is a resultant force.

Reaction force - A force that stops you falling through the floor

Friction - A force that opposes the motion of a moving object

**Drag/ air resistance** - A force that resist motion through the air

Upthrust - An upwards force pushing on an object in fluids

Newton (N) - The unit a force is measured in

Electricity

Some common circuit symbols
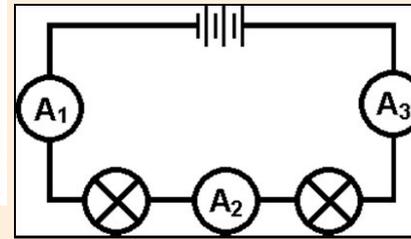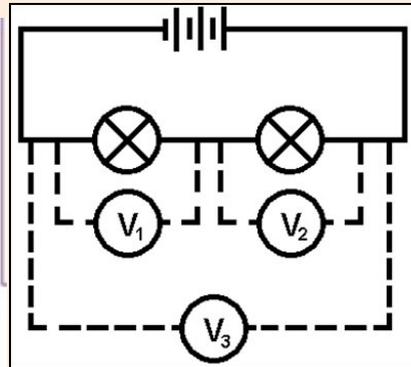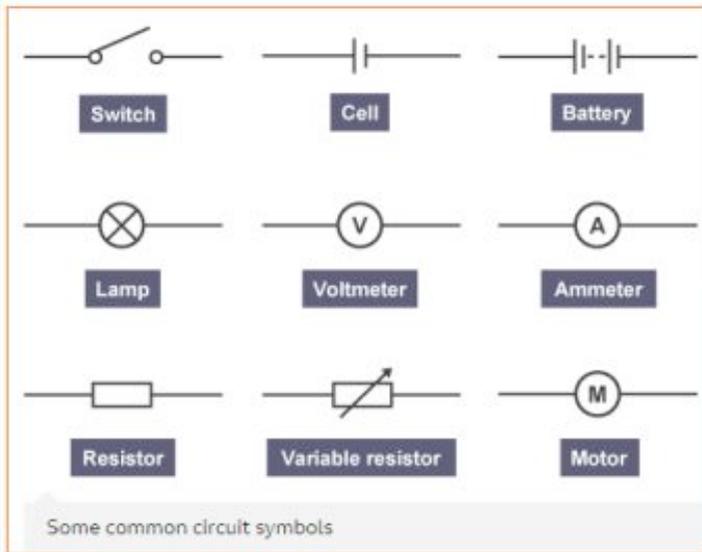
Voltmeters in parallel!

Ammeter in series!

Voltage	A measure of the energy shifted from the battery to the moving charge, or from the charge to circuit components, measured in volts (V).
Current	The flow of electric charge, measured in amps (A).
Series	A single loop in the circuit
Parallel	A circuit with branches
Ammeter	Measures current
Voltmeter	Measures voltage
Conductor	Will allow electricity to flow through it
Insulator	Will not allow electricity to flow through it
Resistance	When something tries to stop the flow of electrons.
Component	Part of an electrical circuit e.g. bulb or battery

Rules for current and voltage:

Current in a **series** circuit is same.
Voltage in a **series** circuit is shared out

Current in a **parallel** circuit splits.
Voltage in a **parallel** circuit is the same across branches.

Series Advantages:
Easy to use, easy to add more power to the circuit
**Series Disadvantage:**
If one component breaks the whole circuit won't work

Parallel Advantage:
Easy to switch different components on and off using the same circuit
Parallel Disadvantage:
Lots of wires, cannot increase voltage across branches.

$$V = I R$$

$$power = \frac{energy\ transferred}{time}$$

Safety: Turn off the power if you're making or changing your circuits
- Set the voltage to the lowest level that will allow your circuit to work
- Keep electrical components away from water
- Don't get any metal objects (jewellery) away from circuits
- The voltage in your home is lower than that in overhead cables to protect you. It can still seriously injure though.

Health and Digestion

Key Definitions:

Protein - nutrient used for growth and repair of cells

Carbohydrate - Nutrient used in respiration to release energy

Fat - Nutrient used for insulation and stored energy

Vitamins and Minerals - Essential components of our diet to prevent deficiency diseases

Oesophagus - Flexible tube between mouth and stomach

Stomach - Muscular bag containing acid and enzymes to destroy microbes and begin digestion.

Liver - Produces bile which emulsifies fats and speeds up their digestion

Pancreas - Produces many enzymes to break down different nutrients

**Small Intestine** - Absorbs nutrients from our digested food into our blood stream

Large Intestine - Absorbs excess water from waste food

Rectum - where undigested food is stored.

Enzymes

Substrate · Active site · Enzyme · Enzyme-substrate complex · Products · Enzyme
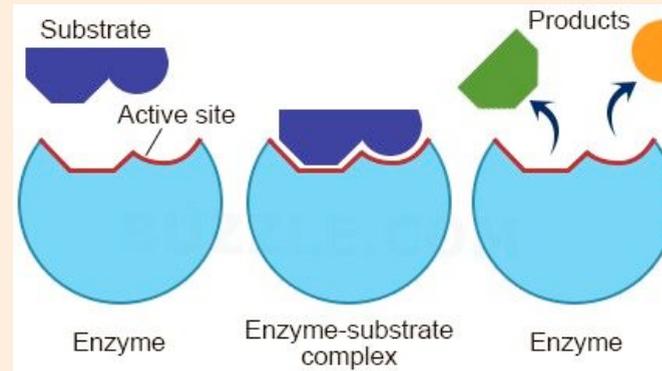
Enzymes are **biological catalysts** for the breakdown of large food molecules.
Each enzyme is specific to a certain type of food molecule.

Mouth · Oesophagus · Liver · Stomach · Gall bladder · Pancreas · Large intestine · Small intestine · Rectum · Anus
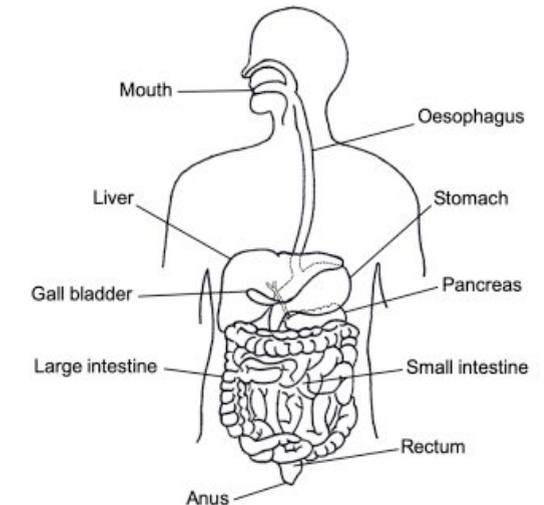
| Enzyme	Function	Location
Carbohydrases	Catalyse the breakdown of carbohydrates into simple sugars	Mouth, pancreas, small intestine
Proteases	Catalyse the breakdown of proteins into amino acids	Stomach, small intestine
Lipases	Catalyse the breakdown of fats into glycerol and fatty acids	Pancreas, small intestine

Food Group	Test for the food group	Positive Test
Fat	Equal parts ethanol and water. Shake	White emulsion
Sugar	Benedicts Solution. Warm for 5 min	Orange/Red precipitate
Protein	Biuret Reagent	Turns lilac
Starch	Iodine	Turns Blue/Black

Atomic Structure and Periodic Table

Atom	A particle with no electric charge made up of a nucleus containing protons and neutrons and surrounded by electrons.
Proton	A positively charged particle found in the nucleus of an atom.
Neutron	A neutral particle found in the nucleus of an atom.
Electron	Negatively charged particles found on energy levels (shells) surrounding the nucleus inside atoms.
Nucleus	Central part of an atom containing protons and neutrons.
Energy level (shell)	The region an electron occupies surrounding the nucleus inside an atom.
Atomic number	Number of protons in an atom.
Mass number	Number of protons plus neutrons in an atom.
Isotope	Atoms with the same number of protons but a different number of neutrons.
Relative atomic mass	The average mass of atoms of an element taking into account the mass and amount of each isotope it contains. RAM = Total mass of atoms / total number of atoms
Electronic structure	The arrangement of electrons in the energy levels of an atom.
Ion	An electrically charged particle containing different numbers of protons and electrons.
Group	The name given to each column in the periodic table.
Element	A substance containing only one type of atom.
Compound	A substance made from different elements chemically bonded together.
Period	The name given to a row in the periodic table.
Alkali metals	The elements in Group 1 of the periodic table.
Noble gases	The elements in Group 0 of the periodic table.

| Halogens	The elements in Group 7 of the periodic table.
Diatomic molecule	A molecule containing 2 atoms.
Halides	Compounds made from Group 7 elements.
Mixture	More than one substance that are not chemically bonded.
Solvent	The liquid that a solute dissolves in.
Solution	A solute dissolved in a solvent.
Soluble	A substance that will dissolve.
Insoluble	A substance that will not dissolve.
Solute	The solid that dissolves in a solvent.
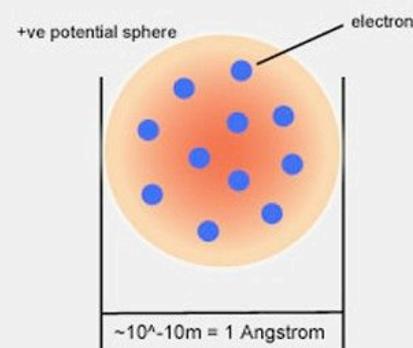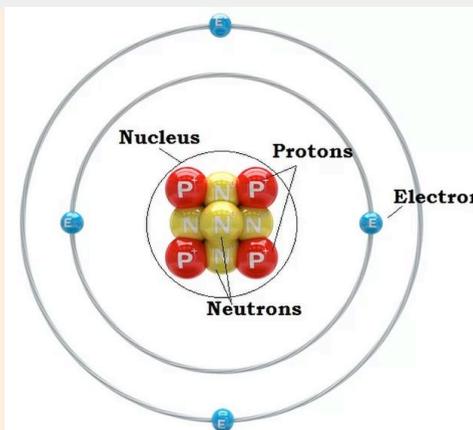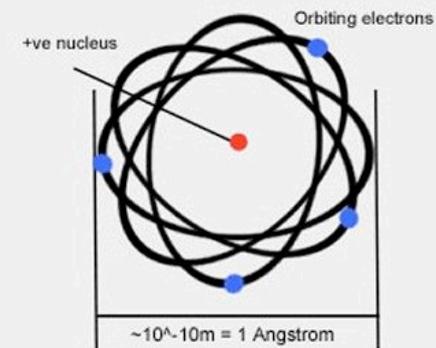
Cells

| Eukaryotic cells	Cells that contain a nucleus
Eukaryote	An organism that is made of eukaryotic cells
Prokaryotic cells	Single-celled organisms that do not contain a nucleus
DNA	Deoxyribonucleic acid – the genetic information found in all living organisms
Ribosome	A cell organelle that makes proteins
Respiration	The release of energy from glucose
Diffusion	The net movement of particles form an area of high concentration to an area of lower concentration
Organelle	A part of a cell with a specific function
Mitochondrion	A cell organelle in which respiration occurs
Chloroplast	A cell organelle in which photosynthesis occurs
Cytoplasm	Jelly like substance in cells where chemical reactions occur
Nucleus	A cell organelle found in eukaryotes containing their genetic material
Cell membrane	Structure surrounding the cell that controls what moves in and out of the cell
Vacuole	Found in plant cells, filled with cell sap, keeps the cell turgid
Cell wall	Made from cellulose and provides structural strength the some cells (not animal cells)
Photosynthesis	Chemical reaction that happens in chloroplasts that stores energy in glucose
Turgid	Describes a swollen cell
Biconcave	Describes a shape with a dip that curves inwards on both sides

Ova	Eggs
Axon	The extension of a nerve cell along which the electrical impulses travel
Phloem	Tubes of living cells that carry sugars to all cells in plants
Xylem	Tubes of dead plant cells through which water flows
Electron microscope	A microscope that uses electrons in place of light to give higher magnification
Resolution	The smallest distance between two separate points

ANIMAL CELL

PLANT CELL

Cell wall
Cell membrane
Ribosomes
Nucleus
Vacuole
Cytoplasm
Mitochondria
Chloroplast

Flagellum
Cytoplasm
Loop of DNA
Plasmid
Cell Wall
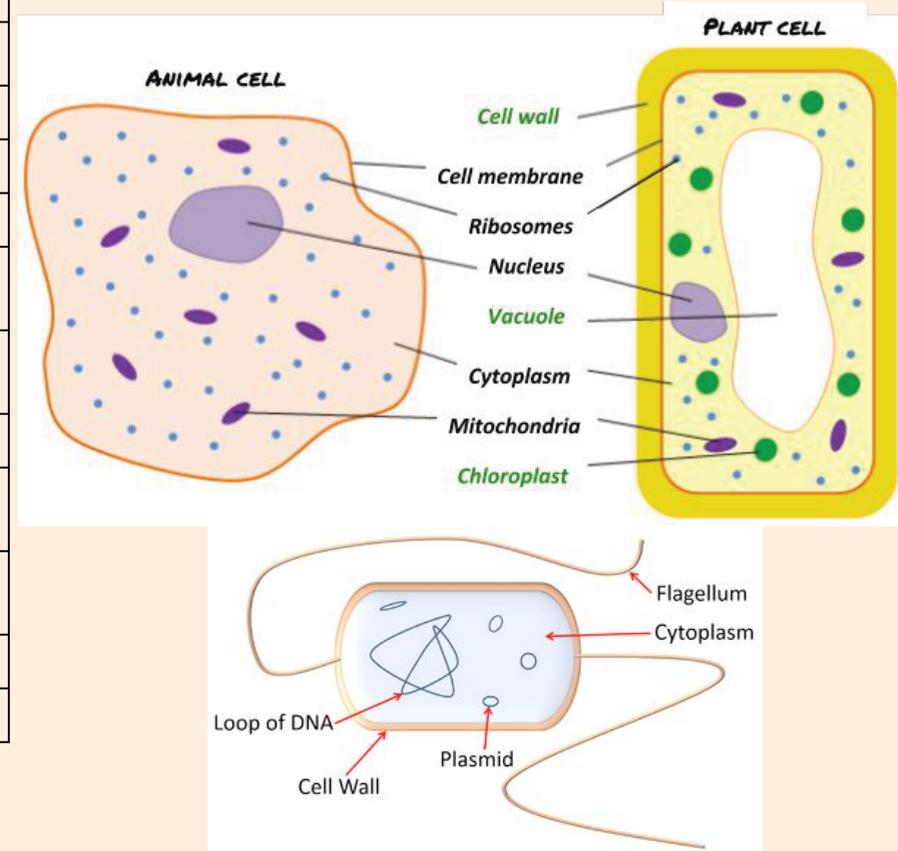
Energy

Specific heat capacity	The energy needed to raise the temperature of 1kg of a substance by 1°C.
Dissipate	To scatter in all directions or to use wastefully. When energy has been dissipated it means we cannot get it back. The energy has spread out and heats up the surroundings.
Non-renewable energy resources	Energy resources which will run out, because they are finite reserves, and which cannot be replenished.
Renewable energy resources	Energy resources which will never run out and (or can be) replenished as they are used.
Alternative energy resource	Resources other than fossil fuels. The resources may or may not be renewable. Nuclear power is not a renewable energy resource, but tidal power is. Alternative energy resources do not contribute to global warming.
Biofuel	Fuel produced from biological material. Biofuels are provided by trees such as willow that can be grown specifically as energy resources.

Working out specific heat capacity, c
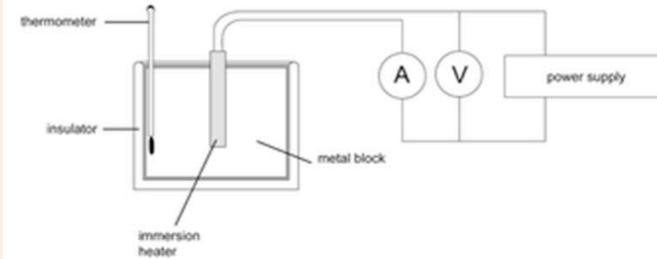
Method

1. Collect your apparatus.
2. Measure the mass of the metal block and record it.
3. Set up your apparatus as shown in the diagram
4. Record the temperature of the metal block using the thermometer.
5. Switch on the heater.
6. Record the voltage, current,
7. Record the temperature of the block after 10 minutes
8. Switch the heater off and leave it to cool before touching it.

Energy Equations

Efficiency (%) = (useful energy out ÷ total energy in) x 100.

GPE = mgh   Gravitational Potential Energy = mass x gravity x height.

E_e = ½ke² Elastic potential energy = 0.5 x spring constant x extension²

KE = ½mv² Kinetic Energy = 0·5 x mass x velocity².

W = F x d   work done = force x distance.

P = E ÷ t   power = energy ÷ time.

E = c x m x θ energy = specific heat capacity x mass x change in temperature.

Bonding and Structure

| Giant Lattice	Ionic substances are made up of a giant lattice of positive and negative ions in a regular structure.
Ionic bonding	The electrostatic attraction between positive and negative ions
Molecule	Particle made from atoms joined together by covalent bonds
Covalent bond	Two shared electrons joining atoms together
Intermolecular forces	Weak forces between molecules
Polymer	Long chain molecule made from joining lots of small molecules together by covalent bonds
Monomer	The building block (molecule) of a polymer
Delocalised	Free to move around
Metallic bonding	The attraction between the nucleus of metal atoms and delocalized electrons
Malleable	Can be hammered into shape
Alloy	A mixture of a metal with small amounts of other elements, usually other metals
States of matter	These are solid, liquid and gas
Fullerenes	Family of carbon molecules each with carbon atoms linked in rings to form a hollow sphere or tube
Catalyst	Substance that speeds up a chemical reaction but is not used up in it

Structure of Monomers and Polymers
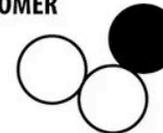
MONOMER — A monomer is a small molecule.

POLYMER
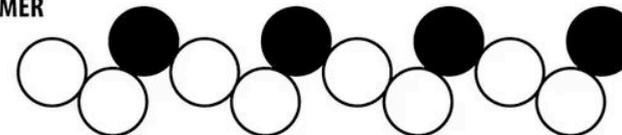
A polymer is a long-chain molecule made up of a repeated pattern of monomers.

free electrons from outer shells of metal atoms

metal ions
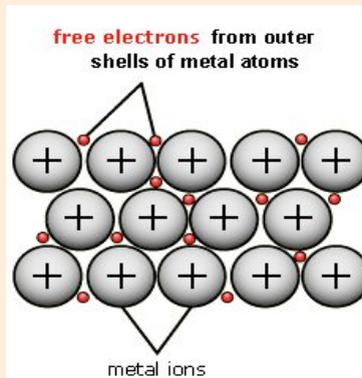
Metallic structure

Covalent bonding
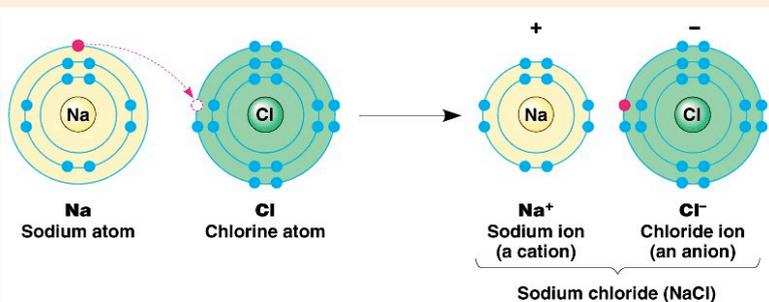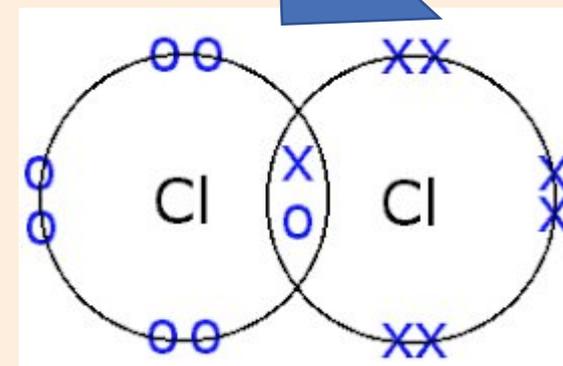
Na Sodium atom — Cl Chlorine atom → Na⁺ Sodium ion (a cation) — Cl⁻ Chloride ion (an anion)

Sodium chloride (NaCl)

Salt in the Solid State

**Ionic bonding and structure**

Cl   Cl
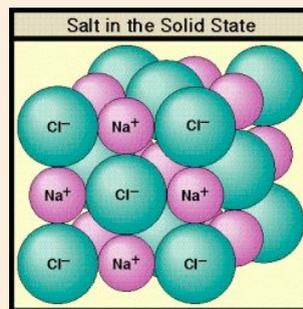
Infection and Response

Infectious	Describes a pathogen that can easily be transmitted, or an infected person who can pass on the disease.
Vector	An animal that spreads a communicable disease.
Antibiotic	A group of medicines, first discovered by Alexander Fleming, that kill bacteria and fungi but not viruses.
Chitin	A polymer made from sugars that forms the cell walls of fungi and the exoskeleton of insects.
Hyphae	Branching filaments of a fungus that spread out.
Malaria	A communicable disease, caused by a protest transmitted in mosquitos, which attacks red blood cells.
Insecticide	A chemical that kills insects.
Lysozymes	Antibacterial enzymes found in your tears to prevent eye infections.
Cilia	Tiny hair-like projections from ciliated cells that waft mucus out of the gas exchange system.
Antigen	A protein on the surface of a pathogen that your antibodies can recognize as foreign.
Antitoxin	A protein produced by your body to neutralize harmful toxins produced by pathogens.
Vaccine	A medicine containing an antigen from a pathogen that triggers a low level immune response so that if you become infected later your body can respond more quickly to the pathogen.
Antiseptic	A substance applied to the skin or another surface to destroy pathogens.
Anaesthetic	A drug that stops all pain sensation and can be local or general.
Efficacy	How effective a drug is.

Double blind trials	A medical experiment in which the patient and doctors do not know who has been given the drug and who has been given the placebo.
Placebo	A medicine that has only psychological effects.
Phagocytes	A type of white blood cell that engulf pathogens.
Lymphocytes	A type of white blood cell that produce antibodies.
Antibodies	Highly specific Y-shaped proteins that are produced by the immune system to help stop intruders from harming the body.

Primary antibody response: the antibody concentration rises gradually and peaks about 2 weeks after vaccination.

Secondary antibody response: the antibody concentration rises quickly, and the response is more intense. The antibody concentration remains higher for longer.