CHRIST THE KING

KNOWLEDGE ORGANISER

Year 7 ADVENT

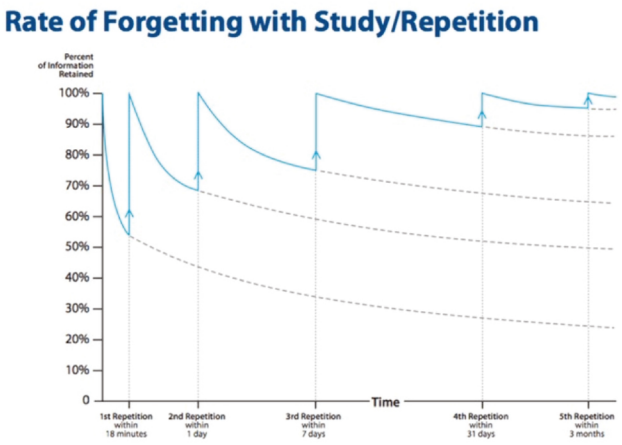
(Term 1)

#CTKCares

Knowledge Organisers

We use knowledge Organisers at Christ the King to help all students achieve. Knowledge Organisers improve your confidence by helping you to understand how to learn and revise. We are building a seven-year revision strategy that supports you to remember the core and powerful knowledge that is required to be successful in each subject.

The Ebbinghaus Forgetting Curve demonstrates that knowledge is lost over time if it is not revisited. A simple model for memory involves working memory and long term memory; working memory is limited, and can very easily become overloaded, whereas long-term memory is effectively limitless. You can support your limited working memory by storing key facts and processes in your long-term memory. Research evidence indicates that regular recall activities, known as retrieval practice, are an effective way of ensuring that knowledge is committed to long-term memory



At the start of each term, you will receive a knowledge organiser booklet that contains content for all subject areas. You will use your knowledge organiser in your lessons, in tutor time, and during homework tasks. An important aspect of your revision for assessments and end-of-year examinations will be to use the knowledge organisers for self-quizzing. If this core knowledge is secured, you will be in a strong position to use and apply this knowledge in a range of contexts. You will be given your knowledge organiser in a plastic wallet along with a homework booklet – the expectation is that you bring this to school every day – **it should be placed on your desk in every lesson**, ready to use. Geography and History highlight the essential 'golden knowledge' in yellow to support your learning.

How to use your Knowledge Organiser

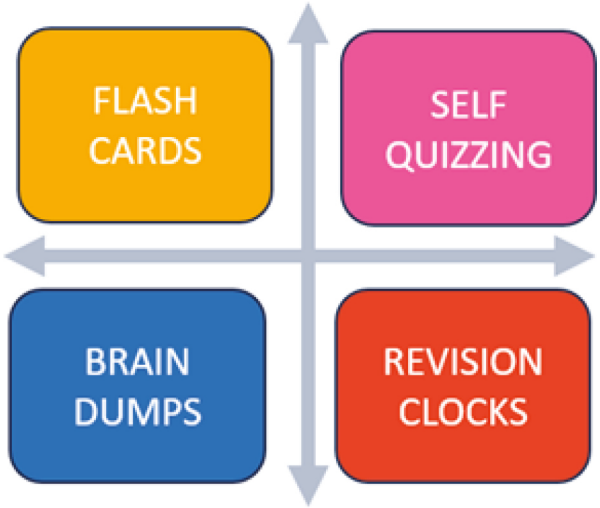
The best way to use your knowledge organisers is to regularly use one of our Core 4 Revision strategies as part of your home learning. These strategies will be explained to you in more detail in tutor time, by your class teachers and as part of your Personal Development lessons.

- **Flash Cards:** Use the information from your knowledge organiser to create flashcards – these could be double sided, with a question on one side and the answer on another, or a keyword on one side and the definition on the other.

- **Self Quizzing:** There are different ways you can self-quiz:
  - Look, cover, write, (say), check
  - Create gaps fills
  - Create questions for the information you want to learn and then answer them from memory

- **Brain dumps:** These are a small but powerful revision strategy which help makes the information 'sticky' so that it goes into your long-term memory, ready for you to recall it into your working memory. They are good to use at the end of topics. An effective brain dump involves you writing down everything you can about a topic you want to revise from your memory. You then check the information against the information on your Knowledge Organiser – you then mark your work and add any missing information onto your brain dump in a different colour pen, so that you know which information you need to revisit, either through using flash cards or self-quizzing.

- **Revision Clocks:** Revision Clocks are a blank clock shape – divided into 12 segments. In each segment put a sub-heading and then include the information linked to that. They are effective as they allow you to 'chunk' up the core knowledge from the topic into the segments. You can use colours and pictures to make the information more 'sticky'.



Homework Schedule

You should complete at least one hour of Home Learning per school day.

This will consist of:

- Knowledge Organiser and Online Learning as directed by your teachers.
- If you have no tasks set, carry out Knowledge Organiser activities as per the Knowledge Organiser timetable below.
- Two periods of 20 minute reading each week.

Week 1					
20 Minutes Per Subject	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Subject 1	English	Science	Maths (Sparx)	Maths	English
Subject 2	RE	PE	RE	Science	Geography
Subject 3	Music	History	Technology / IT	MFL	Art

Week 2					
20 Minutes Per Subject	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Subject 1	Science	English	English	Maths (Sparx)	Science
Subject 2	RE	Maths	RE	Drama	Geography
Subject 3	Music (Practical)	History	Technology / IT	MFL	Art (Practical)

Read 20 minutes a day and you'll read 1,800,000 words per year.

Reading for 6 minutes a day reduces stress by 68%.

Children learn 4,000 to 12,000 words per year through reading,

What are the homework expectations?

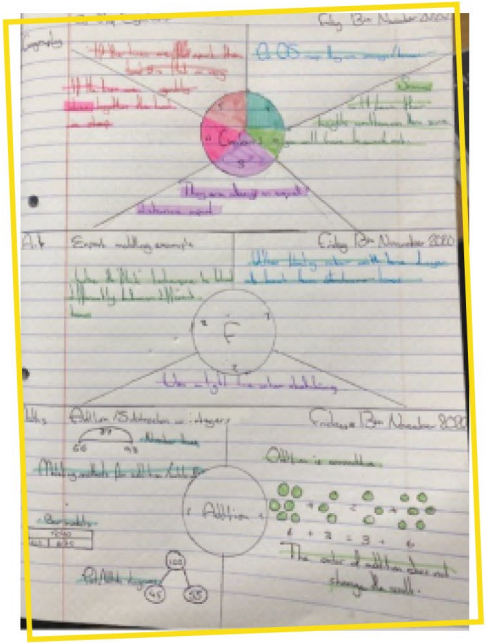
Each homework must meet the following 5 requirements:

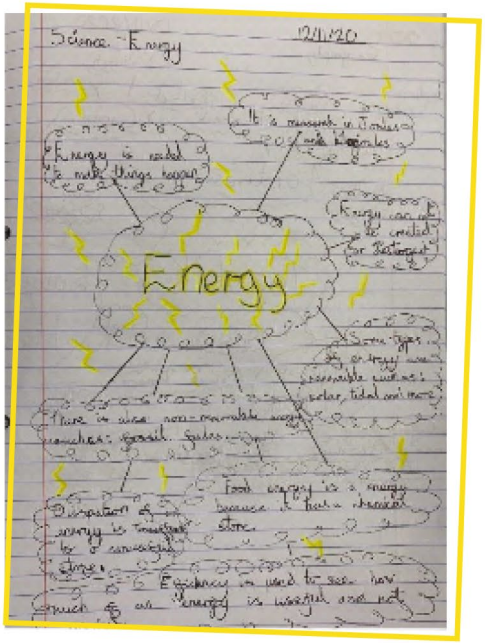
- Write the complete title and date in full *e.g Wednesday 7th June 2023* on each page and underline.
- You should include minimum of words to summarise the topic. Do not copy the words from the text.
- Make full use of the page for each topic by scaling your notes and images appropriately to use all the space.
- You must include diagrams, sketches, or cartoon doodles to visually represent the topic, try to use humour.
- Highlight key words and phrases, using underlines and highlighter pens, and explain technical terms.

How should I present my work?

Please remember that the same rules apply to the presentation of your homework as applies for your class work: **dates and titles** (which should be the name of the subject) **need to be underlined with a ruler** and you should **present your work as neatly as you are able to.**

If you are self-quizzing correctly, there should be **evidence of green pen on your page**. Here are some examples of how to set out your work:





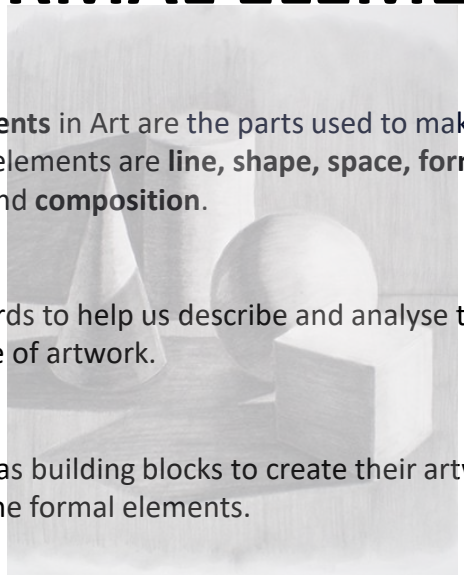
DON'T FORGET!

Always record the date, topic, and page number in your Home Learning Book!

1. Keywords	Definition
Composition	Means 'putting together' and can apply to any work of art or photography that is arranged or put together using conscious thought.
Contrast	Is the representation of two elements of design in opposite ways. For example, areas of bright light in comparison to areas of dark.
Proportion	Refers to the dimensions of an object and relationships between height, width and depth.
Medium/Media	The material used to create a piece of artwork.
Observe	To draw or paint an object as accurately as possible from a viewpoint.
Still life	Describes artwork which often depict inanimate objects that are arranged in a particular composition.

3.

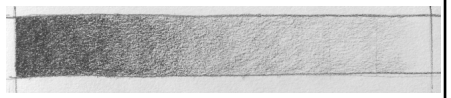
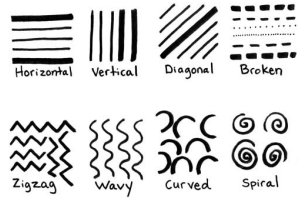
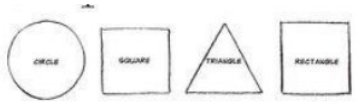
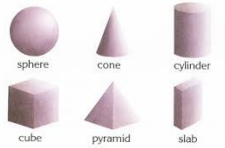
FORMAL ELEMENTS



WHAT?
The **Formal Elements** in Art are the parts used to make a piece of artwork. The art elements are **line, shape, space, form, tone, texture, pattern, colour** and **composition**.

WHY?
We use these words to help us describe and analyse the process and ideas of any piece of artwork.

HOW?
Artists use these as building blocks to create their artwork. All artworks are made using the formal elements.

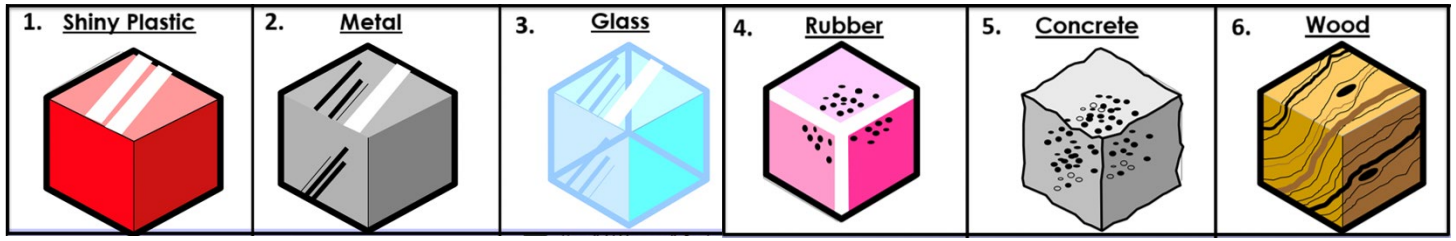
2. Formal Elements	Definition	Visual
Tone	Is the lightness or darkness of something. This could be a shade or how dark or light a colour appears. Tones are created by the way light falls on a 3D object. The parts of the object on which the light is strongest are called highlights and the darker areas are called shadows.	
Line	Is a mark made by a drawing tool or brush. It can be straight, curved, light dark, long/thin it can be used to show contours, movements, feelings, and expressions.	
Shape	Is an area enclosed by a line. It could be just an outline, or it could be shaded in. Shapes can be geometric or irregular.	
Form	Is something that is three-dimensional and encloses volume, having length, width, and height it can be geometric or organic.	

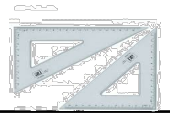
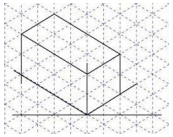
4. Processes	Definition
Blend	The process of fusing two tones or colours to transition from one to another or to create a new tone or colour.
Graduated	Is the technique of gradually transitioning from one hue to another, or from one shade to another, or one texture to another.
Cross-hatching	The layering of multiple lines to achieve tone.

D&T – Graphical Skills

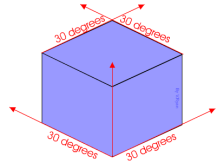
1. Key words	
1. Perspective	Creates the illusion of depth. When drawing in perspective objects appear to get further away into the distance.
2. Horizontal line	A straight line that goes from left to right or right to left.
3. Vertical Line	A straight line going from top to bottom or bottom to top.
4. Isometric	A method for drawing something in 3D. Isometric uses 30° angled lines to create the sides and top of a shape. Isometric grid paper can be used to help draw in an isometric view.
5. Oblique projection	A method of drawing something in 3D. Starting with a front view of a shape, 45° lines are drawn back from each corner of the shape. Lines have to be at 45° for it to be Oblique Projection. Squared grid paper can be used to help with Oblique Projection.
6. Vanishing Point	The point that all lines go back to when drawing in perspective. Lines appear to disappear into the vanishing point to add depth to drawings.
7. Horizon Line	A boundary at which the skyline meets with a flat surface of earth such as the ocean or the ground.
8. Rendering	Using pens, pencils, crayons or paints to add texture and tone to a drawing, making the drawing more realistic looking.
9. Chisel Point	A flat surface on the tip of a pen or pencil allowing you to draw thick or thin strokes depending on the angle of the pen/ pencil.
10. Aesthetics	Visual appearance of a product considering things such as colour, shape, texture and pattern.
11. Tone	How light or dark a colour is.

2. Rendering

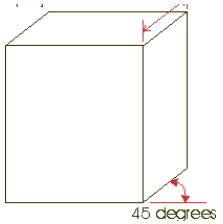


3. Equipment		
Set square		Used for measuring and drawing angles especially at 90°, 45°, 60°, or 30°.
Compass		An instrument for drawing circles and arcs and measuring distances between points.
Isometric paper		A type of drawing paper made of equilateral triangles or dots that is used to assist in drawing dimensions of shapes.

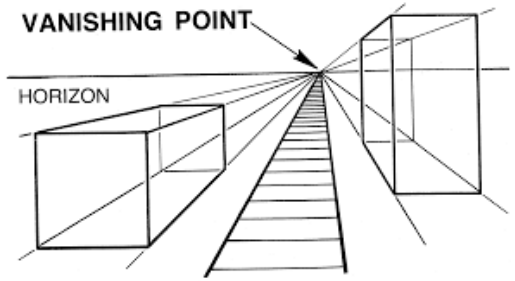
Isometric
Start from the edge of a shape and use 30 degree lines to add the side.



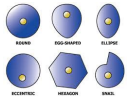
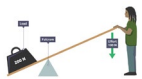
Oblique
Start from the front face of an object and use 45 degree lines to project backwards.



One point perspective
Start by drawing a horizon line and a vanishing point. Ensure all lines always go back to the vanishing point.



D&T - Mechanisms

1. Keywords	Definition
1. Mechanism	Mechanical devices change an **input** force and movement into a desired **output** force and movement. They can change magnitude and direction of force.
2. Cam 	Cam's are used to convert rotary motion in to reciprocating. A rod, known as a follower rests on the cam and rises and falls as the cam rotates.
3. Lever 	A lever is a mechanical device used to transmit and transform the effect of forces. The input force is transferred through the lever to move a load.
4. Linkage	Levers can be joined together to make linkages. Linkages can change an input motion + force into an output motion + force.
5. Pully and Belt	Pulleys use mechanical advantage, similar to levers, to lift up loads.
6. Gear train	*Gear trains* are when two or more gears are joined together. In a simple gear train, the *drive gear* causes the *driven gear* to turn in the opposite direction.

2. System Diagrams

A system is made up of several parts that work together as a whole, to carry out a function. They require and **input**, a **process** and an **output**. A mechanism can make a force bigger or smaller and can change movement direction. The diagram below shows the mechanical process for riding a bike.

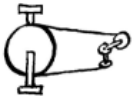
Input

Force and movement are the input into a mechanism.

Force is applied by the rider's feet.

Process

The mechanism converts or transmits the input force and movement.

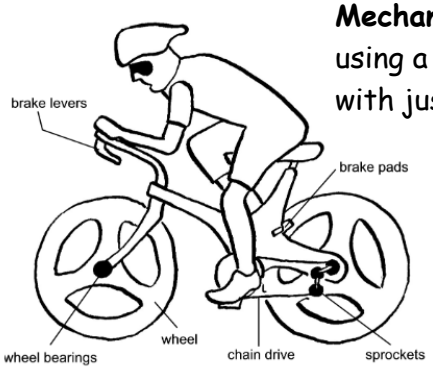


The chain and gear convert the force.

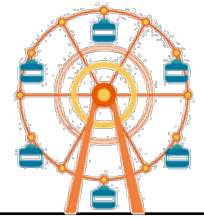
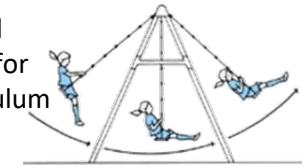
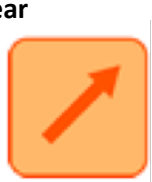
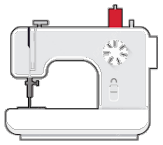
Output

The mechanism produces an output force & movement.

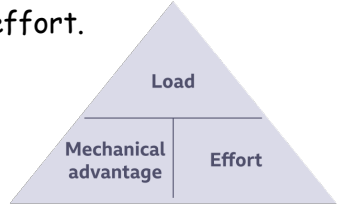
The wheels turn causing the bike to go forward..



3. Types of motion – There are 4 basic types of motion:

Rotary 	Moving in a circular direction, for example a wheel turning.	
Oscillating 	Moving back and forth in an ARC, for example a pendulum swinging.	
Linear 	Moving ONE way in a straight line for example using a paper trimmer.	
Reciprocating 	Moving back and forth in a straight line, for example a needle in a sewing machine.	

Mechanical advantage is the amount of help you get using a machine in comparison to doing something with just human effort.



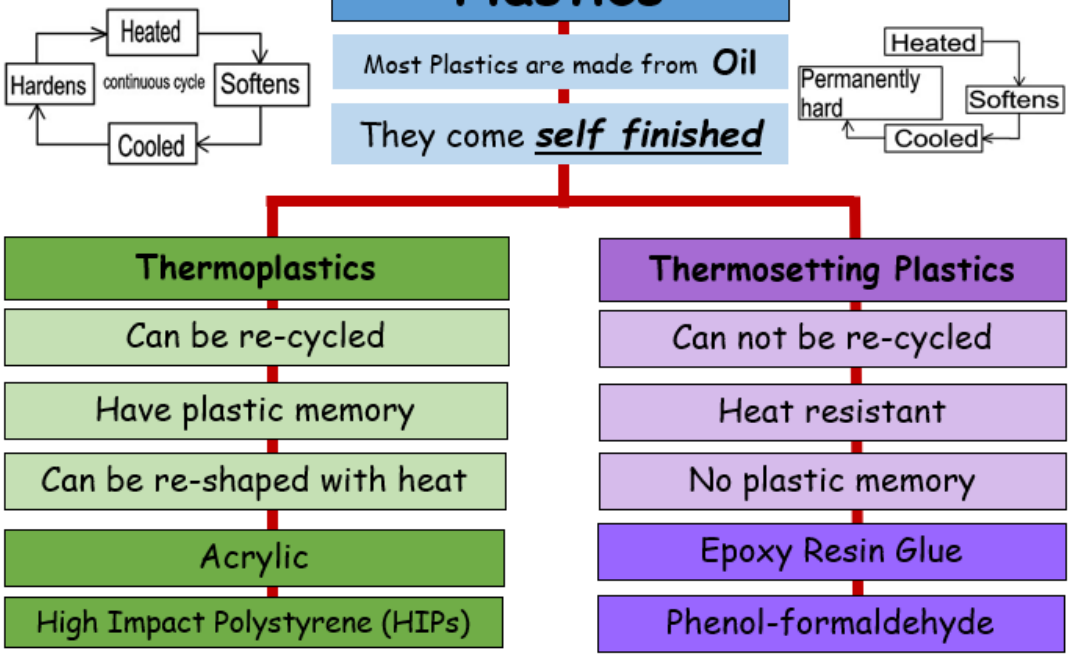
- **mechanical advantage** = load ÷ effort
- **load** = mechanical advantage × effort
- **effort** = load ÷ mechanical advantage

D&T – Plastics and Health & Safety

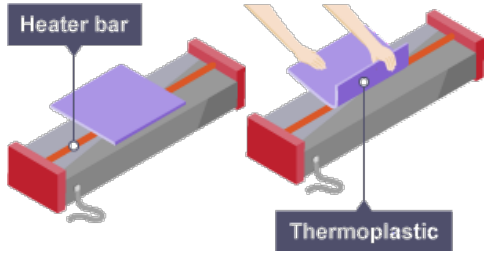
Key words	
1. Thermoplastic	A type of plastic that can be melted and reshaped many times. It becomes soft when heated.
2. Thermoset	A plastic that sets permanently when first heated. It cannot be melted or reshaped again.
3. Acrylic	A thermoplastic that is strong, lightweight, and glossy. Often used in signs, displays, and school projects.
4. Jig	A tool that helps you cut, drill, or shape materials accurately and repeatedly.
5. Marking out	The process of drawing lines or shapes on a material to show where to cut, fold, or drill.

Tools		
Try Square		Used for marking out and checking 90° angles on wood, metal or plastic.
Coping Saw		A saw used to cut wood and plastic. Its thin blade makes it ideal for cutting curved lines.
File		A file is a tool used to remove fine amounts of material from a piece of work.
Pillar drill		A large, fixed drilling machine used to make accurate vertical holes in materials like wood, metal, or plastic.

Know your safety signs



Line bending:
Once the acrylic is cut it can be bent. It needs to be heated to around 150 to 170 °C to bend without cracking, after cooling the bend produced remains the same. A Jig an be used to ensure the bend is accurate.



Process of converting oil to plastic	
Extraction	Raw materials, such as crude oil, are extracted from the ground.
Refined	The crude oil is transported to a refinery where it is cleaned and prepared for further processing.
Fractional Distillation	The oil is heated and separated into different parts, like petrol and the part used to make plastic.
Cracking	Big oil molecules are broken into smaller ones, which are useful for making plastic.
Polymerisation	The small molecules are joined together to make long chains called plastic.

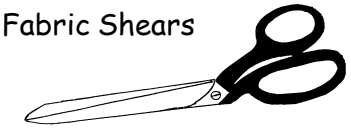
1. Key word	Definition
1. Fibre	A fibre is the smallest element of a fabric; it looks like a human hair.
2. Fabric	Textile fabrics are woven or knitted from **yarn**, which is made from **fibres.**
3. Seam	This is the join where two or more pieces of fabric meet. An unfinished seam leaves the edges open to fraying.
4. Renewable	This means that it can replaced by new growth so that it does not run out.
5. Fossil fuels	Non-renewable sources such as coal, coal products, natural gas, crude oil and petroleum products.
6. Sustainable	They are replaced at a rate equal to or greater than the rate at which they are used).
7. Bio-degradable	The ability for a material to be broken down naturally by the organisms in an ecosystem.
8. Degradable	They can be broken down into very small parts.
9. Standard components	These are a range of components that can be bought ready made such as zips, buttons and Velcro.

2. Equipment

Embroidery Scissors

Iron

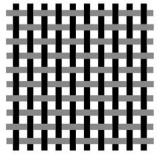
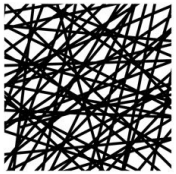
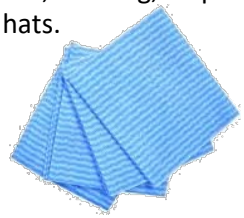
Fabric Shears



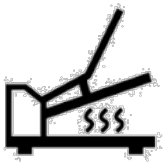
Needle

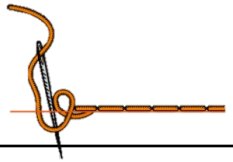
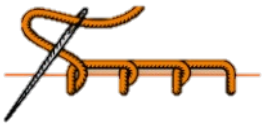
3. Fibres come from several sources and can be either:

Natural 	From plants or animals. 	**Plants** – Cotton and Linen. **Animals** - Silk and Wool.	They are renewable, sustainable and biodegradable. 
Synthetic 	Manmade from **fossil fuels** -coal, oil and gas.	Nylon, Polyester, acrylic.	Cannot be replaced, does not decompose and contributes to environmental problems if they end up in landfill.

Construction	Description	Properties and Examples
Weaving  woven	**Woven fabrics** are made by interlacing two sets of yarn at 90º angles to each other. The **weft** runs along the width of the fabric and the **warp** runs along the length of the fabric.	Woven Fabrics are **strong** and **stable** they are used to make: Clothing, curtains, furniture, blazers, sportswear. 
Knitting  knit	**Weft knitting** can be made by hand or machine using yarn that forms interlocking loops across the width of the fabric. **Warp knitting** is made by machine that forms vertical interlocking loops.	Knitted fabrics are **stretchy, comfortable** and **warm to wear** they are used to make: Clothing, such as jumpers and cardigans. 
Bonded  non-woven	**Bonded** fabric is made from webs of fibres that are bonded together with glue, heat, stitches or needle punching. **Felt** is made from matting wool fibres together using moisture, heat and pressure.	Bonded fabrics **do not fray** but are **weak,** they are used to make: Disposable cloths, clothing, carpets, jewellery and hats. 

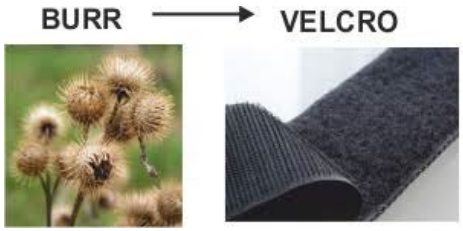
Adding Colour to Fabric:
Most fabrics start out as beige or white (loomstate).
There are 2 main ways to add colour to textiles – **Printing and Dying**

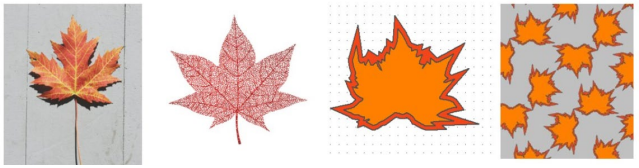
Printing 	Printing involves pressing a pattern directly on to the fabric. This can be done by machine or by hand.	There are many ways to do this: • Block Printing • Screen Printing • Roller Printing • Transfer Printing • **Sublimation Printing** 
Dyeing 	Fabric dyeing involves soaking fabric in a dye bath so that it absorbs the colour into the fibre.	There are many ways to do this: • **Tie dye** • Batik • Dip dye 

Embroidery	Description	Image
Running Stitch	This is a small even stitch that runs back and forth through the cloth, without overlapping.	
Back Stitch	Individual stitches are made backwards to the general direction of sewing. It is more durable than running.	
Cross Stitch	A type of counted embroidery that uses little crosses or 'x's to create a tiled pattern or design.	
Blanket Stitch	This stitch reinforces the edges of fabrics to prevent them from fraying. It is also used to provide a decorative finish.	

Applique
Applique is where fabric is sewn on to another piece of fabric using hand or machine stitches. It is mainly used to add decoration and colour, but can also have a function, for example to strengthen or repair the knee area on children's trousers.

Biomimicry
Biomimicry involves looking at nature for inspiration to solve engineering problems and to develop innovative new designs for products and architecture.





We can also be inspired by nature when considering the patterns and shapes of products.

Fairtrade
Cotton is one of the world's biggest crops. As many as **100 million rural households** (90 percent of them in lower-income countries) rely on cotton production for their livelihoods.

Fairtrade ensures that farmers in lower-income countries get a fair price for their produce. It also aims to improve pay, working conditions, rights for workers as well as more environmentally friendly and sustainable products.

FAIRTRADE FOUNDATION

Material Properties		
Cotton - Natural	Grows on a cotton plant in a ball called a boll, fibres are combed and spun into a yarn.	Takes dye well, soft, strong, absorbent, recyclable, used in clothing.
Polyester - synthetic	Can be woven or knitted, thick or thin and available in a variety of colours, can be blended with other fibres for better properties.	Strong and versatile, it holds colour and washes well.

Drama – Introduction to Drama

1. Skill	Description
Respect	Pay attention when others speak and stay positive about their contributions. Everyone is equally important.
Acting	Use physical and vocal skills to represent a character different from yourself.
Stay in Role	Stay focused on your character even when silent; maintain physical/vocal skills, avoid giggling or distractions.
Focus	Concentrate fully during performances, exercises, rehearsals, or games.
Effort	Work hard and always try your best, even if you don't get everything right.
Teamwork	Listen, cooperate, and work together to achieve group goals.

3. Staging Configuration	Description
Proscenium Arch	Traditional stage setup with audience directly in front.
Traverse	Audience on two sides, stage in the middle.
In the Round	Audience surrounds the stage.
Thrust	Stage extends into audience area, audience on three sides.

2. Technique	Description
Characterization	Make and maintain physical and vocal choices that suit your character.
Freezeframe	Actors create a still, silent image to highlight an important moment using physical skills.
Thought-track	A character speaks directly to the audience about their thoughts and feelings, while others remain in freeze-frame.

4. Role	Description
Director	Responsible for the whole production, ensuring all elements fit together, leading rehearsals with actors.
Actor	Uses physical and vocal skills to create characterization, helped by the director.
Stage Manager	Oversees all design elements of the production.
Lighting Designer	Designs lighting for the production, choosing colours, intensity, and areas to light or darken.
Costume Designer	Designs costumes suited to the character and production style, through research.
Set Designer	Designs the stage's appearance, including backdrops and props, coordinating with the lighting designer.
Marketer	Promotes the production via posters, social media, and programmes to encourage ticket sales.

Drama - Cowboys

1. Key Word	Meaning
Characterisation	Showing a different character using physical and vocal skills.
Background	Your character's past experiences and upbringing.
Rehearsal	Group practice to develop and share performance ideas.
Accent	Shows character's origin, class or status.
Tone	Emotion behind your character's speech.
Facial Expression	Showing emotion through eyes, mouth, eyebrows.
Pace	Speed of speech or movement.
Stance	How a person stands.
Gait	Walk style – narrow or wide?
Posture	Body position in sitting or standing.
Gestures	Communicating using hands, eyes, head, etc.
Pitch	How high or low the voice is.
Body Language	Emotion shown through sitting, standing, or body posture.

2. Technique	Description
Thought Tracking	Character speaks directly to audience about thoughts and feelings.
Cross Cutting	Allows audience to see two scenes side by side on stage.
Still Image	Actors freeze to create a frozen picture highlighting an important moment.
Projection	Using tummy muscles to make your voice fill the entire performance space.
Audience Awareness	Using positioning and clarity to improve the audience's experience.

3. Characters in Cowboys	Who They Are / Script Clues
Doc (Bar Manager)	Bored of the quiet bar life. Wishes for 'booze, birds and brawls'.
Jessie (Barmaid)	Young woman working in the saloon. Once saw Wyatt Earp shoot a man.
Sheriff Winter	Struggling with a group of troublemakers in the town.
Mrs. Winter	Wants to be independent again, misses her youth before marrying for money.

Key Vocabulary: Persuasive Language		
1	**Direct Address**	uses 'you' to speak to the reader directly
2	**Metaphor**	describing something as something else with similar qualities
3	**Oxymoron**	two adjacent words which are opposites
4	**Hyperbole**	exaggerated statements not meant to be taken literally
5	**Simile**	compares two things using 'like' or 'as'
6	**Exaggeration**	representing something as better or worse than it actually is
7	**Adjective**	describes a person, place or thing
8	**Rhetorical Question**	a question which requires no answer
9	**Emotive Language**	words chosen to evoke an emotional response
10	**Facts and Statistics**	real evidence used to prove a point, can be %
11	**Irony**	say the opposite of what you mean in order to be humorous

17. Biography – writing about real events of someone else's life

18.Autobiography – writing about real events of your life

12. Writing a Comparison

Compare – state the similarities and differences between the language and meaning of two texts When we are comparing two texts, we need to use the following vocabulary to show similarities/ differences:

- **Similarly**
- **Whereas**
- **Both**
- **In contrast**

13. Persuasive Structural features

To write an effective argument we can use:
Repetition – repeat words or phrases

Counterargument – acknowledge the other side to an argument

Short sentences – add impact

Triplets - listing three of the same language technique

14. Purpose

Non-fiction texts can have different purposes including:

- **Persuade** - convince the reader to believe something
- **Inform** - teach the reader new information about a topic
- **Explain** – tell the reader how to do something or how it works.

We change the language we use depending upon the purpose of the text.

15. How to write about non-fiction:

Point	The writer makes us think that…
Evidence	For example, …. One quote to show this is…
Technique	This is an example of the writer using a….
Explain	This suggests/shows/implies/connotes/indicates/ Evokes to the reader…. This is used to show that… The connotations of this are…
Relate	This links to … At the time that the text was written, …

16. When we read a text we make ASSUMPTIONS based upon what we read, this is called **INFERENCE.** Inference is an important part of reading because it is the way that we can determine what the writer thinks more deeply.

- **Non-Fiction** texts are based upon facts and real-life events.
- Some examples of Non-Fiction texts are:

Newspaper Autobiography Advert Biography Letter Review Advert Leaflet Instruction manual

19. Viewpoint – how different people/writers see a situation/topic

20. Summarise – state the key points of what has been read

English – The Victorian Poor & Dickens

1. Overview of the Victorian Era

Victorian Era – this is the period of **Queen Victoria**'s reign, from 1837 until her death in 1901. The 1800s was a period of rapid **industrial development** throughout Britain. It was characterized by the **growth of factories**, and the mass production of **manufactured goods.** There were many changes to how people lived because the population of England doubled between 1800 and 1850. **Cities** grew as people moved from the countryside to find work.

2. Living Conditions of the Poor

Previously, the rich and poor had lived in the same districts: the rich in the main streets; the poor in the service streets behind. Now, wealthier people moved out of town centres to the new **suburbs** – leaving the poor housed in the city centre. Much of the housing for the poor was demolished in order to make **factories**. This meant many of the poor were forced to **live on the street** and in **slums**.

3. Key information: why workhouses were built

In 1834, the government amended (changed) the **Poor Law** and set up a network of **workhouses**.

The **middle** and **upper** classes felt that too much money was given to supporting the poor in local parishes and that this encouraged laziness. The government decided to only offer relief (aid) to the poor if they **worked hard** in return for a place to stay. This was intended to be a harsh experience so that it reduced laziness and cut the costs of supporting the poor.

An economist called **Malthus** had published a theory about **population growth** which supported the changes to the Poor Law. He thought that there would never be enough food to feed the growing population, so it made sense to let the poor die and reduce the population. Charles **Dickens** did not agree with this and neither did Thomas **Barnardo.**.

4. Key Skills: Understanding Context

The **context** of a text is information such as: **where** and **when** it was written, **who** it was written by, and **what** was happening at the time (politically and socially), when it was **published**. All of these influence the **writer's purpose** and the **effect** it has on its audience. In order to understand a text it helps to understand something about the time s/he was writing.

5. Key information: Charles Dickens

Charles Dickens (1812 – 1870) Although Charles Dickens is best described as **middle class**, he was sympathetic to the suffering of the poor (**working class**), perhaps because he had some insight into their working conditions. When he was 12, he was sent to work in a factory because his father had been imprisoned for not paying a debt. This influenced the way he saw the working class as he realised that many worked hard for low wages: they were not all lazy and lacking moral standards.

6. Key information: what workhouses were like

People were reluctant to go to workhouses. This was because.

- families were separated
- men did harsh physical activities like oakum picking and stone breaking; women did all the cleaning and household duties
- punishments (for things like trying to escape) were public to deter others
- food was very basic

The programme about Workhouses and Children's Homes in Victorian Britain can be found at:
https://www.bbc.co.uk/programmes/p011t0t5

Food Preparation & Nutrition - A Healthy Balanced Diet

Key topics: The Eatwell guide, the 4 C's, nutrients, knife skills, using the oven and hob, combining ingredients, shaping, forming, testing for readiness, weighing and measuring, washing up and clearing away.

1. The 4 C's

Cooking	Cleaning	Chilling	Cross Contamination
Cooking kills bacteria. Food needs to be heated till steaming hot with the core temperature reaching 75°C for 30 seconds.	Cleaning kills bacteria. Wash hands before, during and after food preparation. Wash all work tops, utensils, chopping boards and equipment. Rinse fruit, salad and vegetables.	Chilling prevents microbial growth. Cool food to below 5°C as quickly as possible. Defrost food in the fridge.	Bacteria is transferred from one object to another. Keep raw meat and shellfish on the bottom shelf of the fridge. Keep raw and cooked food separate. Never wash raw meat.

2. Using a knife safely

Bridge

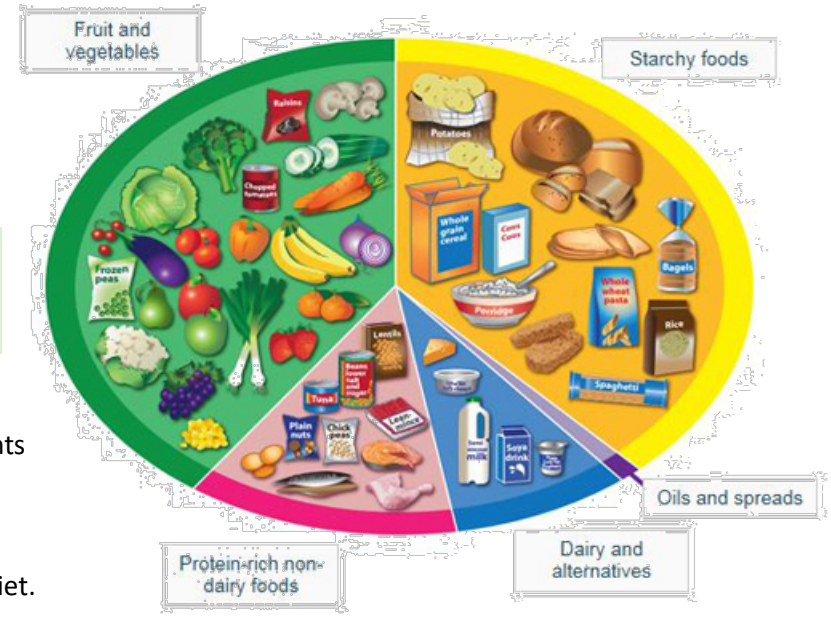
Claw

- Use a firm grip and even pressure.
- Use the bridge or claw to hold food whilst cutting.
- Always cut down towards the chopping board, never cut towards yourself.
- Carry a knife with the point facing downwards.
- Don't touch the knife blade.
- Always put a knife down, don't hand it to someone else.
- Never leave your knife soaking in the washing up bowl.
- Never catch a falling knife.
- Always hand your knife back in at the end of the lesson.

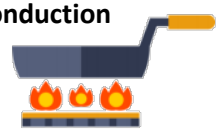
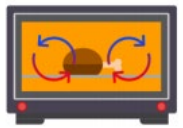
3. The Eatwell Guide

Watch this video for a recap.

This is the governments guideline showing a healthy balanced diet.



4. Heat Transfer and Cooking Methods

Conduction 	The transfer of heat from one object to another by **direct contact.** Metal is a good conductor of heat.	*Dry frying, stir frying*
Convection 	The transfer of heat energy by the movement of molecules, in **a liquid or in the air**, from a warm area to a colder area. Molecules rise as they heat up and then fall back down again as they cool creating convection currents.	*Baking, boiling, poaching and steaming.*
Radiation 	The process where heat and light waves strike and penetrate your food through electromagnetic energy. Heat energy in radiation is in the form of **infrared heat rays.**	*Microwave cooking, grilling and toasting.*

Food Preparation & Nutrition - A Healthy Balanced Diet

5	Nutrient	Function	Food sources
Macronutrients	**Carbohydrate**	This is the primary source of **energy** it also makes you feel full.	Bread, pasta, rice and potatoes.
	Protein	The bodies building block. Helps the body to **grow and repair** itself.	Nuts, eggs, fish, meat, beans and pulses.
	Fat	This is used as a secondary source of **energy**. It helps to **insulate** the body and maintains **brain function**.	Meats, cheese, butter, oils, nuts and seeds.
6 Micronutrients	**Vitamins** A B C D	There are many different vitamins and they play a vital role in keeping **skin**, **eyes**, **hair** and **blood healthy**.	Fruits and vegetables, meats, dairy, eggs, cereals, sunlight etc.
	Minerals Calcium, iron and sodium	Minerals help your body **grow**, **develop** and stay healthy. They help build **strong bones**, **teeth**, **blood** and **nervous systems**.	Dairy, vegetables, fish, meat, cereals etc.
Fibre		Prevent **constipation**, increase the feeling of **fullness**, reduce the risk of heart disease, diabetes and some cancers.	Wholegrain cereals, fruits and vegetables.
Water		Keeps you **hydrated**, controls body temperature, helps kidneys filter waste.	Fruit, vegetables, milk, soup.

7. Key Terms

1. Cross contamination	When bacteria is transferred from one object to another.
2. Diet	The type of foods that a person eats. Some people have special diets depending on their age or needs.
3. Nutrients	Nutrients are chemical compounds in food that are essential for the body to function properly and maintain health.
4. Macro nutrients	These are nutrients that are needed by the body in large quantities; they are Carbohydrates, Proteins and Fats.
5. Micro Nutrients	These are nutrients that are needed by the body in small amounts; they are vitamins and minerals.
6. Health	This defines your physical wellbeing. Good health indicates that you are free from illness.
7. Enzymic browning	An oxidation reaction that takes place in some foods, mostly fruit and vegetables, causing the food to turn brown.

8








- Base your meals on starchy foods.
- Eat lots of fruit and vegetables.
- Eat more fish.
- Cut down on saturated fat and sugar.
- Try to eat less salt- no more than 6g a day.
- Get active and try to be a healthy weight.
- Drink plenty of water.
- Don't skip breakfast.

9


Chopping board


Grater



Weighing scales

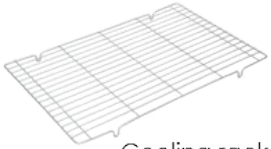

Sieve


Measuring spoons


Measuring jug


Peeler


Saucepan


Cooling rack


Colander


Frying Pan


Vegetable knife


Rolling pin

French - Introducing yourself and your family

Salut ! Ça va ? Moi, ça va très bien.	**1**	Hi! How are you? Me, I'm very well
Je m'appelle Elodie et j'ai douze ans.	**2**	I am called Elodie and I have 12 years old
Ma sœur s'appelle Françoise, elle a quinze ans et elle est heureuse.	**3**	My sister is called Françoise, she has 15 years old and she is happy.
Mon anniversaire est le premier janvier mais	**4**	I was born the 1st of January but
l'anniversaire de ma sœur est le vingt-cinq mars.	**5**	the birthday of my sister is the 25th March.
J'ai un gros chien noir	**6**	I have a big, dog black
J'adore le sport parce que je suis sportive mais	**7**	I love sport because I am sporty,
je n'aime pas courir car c'est fatigant.	**8**	but I don't like to run because it is tiring.
Dans ma famille il y a quatre personnes.	**9**	In my family there are four people
Il y a ma mère, mon père, ma sœur et mon beau-frère.	**10**	There is my Mum, my Dad, my sister and my stepbrother.
Je m'entends bien avec mon frère car il est sympa.	**11**	I get on well with my brother because he is nice.
Il a les cheveux noirs et les yeux bleus.	**12**	He has black hair and blue eyes.
Je pense qu'il est plus créatif que moi. Il aime le dessin.	**13**	I think that he is more creative than me. He likes art.

Geography - Becoming a Geographer

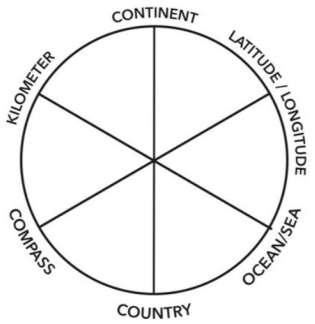
1. Three types of Geography	
Human	How human activity affects or is influenced by the earth
Physical	The natural world
Environmental	The processes which shape our world

2. Countries of the UK	England	Scotland	Wales	Northern Ireland
Capitals	London	Edinburgh	Cardiff	Belfast

3. Bodies of water around the UK	Atlantic Ocean	English Channel	North Sea	Irish Sea
Location from the UK mainland	West	South	East	West

4. Describing Places Key Terms	
Landmark	An object or feature which is easily seen and recognised from a distance, often used to establish our location.
Climate	The pattern of weather over time
Topography	The shape of the land
Biome	A large, naturally occurring major habitat
Settlement	A place people have established to live
Industry	Economic activity in a place
Population	The people who live in a place

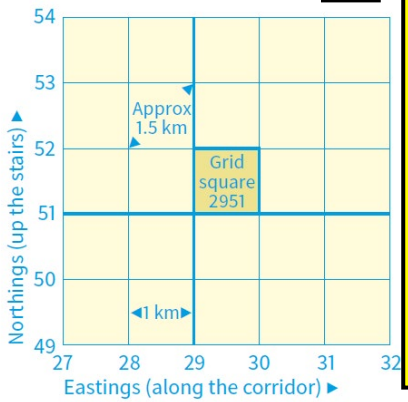
5 Describing Distribution



6. OS map key terms	
Ordnance Survey (OS)	The national mapping agency of Great Britain
Grid Reference	An exact location on a map found using northing and easting
Contour	Lines which joins places of equal height
Spot Height	The highest point in an area above sea level
Relief	The shape and height of the land

7

Four-figure grid references



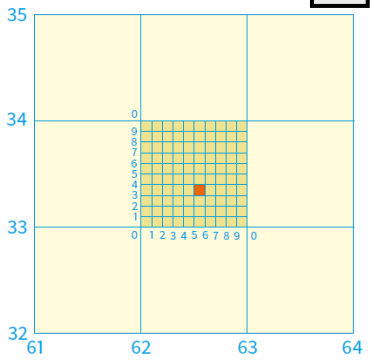
1. Used to identify a square on a map.
2. Always go East along the corridor and then North up the stairs.
3. Follow the Eastings to the bottom left of the square you want. Write this down.
4. Use the Northings to find the same corner. Write this number after the Easting. The one shown is 2951.

9. Using contours

- These are orange lines on an OS map with a number showing the height of the land
- They are drawn an equal distance apart
- The closer contours are together the steeper the relief
- The further apart contours are the gentler the relief

8

Six-figure grid references



1. Used to pinpoint an exact place on a map.
2. Write the four figure reference for the square with a space after each set of numbers. The one above is **62_33_**
3. Imagine the square is divided into 100 squares with 10 along each side
4. Go along the corridor and up the stairs and add the numbers in in this order. The example above is **625333**

10. SEE	
Social	To do with communities, people and how they live
Economic	To do with income, employment and businesses
Environmental	To do with the surroundings

Geography - Russia

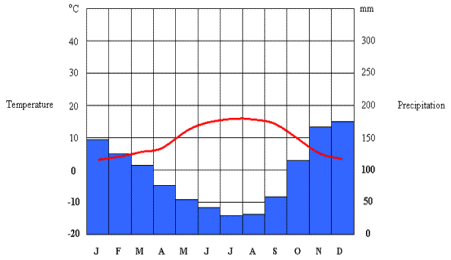
1. Facts about the location of Russia
Largest country in the world by area
In both Europe and Asia
Coastline on the Arctic and Pacific Oceans

2. Physical features key words	
Marsh	Low-lying area which is flooded in wet seasons or high tide and is waterlogged
Mountain	A large elevation rising to a summit
Mountain Range	A series of connected mountains
Peninsula	A piece of land almost surrounded by water or projecting into a body of water
Permafrost	Permanently frozen ground found in tundra and polar regions
Plain	Flat area at a low elevation
Plateau	Flat area at a high elevation
River	A large stream of water flowing in a channel to the sea, a lake or another river
Steppe	A large area of flat unforested grassland in SE Europe or Siberia
Volcano	A mountain or hill through which lava, rock, gas and ash has erupted

3. Climate Graphs

Climate graphs contain three pieces of information

- Months (x-axis)
- Temperature in degrees Celsius (line graph)
- Precipitation in millimeters (bar chart)



4. Biomes in Russia: Taiga
Coniferous forests
Found in the Northern Hemisphere in countries including including Russia, UK, Canada and Sweden.

5. Plant adaptations in the Taiga
Evergreen trees
Thick, resinous bark
Pinecones
Long, shallow roots
Trees have long, thin needles
Downward sloping and springy branches

7. Calculating population density

$$\frac{\text{Population}}{\text{Area}} = \text{Population Density}$$

8. Sectors of Industry	
Primary sector	Includes jobs in which people extract raw materials
Secondary sector	Includes jobs in which people make products out of raw materials often in factories
Tertiary sector	Includes jobs in which people provide a service for others
Quaternary sector	Includes jobs in which people research and invent things using advanced technology
Raw materials	Basic materials, e.g. wood or metal which can be used to make something

6. Population key words	
Population Density	Number of people living in a given area
Densely populated	Many people living in an area
Sparsely populated	Few people living in an area

9. Economy in Russia key words	
Commercial farming	Farming to make a profit
Subsistence farming	Farming to provide food for yourself – anything left after can be sold.
Livestock	Animals reared to make a profit

10. Levels of Development	
HIC	High Income Country
NEE	Newly Emerging Economy
LIC	Low Income Country

The flag of Russia

History - Early Migration

1. Key Words

1	**Immigration**	The action of coming to live permanently in a foreign country.
2	**Migration**	The movement of person or people from one place to another
3	**Push/Pull factors**	Push factors force people away/pull factors draw them towards
4	**Invade**	To enter a country or region with the aim of taking it over.
5	**Conquest**	Taking control of another region or country, usually by force.
6	**Pillage**	To steal from someone. Often this is done through violence.
7	**Source**	**Provides original information on an event, topic, or era** from that period in time
8	**Interpretation**	A Viewpoint of an historical event or person created using sources.
9	**Diversity**	Variety. This term is often used to describe the large number of people from different backgrounds or cultures who have settled in one place.

2. Narrative skill keywords

Narrative	Similar to a story, which contains causes of an event, explains the event and finishes with an outcome
Causes	The reasons the event happened
Consequences	Something that happens because of the event
Chronological	Putting events in order of time
Change and continuity	Studying what has changed over time and what has stayed the same. This allows historians to see trends and processes.

3. Iron Age Celts

Celtic people : Lived in Britain from around 1000BC to 43AD. The term includes lots of different tribes and peoples.

Druids: (priests) led religious rituals.

Tribal business was done at yearly assemblies. Many people lived in **hill forts.** The forts were surrounded by **walls** and **ditches** and warriors defended their people from enemy attacks. Around 800 BC people in Britain learned how to use **iron.**

4. Romans

The Romans established one of the biggest empire in history, covering around five million km. Their influence spread to Britain too.

What did they bring to Britain?

- **Society** – The army was made up of Hungarians, Germans, Gauls (French) and North Africans
- **Geography** –over 10,000 roads built including straight roads
- **Culture** – They introduced Christianity. Many of our clocks still use Roman numerals
- **Government** - introduced a strict system of law and government to rule the country

Septimius Severus was unique amongst the Roman emperors as he was the first black citizen to hold the highest office in the empire.

5. Anglo Saxons

Anglo Saxons originated from northern Europe and settled in Britain from around 410AD. The period of Anglo-Saxon rule is often known as the 'Dark Ages', but historians now question this term.

What did they bring to Britain?

- **Metalworkers** made iron tools, knives and swords.
- **Woodworkers** made wooden bowls, furniture, carts and wheels. **Potters** made pottery from clay.
- **Jewellers** made beautiful brooches, beads and ornaments from gold, gemstones and glass.

Seven Kingdoms	Mercia. Wessex, Essex, Northumbria, East Anglia, Kent, Sussex

6. Vikings

The Vikings arrived in Britain from modern-day Scandinavia. (**Sweden, Norway and Denmark**)They settled and established control, although there was plenty of conflict with the Anglo-Saxons.

Why did they invade?	Britain was rich with good land for farming and other useful raw materials, such as metals, as well as fine treasures.
Raiding Monasteries	Christian monasteries in Britain were easy to attack, because the monks in the monasteries had no weapons. Churches and monasteries kept valuable treasures

7. Timeline

800BC	Britain learned how to use iron
43AD	Romans first come to Britain
208 AD	Septimus Severus arrives in Britain leading battles against Scotland
410 AD	Romans leave Britain
449 AD	Anglo Saxons invade Britain
787 AD	The First Vikings arrive on the Dorset Coast
1016 AD	The Danish Viking **Canute** becomes king of England

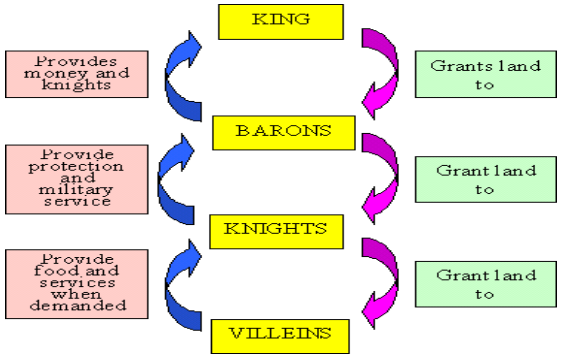
History - The Normans

1. The Succession Crisis	
Heir	Someone who is next in line to be king or queen
Viking	People of Scandinavia (Denmark, Norway, Sweden). The Vikings living in England were called Danelaw.
William Duke of Normandy	Ruler of a small country, at the top of France, called Normandy. He was a distant cousin of Edward the Confessor.
Harald Hardrada	King of Norway. He believed he could invade England and take the throne. His claim was based on a secret deal with another Viking called Magnus.
Edgar Aethling	Edward the Confessor's nephew - had royal blood but was too young.
Harold Godwinson	The most powerful Earl in 1066. He went on to succeed Edward the Confessor

2. Battle of Hastings	
Normans	People from Normandy
Infantry	Soldiers on foot
Cavalry /Knights	Soldiers on horses
Shield wall	Soldiers stood in a line with their shields overlapping to protect them
Feigned retreat	An army retreats to trick the other army in to breaking formation

3. Methods of Norman Control	
Feudal System	William's order of society which showed who was in charge of whom and who had to work for whom
Knights	Gentlemen-soldiers who were born into wealthy military status
Domesday Book	A book which contained a highly detailed survey of the whole of Norman England. It helped William know how much tax people should pay, solved legal arguments over land, and helped to raise an army.
Castles	Castles were a way for the Normans to protect themselves and send out a warning to people that they were here to stay and keep control.

4. Feudal System



5. Timeline	
1042	Edward the Confessor becomes King
1053	Earl Godwin dies and Harold Godwinson becomes Earl of Wessex
Jan 1066	Edward the Confessor dies
20th Sept 1066	Gate Fulford
25th Sept 1066	Battle of Stamford Bridge
14th Oct 1066	Battle of Hastings
1085-1086	Domesday Book created
1087	William Duke of Normandy dies

6. Key questions	
Why did William win the Battle of Hastings?	• **Luck** - The wind changed and allowed William's troops to cross the channel at a time when Harold's troops were away in the north. Harold was killed during the Battle. • **Tactics / Skill** - The Norman's clever trick of pretending to retreat caused the English to leave their strong position on the hill. • **Weapons / Forces** – Normans – Knights on horseback, archers. • **Leadership** - William was skillful, ambitious and determined to be King of England.
What impact did the Normans have on England?	• **Culture** – Christian country, Norman language used in government and laws, new castles and churches built. • **Power** – The King ruled through the Feudal system. Lords promised to be loyal and provide an army in return for land. Most land was given to Norman barons. • **People** – most ordinary people were peasant farmers who lived in small villages controlled by a Norman Lord. The Lord of the Manor protected them and they farmed his land. There were strict laws punishing hunting in the Royal forests.

1

2

Strong passwords:

- Minimum of 8 characters
- Mixture of upper and lowercase letters
- Include numbers / symbols
- Don't be something easy to guess

3

World Wide Web	Used to access data on the Internet using web pages
Internet	Worldwide connection of devices and information
Network packet	Information sent over the Internet
Web crawler	Collect information about websites, used by search engines
https://	Secure web page platform
IP address	Unique address of your PC on the Internet

4

Spam	When an individual or Company bombard us with emails
Phishing	When a scammer tries to scam money out of us
Cyberbullying	This involves any form of hurtful act that occurs online
Hacking	'Hackers' can make millions of pounds by stealing data from organisations and individuals

5

ONLINE SAFETY TIPS

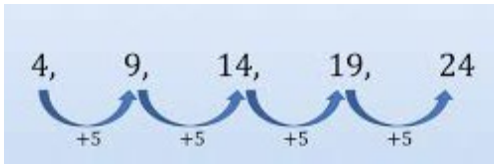
- Get your privacy settings correct!
- Do not post information online that you do not want the world to know.
- **NEVER** post private contact information online.
- Do not add someone as a friend who you do not know.
- Be careful of scams which can steal your data.
- Never meet anyone from the internet.
- **REPORT ABUSE** immediately.

Maths – Sequences & Algebraic Notation

1. Sequences Key Words

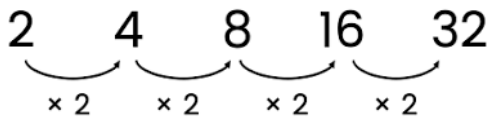
1.	**Term**	A single number or variable
2.	**Position**	The place something is located
3.	**Linear**	The difference between terms is the same
4.	**Non-linear**	The difference between terms is not the same
5.	**Arithmetic**	Add/subtract the same amount each time to get the next term
6.	**Geometric**	Multiply/divide the same amount each time to get the next term

2.



The third **term** in this **linear** sequence is 14.

3.



The fourth **term** in this **geometric** sequence is 16.

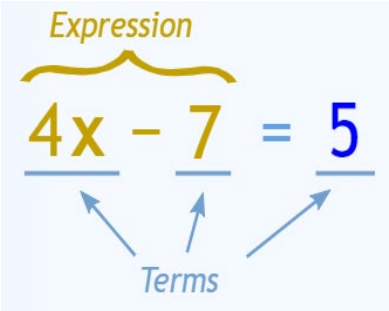
To get the next term in a **Fibonacci** sequence we add the previous two terms. This is an example of a non-linear sequence

0 1 1 2 3 5 8 13 21 34 ...

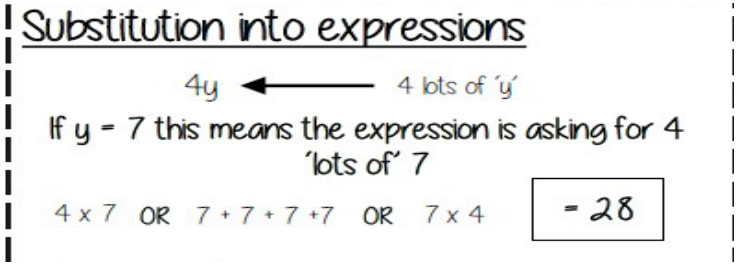
1. Algebraic Notation Key Words

1.	**Function**	A relationship between two variables (inputs and outputs (usually x and y))
2.	**Inverse**	Performing the opposite operation
3.	**Substitution**	Replacing letters with given numerical values
4.	**Term**	A **Term** is either a single number or a variable, or numbers and variables multiplied together
5.	**Expression**	A group of terms separated by operators

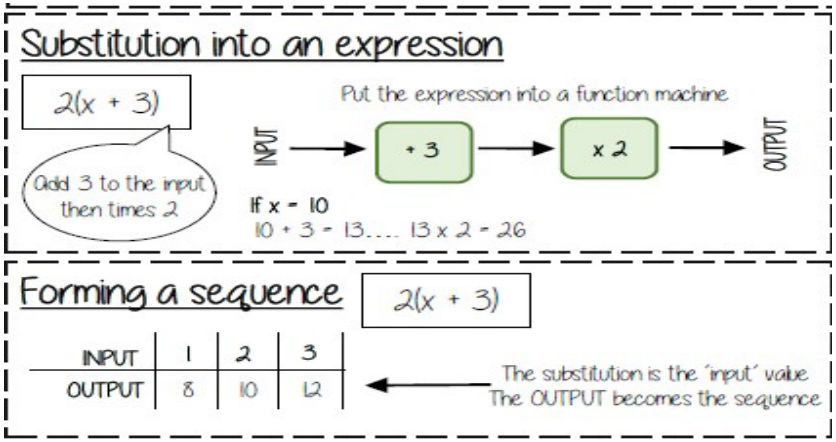
2. Equation



3. Substitution into expressions



4. Substitution into expressions



Sparx Codes

Sequences:
M991
M866
M981

Sparx Codes

Algebraic Notation:
M813
M83
M175

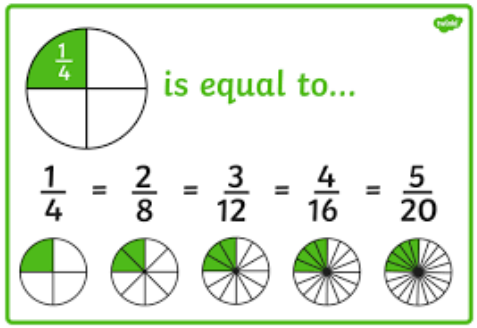
Maths – Equality and Equivalence & Place Value

1. Equality and Equivalence		
1.	**Equation**	Mathematical statement that two things are equal
2.	**Identity**	An identity is an equation that holds true for all values
3.	**Simplify**	Reducing an expression/fraction/problem into a simpler form
4.	**Solve**	To find the solution of an equation by performing inverse operations
5.	**Equivalent**	Expressions or fractions that are identical in value
6.	**Coefficient**	A numerical value that appears next to a variable or term in an equation or expression

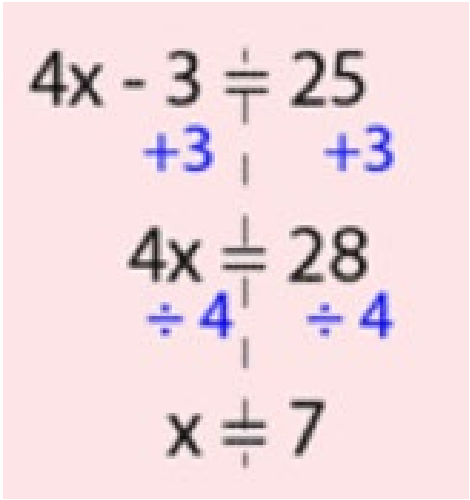
Sparx Codes

Equality & Equivalence
M531
M707
M634

2.



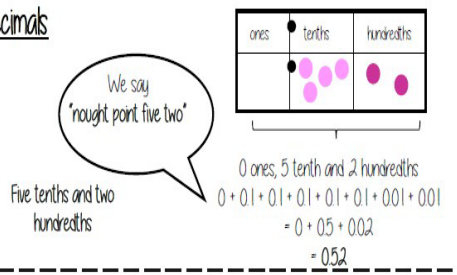
3.



5X + 6 = 2X + 3X + 3 + 2

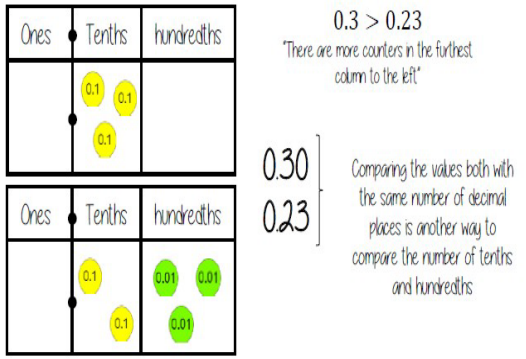
1. Place Value		
1.	< ≤	Less Than / Less than or equal to
2.	> ≥	More than / More than or equal to
3.	=	Is equal to
4.	≠	Is not equal to
5.	**Decimal Point**	Punctuation separating the 'ones' value from the tenths value
6.	**Decimal Place**	The position of a digit to the right of the decimal point
7.	**Decimal Round**	To shorten a number to something less accurate
8.	**Estimate**	An approximate calculation by rounding to make figures easier to perform operations with
9.	**Significant Figure**	The highest non-zero value in a number (furthest to the left)

3. Decimals



Comparing decimals — Which the largest of 0.3 and 0.23?

4.



5.

Round to 1 significant figure

370 to 1 significant figure is 400
37 to 1 significant figure is 40
3.7 to 1 significant figure is 4
0.37 to 1 significant figure is 0.4
0.00000037 to 1 significant figure is 0.0000004

Round to the first non zero number

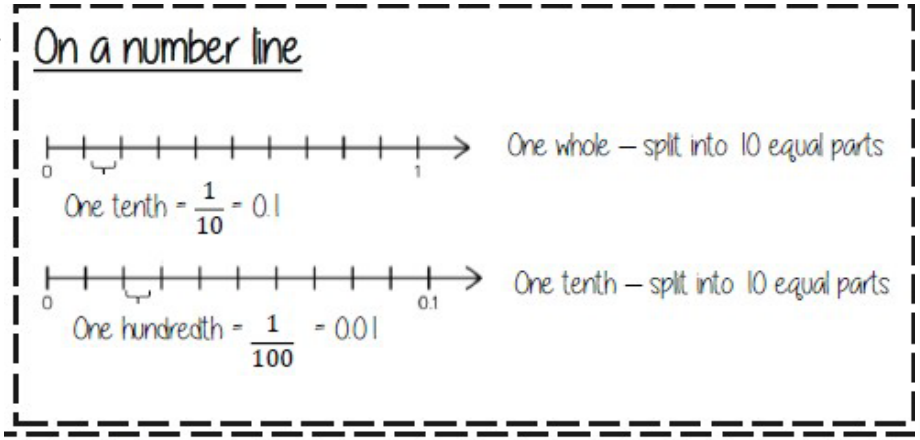
Sparx Codes

Place Value and Decimals
M431
M994
M131

Maths – Fractions, Decimals, Percentages

1. Fractions, Decimals, Percentages		
1.	**Fraction**	How many parts of a whole we have
2.	**Numerator**	The top number in a fraction
3.	**Denominator**	The bottom number in a fraction
4.	**Decimal**	A number with a decimal point separating units and tenths
5.	**Percentage**	A fraction of an amount out of 100
6.	**Recurring**	A decimal that repeats in a given pattern
7.	**Convert**	To change between the different forms of a number

2.



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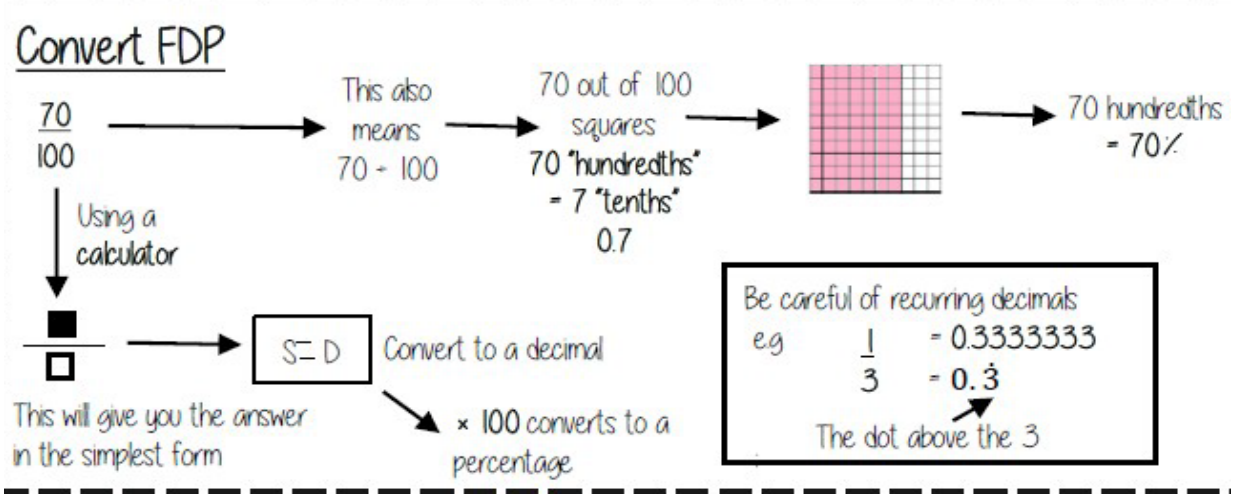

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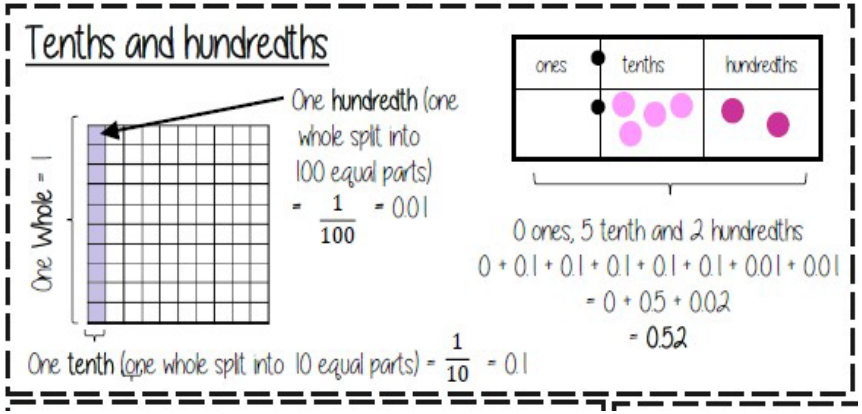


Sparx Codes
Fractions, Decimals, Percentages: **M958** **M264** **M922**

Foundations of Music – Vocals & Rhythm

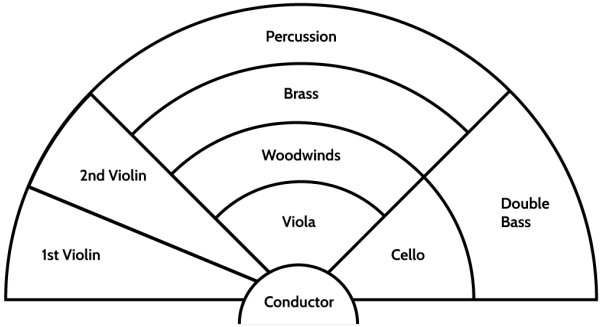
A. Key Words - Vocals	
Unison	Singing the same part together
Melody	The main tune in a song/piece of music
Harmony	Singing or playing higher or lower notes at the same time as the melody that sound good together.
A Cappella	Voices only/without instruments
Call & Response	Call and response is when a performer or group sings or plays a short musical phrase, and another performer or group answers with a musical phrase, like a musical conversation.
Solo	A complete song or portion of a song sung by one person
Ensemble	A group of musicians who perform together e.g. a rock band/an orchestra

B. Key Words – Musical Elements	
Melody	The main tune in a song/piece of music
Articulation	The way individual notes are played or sung e.g. smoothly (legato)/detached (staccato)
Dynamics	How loud or quiet the music is (volume)
Texture	Layers of sound used within a piece of music Monophonic – one musical layer Homophonic – Polyphonic - different parts weave in and out of each other
Structure	The overall layout/form of a piece of music
Harmony	The sound of two or more notes heard at the same time
Instrumentation	The musical instruments used in a piece of music.
Rhythm	A pattern of sounds of different lengths
Tempo	The speed of a piece of music

Soundtrap Introduction: Instruments of the Orchestra, Structure & Texture

A. Key Words	
Orchestra	A large ensemble performing on various musical instruments. Typically 80–100+ performers. Examples include The London Symphony Orchestra, BBC Symphony Orchestra, and Hallé Orchestra.
Conductor	Leads using a baton. Sets tempo and beats time. Adjusts dynamics, tempo, and mood.
Families/ Sections	Strings, Woodwind, Brass, Percussion.
Tuning Up	All instruments need to be in tune with each other – the Oboe plays note A for other instruments to tune to.
Sonority (Timbre)	Unique sound/tone quality. Descriptive terms: velvety, screechy, mellow, brassy, metallic, wooden, etc.
Pitch	Highness or lowness of a sound.

B. Layout of the Orchestra and Famous Conductors	
Famous Conductors	Sir Simon Rattle, Karina Canellakis.



C. Strings Section/Family	
Instruments	Violin, Viola, Cello, Double Bass, Harp.
Playing Style	Played with a bow (arco) or plucked (pizzicato).
Notes	1st Violins often carry melody; 2nd Violins accompany.
Position	Largest section at front of orchestra.

D. Woodwind Section/Family	
Instruments	Flute, Piccolo, Clarinet, Bass Clarinet, Saxophone, Oboe, Cor Anglais, Bassoon, Double Bassoon.
Construction	Originally wood; some now metal or plastic.
Playing Style	Flutes blown across lips. Clarinets use single reeds; oboes and bassoons use double reeds.

E. Brass Section/Family	
Instruments	Trumpet, Trombone, French Horn, Tuba
Playing Style	Blown into mouthpiece; pitch changed with valves/slides.
Features	Trombones use slides. Often play fanfares or ceremonial music.

F. Percussion Section/Family	
Tuned Percussion	Piano, Xylophone, Glockenspiel, Timpani, Celesta, Tubular Bells.
Untuned Percussion	Bass Drum, Snare Drum, Cymbals, Woodblock, Guiro, Triangle, Gong, Tambourine, Cabasa, Maracas.

Personal Development

Key Words		
1	Democracy	A way of running a country where people help make decisions and have a say by voting.
2	PSHE	Personal, Social, Health, and Economic education that helps us learn about life skills and wellbeing.
3	RSE	Relationships and Sex Education; it teaches how to build safe, healthy relationships and understand changes as we grow.
4	Citizenship	Learning about rights, responsibilities, laws, and being a good citizen in society.
5	Knowledge organiser	A one-page summary of key facts to help with learning and memory.
6	Parliament	The group of people who help make the laws in the UK.
7	Authoritarian	A type of government where one person or a small group has all the power and citizens have limited rights.
8	Rule of law	The idea that everyone, including leaders, must follow the law.

Key Facts	
1	Personal Development includes PSHE, RSHE, Citizenship, and Careers education.
2	British Values include democracy, the rule of law, individual liberty, and mutual respect and tolerance.
3	Parliament in the UK is made up of the House of Commons, House of Lords, and the Monarch.
4	Memory works in stages: short-term memory can hold 3-5 items briefly, while long-term memory can store information permanently.
5	The "Core Four" revision techniques are: self-quizzing, revision clocks, brain dumps, and flashcards.
6	A knowledge organiser helps students learn and recall key information for a topic quickly and clearly.
7	Democracy allows citizens to vote, speak freely, and have rights protected by law.
8	The CARE values—Community, Achieve, Respect, Encounter—link closely with British Values and classroom behaviour.

Key Virtues & Scripture			
1	Love of learning	Enjoying the process of gaining knowledge and growing in understanding.	This could look like asking thoughtful questions in class, trying your best in every subject, and enjoying new challenges.
2	Equality	Valuing and treating every person fairly, no matter their background or identity.	Speaking out against unfair treatment, including everyone in group work, and being respectful to all classmates.
3	Perseverance	Not giving up, even when things are difficult or take time.	Revising regularly even when it's tough, practicing a new skill, or continuing to be kind even when others are not.
“Be transformed by the renewing of your mind.” Romans 12:2			This scripture speaks to the core message of the Advent term, reminding us that personal growth starts with our thoughts and attitudes. By learning and reflecting, we become more thoughtful, responsible, and compassionate people.

Factors of Participation

1. AGE

Ageing affects people in different ways.
Children need to develop gross motor skills from an early age to become confident movers.
Adolescents experience a growth spurt that changes their physical development. Older people may experience decrease in flexibility and strength and weight gain
making participation in sport more difficult.

2. **GENDER**

There is a big drop in girls' participation in sport each week from the age of 11.
By age 14, boys are twice as active than girls.
Research shows that common barriers to participation for girls or women are due to: They don't see the relevance of sport in their lives
They dislike taking part with boys or men who play too aggressively
They are more motivated by having fun, making friends, and keeping fit than

3. SOCIO-ECONOMIC STATUS

Socio-economic status recognises that fact that income and wealth influence people's life ex- periences. For example, the more money you have, the more likely you are to participate in sport. This could be due to these following factors:

4. ETHNICITY

Over half of people in black and minority ethnic (BME) communities do no sport or physical activity.
One of the main reasons why BME communities have lower rates of participation is the lack of BME role model involved in leading and organising sport. For example, only 5% of coaches are from BME communities and only 7% of sports professionals (other than performers) are from BME communities.

5 DISABILITY

The participation of disabled people in sport is much lower than that of non-disabled people, for all age groups. This is due to:

- Physical barriers – e.g. a lack of adapted equipment
- Logistical reasons – e.g. a lack of transport or inappropriate communication
- Psychological reasons – e.g. lack of confidence and other people's attitudes

Injuries in Sport

1. Types of Injury

Injury	Description
Sprain	Damage to a ligament that crosses a joint.
Fractures	Broken bones caused by impact, twisting or repetitive stress on the bone.
Dislocation	Joint injuries that occur when the bones meeting at a joint are dislodged through impact, twisting or pre-existing weakness to that area
Concussion	Caused by violent impacts to the head
Abrasion	Damage to the skin caused by impacts and collisions
Torn Cartilage	Cartilage lines the end of bones and can be damaged through twisting actions
Overuse injuries	Caused by repetitive actions or poor technique.

2. How to Treat an Injury (RICE method)

R	Rest	Immobilise the injured part
I	Ice	Apply an ice pack or other cold object to the affected area
C	Compression	Ensure the ice pack or compress is firmly pressed against the affected area
E	Elevation	Raise the injured limb above the level of the heart

The **RICE** method helps to reduce swelling and pain! Used most commonly for soft tissue injuries or injuries where swelling is likely to occur.

3. Prevention of Injury

	Follow rules and apply them fairly
	Always use protective equipment. Ensure all protective equipment is in good condition

Classification of Skill

The classifications fit on a continuum...

Environmental influence

Closed ⟷ Open

1. Closed	2.Open
Where the environment always remains the same E.g. a darts throw The exact timing of the throw is down to the athlete, who is throwing the same weight dart in a similar each time	Where the environment is constantly changing E.g. a tackle in rugby. The timing and style of the tackle is heavily influenced by many factors including the ball carrier, the tackler's teammates and the position on the pitch

Difficulty

Basic ⟷ Complex

3.Basic	4.Complex
A skill the player finds easy and needs little concentration to do E.g. 400m race This skill has very few sub-routines	A skill that requires the performer's complete attention to do E.g. a somersault on a trampoline

Organisational Level

Low ⟷ High

5. Low organisational	6. High Organisational
A skill that can be split into sub-routines easily and each sub- routine can be practiced separately E.g. front crawl Sub-routines that can be practiced separately include: arm pull, breathing stroke, leg kick, tumble turn	A skill that isn't made up of sub-routines and needs to be practised as a whole skill E.g. A cyclist completes the action of cycling in one go This skill is almost impossible to breakdown

Types of Guidance

1. Visual Guidance 	• Demonstrations • Images • Videos • Observations	Example— demonstration to per- form a seat drop in trampolining.
2. Verbal Guidance 	• Coaching points • Feedback • Peer Feedback • Questioning	Example— A coach telling a trampolinist how to correct their position in a skill.
3. Manual Guidance 	When a performer is physically guided or supported by the coach/teacher.	Example— A trampoline coach supporting a front somersault.
4. Mechanical Guidance 	When a piece of equipment or an aid is used to help a performer learn and practise a skill.	Example— Using a hardness when learning somersaults in trampolining.

RE – Creation and Covenant

Key Words		
1	God	The one supreme being, who creates and sustains everything.
2	Revelation	The way in which God is made known to humans, which Catholics believe is most perfectly done through Jesus.
3	Literal sense	The meaning of the text as the author intended it to be; this is different to reading a passage literally which means accepting it as word-for-word truth.
4	Literary form	The style of writing used, for example a letter or a poem.
5	Creation	The act of bringing something into existence; or the universe and everything in it (which Catholics believe God created).
6	Creationism	The belief that the Bible accounts of creation are literally true.
7	Scientism	The belief that science can provide all the answers in life.
8	Prayer	The way in which humans communicate with God.
9	Stewardship	The duty to care for something. Catholics believe that God gave them the duty to care for the earth and everything in it.

Key Quotes		
1	Thus the heavens and the earth were completed in all their vast array… This is the account of the heavens and the earth when they were created, when the LORD God made the earth and the heavens. (Genesis 2:2-4)	
2	'Prayer is the raising of one's mind and heart to God' (Catechism of the Catholic Church)	

Key Facts	
1	The Bible is the holy book for Christians and contains **God's** word. It is split into the Old Testament and the New Testament. The Old Testament contains the history and faith of the Israelites.
2	Catholics do not read the Bible literally. Instead, they aim to understand the **literal sense** of the Bible (the message that **God** wanted to communicate with them).
3	Catholics believe that **God** is responsible for all **creation**. Genesis 1 teaches that **God** created over 6 days and rested on the 7th. This story helps to answer the questions of 'Where did the world and everything in it come from?' and 'Why are we here?'
4	Genesis 2 shows **God** creating harmony from chaos and **God** creates man by breathing life into him. Woman is created from man's rib. This story helps Catholics to answer the question 'What is our purpose?'
5	Catholics believe that there is no conflict between science and religion. They believe in the theories of the Big Bang and Evolution.
6	The Catholic Church teaches that we should try to reduce human suffering and increase friendship between all people through Catholic Social Teaching. Catholics believe they have a duty to care for the world and everything in it.
7	Catholics believe they have a duty of care for the world and everything in it (**stewardship**). Pope Francis describes stewardship as responding to 'the cry of the earth and the cry of the poor'.
8	**Prayer** is the way in which people communicate with **God**.

RE – Prophecy and Promise

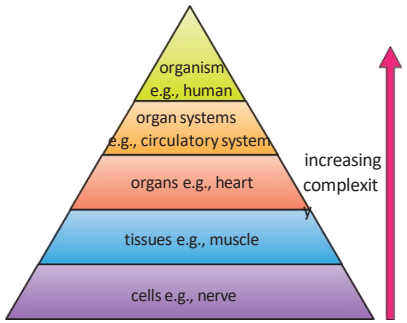
Key Words		
1	Revelation	The way in which God is made known to humans, which Catholics believe is most perfectly done through Jesus.
2	Scripture	The holy books (s) of a religion; in Christianity it is the Bible.
3	Tradition	Also known as apostolic tradition, these are actions and teachings from the original apostles passed on from one generation of bishops to the next.
4	Magisterium	From the Latin term, *magister*, meaning teacher or master.; it is the authority of the Church to teach.
5	Inspired	'God breathed'; the belief that the Holy Spirit guides an individual to write what is good and true.
6	Old Testament	The books of the first half of the Bible showing the creation of the world and God's relationship with the Israelites.
7	New Testament	The books of the second half of the Bible which tells the story of Jesus' life, ministry and death, and the establishment of the early Church.
8	Liturgy of the Word	The part of the Mass where Catholics are taught God's word from the Bible.

Key Quotes	
1	'For Sacred Scripture is the word of God inasmuch as it is consigned to writing under the inspiration of the divine Spirit.' (Dei Verbum 9)
2	'All scripture is breathed out by God and profitable for teaching…that the man of God may be complete, equipped for every good work.' (2 Timothy 3:16-17)
3	'they, as the true authors, consigned to writing everything and only those things which He wanted.' (Dei Verbum 11)

Key Facts	
1	The Bible is a form of **revelation** and has been divinely **inspired** which means they Holy Spirit guided human writers to write down the truth from God.
2	**Tradition** has developed teachings on the sanctity of life, the sacraments, the Creeds and Mass. **Tradition** is alive which means that as the Church grows, so does tradition.
3	The **Magisterium** is the teaching authority of the Church which was given to St Peter & the apostles who founded the early Church.
4	Catholics also use **scripture** in prayer, for example in the Rosary, which is connected to key events in the Gospels.
5	The Bible is like a library of books. It has around 40 different authors and each book has their own backgrounds and literally forms. Bible references are made up of book, chapter & verse.
7	The Tanakh (the Jewish Bible) and the **Old Testament** share many of the same books, however Jews and Christians arrange and interpret them differently.
8	The Catholic Church uses scripture as the foundation of the Mass. In the **Liturgy of the Word**, Catholics hear Bible readings that help them to feel closer to God and understand what God expects of them.

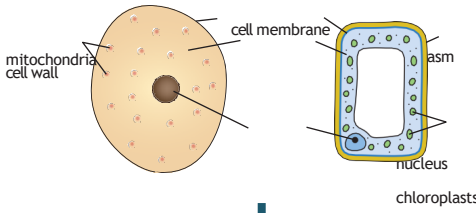
Science - Organisms

1. Levels of organisation



2. Plant and animal cells

- Tobe able to **observe** a **cell** we need to use a **microscope**, this magnifies the cell to a point to which we can see it
- Plant and animal cells have small structures inside known as **organelles**, each of these performs a certain role which allows the cell to survive

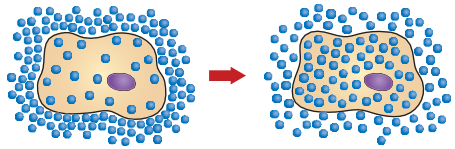


3. Specialised cells

- **Specialised cells** are designed to carry out a particular function, because of this they have specific features and adaptations to allow them to carry this out
- Both plant and animal cells can be specialised, with these specialised cells working together to help the organism to survive

4. Movement into and out of cells

- The process in which substances move into and out of cells is known as **diffusion**
- This occurs across the **cell membrane**
- During diffusion particles move from an area of high **concentration**, to an area of low concentration

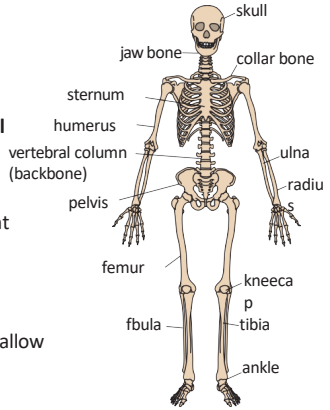


before diffusion — after diffusion

- Oxygen and nutrients enter the cell by diffusion, carbon dioxide and waste products leave

5. The skeleton

- The **skeleton** is made up of 206 **bones** which are a type of **tissue**
- Bones have a blood supply and are a living tissue
- The skeleton is part of the **muscular-skeletal system**
- The four main functions of the skeleton are:
  - **To support the body** – to keep you upright and hold **organs** in place
  - **Protect organs** – such as the skull protecting the brain
  - **Movement** – by working with muscles to allow you to move
  - **Making blood cells** – the **bone marrow** produces red and white blood cells



6. Muscles

- **Muscles** are a type of tissue which allows movement
- They pull on tendons which in turn pull on bones to allow movement
- Muscles like the triceps and biceps are known as **antagonistic muscle pairs**, they work together – as one contracts, the other will relax

7. Organs

- An organ is a group of tissues that have the same function
- They can work with other organs in an **organ system**, such as the respiratory system which uses organs like the heart and lungs to transfer oxygen around the body
- Vital organs are the organs that need to keep functioning for an **organism** to stay alive, e.g. the heart

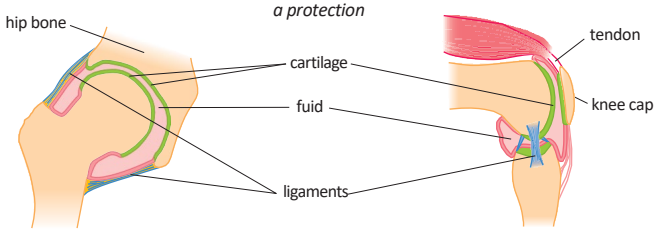
8. Movement

Joints occur between bones and allow movement, there are three main types of joints

Hinge	Ball and socket	Fixed
For back and forward movement, e.g. knees	*For movement in all directionse.g. hips*	*Do not allow movement, e.g. skull*

Joints have three main types of tissue:

Ligaments	Cartilage	Tendons
Connect bone to bone	*Coats the end of bones as a protection*	*Connects bone to muscle*

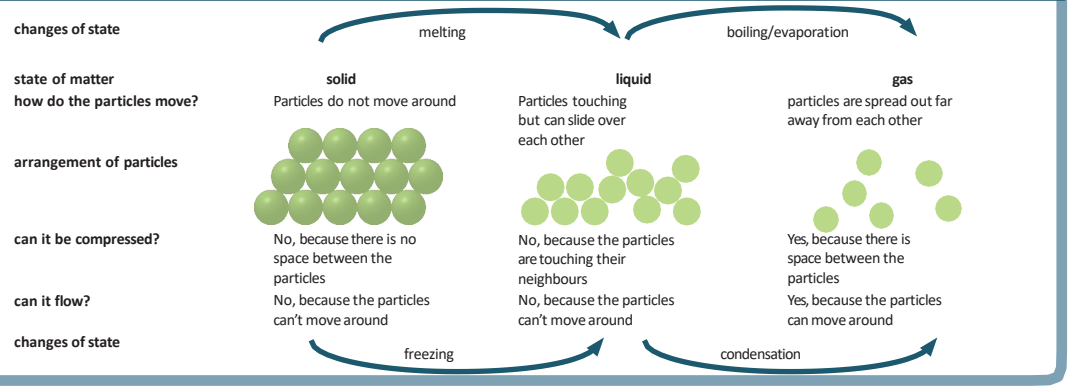


Keywords	Definition
Antagonistic muscle pair	Muscles that work together, but in opposition to one another
Bone	An organ that forms the skeleton of vertebrates
Bone marrow	The soft blood-forming tissue that fills the cavity of bones
Cartilage	Coats the end of bones as protection
Cell	The building blocks of all living things
Concentration	The density of particles in a stated volume

Diffusion	The process where substances move into and out of cells
Joints	Allow the movement between bones
Ligaments	Tissue that connects bone to bone
Microscope	Scientific apparatus used to observe objects too small for the naked eye
Muscular skeletal system	The organ system of muscles and bones that provide movement to an organism
Nucleus	Hold s the genetic information of the cell
Organ	A group of tissues that work together to perform a function

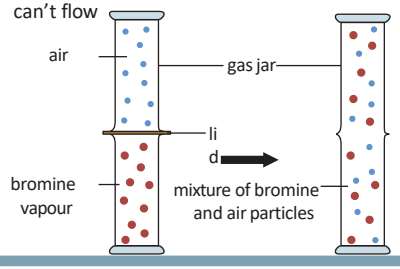
Organism	A living thing that has an organised structure of cells, tissues and organs
Organ system	A group of organs that work together to perform a certain function in an organism
Skeleton	The supporting framework of an organism
Specialised cells	Cells adapted to carry out a particular function
Tendons	Tissue that connects muscles to bones
Tissue	A group of the same cells carrying out a particular function

1. Changes of state



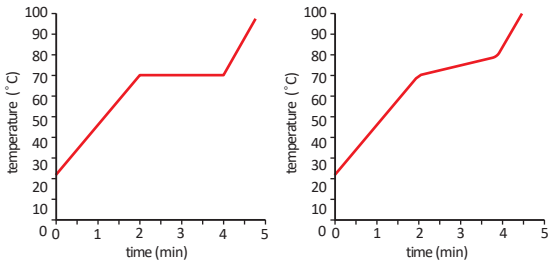
3. Diffusion

- **Diffusion** is the movement of particles from an area of high concentration (lots of the same particle) to an area of low concentration (not a lot of the same particle)
- It is a random process which does not need energy
- The speed of diffusion can be increased by:
  - A higher temperature
  - Smaller particles diffusing
  - A gas rather than a liquid
- Diffusion does not happen in a solid as the particles can't flow



2. Melting and boiling points

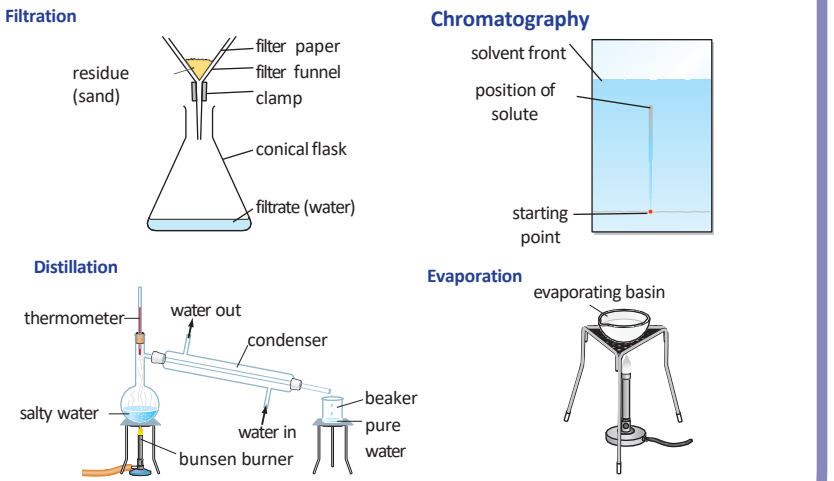
- The **melting point** of a substance is the temperature at which it turns from a solid to a liquid, or a liquid to a solid
- The **boiling point** of a substance is the temperature at which it turns from a liquid to a gas or a gas to a liquid
- **Pure substances** have a fixed (sharp) boiling or melting point, whereas **impure substances** have a range which appears as a diagonal line on a graph



4. Mixtures

- **Mixtures** are different **substances** which are together, they are not chemically bonded and so are easy to separate
- The substances which make up a mixture keep their own **properties** unlike those in a compound
- A mixture is an **impure** substance as it does not have a fixed melting point, instead it has a range
- A **solution** is a type of mixture which is made up of two parts
- A **solute** is the part which has dissolved in the solution
- A **solvent** is the liquid part which the solute has dissolved into
- The **solubility** of a substance is a measure of how much of it will **dissolve**
- Not all solutes will dissolve in all solvents
- Solutes which do not dissolve are known as **insoluble**
- Substances which do dissolve are known as **soluble**
- The **solubility** of a substance can be increased by increasing the temperature of the solution or by stirring the solution
- A **saturated solution** is one where the maximum amount of solute has dissolved in it, no more solute will be able to dissolve

5. Separating Mixtures



Keyword	Definition
Boiling point	The temperature a liquid turn into a gas
Chromatography	The technique for the separation of mixed substances in a solution
Condensation	When a gas cools and forms a liquid
Diffusion	The movement of particles from an area of high concentration to an area of low concentration
Dissolve	When a solid disappears into a liquid
Distillation	The technique of separation of a mixture of liquids
Evaporation	When a liquid is heated and forms a gas

Filtration	The technique of separating a solid and a liquid
Freezing	When a liquid cool and forms a solid
Impure substance	2 or more elements or compounds not chemically joined
Melting point	The temperature a solid turn into a liquid
Mixture	Different elements or compounds that are not chemically joined
Property	A characteristic or behaviour of a substance
Properties	A group of characteristics or behaviours of a substance
Pure substances	A substance made up of just 1 chemical element or compound

Saturated solution	A solution that cannot dissolve any more solute (solid)
Substance	Any element, compound, or mixture
Soluble	The property of dissolving
Solubility	The measurement of how much substance will dissolve in a given volume of liquid
Solute	The solid that is dissolved into a solution
Solution	The solid and liquid mixture. It consists of the solute and the solvent
Solvent	The liquid part of a solution

1. Energy

- **Energy** is needed to make things happen
- It is measured in **joules** or **kilojoules**

- The **law of conservation of energy** says that energy cannot be created or destroyed, only transferred
- This means that the total energy before a change if always equal to the total energy after a change

Energy can be in different energy **stores**, including:

- **Chemical** – to do with food, fuels and batteries
- **Thermal** – to do with hot objects
- **Kinetic** – to do with moving objects
- **Gravitational potential** – to do with the position in a gravitational field
- **Elastic potential** – to do with changing shape, squashing and stretching

2. Food and energy

- Food has energy in a chemical energy store
- Different foods contain different amounts of energy
- Different activities require different amounts of energy
- Different people need different amounts of energy depending on what they do each day

3. Power and energy

- **Power** is a measure of how much energy is transferred per second
- Power is measured in **watts** (W)
- Each appliance has it's own power rating to tell us how quickly it uses energy
- We can calculate power with the equation:

$$\text{power (W)} = \frac{\text{energy (J)}}{\text{time (s)}}$$

4. Non-renewable energy

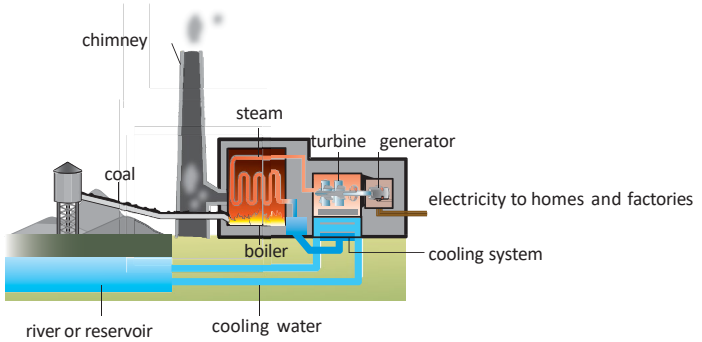
- **Non-renewable** energy cannot be replaced within your lifetime
- Non-renewable **energy resources** include coal, oil, natural gas and nuclear resources
- Coal, oil and natural gas are also known as **fossil fuels**, they release carbon dioxide when burned which contributes to global warming

5. Renewable energy

- **Renewable** energy can be replaced within your lifetime
- Renewable energy resources include wind, tidal, wave, biomass, solar, hydroelectric and geothermal
- Renewable energy resources do not produce much carbon dioxide, meaning that they have a smaller effect on global warming

6. Power stations

Thermal power stations burn coal, oil and natural gas, which are all non-renewable energy resources



Fuel is burned underneath water → Water is heated and turns into steam → The steam turns a turbine which turns a generator → Electricity is generated

7. Dissipation of energy

- We say that energy is **dissipated** when it is transferred to a nonuseful store, it cannot be used for what it was intended for
- Energy can be wasted through friction, heating up components or heating the surroundings
- **Efficiency** is a measure of how much of the energy has been used in a useful way, we can calculate this with the equation:

$$\text{efficiency (\%)} = \frac{\text{useful energy output}}{\text{energy input}} \times 100$$

Keyword	Definition
Chemical	The energy store referring to food, fuels, and batteries
Dissipated	When energy is transferred to a non- useful store
Efficiency	The measure of how much energy has been used in a useful way
Elastic potential	The energy store referring to objects changing shape, squashing, or stretching
Energy	Energy is needed to make things happen
Energy resources	A source from which useful energy can be extracted
Fossil fuels	Coal, Oil and Natural Gas. They are an example of a chemical energy store
Gravitational potential	The energy store referring to an objects position in a gravitational field
Joules	The unit of energy. It has the symbol J
Kinetic	The energy store referring to moving objects
Kilojoules	The unit of energy. There are 1000J in 1kilojoule (kJ)
Law of conservation of energy	Energy cannot be created or destroyed only transferred
Non-renewable	An energy resource that cannot be replaced in a human lifetime
Power	The measure of how much energy is transferred per second
Renewable	An energy resource that can be replaced in a human lifetime
Thermal	The energy store referring to hot objects
Watts	The unit of power. The symbol is W

THE CORE FOUR

How to Create Flash Cards

1. Identify Knowledge

- What are you creating flashcards on?
- Do you have your knowledge organiser?
- Use your book to look at previous misconceptions from whole class feedback.

2. Colour Coding

- Use different coloured flash cards for different topics. This helps with organisation, NOT recall.

3. Designing

- 1 Question per flash card - make them concise and clear
- Use a one-word prompt, so that you can recall as much as you can
- No extended answer questions
- Number your cards for self-quizzing.

4. Using

- Write your answers down, then check, or say your answers out loud. This clearly shows the gaps in your knowledge.
- Do not just copy and re-read.
- Shuffle the cards each time you use them.
- Use the Leitner system to use flash cards every day.

5. Feedback

- How have you performed when you look back at your answers?
- Is there anything you need to revisit in more detail?
- Is your knowledge secure? If so, move on to applying knowledge in that area in specific extended exam questions.

Brain Dumps

1. Identify Knowledge

- Identify the knowledge / topic area you want to cover.

2. Write it Down

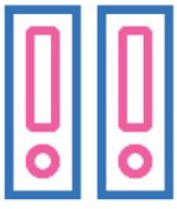
- Take a blank piece of paper/white board and write down everything you can remember about that topic (with no prompts)
- Give yourself a timed limit (e.g 10 minutes)

3. Organise Information

- Once complete and you cannot remember any more, use different colours to highlight / underline words in groups.
- This categorises / links information

4. Check Understanding

- Compare your brain dump to your Knowledge Organiser or book and check your understanding.
- Add any key information you have missed (key words) in a different colour.



5. Store and Compare

- Keep your brain dump safe and revisit it.
- Next time you attempt the same topic, try and complete the same amount of information in a shorter period of time or add more information.

THE CORE FOUR

Revision Clocks

1. Identify Knowledge

Select a topic you wish to revise. Have your class notes, knowledge organiser or revision books ready.

2. Designing

You can make your own revision clock by drawing a clock in the centre of a page and dividing it into 12 chunks. You can also use an existing template from your teacher, or one you can find online.

3. Manageable Chunks

Organise your revision notes into 12 sub-topics and make brief notes for each sub-topic into one of the segments on the page, creating manageable chunks of information. Combine text with images to help retain the information.

4. Using Revision Clocks

Revise each segment for 5 minutes. Turn the clock over and recite the sections out loud or ask someone to quiz you.

Alternatively, you can revise certain sections for 5 minutes and use a blank revision clock with headings, recall as much information as you can in the segments.

5. Check Understanding

How have you performed when you compare you answers to what you have written? Is your knowledge secure?

Remember to repeat the process regularly, using different techniques to answer the questions.

Put it somewhere visible for you to use again.

Self Quizzing

1. Identify Knowledge

- Identify knowledge / content you wish to cover

2. Review and Create

- Spend around 5 - 10 minutes reviewing content (knowledge organisers / class notes / textbook.)
- Create 10 questions on the content (if your teacher has not provided you with questions already)

3. Cover and Answer

- Cover up your knowledge and answer the questions from memory.
- Take your time and where possible answer in full sentences.

4. Self Mark and Reflect

- Go back to the content and self-mark your answers in green pen.

5. Next Time

- Revisit the areas where there were gaps in knowledge and include these same questions next time.