Thomas Estley Community College
Year 8 Spring Term
Knowledge Organiser

What are Knowledge Organisers?

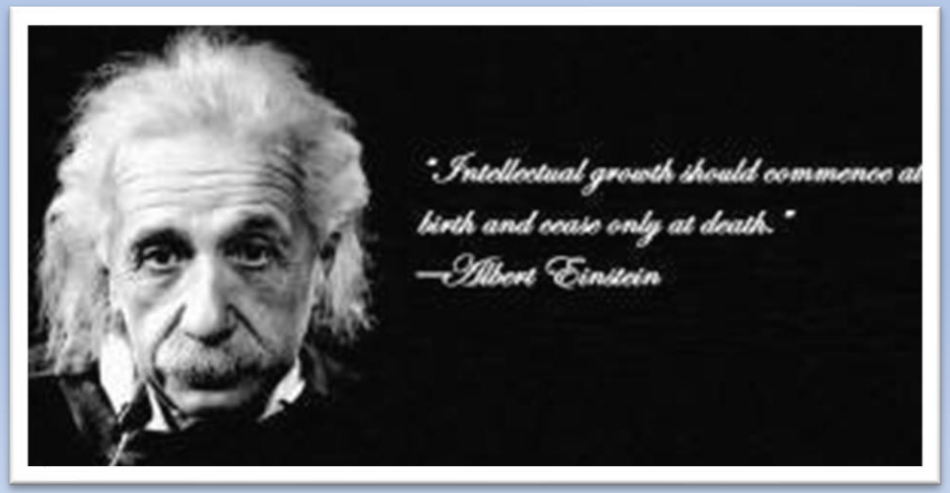
A knowledge organiser is an easy way that each subject can summarise the most important information. Each subject section will include key terms, short explanations, glossary words, diagrams etc making it clear to the student as to what is essential to learn. Each grid has an overall theme and these vary according to the subject being taught.

It will be the students responsibility to keep the knowledge organisers safe and refer to them over the whole academic year.

How will these be used at Thomas Estley?

At Key stage 3, you will be given a knowledge organiser each term. You need to keep these safe in your learning packs that you were provided with at the start of the academic year.

Your subject teachers will use these in a variety of ways, for both class work, remote learning opportunities and homework. They will be used to help with revision for class quizzes and retrieval practice activities. They will also be used for flip learning activities, where subject teachers will ask you to learn some information and then go in to it in more detail in class.



SUCCESS
THOMAS ESTLEY COMMUNITY COLLEGE

Revision Tips and Tricks!

Record It

Record yourself on your phone or tablet reading out the information. These can be listened to as many times as you want!

Teach it!

Teach someone your key facts and the get them to test you, or even test them!

Flash Cards

Write the key word or date on one side and the explanation on the other. Test your memory by asking someone to quiz you on either side.

Back to front

Write down the answers and then write out what the questions the teacher may ask to get those answers.

Hide and Seek

Read through your knowledge organiser, put it down and try and write out as much as you can remember. Then keep adding to it until its full!

Sketch it

Draw pictures to represent each of the facts or dates. It could be a simple drawing or something that reminds you of the answer.

Post its

Using a pack of post-it notes, write out as many of the keywords or dates as you can remember in only 1 minute!

Practice!

Some find they remember by simply writing the facts over and over again.

Read Aloud

Simply speak the facts and dates out loud as you're reading the Knowledge Organiser. Even try to act out some of the facts – it really helps you remember!

Thomas Estley Community College
Year 7 Autumn Term
Knowledge Organiser

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	masculine	feminine		
Yo soy I am **Mi hermana menor es** my younger sister is **Mi hermano mayor es** my older brother is **Mi madre es** my mother is **Mi padre es** my father is	alto [tall] bajo [short] bueno [good] delgado [slim] feo [ugly] fuerte [strong] gordo [fat] guapo [handsome] musculoso [muscular] aburrido [boring] antipático [mean] divertido [fun] generoso [generous] malo [bad] simpático [nice/friendly] terco [stubborn]	alta [tall] baja [short] buena [good] delgada [slim] fea [ugly] fuerte [strong] gorda [fat] guapa [pretty] musculosa [muscular] aburrida [boring] antipática [mean] divertida [fun] generosa [generous] mala [bad] simpática [nice/friendly] terca [stubborn]	**Tengo el pelo** I have…hair **Tiene el pelo** s/he has…hair **Tengo los ojos** I have… eyes **Tiene los ojos** s/he has… eyes	**castaño** [brown] **moreno** [dark brown] **negro** [black] **pelirrojo** [red] **rubio** [blonde] **azules** [blue] **marrones** [brown] **verdes** [green] **negros** [black]
			Me llamo I am called / I call myself… **Se llama** s/he is called	
			[**no] llevo** [I don't] wear [**no] lleva** [s/he doesn't] wear]	**gafas** [glasses] **bigote** [a moustache] **barba** [a beard]

Year 7 Spanish
Sub-Unit 3 sentence builder

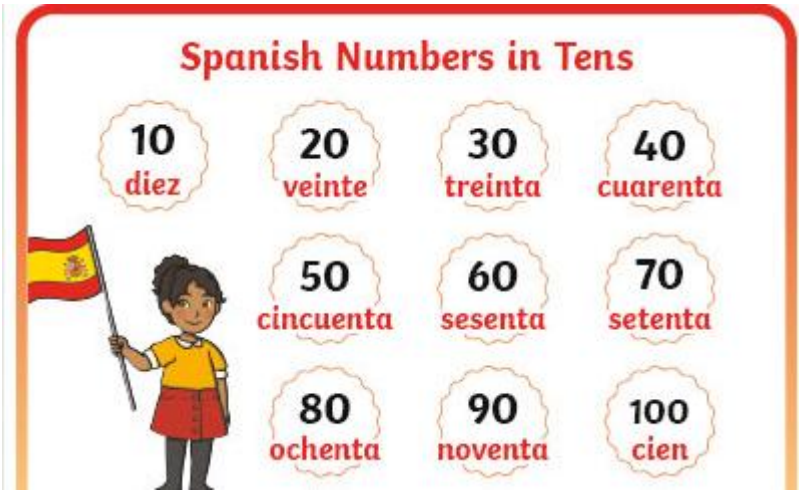
Questions

¿Cómo eres? What are you like?

¿Cómo es…..? What is ….. like?

¿Cuántos años tienes? How old are you?

¿Cuándo es tu cumpleaños? When is your birthday?



Grammar

- Infinitive verbs are verbs in their base form
- In Spanish the verb endings change so we know who we are talking about

Masculine and feminine
Remember that adjectives which end in O in the masculine form end in A in the feminine form

Tener	To have
Tengo	I have
tienes	You have
Tiene	He/she has

Ser	To be
Soy	I am
Eres	You are
es	He/she is

Llamarse	To be called
Me llamo	I am called
Te llamas	You are called
Se llama	He/she is called

En mi familia tengo
In my family I have…

Hay cuatro personas en mi familia
There are four people in my family

Me llevo bien con…
I get along well with…

Me llevo mal con… I get along badly with…

Year 7 Spanish unit 4 sentence builder

mi abuelo - my grandfather
mi padre my father
mi tío my uncle
mi hermano mayor
mi hermano menor
mi primo
mi abuela - my grandmother
mi madre - my mother
mi tía my aunt
mi hermana mayor – my older sister
mi hermana menor my little sister
mi prima - my cousin

Me gusta mi……. porque es…
I like my _____ because he is…

“Mi padre” es muy/ bastante
My dad is very/quite …

“Mi padre” también es un poco
My dad is also a bit …

alto [tall]
bajo [short]
bueno [good]
delgado [slim]
fuerte [strong]
gordo [fat]
guapo [handsome]
antipático [mean]
divertido [fun]
generoso [generous]
inteligente [clever]
simpático [nice/kind]
terco [stubborn]

Me gusta “mi _____” porque es…
I like my _____ because she is…

“Mi madre” es muy/bastante
My mum is very/quite …

“Mi madre” también es un poco
My mum is also a bit

alta [tall]
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Questions

Year 7 Spanish
Sub-Unit 4 knowledge organiser

¿Cómo eres? What are you like?

¿Cómo es…..? What is ….. like?

¿Cómo es tu familia? What is your family like

¿Cuántos años tienes? How old are you?

¿Cuándo es tu cumpleaños? When is your birthday?

Grammar

- Infinitive verbs are verbs in their base form
- In Spanish the verb endings change so we know who we are talking about

Tener	To have
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Ser	To be
Soy	I am
Eres	You are
es	He/she is

Llamarse	To be called
Me llamo	I am called
Te llamas	You are called
Se llama	He/she is called

P2 Infinity
Knowledge organiser

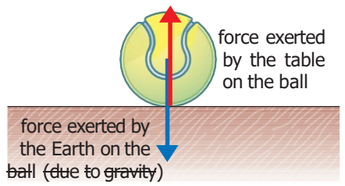
Activate
Question • Progress • Succeed

What is a force?

- A **force** can be a **push** or a **pull**
- A force is measured in **Newtons** (N)
- We measure forces with a **newton meter**
- Forces explain why objects will move, change direction and change speed

- Forces always act in pairs, we call these **interaction pairs**

e.g. the tennis ball exerts a downward force of **weight** onto the table, the table exerts an equal and opposite reaction force onto the ball



Types of forces

- **Contact forces** act when two objects are physically touching
- **Air resistance** and **friction** are examples of contact forces

- **Non-contact forces** act when two objects are physically separated (not touching)
- Examples of non-contact forces include **gravitational force** and magnetic forces
- We call the region where an object experiences a non-contact force a **field**, examples of these include gravitational fields and magnetic fields

Gravity

- **Gravity** is a non-contact force that acts between two objects
- **Gravitational force** pulls you back to Earth when you jump
- The size of the gravitational force depends on the mass of the two objects and how far apart they are

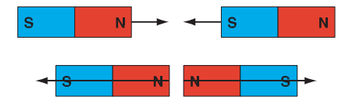
- **Weight** is the downward force caused by gravity acting upon the mass of an object, it is measured in Newtons (N)
- **Mass** is the amount of matter within an object, whereas weight is the downward force of the object, we measure mass in **kilograms**
- We calculate weight with the equation:

$$\text{weight (N)} = \text{mass (kg)} \times \text{gravitational field strength (N/kg)}$$

- The value of the gravitational field strength can vary, so although a person's mass would be the same on different planets, their weight would not be

Magnets

- A **magnet** has two poles, a north and a south pole
- North poles **attract** south poles
- South poles **attract** north poles
- South poles **repel** south poles
- North poles **repel** north poles



- **Magnetic materials** will experience a magnetic force when placed near a magnet, this is a type of non-contact force as the materials do not have to touch for the force to be apparent
- The three magnetic metals are iron, nickel and cobalt

Balanced and unbalanced forces

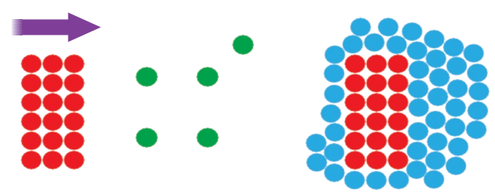
- When forces acting on an object are the same size, but acting in different directions, we say that they are **balanced**
- When forces are balanced, the object is either not moving (stationary) or moving at a constant **speed**

- When the two forces acting on an object are not the same size, we say that the forces are **unbalanced**
- When forces are **unbalanced**, the object will either be in **acceleration** or **deceleration**
- The **resultant force** is the difference between the two unbalanced forces

Friction and drag

- **Friction** is a force which will slow down a moving object due to two surfaces rubbing on one another
- The greater the friction, the faster an object will slow down, or the greater the force it will need to overcome the force of friction. For example, it is easier to push a block on ice than on concrete, as the ice is smoother and causes less friction

- When an object is moving through a fluid, either liquid or gas, the force which slows it down is known as **drag**
- The fluid particles will collide with the moving object and slow it down, meaning that more force is needed to overcome this
- Both drag and friction are **contact forces** as the two surfaces in friction, and the object and fluid particles in drag, come into contact with one another
- Both drag and friction are forces so they are measured in **Newtons** (N)



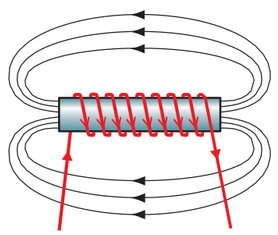
A solid moves through a gas.

A solid moves through a liquid.

Electromagnets

- **Electromagnets** are made by wrapping a coil of wire around a magnetic **core**
- Electromagnets only work when electricity is flowing through the coil, which means that they can be turned on and off
- Electromagnets are also stronger than **permanent** magnets
- The electromagnet will produce the same magnetic field shape as a bar magnet

iron core with current on



- You can increase the strength of an electromagnet by:
  - Increasing the number of turns on the coil around the core of the electromagnet
  - Increasing the current which is flowing through the coil of wire
  - Using a more magnetic material for the core, e.g. iron rather than aluminium

Key terms

Make sure you can write definitions for these key terms.

air resistance, atmospheric pressure, contact force, drag, equilibrium, extension, friction, linear relationship, moment, newton, incompressible, stress, resultant force

C2 Acids and alkalis
Knowledge organiser

Activate
Question • Progress • Succeed

Chemical reactions

- A **chemical** reaction is a change in which atoms are rearranged to make new substances
- A **reversible** reaction is one where the products can react to get back the substances which you started with, most chemical reactions are not reversible
- You can look for signs that a chemical reaction has taken place such as flames, smells, heat change, a loud bang or gentle fizz

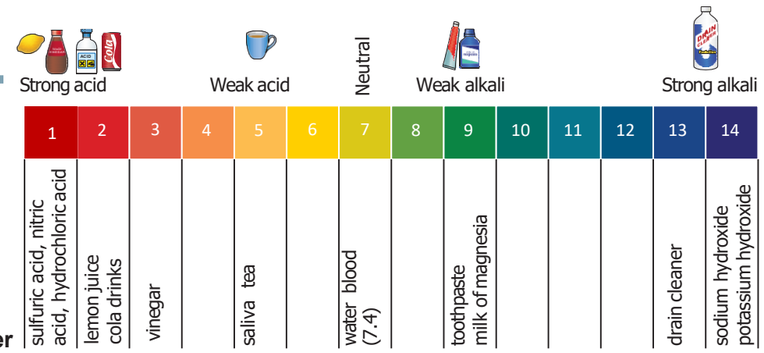
Acids and alkalis

- **Acids** and **alkalis** are the chemical opposites of one another
- Both acids and alkalis can be **corrosive** and **irritants**

To see whether a substance is an acid or an alkali, we can use an **indicator**. Indicators show how acidic or how alkaline a solution is by showing its position on the **pH scale**, one example of this is **universal indicator**

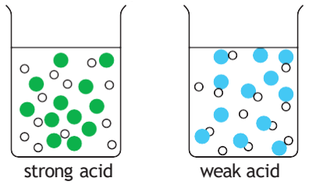
- If the solution has a pH value of 1–6 it is **acidic**
- If the solution has a pH value of 8–14 it is **alkaline**
- If the solution has a pH value of 7 it is known as **neutral**

Another example of an indicator is red & blue **litmus paper**



Acid strength

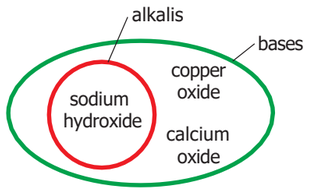
- The strength of an acid depends on how much of the acid has broken apart when it has dissolved in water
- Hydrogen chloride dissolves in water to form hydrochloric acid, this is a **strong acid** as all of the particles split up
- A **weak acid** will have particles that do not all split up



- The **concentration** of the acid is the amount of acid which has dissolved in 1 litre of water
- The more concentrated the acid, the lower the pH

Neutralisation

- **Neutralisation** reactions are any reaction in which acids react with a **base** to cancel out the effect of the acid
- These reactions form a neutral solution with a pH of seven
- A **base** is any substance which neutralises an acid
- An alkali is a base which has been dissolved in water



Salts

Salts are substances which are formed when an acid reacts with a metal or metal compound

Different acids form different types of salts:

- Hydrochloric acids form chloride
- Sulphuric acids form sulphates
- Nitric acids form nitrates

Metal reactions and gas tests

When a metal reacts with an acid it will produce a salt and hydrogen gas, the fizzing that you see is the hydrogen gas being given off

metal + acid → salt + hydrogen

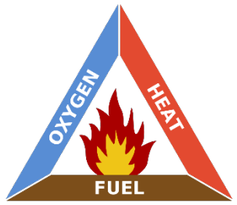
magnesium + hydrochloric acid → magnesium chloride + hydrogen

As most gases are colourless and odourless, it is sometimes necessary to test a gas to see what it is. This helps you to understand what has happened during a reaction.

- To test to see if the gas is hydrogen: put a lit spill in the end of the test tube containing the gas. If there is a squeaky pop sound then the gas is hydrogen.
- The sound is caused by the hydrogen igniting and creating a miniature explosion.
- To test to see if the gas is oxygen: Blow out a lit spill so that the end glows. Put the glowing spill into the test tube containing the gas. If the spill reignites then the gas is oxygen
- To test to see if the gas is carbon dioxide: Put a lit spill into the test tube containing the gas. If the spill is extinguished then the gas **could** be carbon dioxide.
- To confirm the gas should be mixed with lime water (*not from the fruit!).* If the lime water turns a cloudy white then the gas is carbon dioxide

Combustion

- When substances burn in oxygen a chemical reaction called combustion takes place.



- Combustion can only take place when there is a fuel to burn, heat to start the reaction and plenty of oxygen. The product of the reaction is an oxide.
- carbon + oxygen → carbon dioxide
- copper + oxygen → copper oxide
- iron + oxygen → iron oxide
- magnesium + oxygen → magnesium oxide

Key terms

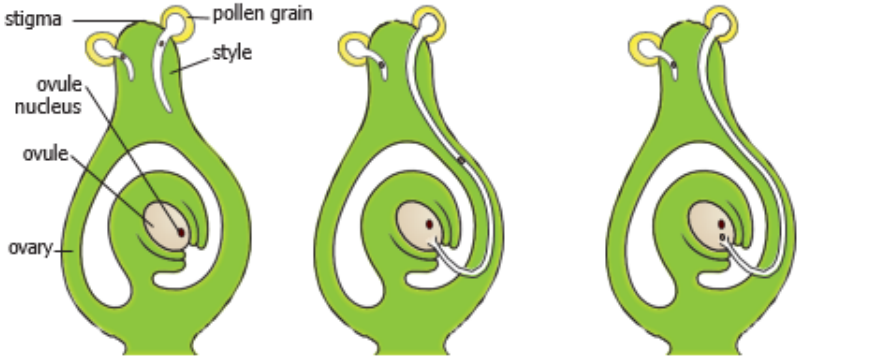
Make sure you can write definitions for these key terms.

acid **acidic** **alkali** **alkaline** **base** **chemical** **chemical reaction** **concentration** **corrosive** **displacement** **hydroxide** **indicator** **irritant** **neutral** **concentrated** **neutralisation** **oxide** **oxidation** **pH scale** **reversible** **reactivity** **salt** **strong acid** **universal indicator** **weak acid** **combustion** **lime water**

Pollination and fertilisation

Pollination is the **fertilisation** of the ovule, the point at which the pollen is transferred to the ovule from the anther to the stigma, there are two types of pollination

- Cross pollination is between two different types of plant
- Self pollination happens within the same plant



The tube grows out of the pollen grain and down through the style.

The pollen nucleus moves down the tube.

The pollen nucleus joins with the ovule nucleus. Fertilisation takes place and a seed will form.

Germination is the process in which the **seed** begins to grow, for this to occur the seed needs:

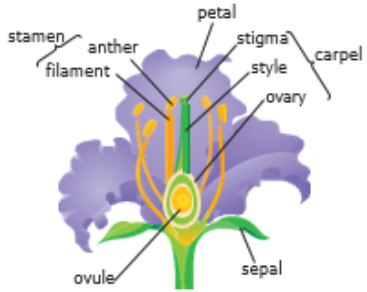
- Water to allow the seed to swell and grow and for the embryo tostart growing
- Oxygen for that the cell can start respiring to release energy forgermination
- Warmth to allow the chemical reactions to start to occur within the seed

Parts of a flower

Stamen

Male part of the flower

- The **anther** produces **pollen**
- The **filament** holds up the anther



Carpel

Female part of the flower

- The **stigma** is sticky to catch grains of pollen
- The **style** holds up the stigma
- The **ovary** contains **ovules**

Adaptations

- **Adaptations** are characteristics which organisms have developed to best survive in their surroundings
- Organisms with the best suited adaptations can breed and pass these on
- Those who are not best adapted will die out and not be able to pass on their genes

Key terms Make sure you can write definitions for these key terms.

Adaptation Adolescence Amniotic sac Anther Carpel Cervix Cilia Egg cell Embryo Environmental variation Fertilisation Fetus Gamete Germination Gestation Implantation Inherited variation Menstrual cycle Ovary Ovule Oviduct Ovulation Penis Petal Period Placenta Pollen Pollination Puberty Reproductive system Scrotum Semen Seed Sepal Sex hormones Species Sperm cell Sperm duct Stamen Style Testicles Umbilical cord Urethra Uterus Vagina Variation

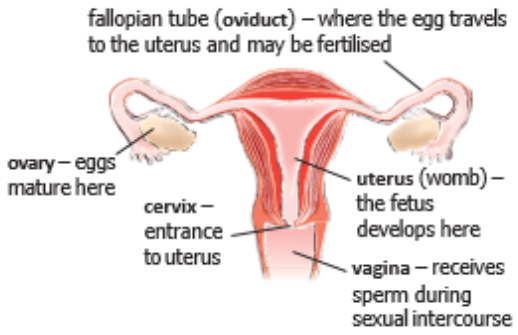
Variation

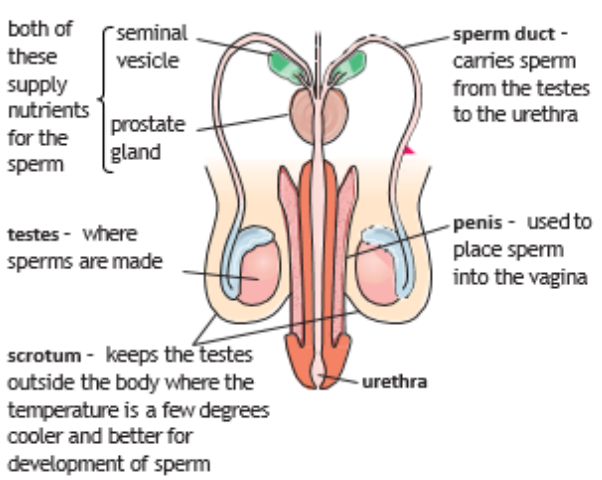
- The differences in characteristics of living things is known as **variation**
- There is a large amount of variation between different **species**, but within species many more characteristics are shared
- Even though two organisms may look the same, they will always have variation between them

Inherited variation	Environmental variation
• Is anything that comes directly from your parents, anything that you inherit • Examples can include lobe less or lobed ear lobes and eye colour	• Is any type of variation that is caused by your surroundings • Factors that can cause environmental variation include diet, education and lifestyle

- Environmental factors can also impact inherited factors, for example a poor diet can affect height or your exposure to the sun can affect skin tone
- Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases

Reproductive systems



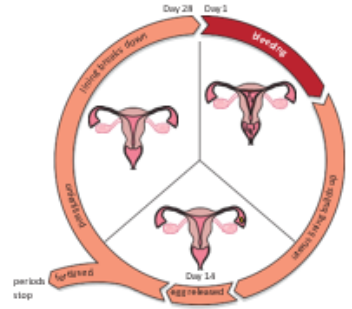


Adolescence

- **Adolescence** is the process in which a child changes into an adult, it involves both physical and emotional changes
- The physical changes alone in this time are known as **puberty**, these are caused by **sex hormones**

The menstrual cycle

- The **menstrual cycle** is the process in which an egg is released from an ovary and leaves through the vagina
- Day 1: blood from the uterus lining leaves through the vagina, which is known as a **period**
- Day 5: the bleeding stops and the uterus lining starts to re-grow
- Day 14: an egg is released from one of the ovaries during **ovulation**
- If the egg is **fertilised** than the menstrualcycle stops until the baby is born



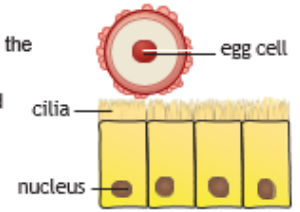
Fertilisation, implantation and gestation

- Egg cells and sperm cells are also called **gametes**, and each contains half the genetic information needed to form a complete organism.

Egg cells

An egg is released by the ovaries every month

The egg cell is moved along the oviduct towards the uterus by **cilia**



Sperm cells

Sperm cells are produced in the testicles/testes

Sperm are mixed with nutrients and fluid from the glands to form **semen**

During sexual intercourse a man will release semen into the vagina (**ejaculation**)

If a sperm meets the egg **fertilisation** may happen

The fertilised egg may then **implant** in the uterus lining and form an **embryo** (ball of cells)

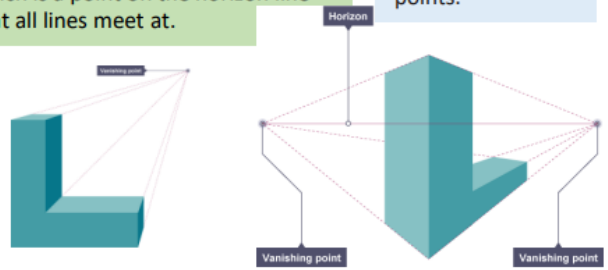
- During **gestation** the developing **fetus** needs nutrients from the mother, these are passed through the **placenta** which is connected to the fetus by the **umbilical cord**
- Nutrients are passed from the mother to the baby and waste products are passed back from the baby to the mother
- The baby is protected from bumps to the mother by the **amniotic sac** which acts as a shock absorber

Just a dot	∘	1 week – cells beginning to specialise
3 mm long		4 weeks – spine and brain forming, heart beating
3 cm long		9 weeks – tiny movements, lips and cheeks sense touch, eyes and ears forming
7 cm long		12 weeks – fetus uses its muscles to kick, suck, swallow, and practise breathing

Year 7 Resistant Materials Knowledge Organiser

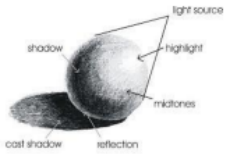
Single-point perspective - This shows an object from the front in a realistic way as it gets smaller going into the distance. The front view goes back towards a **vanishing point**, which is a point on the horizon line that all lines meet at.

Two-point perspective - This shows an object from the side with two vanishing points.

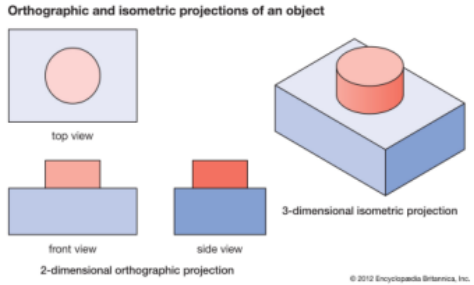


Rendering
Creating the illusion of light , tone and texture using graphic materials. Creating the illusion that an object is made from a particular material.

3 Tone shading

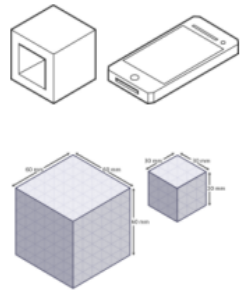


Orthographic Projection
They are used to show an object from every angle to help manufacturers plan production. Starting with a front view of a product, **construction lines** show where areas join and are used to draw a side and plan (top) view, ensuring that the drawing is accurate from all angles. These drawings are **to scale** and must show **dimensions**.



Freehand sketching is the quickest way of getting your initial designs on paper before an idea is forgotten. Freehand sketches are often done without a ruler or template and instead are produced quickly and freely.

Isometric
Isometric drawings, sometimes called isometric projections, are a good way of showing measurements and how components fit together. Unlike perspective drawings, they don't get smaller as the lines go into the distance.
There are three main rules to isometric drawing:
- **horizontal** edges are drawn at 30 degrees
- **vertical** edges are drawn as vertical lines
- **parallel** edges appear as parallel lines

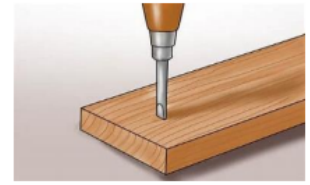


Personal protective equipment (PPE)
- Apron
- Leather gloves
- Goggles
- Sturdy shoes

Surface treatments and finishes
Used to improve the appearance and protect the material. Polish , varnish , paint , wax and stain are examples.

Wasting tools
Coping saw – used to cut curved lines
Junior hacksaw - used for sawing plastic and metal
Hand file – used to shape materials
Rasp – used to shape wood
Pillar drill – used to drill holes
Needle file – used to shape materials , remove material is small spaces
Disc sander : used to waste material

Marking and measuring tools
Steel rule
Bradawl
Centre punch
Marking knife
Try square



Metals and alloys

Metals are found naturally and are mined from the earth. Metals used in products are **extracted** from the natural **ore** using large heat furnaces.

Ferrous metals
Ferrous metals contain iron and are **magnetic**. They are prone to **rust**.

Non-ferrous metals do not contain iron and are not magnetic. They do not rust.

Alloys are mixtures of metal with an element to improve its properties or **aesthetic**. For example brass is a mixture of copper and zinc. Alloys can also be classified as ferrous or non-ferrous.

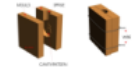
Timbers

Wood comes from trees that are felled. There a are three main groups of wood:

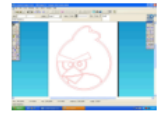
Hardwoods - take longer to grow, are not easily sourced and are expensive to buy. Oak , beech and mahogany are hardwoods.
Softwoods - They are faster growing than hardwoods, making them cheaper to buy, and are considered a **sustainable** material. Pine is a softwood

Manufactured board - Manufactured boards are usually made from timber waste and **adhesive**. To make them more aesthetically pleasing they are often **veneered**. They are cheap to buy.

Moulds and casting – used to make complex shapes



Computer aided design (CAD) now has the capability to design new products in 3D, visualise them in a variety of materials and send images around the world for collaboration and consultation.



By using **computer aided manufacture (CAM)**, designs can be sent to CAM machines such as laser cutters, 3D printers and milling machines.

Year 7 Music Knowledge Organiser: Program music

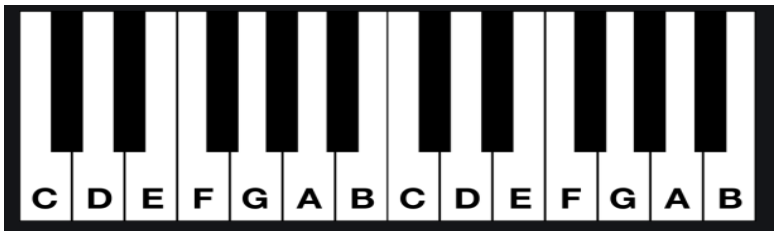
Key Vocabulary
First hand position
Middle C
Pitch
Beat
Duration
Tab
Fret
Major
Minor
Chord

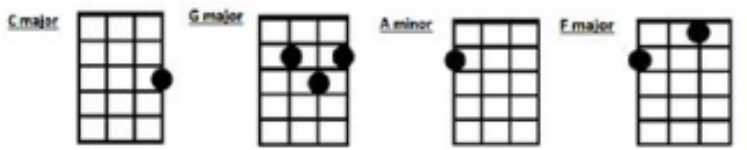
Additional Vocabulary
Tempo
Treble clef
Time signature
Melody
Solo
Ensemble
Octave

Key Listening
Jaws Theme - John Williams
Batman Theme - Danny Elfman
Peter and the wolf-Sergei Prokofiev
Carnival of the animals- Camillie Saint-Saens

Performance Directions (Dynamics)
p - piano
f - forte
mp - mezzo piano
mf - mezzo forte

Notation symbols

Ukulele chords


DRAMA
AT THOMAS ESTLEY

Introduction to Drama:

Students will Understand, Explore and apply a variety of Drama Skills:

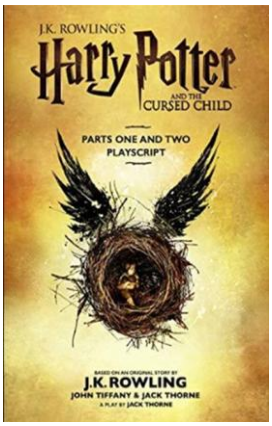
Vocal- Projection, Pitch, Intonation, Accent, Clarity, Inflection, Emotional range, Pace/ pause and timing.

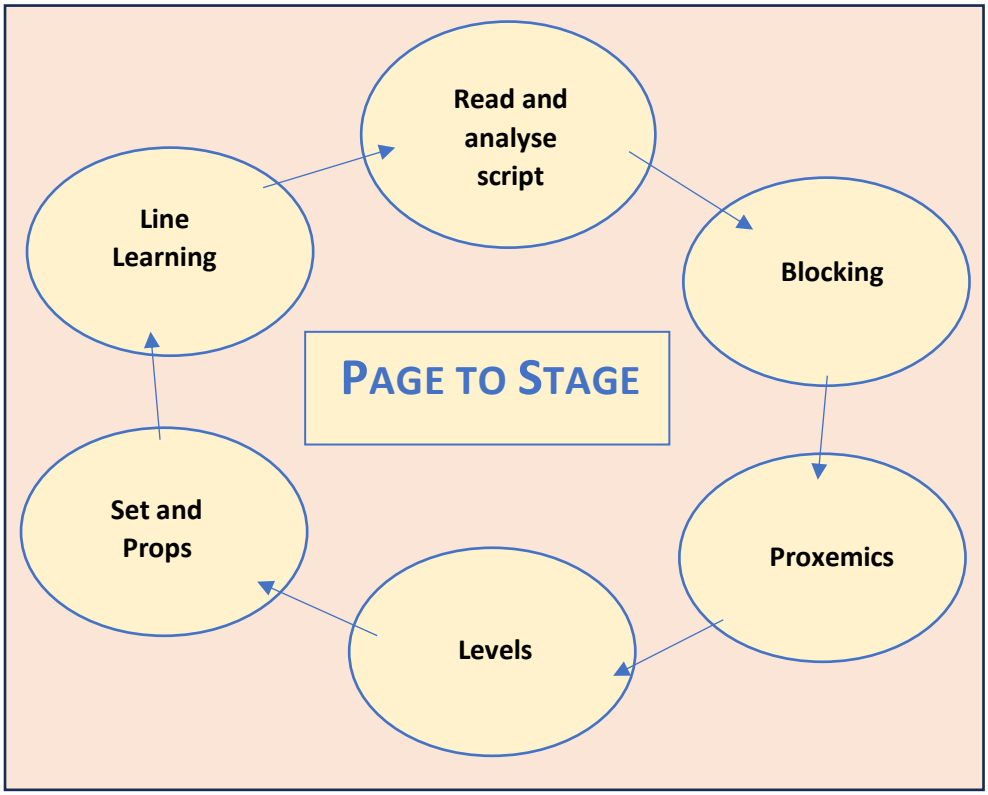
Physical- Characterisation, Gesture, Facial expression, Posture, Spatial awareness, Eye contact, Coordination, Timing and Expression of mood.

Before applying them to the creation of their own original material through the process of Devising from a stimulus.

Harry Potter and The Cursed Child:

Students will, explore and apply the page to stage process to the play 'Harry Potter and The Cursed Child' through a variety of workshops and performances in a range of group sizes.





DRAMA TERMINOLOGY BANK:

- Devising: A collaboration in response to a stimulus leading to the creation of an original performance.
- Stimulus: The initial idea or inspiration for the drama.
- Page to Stage Process: Read and analyse script, Blocking, Proxemics, levels, set and props, line learning and application of vocal and physical skills.
- Blocking: Planned movement that is linked to a character's motivations and emotions.
- Proxemics: The use of space between actors and how it communicates their relationship to the audience.
- Duologue: a play or part of a play with speaking roles for only two actors.
- Naturalism theatre: theatre that attempts to create an illusion of reality through a range of dramatic and theatrical strategies.
- Epic Theatre: didactic drama presenting loosely connected scenes that avoid illusion and often interrupt the story line to address the audience directly with analysis, argument, or documentation.

Dance Year 7 – Dancing Through Time

1920s – Charleston

- First appeared in the United States around 1903 in Black communities in the southern U.S.
- Historians believe that some of the Charleston's movements probably came from Trinidad, Nigeria, and Ghana.
- The Charleston involves the fast-paced swinging of the legs and big arm movements.
- The music for the Charleston is ragtime jazz, in quick 4/4 time with syncopated rhythms.

Charleston Steps:

1. The basic Charleston tap
2. The windmill
3. cross knees
4. kick and dip

1940/50s – Lindy Hop and Rock n Roll

- Lindy Hop is named after Charles Lindbergh aka 'Lucky Lindy.' A famous aviator who 'hopped' across the Atlantic in the 1st non-stop flight from New York to Paris.
- Associated dance styles include Swing, Jazz and the Jitterbug.
- Rock n Roll became popular with the success of the film 'Rock around the Clock' in 1956 – Starring Elvis Presley.
- Becoming popular with the teenagers of 1950 it soon gained a 'bad boy' image that gave rise to Teddy Boys in Britain. This is thought to be both the result and the cause of youthful rebellion at the time.

Lindy Hop/RnR Steps:

1. Applejacks
2. Al & Leon Triple Steps
3. Suzie Q
4. Charleston Squat
5. Throw
6. Leap Frog

1960s

- The 60s was an era of 'flower power'
- Finally recovering from WW2, Britons embraced this freer way of life
- The most popular dance was 'The Twist', named after the song.
- The 'Swinging Sixties' marks a significant change in British Pop culture (music and fashion)
- The 'V' sign, which was first used by Churchill (meaning V for victory), was adopted by Hippies as an anti-war sign
- The 60s was also the birth of music video dance crazes

1960s Steps:

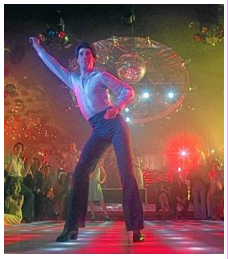
1. The Mash Potato
2. The pony
3. The Watusi
4. The hitch hike
5. The Swim

1970s - Disco

- Emerged in the 1970s from the United States' urban nightlife scene, e.g., *disco*theques.
- Rise in popularity in the late 70s due to the film 'Saturday Night Fever' and its soundtrack by bands such as the BeeGees.
- For the first time, people were seen dancing 'en masse' instead of in couples.
- This is also the first time that songs were released in clubs, rather than on the radio – which opened the door to a wider variety of artists.

1970s Steps:

1. The Hustle
2. Disco Down
3. Disco Fingers
4. The Snap



1980s – Hip Hop

- Began during the late 1960's and early 1970's, originally inspired by African dancing, and flourished as a new style of street dance.
- Hip-hop developed from jazz, rock, tap, and American and Latino cultures, but is most often associated with the East Coast, specifically New York City.
- It combines a variety of freestyle movements and has 3 main techniques, popping, locking and breaking, to create a cultural piece of art.
- Due to its freestyle nature, dancers are more able to let loose and worry less about technique.

Hip Hop Steps:

1. The Roger Rabbit
2. The Kid n Play
3. The moonwalk
4. The running man
5. The cabbage patch

Year 7 Knowledge Organiser
Spring Term

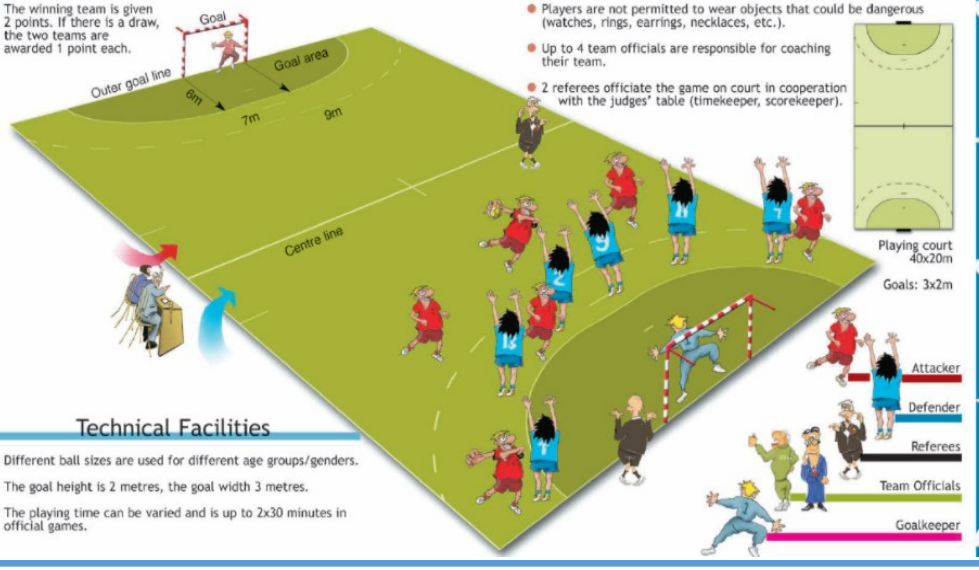
How well do you understand handball?

Get ahead of the game

If you've already done your Netball rotation, keep the positions in your head. If your Netball is still to come you need to learn these

The Basic Principles of Handball

- Handball is a team sport based on "fair play" principles.
- On court there are two male or female teams playing against each other, both trying to score goals with a handball.
- The team that has scored the most goals when the playing time is over is the winner.
- The winning team is given 2 points. If there is a draw, the two teams are awarded 1 point each.



Technical Facilities

- Different ball sizes are used for different age groups/genders.
- The goal height is 2 metres, the goal width 3 metres.
- The playing time can be varied and is up to 2x30 minutes in official games.

Teams/Players/Team Officials/Referees

- Each team consists of up to 14 players. On court a team has 6 field players and 1 goalkeeper.
- Within each team the players are interchangeable during the game.
- All field players of a team wear identical, coloured uniforms. Goalkeepers wear uniforms that differ from those of the field players.
- Players are not permitted to wear objects that could be dangerous (watches, rings, earrings, necklaces, etc.).
- Up to 4 team officials are responsible for coaching their team.
- 2 referees officiate the game on court in cooperation with the judges' table (timekeeper, scorekeeper).

BASIC SKILLS

Sit Ups | Wall Throw | Stork Stand | Ruler Drop | SLJ

Fitness Tests

Cooper Run

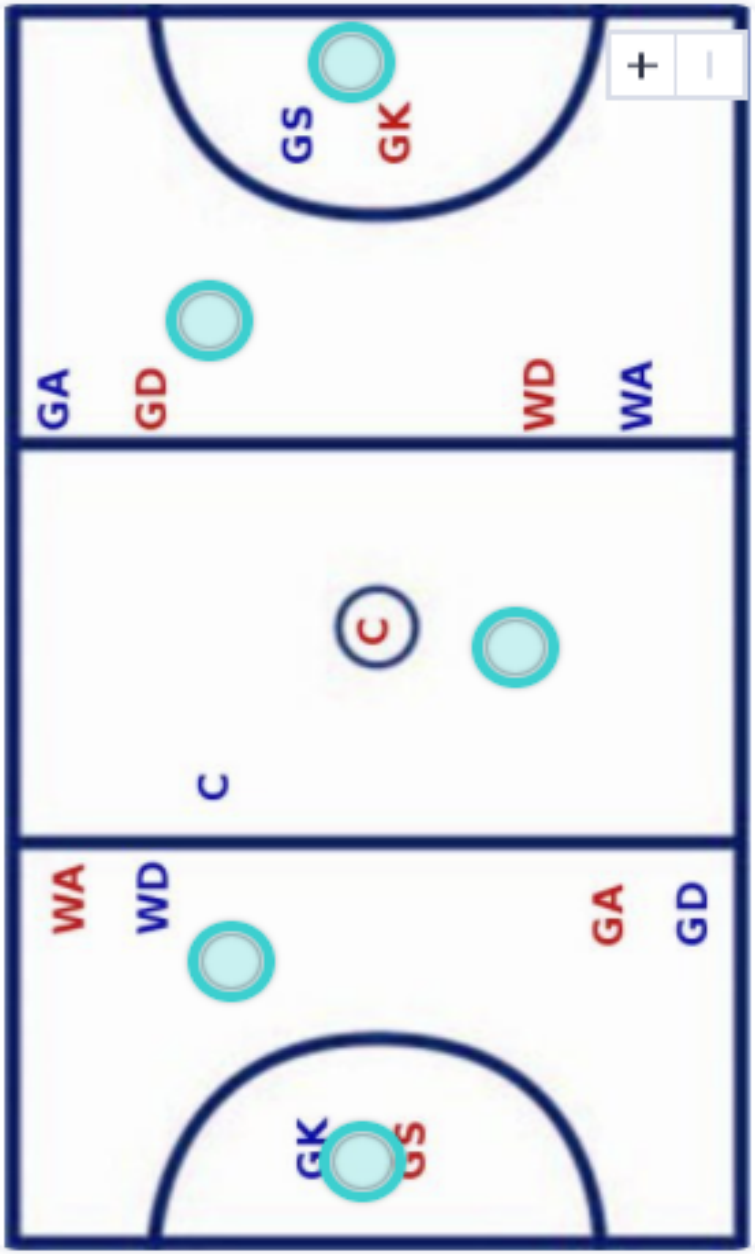
30M Sprint

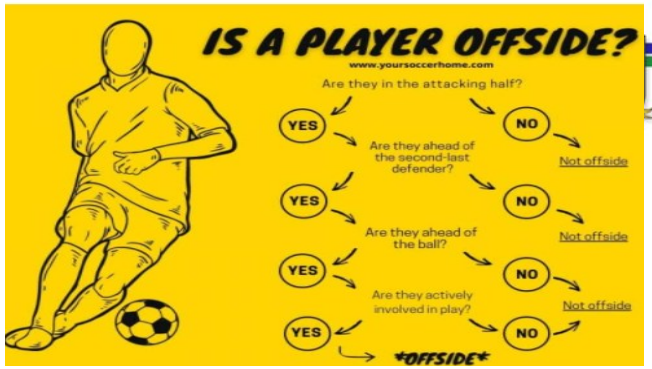
Sit & Reach

Vertical Jump

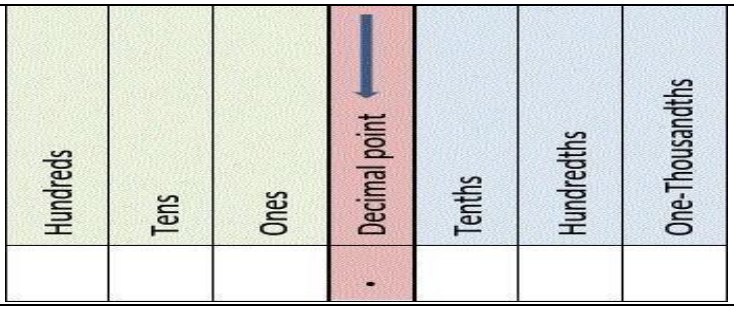
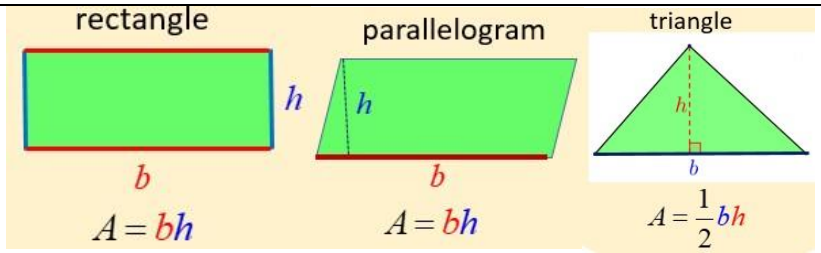
Agility Run

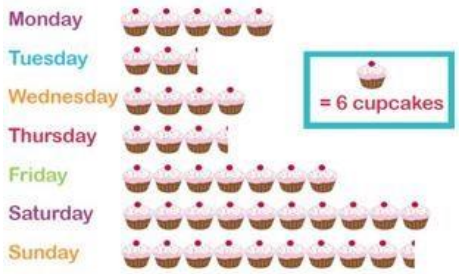
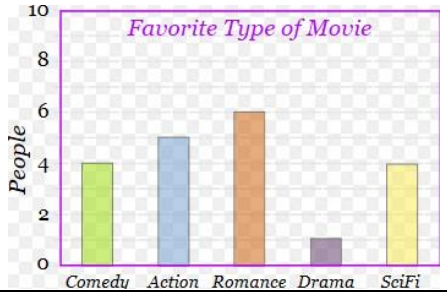
Speed Bounce





Y7 Spring Maths Knowledge Organiser

Topic	Key fact	Hegarty maths clip number
Read, write and compare positive integers and decimals		13, 14 45 & 46
Multiply and divide by powers of 10	Multiplying: Move the digits to the left Dividing: Move the digits to the right	15 & 16
Calculations with integers	Addition and Subtraction: put in columns Multiplication: Remember place holder Division: Remember bus stop and remember to carry	1 to 12 & 18 to 23
Rounding	5 or more: round up 4 or less: keep the same Look to the right Significant figures: start counting at first non-zero	17, 56 & 130
Estimation	Round each value to 1 significant figure	131
Simplify expressions	Collect all the 'like' terms (numbers, x, x^2, x^3 are all separate terms) e.g. $12 + 3x + 6x^2 - 2x^3 – 5 - 3x + 5x^2 + 7x^3 = 7 + 11x^2 + 5x^3$ 3y means 3 x y $\frac{7}{x}$ means 7 ÷ x	156 and 157
Simplifying ratio	Divide all parts by the highest common factor. Always include the colon (:).	329
Perimeter	Perimeter is the distance all the way round a shape. All sides added together.	548-552
Area		553-559

Pictograms	Use the key to work out the number of cupcakes sold each day.  5 x 6 = 30 2.5 x 6 = 15 4 x 6 = 24 3.5 x 6 = 21 7 x 6 = 42 10 x 6 = 60 9.5 x 6 = 57	426
Bar charts	Which type of movie was most popular? ***Romance*** How many people said comedy was this favourite? ***4***  How many people were asked in total? 4 + 5 + 6 + 1 + 4 = ***20***	425

Key Vocabulary

- Integer – a whole number ○ Product – the result of a multiplication. ○ Divisor – the number that you are dividing by. Eg. 16 divided by 2. 2 is the divisor. ○ Quotient - the answer after you divide one number by another.
- Power/Indices - The index of a number says how many times to use the number in a multiplication. It is written as a small number to the right and above the base number. ○ Root – The inverse operation of a power.
- Significant figures - Leading zeros are not significant. For example, 0.00052 has two significant figures: 5 and 2. Trailing zeros in a number containing a decimal point are significant.
- Remainder - A remainder in mathematics is what's left over in a division problem.
- Round - Rounding means making a number simpler but keeping its value close to what it was.
- Truncate – A method of approximating a decimal number by dropping all decimal places past a certain point without rounding. ○ Estimate - To estimate means to find something close to the correct answer. ○ Approximate – an alternative word for estimate. ○ Area: The space inside a 2D shape ○ Perimeter: Distance all around a shape ○ Term- each part of an expression. A single number or variable within an expression.
- Expression- a mathematical sentence containing numbers and variables. ○ Simplify: Write in shorter form.

○

Year 7 Medieval England knowledge organiser

Key terms	
King's Courts	Law courts which were controlled by the King and his justice.
Church Courts	These were controlled by the church for religious offences and for any crimes committed by the clergy.
Archbishop of Canterbury	The head of the Church in England. He was appointed by the Pope.
Magna Carta	The document that King John was forced to sign by the barons in 1215 that limited some of his power.
Black Death	The disease that affected England from 1348 onwards. It is estimated that it killed 40% of the population.
Bubonic Plague	The more common Plague that was carried in the bloodstream of rats. Fleas bit the rats and become infected. They then hopped onto humans, bit them and passed on the disease.
Pneumonic Plague	This was more deadly. It was caught by breathing in the germs when an infected person coughed or sneezed. They would cough up blood and their lungs rotted inside them.
Freeman	These people paid rent to the lord to farm their land, but they weren't 'owned' by the Lord, and could come and go as they pleased.
Villein	They were Medieval peasants who were 'tied' to the Lord's land. They had to farm their own land and the land of the Lord, and they had to get the Lord's permission to do things like get married or leave the village.
Statute of Labourers	This Statute (law), passed after the Black Death, said labourers could not earn more than 2 pence per day. It was bitterly resented by the peasants.
Poll tax	Introduced by King Richard II to pay for the Hundred Years War. Everyone had to pay 4p every year – later increased.
Peasant's Revolt	A popular revolt in 1381 against the rule of Richard II, his advisors and taxation led by Wat Tyler.

The conflict between King and Church: Henry II vs. Thomas Becket.

1154	King Henry II appointed Thomas Beckett as his Chancellor. His job was to look after the church and the King's law courts. During this time Henry and Thomas became good friends.
1161	Henry asked Thomas to become the new Archbishop of Canterbury. Beckett was asked to make the church courts fairer, as they favoured the churchmen. Beckett refused and made Henry very angry.
1164	Henry announced that he would be in charge of the church court, and Beckett agreed but then changed his mind. Sensing danger, Beckett fled to France.
June 1170	Henry ordered the Archbishop of York to crown the next king. This was usually the job of the Archbishop of Canterbury. Beckett was furious!!
November 1170	Despite making up, Beckett removed Henry's supporters from the church.
December 1170	Henry found out that Beckett had removed his supporters from the church. Henry was furious and shouted: "Will no one rid me of this troublesome priest?!?!?!"
29th December 1170	Four knights heard Henry's shout and went to Canterbury Cathedral. They found Beckett and tried to force him to change his mind. Beckett refused and the four knights stabbed him to death in the church.

Year 7 Medieval England knowledge organiser

The Black Death (1348-9)

Causes

God deserting mankind/ unusual position of the planets/ impure air from a volcano or earthquake/ the Jews

Treatments

Ask for God's forgiveness/ bleeding/ purging/ strong smelling herbs/ theriaca/ lancing buboes

Prevention

Pray/ Pilgrimage/self-flagellation/ escape!/ carry a posy of flowers/ do joyful things!/ quarantine laws

Consequences of the Black Death

Short term	Long term
Half the people in Britain died from the Black death. More died in later outbreaks of the disease.	The Black death led to some freemen earning higher wages.
Food prices went up by 4 times as animals and crops died with no one to look after them.	The Black Death lasted from 1348-1350. Later outbreaks did occur, but they were less severe.
An estimated 35 million people, two thirds of the world's population, died from the disease.	After the Black Death people demanded freedom but lords refused. This led to the Peasants Revolt in 1381.
Landlords made less money as they had less people to charge rent.	The government tried to stop peasants getting higher wages in 1351 with a law called the Statute of Labourers.
Praying to God hadn't saved people from the Black death so some people began to criticise the bishops. This had little impact. Most people remained deeply religious.	It took 300 years for the population to recover to the same level as before the Black Death.
As there were less people alive after the Black Death, survivors could charge more for their services. Wages increased.	By the mid-1400s everyone was free.

Year 7 Medieval England knowledge organiser

The King vs. The Barons

King John (1199-1216)

Brother of the popular King Richard I, who died shortly after his return from the 3rd Crusade.

John was suspicious and had rebelled against both his father and brother.

John inherited the cost of his brother's costly wars, but was a cruel and incompetent king.

Causes of the barons' revolt

John spent ten years raising taxes for a war in Normandy with France. The barons did not support this.

John lost the war and ran up huge debts.

In 1205 the Pope chose Stephen Langton to be the new archbishop of Canterbury. John refused to accept this and so was excommunicated by the Pope.

The Pope supported the French against John. Eventually John was forced to admit Langton as archbishop.

John increased taxes and did not consult the barons on important issues.

John sold justice at court by rewarding nobles who paid him the most.

MAGNA CARTA

The barons were angry with John and no compromise could be agreed. In April/May the barons took up arms against the King, led by Robert FitzWalter. They marched on London, Lincoln and Exeter, which asll fell to the barons and the rebellion grew in size.

The barons issued a royal charter of demands which John was forced to accept on the field of Runnymeade on 15th June 1215. This became known as the MAGNA CARTA.

Some of the key terms of this were:

- It promised the protection of church rights
- The King could not sell justice.
- Protection from illegal imprisonments
- All people were to be tried by jury.
- new taxation only with the consent of the barons
- The King could not sell justice
- A council of 25 barons would be set up to ensure that the King was respecting the rights and the laws of the charter.

The charter defined that a formal relationship should exist between the monarch and barons. The king was now subject to the law. These were radical ideas.

Consequences

John over-turned the MAGNA CARTA in the Autumn and the battle raged again.

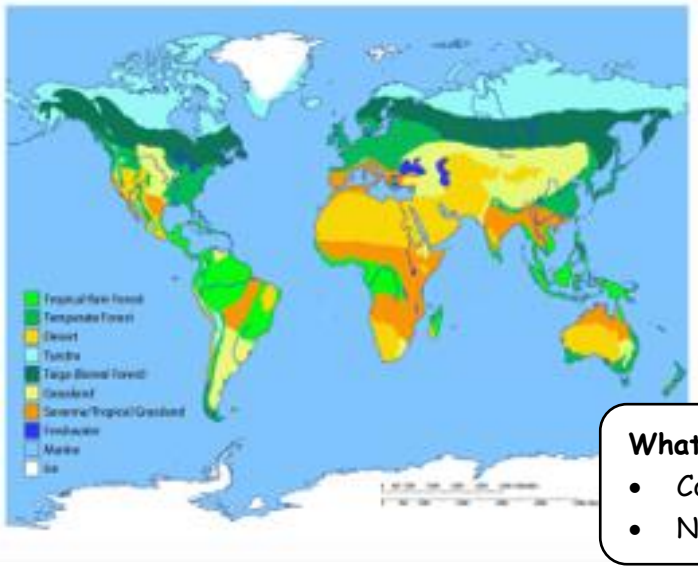
John died in 1216 (he died of dysentery, possibly by eating too many mouldy peaches, on his way to fight the barons) and was succeeded by his 9 year old son, King Henry III.

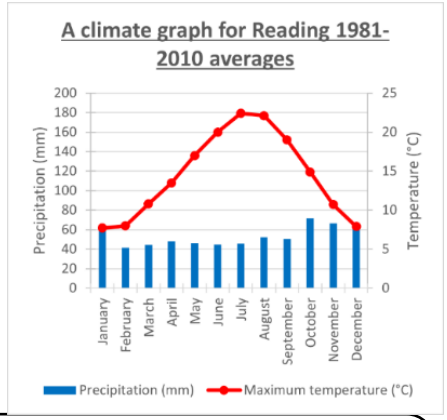
In 1225 Henry III re-issued the MAGNA CARTA to show that he accepted that the King was subject to the law.

It was re-issued in 1265 and 1297 to define the relationship between the monarchs and their subjects.

The MAGNA CARTA showed that the King could not ignore his barons and had to consult. It also made it clear that monarchs could not be a law unto themselves.

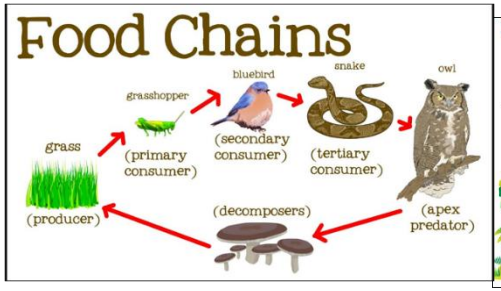
Year 7 KO – UK Ecosystems and Biomes

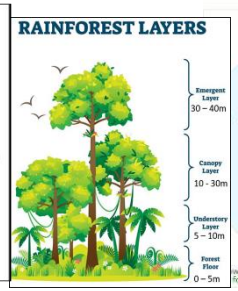




What should I already know?

- Compass skills
- Names of continents and oceans





What conditions are needed for coral reefs to grow?

Coral reefs form at **depths not exceeding 25 metres and** need **warm water between 20 to 28 degrees Celsius**. Reefs grow faster in clear water that allows sunlight to penetrate, therefore when water is dirty or polluted, coral does not grow as well.

Threats to the polar biomes.

Scientific bases and programmes. The construction of buildings and research facilities such as roads, fuel storage, airports, and bases. However, without these scientific research bases we would not be able to monitor and research these colder regions.

Fishing, both legal and illegal. The world's oceans are over-fished, now companies are making investments into the kinds of boats and fishing gear needed for Antarctica. Also, as ice melts Arctic oceans are easier to access. Fishing could destroy the polar food chains.

Key Vocabulary and definitions

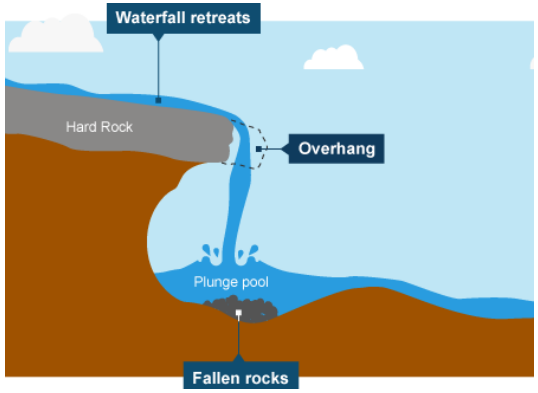
Key Term	Definition
Ecosystem	A community of living things and their environment, working together.
Climate	The usual weather conditions in a place over a long time.
Biome	A large area with similar plants and animals, shaped by its climate.
Food Chain	A simple line of who eats whom in an ecosystem.
Food Web	A network of many food chains in an ecosystem.
Herbivore	An animal that eats only plants.
Carnivore	An animal that eats only other animals.
Omnivore	An animal that eats both plants and animals.
Producers	Organisms, like plants, that make their own food using sunlight.
Primary Consumer	An animal that eats plants (the first consumer in a food chain).
Secondary Consumer	An animal that eats primary consumers (usually a carnivore).
Decomposer	Organisms like fungi or bacteria that break down dead plants and animals.
Tertiary Consumer	An animal that eats secondary consumers; usually the top predator.
Distribution	Where a species or group of organisms is found.

Year 7 – How does a river change from source to mouth?

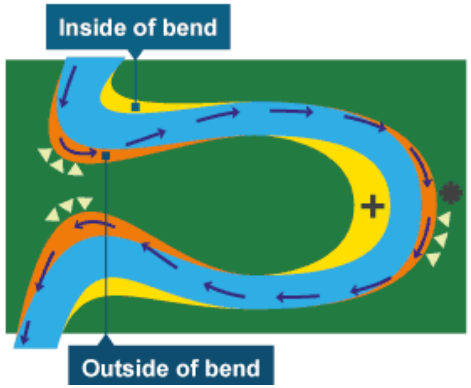
What should I already know?

- A river is a moving channel of water from its **source** (start point) on high ground flowing to its **mouth** (end point) on lowland flowing into another body of water (lake or ocean).
- Rivers usually begin in **upland** areas, when rain falls on high ground and begins to flow **downhill**. They always flow downhill because of **gravity**.

Water Fall: (Upper Course)



Meander: (Middle/Lower Course)



Flooding:

- A river floods when the water normally flowing in the channel overflows its banks and spreads out onto the surrounding land.
- **Physical Factors** affecting flooding: Steep Slopes, Very wet soil, Very dry soil, Rock type
- **Human Factors** affecting flooding: Deforestation, Urbanisation & Over Farming

Key Vocabulary and definitions

Erosion	The breaking down or wearing away of rock in the river channel.
Hydraulic Action	Water enters cracks and compresses the air, crack then expands.
Abrasion	Stones rub/bang against river bed/banks, breaking it down.
Attrition	Stones in the river bash together to become smoother/round.
Corosion	Chemicals in the water react with the stone and dissolve it.
Transportation	A natural process where material/sediment is carried or moved.
Traction	Large stones and pebbles pushed along the river bed.
Saltation	Small pebbles and stones bouncing along the river bed.
Suspension	Sediment floating in the water of the river.
Solution	Sediment dissolved in the water of the river.
Deposition	When sediment is dropped due to a lack of energy.

UK Flood – 2019	**Bangladesh Flood – 2019**
• 500 homes flooded and buildings evacuated • Over £120m worth of damage caused • 100 soldiers sent to help with rescue and recovery	• 800,000 people displaced from their homes • 27,000 homes were destroyed • Food aid (rice and wheat) from other countries to help feed people

UNIT 6 (Part 2/2)
Describing my family and saying why I like/dislike them

<table>
<tr>
<td rowspan="2">Dans ma famille j'ai
[in my family I have…]

Dans ma famille il y a <u>quatre</u> personnes
[there are <u>four</u> persons in my family…]

Je m'entends bien avec…
[I get along well with…]

Je m'entends mal avec…
[I get along badly with…]</td>
<td>mon grand-père, Claude
[my grandfather Claude]

mon père, Georges
[my father Georges]

mon oncle, Paul
[my uncle Paul]

mon petit/grand frère, Olivier
[my little/big brother Olivier]

mon cousin, Tristan
[my -boy- cousin Tristan]</td>
<td>MASC
J'aime "mon _____" car il est…
[I like my _____ because he is…]

"Mon père est très/assez…
[My dad is very/quite…]

"Mon père" est aussi un peu…
[My dad is also a bit…]</td>
<td>amusant [fun]
beau [handsome]
fort [strong]
généreux [generous]
grand [tall]
gros [fat]
honnête [honest]
intelligent [clever]
méchant [mean]
mince [slim]
petit [short]
sympa [nice/kind]
timide [shy]
têtu [stubborn]</td>
</tr>
<tr>
<td>ma grand-mère, Thérèse
[my grandmother Thérèse]

ma mère, Eliane
[my mother Eliane]

ma tante, Françoise
[my aunt Françoise]

ma petite/grande sœur, Léa
[my little/big sister Léa]

ma cousine, Claire
[my -girl- cousin Claire]</td>
<td>FEM
J'aime "ma _____" car elle est…
[I like my _____ because she is…]

"Ma mère" est très/assez…
[My mum is very/quite …]

"Ma mère" est aussi un peu…
[My mum is also a bit …]</td>
<td>amusante [fun]
belle [pretty]
forte [strong]
généreuse [generous]
grande [tall]
grosse [fat]
honnête [honest]
intelligente [clever]
méchante [mean]
mince [slim]
petite [short]
sympa [nice/kind]
timide [shy]
têtue [stubborn]</td>
</tr>
</table>

UNIT 5

Talking about my family members, saying their age and how well I get along with them. Counting to 100.

<table>
<tr>
<td rowspan="2">Dans ma famille, j'ai
[in my family, I have…]

Il y a <u>quatre</u> personnes dans ma famille
[there are <u>four</u> people in my family…]

Je m'entends bien avec…
[I get on well with…]

Je ne m'entends pas bien… [I don't get on well with…]</td>
<td>mon grand-père, Léon
[my grandfather Léon]

mon père, Jean
[my father Jean]

mon oncle, Yvan
[my uncle Yvan]

mon petit/grand frère, David
[my little/big brother David]

mon cousin, Tanguy
[my cousin, Tanguy]</td>
<td>Il a</td>
<td rowspan="2">un [1]

deux
trois
quatre
cinq
six
sept
huit
neuf
dix
onze [11]
douze [12]
treize [13]
quatorze [14]
quinze [15]
seize [16]
dix-sept [17]
dix-huit [18]
dix-neuf [19]
vingt [20]
vingt-et-un [21]
vingt-deux [22]
trente [30]
trente-et-un [31]
trente deux [32]
quarante [40]
cinquante [50]
soixante [60]
soixante-dix [70]
quatre-vingts [80]
quatre-vingt-dix [90]
cent [100]</td>
<td rowspan="2">an

ans</td>
</tr>
<tr>
<td>ma grand-mère, Adeline
[my grandmother Adeline]

ma mère, Anne
[my mother Anne]

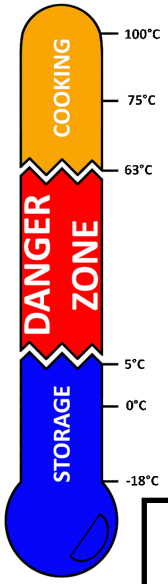
ma tante, Gisèle
[my aunt Gisèle]

ma petite/grande sœur, Léa
[my little/big sister Léa]

ma cousine, Claire
[my (girl) cousin Claire]</td>
<td>Elle a</td>
</tr>
</table>

Year 7 - Healthy Eating

Food safety and hygiene is about protecting people and reducing the risk of food poisoning.



https://www.youtube.com/watch?v=kEZvOyp_-8c

The Eatwell Guide shows how much of what we eat overall should come from each food group to achieve a healthy, balanced diet.

https://www.youtube.com/watch?v=7MlE4G8ntss
https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/

COOKING AND NUTRITION

Get active.

https://www.nhs.uk/change4life/activities/sports-and-activities
https://www.youtube.com/watch?v=k5Y9D37KmJo

The 8 tips for healthy eating can help you make healthier choices.

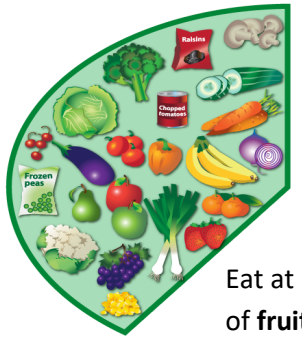
https://www.youtube.com/watch?v=UIQ1Hyq9HG0
https://www.nhs.uk/live-well/eat-well/eight-tips-for-healthy-eating/

https://www.youtube.com/watch?v=PByM12M1n3A

Starchy foods give us the energy we need to keep going each day.

Key vocabulary

clean / cook / chill / separate
cross-contamination / safety
bacteria / food poisoning
temperatures / danger zone
carbohydrates / protein
dairy / function / hydration
seasonality / portion
calories / energy



Eat at least 5 portions of a variety of **fruit and vegetables** every day.

https://www.youtube.com/watch?v=K5pW7rpMTQw

Water.

https://www.youtube.com/watch?v=24lvMvFKFZo
https://www.youtube.com/watch?v=b7s2Aqj72Q8

Foods high in fat, salt and sugars should be eaten less often and in smaller amounts.

= 6g

https://www.youtube.com/watch?v=Jfac64PI14Q
https://www.youtube.com/watch?v=vADtodHhfKU

Year 7 - Cooking skills

Equipment

 Vegetable peeler	 Measuring jug	 Mixing bowl	 Colander	 Box grater
 Digital scales	 Saucepan	 Frying pan	 Flour dredger	 Pastry brush

Skills and Processes

Bridge hold and Claw grip


Used in: fruit salad, pasta salad, sausage rolls, Spanish omelette, potato wedges and salsa

Weighing and Measuring



Used in: fruit salad, pasta salad, cheesy pinwheels, goujons, breakfast muffins, sausage rolls, scones, potato wedges

Knife skills: peeling, chopping, slicing, dicing


Used in: fruit salad, pasta salad, sausage rolls, Spanish omelette, potato wedges and salsa

Rubbing in technique


Used in: cheesy pinwheels and scones

Key word	Meaning
Enzymic browning	Discolouration that occurs when some fruit/vegetables (eg. apples, bananas, potatoes) are cut; caused by exposure to oxygen in the air.
Boiling	Water boils at 100°C, vigorous bubbles are visible. Pasta can be cooked this way.
Rubbing in	Combining butter and flour together using your fingertips.
Enrobing	Coating an item of food (eg. fish, chicken) in flour, egg, breadcrumbs.
Glazing	Brushing with a milk or egg wash to give colour and shine to your food product (eg. sausage rolls, scones)

Independent skills I need to learn in Year 7

- **Use the bridge hold and claw grip** to cut food safely and accurately.
- **Use a range of other preparation techniques** eg. peeling, chopping, slicing, dicing, grating etc.
- **Weigh and measure** ingredients accurately.
- **Organise** all my ingredients and follow a recipe.
- **Use the cooker** (eg. hob and oven) safely.

Food safety

Using **colour coded chopping boards** and equipment prevents **bacteria** spreading and causing **food poisoning**.

Year 7 – Spring term focus: Intro to SHAKESPEARE

When Shakespeare began writing, Queen Elizabeth I was on the throne in England.

Elizabeth I was the last Tudor monarch, the daughter of Henry VIII and his second wife, Anne Boleyn.

Her 45-year reign is generally considered one of the most glorious in English history. During this time, a secure Church of England was established and the country became renowned around the world for power and prosperity.

James I of England (he was also King James VI of Scotland) became King of England in 1603. He ordered a new translation of the Bible and although he was fairly tolerant in terms of religious faith, the Gunpowder Plot (an attempt by Guy Fawkes and other Roman Catholic conspirators to blow up the Houses of Parliament) in 1605 resulted in the reimposition of strict penalties on Roman Catholics. As an arts patron, James attended Shakespeare's plays. He was terrified by the supernatural, however, and thought witches were real evil entities. He undertook "witch trials" where he drown or set fire to women to prove if they were or weren't witches.

Key terminology:

Elizabethan – the period of Elizabeth's reign.
Renaissance – (means rebirth) period in 15/16th centuries.
Jacobean – the period of King James' reign.
The Globe – Shakespeare's theatre in London.
Iambic pentameter – Shakespeare's poetic technique of writing ten syllables in a line.
Thee – old fashioned way of saying "you"
Act – a chapter of a play, containing numerous "scenes"
Tragedy – a type pf play written by Shakespeare
History – a type of play written by Shakespeare
Comedy – a type of play written by Shakespeare

Some of Shakespeare's key texts:

Measure for Measure
Midsummer Night's Dream
Much Ado about Nothing
Tempest
Twelfth Night
Hamlet
Julius Caesar
King Lear
Macbeth
Othello
Romeo and Juliet
Timon of Athens
Titus Andronicus
Troilus and Cressida

Romeo and Juliet is a play written by Shakespeare. It is a tragic love story where the two main characters, Romeo and Juliet, are supposed to be sworn enemies but fall in love. Due to their families' ongoing conflict, they cannot be together, so they kill themselves because they cannot cope with being separated from one another. Romeo and Juliet is a Shakespearean TRAGEDY.

Macbeth is a play about a brave soldier who meets some witches on the way back from battle. They predict he will be King, and after he is told that, he sets off on a murderous, bloody rampage to get on the throne and destroy anyone who threatens to remove him from it. *Macbeth* is a Shakespearean TRAGEDY.

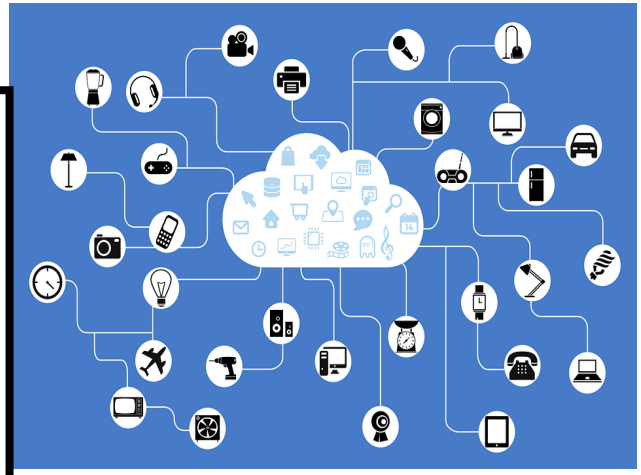
A Midsummer Night's Dream is a play about four people from Athens (Greece) who run away to the forest only to have Puck (the fairy) make both of the boys fall in love with the same girl. The four run through the forest pursuing each other while Puck helps his master play a trick on the fairy queen. In the end, Puck reverses the magic, and the two couples reconcile and marry. It is a play about magic and love and is a Shakespearean COMEDY

OTHELLO is a play about jealousy. Iago is furious about being overlooked for promotion and plots to take revenge against his General; Othello, the Moor of Venice. Iago manipulates Othello into believing his wife (Desdemona) is unfaithful, stirring Othello's jealousy. Othello allows jealousy to consume him, murders Desdemona, and then kills himself. Othello is a Shakespearean TRAGEDY.

The Tempest is about a man called Prospero who uses magic to conjure a storm and torment the survivors of a shipwreck, including the King of Naples and Prospero's treacherous brother, Antonio. Prospero's slave, Caliban, plots to rid himself of his master, but is thwarted by Prospero's spirit-servant, Ariel. The King's young son Ferdinand, thought to be dead, falls in love with Prospero's daughter Miranda. Their celebrations are cut short when Prospero confronts his brother and reveals his identity as the usurped Duke of Milan. The families are reunited and all conflict is resolved. Prospero grants Ariel his freedom and prepares to leave the island. The Tempest is a COMEDY.

Year 7 Networks

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



Wired and **Wireless** data transmission

A computer network can be either wired or wireless.

- Wired networks send data along cables.
- Wireless networks send data through the air using radio waves.

Bandwidth—Bandwidth is the amount of data that can be moved from one point to another in a given time. Higher bandwidth = more data per second

Bandwidth is measured in bits per second
A bit is the smallest unit of data
Data transfer rates are now so good that bandwidth is usually measured in Megabits per second (Mbps)
1Mb—1 million bits

Internet services

There are a range of services provided by the internet. These include:

- World Wide Web
- Email
- Online gaming
- Instant messaging
- Voice over IP (VoIP) – audio calls
- Internet of Things (IoT)
- Media streaming (e.g. watching Netflix online)

The rules for each service are different.
As a result, a different protocol is used.

HTTP—HyperText Transfer Protocol—used so that data can be understood when sent between web browsers and servers.
HTTPS—is the secure version of HTTP where data sent is encrypted.

Key Words

bandwidth	Amount of data that can be moved from one point to another in a given time.
buffering	Data arriving slower that it is being processed
internet	A worldwide network of computers
Internet of Things (IoT)	Takes everyday 'things' and connects them to the Internet eg smart light bulb, fridge, heating etc
IP address	A unique address for every device on the internet
packet	Networks send/receive messages in units called packets
protocol	All methods of communication need rules in place in order to pass on the message successfully. These sets of rules are called 'protocols'
Search engine	A website that allows user to look up information on WWW e.g. Bing, Google etc
Web browser	Piece of software(code) used to view information on the Internet
WWW	Part of the Internet that contains websites and webpages. NOT the same as the Internet.

Network Hardware—physical equipment required to set up a network

Hub—Connects a number of computers together. Ports allow cables to be plugged in from each connected computer.

Router—Used to connect two separate networks together across the internet

Sever—A powerful computer which provides services to a network

Cable—Used to connect different devices together. They are often made up of a number of wires.

Year 7 Modelling Data Spreadsheets

Spreadsheets are used to model data.

That means that they can be used to perform calculations on data and make predicts.

Spreadsheets use data which is held in cells.

Data and **information** are not the same.

- **Data**: facts and figures in their raw form
- **Information**: data that has been given structure or meaning

For example:
Data—10, 2107, 18
Information—Time 10am, date 21st July, temperature 18°

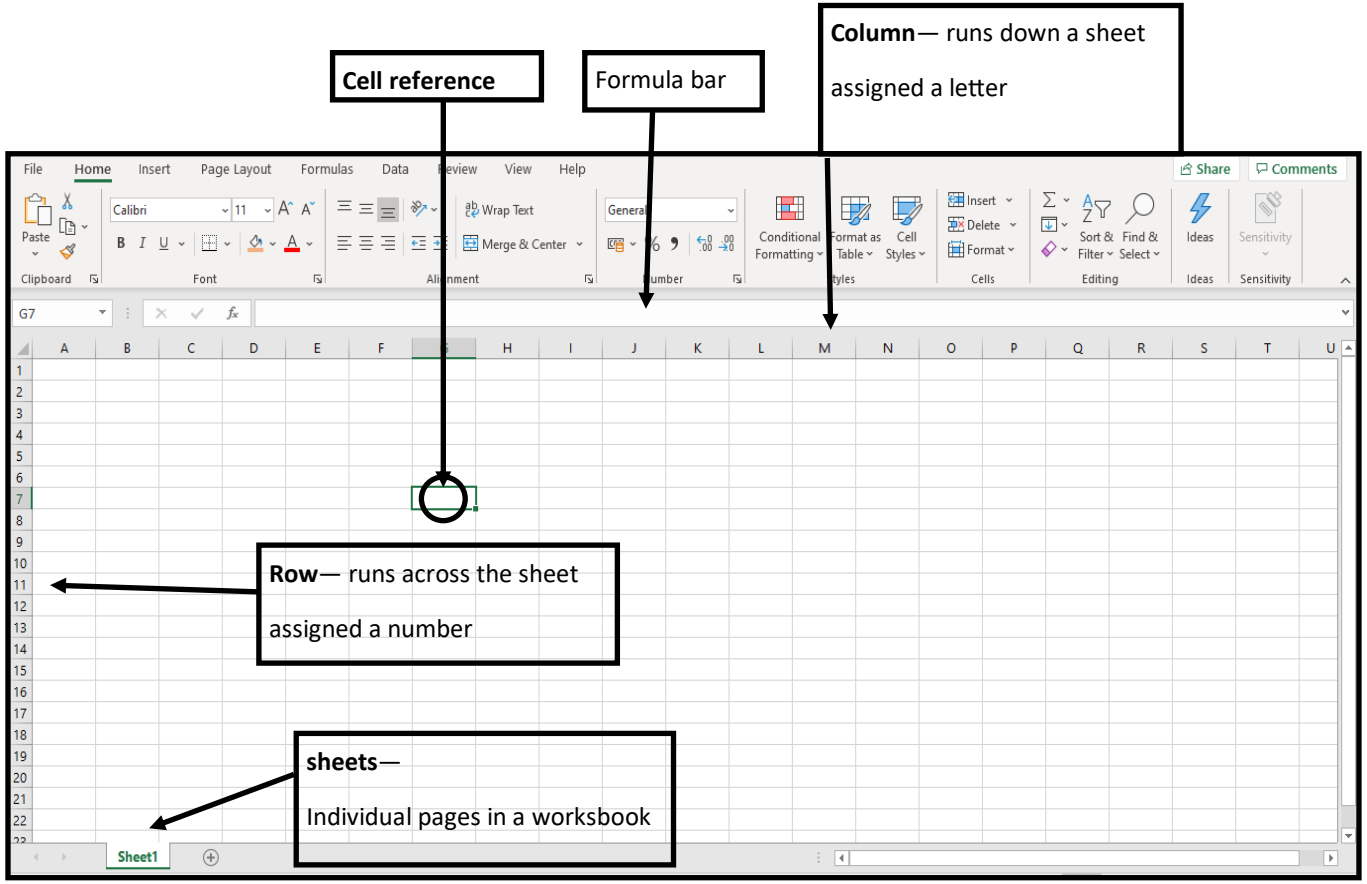
Data can be gathered from different sources

- **Primary** source: collecting data yourself
- **Secondary** source: someone else collects the data

Each box on a spreadsheet is called a **cell** and they hold data.

Each **cell** has a unique **cell reference** to identify its location.

Example G7



In order to complete calculations spreadsheets make use of **formula**.
A formula uses the following basic symbols
The **=** symbol is always at the start of a formula
The **+** symbol is used for addition
The **-** symbol is used for subtraction
The ***** symbol is used for multiply
The **/** symbol is used for divide

Functions are also used which are predefined formula.

Common **functions** are
SUM—adds a range of cells
MAX—returns the largest value from selected cells
MIN—returns the smallest value from selected cells
AVERAGE—provides the arithmetic mean (average) of selected cells
COUNTIF—counts the number of cells in a range that meet the given criteria
IF— allows logical comparisons
COUNTA—counts cells that are not empty

The tool bar at the top allows for **formatting** of the data. Changing colour, size, style etc

There is a **sort** and **filter** tool that allows for data to be arranged in ways that is most useful for the user e.g. alphabetical, highest first etc.

Conditional formatting can be set to allow the cell **formatting** to **automatically** change if certain criteria is met. For example a cell might turn red if there was a negative number

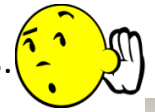
ART & DESIGN KNOWLEDGE ORGANISER

CLASSROOM RULES

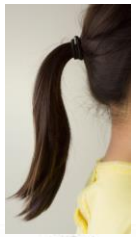
1. Hang your coat and blazer on pegs.
2. Put your bag **UNDER** the table.
3. Pencil cases **ON** the table.

Hessian mat stops your work sticking to the table.

4. **ALWAYS** listen carefully to instructions.



5. Wash hands after using paint, clay etc.



Tie your hair up.

Always wear an apron.

PAINT NAMES

Black
Vandyke Brown
Burnt Sienna
Crimson
Vermillion
Prussian Blue
Ultramarine
Hookers Green
Leaf Green
Yellow Ochre
Gamboge
White

CLAY LESSON

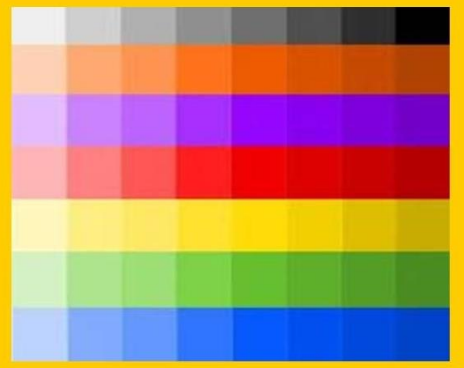
Guide rules help you to roll out the clay evenly.

LINE

A Line is the path left by a moving point, e.g. a pencil or a brush dipped in paint. A line can take many forms. e.g. horizontal, diagonal or curved. A Line can be used to show Contours, Movements , Feelings and Expressions.

TONE

Tone means the lightness or darkness of something. This could be a shade or how dark or light a colour appears

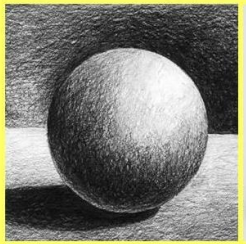


SHAPE & FORM

A shape is an area enclosed by a line. It could be just an outline or it could be shaded in.

Form is a three dimensional shape such as a sphere, cube or a cone.

Sculpture and 3D design are about creating forms



FORMAL ELEMENTS

TEXTURE

Texture is the surface quality of something, the way something feels or looks like it feels. There are two types of texture: Actual Texture and Visual Texture.

Actual Texture– really exists so you can feel it or touch it

Visual Texture—created using different marks to represent actual texture.

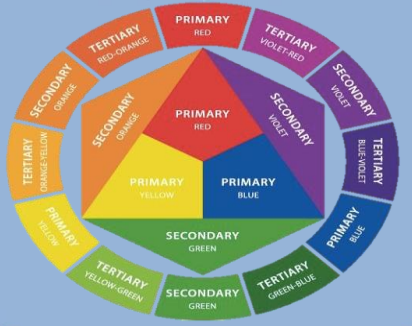
Actual Texture

Visual Texture

COLOUR

There are 3 Primary Colours:
RED, YELLOW and BLUE.

By mixing any two Primary Colours together we get a Secondary Colour;
ORANGE, GREEN and PURPLE



PATTERN

A pattern is a design that is created by repeating lines, shapes, tones or colours.

Patterns can be manmade, like a design on fabric, or natural, such as the markings on animal fur.

Year 8 sub-unit 3 – la comida

• Me encanta — I love • Me gusta mucho — I like a lot • Me gusta — I like • Me gusta un poco — I like a bit • No me gusta — I don't like • Odio — I hate • Prefiero — I prefer 	•el agua — *water* •el arroz — *rice* •el café — *coffee* •la carne — *meat* •el chocolate — *chocolate* •la ensalada verde — *green salad* •la fruta — *fruit* •la leche — *milk* •la miel — *honey* •el pan — *bread* •el pescado — *fish* •el pollo asado — *roast chicken* •el queso — *cheese* •el zumo de fruta — *fruit juice*	porque es — *because it is*	•asqueroso/a — *disgusting* •delicioso/a — *delicious* •dulce — *sweet* •duro/a — *tough* •grasiento/a — *oily, greasy* •malsano/a — *unhealthy* •picante — *spicy* •refrescante — *refreshing* •rico/a — *delicious* •sabroso/a — *tasty* •sano/a — *healthy*
•Me encantan — *I love* •Me gustan mucho — *I like a lot* •Me gustan — *I like* •Me gustan un poco — *I like a bit* •No me gustan — *I don't like* •Odio — *I hate* •Prefiero — *I prefer*	•los chocolates — *chocolates* •las gambas — *prawns* •las hamburguesas — *burgers* •los huevos — *eggs* •las manzanas — *apples* •las naranjas — *oranges* •los plátanos — *bananas* •los tomates — *tomatoes* •las verduras — *vegetables* 	porque son — *because it is*	•asquerosos/as — *disgusting* •deliciosos/as — *delicious* •dulces — *sweet* •duros/as — *tough* •grasientos/as — *oily, greasy* •malsanos/as — *unhealthy* •picantes — *spicy* •refrescantes — *refreshing* •ricos/as — *delicious* •sabrosos/as — *tasty* •sanos/as — *healthy*

Grammar: Present/ past/ future	**Food**	**opinion**	**Because it is/ they are**	**Adjective**
Como- I eat Bebo – I drink Come – he/she eats Bebe- he/she drinks	Eg. el pan las manzanas	• Me encanta (n)— I love • Me gusta(n) — I like • No me gusta (n) — I don't like • Odio — I hate • Prefiero — I prefer	porque es porque son	•delicioso/a — *delicious* •dulce — *sweet* •duro/a — *tough* •grasiento/a — *oily, greasy*
	Food	**opinion**	**Because it/they were**	**adjective**
Comí- I ate Bebí – I drank Comió– he/she ate Bebió- he/she drank	Eg. el pan las manzanas	Me gustó/ gustaron Me encantó/ encantaron Odié Detesté	porque fue porque fueron	•refrescante (s)— *refreshing* •rico/a(s) — *delicious* •sabroso/a(s) — *tasty* •sano/a (s)— *healthy*
In the restaurant	**Food**	**opinion**	**It will be**	**adjective**
De primer plato – as a starter De Segundo plato – as a main course De postre – for pudding Para beber – to drink La cuenta porfavor – the bill please ¿cuanto cuesta? – how much is it?	Voy a comer- I will eat Voy a beber Voy a tomar	en mi opinion – in my opinion Creo que/ Pienso que – I think that	será	•refrescante (s)— *refreshing* •rico/a(s) — *delicious* •sabroso/a(s) — *tasty* •sano/a (s)— *healthy*

Year 8 sub-unit 4– las vacaciones

<table>
<tr>
<td>Este verano voy a ir de vacaciones a … This summer I am going to go on holiday to …</td>
<td>Argentina
Chile
Cuba
España
México</td>
<td>Vamos a ir
We’re going to go</td>
<td>en autocar – by coach
en avión – by plane
en barco – by boat
en coche – by coach</td>
<td rowspan="4">Será aburrido - It will be boring
Será divertido - It will be fun
Será guay (It will be cool)</td>
</tr>
<tr>
<td>Voy a pasar - I am going to spend
Vamos a pasar - We are going to spend</td>
<td colspan="3">1 semana allí – 1 week there
2 semanas allí – 2 weeks there</td>
</tr>
<tr>
<td>Voy a quedarme en - I am going to stay in
Vamos a quedarnos en - We are going to stay in</td>
<td colspan="3">la casa de mi familia – my families house
un camping – a campsite
un hotel barato – a cheap hotel
un hotel de lujo – a luxury hotel</td>
</tr>
<tr>
<td>Voy a - I am going to
Vamos a - we are going to
Me gustaría - I would like
Nos gustaría - we would like</td>
<td colspan="3">Bailar- dance
comer comida deliciosa – eat Delicious food
comprar recuerdos – buy souvenirs
descansar - relax
hacer buceo, - go scuba diving
hacer turismo- to go sight seeing
ir a la playa – to go to the beach
, ir de compras – to go shopping
montar en bici – to ride my bike
tomar el sol – to sunbathe</td>
</tr>
</table>

Grammar

Future tense
Use the correct part of the verb IR (to go)
Voy (I am going to)
Va (he/she is going to)
Vamos (we are going to)

+ a +

Infinitive
Bailar
Tomar el sol…

Questions

¿ Adónde vas de vacaciones? Where do you go on holiday?

¿ Para cuánto tiempo? For how long?

¿Con quién? Who with

¿Cómo viajas? - how do you travel?

¿**Qué actividades haces?** – What activities do you do?

Year 8 universals

Y – and
Pero – but
También – also
Sin embargo – however

Pienso que- I think that
Creo que – I believe that
En mi opinión – in my opinion

es – it is
era – it was
será – it will be

aburrido - boring
divertido - fun
interesante - interesting
emocionante - exciting

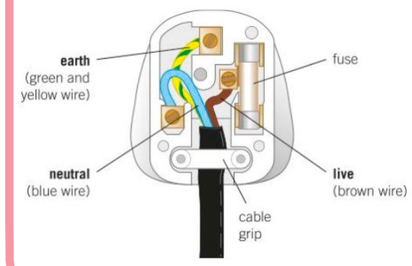
P4 Electricity

Knowledge organiser

Activate
Question • Progress • Succeed

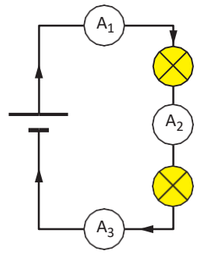
Wiring a Plug

- Most appliances are attached to the electricity supply using a three pin plug.
- These are usually made from a hard wearing plastic as plastic is an **insulator**.
- There are three wires in the plug; the Earth, the live and the **neutral** wire.
- Plugs contain a fuse which breaks the circuit if the current flowing gets too high.
- We use brass for the pins as it is a good conductor and hard wearing.
- Copper is used for the wires as it is an excellent conductor.



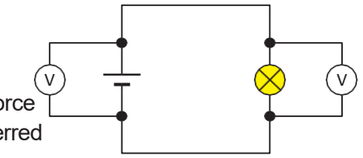
Current

- **Current** is the amount of **charge** flowing per second
- The charges that flow in a circuit are **electrons**, they are negatively charged
- **Electrons** leave the negative end of the **cell** and travel around the circuit to the positive end of the cell
- Current has the unit of Amps (A) and is measured with an **ammeter** (which is placed in series or in the main circuit)



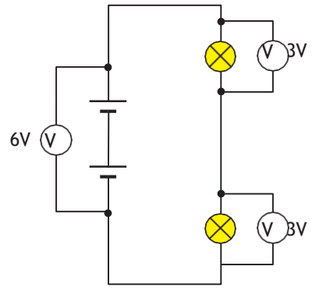
Potential difference

- **Potential difference** is the amount of energy transferred by the cell or **battery** to the charges
- The value of potential difference tells us about the force applied to each charge and then the energy transferred by each charge to the component which it passes through
- Potential difference has the unit of volts (V) and is measured with a **voltmeter** (which is placed in parallel to the circuit)



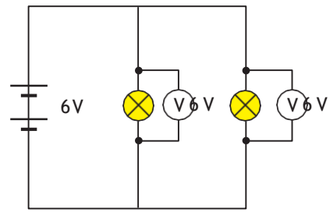
Series circuits

- **Series** circuits only have one loop
- If one component breaks, the whole circuit stops working
- Current is the same everywhere in a series circuit
- The total potential difference from the battery is shared between the components in a series circuit
- Adding more bulbs decreases the brightness of the bulbs



Parallel circuits

- **Parallel** circuits have more than one loop
- If one component breaks, the rest of the circuit will still work
- Current is shared between the different loops in the circuit
- The potential difference is the same everywhere in the circuit
- Adding more bulbs does not affect the brightness of the bulbs

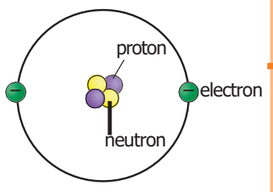


Electrical signals in the body

- **Nerve** cells are long and thin and carry electrical impulses around the body.
- Electricity from our surroundings can over power these impulses and cause us harm.

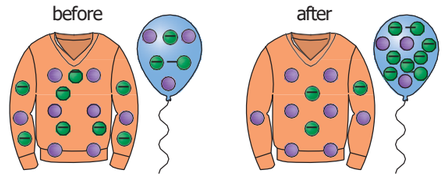
The atom

- The **atom** consists of a central nucleus with electrons orbiting around the outside in shells
- **Electrons** have a negative charged
- **Protons** are inside the nucleus and have a positive charge
- **Neutrons** are inside the nucleus and have a neutral charge



Static electricity

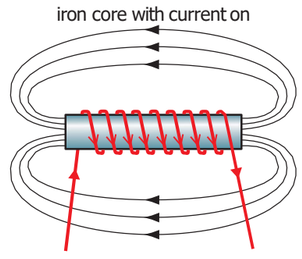
- Static electricity is the caused by the rubbing together of two **insulators**
- This causes electrons to be transferred, leaving one object with a positive charge, and one object with a negative charge



- Like charges will **repel**, opposite charges will **attract**

Electromagnets

- **Electromagnets** are made by wrapping a coil of wire around a magnetic **core**
- Electromagnets only work when electricity is flowing through the coil, which means that they can be turned on and off
- Electromagnets are also stronger than **permanent** magnets
- The electromagnet will produce the same magnetic field shape as a bar magnet



- You can increase the strength of an electromagnet by:
  - Increasing the number of turns on the coil around the core of the electromagnet
  - Increasing the current which is flowing through the coil of wire
  - Using a more magnetic material for the core, e.g. iron rather than aluminium

Key terms

Make sure you can write definitions for these key terms.

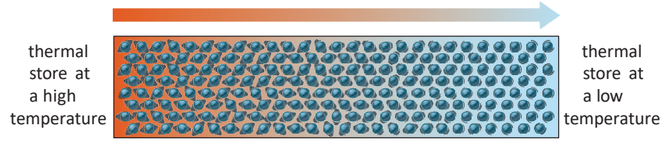
Ammeter, atom, attract, battery, cell, conductors, current, electrons, electric charge, insulator, neutral, neutrons, potential difference, protons, repel, resistance, parallel, series, voltmeter

C4 Heating and cooling
Knowledge organiser

Activate
Question •Progress •Succeed

Conduction

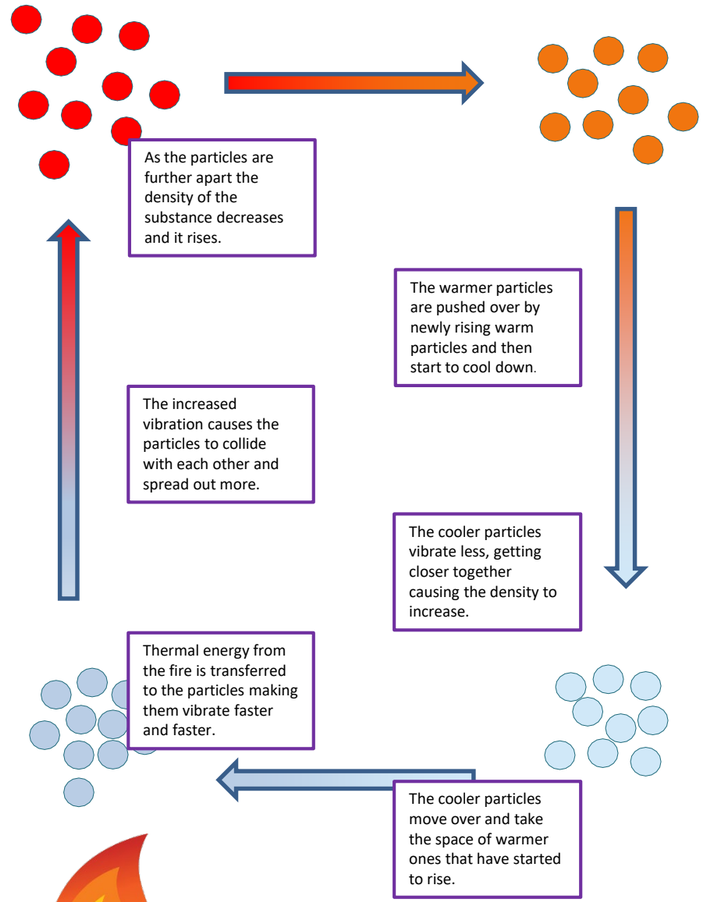
- **Conduction** is the transfer of thermal energy by the vibration of particles, it cannot happen without particles
- This means that every time particles collide they transfer thermal energy
- Conduction happens effectively in solids as their particles are close together and can collide often as they vibrate around a fixed point
- Metals are also good **thermal conductors** as they contain electrons which are free to move
- In conduction the thermal energy will be transferred from an area which has a high **thermal energy store** (high temperature) to an area where there is a low thermal energy store (low temperature)
- Gases and liquids are poor conductors as their particles are spread out and so do not collide often, we call these **insulators**



Convection

- **Convection** is the transfer of thermal energy in a liquid or a gas, it cannot happen without particles
- As the particles near the heat source are heated they spread out and become less dense, this means that they will rise
- More dense particles will take their place at the bottom nearest the heat source creating a constant flow of particles
- This is known as a **convection current**
- Convection cannot happen in a solid as the particles cannot flow, they can only move around a fixed point

Convection currents



- Convection currents can be seen in any fluid as it gets heated. Most commonly you will see them in the air around us. As the sun heats the air convection currents cause air to rise. The air that moves in to take its place is what we call wind.

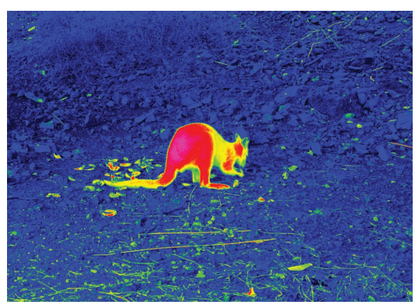
Energy and temperature

- The **temperature** of a substance is a measure of how hot or cold it is
- Temperature is measured with a **thermometer**, it has the units of degrees Celsius (°C)

- The **thermal energy** of a substance depends on the individual energy of all of the particles, it is measures in Joules (J)
- As all particles are taken into account, a bath of water at 30 °C would have more thermal energy than a cup of tea at 90 °C as there are many more particles
- The faster the particles are moving, the more thermal energy they will have
- When particles are heated they begin to move more quickly
- The energy needed to increase the temperature of a substance depends on:
  - the mass of the substance
  - what the substance is made of
  - how much you want to increase the temperature by

Radiation

- **Radiation** is a method of transferring energy without the need for particles
- An example of radiation is thermal energy being transferred from the Sun to us through space (where there are no particles)
- This type of radiation is known as **infrared radiation**, it is a type of wave just like light
- The hotter an object is the more infrared radiation it will emit (give out)
- The amount of radiation emitted and absorbed depends on the surface of the object:
- Darker matte surfaces absorb and emit more infrared radiation
- Shiny and smooth surfaces absorb and emit less infrared radiation, instead reflecting this
- The amount of infrared radiation being emitted can be viewed on a **thermal imaging camera**



Keyterms

Make sure you can write definitions for these key terms.

conduction **convection** **convection current** **density** **insulator** **infrared radiation** **temperature** **thermometer** **thermal conductor** **thermal energy store** **thermal imaging camera** **density**

Respiration

- Respiration is the process in which energy is released from the molecules of food which you eat
- Respiration happens in the mitochondria of the cell
- **Aerobic respiration** involves oxygen, it is more efficient as all of the food is broken down to release energy

glucose + oxygen → carbon dioxide + water

- The glucose is transported to the cells in the blood **plasma**
- The oxygen is transported to the cells in **red blood cells**, by binding with **haemoglobin**
- Carbon dioxide is a waste product and is transported from the cells to the lungs to be exhaled

Key terms Make sure you can write definitions for these key terms.

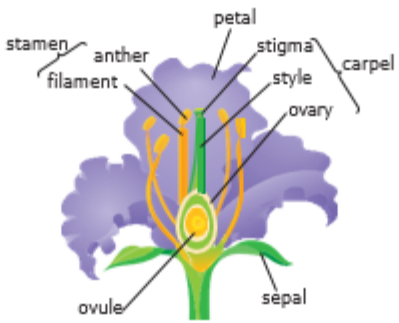
Algae Anther Chlorophyll Chloroplast Fertiliser Light intensity Magnesium Mineral deficiency Nitrates Palisade cells Phosphates Photosynthesis Potassium Producer Rate Spongy layer Stomata Waxy layer

Parts of a flower

Stamen

Male part of the flower

- The **anther** produces **pollen**
- The **filament** holds up the anther



Carpel

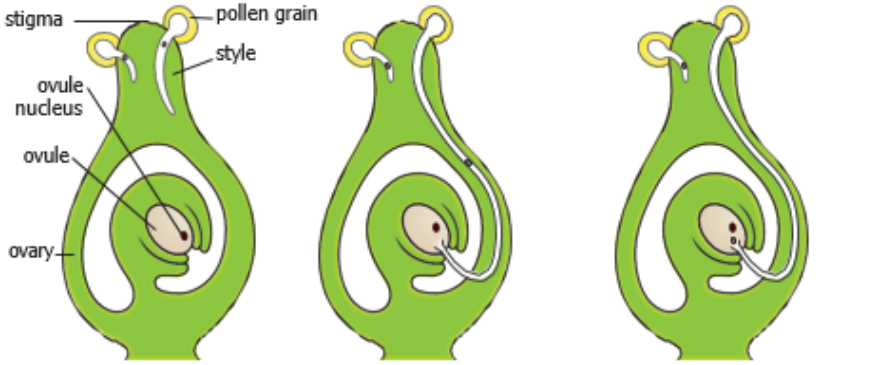
Female part of the flower

- The **stigma** is sticky to catch grains of pollen
- The **style** holds up the stigma
- The **ovary** contains **ovules**

Pollination and fertilisation

Pollination is the **fertilisation** of the ovule, the point at which the pollen is transferred to the ovule from the anther to the stigma, there are two types of pollination

- Cross pollination is between two different types of plant
- Self pollination happens within the same plant



The tube grows out of the pollen grain and down through the style.

The pollen nucleus moves down the tube.

The pollen nucleus joins with the ovule nucleus. Fertilisation takes place and a seed will form.

Germination is the process in which the **seed** begins to grow, for this to occur the seed needs:

- Water to allow the seed to swell and grow and for the embryo tostart growing
- Oxygen for that the cell can start respiring to release energy forgermination
- Warmth to allow the chemical reactions to start to occur within the seed

B4 Plants Knowledge organiser

Activate Question • Progress • Succeed

B4 Plants

Activate — Question • Progress • Succeed

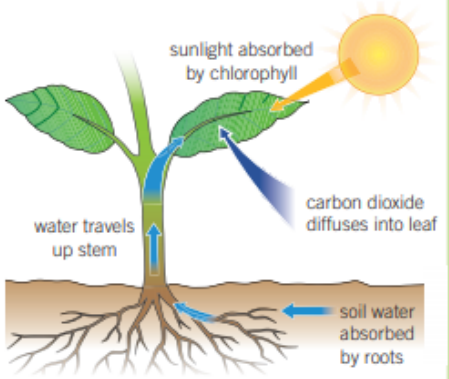
Knowledge organiser

Photosynthesis

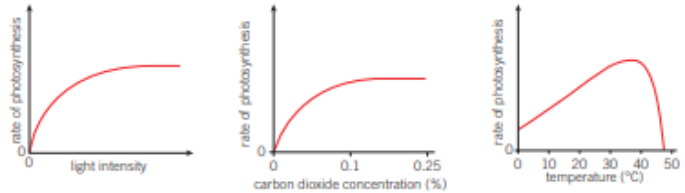
- **Photosynthesis** is the process which occurs in the chloroplasts to produce glucose using sunlight

water + carbon dioxide + sunlight → glucose + oxygen

- Any organism that can use photosynthesis to produce its own food is known as a **producer**, these are not just limited to plants but can include other organisms such as **algae**

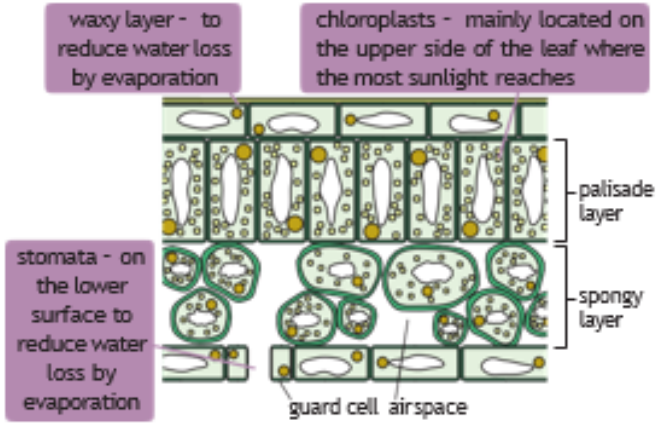


- The rate of photosynthesis can be affected by:
  - Light intensity – the higher the light intensity the higher the rate of photosynthesis up to a point
  - Carbon dioxide concentration – the higher the carbon dioxide concentration the higher the rate of photosynthesis up to a point
  - Temperature – the optimum temperature is the temperature at which photosynthesis occurs at the highest rate, before and after this the rate will be less



Leaves

- To best adapt for photosynthesis leaves have a number of adaptations
- They are thin to allow the most light through
- There is a lot of **chlorophyll** to absorb light
- They have a large surface area to absorb as much light as possible



Plant minerals

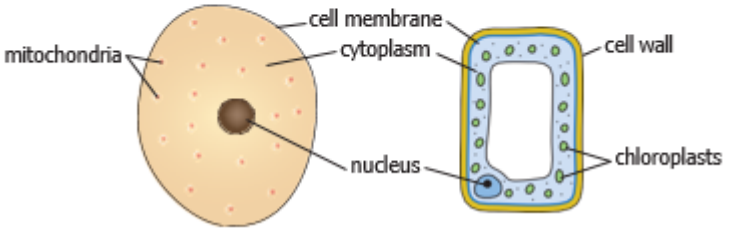
Plants need minerals for healthy growth, if they do not have enough of these minerals this is known as a **mineral deficiency**

Mineral	What is it used for?	What happens if there is not enough?
nitrates (contain nitrogen)	healthy growth	poor growth and older leaves yellow
phosphates (contain phosphorus)	healthy roots	poor growth, younger leaves look purple
potassium	healthy leaves and flowers	yellow leaves with deadpatches
magnesium	making chlorophyll	leaves will turn yellow

Fertilisers can be used to stop plants from suffering with mineral deficiencies

Plant and animal cells

- To be 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



Year 8 Resistant Materials Knowledge Organiser

Design for maintenance and repair

Advantages of repairable products and those that can be maintained:

Can be updated, to be more efficient, lengthening their useful life time.
It is cheaper to repair than replace an entire product.
Repairable products are environmentally friendly

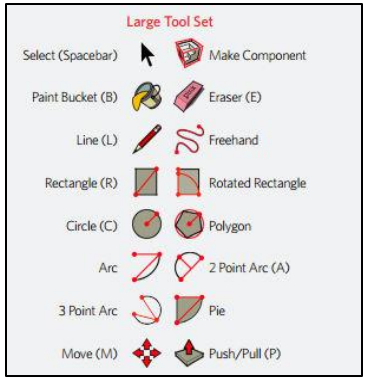
A **standard component** is a pre-manufactured product that is used in the manufacturing of another product. As well as saving time, using a standard component can ensure a consistent product is produced. Users can remove standard fittings to help them repair or replace parts . **Nuts , bolts , washers , zips , buttons are just some examples.**

CAD – Computer aided design.

2DDesign , Google Sketch-up
Advantages
- Easy to make changes
- Show clients 3D models of your idea
- Files can be emailed across the world instantly
- You can test your idea in a virtual environment

Disadvantages
- Software can be expensive
- You need training

CAD Tools



Computer aided manufacturing machines

Laser cutter

3D printer

Accurate , can be used to make multiple copies

Design movement : A design movement is a group of designers with a common cause view or idea who then produce designs based upon their views or ideas. Memphis Design movement , Art Deco , modernism and Art Nouveau are examples from the 20th century.

Input Components

These devices form the crucial control needed for a product to operate. Most input components need to be bought but some can be manufactured especially for a project. For instance, a pressure sensor.

Light dependent resistors (LDRs) are a type of variable resistor whose resistance increases with light.

Switches are simple input devices which allow electrical current to flow when pushed.

Motion sensors use infrared to detect changes in the environment to activate the system.

Thermistors are a type of variable resistor whose resistance changes when it becomes hot or cold.

Process Components

These devices are used in combinations to turn the signal from the input component into the signal to the output component. Careful designing and a good knowledge of the way circuits are designed is crucial

Resistors limit current flow in an electronic circuit and have to be placed before some components to prevent damage.
.

Integrated circuits (ICs) are manufactured for many different uses and functions. A tiny circuit is encased in silicone (a semiconductor material). Although they look complex, they follow the same logic as simple circuits. Because of their reduced size, smaller products can be achieved as more technology can be made to fit into smaller spaces.

Microcontrollers are tiny integrated circuits used widely in automatically controlled devices such as engine management in cars. These can be combined with drivers to control devices such as motors. Raspberry Pi and BBC micro:bit computers are examples used in schools

Output Components

The output is the end function of the product. In most cases, the output can be classed as light, sound, motion or a combination of two or more functions.

Light emitting diode (LED) come in different colours and levels of brightness. They have replaced the filament bulb in many everyday uses.

Light bulbs are not as widely used because of LEDs in an everyday context but minilight bulbs do not require soldering, so can still be useful.

Buzzers use electric current to create their own sound. Used in alarm systems.
Speakers allow a sound signal from a circuit to be amplified.

Motors are magnetic devices and are behind nearly all moving parts in electronic systems.

Analysing products

When a designer is developing a new design, it is useful to analyse existing products to see how successful they have been and identify any areas in which they could be improved

Solder

Soldering iron

Side cutters

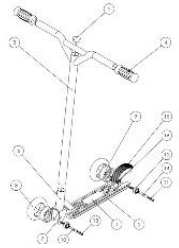
Tenon saw

Printed circuit board . Electronically connect components using copper tracks .

A **hazard** is any source of potential damage, harm or risk.

A **precaution** is a measure taken to prevent something dangerous or harmful happening

Exploded drawings show how a product is assembled. Each component is usually labelled.



Anthropometrics
Anthropometrics is the practice of taking measurements of the human body and provides categorised data that can be used by designers.

Soldering is a permanent addition method for electronic components.

Short-circuit In a circuit, often as the result of a solder bridge, electricity will flow in the shortest path back to the battery.

Insulator A material that does not conduct electricity and can therefore be used as a coating to components, circuit boards and wires. PVC is a example.

Conductor A material which allows heat or electricity to pass through it easily. Copper is an example .

Ergonomics is **a consideration that leads to a product being designed in a way to make it easy to use**. Size, weight, shape, position of buttons and controls are all aspects that contribute to it being ergonomically designed.

Year 8 Music Knowledge Organiser: Keyboard skills

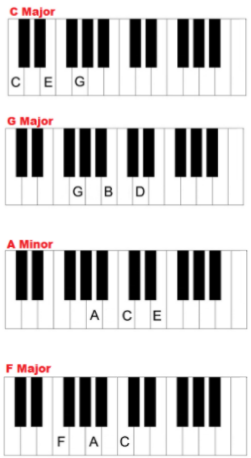
Key Vocabulary
Chord
Major
Minor
Sharp - # Flat - *b*
Leitmotif
Bass clef
Discord
Dynamics
Repeat
Ensemble
Amplifier
Jack lead

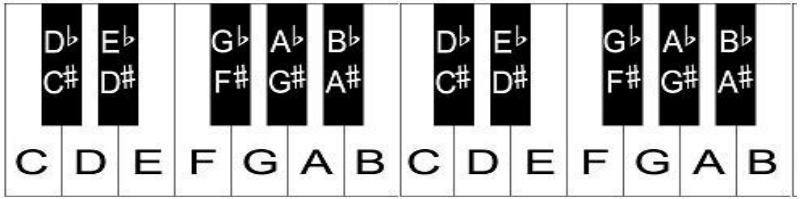
Additional Vocabulary
Semitone
Crescendo
Diminuendo
Timbre
Lead sheet
Cue sheet

Key Listening
Ode to Joy - Beethoven
Pachelbel's Canon
Fur Elise-Beethoven
Someone You Loved - Jonas Brothers Radio 1 Live Lounge

Composing Techniques
Repetition
Instrumentation
Gradually getting faster/slower
Short rhythms
Simple chords
Structure (the order)

Piano chords






Amp


Microphone


Jack lead


Kettle lead

KS3 Dance Skills KO – Autumn Term

Performance Skills

PHYSICAL:

Balance – Holding a steady position
Alignment – correct placement of body parts
Flexibility – range of movement in the muscles
Extension – lengthening of the muscles
Mobility – range of movements in the joints
Control – ability to stop, start and change direction
Co-ordination – combining the body parts
Isolation – independent movement of body parts
Posture – the way the body is held
Strength - muscle power

EXPRESSIVE:

Focus – use of the eyes
Facial Expressions – use of the face
Spatial awareness – using the space
Projection – energy used to connect with audience
Phrasing – distribution of the energy
Sensitivity to others – connecting with other dancers
Musicality – bringing out the music
Communication – portraying intentions and themes.

SAFE PRACTICE:

Safe execution, Appropriate dancewear- footwear, hairstyle, and no jewellery. Warm-up/cool down. Nutrition. Hydration

Actions

What the body is doing

Gesture – non-weight bearing action

Use of different body parts – head, shoulders, hips

Elevation – whole body in the air

Stillness – stationary/not moving

Travel – journey from A-B

Floorwork – movement at a low level

Turn – whole body rotation

Transfer – changing the weight-supporting body parts

SPIN TWIST KICK
STAND SLIDE CHOP
SCOOCH CARTWHEEL
COLLAPSE SHAKE GALLOP
PUNCH LEAP FLICK
RUN PIROUETTE STAMP
HIP ROLL PIVOT ROLL
RISE BALANCE STRETCH

Dynamics

How the body is moving.

Fast/**S**low

Sudden/**S**ustained

Flowing/**A**brupt

Direct/**I**ndirect

Accelerate/**D**ecelerate

Strong/**L**ight

SMOOTH SHARP
EXPLODE JERKY
ROBOTIC MELTING
QUICKLY BOUNCY
AGGRESSIVE ERRATIC
GRACEFULLY SILKY
SOFT SPORADIC
FORCED FLUID
LETHARGIC HEAVY

Year 8 Knowledge Organiser

Spring Term

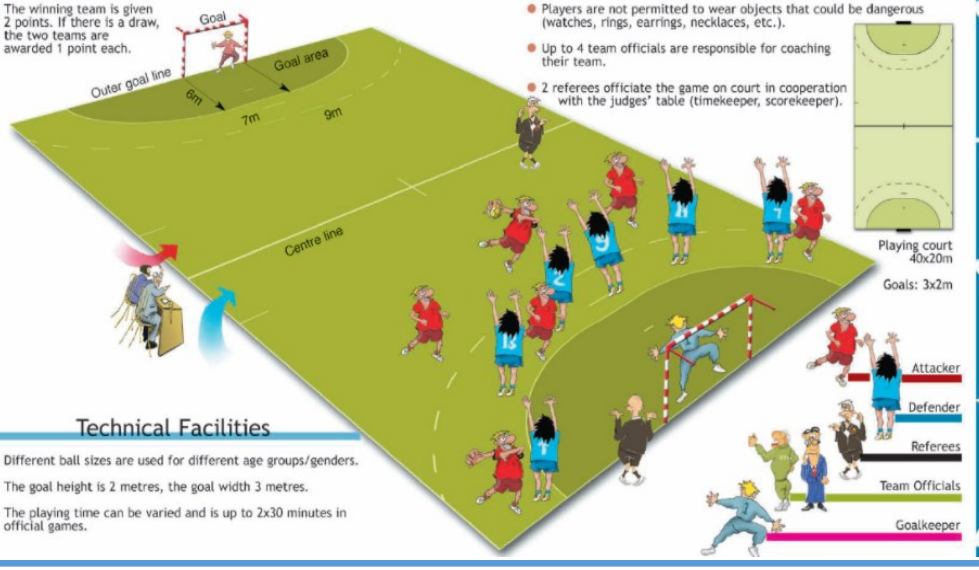
How well do you understand handball?

Get ahead of the game

If you've already done your Netball rotation, keep the positions in your head. If your Netball is still to come you need to learn these

The Basic Principles of Handball

- Handball is a team sport based on "fair play" principles.
- On court there are two male or female teams playing against each other, both trying to score goals with a handball.
- The team that has scored the most goals when the playing time is over is the winner.
- The winning team is given 2 points. If there is a draw, the two teams are awarded 1 point each.



Technical Facilities

- Different ball sizes are used for different age groups/genders.
- The goal height is 2 metres, the goal width 3 metres.
- The playing time can be varied and is up to 2x30 minutes in official games.

Teams/Players/Team Officials/Referees

- Each team consists of up to 14 players. On court a team has 6 field players and 1 goalkeeper.
- Within each team the players are interchangeable during the game.
- All field players of a team wear identical, coloured uniforms. Goalkeepers wear uniforms that differ from those of the field players.
- Players are not permitted to wear objects that could be dangerous (watches, rings, earrings, necklaces, etc.).
- Up to 4 team officials are responsible for coaching their team.
- 2 referees officiate the game on court in cooperation with the judges' table (timekeeper, scorekeeper).

BASIC SKILLS

Fitness Tests

Cooper Run

30M Sprint

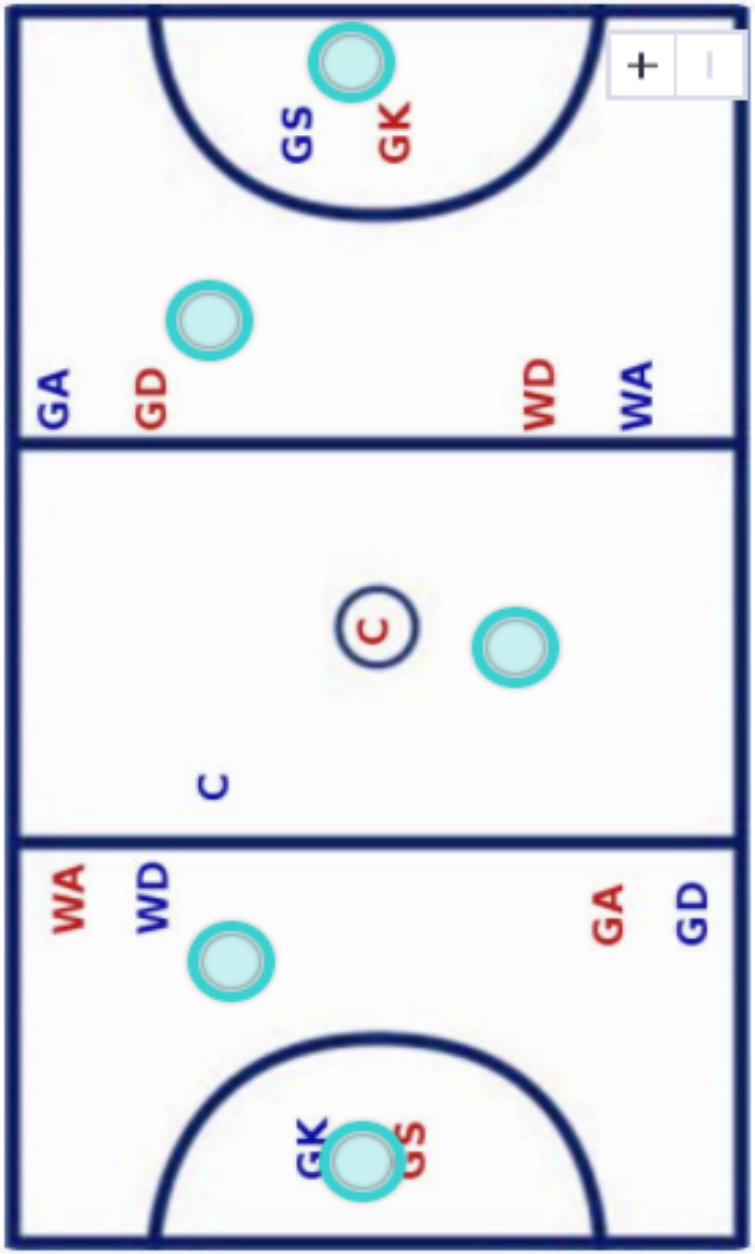
Sit & Reach

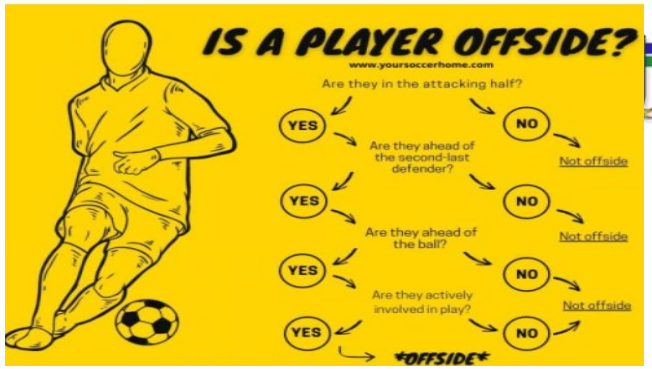
Vertical Jump

Agility Run

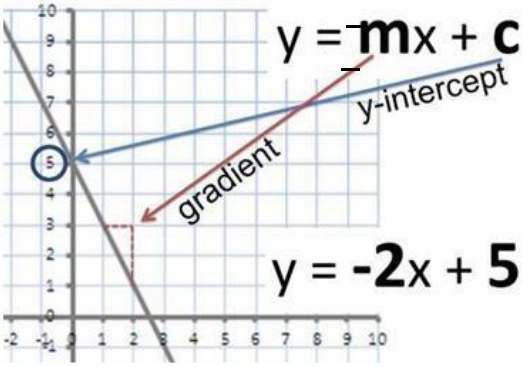
Speed Bounce

Sit Ups | Wall Throw | Stork Stand | Ruler Drop | SLJ





Y8 Spring Maths Knowledge Organiser

Topic	Key fact	Hegarty maths clip number
Expanding single brackets	$2(y - 3) = 2xy - 2x3 = 2y - 6$ ✓	160 - 161
Plotting linear graphs using a table of values	▪ Need minimum 3 pairs of coordinates. ▪ Start at x = 0. ▪ Do the positive x co-ordinates first. ▪ X co-ordinate: along the corridor ▪ Y co-ordinate: up the stairs. ▪ Y = mx + c will be a straight line.	206
Identifying gradient and y- intercept	The number in front of x is called the gradient and tells us how many up (+) or down (-) the graph goes for every 1 across (right). 	207
Calculating with Decimals	Addition and subtraction: line up the decimal point. Multiplication: Change to whole numbers and remember to put the point in at the end. Division: If dividing by a decimal times both numbers by 10, 100 or 1000. Do not put decimal back in.	47 - 51
Four Operations with Fractions	To add and subtract fractions you need to write all fractions in a sum with the same denominator by writing equivalent fractions. Multiplying: Cancel down whenever possible, then multiply the numerators together and multiply the denominators together. Dividing fractions: KFC (**K**eep the first, **F**lip the second and **C**hange the sign to x)	65 -78
Sharing in a given ratio	Always find 1 part	332 to 334
Ratio problems	Set out in columns and put information below the appropriate column	335 to 338
Proportion	Direct proportion: as one quantity increases so does the other Inverse proportion: as one quantity increases the other decreases	339 to 342

Multi-step Angle Reasoning	Angles on a straight line add up to 180°. Angles in a triangle add up to 180°. Angles in a quadrilateral add up to 360°. Vertically opposite angles are equal. Angles around a point add up to 360°.	477 - 480, 484 - 491, 812 - 815
Pie Charts	• Find the angle for each category: • 360° ÷ total frequency = the number of degrees per piece of data • To work out each category's associated angle we multiply the number of degrees per piece of data by each frequency.  **Top Tip:** Always draw each angle clockwise, using the previous line drawn to start.	427 - 429

Key Vocabulary

○ Numerator - the top number in a fraction. ○ Denominator - the bottom number in a fraction. ○ Mixed number - a number consisting of an integer and a proper fraction. ○ Improper fraction - an improper fraction is a fraction where the top number (numerator) is greater than or equal to the bottom number (denominat~~or): it is top~~-heavy.

○ Direct proportion - one quantity increases at the same rate as the other quantity increases. ○ Inverse proportion - one quantity increases at the same rate as the other quantity decreases. ○ Rate - a price or charge set according to a scale or standard hotel rates.

○ Quantity – the amount of something. ○ Expand – to multiply the term before bracket by the terms in the bracket. ○ Expression – collection of terms. E.g 4x + 8p.

○ Gradient – the steepness of a curve

○ Linear Graph – straight line graph $y = mx + c$ ○ Y-intercept – where the graph crosses the y axis

Mean, Median, Mode and Range (recap averages)	Mean: Add up all the numbers and then divide by the number of items. Median: Put in order and then find the middle. If two middle values then add the two middle numbers and divide by 2. Mode: The number that appears the most. There can be more than one mode. Range: The difference between the largest and smallest numbers.	404 -410 And 419 – 421

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KS3 Knowledge Organiser – English Civil War

Knowledge Check 1 Content

Key People/Words	Description
James I	King of England and Scotland 1603-1625
Princess Elizabeth	Daughter of James.
Robert Cecil	King's chief advisor
Robert Catesby	Leader of the Gunpowder Plot
Guy Fawkes	The most famous conspirator, given the job of blowing Parliament up
Catholic	Christian's who believe the Pope is the head of the church
Protestant	Christian's who believe the monarch is the head of the church. They follow the Church of England
Parliament	Parliament is a group of people who make laws and help run the government.
Houses of Parliament	Where the government is run from.

Who was James 1st?

- James I and VI (1566-1625), was King of Scotland as James VI between 1567 and his death, and King of England and Ireland as James I from 1603 until his death.
- The previous monarch of England, Queen Elizabeth I, died without any children. The English agreed to have a Scottish King, because James was her closest living relative (as the son of Mary Queen of Scots).
- James' reign is characterised by his frequent quarrels with the Parliament of England.

How did religion cause problems for James?

- Growing up James was raised as a Protestant. Most people in Scotland, where he grew up, were Protestants.
- When James became king, he supported the Protestant church in England.

How did James deal with the Catholic threat?

- James made strict rules against Catholics. These rules made it hard for them to practice their religion. For example Catholics were fined for not going to Protestant mass-this angered the Catholics.
- Even though he was strict, James didn't want to be too harsh because he didn't want more trouble. Sometimes, he allowed Catholics to pay fines instead of harsher punishments.

What was the Gunpowder Plot (1605)?

- The Gunpowder Plot was a plan by a group of Catholics to blow up the Houses of Parliament in London on November 5, 1605.
- When James I became king, many Catholics hoped he would be nicer to them because his mom was Catholic. But when he continued the strict rules, they got very angry and frustrated.
- The Catholics wanted to stop being persecuted and hoped to make their religion more accepted in England.
- The Catholic plotters wanted to kill James I and many important leaders in the explosion, start a Catholic revolt and kidnap Princess Elizabeth, the King's daughter, with the aim of bringing her up as a Catholic Queen who would be nicer to the Catholic faith.
- The plot was discovered before it could happen, and the people involved were caught and punished. Because of this, the laws against Catholics became even stricter.

Who were the key conspirators?

- Robert Catesby - The leader of the plot.
- Thomas Winter - A close associate of Catesby.
- Guy Fawkes – His job was to create the explosion
- John Wright - Another key member
- Thomas Percy - A cousin of Catesby
- Robert Keyes - Assisted in the plot
- Christopher Wright - Brother of John Wright

Why was Robert Cecil important to James?

- Robert Cecil was the kings closest advisor. He worked as Secretary of State and helped manage the government, gather information, and handle important foreign relations.
- He played a big role in keeping the country stable and even helped prevent the Gunpowder Plot.

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KS3 Knowledge Organiser – English Civil War

Knowledge Check 2 Content

Key People/Words	Description
Charles 1	King of England and Scotland 1625-1649
Cavaliers	Supported the King
Roundheads	Supported Parliament
Taxation	When Parliament collects money from people to pay for things like wars-like a bill everyone has to pay
Absolute Power	Belief that one person holds all power and makes all decisions without question
Divine Right of Kings	Belief that monarchs are chosen by God to rule and that this should not be argued.
Civil War	A war between groups of people from the same country
Royal Authority	Royal authority is the power a king or queen has to make rules and decisions for a country. It's like being the boss of the whole country

Who was Charles 1st?

- Charles I was the king of England, Scotland, and Ireland from 1625 until his execution in 1649.
- He had many struggles with Parliament, due to his stubbornness over power and money.

What were Charles 1st beliefs about power?

- Charles I believed in the 'Divine Right of Kings', which meant he thought that kings were chosen by God to rule and should have absolute power.
- Charles believed that he should make decisions without needing permission from Parliament, leading to many conflicts.
- Charles felt that his authority came from God, not from the people, which created tension with those who wanted more power for Parliament.

What power did Parliament have under Charles?

- Under Charles I, Parliament had two main powers.
- Taxation: Parliament had to approve taxes, and Charles often tried to raise money without their consent, leading to conflict.
- Law-making: Parliament could propose and debate new laws, influencing rule in England.

What problems did Charles and Parliament have?

- The were many problems between Charles I and Parliament. Charles wanted to raise taxes without Parliament's approval, which caused fights over money.
- Royal Authority: Charles believed he should have absolute power as king, while Parliament wanted a bigger role in decisions.
- Dismissal of Parliament: Charles often dissolved Parliament when he didn't agree with them, making things worse. He once dissolved them for 11 years.

What was England's relationship with Scotland like?

- Scotland went to war with King Charles I because of disagreements over religion and power.
- New Church Rules: King Charles I and his religious advisor wanted Scotland to follow the same church rules as England. They introduced a new prayer book in 1637, the 'King James Bible' which many Scots disliked because it felt like they were being forced to change their religion.

Why was Charles 1st marriage to Henrietta Maria a problem?

- Charles marriage to a foreign Princess caused many problems in England.
- Religious Fears: People in England were mostly Protestant and were scared of Catholics. Henrietta Maria was a Catholic, so they worried she might try to make England more Catholic.
- Foreign Influence: Henrietta Maria was from France, and some people were afraid she would bring too much French influence into England's politics.
- Distrust and Expense: Her marriage made Parliament distrust Charles I even more, and maintaining her household was very expensive, adding to the country's financial problems.

What were the two sides in the English Civil War?

- Eventually tension between the King and Parliament led to civil war.
- The two sides were the Royalists (Cavaliers) they supported King Charles I. They were called "Cavaliers" and the Parliamentarians (Roundheads) They supported Parliament and wanted more say in how the country was run. They were called "Roundheads" because many of them had short hair.

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KS3 Knowledge Organiser – English Civil War

Knowledge Check 3 Content

Key People/Words	Description
Musketeer	Soldier who fought with a musket
Pikeman	Soldier who fought with a 5 meter long pike
Puritan	A person in England who wanted to make the Church of England simpler and followed strict religious rules.
Oliver Cromwell	Leader of the Parliamentarians
New Model Army	A well-trained army formed by Parliament during the English Civil War to fight against King Charles I.

What types of soldier fought in the English Civil War?

- A musketeer was a soldier who fought with a musket, a type of gun.
- They were part of both the Royalist and Parliamentarian armies but due to the cost of musket's were found mainly on the King's side.
- Musketeers were known for their training in using firearms and often wore uniforms that included a hat and sometimes armour.
- A pikeman was a soldier who fought with a pike, a long spear used for combat.
- Pikemen were important in battles to protect against cavalry charges and to support musketeers.
- They often wore armour and were part of both the Royalist and Parliamentarian armies.

Who had the better soldiers?

The Musketeers:

Strengths:

- The gun was fired using a match (a piece of burning rope) to light the gunpowder that had been poured in a barrel. Hopefully a ball or shot would fly out and travel up to 400 metres.

Weaknesses

- A musket was a big clumsy gun. It was so heavy that musketeers needed a stick to rest them on
- Unfortunately the bullets were not aerodynamic and the chances of hitting what you aimed at were slim. However if you did hit flesh, the results were devastating!
- There was always the chance of accidentally blowing a finger off. One musketeer said, 'we seem to bury more fingers and thumbs than we do men'.

The Pikemen

Strengths:

- Their job was to stand at the front of the army with a five meter long pole, tipped with steel. As the enemy approached, they dug on end into the ground and pointed the other at the charging enemy's horse. They also wore heavy armour and also carried a sword.

Weaknesses

- These men were at the front line of battle so death and injury was commonplace.
- Brute force rather than skill was a requirement to be a pikeman.

Who were the Puritan's?

- The Puritans were a group of people in England who wanted to make the Church of England more simple and less like the Catholic Church. They believed in stricter religious practices.
- Many Puritans supported the Parliamentarians (Roundheads) because they disagreed with King Charles I and his rules.
- Puritans helped lead the New Model Army, which fought for Parliament and won important battles.
- After the war, Puritan ideas influenced how England was run, especially under Oliver Cromwell they helped shape England's future after the war.

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KS3 Knowledge Organiser – English Civil War

Knowledge Check 4 Content

Key People/Words	Description
Treason	Someone who betrays their country
Tyrant	a leader who uses power in a cruel and unfair way.
Court	a place where people go to solve problems, decide if someone broke the law, and figure out punishments.
Traitor	someone who betrays their friends, country, or team by helping the other side.
Martyr	someone who dies or suffers a lot because they stand up for what they believe in.
Lord Protector	Leader who rules a country without the title of King or Queen.
Republic	a type of government where people elect their leaders and have a say in how things are run

What were the key battles of the Civil War?

- Battle of Edgehill (1642): The first big fight. Both sides thought they won, but it showed that the war would be long.
- Battle of Marston Moor (1644): A major win for the Parliamentarians, giving them control of Northern England.
- Battle of Naseby (1645): A crucial victory for the Parliamentarians that weakened King Charles I's army.
- Battle of Preston (1648): Parliament's forces, led by Oliver Cromwell, defeated the Royalists and their Scottish allies, leading to the capture of King Charles I.
- Battle of Worcester (1651): The last big battle. Cromwell's army won, causing King Charles II to escape to France.
- These battles helped decide that Parliament, not the king, would control England.

Why was Charles put on trial?

- Charles I was put on trial for treason at the end of the English Civil War because people believed he was a threat to the country. Charles refused to negotiate and work with Parliament at all.
- He was accused of trying to rule without Parliament and doing serious things like waging war against his own people.
- The Parliamentarians wanted to hold him responsible for the Civil War.

What happened during the trial of King Charles?

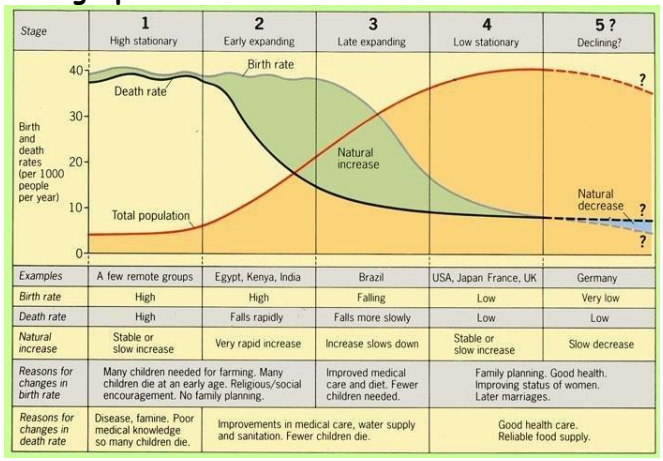
- The trial of King Charles I happened in January 1649. A special court was formed by Parliament to try Charles. Many people thought this court was unfair as it contained mainly people who were against Charles.
- Charles was accused of being a tyrant and a traitor.
- Charles didn't accept the court's authority. He argued that it was wrong to try a king and said he was protecting his rights.
- The trial lasted several days. Charles often talked about the rights of kings and stood firm in his beliefs.
- On January 27, 1649, Charles was found guilty of treason. The court sentenced him to death.
- Charles was executed on January 30, 1649, in front of a crowd. He said he was going to his death as a martyr and still believed strongly in the power of kings.

What was life in England like after the execution of Charles 1st?

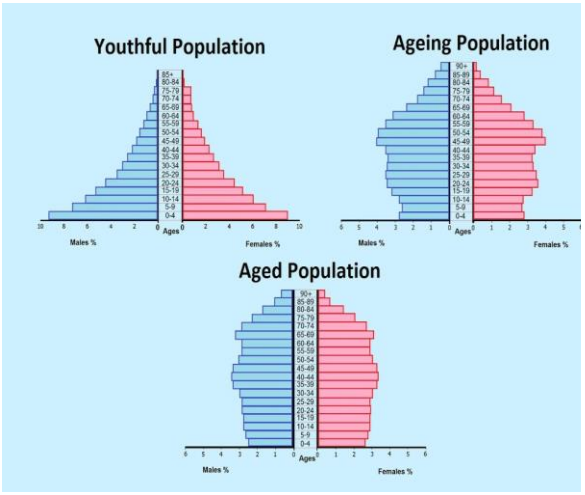
- Under the rule of Oliver Cromwell, England experienced significant political, social, and religious changes.
- After Charles I's execution, England became a republic with no king. Oliver Cromwell was given the title of 'Lord Protector' and held a lot of power.
- He relied on the army to maintain order.
- Strict religious rules, mainly Puritan, were enforced, limiting freedoms for some groups. Activities like sports were banned.
- More people learned to read and write.
- England was involved in wars that affected trade and led to higher taxes.
- The government controlled free speech.
- Society was split between royalists and supporters of Cromwell.
- After Cromwell's death in 1658, the monarchy was restored in 1660. Cromwell's rule brought order but also conflict.

Year 8 Knowledge Organiser (KO) – How does population, shape places?

Demographic Transition Model



Population Pyramids



Push and Pull Factors

What is a push factor?

Push factors are factors that will make people want to leave a particular location.

What is a pull factor?

Pull factors are factors that will make people want to live in a particular area.

Task
Colour code the statements into Push Factors (for Poland) and Pull Factors (for the UK).

Polish unemployment in 2005 was 18.2%.	The desire to live abroad.	The UK do not restrict immigration (as well as Ireland and Sweden).
UK skill shortages in tourism and construction industry.	Rural areas in Poland have 40% unemployment.	UK unemployment in 2005 was 5.1%/
Poland has a high youth unemployment rate.	Average UK job vacancies for Jan 2007 was over 600,000.	The average salary in the UK is $30,900.
Unskilled labour needed in farming.	The opportunity to improve in the English language.	The average salary in Poland is $12,700.

What should I already know?

How to locate a place on a map

Different types of settlements

What is Leicester like

Why is population density as it is in these places? What factors affect it?
Glue the photos into your book and add these annotations to the correct photograph.

Poor transport	Few schools
Business opportunities	Electricity & gas
Excellent healthcare	Flat land
Dating opportunities	Arranged marriages
Little social activity	Warm climate
River water	Job opportunities
No mobile signal	Modern culture

Few jobs	Clean piped water
Nightlife	No hospitals
Supermarkets	Good transport
No electricity & gas	Weekly market
Harsh climate	Good schools
Difficult terrain	International airports
Broadband internet	Traditional culture

Keywords	Definition
Birth rate	**The number of babies born per 1000 people (per year)**
Death rate	**The number of deaths per 1000 people (per year)**
Fertility rate	**The number of babies born per woman**
Migration	**When people move** from one place to another
Push factor	**A reason that forces people to move** away
Pull factor	**A reason that draws people** to a new place
Obstacle	**A reason that prevents people from migrating** when they might want to
Nomad	**A person with no fixed home** – they are permanently migrating

Pour mon anniversaire – **for my birthday** Pour l'anniversaire de ma mère – **for my mum's birthday** Pour l'anniversaire de mon père – **for my dad's birthday** Pour noël – **for Christmas**	je vais – **I'm going** on va – **we are going** nous allons – **we are going**	manger une pizza – **eat a pizza** manger un grand repas – **eat a big meal** manger du chocolat – **eat some chocolate** boire du coca – **drink some coke** jouer au foot – **play football** faire du shopping/faire les magasins– **go shopping** faire de l'équitation/faire du cheval – **go horse riding** faire une promenade – **go for a walk** aller au cinéma – **go to the cinema** aller à la plage – **go to the beach** aller à la piscine – **go to the pool** aller à un concert – **go to a concert** regarder un film – **watch a film**

Je pense que – **I think that** Je crois que – **I believe that** Je trouve que – **I find that** Selon moi – **according to me** Selon ma mère – **according to my mum**	ce sera – **it will be**	vraiment - **really** assez - **quite** très - **very** un peu – **a bit**	amusant - **fun** incroyable - **incredible** formidable - **great** magnifique - **amazing** hypercool - **awesome** nul - **rubbish** ennuyeux - **boring** barbant - **boring** fatigant - **tiring**

UNIT 16
Talking about my daily routine

Vers… *[around…]*

A… *[at]*

…cinq heures *[5]*

…six heures *[6]*

…sept heures *[7]*

…huit heures cinq *[8.05]*

…huit heures dix *[8.10]*

…huit heures et quart *[8.15]*

…huit heures vingt *[8.20]*

… huit heures vingt-cinq *[8.25]*

… huit heures et demie *[8.30]*

…neuf heures moins vingt-cinq *[8.35]*

…neuf heures moins vingt *[8.40]*

…neuf heures moins le quart *[8.45]*

…neuf heures moins dix *[8.50]*

… neuf heures moins cinq *[8.55]*

A midi *[12 pm]*

A minuit *[12 am]*

du matin *[in the morning]*

de l'après-midi *[in the afternoon]*

du soir *[in the evening]*

je me brosse les dents *[I brush my teeth]*

je me coiffe *[I do my hair]*

je me couche *[I go to bed]*

je déjeune *[I have lunch]*

je dîne *[I have dinner]*

je fais mes devoirs *[I do my homework]*

je m'habille *[I get dressed]*

je joue sur l'ordinateur *[I play on the computer]*

je me lève *[I get up]*

je prends le petit-déjeuner *[I have breakfast]*

je regarde la télé *[I watch telly]*

je rentre à la maison *[I go back home]*

je me repose *[I rest]*

je sors de chez moi *[I leave my house]*

je vais au collège en bus *[I go to school by bus]*

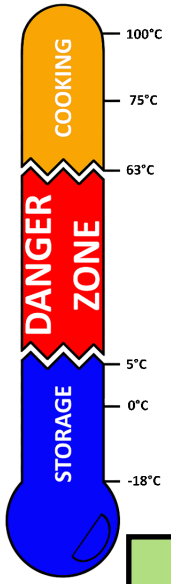
ensuite… *[then]*

après… *[after]*

finalement… *[finally]*

Year 8 - Nutrients

Food safety and hygiene is about protecting people and reducing the risk of food poisoning.



https://www.youtube.com/watch?v=zE0ypKtFuWQ

Carbohydrates are *macro*nutrients.

The main function is to **provide energy** to the body.

2 main types = **starchy** (complex) and **sugary** (simple)

Complex = long lasting energy;
Simple = short burst of energy

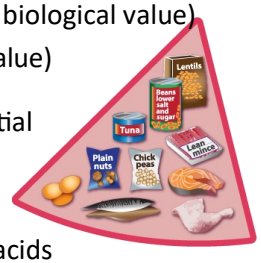
https://www.youtube.com/watch?v=PByM12M1n3A
https://www.youtube.com/watch?v=Xto8ZqCYDvY

Proteins are *macro*nutrients.

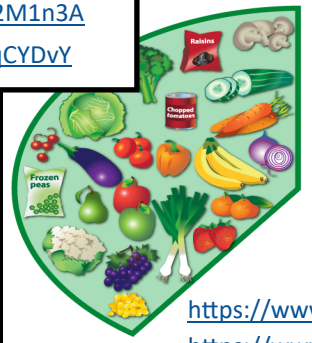
They're used by the body for **growth, repair** and maintenance of **muscle and tissue**.

2 main types = **HBV** (high biological value) and **LBV** (low biological value)

HBV = contain all 9 essential amino acids;
LBV = contain some but not all 9 essential amino acids



https://www.youtube.com/watch?v=61LeIea02ao
https://www.youtube.com/watch?v=KSKPgaSGSYA



vitamins and minerals are *micro*nutrients. They have a wide range of health benefits.

https://www.youtube.com/watch?v=K5pW7rpMTQw
https://www.youtube.com/watch?v=kteZneJm1EI
https://www.youtube.com/watch?v=1u5HOURq7kQ

The Eatwell Guide shows the types and proportions of foods people need for a healthy and well-balanced diet.

https://www.youtube.com/watch?v=7MlE4G8ntss
https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/
https://www.youtube.com/watch?v=8aWqZd9RScQ

Key vocabulary

safety / hygiene
nutrients / sources / function
carbohydrates / protein / amino acids
HBV / LBV / protein complementation
fibre / vitamins / minerals / fat / water
deficiency / excess
convection / conduction / radiation

https://www.youtube.com/watch?v=fiFi-d0RwKo

Conduction is the transfer of heat through a **solid**

Convection is the transfer of heat through a **liquid** or **gas**

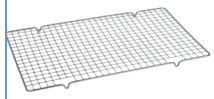
There are 3 methods of **Heat Transfer**

Radiation is the transfer of heat through electro-magnetic rays

https://www.youtube.com/watch?v=vg5k6t6uZwE

Year 8 - Cooking skills

Equipment

 Rolling pin	 Pastry cutter	 Cooling rack	 Baking tray	 Tin opener
 Juicer	 Garlic press	 Pasty mould	 Electric whisk	 Sieve

Skills and Processes

Bridge hold and Claw grip


Used in: fruit salad, pasta salad, sausage rolls, Spanish omelette, potato wedges and salsa

Rubbing in technique


Used in: jam tarts, bread rolls, Chelsea buns, cheese and onion pasties

Kneading

Used in: bread rolls, pizza wheels, Chelsea buns

Creaming

Used in: Dutch apple cake

Key word	Meaning
Gluten	The protein found in wheat, which is responsible for the elastic texture of dough.
Kneading	Working bread dough with the hands to stretch the gluten so it is elastic (helps the yeast to make bread rise).
Gelatinisation	When liquid is added to starch grains making them swell. Used to thicken sauces eg. cheese.
Simmering	When water or food in a saucepan bubbles gently (stays below boiling point).
Vegan	Don't eat or use ANY animal products.

Independent skills I need to learn in Year 8

- **Use the bridge hold and claw grip** to cut food safely and accurately.
- **Use a range of other preparation techniques** eg. peeling, chopping, slicing, dicing, grating etc.
- **Organise** all my ingredients and follow a recipe.
- **Use the cooker** (eg. hob and oven) safely.
- **Temperature control** know when to turn heat up and down accordingly.

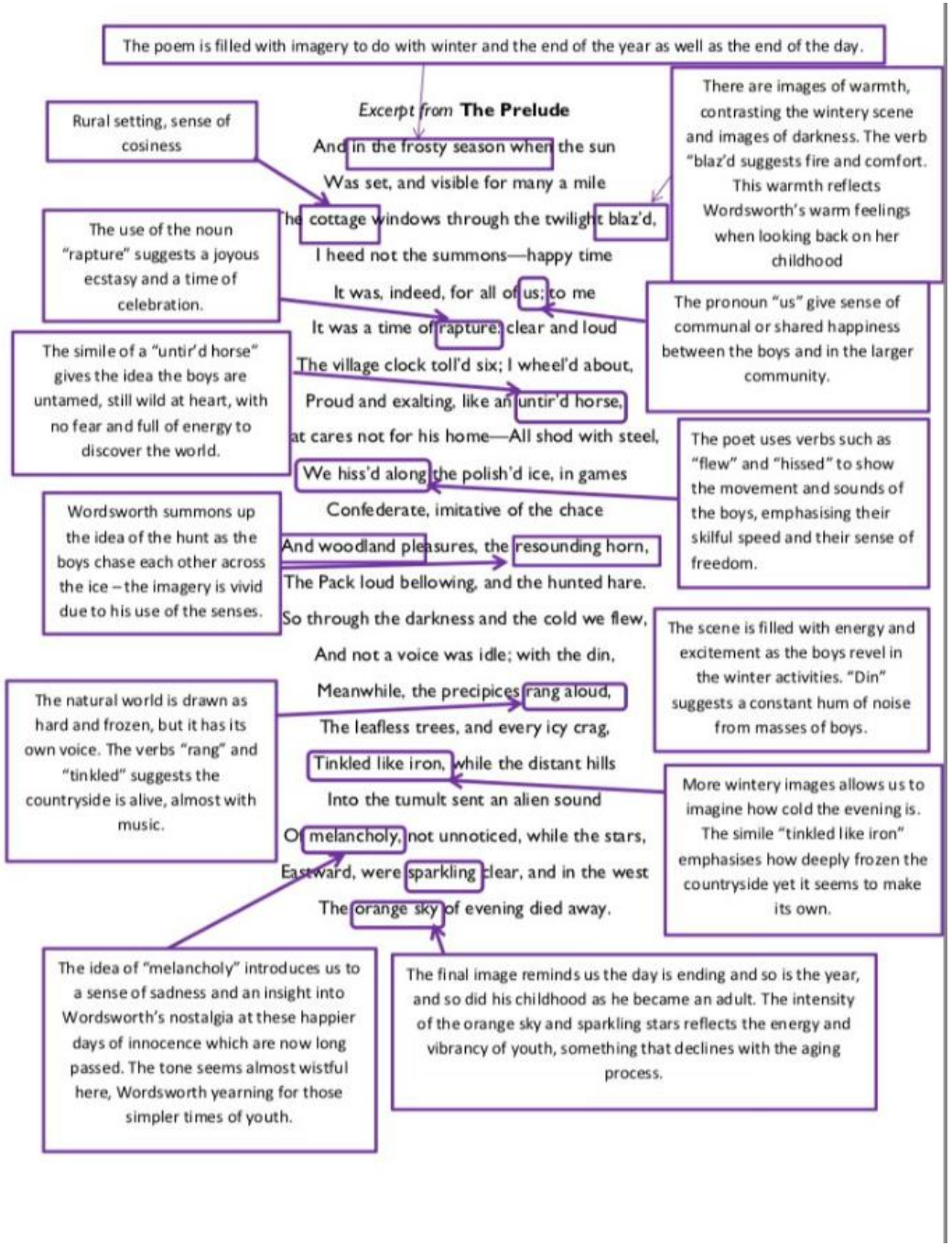
Food safety

Using **colour coded chopping boards** and equipment prevents **bacteria** spreading and causing **food poisoning**.

Romantics

Context	Key Poets
World changing events in the late 18th century from the French Revolution to the Industrial Revolution to the Scientific Revolution of the Victorian era inspired a new movement in art, literature and thinking: The Romantics.	Wordsworth: William Wordsworth was not without his share of loss. In fact, he lost his mother when he was seven, and his father when he was thirteen. As if that were not enough loss for one person, three of his children preceded him in death. This background gives his poems greater meaning. Wordsworth explores the ideas that people find comfort in and are connected to nature, feeling more at home in the great outdoors than in his house. He reveals a sense of longing for what comes after life, and suggests a sense of disappointment in earthly life, hoping for better things to come.
The late 18th Century was a time of violent rebellion in parts of Europe and the New World. Conscious of the violent events across the English Channel, the British government feared similar outbreaks. The early Romantic poets tended to be supporters of the French Revolution, hoping that it would bring about political change in England. However, the bloody events in France shocked them deeply and affected their views. Poets like Wordsworth gradually became disappointed with the Revolutionaries due to the violence they were causing.	
Romantic poets - such as Wordsworth - believed that poetry should be accessible; that it should be composed in 'the language really spoken by men' and should be relevant to ordinary people. For this reason, he tried to give a voice to those who tended to be marginalised and oppressed by society: the rural poor; discharged soldiers; the insane; and, often, children.	Blake: William Blake was wrote poems of social protest. He believed that the working class were innocent victims of the cruellest exploitation. He explored ideas of industrialisation, with vivid descriptions of the smoke of the factories and the grey environments of London, reflecting the dull and hopeless lives of the poor. Blake focusses on two major Romantic preoccupations: childhood; and the impact of the Industrial Revolution on the natural world. Blake frequently addressed social issues in his poems and express his concerns about the way society was organised and ruled. His poem 'London' draws attention to the suffering of chimney-sweeps, soldiers and the poor while criticising the established church.
To create a better world, the Romantics said that it was necessary to start all over again with a childlike perspective. They believed that children were special because they were innocent and uncorrupted. Romantic verse was also filled with reverence for the natural world.	
The Romantics highlighted the healing power of the **imagination**, because they truly believed that it could enable people to transcend (rise above) their troubles and their circumstances. They felt their creative talents could illuminate the world and regenerate mankind spiritually.	Keats: Keats is most famous for his collections of odes, in which he explores extreme emotion through his hyperbolic descriptions of natural imagery and sensual language. Keats died of tuberculosis at 25.
As technology and science was developing at such a speed, the Romantics wanted to revert back to a time of simplicity and natural order, taking preference in spending time in the rural, rather than urban spaces; enjoying the simplicity and predictability of nature and the seasons; taking time to be at one with their own thoughts amongst a world that was becoming more fast-paced by the day.	Shelley: A well known Romantic (along with his wife, Mary Shelley, who wrote Frankenstein), was radical in his poetry and his political and social beliefs. His life was troubled with illness, family crises and tumult due to his atheism and defiance of social conventions. He died in a boating accident at the age of 29.

Vocabulary		
Liberty: the state of being free from oppression in society	Ode: a poem that expresses strong feelings for something/someone	Radical (n): a person who advocates complete change
Oppress: to treat cruelly/unfairly	Ballad: a poem that tells a story	Iambic pentameter: 5 stressed and 5 unstressed syllables in a line of poetry, creating a de-dum rhythm (5 times). These 10 syllables are likened to a heartbeat.
Dogma: principles/ideas set by those in authority	Sonnet: a 14 line poem, often exploring the theme of love	
Marginalise: to put or keep someone in a powerless/unimportant position	Rural: relating to characteristics of the countryside	Equality: the state of being equal
Tempestuous: full of strong emotions/affected by a storm	Urban: relating to characteristics of a town or city	Magnum Opus: the masterpiece, or greatest piece of work from a writer.
Adherence: Attachment/commitment to rules	Endure: suffer for an extended period of time, with patience.	
Conscience: sense of right and wrong	Fortitude: courage in the face of pain or adversity	Democratic: relating to the idea all people should be treated equally
Incontrovertible: not able to be denied/disputed	Judicious: having or showing good judgement or sense	Critic: a person who expresses disapproval of something



Students will develop their **annotation** skills during this module, making small notes and references in order to revise and recall information and ideas discussed in lesson.

A good knowledge of key poetic terms along with being able to explain why the poet has used them is crucial to developing their work in this area of Literature, in preparation for applying these skills at GCSE level.

Simile – comparing two things using like or as.
Metaphor – saying another idea IS the thing you're comparing it to.
Repetition – repeating words or phrases for effect.
Caesura – a harsh stop in the middle of a line.
Enjambment – when the line does not stop at the end but flows into the next line or even stanza.
Hyperbole – extreme exaggeration.
Imagery – providing a clear image for the reader through vivid descriptions.
Onomatopoeia – words that sound like thing itself.
Noun – a name, thing or idea.
Verb – a doing or action word.
Adjective – describing word (describes a noun).
Adverb – describes how an action word is done.

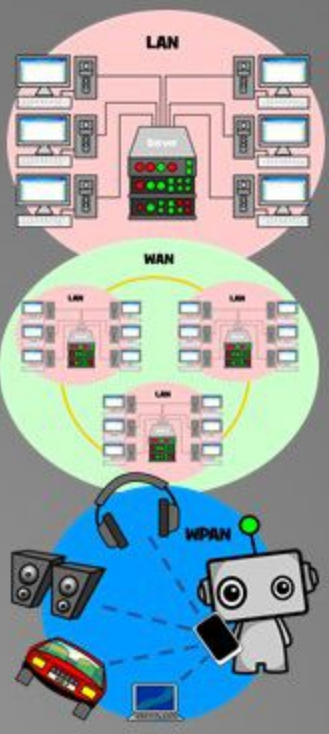
Year 8 Knowledge Organiser: Networks

Networks

LAN – Local Area Network, connects devices together over a small geographical location e.g. a building. They connect computers using a combination of Ethernet cables and switches and require a Network Interface Card.

WAN – Wide Area Network A computer network where devices are connected over a large geographical area (e.g. the internet). They require access to the internet via a router / modem.

WPAN – Wireless Personal Area Network used to connect devices to your personal computer system without the use of wires. Most commonly uses Bluetooth. E.g. connecting a peripheral device to your laptop, connecting a mobile phone to a car, wireless headphones to your phone etc.



LAN Hardware

Server

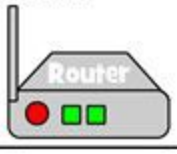
Stores all user data and information within a network in a central location. This allows users to log into any work station access their files.

Switch

Using Ethernet cables to connect to both the server and individual work stations, a switch directs information between the server and individual workstations.

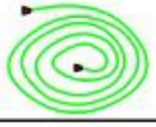
Router

Allows wireless connection of mobile devices to a network if within suitable range. Allows several devices to be connected at the same time.



Ethernet Cable

Networking hardware used to connect one network device to another. They can be used to share devices such as printers and scanners amongst many users.



Network Security

Firewall: Controls which programs on your computer can send and receive data packets.

Antimalware: Scans your computer system and files for malicious software.

Encryption: Scrambles data to make it unreadable.

Decryption: Unscrambles it so that it is readable.

Passwords

A strong password contains a mixture of numbers, letters, symbols and is at least 8 characters in length, for example:

Ce91!*8dj

Malware combines the words **'malicious'** (meaning 'harmful') and **'software'.** It is a program designed to cause damage to a computer or a computer network.

Viruses

A **virus embeds** itself within computer software. When the software is run it **creates copies of itself** using software as a host. A virus is capable of slowing down your digital device, can stop it running or even steal your data.

Spyware

Spyware is a type of program that **secretly records** what you do on a computer. Spyware can be used to **steal personal information** such as capture passwords, email addresses or banking information. They can even control your webcam.

Worms

Worms attack systems connected to the internet. Like a virus, a worm is capable of **copying itself**, causing similar damage to a virus. However, worms are **standalone software** and don't require existing software to host them.

Trojan

A **Trojan** is a harmful piece of software, **pretending to be useful**. Commonly spread through **email attachments**, a user is typically tricked into loading it onto their computer. Attacks can vary from deleting files and stealing data to creating access points for hackers.

AI and machine learning

What is artificial intelligence (AI)?

An artificial creation of human-like intelligence that can 'think' like humans with abilities such as learning or problem solving.

What is AI?

Facial recognition, fingerprint recognition, speech recognition, opponents in computing games, self-driving cars, robot vacuum cleaners

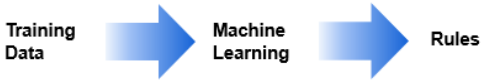
What is a neural network?

A neural network classifies information in the same way a human brain does.

Machine learning

Machine learning (ML) is a part of AI

- In machine learning, the machine will work out the rules for itself
- It will be given a large amount of training data to work out these rules



Machine Learning and images

Machine learning is used to classify images. Applications include:

- Screening medical scans and x-ray images
- Quality control on production lines
- Detecting hazards for self-drive cars
- Face recognition
- Fingerprint ID
- Robot fruit pickers
- Identifying spam email

Ethics

'Ethics' is a significant aspect of philosophy. At its simplest, ethics is about what is right, or wrong

Bias

When using AI, it is important to consider bias. If the training data is bias, the AI may exclude certain minority groups or views.

Measuring intelligence

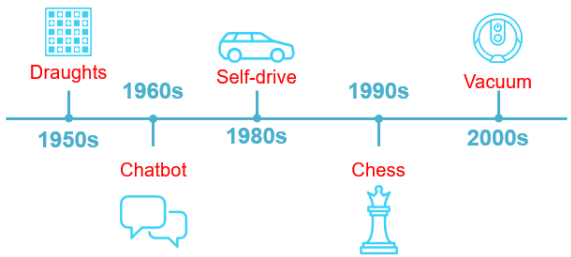
IQ tests are used to test the intelligence of humans

The Turing Test - This test was created by Alan Turing in 1950. A human sits in one room and asks questions through a computer. The questions go to a computer and a human. If the human cannot tell the difference between talking to a computer and a human, the computer passed the test.

Examples of facts and rules to identify people

Facts	Rules
People have two eyes	Some people wear hats
People have a mouth	Mouths may be open
People have teeth	Teeth may not be shown
People have a nose	People normally have hair
Noses are the same colour as people's faces	Hair may also be on some people's faces

AI Milestones

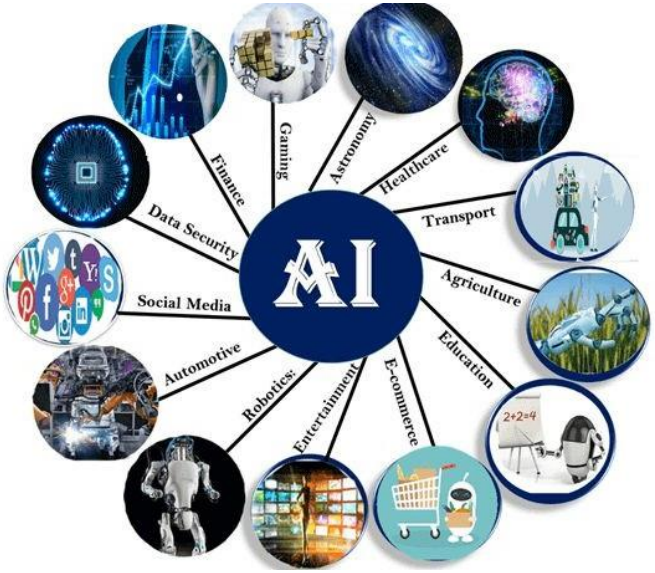


AI and patterns

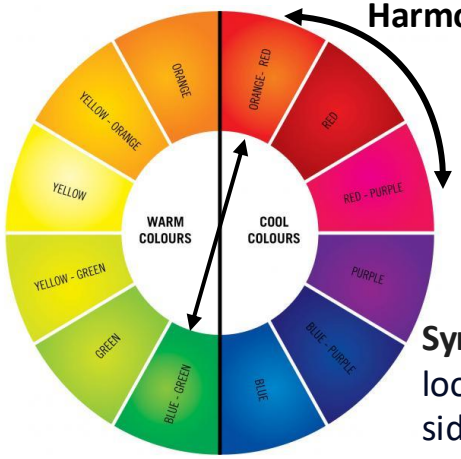
AI and machine learning are very good at finding patterns.

AI is not good at understanding why things happen though.

Applications of AI



ART & DESIGN KNOWLEDGE ORGANISER



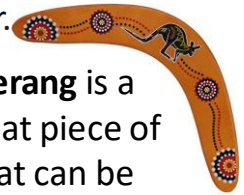
Harmonious colours are next to each other on the colour wheel.

Complementary colours are opposite each other on the colour wheel.

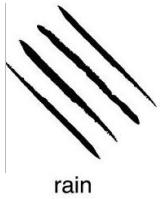
The **didgeridoo** is a long wooden wind instrument played by Australian Aborigines to produce a long deep sound.

Symmetry is when an object looks the exact same on one side as the other.

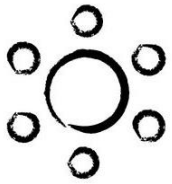
A **boomerang** is a curved flat piece of wood that can be thrown so that it will return to the thrower, traditionally used by Australian Aborigines as a hunting weapon.

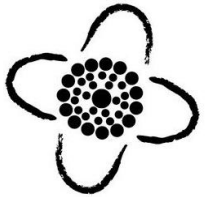


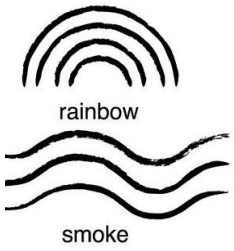
Clapping sticks are a traditional percussion instrument used during ceremonies and songs.



Symbols are used to tell the stories of the Dreamtime.







The **Bull-roarer** is a sacred object used in Aboriginal religious ceremonies, consisting of a piece of wood attached to a string, whirled round to produce a roaring noise.

Composition is the placement or arrangement of visual elements in a piece of work.

Monochromatic means varying tones of **ONE** colour from light to dark.

Media	Best practice
Coloured Pencils	• Apply using a soft circular motion • Start with the lightest colours and build up colour/tone • Harmonious colours add depth • Complimentary colours add definition • A sharp pencil will create a crisp finish • Avoid applying a thick stripy line of tone around the edge of shapes, blur it by applying soft pressure on the edge
Watercolour	• Mix your own variations of colour instead of using them straight out of the palette to make your work look more individual • Avoid adding too much water to your paint or the paper will start to bobble/wave • Apply colour in layers to build up tone • To blend colours on the page work quickly and place wet next to wet • When you want colour to stay separate make sure you don't apply wet next to wet • Consider layering mark-making on top of dry layers to add interest • Change your water regularly to avoid cross contamination
Pen / Biro	• Work from left to right (or right to left if you are left handed) to avoid smudging • Use a paper towel to blot any excess ink of the nib • Work quickly to avoid letting too much ink collect on the page • Experiment with thickness of line and mark-making techniques

The **Dreamtime** is the Aborigines belief of how the world and its creation began. Aboriginal culture includes ceremonies, body art, music, art and story telling.

Aborigines are the original inhabitants of Australia.