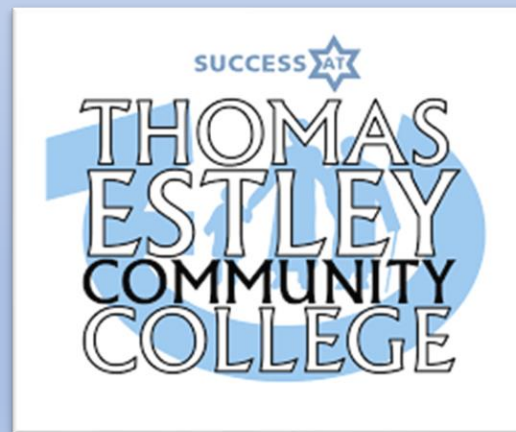# Thomas Estley Community College
Year 7 Autumn Term
Knowledge Organiser

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.

Learn continually - there's always "one more thing" to learn!

— Steve Jobs —

AZ QUOTES

**Latitude and longitude are used for global coordinates**
1. The position of anywhere on Earth can be given using coordinates if you use latitude and longitude
2. Lines of latitude run horizontally around the Earth. They measure how far north or south from the Equator something is.
3. Lines of longitude run vertically around the Earth. They measure how far east or west from the Prime Meridian (a line of longitude running through Greenwich in London) something is.
4. Latitude and longitude are measured in degrees

4 and 6 grid references - Things to remember:
1. First, find the four-figure grid reference but leave a space after the first two digits.
2. Estimate or measure how many tenths across the grid square your symbol lies. ...
3. Next, estimate how many tenths up the grid square your symbol lies. ...
4. You now have a six-figure grid reference.

SUCCESS AT
THOMAS ESTLEY COMMUNITY COLLEGE
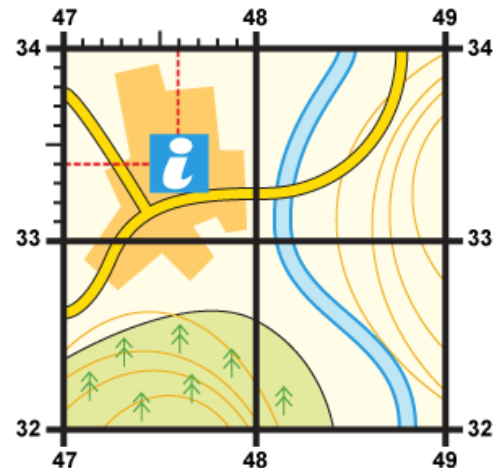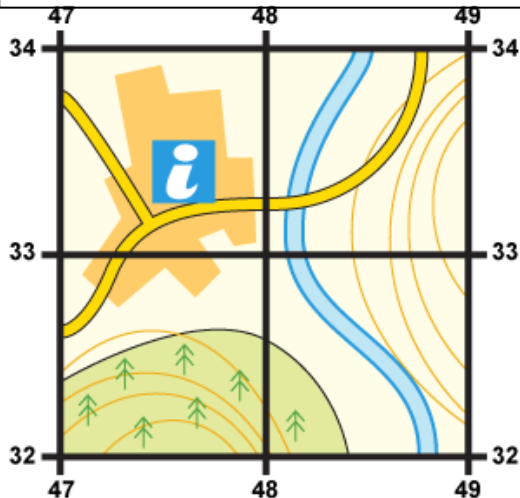
KO – Y7
Geography Skills

Longitude and Latitude
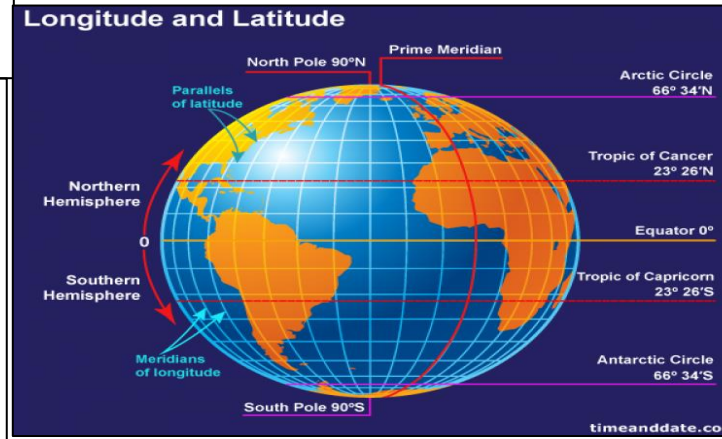
Describing distributions on maps – describe the pattern
1. 'use the map to describe the distribution of tropical rainforest's
2. Describe the general patterns and any anomalies (things that don't fit the general pattern).
3. Make at least as many points as there are marks and use names of places and figures if they're given.
4. If you're asked to give a reason or explain, you need to describe the distribution first.

2. Where are tropical rainforests found?

World distribution of tropical rainforests
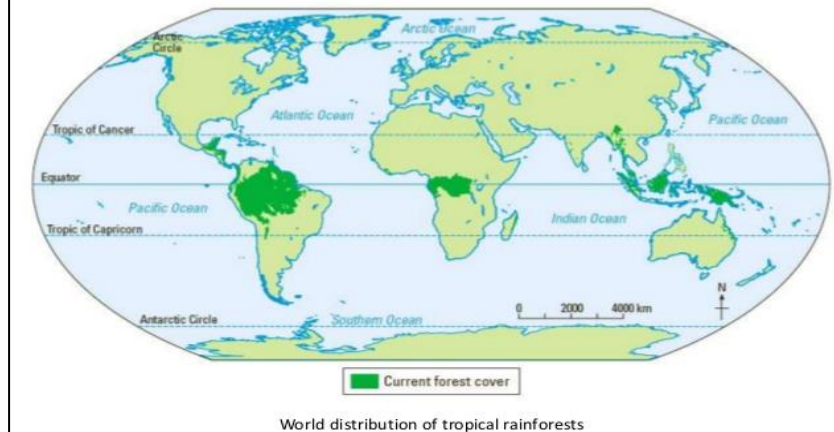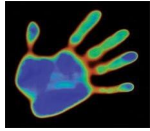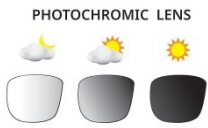
Learn These Common Symbols

Ordnance Survey (OS®) maps use lots of symbols. It's a good idea to learn some of the most common ones — like these: ⟹

- ▭▭▭ Motorway
- ▭▭▭ Main (A) road
- ▭▭▭ Secondary (B) road
- ⟩⟨ Bridge
- ▬▬▬ Railway
- – · – · County boundary
- National Park boundaries
- ▭ Building
- ⬦ Bus station
- ⸭⸭⸭ Footpaths
- ⩗⩘ Viewpoint
- Tourist information centre
- Parking
- ✝ Places of worship

Year 7 Textiles - Design and Technology

SMART MATERIALS

Material	Example	Properties
Thermo chromic		Changes colour with heat
Photo chromic	PHOTOCHROMIC LENS	Changes colour with light
Memory shape alloy		Metal that returns to original shape
Hydro-chromic	Wet = colour / Dry = white	Changes colour in water

Modern MATERIALS

Material	Example	Properties
Kevlar	POLICE	Very strong and resists cuts, tears.
Nomex		Heat and fire resistant
Micro-encapsulation	Encapsulation Technology / Antibacterial to stop feet smelling	Tiny beads encapsulated with liquid e.g. antibacterial
Phosphorescent		Glows in the dark

Equipment

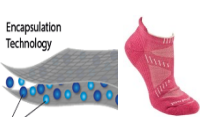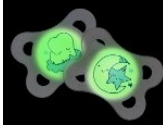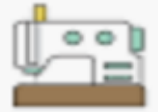|			
Sewing machine	Thread	Needle	Scissors
One person at a time. Keep fingers away from moving parts. Use slowly and steadily.	Pins	Button	Carry with blade together. Always cut on the table away from fingers. Return to scissor rack when finished.
Stitch ripper	Pins and needles are kept in containers. Use carefully pointing away from fingers and body.	Pattern	Iron
Tape measure	Zipper	Pattern pieces are used to make paper templates before cutting fabric out.	Extremely hot. Always ask before using. Turn off after use. Store hot plate down on rack.

Hand Sewing

Running Stitch

Back Stitch

Whip Stitch

Running stitch is quick and easy

Back Stitches are strong and look neat

Whip stitches are used to finish and neaten edges.

More Key words:

Seam - joining two separate pieces of fabric together.

Hem - fold on the edge of fabric which is sewn down making the edge look neat.

Fray - the yarn coming away at the edge of curt fabric.

Dying - when the fabric colour is changed by soaking in water and fabric dye.

NATURAL

Cotton — Natural fibre from a plant

Used for making jeans, T-shirts and towels.
- Cool to wear
- Very absorbent
- Dries slowly
- Soft
- Creases easily

Linen — Natural fibre from a plant

Used for summer clothing, tea towels and table cloths.
- Very cool to wear
- Very absorbent
- Dries quickly
- Stiffer than cotton
- Creases badly

Bamboo — Natural fibre from a plant

Used for clothing and mixed with other fibres like spandex.
- Cool to wear
- Very absorbent
- Soft
- Sustainable (environmentally friendly)

SYNTHETIC

Viscose — Synthetic Fibre

Used for shirts, dresses, linings.
- Low warmth
- Absorbent
- Soft
- Good drape
- Not durable
- Creases easily

Nylon — Synthetic Fibre

Used for sportswear, socks, seat belts.
- Warm to wear
- Absorbent
- Breathable
- Soft or course
- Can shrink
- Durable

Polyester — Synthetic Fibre

Used for raincoats, Fleece jackets, medical textiles.
- Low warmth
- Non-absorbent
- Dries quickly
- Soft
- Very durable
- Crease resistant
- Can be recycled

UNIT 1
Beginner: Talking about my age & birthday

| me llamo

I call myself

Alejandro
Antonio
Arantxa
Belén
Carlos
Diego
Emilia
Felipe
Isabel | **soy de Madrid**
[I am from Madrid] | **y**
[and] | **tengo ....**
año / años
[I am .... year / years old]

mi cumpleaños es el
[my birthday is the] | **1 - uno / primero**
2 - dos
3 - tres
4 - cuatro
5 - cinco
6 - seis
7 - siete
8 - ocho
9 - nueve
10 - diez
11 - once
12 - doce
13 - trece
14 - catorce
15 - quince
16 - dieciséis
17 - diecisiete
18 - dieciocho
19 - diecinueve
20 - veinte
21 - veintiuno
22 - veintidós
23 - veintitrés
24 - veinticuatro
25 - veinticinco
26 - veintiséis
27 - veintisiete
28 - veintiocho
29 - veintinueve
30 - treinta
31 - treinta y uno | **de** | **enero**
[January]

febrero
[February]

marzo
[March]
Abril
[April]

Mayo
[May]

junio
[June]

julio
[July]

agosto
[August]

septiembre
[September]

octubre
[October]

noviembre
[November]

diciembre
[December] |

UNIT 1
Beginner: Talking about my age & birthday

me llamo	soy de Madrid	y	tengo ….	1 - uno / primero		enero
I call myself	*[I am from Madrid]*	*[and]*	**año / años** *[I am …. year / years old]*	2 - dos		*[January]*
				3 - tres		**febrero**
				4 - cuatro		[February]
				5 - cinco		
Alejandro				6 - seis		**marzo**
Antonio				7 - siete		*[March]*
Arantxa				8 - ocho		**Abril**
Belén				9 - nueve		*[April]*
Carlos				10 - diez		
Diego				11 - once		**Mayo**
Emilia				12 - doce		*[May]*
Felipe				13 - trece		
Isabel				14 - catorce		**junio** *[June]*
				15 - quince		
				16 - dieciséis		
				17 - diecisiete	**de**	**julio** *[July]*
			mi cumpleaños es el *[my birthday is the]*	18 - dieciocho		
				19 - diecinueve		
				20 - veinte		**agosto** *[August]*
				21 - veintiuno		
				22 - veintidós		**septiembre** *[September]*
				23 - veintitrés		
				24 - veinticuatro		
				25 - veinticinco		**octubre** *[October]*
				26 - veintiséis		
				27 - veintisiete		**noviembre** *[November]*
				28 - veintiocho		
				29 - veintinueve		**diciembre** *[December]*
				30 - treinta		
				31 - treinta y uno		

THE LANGUAGE GYM

P1 Energy and Energy Resources
Knowledge organiser

Activate
Question • Progress • Succeed

Energy

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

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

Energy can be in different energy **stores**, including:
- **Chemical** – to do with food, fuels and batteries
- **Thermal** – to do with hot objects
- **Kinetic** – to do with moving objects
- **Gravitational potential** – to do with the position in a gravitational field
- **Elastic potential** – to do with changing shape, squashing and stretching

Food and energy

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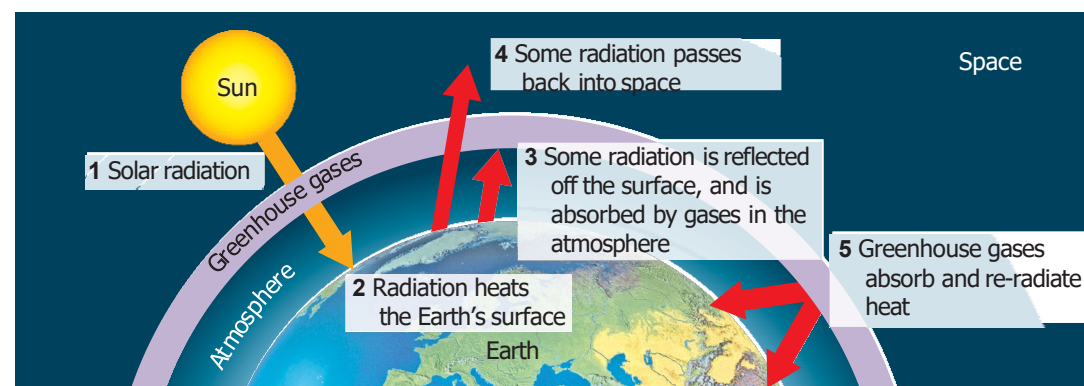
Non-renewable energy

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

Renewable energy

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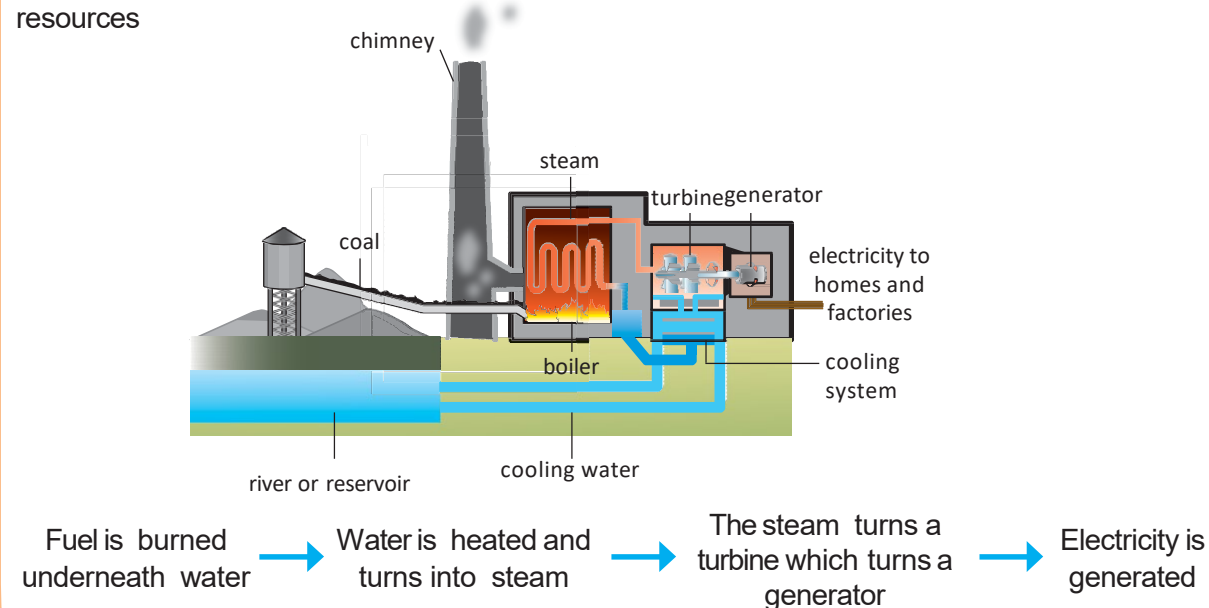
Global warming

- **Global warming** is the gradual increase in temperature of the Earth
- This is closely linked to the rise in carbon dioxide levels in the atmosphere
- When the Sun heats the Earth's surface, some of the radiation is absorbed and some is reflected back into space
- Some of the gases in the atmosphere absorb radiation that is about to be reflected into space, this keeps the Earth at a warmer temperature than it would be without the atmosphere, this is needed as otherwise it would be too cold for life
- The gases in the atmosphere which absorb and trap this radiation are known as **greenhouse gases**, the most commonly known greenhouse gases are carbon dioxide and methane


1 Solar radiation
2 Radiation heats the Earth's surface
3 Some radiation is reflected off the surface, and is absorbed by gases in the atmosphere
4 Some radiation passes back into space
5 Greenhouse gases absorb and re-radiate heat
Sun, Greenhouse gases, Atmosphere, Earth, Space

Power stations

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

chimney, steam, turbine generator, coal, electricity to homes and factories, boiler, cooling system, cooling water, river or reservoir

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

The Earth's Atmosphere

- The air around us all of the time is known as the **atmosphere**, it is made up of a mixture of gases.

Helium, Carbon dioxide, Hydrogen, Other gases
21% Oxygen
78% Nitrogen
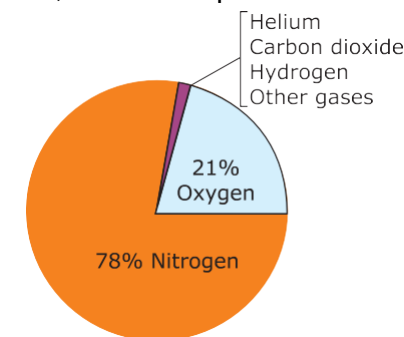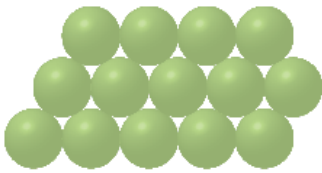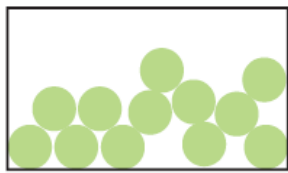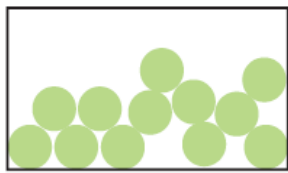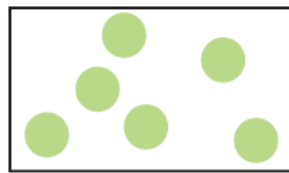
The carbon cycle

- The **carbon cycle** is the processes by which carbon is naturally transferred to different stores through a range of natural processes
- Carbon is released into the atmosphere through **combustion** of **fossil fuels**, and animal **respiration**
- It is then reabsorbed by plants during **photosynthesis**

burning fossil fuels, photosynthesis, atmosphere, respiration, dissolving and photosynthesi, respiration and coming out of solution, land-based animals, plants, and the soil, decay in absence of oxygen, carbon compounds dissolved in oceans and part of sea life, fossil fuels, sedimentary rocks
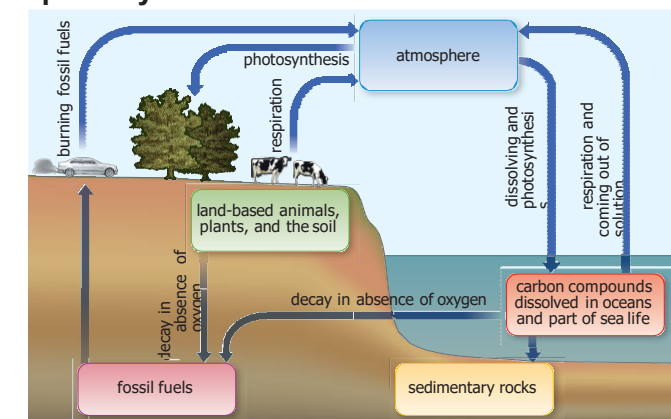
Climate change

- Long term changes to weather patterns are known as **climate change**
- This can cause the ice caps to melt, leading to sea levels rising and flooding of low level land
- Graphs alone cannot confirm that humans are the cause, but the majority of scientists now believe that human activity is a very likely cause
- We can help to prevent climate change by:
  - Using renewable energy resources
  - Using cars less
  - Buying and wasting less resources

Key terms

Make sure you can write definitions for these key terms.

Atmosphere, carbon cycle, Chemical, climate change, combustion, dissipated, efficiency, elastic potential, energy, energy resources, fossil fuels, global warming, gravitational potential, greenhouse gas, joules, kilojoules, kinetic, law of conservation of energy, non-renewable, photosynthesis, renewable, respiration, thermal, watts

Changes of state

changes of state	melting →	boiling/evaporation →
state of matter	solid	liquid	gas
how do the particles move?	Particles donot move around	Particles touching but can slide over each other	particles are spread out far away from each other
arrangement of particles			
can it be compressed?	No, becausethere is no space between the particles	No, because the particles are touching their neighbours	Yes, because there is space between the particles
can it flow?	No, because the particles can't move around	No, because the particles can't move around	Yes, because the particles can move around
changes of state	freezing	condensation	

Diffusion

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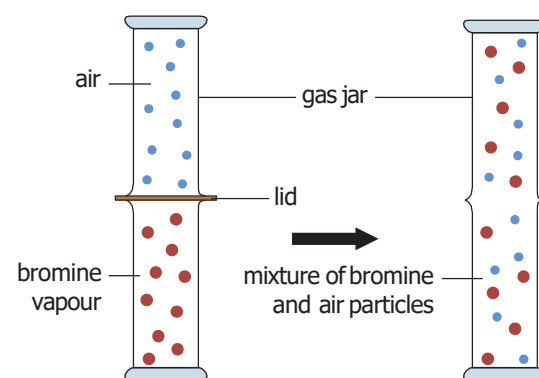
Melting and boiling points

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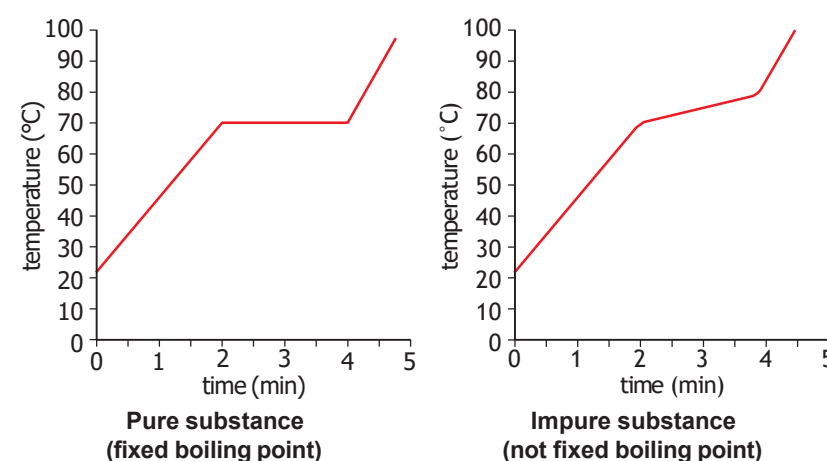- The **boiling point** of a substance is the temperature at which it turns from a liquid to a gas or a gas to a liquid
- **Pure substances** have a fixed (sharp) boiling or melting point, whereas **impure substances** have a range which appears as a diagonal line on agraph

Pure substance (fixed boiling point)

Impure substance (not fixed boiling point)

Mixtures

- **Mixtures** are different **substances** which are together, they are not chemically bonded and so are easy to separate
- The substances which make up a mixture keep their own **properties** unlike those in a compound
- A mixture is an **impure** substance as it does not have a fixed melting point, instead it has a range

- A **solution** is a type of mixture which is made up of two parts
- A **solute** is the part which has dissolved in the solution
- A **solvent** is the liquid part which the solute has dissolved into

- The **solubility** of a substance is a measure of how much of it will **dissolve**
- Not all solutes will dissolve in all solvents
- Solutes which do not dissolve are known as **insoluble**
- Substances which do dissolve are known as **soluble**
- The **solubility** of a substance can be increased by increasing the temperature of the solution or by stirring the solution
- A **saturated solution** is one where the maximum amount of solute has dissolved in it, no more solute will be able to dissolve

Separating Mixtures
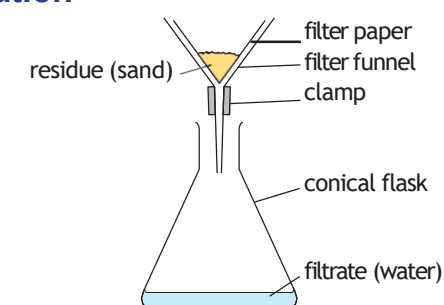
Filtration
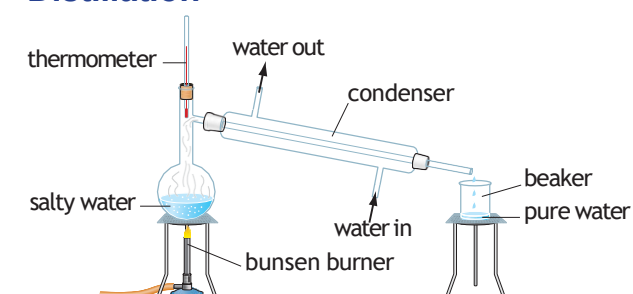
Chromatography
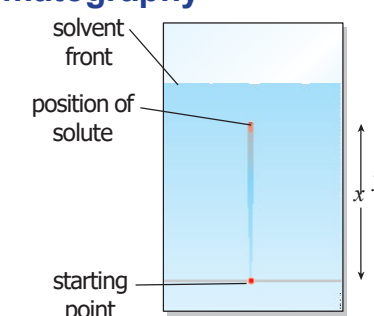
Distillation
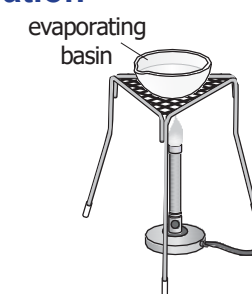
Evaporation

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

boiling point   chromatography   condensation   diffusion   dissolve   distillation   evaporation   filtration   freezing   impure substance   melting point   mixture

property   properties   pure substance   saturated solution   substance   soluble   solubility   solute   solution   solvent

Levels of organisation

organism e.g., human
organ systems e.g., circulatory system
organs e.g., heart
tissues e.g., muscle
cells e.g., nerve

increasing complexity

Plant and animal cells

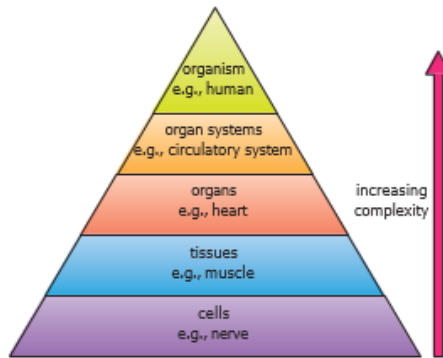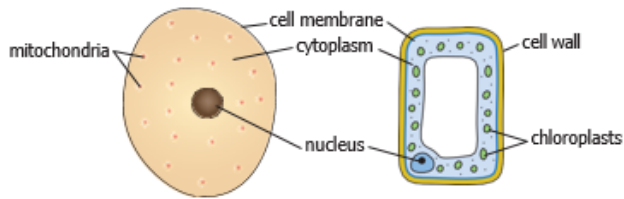- To be able to **observe** a **cell** we need to use a **microscope**, this magnifies the cell to a point to which we can see it
- Plant and animal cells have small structures inside known as **organelles**, each of these performs a certain role which allows the cell to survive

mitochondria
cell membrane
cytoplasm
nucleus
cell wall
chloroplasts

Specialised cells

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

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

Bioaccumulation Cell Community Competition Concentration Consumer Diffusion Ecosystem Food web Habitat Interdependence Microscope Niche Nucleus Organ Organisms Organ system Predator Prey Producer Population Specialised cells Tissue

Organs

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

Movement into and out of cells

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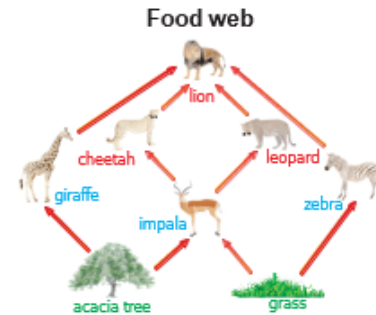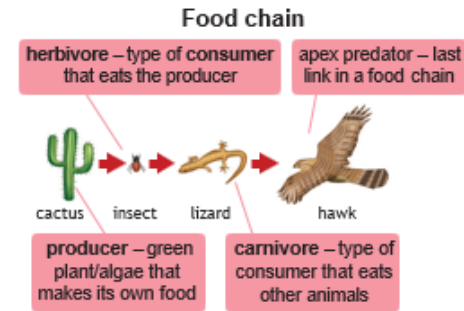- During diffusion particles move from an area of high **concentration**, to an area of low concentration

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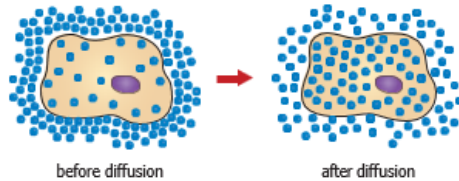
- Oxygen and nutrients enter the cell by diffusion, carbon dioxide and waste products leave

LIFE Activate
Question • Progress • Succeed
Knowledge organiser

B1

Ecosystems

- All of the organisms which live in one area are known as a **population**
- An **ecosystem** is all of the organisms which are found in a particular location and the area in which they live in, both the living and non-living features
- A **community** are all of the areas in an ecosystem, the area in which the organisms live in is known as the **habitat**
- A **niche** is the specific role in which an organism has within an ecosystem, for example a panda's diet consists of 99 % bamboo

Disruption to food chains

- **Interdependence** is the way in which living organisms rely on each other to survive
- A food chain will be disrupted if one of the organisms die out
- If the producer dies out the rest of the food chain will also die out unless they have a different food source
- If the **consumer** population die out the number of organisms which they eat will increase unless they are eaten by another organism
- **Bioaccumulation** is the process by which chemicals such as pesticides and insecticides build up along a food chain

Food chains and webs

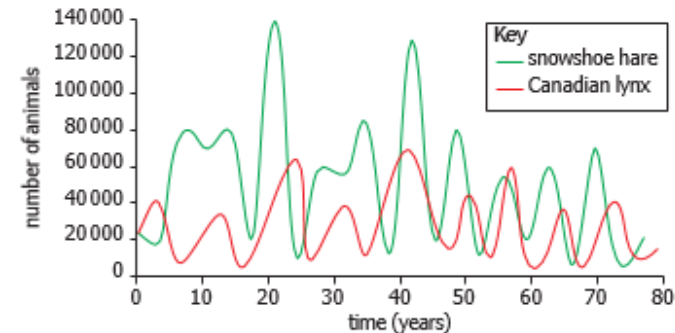- **Food chains** show the direction in which energy flows when one organism eats another
- The direction of the arrows represent the direction in which the energy flows
- **Food webs** show how a number of different food chains are connected

Food chain

herbivore – type of **consumer** that eats the producer
apex predator – last link in a food chain
cactus insect lizard hawk
producer – green plant/algae that makes its own food
carnivore – type of consumer that eats other animals

Food web

lion
cheetah
leopard
giraffe
zebra
impala
acacia tree
grass

- **Producers** are the organisms which start the food chain, they convert energy from the Sun, making their own food, these are often plants
- **Prey** are organisms which are eaten by other organisms
- **Predators** are the organisms which eat the prey

Competition

- **Competition** is the process in which organisms compete with one another for resources
- Animals compete for food, water, space and mates
- Plants compete for light, water, space and minerals
- The best competitors are those who have adapted in order to best gain these resources
- As the number of a predator in a population increases the number of the prey will decrease as more are being eaten
- As the number of the predator decreases the number of the prey will increase as less are being eaten
- The relationship between the predator and the prey is known as a **predator-prey relationship**

Key
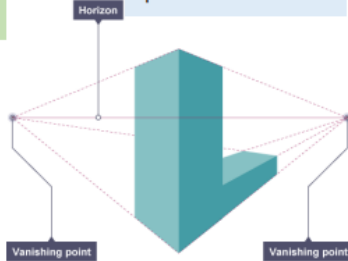snowshoe hare
Canadian lynx

number of animals
time (years)

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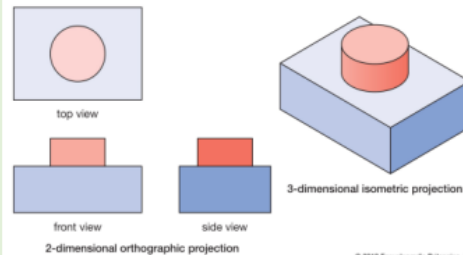
Two-point perspective - This shows an object from the side with two vanishing points.

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

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

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

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

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

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**.

Orthographic and isometric projections of an object
top view
front view   side view
2-dimensional orthographic projection
3-dimensional isometric projection
© 2012 Encyclopædia Britannica, Inc.

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.

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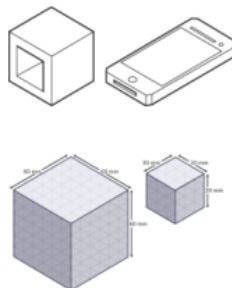
Isometric
Isometric drawings, sometimes called isometric projections, are a good way of showing measurements and how components fit together. Unlike perspective drawings, they don't get smaller as the lines go into the distance.
There are three main rules to isometric drawing:
- **horizontal** edges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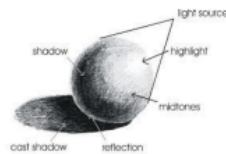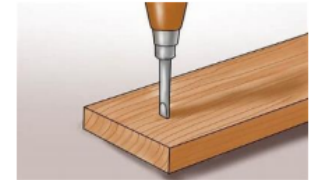- **parallel** edges appear as parallel lines

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.
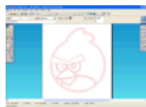
MUSIC VIP SHEET YEAR 7 Stomp Out Loud

Exploring Rhythm and Pulse

STOMP

MELODY

Pitch – high and low sounds

DYNAMICS

Piano - soft p cresc. f
Forte - loud
Crescendo – gradually getting louder
Diminuendo – gradually getting quieter   dim.

TEMPO/TIME

Metre – the number of beats in a bar
Pulse – the main beat of the music
Metronome – a device used to keep a beat
BPM – the number of 'Beats Per Minute'
Time Signature – is found at the beginning of a piece of music showing how many beats are in a bar. In the time signature below there are 4 beats in a bar.

Posture – the position in which you hold your body when standing or sitting

TEXTURE

Thick – lots of layers of sound
Thin – one or two layers of sound
Solo – one person on their own
Monophonic – one layer of sound
Unison – singing as one
Polyphonic – lots of tunes at the same time

INSTRUMENTS/TIMBRE

Timbre - the type of instrument sound
Percussion – an instrument that makes a noise by being hit, shaken or scrapped

Examples of different timbres

Musical Ensemble – a group of musicians playing together eg an orchestra, choir or rock band.

Conductor – The leader of the orchestra. He uses a baton to beat time and communicates the dynamics and emotion of the music to get the musicians playing together as a team.
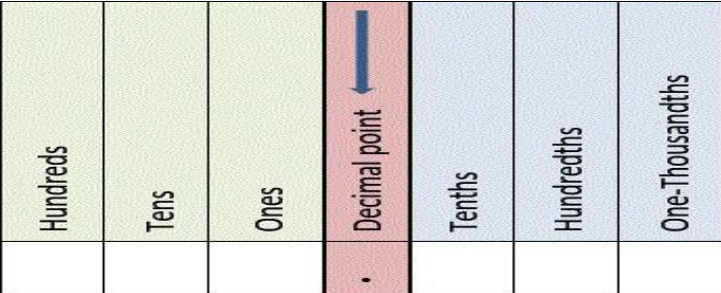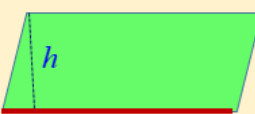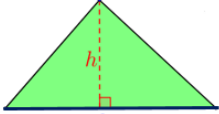
RHYTHM

Duration: long or short notes
Rhythm: a combination of notes of different durations
Rests – a beat or beats where no sound is played
Ostinato (rhythmic ostinato) – a repeated rhythmic pattern
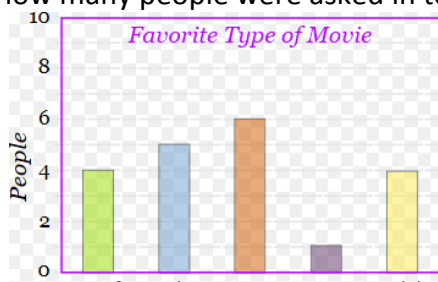
Note Name	Note Symbol	Note Value
Crotchet *Remember it... Frog*		1 beat
Quaver		½ of a beat
Semiquaver		¼ of a beat
Pair of Quavers *Remember it... Tadpole*		2 x ½ beats = 1
Four Semiquavers *Remember it... Caterpillar*		4 x ¼ beats = 1
Two Semiquavers + one Quaver *Remember it... Butterfly*		2 x ¼ and ½ = 1
One Quaver + two Semiquavers *Remember it... Woodpecker*		½ and 2x ¼ =1
Crotchet Rest *Remember it... Sh!*		1 beat rest

M	A	D	T	S	T	H	I	R	T
Melody	Articulation	Dynamics	Texture	Structure	Tempo/Time	Harmony	Instruments	Rhythm	Tempo/Time
the tune	how notes are played	loud/soft and any changes in volume	the layers of sound and how they fit together	sections of music and how they are organised		the chords used	types of instruments used (timbre)	the pattern of notes	the speed of the music/number of beats in a bar

Y7 Autumn Maths Knowledge Organiser

Topic	Key fact	Hegarty maths clip number
Read, write and compare positive integers and decimals	Hundreds | Tens | Ones | Decimal point | Tenths | Hundredths | One-Thousandths	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	rectangle $A = bh$ parallelogram $A = bh$ triangle $A = \frac{1}{2}bh$	553-559
Pictograms	Use the key to work out the number of cupcakes sold each day. Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday = 6 cupcakes 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*** *Favorite Type of Movie* People Comedy Action Romance Drama SciFi	425

Key Vocabulary

o Integer – a whole number

o Product – the result of a multiplication.

o Divisor – the number that you are dividing by. Eg. 16 divided by 2. 2 is the divisor.

o Quotient - the answer after you divide one number by another.

o 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.

o Root – The inverse operation of a power.

o 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.

o Remainder - A remainder in mathematics is what's left over in a division problem.

o Round - Rounding means making a number simpler but keeping its value close to what it was.

o Truncate – A method of approximating a decimal number by dropping all decimal places past a certain point without rounding.

o Estimate - To estimate means to find something close to the correct answer.

o Approximate – an alternative word for estimate.

o Area: The space inside a 2D shape

o Perimeter: Distance all around a shape

o Term- each part of an expression. A single number or variable within an expression.

o Expression- a mathematical sentence containing numbers and variables.

o Simplify: Write in shorter form.

UNIT 3
Describing hair and eyes

Je m'appelle... *[I am called / I call myself...]* **Il/elle s'appelle** *[He/she is called]*	**Anthony** **Charles** **Pierre** **Emilie** **Isabelle** **Marie** **Jules** **Julien** **Robert**	**et** *[and]*	**j'ai** *[I have]* **iI/elle a** *[he/she has]*	**six ans** *[6 years]* **sept ans** *[7 years]* **huit ans** *[8 years]* **neuf ans** *[9 years]* **dix ans** *[10 years]* **onze ans** *[11 years]* **douze ans** *[12 years]* **treize ans** *[13 years]* **quatorze ans** *[14 years]* **quinze ans** *[15 years]*
J'ai les cheveux *[I have...hair]* **Il/elle a les cheveux** *[he/she has...hair]*	**châtains** *[light brown]* **bruns** *[dark brown]* **noirs** *[black]* **roux** *[red]* **blonds** *[blond]*	**et**	**courts** *[short]* **en épis** *[spiky]* **longs** *[long]* **mi-longs** *[mid-length]* **raides** *[straight]* **en brosse** *[very short / crew-cut]* **frisés** *[curly]* **ondulés** *[wavy]*	
J'ai les yeux *[I have... eyes]* **Il/elle a les yeux** *[he/she has... eyes]*	**bleus** *[blue]* **marron** *[brown]* **verts** *[green]* **noirs** *[black]*	**et**	**je porte** *[I wear]* **il/elle porte** *[he/she wears]* **j'ai** *[I have]* **il/elle a** *[he/she has]*	**des lunettes** *[glasses]* **une moustache** *[a moustache]* **une barbe** *[beard]*

Author's note: in the negative form in French the "des" or "une" turns into "de"
Examples: **-Je <u>ne</u> porte <u>pas</u> <u>de</u> lunettes** *[I don't wear glasses]*
　　　　　-Je <u>n'</u>ai <u>pas</u> <u>de</u> moustache/barbe *[I don't have a moustache/beard]*
　　　　　-Elle <u>ne</u> porte <u>pas</u> <u>de</u> lunettes *[She doesn't wear glasses]*
　　　　　-Il <u>n'</u>a <u>pas</u> <u>de</u> moustache/barbe *[He doesn't have a moustache/beard]*

UNIT 2
Saying when my birthday is

			1 - premier	janvier [January]
Je m'appelle Julien [I am called Julien]	**je suis de Paris** [I am from Paris]	**et** [and]	2 - deux	
			3 - trois	**février**
			4 - quatre	
		mon anniversaire est le [my birthday is the]	5 - cinq	**mars**
			6 - six	
			7 - sept	**avril**
	***j'ai X ans** [I am X years old]		8 - huit	
			9 - neuf	**mai**
			10 - dix	
			11 - onze	**juin**
			12 - douze	
			13 - treize	**juillet**
			14 - quatorze	
			15 - quinze	**août**
			16 - seize	
	il/elle est de Biarritz [he/she is from Biarritz]		17 - dix-sept	**septembre**
Mon amie s'appelle Catherine [my friend is called Catherine]		**et** [and]	18 - dix-huit	
			19 - dix-neuf	**octobre**
			20 - vingt	
			21 - vingt-et-un	**novembre**
		son anniversaire est le [his/her birthday is the]	22 - vingt-deux	
			23 - vingt-trois	**décembre**
			24 - vingt-quatre	
	***il/elle a X ans** [he/she is X years old]		25 - vingt-cinq	
Mon ami s'appelle Francis [my friend is called Francis]			26 - vingt-six	
			27 - vingt-sept	
			28 - vingt-huit	
			29 - vingt-neuf	
			30 - trente	
			31 - trente-et-un	

*AUTHOR'S NOTE: *J'ai or il/elle a actually means "I have" and "he/she has" in French. You use this verb for telling age. You will see it many times throughout this booklet!* ☺

UNIT 1
Talking about my age

Je [I]	m'appelle [am called]	Alexandre Anthony Annabelle Béatrice Charles Denis Emilie Frédéric	et [and]	j'ai [I have*]	un [1] deux [2] trois [3] quatre [4] cinq [5] six [6] sept [7] huit [8]	an [year] ans [years]
Mon frère [my brother] Ma sœur [my sister]	s'appelle [is called]	Isabelle Joséphine Julien Marie Paul Tristan		il/elle a [he has*]	neuf [9] dix [10] onze [11] douze [12] treize [13] quatorze [14] quinze [15]	

Author's note: in French we use the verb "avoir" [to have] to talk about age
*although "J'ai quatre ans" literally means "I have four years", in English, it's translated by "I am four years old"

Year 7 - Healthy Eating

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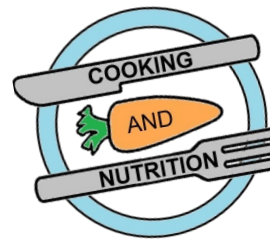
Food safety and hygiene is about protecting people and reducing the risk of food poisoning.

FIGHT BAC!
Keep Food Safe From Bacteria

CLEAN — Wash hands and surfaces often.
SEPARATE — Don't cross-contaminate.
CHILL — Refrigerate promptly.
COOK — Cook to proper temperatures.

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

Thermometer:
- 100°C COOKING
- 75°C
- 63°C
- DANGER ZONE
- 5°C
- 0°C STORAGE
- -18°C
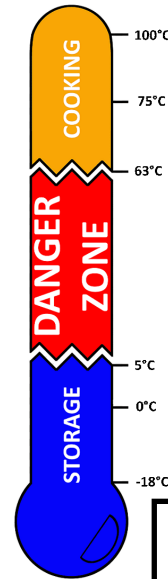
Get active.

60 active minutes
do you get yours everyday?

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.

1. Base your meals on starchy foods
2. Eat lots of fruit and veg
3. Eat more fish – including a portion of oily fish each week
4. Cut down on saturated fat and sugar
5. Try to eat less salt – no more than 6g a day for adults
6. Get active and try to be a healthy weight
7. Drink plenty of water
8. Don't skip breakfast

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.

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

Eatwell Guide

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

Key vocabulary

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

Water.

6-8 a day

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.

Salt = 6g

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

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

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

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**.

PREVENT CROSS CONTAMINATION
USE CORRECT COLOUR CODED CHOPPING BOARDS & KNIVES

RAW MEAT
RAW FISH
COOKED MEATS
SALAD & FRUITS
VEGETABLES
DAIRY PRODUCTS

The Odyssey and the Tragic Hero

The Odyssey is a collection of 24 books written by the Greek poet, __Homer.__
The epic poem is the story of Odysseus, the King of Ithaca, and his attempt to get home after the Trojan War.
After a long journey (over a number of arduous years), he is recognised only by his faithful dog and a nurse.
He eventually gets help from his son to regain his wife and re-ascend the throne to his kingdom.

Keywords/ideas:

8th century BC (Before Christ)
Epic poem (a lengthy narrative work of often many thousands of lines)
Odysseus
Suitor (a man who pursues a relationship with a particular woman, with a view to marriage)
Telemachus (Odysseus's son)
Swineherd (pig farmer)
Shipwreck
Greek
Homer
Penelope (his wife)
Iliad – a series of miseries and disastrous events
Linear chronology (meaning the events unfold in time order)
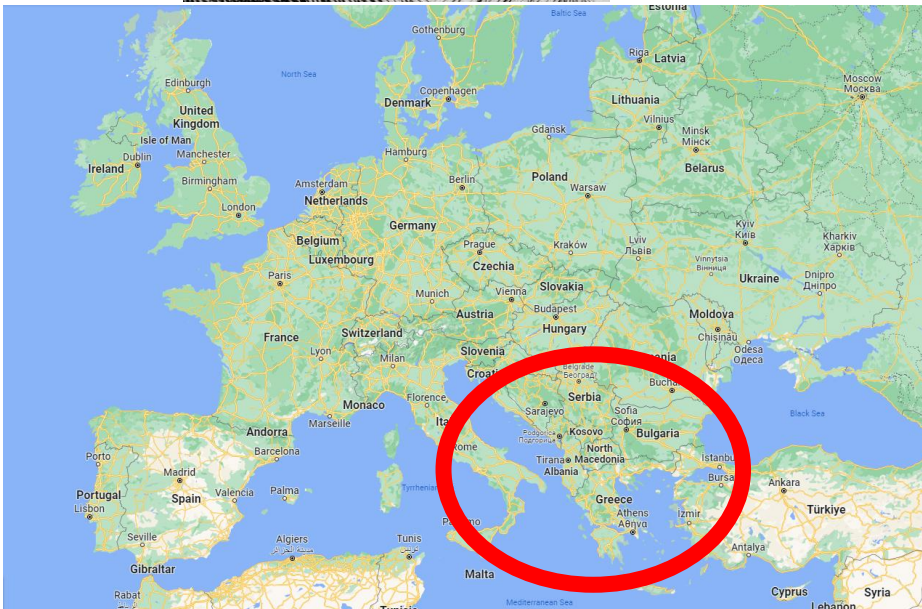
Archaic Period - This period ran from the start of Greek civilization in 800 BC to the introduction of Democracy in 508 BC. This period included the start of the Olympic Games and Homer's writing of the Odyssey and the Illiad.
Classical Period - This is the time that many of us think of when we think of ancient Greece. Athens was governed by a democracy and great philosophers like Socrates and Plato arose. Also, the wars between Sparta and Athens were during this time. This period ended with the rise and then the death of Alexander the Great in 323 BC.
Hellenistic Period - The Hellenistic period lasted from the death of Alexander the Great until 31 BC when Rome defeated Egypt at the Battle of Actium. The name Hellenistic comes from the Greek word "Hellas", which is the original word for Greece. (Source: https://www.ducksters.com/history/ancient_greece.php)

Tragic Heroes

A tragic hero (or tragic heroine, if they are female) is the main character of a tragedy (a play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character).
Many of the most famous instances of tragic heroes appear in Greek Literature, most notably the works of Sophocles and Euripides.

Key terms:

Rex – Latin for "King"
Hubris (over full of pride or self-confidence)
Hamartia (a fatal flaw leading to the downfall of a character)
Aristotle
Downfall
Philosophy
Rhetoric
Athens
Alexander the Great
Sophocles (pronounced soff-oh-klees) – a Greek tragic writer
Muse – one of nine sisters/goddesses who were protectors of arts and literature
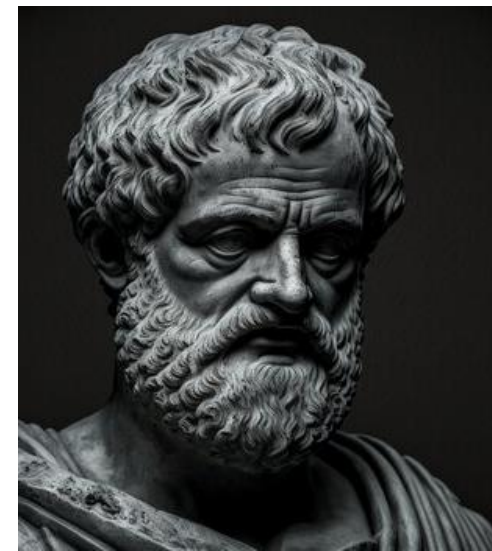
Aristotle claimed: "A man does not become a hero until he can see the root of his own downfall." Nobility (of a noble birth) or wisdom (by virtue of birth).

The three Greek heroes Oedipus, Medea and Agamemnon, who each killed a member of their family, carry most of the qualities that make up a tragic hero: being of noble birth, being surrounded by an extraordinary circumstance, and gaining self-awareness or some kind of knowledge through their downfall (source: www.bartleby.com)

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:

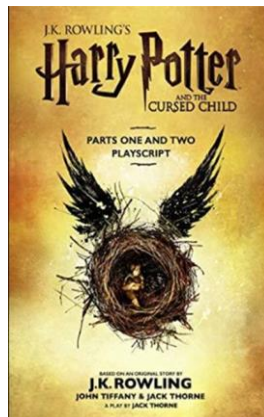Students will, explore and apply the page to stage process to the play 'Harry Potter and The Cursed Child' through a variety of workshops and performances in a range of group sizes.

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.

PAGE TO STAGE

- Read and analyse script
- Blocking
- Proxemics
- Levels
- Set and Props
- Line Learning
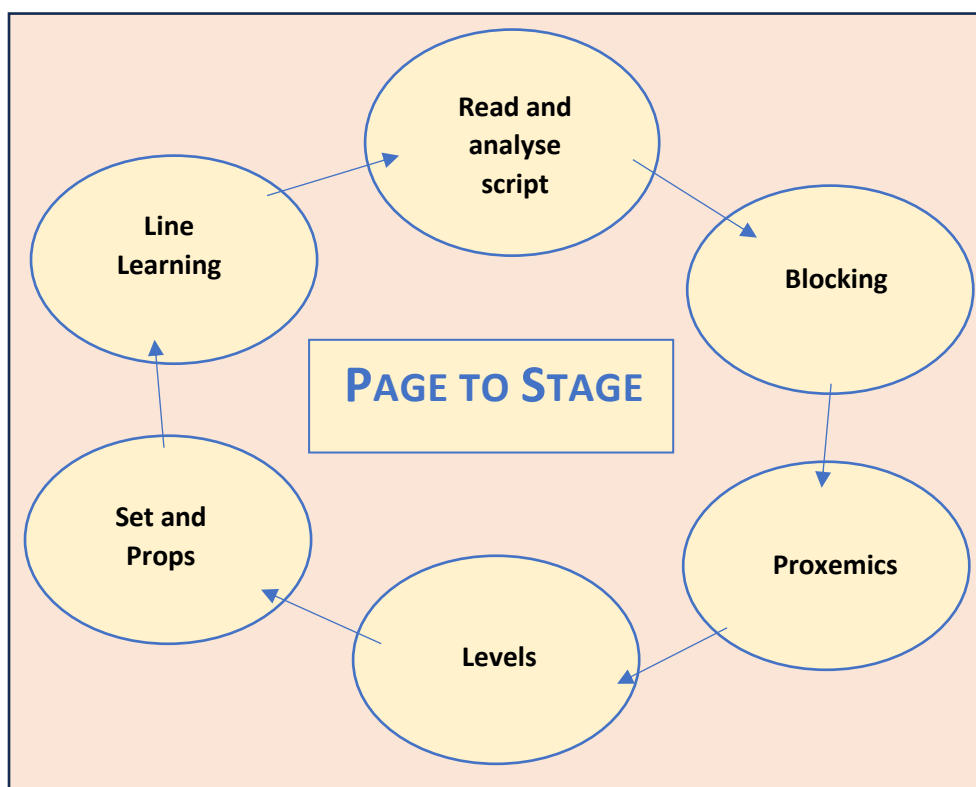
Dance Year 7 – Dancing Through Time

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., discotheques.
- 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
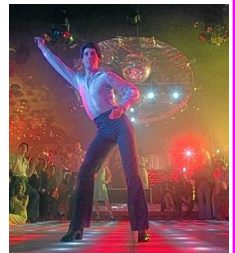
1980s – Hip Hop

- 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 Using media

Different **application software** can be used for different purposes. It is important to think about what the task is and select the most **appropriate** one.

The **application software** chosen allows different formatting techniques to be used.

Formatting can be using tools like **bold**, *italic*, underline, changing colour, font style and size, alignment and many more.

Formatting can be used for many reasons including, to make text easier to read, easier for the audience to use, highlight important information or attract attention.

Images play an important role when using software. It is important that **appropriate** images are used, ones that meet the requirements of the **audience** and the **purpose** of whatever is being created.

A **blog** is simply a regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

When researching and reading stories online you need to check that they are **reliable**, **trustworthy** and **credible**. Anyone can upload content so it is not always accurate.

- Check the source, find out which other sources are reporting it

- Check whether other sites are saying the same thing

- Don't trust all the stories and all pictures

- Check for facts not rumours

- Check any citations or references

When you are researching a topic you will come across a lot of useful information. Once the reliability and accuracy has been checked you may decide to use the information. Check the law

Plagiarism is using someone else's work or ideas and using them as if they were your own. This can be any type of work either printed or electronic.

C**itation** tells the audience where the information came from. Anything that is used needs to have **citations** or **references** to the original work. A reference gives the audience details about the source so that they can see that the source is relevant and recognised so they can find the source themselves if they want to.

Paraphrase means using someone else's work by changing a few words, often with the intention of shortening the original piece of work.
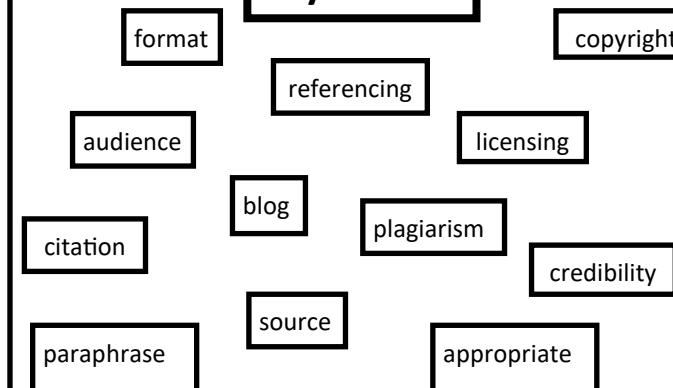
Copyright Law gives the creators of literary, dramatic, musical, artistic works, sound recordings, broadcasts, films and typographical arrangement of published editions, rights to control the ways in which their material may be used.

Creative Commons (CC) license is one type of copyright license. This allows the copyright owner to say exactly what other people can and can't do with or to their work.

They help copyright owners share their work while keeping the copyright. For example, a Creative Commons licence might allow other people to copy and distribute the copyright owner's work, if they give them credit.

Key words

format   copyright   referencing   audience   licensing   blog   plagiarism   citation   credibility   source   paraphrase   appropriate
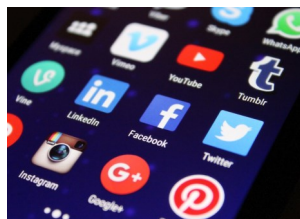
Making sure the item being created is successful and actually does what it was intended to do is important.

Setting **success criteria** should be determined at the start of the project and can be revisited frequently.

The success criteria should be clear and easy to follow.

creative commons

IMPACT OF TECHNOLOGY

CEOP
A National Crime Agency command

Social media settings

- Profiles should always be set to private
- Profile images should not reveal locations.
- Profile images should not be easy to recognise; it is much better to use a picture of a pet or a cartoon character.
- Don't reveal locations — this makes it easy to find out where you are.
- Making your date of birth public makes it easy for hackers to steal your personal information and set up fake accounts in your name.
- You should never reveal your phone number, email address or home address on a public site.
- You should never reveal your current location on social media.
- Putting your full name, including a middle name, makes it easy for someone to steal your personal information. Always use a nickname or shortened version of your name.

Cyberbullying is the similar to bullying that tends to occur online.
Cyberbullying can come in many forms. Some examples are:
- Threatening someone to make them feel scared
- Harassing someone by repeatedly sending them messages
- Ruining somebody's reputation
- Excluding someone from a group
- Stealing someone's identity and pretending to be them
- Publicly displaying private images or messages

Do you really want to send that?

Think before you click.
It is easy to send comments from the other side of a screen.
It is not easy to then remove them.
Actions need to be considered before mistakes are made.

Using technology appropriately, carefully and positively leads to positive digital citizens.
Digital citizenship refers to the responsible use of technology by anyone who uses computers, the Internet, and **digital** devices to engage with society on any level.

Secure **passwords**

No one should be able to guess/work out your password.
Current guidance: Use three random words, for example, **9FishCloudRoad23**

PASSWORDS
are like underpants

Never share them   Change them often   Keep them Private

Key Words	
audience	The people you are communicating, presenting information to.
catfishing	A person pretends to be someone they are not.
collaboration	Working effectively together.
Digital tattoo/ Digital footprint	Online reputation that is permanent.
email	A tool for online communication.
hazards	Areas/items that could cause damage or injury.
network	Where devices are connected together usually by cable or Wi-Fi.
password	A way to ensure no one access your data or information.
respect	Be mindful of how you are responding to others.
secure	Making sure your online information is safe.

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.
4. **ALWAYS** listen carefully to instructions.
5. Wash hands after using paint, clay etc.

Hessian mat stops your work sticking to the table.

Tie your hair up.

No Jewellery

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.
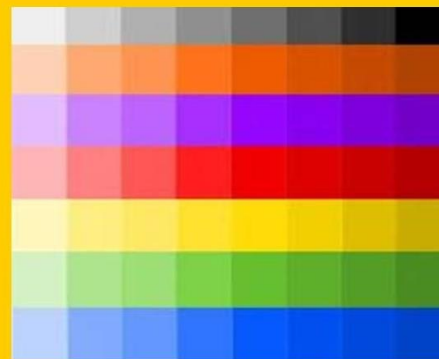
FORMAL ELEMENTS

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.

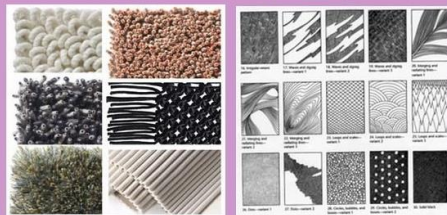Sculpture and 3D design are about creating forms

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.
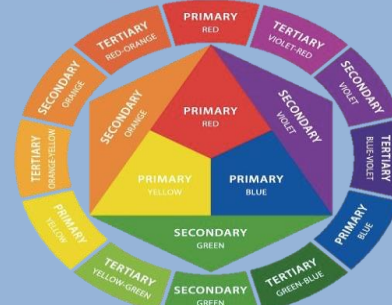
Actual Texture   Visual Texture

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.