Knowledge Organiser

YEAR 7

"Be the change that you wish to see in the world."

MAHATMA GANDHI

David Attenborough

Dina Asher Smith

JK Rowling

David Walliams

Mary Seacole

THE ENGAGED MIND STAYS SHARP.
BE ENGAGED IN THE HERE AND NOW.

THANK YOU FOR YOUR NOMINATIONS!

Knowledge Organisers at Redmoor Academy

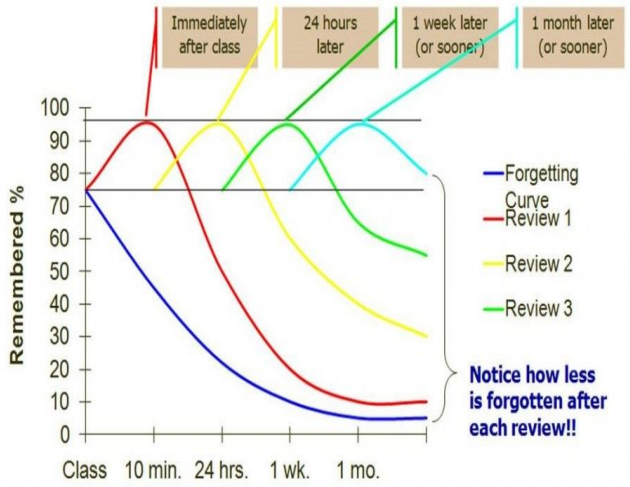
Why do we have knowledge organisers?
Your knowledge organisers help you to be successful in many ways. Firstly, they make clear the key elements needed in a topic to have an excellent understanding of it. If you know these elements, your teacher will help you to understand them.

What are my teachers' expectations of me?
In year 7 and 8 your teachers will give you homework that means you will be spending 20 minutes a week learning information from your knowledge organiser for each subject. In year 9 this will 30-40 minutes. Teachers will test you once a week to make sure that you are completing the homework and remembering your knowledge. Your knowledge organiser exercise book is where you will complete your practising. Each time you revise and practise, you should put the subject as the title and the date. Rule off when you have completed your revising for that subject. Teachers and form tutors will be regularly checking that you are revising.

How will my teachers use them?
Each subject will set homework once a week that will help you to learn your knowledge organiser. They will also test you once a week on certain parts to see how well you have remembered it. Research tells us that this practising is a really good way of helping you make sure that the knowledge stays in your memory. Over time you will build on this knowledge to make sure that you know everything you need to for your subject. Sometimes you may have high stakes quizzes, where teachers will set a certain score that you have to reach to be successful.

How will they help me revise?
When it comes to GCSEs, you have lots of information to remember. Your knowledge organisers will gradually build up this knowledge over 5 years to help support you in year 11 so that when you revise, you are just recalling knowledge that you have already stored. Also, you will have practised lots of revision techniques whilst revising your knowledge organisers over the past 5 years, which will help prepare you for the final exams.

How we learn at Redmoor



Why reviewing your learning is so important

As soon as we are told a new piece of information, most of that information is 'lost' and forgotten. Hermann Ebbinghaus found that repeating information helps us remember more of it.So we need to be be reviewing and going over what we learn in order for us to remember and be able to use the information after a period of time has passed.

This resources summarises some proven strategies that you can use to review your knowledge.

Common methods of revision that are the least effective:

- Highlighting key points
- Re-reading
- Summarising texts

Retrieval practice

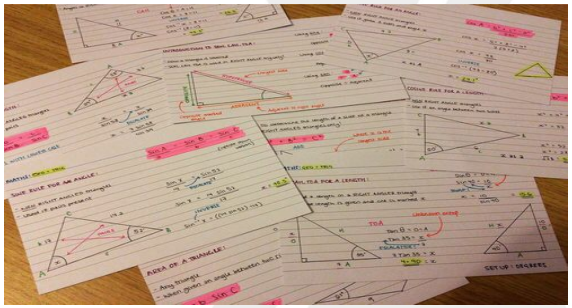
Testing what you know is a powerful tool in revision; the effort to remember something really strengthens your memory. Apps such as Memrise and Quizlet allow you to use or create your own quizzes based on topics. Create them, test yourself or get someone to test you. It works!

Learn more about retrieval practice here: Link to the Learning Scientists

How we learn at Redmoor

Flash cards

Simply create questions on one side, answers on the other. Colour code the cards for specific topics. Post it notes can be useful for keywords and timelines.
Once you have created your flash cards, you need to think about how you will use them effectively. There is a link below to Leitner system of using flashcards:
YouTube: The Leitner Method



Dual coding

Dual coding is the process of combining verbal materials with visual materials.
Simply take information that they are trying to learn, and draw visuals to go with it

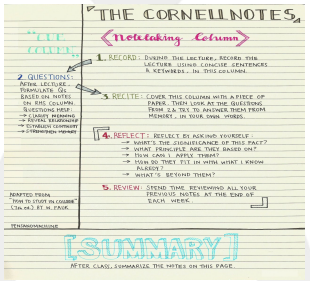
Learn more about dual coding here:
Link To The Learning Scientists

Try to come up with different ways to represent the information. For example: a timeline, a cartoon strip or a diagram of parts that work together.

Cornell Notes

This method can be used in your revision books as a
great method to get you to 'think' about your revision.
Simply split your page into 3 sections as shown on the diagram below:

- Note Taking
- Key words / concepts
- Summary



THINK HARD, WORK HARD, GO FAR

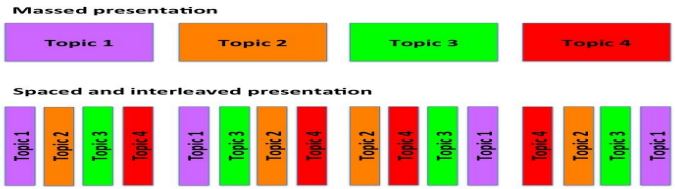
How we learn at Redmoor

Spacing and interleaving

Don't revise your all topics in one go (cramming). Instead, you should revise 'chunks' of a topic for small amounts of time (15-30 minutes) and then move onto another 'chunk' from a different Topic.

Eg. topic 1 cells, topic 2 digestive system

This will improve your memory!



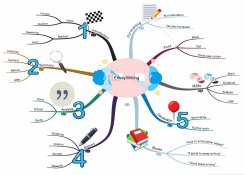
Mind Maps

Mind mapping is simply a diagram used to visually represent or outline information.

It is a powerful graphic technique you can use to translate what's in your **mind** into a visual picture.

Mind maps help with memorisation of jey knowledge as it helps to organise information and begin to make links and connections to different pieces of information.

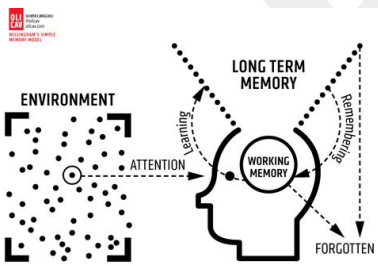
The use of visual images helps your brain to memorise the information with simple words next to them - links to dual coding!



.

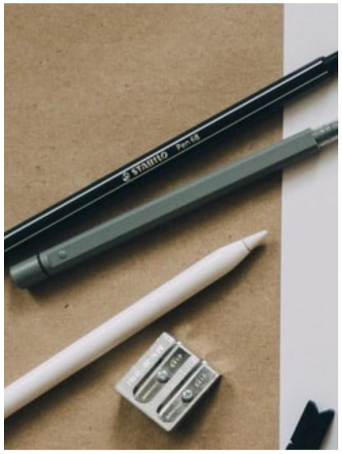
Useful links:

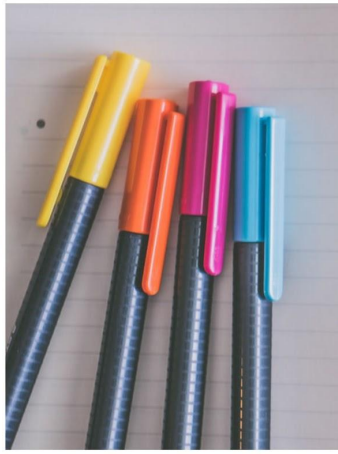
- The learning scientists: https://www.learningscientists.org/
- Memrise: https://www.memrise.com/
- Quizlet: https://quizlet.com/en-gb
- Seneca: https://www.senecalearning.com/



THINK HARD, WORK HARD, GO FAR

Contents Page





Equipment

all students must have...

Mobile phones are not to be used in lessons without staff permission
No photos or videos to be taken without permission
No school related images or videos to be uploaded on to social media

Black or blue pen
Pencils
Ruler - 30cm
Protractor
Compass
Rubber
Pencil Sharpener
Purple pen
Scientific calculator
Coloured crayons
Student Organiser
Knowledge Organiser
Locker Key

REDMOOR ENGLISH DEPARTMENT: The Point Of Poetry

Poetry: Key Facts

- The first epic English poem was Beowulf, written between 700 and 750.
- The existence of the poem was first noted in 1563.
- Throughout history, poetry has been composed (made) for many different functions (purpose).
- Poems have been used to help win wars by telling people what to do, to win hearts in love poems, to entertain, to tell stories, to mark major events, to lay bare our darkest fears and to bring people together in times of difficulty.
- Poems are read aloud when people come together - at weddings and funerals.
- Slam poetry is where poems are used to argue in a competition.
- Rap is poetry where the words are accompanied by a beat.
- There are lots of rules around poetry - for example a sonnet has to have 14 lines.
- Poetry does not have to rhyme.

POETIC TERMINOLOGY

Alliteration: Repetition of the same consonant sound (not a, e, i, o, u sounds) at the start of adjacent words (those near to each other)	**Octave:** The first eight lines of a Petrarchan sonnet, which are unified (united, the same) by their rhythm, rhyme and topic
Anaphora: Repetition of the same word or phrase at the start of a line - used for emphasis	**Ode:** A lyric poem, typically to a particular subject
Assonance: Repetition of identical vowel sounds (a, e, i, o, u) in words that are close together	**Pentameter:** A line with five beats in it
Blank Verse: Unrhymed iambic pentameter	**Personification:** Giving human characteristics to something non-human
Caesura: A short pause for effect in a line of poetry	**Poetic voice:** The character of the 'narrator' of the poem
Couplet: A pair of lines that rhyme	**Quatrain:** A four-line stanza
End-stopping: A line that pauses at the end with a full stop or semicolon	**Refrain:** A repeated word or series of words in response to the main stanza section, as in a ballad
Enjambment: A line with no end punctuation so that it runs on into the next line	**Repetition:** Repeating of a words or phrase for emphasis
Epic poem: A long poem telling a story of olden times	**Rhyme Scheme:** The pattern of end rhymes on lines
Epistrophe: The repetition of a word at the end of successive lines	**Sestet:** A six-line stanza; the second part of a Petrarchan sonnet
Iambic: A rhythmic pattern (called a foot) that has an unstressed syllable followed by a stressed one da-**dum**	**Sonnet:** A love poem of fourteen lines
Iambic Tetrameter:. A four-foot line da-**dum**, da-**dum**, da-**dum**, da-**dum**	**Stanza:** A group of poetic lines, rather like a paragraph in a story
Metaphor: Describing something as something else	**Theme:** The topic or idea that runs through the poem
Narrative: A written account of events	**Tone:** The mood of the poem
Nonsense lyric: A set of words in a poem that are made-up words	**Volta:** In a sonnet, the change of mood between the octave and sestet
Nursery rhyme: A rhyme for children	

Beowulf:

foundling (n): a child abandoned by its parents and discovered by someone

prudent (adj): showing thought and care for the future

revere (v): to show deep respect for

steadfast (adj): firm and unwavering (always steady)

vernacular (n): the language or dialect spoken

Birthday Card Verses:

fragrant (adj): having a pleasant smell

mere (adj): small and insignificant

scan (v): to fit into a regular pattern

sentimentality (n): exaggerated tenderness, sadness or nostalgia

trite (n): lacking originality or freshness

Sonnet 116:

alter (v): to change

bark (n): a small boat

impediment (n): something that gets in the way

sickle (n): a short-handled farm tool with a semicircular blade

tempest (n): a violent storm

To Edward Lawrence:

dank (adj): unpleasantly damp and cold

interpose (v): intervene; place between

repast (n): a meal

sullen (adj): sulky and bad-tempered

virtuous (adj): having high moral standards

Perseverance:

bane (n): a cause of great annoyance

bliss (n): perfect happiness

cease (v): to end

fowling-piece (n): a gun for killing birds; a shotgun

perseverance (n): keeping on doing something, even when things go wrong

To Cromwell:

detraction (n):something which diverts attention away

fortitude (n): courage when things are really bad

gospel (n): something which is the truth

laureate (n): a person honoured for creative or literary achievement

resound (v): fills with an echoing sound

REDMOOR ENGLISH DEPARTMENT: THE POINT OF POETRY – VOCABULARY

Music When Soft Voices Die:

beloved (n): a dearly loved person
odour (n): smell
quicken (v): to stimulate
slumber (v): to sleep
violet (n): a purple flower

If We Must Die:

accursed (v): a strong dislike or anger at something
constrained (v): forced to follow a particular course of action
inglorious (adj): causing shame or dishonour
kinsmen (n): relatives
penned (v): wrote

When I Have Fears That I May Cease To Be:

faery (adj): mythical, imaginary
garner (v): to gather or collect
glean (v): to obtain information
relish (n): great enjoyment
teeming (v): to be full, or swarming with

I Wanna Be Yours:

devotion (n): love, loyalty to a particular object or person
dreamboat (n): a handsome man

Invictus:

bludgeonings (n): having been beaten with a heavy, blunt instrument
circumstance (adj): something that happens
looms (v): to appear in an exaggeratedly large form
unconquerable (adj): unable to be conquered
wince (v): to pull a face in pain

THE TIMELINE OF ENGLISH LITERATURE






750 BC - 400 BC Ancient

400 - 1500 Old & Middle English

1500 - 1660 Renaissance

1785 - 1832 Romantic

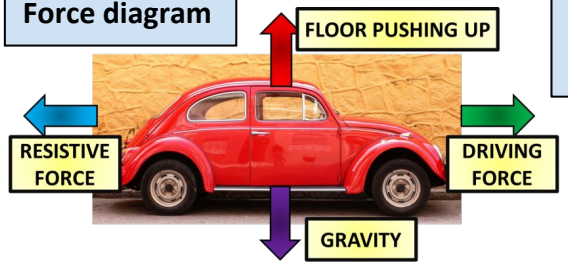
1837 - 1901 Victorian

1901 - Today Modern / Post-modern

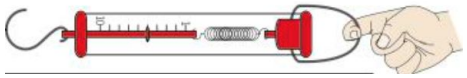
Physics → 1.1 and 1.2: Forces

Keyword	Definition
Contact Force	Forces that arise by the physical interaction between 2 objects.
Non-Contact Force	Forces that arise by the interaction between 2 objects WITHOUT physical contact.
Resultant Force	Single force that represents ALL the forces acting on an object
Balanced	When forces acting in opposite directions are equal.
Equilibrium	State of the OBJECT when ALL forces acting on it are equal.
Unbalanced	When forces acting in opposite directions are different.
Driving Force	The force that pushes or pulls an object.
Resistive Force	Any force that acts to slow down a moving object.
Acceleration	A change in speed: +ve acceleration → gets faster -ve acceleration → slows down
Gravity	A **non-contact force** that pulls objects towards a planet's surface.
Gravitational Field Strength	The force which a planet's gravity pulls on an object.
Mass	The amount of particles that you are made from. It is measured in **grams (g) or kilograms (kg).**
Weight	The **force** you exert on the Earth as **Gravity** pulls you towards it, it is measured in **Newtons (N).**
Interaction pair	When two objects interact there is an equal but opposite force acting on each object.

Force diagram

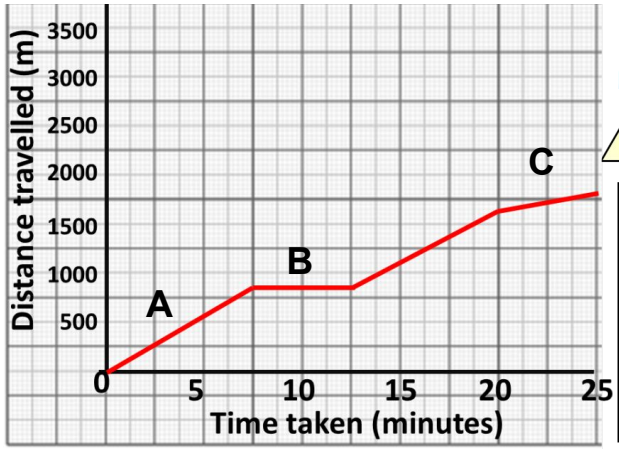


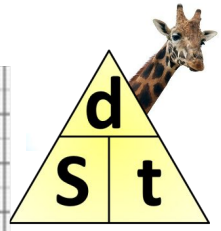
Forces are measured using a **newton-meter.**



When forces are balanced, objects will either remain stationary or move at a constant speed.

The distance-time graph



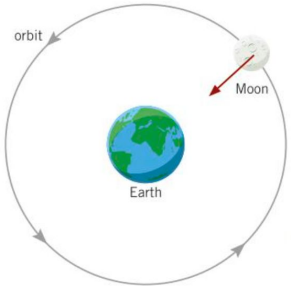


The graph shows the journey of a person on their way to work

Graph	Meaning
A	Moving fastest
B	Constant speed
C	Moving slowest

Conversions:
1 kilometre = 1000 metres
1 minute = 60 seconds

1 km → m x 1000
1 min → s x 60

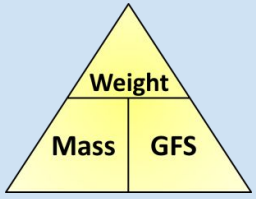


The Earth exerts a force on the Moon. The force of gravity acting on the Moon keeps the Moon in orbit around the Earth. It changes the direction of the motion, not the speed.

Mass is CONSTANT

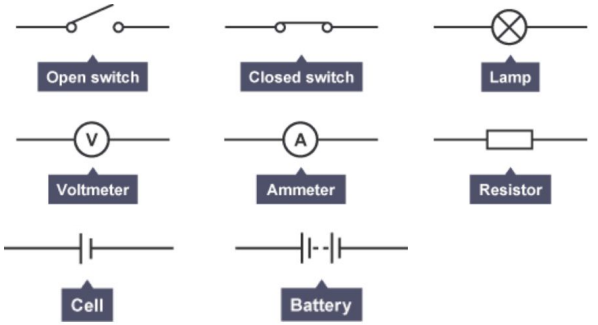
Weight = mass x GFS
(gravitational field strength)

N = kg x N/kg

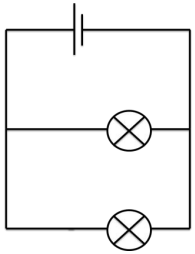


Physics → 2.1 and 2.2: Potential Difference, Current and Charge

Keyword	Definition
Cell	A chemical store of energy – provides the push which moves charge around a circuit
Battery	Two or more electrical **cells** joined together
Potential Difference	The amount of energy shifted from either… **a)**… the cell to the moving charge -or- **b)**… the moving charge to the components
Voltmeter	Measures the potential difference around a component (in **Volts, V**)
Rating	The value of potential difference at which a component operates
Resistance	How difficult it is for charge to pass through a component measured in Ohms (Ω)
Series Circuit	Components in a circuit within the same loop
Parallel Circuit	Components in a circuit within 2 or more loops
Current	The flow of charge through a circuit
Ammeter	Measures the **current** flowing through a circuit in Amps (A)
Motor	Converts electrical energy into kinetic energy
Electrostatic force	Non-contact force between 2 objects
Electrons	Sub-atomic particle with a negative charge
Insulator	Does not conduct electricity Electrons are NOT free to move
Conductor	Conducts electricity Electrons are free to move
Electric field	A region in which a charged particle experiences a force



Circuit Symbols



Parallel circuit

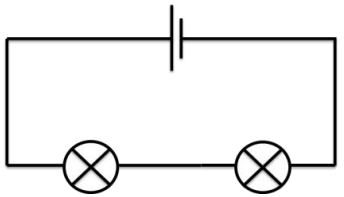
Components are on more than one loop

Current: shared between loops
Potential difference: stays the same

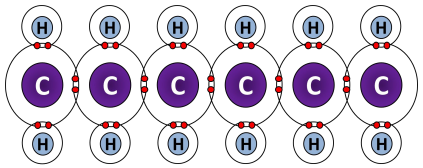
Series circuit

Components are on one loop.

Current: stays the same
Potential difference: shared between components

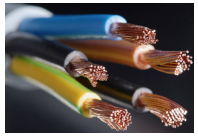


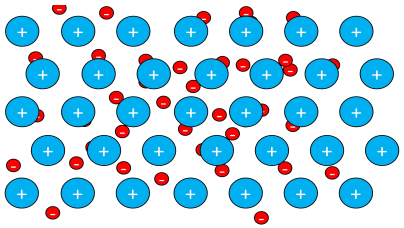
Insulator



Have no free electrons therefore a current cannot flow.

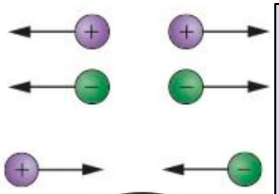
Conductor





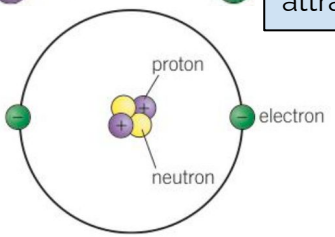
Electrons are free to move therefore a current can flow through the material.

Particle	Charge
Proton	Positive
Electron	Negative
Neuton	Neutral



Like charges repel

Unlike charges attract

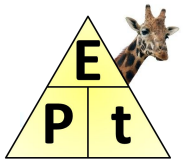


Physics → 3.1 & 3.2: Energy and Costs

Keyword	Definition
Energy	Required to make things happen
Joule	The unit of energy (J) 1000 Joules = 1 **Kilo**joule
Fossil Fuels	Non-renewable resource formed over millions of years from the remains of ancient plants
Non-Renewable	An energy resource that **CANNOT** be replaced after it is used
Renewable	An energy resource that **CAN** be replaced after it is used
Power	How quickly energy is transferred to a device Measure in Watts (W) or Joules per Second (J/S)
Kilowatt Hour	Unit of energy used by power companies (kWh)
Dissipation	Wasted energy that spreads to the surroundings

Energy store	Definition
Chemical	Energy stored in chemicals e.g. batteries & food
Gravitational Potential	Energy linked to position above the Earth surface e.g. ball being thrown in the air
Kinetic	Energy linked to movement e.g. jogger
Elastic Potential	Energy linked to squashing and stretching e.g. elastic band
Thermal	Energy associated with temperature

EQUATIONS



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

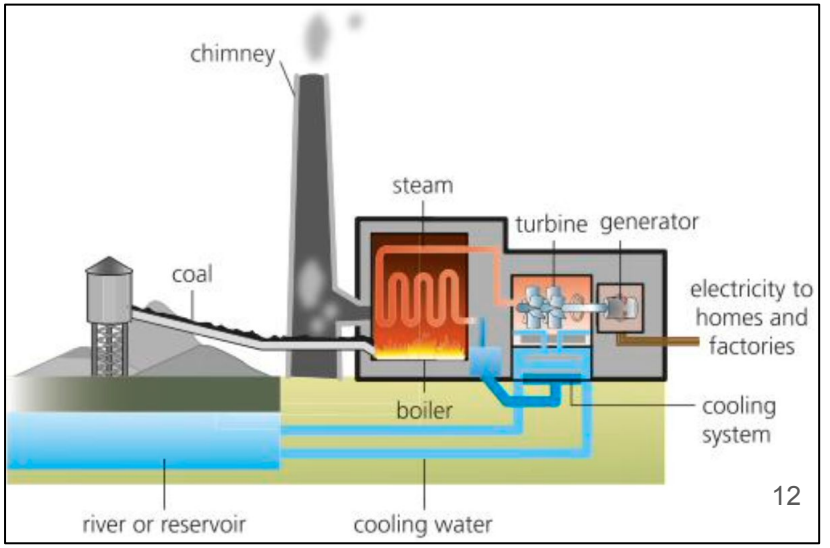
$$\text{cost} = \text{power (kW)} \times \text{time (hours)} \times \text{price (per kWh)}$$

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

Energy Resources

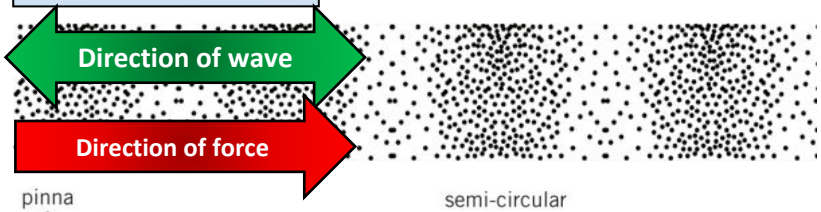
Renewable	Non-Renewable
Wind	Coal
Solar	Oil
Hydroelectric	Gas
Geothermal	Nuclear

A Fossil Fuel Power Station

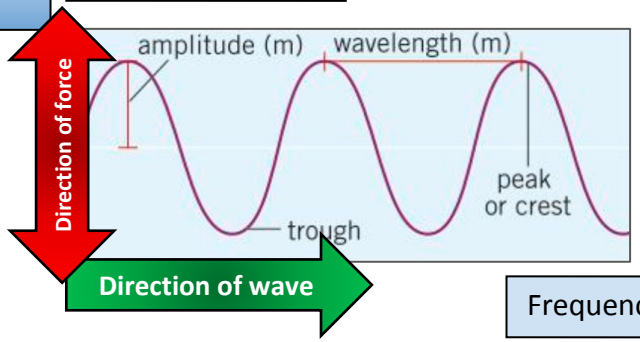


Physics 4.1 → Sound Waves

Longitudinal waves

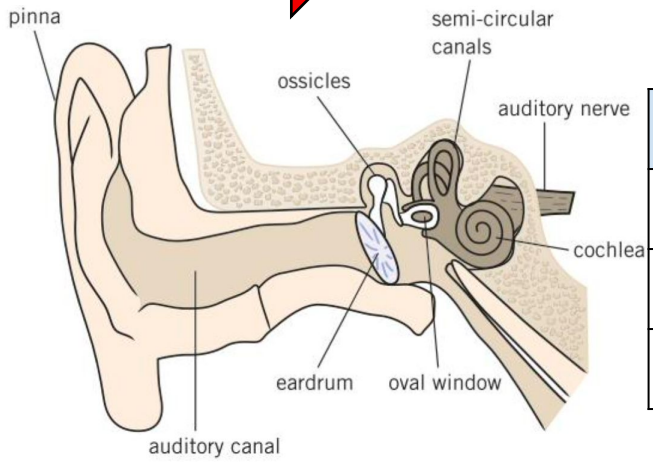


Transverse waves



Longitudinal wave:
Particles oscillate in the same direction of travel

Transverse wave:
Particles oscillate at right angles to the direction of travel



The **pinna** directs the sound wave into your **auditory canal** towards your **eardrum**.

The **eardrum** vibrates and passes this vibration on to the **ossicles**. The **ossicles** vibrate that amplify the sound. This makes the **oval window** vibrate.

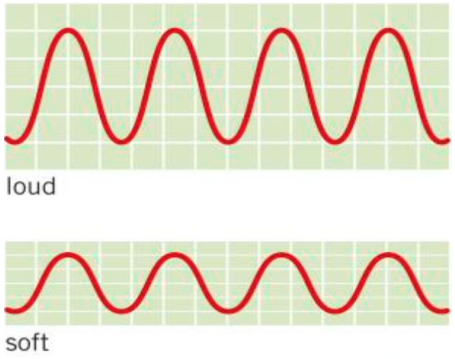
The vibrations then pass on to the liquid in the **cochlea** which contains thousands of tiny hairs. As the liquid moves, the hairs move. This is converted to an electrical signal.

The electrical signal travels down the **auditory nerve** to your brain.

State of matter	Speed of Sound (m/s)
Solid	5000
Liquid	1500
Gas	330

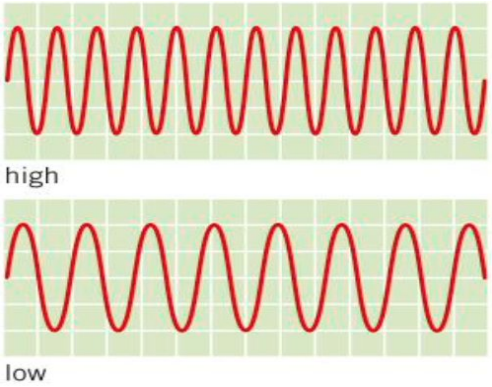
Loudness and Amplitude

Louder sounds have a bigger **amplitude** than softer sounds. Sound intensity is measured in **decibels** (dB)



Frequency and Pitch

High pitched sounds have a higher **frequency** than low pitched sounds. Frequency is measured in **Hertz** (Hz)



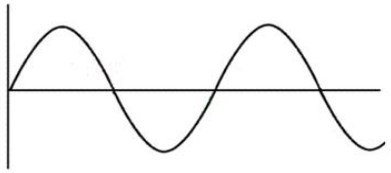
EQUATIONS

$$\text{frequency} = \frac{1}{\text{time period}}$$

$$\underset{\text{(metres per second, m/s)}}{\text{wave speed, } v} = \underset{\text{(hertz, Hz)}}{\text{frequency, } f} \times \underset{\text{(metres, m)}}{\text{wavelength, } \lambda}$$

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

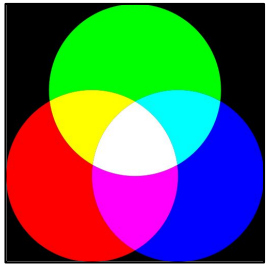
Physics 4.2 → Light Waves



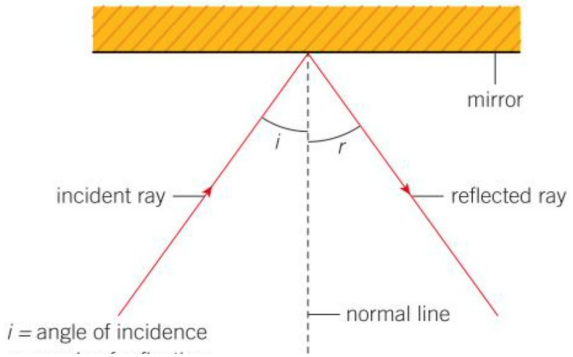
All colours are made up of the 3 primary colours of light
RED
GREEN
BLUE

Speed of light: 300,000,000 m/s

Mixing Light

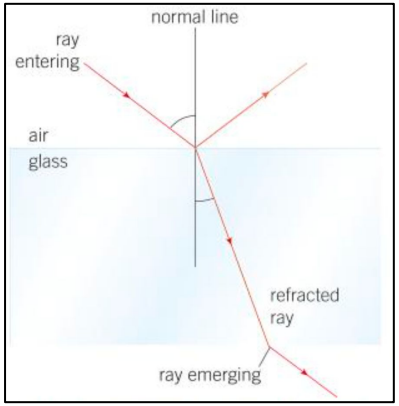


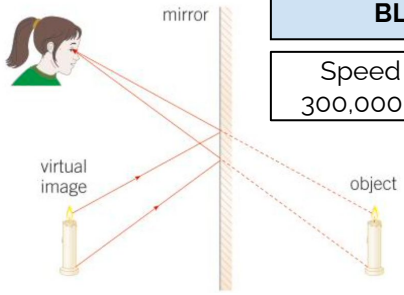
Law of Reflection

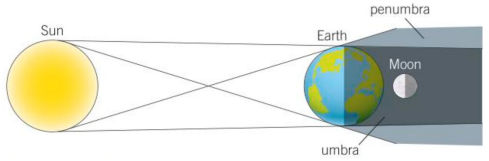


Angle of incidence (i) = Angle of reflection (r)

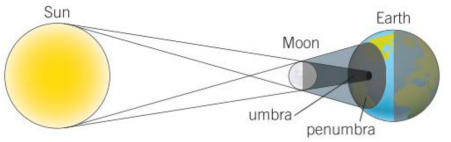
Refraction







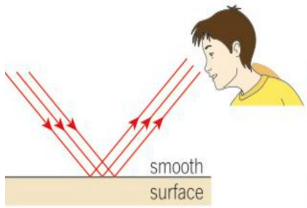
Lunar eclipse: when the Earth comes between the Sun and Moon.

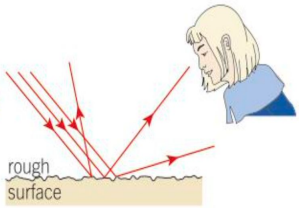


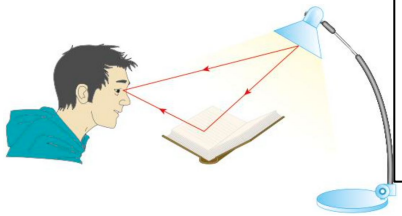
Solar eclipse: when the Moon comes between the Sun and Earth.

Real image: an image that you can put on a screen.

Virtual image: an image that cannot be focussed onto a screen



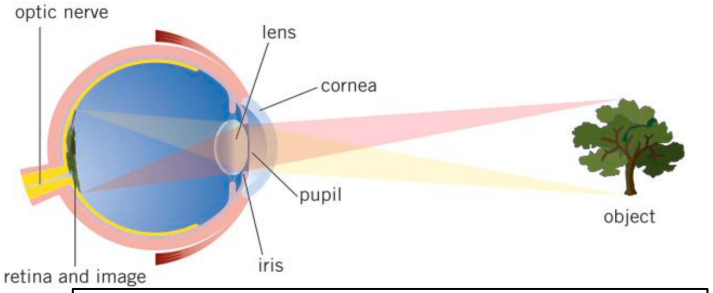


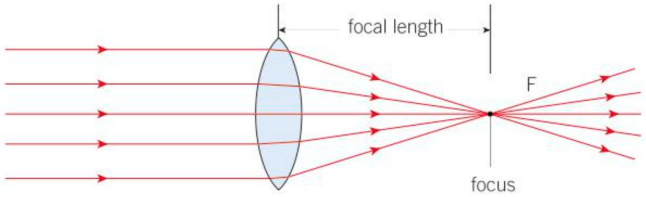


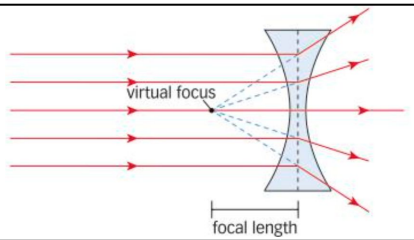
Specular: reflection from a smooth surface.

Diffuse: reflection from a rough surface

Light **emitted** hits an object and is reflected. The light is then **absorbed** by our eyes.
Arrows show the direction of light.







Convex lens: found in your eye. It focuses the light and enables you to see. They produce real images.

Concave lens: found in spy-holes in doors. It spreads the light out. They produce virtual images.

When you look at an object light travels through the **pupil** of your eye.
The **iris**, a muscle, controls the size of the **pupil**.
The **cornea** and **lens** then focus light onto the **retina**.
The image is **inverted** but your brain flips the image to be the correct way up.

French Unit 2 - Chez Moi

Key Vocabulary

Noun - people, places and things.
Verb - an action, state or occurrence
Adjective - used to describe a noun
Adjectival Agreement - the idea that adjectives must agree with masc/fem/plural nouns

Conjugate - to take an infinitive and change it into a tense.
Tense - describes when an action (verb) takes place.
Conditional Tense - to describe something that would happen.

C'est de quelle couleur ? What colour is it?

Verb	Noun	Adjective (mas/fem)	
Il y a There is **J'ai** I have	**une table** a table **un tapis** a rug	**blanc(he)** (white) **bleu(e)** (blue) **gris(e)** (grey) **jaune** (yellow) **marron** (brown) **noir(e)** (black)	**orange** (orange) **rose** (pink) **violet(te)** (purple) **rouge** (red) **vert(e)** (green) **multicolore**

(1) Phonics

oi [wa]	**é** [ay]
ui [we]	**è** [eh]
an [on]	**in** [an]
ç [s]	**ou** [oo]
ain [an]	**on** [on]
ch [sh]	**qu** [k]
u [oo]	**gn** [nyuh]

Oú habites-tu ? Where do you live?

Tu es de quelle nationalité? What nationality are you?

(2) Verb	(3) PVS + Country			(4) Verb	(5) Adjective (masc/fem)	
J'habite I live **Tu habites** You live **Il habite** He live **Elle habite** She lives **Nous habitons** We live	**en France** in France **en Angleterre** in England **en Italie** in Italy **en Espagne** in Spain **au Pays de Galles** in Wales	**aux Etats-Unis** in the USA **en Belgique** in Belgium **en Irlande** in Ireland **en Ecosse** in Scotland **à Londres** in London	**et** and	**je suis** I am **tu es** you are **il est** he is **elle est** she is **nous sommes** we are	**français / française(s)** French **anglais / anglaise(s)** English **italien(s) / italienne(s)** Italian **espagnol(s) / espagnole(s)** Spanish **gallois / galloise(s)** Welsh	**américain(s) / américaine(s)** American **belge(s) / belge(s)** Belgian **irlandais / irlandaise(s)** Irish **écossais / écossaise(s)** Scottish

Qu'est-ce qu'il y a dans ta maison ? What rooms do you have in your house?

(6) Sentence starter	(7) Verb	(8) PVS + Rooms	Connective	Negative	(8) Rooms
Dans ma maison (In my house) **Au rez-de-chaussée** (On the ground floor) **Au premier étage** (On the first floor) **A l'extérieur** (Outside) **En bas** (Downstairs) **En haut** (Upstairs)	**il y a** there is **j'ai** I have **on a** we have	**ma chambre** (my room) **la chambre de mes parents** (my parent's room) **la cuisine** (the kitchen) **l'entrée** (the hallway) **les w.c** (the toilets) **la salle de bains** (the bathroom) **le salon/ la salle de séjour** (the lounge)	**mais** but **cependant** however	**il n'y a pas de** there isn't **je n'ai pas de** I don't have **on n'a pas de** we don't have	**cave. (m)** (basement.) **garage (m)** (garage.) **jardin. (m)** (garden.) **salle à manger. (f)** (dining room.) **salle de jeux. (f)**(games room.)

Tu aimes...? Pourquoi? Do you like...? Why?

(9) Opinion	Noun	Connective		(10) Quality Vocab	(11) Adjective
J'aime I like **Je n'aime pas** I don't like **Je déteste** I hate **J'adore** I love **J'aime assez** I quite like **J'aime beaucoup** I really like **Je préfère** I prefer **Je ne supporte pas** I can't stand	**ma maison** my house **ma chambre** my bedroom **le salon** the lounge **la cuisine** the kitchen	**car** because **parce que** because **puisque** as	**c'est** it is **ça peut être** it can be	**absolument** absolutely **complètement** completely **tellement** so **un peu** a bit **vraiment** really **plutôt** rather **trop** too **assez** quite **très** very	**grand** big **petit** small **vieux** old **moderne** modern **nouveau** new **confortable** comfortable **sale** dirty **bien rangé** tidy **en désordre** messy

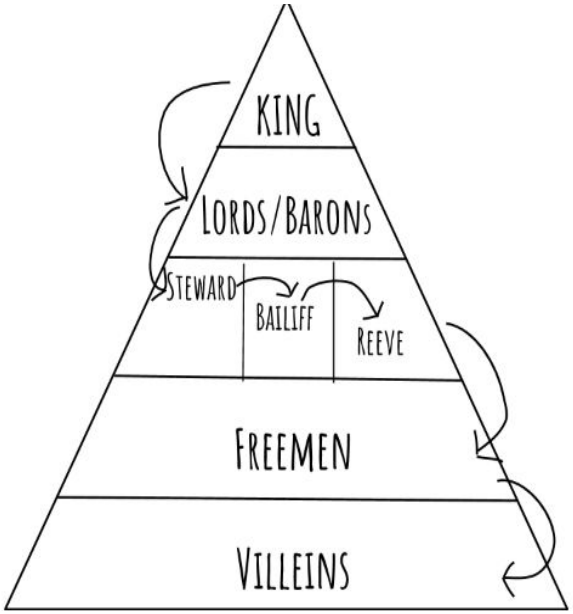
Comment est ta maison idéale ? What would your ideal house be like?

(12) Sentence starter	(13) Verb (conditional)	(14) Nouns & Adjectives	
Dans ma maison idéale In my ideal house **Dans ma maison de rêves** In my dream house	**il y aurait** there would be **j'aurais** I would have **je voudrais** I would like	**une salle de jeux.** a games room. **une salle de cinéma.** a home cinema. **une piscine.** a swimming pool.	**un terrain de foot.** a football pitch. **beaucoup de chambres.** lots of bedrooms. **un dressing.** a dressing room
Ma maison idéale My ideal house **Ma maison de rêves** My dream house	**serait** would be **ne serait pas** wouldn't be	**vraiment grande.** really big. **très moderne.** very modern. **sans cloisons.** open-plan.	**assez vieille.** quite old **individuelle.** detached **très jolie.** very pretty

Qu'est-ce que tu as dans ta chambre ? What do you have in your bedroom?

	Verb	(15) Furniture	(16) Preposition	(15) PVS + Furniture
Dans ma chambre In my bedroom	**il y a** there is **j'ai** I have **il n'y a pas de** there isn't **je n'ai pas de** I don't have	**un lit** a bed **un lit superposé** a bunk bed **une armoire** a wardrobe **une console de jeux** a games console **une commode** a chest of drawers **une chaise** a chair **une table** a table	**sous** under **sur** on **entre** between **derrière** behind **devant** in front of	**le tapis** the rug **la console de jeux** a games console **les posters de...** the posters of... **l'ordinateur portable** the laptop
			à droite on the right of **à gauche** on the left of **à côté** next to **en face** facing	**du bureau** the desk **de la télé** the TV **des posters de...** the posters of **de l'ordinateur** the computer

Year 7 History: Medieval Life & Power



Everyday life:

Feudal System: how society was organised
Week-work: work for the Lord that would have had to be completed by a villein each week.
Boon-work: work for the Lord that would have had to be completed by both villeins & freemen.
Duties: extra jobs for the Lord of the Manor which peasants could pay to get out of.
Open Field System: three-field system, where wheat and oats would be grown.
Strip Farming: land was divided into strips and given out to peasants to farm.
Fallow: a field left empty after being ploughed to restore its fertility.
Enclosure: the practice of fencing off common land to farm sheep, ended strip farming

Justice:

Tithing: A group of 10 men who were responsible for each other in the eyes of the law.
Hue and Cry: a loud cry calling for the pursuit and capture of a criminal. Everyone in the village would be expected to pursue the criminal.
Manorial Court: The court within each Lord's land that would deal with law and order.
Jury: A group of peers who would hear cases at court and decide if innocent or guilty.
Trial by Ordeal: a painful/extreme trial to decide innocence/guilt through the judgement of God.
Trial by Combat: a trial (fight) to settle disputes with no witness or confessions.
1066: Trial by Combat introduced.
1215: Trial by Ordeal abolished.

Religion:

Heaven: the place believed souls would go, after death, if they lived good lives.
Hell: the place believed souls would go, after death, if they lived bad lives.
Sins: doing something that God would not agree with.
Doom Paintings: paintings in churches throughout Medieval England to remind peasants of what would happen if they lived good lives (Heaven) and what would happen if they lived bad lives (Hell).
Purgatory: a place between heaven and hell where souls go to have their sins burnt away.
Church Courts: Could try any churchman accused of crime.

Power:

Divine Right of Kings: The belief that God gave complete control to the King.
Henry II: A Plantagenet King of England.
1154-1189: Henry II reign.
The Pope: Head of the Catholic Church.
Thomas Becket: A Churchman who was Henry's friend.
1161: Becket was appointed as Archbishop of Canterbury.
John I: Henry II's son
1199-1216: John I's reign.
Barons: a different term for the Lords.
1214: John I cannot raise an army and loses the Battle of Bouvine to the French King. .
1215: The Magna Carta signed
Magna Carta: a 'charter' that limited the King's power.
1216: Civil War between the Barons and the John I.

The Black Death:

Black Death: A plague that devastated Europe in the fourteenth century. Spread by fleas.
Buboes: Onion shaped swellings that were usually the first symptom of the Black Death.
Bubonic plague: the most common type of plague, named after the buboes.
1347: Black Death hits Venice (Italy)
June 1348: Black Death arrived in England (Dorset).

The Peasants' Revolt.

Statute of Labourers: a law which fixed peasant wages at the pre-Black death rate.
Peasants' Revolt: major uprising across England in 1381.
Wat Tyler: Leader of the Peasants' Revolt
1351: Edward III introduces the Statute of Labourers
1377: Poll tax - peasants had to pay more money to pay for a war with France.
May 1381: Peasants refused to pay. Peasants' Revolt began.
15 June 1381: Richard II meets the rebels. Wat Tyler was killed

Geography - Africa

The average age across the population of Africa is 19 years. With only 15% of the world's people, Africa produces less than 5% of carbon dioxide emissions.

Largest Country: Algeria. This country is among the ten largest countries in the world.
The most populous country in Africa, however, is Nigeria, with more than 185 million people, but the country is only a third of the size of Algeria.

Largest City: Lagos in Nigeria. With more than 21 million inhabitants, Lagos is also one of the biggest metropolitan cities in the world and is estimated to become the world's largest city by 2100.

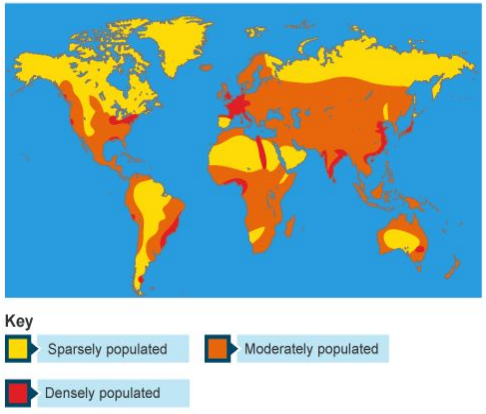
Smallest Country: Seychelles, which is an archipelago (nation of islands) in the Indian Ocean. On the African mainland, the smallest country is The Gambia.

Africa is Not A Country!
It's a Continent of 54 countries

16 Subject Specific Key Terms

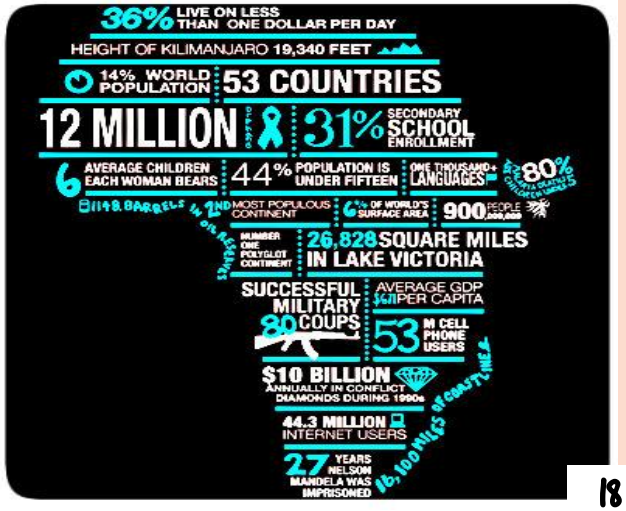
Africa	One of the seven continents.	**Population density**	The number of people in a given area. Usually measured in square km.
Consumers	Those who will purchase the finished product, e.g. someone who buys a chocolate bar from a shop.	**Population distribution**	The spread of people across a given area; where people live.
Country	Humans have divided continents up into political units called countries. Africa contains 54 countries.	**Producers**	Those involved in supplying raw materials to sell on to companies who manufacture a product from this. Usually a farmer, e.g. cocoa producer.
Equator	The imaginary line that divides the northern hemisphere from the southern hemisphere. The equator runs through Africa, including Kenya, Uganda, Somalia and the DRC.	**Biome**	A **biome** is a specific **geographic** area notable for the species living there. A **biome** can be made up of many ecosystems.
Fair Trade	Trade between companies in richer countries and producers in poorer countries in which fair prices are paid to the producers.	**Pull Factors**	Reasons that attract people to the cities.
Manufacturer	The company who will turn the raw material into the finished product ready to sell on to the consumer, e.g. Cadbury's.	**Push Factors**	Reasons for people to leave rural areas.
Migration	The movement of people from one place to another.	**Safari**	An expedition to observe animals in their natural habitat, especially in East Africa.
Population	All the inhabitants of a particular place. In Geography, we normally mean people as the inhabitants.	**Tourism**	The commercial organisation and operation of holidays and visits to places of interest.

Skills: Choropleth Maps



Densely populated areas have a **high** number of people per km2
Sparsely populated areas have a **low** number of people per km2

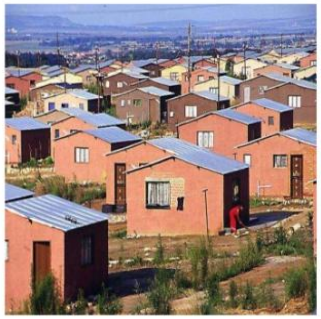
Welcome to Africa



KIBERA - Kenya

- Largest slum in Kenya
- 60% of the people that live in Nairobi live in slums
- Between 800,000 and 1 million people live in Kibera
- 255 ha (around the size of 255 football pitches)
- Extremely high population density
- 1 meter of floor space per person
- There are around 100,000 orphans – this is due in part to the AIDS epidemic in Kibera

Solutions to Squatter Settlements



- Low-cost housing for employed workers where they pay a small part of the rent
- Self-help tools provided to help people build houses with the proper materials
- Provision of basic services, water, sewerage, electricity by city authorities

Kenya Tourism

Can you spot Kenya's tourist attractions?

Positive Impacts of Tourism

- ✔ Tourism generates **money & jobs**
- ✔ Money from tourism can be used to **improve local services**, e.g. building schools
- ✔ **Game reserves** funded by income from tourism **protect animals** from being hunted
- ✔ Helps people **understand different cultures** and **traditions**

- **Mount Kenya** is 5,199m high. It is the highest peak in Kenya and second highest in all of Africa.
- The 'Great Migration' takes place in the **Maasai Mara National Reserv**e every year between July and October. Millions of wildebeest and zebra migrate from the Serengeti to Tanzania.
- The algae at **Lake Nakuru** attracts many 'lesser flamingos' - sometimes more than a million at once.
- **Tsavo National Park** is the largest national park in Kenya and one of the largest in the world. It contains stunning scenery and wilderness.
- **Lamu Island** has remained unspoiled by tourism in Kenya. There are no roads here, only footpaths. Residents move around by foot or boat. Donkeys are used to transport goods.
- **Malindi** has beautiful beaches and extensive coral reefs here. Tourists can do activities such as snorkelling, surfing and deep-sea fishing.
- **Nairobi** is the capital of Kenya and home to 3.5 million people.
- **Lake Victoria** is the second largest freshwater lake in the world and contains over 200 species of fish.

Negative Impacts of Tourism

- × A lot of the **profit from tourism goes to foreign companies** rather than the local people
- × Many **jobs** created by tourism are **seasonal** and **poorly paid**
- × Local tribes, e.g. the **Maasai, have been forced off their land**
- × **Wildlife is disturbed** by safari jeeps and hot air balloons
- × Tourist **boats drop their anchors on coral reefs**, destroying this fragile ecosystem
- × The **ground becomes damaged and eroded** by safari jeeps

Ghana Fair Trade

Farmers: • grow and care for the cocoa trees for **three to five years** • harvest the cocoa pods in very hot temperatures • remove the beans from the pods • ferment the beans for six days and dry them for ten days • take the sacks of beans to sell to cocoa buyers.

Cocoa buyers: • weigh the sacks of beans • pay the farmer for the beans • arrange to take the beans to the port.

Importers: • arrange transport for the beans from Ghana to the UK and Ireland • turn the beans into cocoa solids and cocoa butter.

Why isn't chocolate fair?
This bar of chocolate costs £1
Who gets what?

- Farmer 8p
- Cocoa buyers 7p
- Importer 14p
- Chocolate company 28p
- Shops 28p
- Government 15p

Government: • charges tax on the chocolate bars. Tax is the money that the government uses to pay for essential services such as schools and healthcare

Shops: • buy the chocolate bars from the chocolate companies • sell the chocolate bars to shoppers.

Chocolate companies: • buy the cocoa solids and cocoa butter • buy the other ingredients • make the chocolate bars • pay for the chocolate bar wrappers • pay for advertising the chocolate bars

Fair Trade Chocolate: The Kuapa Kokoo co-operative of coca farmers in Ghana

The co-operative sells part of its cocoa bean crop to Divine Chocolate in the UK who make Fairtrade chocolate. The main benefits are:

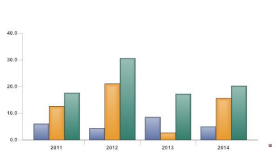
- Farmers **receive an extra US$150** per tonne for their cocoa - about **10% more** than the price on the world market.
- The co-operative also receives a **Premium** that is then used to fund **community projects** such as constructing **school**s and **drinking wells**, providing **community bicycles**, **mosquito nets** and **mobile health services**.
- Farmers receive training to help them deal with problems such as pests or diseases that affect the cocoa crop, for example the black pod.
- Members of the co-operative can borrow small amounts of money from a micro-credit bank, which is known as the Kuapa Kokoo Credit Union.

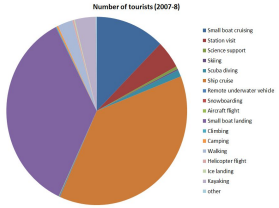
Geography - Tourism

Key Terms and Definitions

Key Term	Definition
Tourism	Is travel for recreation, leisure or business purposes.
Domestic Destinations	Are located in the tourist's own country. So, for British people, they are destinations in the UK.
Short-haul destinations	Can be reached by air flight of less than 3 hours. For tourists from the UK, they are places in Europe and around the Mediterranean Sea.
Long-haul destinations	Are further away and include tropical destinations in countries such as Jamaica, Kenya and Thailand.
HIC	High Income Country. A country with GNI per capita higher than $12 746.
LIC	Low Income Country. A country with GNI per capita lower than $1045.
GNI	Gross National Income. The total domestic and foreign output by residents of a country.
Tourist	A person who is travelling or visiting a place for pleasure.
GDP	Gross Domestic Product. The total value of goods and services produced by a country in one year.
Tertiary Sector	This refers to the commercial services that support the production and distribution process, e.g insurance, transport, advertising warehousing and other services such as healthcare and teaching.
Mass Tourism	When large numbers of tourists visit the same destination.
Charter Flights	Special flights arranged to transport tourists to a destination.
Package Holidays	Holidays that include flights, airport transfers and accommodation.
Honeypot	When people swarm to attractions.
Extreme Environment	Places where people find it difficult to live. They're wild and inhospitable, places like mountains, deserts and rainforests.
Adventure Holidays	More active holidays with more risk. Off the beaten track and in more unusual environments.
Ecotourism	When people visit a place because of its natural environment and cause as little harm to it as possible.
Sustainable	Development which meets the needs of people now and in the future, but limits harm to the environment.

Case study
The Lake District national park





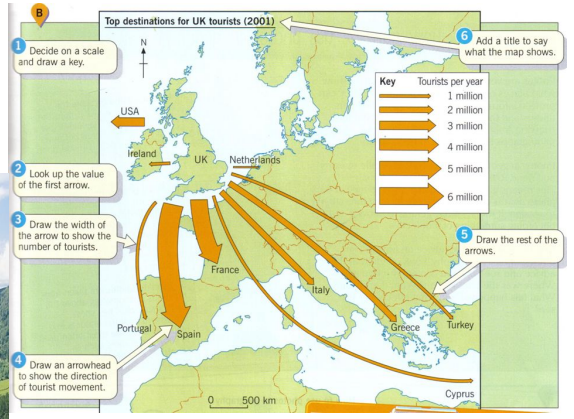
Pie Charts

Advantages	Disadvantages
A good way of showing how a total is divided up	Hard to assess % accurately
Visually effective	Comparing one pie chart to another is difficult
Can be used on a map for extra information	Small segments are difficult to draw

Bar graphs & Line graphs

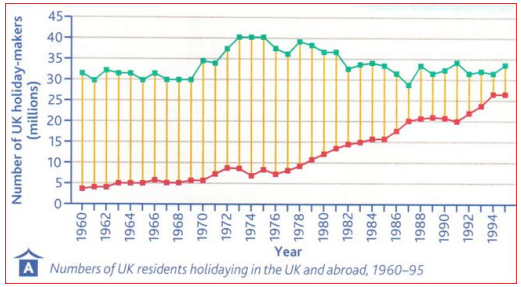
Easily understood & visual	Can be tedious and time-consuming to construct
Comparisons can be made	Can be difficult to read accurately
Bar charts show cumulative data/discrete data	Often requires additional information to be useful
Line graphs show continuous data	Scale needs to be carefully considered

Flow Line Maps



Flow Line Maps

Advantages	Disadvantages
Immediate impression - visual	Hard to draw
Shows movement easily	Flows can be in the same direction/overlap
Gives clear sense of direction	Might be difficult to show meeting points without overwhelming the map



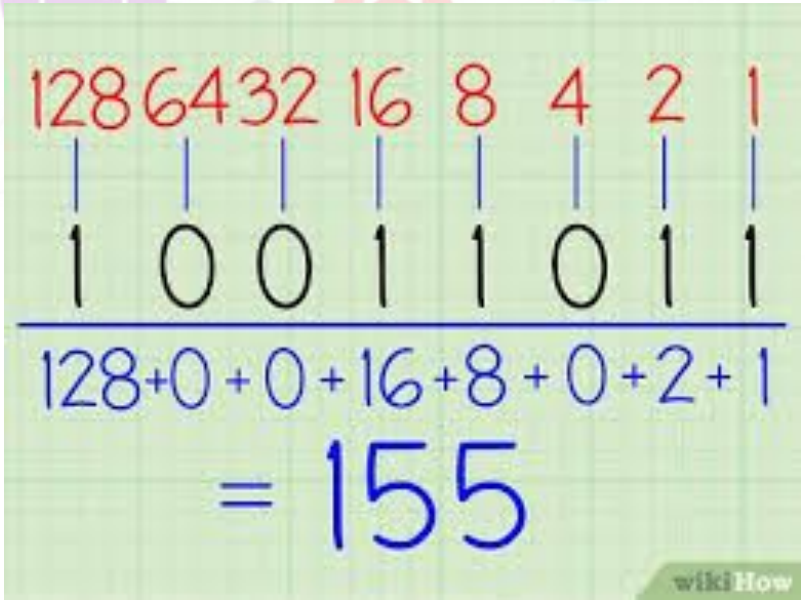
2
0

Year 7 ICT & Computer Science
Data Representation

Units of Data	
Bit	A single binary digit. A 0 or a 1.
Nibble	4 bits
Byte	8 bits
Kilobyte	1000 bytes
Megabyte	1000 kilobytes
Gigabyte	1000 megabytes
Terabyte	1000 gigabytes
Petabyte	1000 terabytes

Why Binary?	
Transistor	A transistor is a tiny switch that is activated by the electronic signals it receives. The digits 1 and 0 used in binary reflect the on and off states of a transistor.
CPU/Processor	The circuits in a computer's processor are made up of billions of transistors
Machine Code	The only language the computer understands, made up of 1s and 0s. Any code that is written in languages such as Python has to be translated into 1s and 0s before the computer can understand it

Number Systems	
Binary	A base 2 number system. It only has two symbols, 0 or 1
Denary	A base 10 number system. The number system we regularly use. Has the symbols 0 to 9



Year 7 ICT & Computer Science
Small Basic Programming

Key Term	Description
Code	The instructions for the computer telling it how to function.
Input	Where data is entered into a computer by a user/human.
Output	Where data is displayed by the computer. Examples include: text, images, sound, or video displayed on a monitor or through speakers.
Syntax	The rules for how the code is written.
Syntax error	Where the code doesn't work because of a mistake in the code or because of how it is written.
Logic error	A logic error is where the code works but it doesn't give the result that you wanted.
Variable	A place to store a single piece of data.
Selection	Where code is only run if a condition is met. This basically is when the computer is able to make a decision
Intellisense	Where the program tries to guess the code you are writing. Similar to autocorrect.
Loop	Where code repeats. It can repeat forever, a set number of times or until a condition is met.

Key Term	Description
Editor	The area in Small basic where you type the code.
Graphics window	The window where drawings are made by the computer based on your instructions/code.
Text window	The window where text appears when running your program. Programs can print text to this window or the user can write text into it.

For Loop	Allows you to run a piece of code a set number of times.
	
	The following example will print out numbers from 1 to 10.
	
	`For i = 1 To 10`
	`  TextWindow.WriteLine(i)`
	`EndFor`

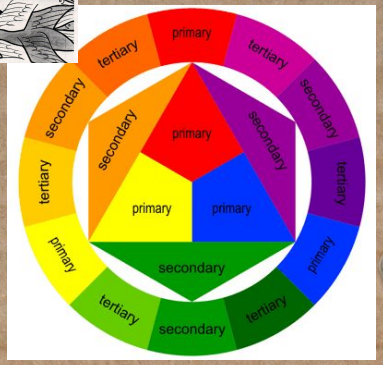
While Loop	Allows you to repeat code forever or until a condition has been met.
	
	The following code will print a set of random numbers until one that is greater than 100 is encountered.
	
	`While i < 100`
	`  i = Math.GetRandomNumber(150)`
	`  TextWindow.WriteLine(i)`
	`EndWhile`

Year 7 Art and Design No.1

Escher

5 facts about the artist

1. Escher (1898-1972) is one of the world's most famous graphic artists. His art is enjoyed by millions of people all over the world.
2. His work features mathematical objects including impossible objects, reflection, symmetry and perspective.
3. Early in his career, he drew inspiration from nature, making studies of insects, landscapes, and plants
4. The prints Escher produced from 1941 on are his most well-known. He continued experimenting with repeating patterns and geometric mathematical concepts,
5. More recently, Escher's mind-bending visions have provided inspiration for the film Labyrinth 1986



Drawing Style/Skill/Technique

The Visual Elements of line, shape, tone, colour, pattern, texture and form are the building blocks of composition in art. When we analyse any drawing, painting, sculpture or design, we examine these component parts to see how they combine to create the overall effect of the artwork.

Line	**Line** is the beginning of all drawing. Line in an artwork can be used in many different ways. It can be used to create shape, pattern, form, structure, growth, depth, distance, rhythm, movement and a range of emotions.
Shape	**Shape** can be shown in a number of ways. Sometimes we can recognise the shapes, at other times, they can look like something we haven't seen before. This could be called 'abstract'.
Tone	**Tone** is the lightness or darkness of a color. Tone can be changed by using white or black to make a colour lighter or darker.
Colour	**Colour** is the visual element that has the strongest effect on our emotions. We use color to create the mood or atmosphere. For example, artwork that uses mainly reds and oranges, might make you feel angry.
Pattern	**Pattern** is made by repeating parts of the work. There are two basic types of pattern in art: **Natural Pattern** and **Man-Made Pattern**. The patterns could be made by repeating something in a certain way or completely random.
Texture	Texture is the surface effect used in art - the roughness or smoothness of the materials used to make the art.
Form	Form is the physical shape of the artwork. Form generally links to sculpture work, 3D design and architecture but may also relate to the illusion of 3D image on a 2D surface.

Theme for the Project - Visual Art Elements

The colour wheel helps us understand the relationships between colours.

The **primary colours** are red, yellow and blue. They cannot be made by mixing other colours together. All other colours can be mixed from red, yellow and blue.

Secondary colours are made by mixing equal amounts of primary colours together:

- Blue and red mixed together make purple
- Yellow and red mixed together make orange
- Blue and yellow mixed together make green

A **tertiary colour** is made by mixing equal amounts of a primary colour and a secondary colour together. There are six tertiary colours.

Harmonious colours sit beside each other on the colour wheel. These colours good for mixing together.

Complementary colours sit across from each other on the colour wheel. These are often referred to as opposite colours and even contrasting colours.

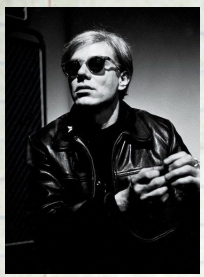
A **tint** is where an artist adds a colour to white to create a lighter version of the colour. An example of a tint is pink. Pink is a tint created by adding white to red.

A **shade** is where an artist adds black to a colour to darken it down.

1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020

Year 7 Art and Design No.2

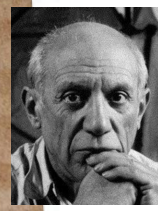
Warhol

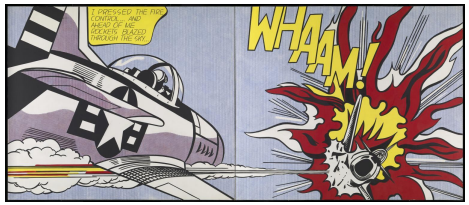


1. His birth date was never recorded at a hospital. Andy Warhol liked to change his birthday and make up stories about his youth when doing interviews with the press.
2. He once said that "good business is the best art."
3. In 1961 Andy Warhol came up with the concept of using mass-produced commercial goods in his art. He called it Pop Art. He would use commercial images and reproduce them over and over. One early example of this was a series on Campbell's Soup cans.
4. Andy Warhol also used pictures of famous people. He would repeat the same portrait over and over, but use different colors and effects in each picture. Some of the celebrities he had as subjects include Marilyn Monroe.
5. He was also interested in film and music. He produced around 60 films and supported a band called the Velvet Underground. One of his movies was a 6 hour film of his friend sleeping called *Sleep*.

Theme for the Project - Pop Art

- Pop art is an art movement that started in the 1950s and was very popular in the 1960s in America and Britain.
- Pop art was normally related to everyday objects or people that were popular at the time.
- It made use of popular imagery, such as comics, films, advertising and household objects.
- It often used bright colours such as red, blue and yellow, as well as images of celebrities or fictional characters from TV or comics.
- Another well known pop artist was Roy Lichtenstein. His paintings and prints looked just like comic strips, including his most well known work entitled Whaam!





Drawing Style/Skill/Technique

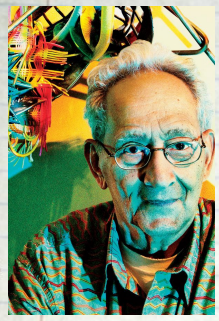
The lightness or darkness of something – this could be a shade, or how dark or light a colour appears. When we add white to a colour it's called a tint - this lightens the base colour.
When we add black to a colour it's called a shade - this darkens the base colour
Tone can be used to make something look three dimensional by blending tints and shades in specific areas.

Screenprinting; A method where ink is applied directly to the surface to be printed. The image to be printed is transferred to a very fine fabric (the screen) The parts that are non-printing areas are blocked off and the fabric becomes a stencil. The ink is wiped across the screen to pass through the unblocked areas and reach the underneath surface. For each colour to be printed a separate screen is prepared and the process is repeated. This is a process to mass produce an image.

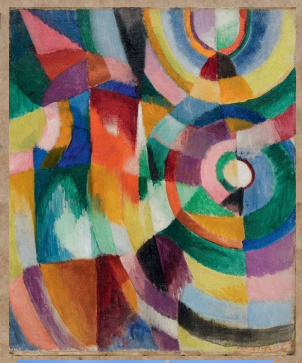
1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020

Year 7 Art and Design No.3

Frank Stella



1. Frank Stella studied at Princeton University in America, where he painted and majored in history.
2. New York art galleries inspired Frank Stella's work.
3. Stella started his printmaking in the mid-1960s.
4. Stella's art work was recognised before he was twenty-five.
5. Stella introduced 3D relief into his art, which he called "maximalist" painting because it included sculptures.



Design Movement/Art Style

What is Art Deco?

- Created in Paris in 1925, art deco can be seen as a reaction against art nouveau (another art movement).
- Seen in furniture, pottery, textiles, jewellery, glass etc. it was also a used when designing styles of cinema and hotel architecture.
- The big difference from art nouveau is the influence of cubism which gives art deco design generally a more fragmented, geometric look.
- However, images based on plants and curves remained in some art deco design.
- Art deco took inspiration from ancient Egyptian art, Aztec and other ancient Central American art, as well as from the design of modern ships, trains and motor cars.
- It also was inspired by the modern architecture and design of 'The Bauhaus', and of architects such as Le Corbusier and Mies van de Rohe.

Drawing Style/Skill/Technique

A relief is a sculpture in which the three-dimensional elements are raised from a flat base. The term ***relief*** is from the Latin verb *relevo*, meaning 'to raise'. To create a sculpture in relief is to give the impression that the sculpted material has been raised above the background. The opposite of relief sculpture is *counter-relief*, intaglio, or *cavo-rilievo,* where the form is cut into the field or background rather than rising from it.
Reliefs are common throughout the world on the walls of buildings and a variety of smaller settings, and a sequence of several panels or sections of relief may represent an extended story.

Abstract

- Abstract art uses shapes, colours, forms and marks to create a picture.
- Abstract art often doesn't represent something that is recognisable or real.
- The word abstract means to separate or withdraw something from something else.
- The term can be applied to art that is based an object, figure or landscape, where forms have been simplified.
- It is also in art that uses forms, such as geometric shapes or gestural marks, which have no relation to anything in the real world.
- Some artists of this 'pure' abstraction like to be known using the terms 'concrete art or non-objective art.'
- Since the early 1900s, abstract art has inspired modern art.

1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020

Year 7 Cultural Understanding

British Values

- The British are the creation of invaders and migrants, including Celts, Romans, Anglo-Saxons, Vikings, and Normans.
- Today we live in a society that should show mutual respect for and tolerance of those with different faiths and beliefs, and for those without faith.
- Sports and literature are among the UK's cultural claims to fame. Soccer, rugby, cricket, boxing, and golf were all invented in Britain.
- Kings once ruled with advice from a council of religious leaders and nobles. Today, the monarch (which can be a king or queen) has no real power.

Artwork information

From blacksmithing to basketry, from weaving to woodturning, we have an incredible range of heritage craft skills in the UK and some of the best craftspeople in the world.

African

- There are 54 countries in Africa - and 9 territories -with a total of more than 1.1 billion people living on the continent, which is 15% of the world's total population.
- Most of the African people are Christians and Muslims. In North Africa and many West African countries, most people follow the Islam.
- There are also almost 10% of Africans that follow traditional religious rituals which means they have traditional healing rituals such as bone-throwing, 'magic' and herbal medicine and celebrating the spirit of the ancestors.
- In Africa, you will find some of the largest mammals on this planet.

Artwork information

There are 5 elements of African art that are used to describe the aesthetics of African art. These are:

1. Resemblance to a human figure.
2. Shiny and unflawed skin.
3. Youthfulness representing vitality and fertility.
4. Reserved demeanor representing a person in control.
5. Balance and proportion through material choices.

Native American

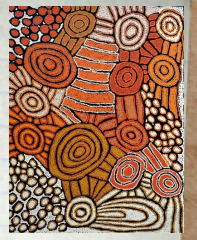
- Native Americans lived in the United States for a very long time before Christopher Columbus discovered America.
- The first people to live in a land are called indigenous peoples.
- The Native Americans were grouped into tribes or nations usually based on the area they lived in and their culture such as their religion, customs, and language.
- The Native Americans did not write down or record their history, so we have to find out about their history in other ways.

Artwork information

Evolving from simple cave drawings and carvings traditional American Indian art grew to include intricate art in such forms as jewelry, beadwork, weaving, pottery, paintings, carvings, masks, quillwork (embroidery), and totem poles. Throughout their history their art has reflected their culture, lifestyle, and environment.

Aboriginal

- Aboriginal Australians is a western term for the people who are from the Australian mainland and many of its islands
- Aborigines have lived in Australia for over 40,000 years, and it is believed that they came from areas of Asia. These original Australians were hunter-gatherers.
- The didgeridoo is one of the world's oldest musical instruments and is made from limbs and tree trunks hollowed out by termites.
- Dream time refers to the Indigenous understanding of the world's creation.



Artwork information

The earliest Indigenous art was paintings or engravings on the walls of rock shelters and caves which is called rock art. People believe that dots were used in artwork to hide information from white men when the Aboriginal people became afraid that they would be able to see and understand their sacred, private knowledge.

Year 7 Drama: Unit 3: Script 'Fantastic Mr Fox' Knowledge Organiser (Jan-Feb)

Drama Keywords

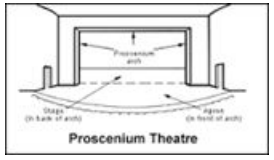
Tableau (x)	A Dramatic Picture. Frozen in time. (Needs to be with 2 or more people.
Narration	To tell a story, information of what is happening to the audience
Mime	Acting out a moment, action, feeling without WORDS.
Split-staging	2 scenes performed at the same time on stage. (BUT the TECHNIQUE of this needs to be used!!!)
Physical Theatre	Use of the body & Movement to show a story, feeling, situation & object.
Structure & Plot	The story (Plot) Scene by scenes & Order of scenes (Structure)
Projection	To speak loudly in for the audience to hear you words.
Expression	Use of Facial Expression to SHOW how you feel.
Tone of Voice	The emotion HEARD in your voice of this character.
Gesture	Body or facial movements of a character during a play.
Body Language	To show your emotion & TOWARDS others in your body.
Wash/Flood	Covers the whole stage in light, allowing the audience to see everything.
Spotlight	A 'Spot'/Circle of Light in a small area- to focus on less actors.

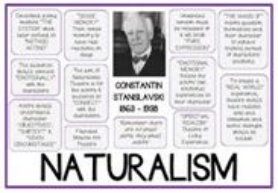
Themes & Context:

- You will be recapping your skills from your Script Unit 'Shipwrecked', thinking about your voice, expression, body language & also following the stage directions, blocking where you will stand & how you will say your lines.
- You will be different characters from this story; you will use the technique of Narration to tell the story & applying your knowledge of the characters, through watching clips from Youtube of the story.
- Characters: Mrs Fox, Mr Fox & their friends. You will need to explore different voices of these characters, with different gestures (using the clips from Youtube)
- You will all be the directors to bring this script to life! Think about how you will set this scene- What will be in stage? A chair? Table? Are you outside/inside? How do you imagine each room or outside to be?

Use of Practitioners, Performance Spaces:

Performance Space: Proscenium Arch (An arch/frame is created & the audience have one view point.)





Practitioner: Stanislavski= He created a method of Acting where you make your character as REAL as possible.
"TO BE THE CHARACTER" not yourself. He wanted you to ask yourself questions 'What if I was this character, how would I feel?' 'What would I do?'

Drama Keywords

Tableau(x)	A Dramatic Picture. Frozen in time. (Needs to be with 2 or more people.
Physical Theatre	Use of the body & Movement to show a story, feeling, situation & object.
Thought-Tracking	An extended piece of script performed by one person & spoken to the audience.
Split-staging	2 scenes performed at the same time on stage. (BUT the TECHNIQUE of this needs to be used!!!)
Gesture	Body or facial movements of a character during a play.
Body Language	To show your emotion & TOWARDS others in your body.
Expression	Use of Facial Expression to SHOW how you feel.
Reaction	To respond to each other as characters, on stage. Reacting to their words, feelings, actions.
Wash/Flood	Covers the whole stage in light, allowing the audience to see everything.
Transitions	A change from one scene to another. Smooth Transitions in Drama are key!
Characterisation	Creating a character through the skills above. (Connecting to your research here of

Drama techniques, skills and lighting.

Drama: Unit 4: 'Evacuees & WW2' Knowledge Organiser (March-April)

Key Knowledge:

- In this unit, you will research WW2 & look at how the children were evacuated to safe areas of the country during the war, leaving their families behind. Here will you find examples of characters, their feelings in this situation, & we can try to connect to these points.
- You will explore this situation through creating a comic strip for the plot, characters & their feelings. We will use thought-tracking & monologues to show. their sadness, confusion, uncertainty of when they would see their family again.
- Like previous units with not being in the studio, you will create different scenes, for example, tableaux of showing images of leaving your family & travelling to a safe place. To also show the roles of the men & women as soldiers & nurses, with Split-staging & dialogue used. The children returning back to their homes/families after the war is over & the emotions of the children during the war. This will be shown through description of your ideas & script work.
- You will also think about how you will show your voice, the tone & pitch, with expression & body language, will show these emotions of your character.
- Think about Stanislavksi 'What if?' 'What if I was this child in the war, leaving their family, how would I feel?' This will show realism.
- You will also explore the costume, set & lighting designs this unit.

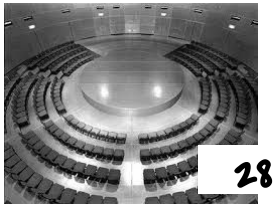
Use of Practitioners, Performance Spaces:

WHEN WE ARE ON STAGE, WE ARE IN THE HERE AND NOW

Stanislavski - Creating as much Naturalism/Realism as possible on stage. Thinking about the 'Magic If': What if I was this character, what would I do? How would I feel?

Theatre of The Round= The audience will in a 'circle/round' shape. You will need to think about HOW you POSITION yourself on stage.

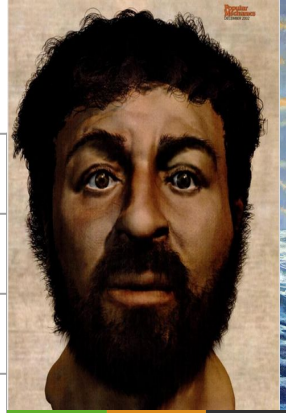
This allows the audience/actors to feel closer together and a very intimate atmosphere is created.

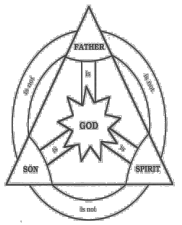


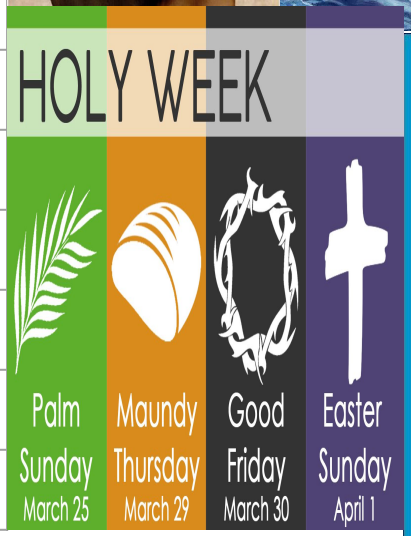
Morals and Ethics

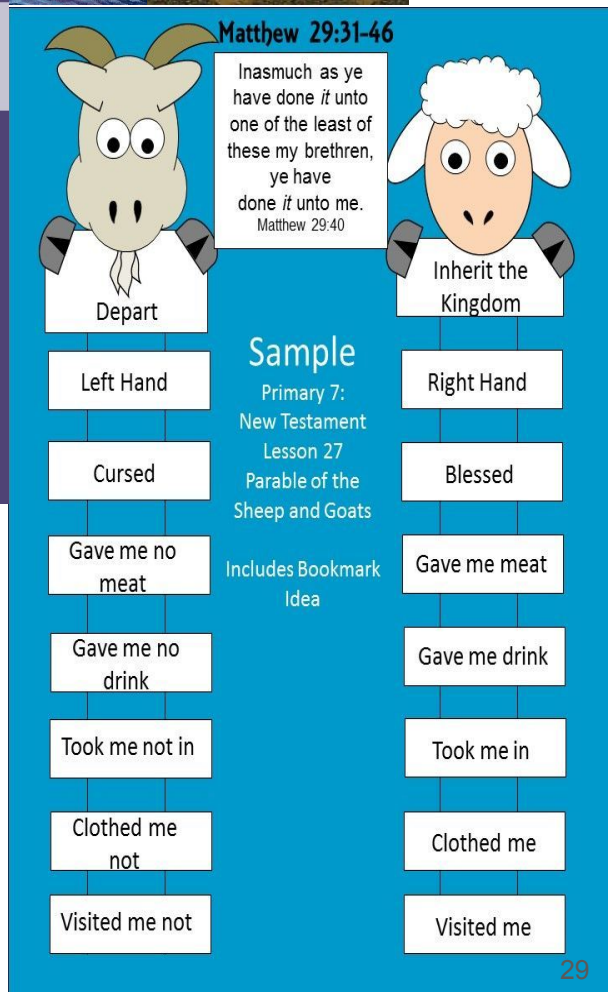
Keywords Jesus Christ, Messiah, Son of God

Baptism	Welcomes a believer into the Christian church.
Christian	Someone who believes in Jesus Christ.
Christmas	Celebrating the birth of Jesus
Crucifixion	Method of execution used on Jesus
Easter	Celebrating the resurrection of Jesus
Resurrection	Jesus coming back to life after 3 days
Acsension	Jesus going to heaven to be with his Father.
Miracles	Unexplained events performed by Jesus in the Bible
Parables	Stories with a religious meaning Jesus told
Samaritan	Somebody who helps somebody else









"A man was going down from Jerusalem to Jericho, and he fell among robbers, who stripped him and beat him and departed, leaving him half dead. Now by chance a priest was going down that road, and when he saw him he passed by on the other side. So likewise a Levite, when he came to the place and saw him, passed by on the other side. But a Samaritan, as he journeyed, came to where he was, and when he saw him, he had compassion. He went to him and bound up his wounds, pouring on oil and wine. Then he set him on his own animal and brought him to an inn and took care of him. And the next day he took out two denarii and gave them to the innkeeper, saying, 'Take care of him, and whatever more you spend, I will repay you when I come back.' Which of these three, do you think, proved to be a neighbor to the man who fell among the robbers?" He said, "The one who showed him mercy." And Jesus said to him, "You go, and do likewise."

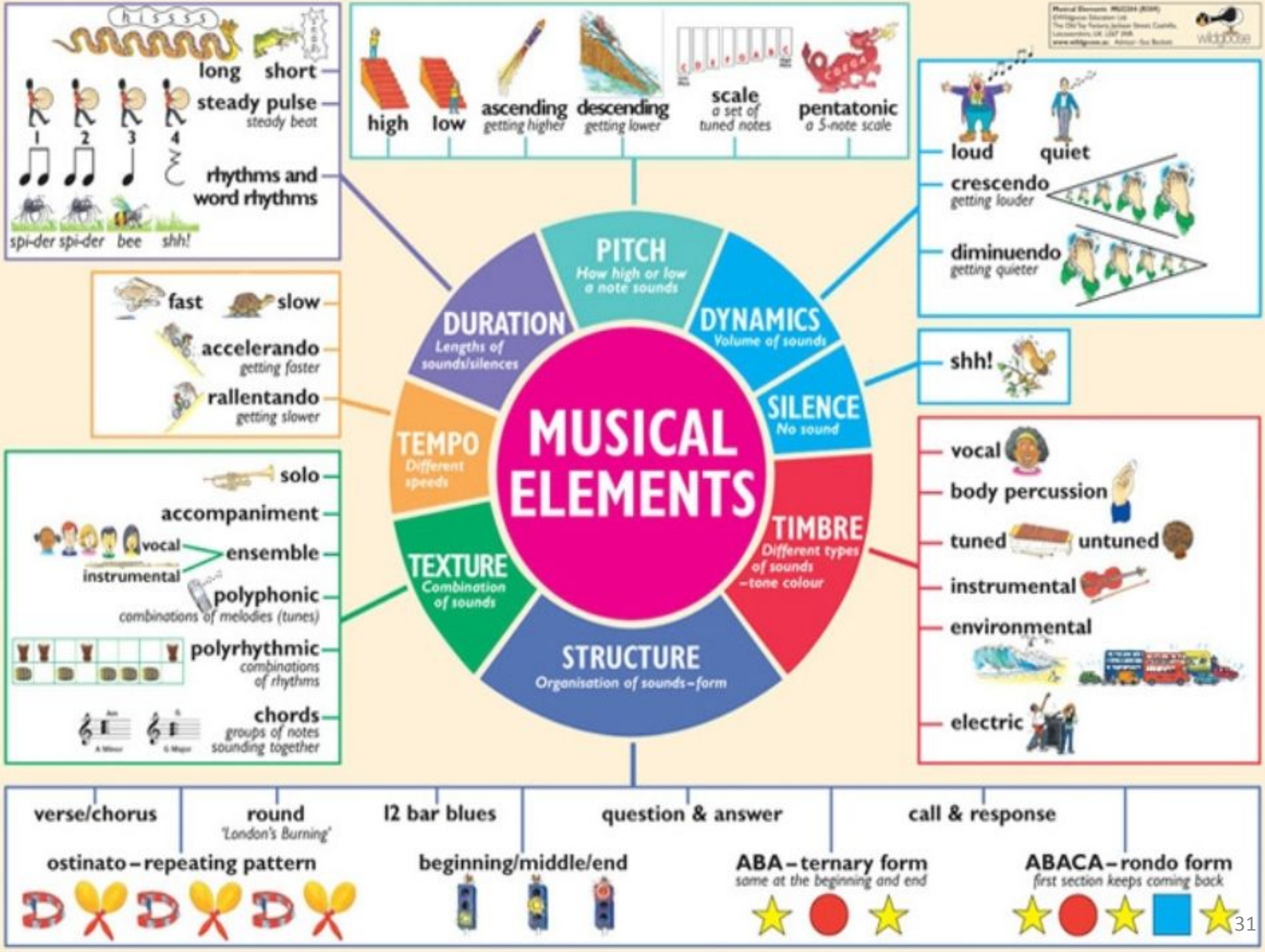
'You should always do what your parents tell you too.'

'It is never too late to change your life.'

'It is easy to fall for temptation'

'Your friends are the most important thing in your life.'

P	Point	First and foremost… additionally…	What final judgements can we make? Do you agree with the questions? Why? Why not? IS there a definitive answer? Why? Why not?
E	Example / Evidence	As is shown by Quote….	What a the causes/consequences? Are any positives/negatives? What are the criticism? What are the differences within Christianity / Islam? What are the differences between Christianity / Islam?
E	Explanation	This means …	Are there any similarities between the teachings / religions / your arguments? What are the main differences / contrasts?
D	Development	Furthermore… Quote…. Which highlights / shows/ exemplifies…	Link all paragraphs to the questions. How does your evidence answer the question?
Must include		**Optional**	Use key teachings and quotes
Specify religious believers as Christians and / or other religion Religious beliefs and quotes/teachings in PEED Different viewpoints from within **or** between religions		Non religious beliefs in PEED Your general opinion on the question Include views that differ both within **and** between religions	Use keywords Use Key content


MUSICAL ELEMENTS
PITCH
How high or low a note sounds
high
low
ascending
getting higher
descending
getting lower
scale
a set of tuned notes
pentatonic
a 5-note scale
DYNAMICS
Volume of sounds
loud
quiet
crescendo
getting louder
diminuendo
getting quieter
SILENCE
No sound
shh!
TIMBRE
Different types of sounds – tone colour
vocal
body percussion
tuned
untuned
instrumental
environmental
electric
STRUCTURE
Organisation of sounds – form
verse/chorus
round
'London's Burning'
12 bar blues
question & answer
call & response
ostinato – repeating pattern
beginning/middle/end
ABA – ternary form
same at the beginning and end
ABACA – rondo form
first section keeps coming back
TEXTURE
Combination of sounds
solo
accompaniment
vocal
instrumental
ensemble
polyphonic
combinations of melodies (tunes)
polyrhythmic
combinations of rhythms
chords
groups of notes sounding together
TEMPO
Different speeds
fast
slow
accelerando
getting faster
rallentando
getting slower
DURATION
Lengths of sounds/silences
long
short
steady pulse
steady beat
rhythms and word rhythms
spi-der spi-der
bee
shh!

KEY VOCABULARY - ITALIAN TERMS - ELEMENTS OF MUSIC

TONALITY - RELATIONSHIP BETWEEN NOTES, CHORDS AND KEYS

Major- *cheerful, bright, joyful sounding*
Minor- *serious, sad or dark sounding*
Modal - *various fixes orders of the various notes in an octave*
Atonal- *music that lacks a tonal centre*

STRUCTURE - THE WAY A PIECE IS BUILT UP

Binary form A B - *musical form in 2 different but related sections eg Empire Ants by Gorillaz and Greensleeves by Henry VIII*
Ternary form A B A - *musical form in 3 sections, the 3rd section being a repeat of the first eg Twinkle Twinkle Little Star by Mozart and Minuet in G by Beethoven.*
Rondo form A B A C A - *musical form with a recurring leading theme eg Every Breath you take by The Police and Fur Elise by Beethoven*
Verse-chorus form - *song writing structure built around 2 repeating sections, a verse and a chorus.eg Chasing Cars by Snow Patrol eg La Donna E Mobile from Rigoletto by Verdi*
Strophic form AAA - *a song structure form where all verses are sung to the same music.eg Amazing Grace. by John Newton and Silent Night by Gruber*
Through Composed - *different music for each verse/stanza of the lyrics.eg. Bohemian Rhapsody by Queen and The Erl-King by Schubert*

MELODY/PITCH - THE 'TUNE' HIGH AND LOW SOUNDS

Conjunct - *a melody that moves smoothly and in small tone or semitone steps*
Disjunct - *an angular melody with large leaps between notes*
Treble clef line notes- E G B D F - Every Green Bus Drives Fast
Treble clef space notes- F A C E
Bass clef line notes - G B D F A - Green Buses Drive Fast Always
Bass clef space notes - A C E G - All Cows Eat Grass

TEXTURE - LAYERS OF SOUNDS

Monophonic - *1 layer, 1 single melody*
Polyphonic - *2 or more different melodies played at the same time.*
Homophonic - *Several parts all moving at the same time*
Heterophonic - *1 melody, but different variations of it are being sung or played at the same time.*

WORD SETTING - HOW WORDS ARE SET TO MUSIC

Syllabic- *each syllable of a word is broken up and given to an individual note. One syllable, one note.*
Melisma- *a musical phrase of several notes sung to 1 syllable*
Vocables - *sequence of sounds or letters sung without meaning eg. Ooh, aah, lah,*

DYNAMICS - VOLUME

pp - *pianissimo - very quiet*
p - *piano - quiet*
mp - *mezzo piano moderately quiet*
mf - *mezzo forte - moderately loud*
f - *forte - loud*
ff - *fortissimo - very loud.*
< cresc -*crescendo -gradually get loud*
> dim -*diminuendo -gradually get quiet*

TEMPO - SPEED

Allegro - *fast*
Presto - *super fast*
Vivace - *lively*
Andante- *at a walking pace*
Allegretto - *quite fast*
Lento - *slowly*
Accel - accelerando - *gradually getting faster*
Rall - rallentando - *gradually getting slower*
Rit. - ritardando - *gradually getting slower*

HARMONY - SIMULTANEOUSLY BLENDING NOTES.

Chord - *a group of 3 or more notes played together at the same time.*
Triad - *3 notes vertically stacked in thirds and played at the same time*
Cadence - *the sequence of chords at the end of a musical phrase.*
Tonic - *1st note of a scale and tonal centre of a key-* **I**
Dominant - *5th note of a scale-* **V**
Subdominant - *4th note in a scale -* **IV**
Diatonic - *notes that belong to a key.*
Chromatic- *notes not in the scale of a key*
Atonal - *music with no tonal centre*
Dissonant - *harshness, clashing, jarring sounds*

INSTRUMENTS/TIMBRE/SONORITY.

Strings -*violin, viola, cello, double bass, harp.*
Woodwind-*flute,piccolo, oboe, cor anglais, clarinet,bass clarinet, saxophone, bassoon, double bassoon*
Brass - *trumpet, French horn, trombone tuba.*
Percussion - *hand held eg cowbell, tuned percussion eg glockenspiel, drums and 'kitchen sink' eg rattles,whistles*

RHYTHM - THE REGULAR PULSATION OF MUSIC

Time signature 4/4 - *a sign to indicate meter. The top number specifies how many beats in a bar and the bottom, which type of note value is to be given one beat.*
Compound Time - *each beat In a bar is divided into 3 equal, shorter beats*
Simple Time - *4/4 or 3/4 or 2/4 or 2/2*
Syncopation - *where the strong emphasis in the rhythm falls on a normally weak beat.*
Cross Rhythms - *two rhythms with different emphases played at the same time.*
Triplet - *3 notes played in the time of 2.*

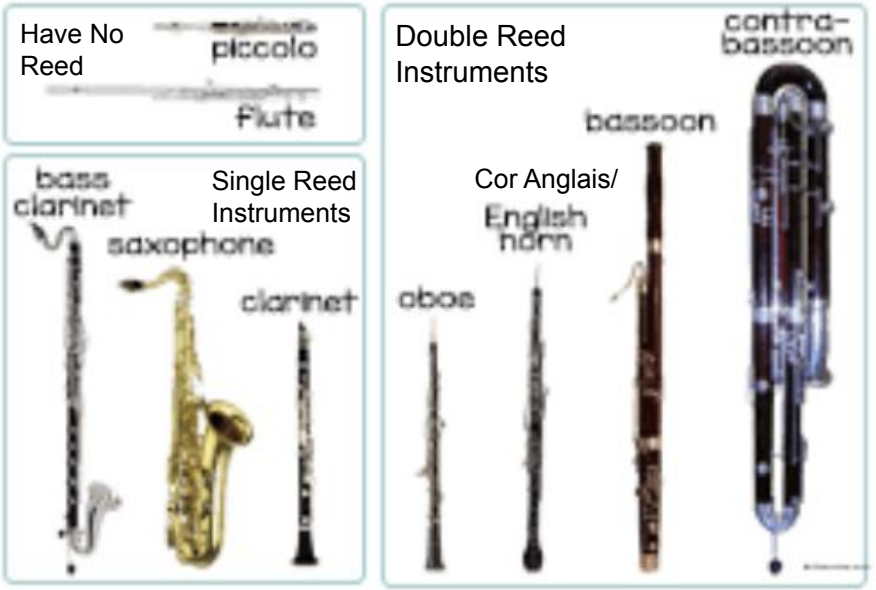
DURATION
Note Values

Note	Name	Beats	Rest	Note	Name	Beats	Rest
𝅝	Semibreve	4	𝄻	𝅝.	Dotted Semibreve	6	𝄻.
𝅗𝅥	Minim	2	𝄼	𝅗𝅥.	Dotted Minim	3	𝄼.
♩	Crotchet	1	𝄽	♩.	Dotted Crotchet	$1\frac{1}{2}$	𝄽.
♪	Quaver	$\frac{1}{2}$	𝄾	♪.	Dotted Quaver	$\frac{3}{4}$	𝄾.
𝅘𝅥𝅯	Semiquaver	$\frac{1}{4}$	𝄿	𝅘𝅥𝅯.	Dotted Semiquaver	$\frac{3}{8}$	𝄿.

STRING FAMILY

BRASS FAMILY

WOODWIND FAMILY



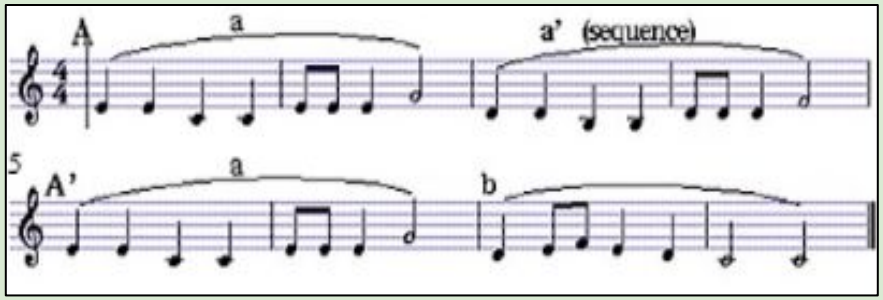
PERCUSSION FAMILY

Hand held untuned Percussion

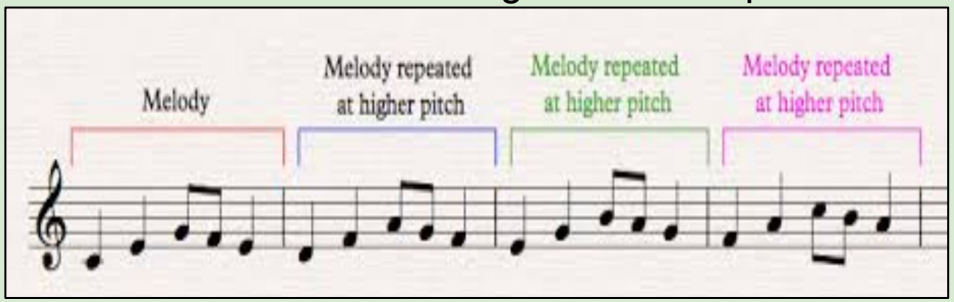
Tuned Percussion

MELODIC WRITING DEVICES

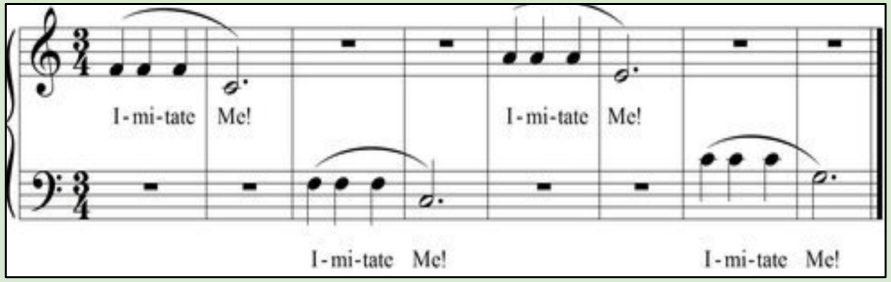
REPETITION
Repeating something already written down.



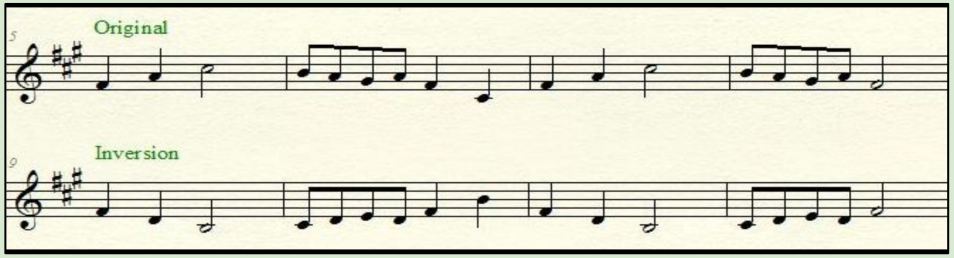
SEQUENCE
A short motif restated at a higher or lower pitch.



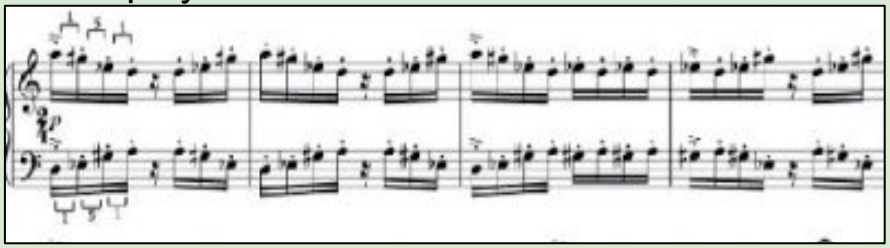
IMITATION
A melody is repeated in a different voice.



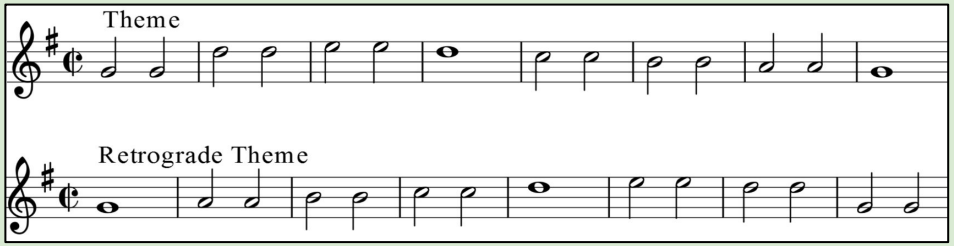
INVERSION
Turning a melody upside down.



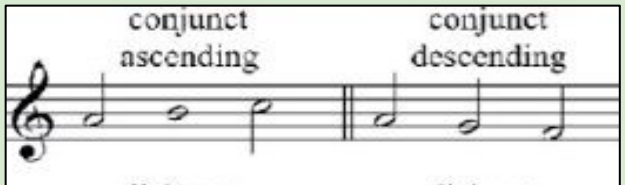
MIRROR
Music played first forwards then backwards.



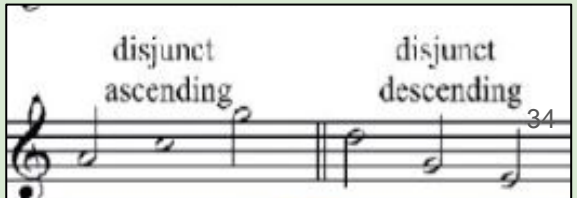
RETROGRADE
Playing the melody backwards.



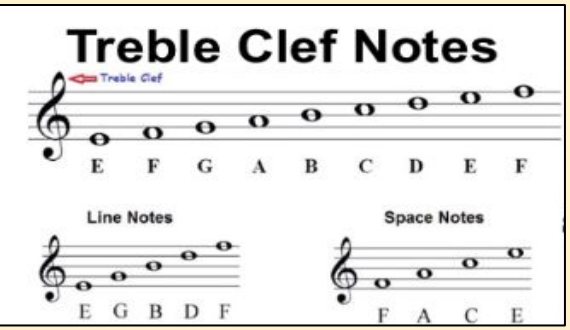
CONJUNCT
A stepwise melody



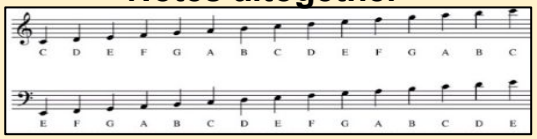
DISJUNCT
Disjointed melody. Gaps between the notes.

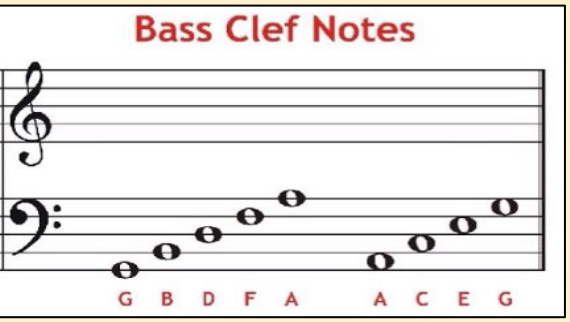


Reading Music

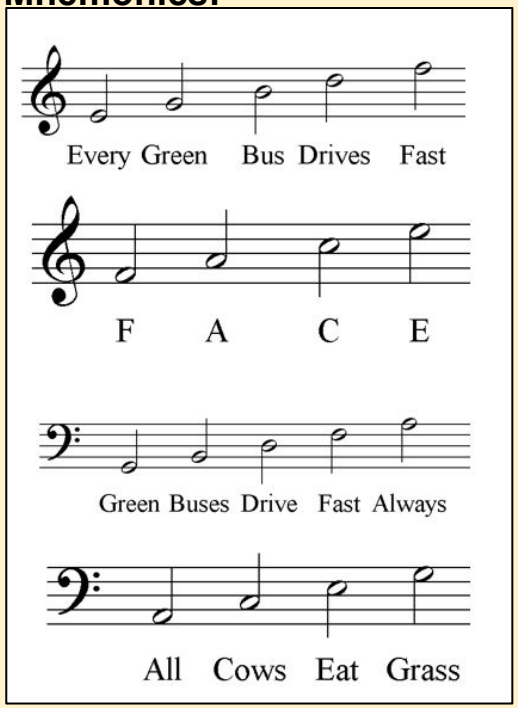


Notes altogether

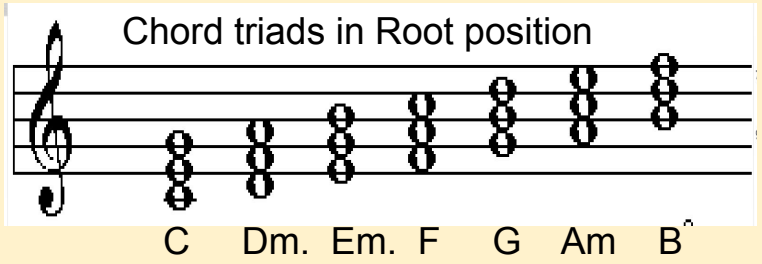




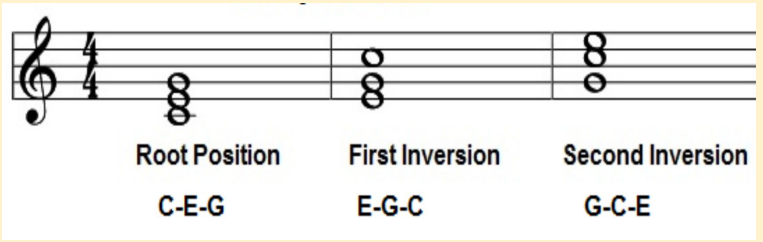
Mnemonics:



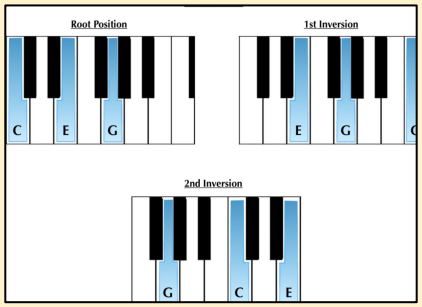
Root Chords and their Inversions



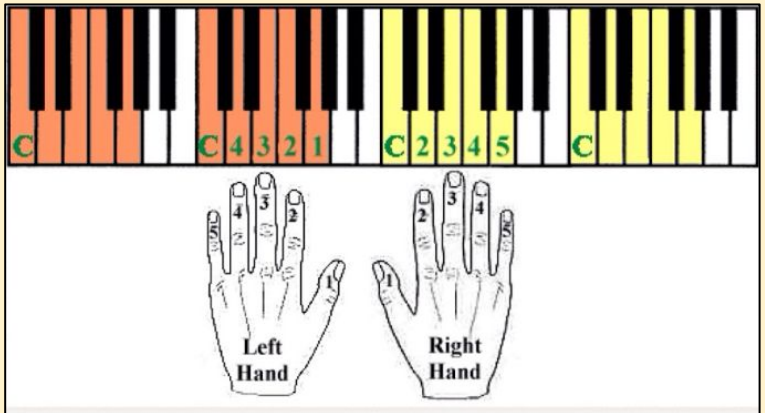
C major chord and its inversions.

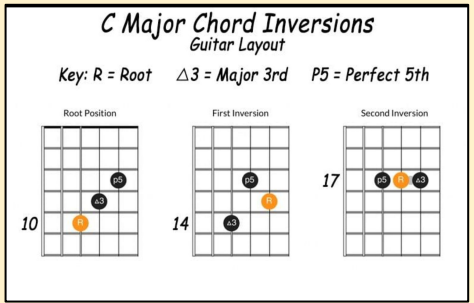


C major chords and its inversions



Finger Numbers - Hands on - How to play the keyboard.

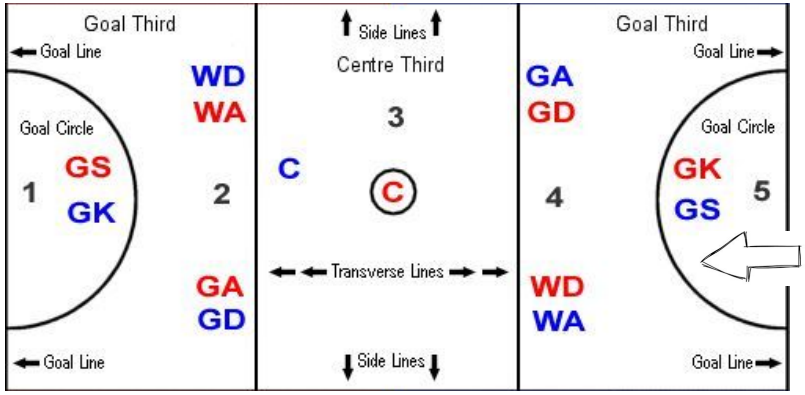




Year 7 PE - Netball

KEY TERMS

Court – The area netball is played on.
Goal Third – The 2 areas of the court including the shooting circle.
Centre Third – The area in the middle including the centre circle.
Umpire – The name of the person who officiates the match.
Other areas of the court: back line, side line, centre circle, shooting semi-circle.
Intercept / Interception – Gaining the ball by getting in between a pass from the opposing team.
Possession – Keeping the ball.



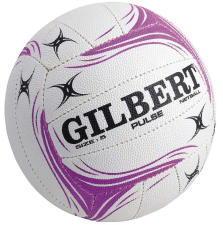
A netball match lasts for 4 x 15 minute quarters= 1 hour

POSITIONS – BLUE TEAM

How many players on 1 team?
Where can they go?

Defence:	Attack:
GK – 1 & 2	GS – 4 & 5
GD – 1, 2 & 3	GA – 3, 4 & 5
WD – 2 & 3	WA – 3 & 4
C – 2, 3 & 4	

Which areas can the RED team go into?

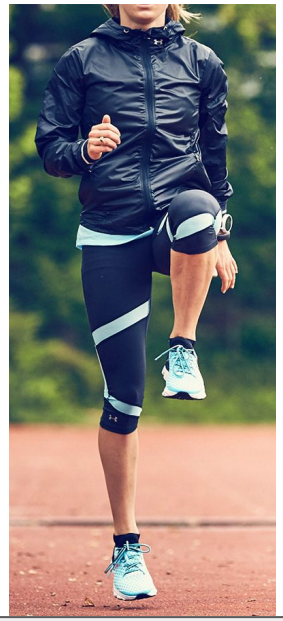


SKILLS IN ISOLATION

Passing – chest, shoulder, bounce.
Handling – Ball control.
Catching – 1 and 2 handed.
Footwork – landings, pivot.
Evasion – holding space, dodging.
Shooting – 1 or 2 handed.
Defending – stage 1 man to man, stage 2 defend the pass.

HOW TO WARM UP FOR NETBALL AND OTHER SPORTS

A good warm up must consist of 3 parts;
1 – **Pulse raising** activity e.g. jogging
2 – **Stretches** (dynamic and static)
3 – **Skills practice** e.g. passing



RULES AND REGULATIONS

Rules resulting in a FREE PASS (Involves 1 player):

FOOTWORK – A player must not move their landing foot before passing the ball.
OFFSIDE – A player must stay in their playing area. See diagram above.
HELD BALL - The ball can only be held for 3 seconds by a player.
REPLAYING – A player must not bounce the ball to themselves when playing.

Rules resulting in a PENALTY PASS (Involves 2 players):

CONTACT – A player must not touch another player whilst on court.
OBSTRUCTION – Any player must stand 1 meter away from the player with the ball.

★ Which players can shoot in netball?
★ Which components of fitness do you need for netball?

Year 7 PE - Football

KEY TERMS

Possession	Throw in	Penalty
Jockeying	Corner	Offside
Distribution	Free kick	
Tactics	Under pressure	

POSITIONS

Goalkeeper – the player who can use their hands and is the last line of defence to stop the ball entering the goal.

Defenders – players who have the main responsibility to stop the opposition from scoring. They also start the attacks.

Midfielders – lie between the defence and the attack. Responsible for stopping oppositions reaching the defence and providing the attackers with opportunities to score.

Strikers – responsible for scoring and setting up goals.

SKILLS IN ISOLATION

Passing	Tackling
Dribbling	Heading
Running with the ball	
Volleying	Control

CONDUCTING A WARM UP

Phase 1: Pulse raiser – jogging, high knees, heel flicks, jockeying

Phase 2: Stretches – static and dynamic

Phase 3: Skill related – passing, dribbling, heading etc..

RULES AND REGULATIONS

- Game is started by a kick off in the centre of the pitch.
- In a full sided game each team consists of 11 players.
- If the ball goes off the side of the pitch it is a throw in to the team that didn't touch the ball last.
- If the ball goes off the end of the pitch it is a corner or a goal kick depending who the ball touched last.
- Depending on where the incident takes place, a free kick or a penalty is awarded if the player in possession of the ball is illegally infringed.
- The goalkeeper is the only player allowed to touch the ball with their hands and can only do this inside their 18 yard box.
- To score a goal, the ball must cross the opposition's goal line.
- If a player is past the opponent's last defender and in the opposition half when the ball is passed they are offside and a free kick is awarded to the opposition team.

★ What components of fitness do you need for football?
★ What are the 3 parts of a warm up called? Could you demonstrate in lesson.

Reading Skills and Literacy

Key Vocabulary when discussing a book

Blurb	A short description of a book, usually found on the back cover.
Narrator	A character who recounts the events of a novel.
Subgenre	This is then the style or type of literature within one of the above genres. For example, Horror Fiction is a subgenre of fiction intended to scare the reader.
Protagonist	The main character, or one of the major characters in a novel.
Plot Twist	An unexpected turn of events in a story.
Hook	The opening of a story that grabs the reader's attention and 'hooks' them in.
Recommend	To suggest that a book would be good or suitable for a particular person.
Deduce	What you can understand based on the evidence in the text.
Predict	Based on what has already happened, making assumptions about what will happen next.
Empathise	To put yourself in the shoes of a character and understand how they feel.

Questions to become an active reader...

Which sentences could help you to sum up the entire passage?

What do you think is going to happen next?

What did you think about as you read?

What else do you know about the topic?

What questions do you have about the book?

Which words do you not know or understand?

What clues from the passage help you to remember what has already happened?

How could you describe what you have just read to someone else?

ABC Sentence Starters

ADD: To add a new idea to what someone else has been saying:

- I would like to add to this…
- I would have to agree with you because…
- We might also consider…
- We might also consider…

BUILD: To build on what someone else has been saying:

- This could be developed by considering…
- This links to...because…
- Building onto this…
- Taking this one step forward…

CHALLENGE: To challenge someone's ideas and offer the opposite viewpoint:

- I would challenge this idea because…
- From another perspective you might argue that…
- Although I can see why ___ thinks… I disagree because…
- On the other hand this idea could be challenged because…

Acceleration through depth...

English

- Research the writer's context and explain the links between this and the writer's purpose.
- Can you make links between this text and another text you have studied?
- Can you change any words in your writing today using your knowledge organiser?
- Turn the text, or its key ideas, into another form (poem, article, letter, speech, short story, etc)

Science:

- **Content:** Using the topics you have studied so far in science, can you make any links? What understanding from other topics do you need to have for the topic you are studying now? Can you do this across biology, chemistry and physics?
- **Context:** Looking at what you have been covering during the topic you have been covering, can you put the science into a real life context? When would what you understand be important to someone's life? Can you link it to any careers and jobs?
- **Practical skills:** Look at a set of data you have collected in a recent practical. Describe and explain the trend in your data in as much detail as you can. How could you make your data more repeatable and reproducible? Can you find any errors, systematic or random? How could you reduce the error? Is your data accurate and valid? How could you make the data more accurate and improve the validity.

PE:

- What components of fitness apply to the sport/s you play?

Maths:

- Please go to the NRICH postcards and select a problem to solve.

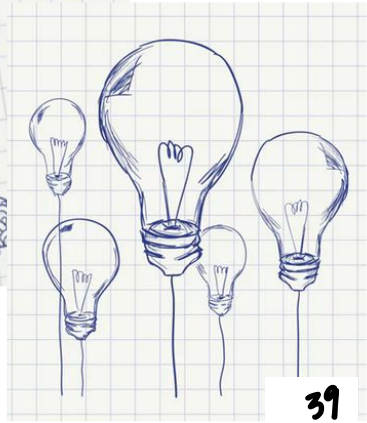
Geography

- The answer is Geography. What are 5 possible questions?
- How do you think Geography in school will change over the next 10 years with the development of new technology?
- List words associated with geography (A-Z)

MFL:

Research how to form the present tense in French either by using the link https://youtu.be/p1RfmaoYZFI or asking your teacher for a grammar sheet.

- Create a help sheet for other students to explain the rules with step by step instructions.
- Design a worksheet with an answer sheet which can be used in other French classes.



History:

- Strengthen your evidence; read through your work, can you swap any words for key terms.
- What parallels are there between this topic and what you have previously studied?
- Outline an idea of how could you teach this topic in a different way to either younger, peers or older students?
- Identify how this topic links to any British Values:

Democracy.
Individual liberty
Mutual respect
Tolerance of those of different faiths & beliefs.

ICT:

- Learning programming is about trial and error, experimenting and trying different projects of your own. Try a project of your own or use one of the websites below to give you some inspiration. Attempt to put into practice the techniques learnt in your Computer Science lesson and extend what you can do by using online resources, there are loads available if you carry out a quick Google search.

Small Basic https://bit.ly/2Pywsrc

Art/Design

- Explore the work of an artist or designer linked to the Art or Design movement on your KO page by producing a mini artist study. (Visit **the Tate** website)
- Investigate 3 different art, modelling or textile techniques. How could you apply these to an end piece?
- Create your own project for a class to study using the current theme of your work.
- Visit **the Tate** website and complete one of the activities they've created.

Music:

- Demonstrate and improve your depth of knowledge and understanding by reading through your written work and swapping normal words for more technical ' musical' words and Italian terms.
- In ' listening library' tasks - extra to the written criteria requested - try and direct your listening to as many of the other different elements of music as well, and include comments and information about them also. Again use Italian terms where possible.

ME:

- Include two quotations from scripture in your answer.
- Create 5 questions that your teacher might ask you about what you have learnt about today.
- Transform today's learning outcomes into questions.
- Select 5 key terms that you have used in your work today.
- Create a sentence using all of these terms.
- Based on what you have learnt today, what do you think that you should study next lesson and why?
- Produce a summary of what you have learnt today. When done, reduce it to either a single sentence of three bullet points

Drama:

- Discuss and Write the Changes that you would have made to your performance piece, if you could create and perform this again. (Write about the Drama Skills and Techniques used in performance)
- Discuss and Write the audience response and effect to your performance piece. How did they feel? What feedback did they give? Did your story, characters, intention for your piece come through to them?
- After performing your piece and if you could chose a different Performance Space, what would it be? Describe the performance space, what viewpoints would your audience have? How would a relationship between the actor and audience be created?

Year 7 Block 3

FRACTIONS

The division of one integer by another.

+/- Mixed Numbers $3\frac{2}{5} + 1\frac{4}{7}$

Change to improper/top heavy fractions

$$3\frac{2}{5} + 1\frac{4}{7} = \frac{17}{5} + \frac{11}{7}$$

Mixed Number to Improper Fraction

$$2\frac{3}{4} = \frac{(4 \times 2)+3}{4} = \frac{11}{4}$$

start here

Multiply the whole number by denominator
Add this to the numerator

RECIPROCAL

The reciprocal of a number is a fraction flipped over

Fraction → Reciprocal

$\frac{2}{3} \rightarrow \frac{3}{2}$

$5 = \frac{5}{1} \rightarrow \frac{1}{5}$

ADDING / SUBTRACTING FRACTIONS

Denominators MUST be the same!
If they are just add or subtract the numerators

$\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$

If denominators are **different** - you must find an equivalent fraction!

$\frac{2}{15} + \frac{3}{5} = ?$

$\frac{2}{15} + \frac{3 \times 3}{5 \times 3}$

$\frac{2}{15} + \frac{9}{15} = \frac{2+9}{15} = \frac{11}{15}$

Same

Top Tip

Just multiply each side by the opposite side's denominator

$\frac{3 \times 7}{3 \times 9} - \frac{2 \times 9}{3 \times 9}$

$\frac{21}{27} - \frac{18}{27} = \frac{3}{27}$

When **COMPARING** fractions, the denominator MUST be the same!

$\frac{3}{5}$ ← numerator
denominator

FRACTIONS

$\frac{1}{5}$ **Proper Fraction** — Numerator smaller than denominator

$\frac{6}{2}$ **ImProper Fraction** — Numerator greater than denominator

$2\frac{1}{2}$ **Mixed fraction** — Whole number and fraction together

SIMPLIFYING FRACTIONS

Divide the numerator and denominator by a common factor

$$\frac{32 \div 2}{40 \div 2} = \frac{16 \div 2}{20 \div 2} = \frac{8 \div 2}{10 \div 2} = \frac{4}{5}$$

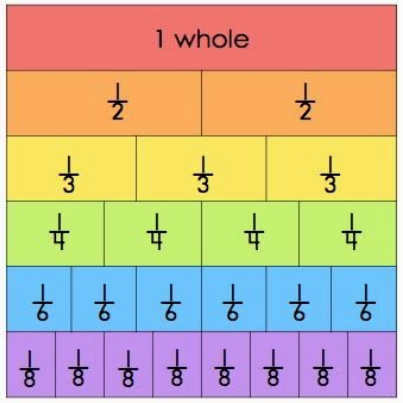
You know when the fraction is in its simplest form when you can no longer find a common factor

Only common factor is1!

EQUIVALENT FRACTIONS

Fractions which represent the **same value**.
To find an equivalent fraction multiply or divide the numerator and denominator by the same number

$\frac{1}{3} \overset{\times 2}{=} \frac{2}{6} \overset{\times 2}{=} \frac{4}{12} \overset{\times 2}{=} \frac{8}{24} \overset{\times 2}{=} \frac{16}{48}$



Dividing Fractions

K- Keep the 1st fraction
F- Flip the 2nd fraction
C -Change ➗ to ✖

$\frac{1}{3} \div \frac{2}{5} = \frac{1}{3} \times \frac{5}{2} = \frac{5}{6}$

Dividing Fractions is as easy as pie, Flip the 2nd fraction and multiply!

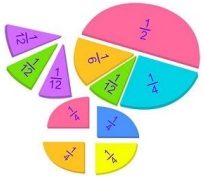
Multiplying Fractions

Not a problem: top x top & bottom x bottom!

Multiply the numerators

$\frac{3}{4} \times \frac{1}{2} = \frac{3 \times 1}{4 \times 2} = \frac{3}{8}$

Multiply the denominators



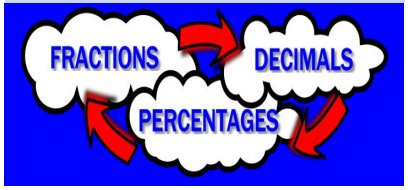
An **integer** is a whole number (not a fraction) that can be positive, negative, or zero.

Unit Fraction

A fraction where the **numerator** is **one** and the denominator is a positive integer.

$\frac{1}{5}$

Year 7 Block 3



Percent
= out of 100!
(per = divide
cent = 100)

Converting Fractions / Decimals/Percentages

Fraction	Decimal	Percent
$\frac{3}{4}$	0.75	75%

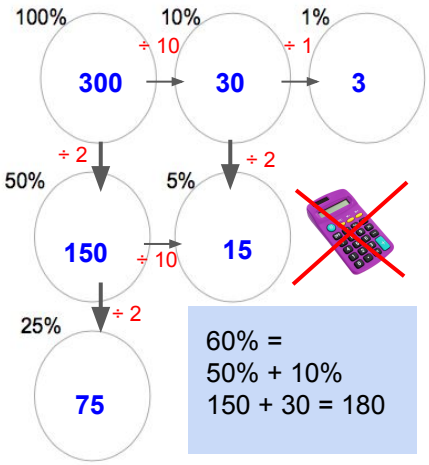
Fraction → Decimal: Divide numerator by denominator (3 ÷ 4 = 0.75)

Decimal → Fraction: 75 is numerator; use place value of last digit as denominator 75/100 Simplify

Decimal → Percent: Multiply by 100 (0.75 x 100 = 75%)

Percent → Decimal: Divide by 100 (75 ÷100 = 0.75)

Percentage Bubbles help you to work out any percentage



60% =
50% + 10%
150 + 30 = 180

Percentage Increase /Decrease

Increase	Decrease
Increase 140 by 12%	Decrease 140 by 12%
Find 12% of 140	Find 12% of 140
12% 0f 140 is 21 140 is 21	12% 0f
Add it to the original value	Subtract from original value
140+21=161	140-21=119

Express one value as a percentage of another

What is 35 as a percentage of 900?

1.
Divide the first value by the total value
35 ÷900 $\frac{35}{900}$

2.
Multiply by 100 (per cent)

$\frac{35}{900}$ X 100 = 3.9% (to 1 decimal place)

What is 12 as a percentage of 120?

$\frac{12}{120} = \frac{1}{10} \times 100 = 10\%$ (simplify)

Learn these Fractions Decimals & %

$\frac{3}{4}$ =	0.75 75%
$\frac{1}{3}$ =	0.33̇ 33.3%
$\frac{1}{4}$ =	0.25 25%
$\frac{1}{5}$ =	0.2 20%
$\frac{1}{8}$ =	0.125 12.5%

Percent - Calculator

Convert your percentage to a decimal to get a multiplier

12% of 630
12 ÷ 100 = 0.12
Multiply by this decimal
630 x 0.12 = 75.6

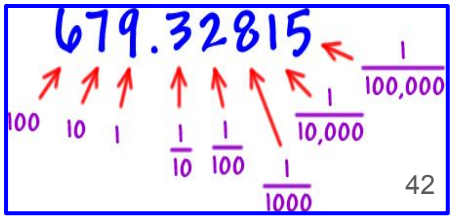
Fraction of an Amount

Multiply by the **numerator**
Divide by the **denominator**

Find $\frac{2}{5}$ of £60 ← of = multiply

$\frac{2 \times 60}{5}$ ← divide

Decimal Place Value



Y7 Block 4 Grammar of Algebra

Algebra Definition

Algebra is the mathematics of unknown numbers.
It uses letters in place of an unknown number.
Each different letter used means it is representing a different value /number..

$x + 3 = 7$

x is used in place of a number you don't know - a variable

VARIABLE
A letter to represent a number you don't yet know

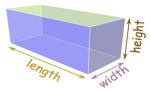
Subject of an equation

Single letter on one side of = sign
s = 10t+4

s is the subject!

What is a Formula?

A fact or rule that uses mathematical symbols / letters
It will usually have:
An equals sign =



volume = length x width x height
v = l x w x h

Rules of Algebra

- ★ Don't write a x sign for multiplying - just leave it out - you don't want to confuse it with x
- ★ Combined letters should be written alphabetically
- ★ Don't use a ÷ sign, use a fraction dividing line instead
- ★ Always write numbers before letters

5a not 5 × a

ab not *ba*

not $x \div 2$ but $\frac{x}{2}$

$2xy$ not $yx2$

Expanding single brackets

To expand a single bracket, multiply whatever is inside the bracket by the number outside.

Here is x + 2:

x	1 | 1

3(x + 2) means 3 lots of x + 2 and would look like this:

x	1 | 1
x	1 | 1
x	1 | 1

Altogether this is 3x + 6.
Algebraically, we would write:
3(x + 2) = 3x + 6.

We have multiplied each term inside the bracket by 3.

$4(x + 3) = 4x + 12$ (4 × x = 4x, 4 × 3 = 12)

$5(2x + 4) = 10x + 20$ (5 × 2x = 10x, 5 × 4 = 20)

Watch out!
Be really careful with negatives!

$3(x - 3) = 3x - 9$

$-3(x - 4) = -3x + 12$

Remember -x - = +

$1x = x$
No need to write the 1!

Writing a Formula

Joe works at a car wash on Sundays.
He is paid a basic wage of £10 and a bonus of £3 for each car washed.

w = wage
n = number of cars washed
10 = basic wage
Formula:

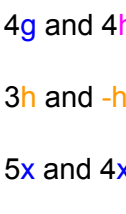
$w = 3n + 10$

(wage= £3x number cars + £10)

NOTE:

2a = a+a
3a = a+a+a
BUT:

$a^2 = a \times a$,
$a^3 = a \times a \times a$
$a^2b = a \times a \times b$



An **expression** is part of a sum without the = sign
terms are each part of the sum

Collect like terms

$4a + 5 + 2a - 3$

$= 6a + 2$

Collect all the terms with the same letters into one group and all numbers into another group and simplify

Are They Like Terms ?

4g and 4h NO - letter variables are different

3h and -h YES - letters the same(-h = -1h)

5x and 4xy NO- letter variables are different

$2a^2b^3$ and $2a^2b^5$ NO - b powers are different

$5p^2q^3$ and $-4p^2q^3$ YES - letters & powers same

Substitution

You can substitute (replace) a value into an expression (or formula) to find its value

If a = 12
$4a + a^2 = x$
$4 \times 12 + 12^2 = 48 + 144$
$x = 192$