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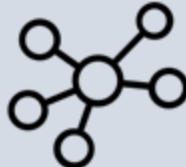




**MARTIN**  
HIGH SCHOOL  
Lionheart Educational Trust

# Knowledge Organiser Booklet

Year 8  
Spring Term

# Ways to use your knowledge organiser

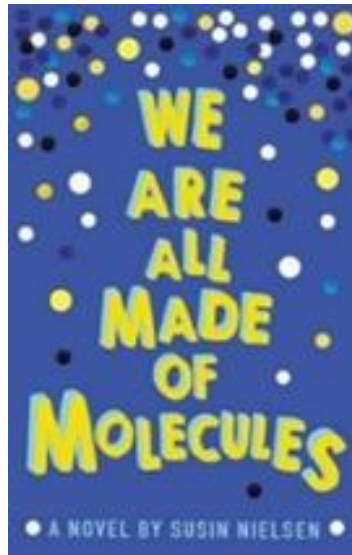
	Look, Cover, Write, Check	Self Quizzing	Mind Maps	Paired Retrieval	Definitions to Key Words
Step 1	<p>Look at and study a specific area of your knowledge organizer.</p> 	<p>Use your knowledge organizer to create a mini quiz. Write down questions using your knowledge organizer.</p> 	<p>Create a mind map with information from your knowledge organiser.</p> 	<p>Like self quizzing, use your knowledge organizer to create a quiz.</p> 	<p>Write down the key words and definitions.</p> 
Step 2	<p>Cover or flip the knowledge organizer over and write down everything you remember.</p> 	<p>Cover or flip the knowledge organizer over and answer the questions and remember to use full sentences and key words/vocabulary.</p> 	<p>Add pictures to represent different facts, knowledge. Try to categorise different areas in different colours.</p> 	<p>Ask a family member to ask you the questions and tell you which ones you get right and which ones you get wrong.</p> 	<p>Try not to use your knowledge organiser to help you.</p> 
Step 3	<p>Check what you have written down. Correct any mistakes in a different coloured pen and add anything you missed. Repeat.</p> 	<p>Check your answers. Correct any mistakes in a different coloured pen and add anything you missed. Repeat.</p> 	<p>Try to make connections that link information together.</p> 	<p>Following the quiz, summarise which areas you got wrong and need to revise further.</p> 	<p>Use a different coloured pen to check you work and correct any mistakes you may have made.</p> 

# Lionheart Literary Canon: Curating a Lifelong Love of Literature

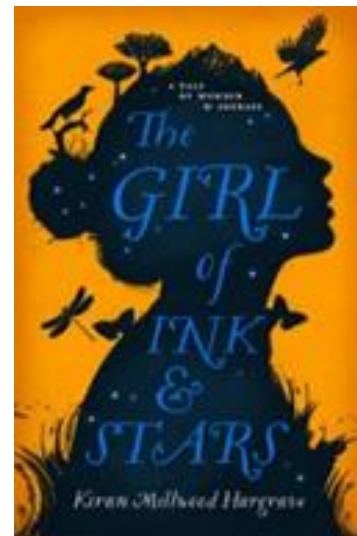
Recommended books to have read by the end of Year 8



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**We Are All Made  
Of Molecules**  
Susan Nielsen



**The Girl of the Ink  
and the Stars**  
Kiran Millwood  
Hargrave



**The Acrobats  
of Agra**  
Robin Scott-Elliot

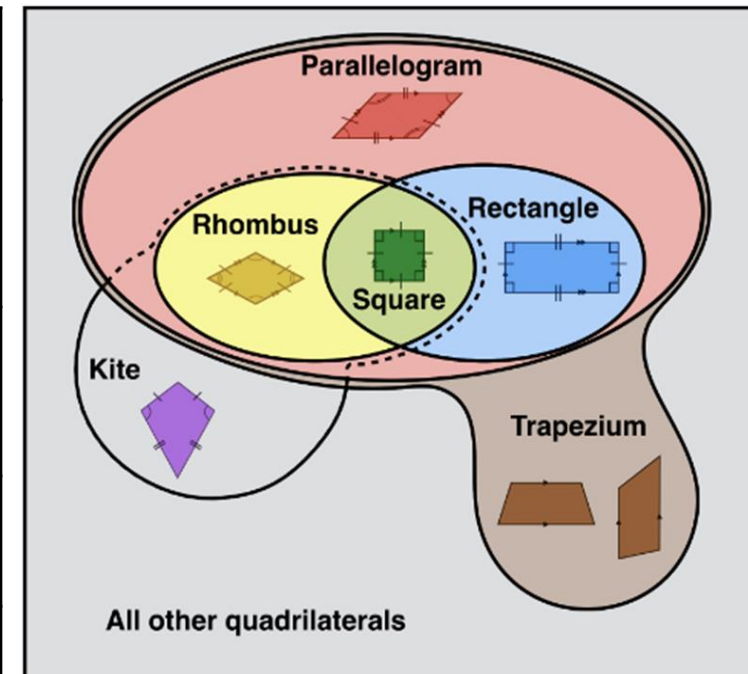


**The Curious Case of  
Karl Nova**  
Karl Nova

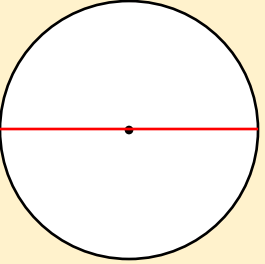
All books can be purchased online, or loaned from our library

<b>Side</b>	One of the line segments that make a flat (2-dimensional) shape.
<b>Angle</b>	The amount of turn between two lines around their common point (the vertex).
<b>Degrees</b>	A measure for angles. There are 360 degrees in a full rotation. The symbol for degrees is °
<b>Circle</b>	A 2-dimensional shape made by drawing a curve that is always the same distance from a centre.

<b>Quadrilateral</b>	A two dimensional shape with four straight sides and four angles which add up to 360 degrees.
<b>Parallelogram</b>	A quadrilateral with 4 straight sides where opposite sides are parallel and equal in length. Opposite angles are equal. NOTE: Squares, Rectangles and Rhombuses are all Parallelograms!
<b>Rhombus</b>	A quadrilateral with 4 straight sides that are all equal length. Also opposite sides are parallel and opposite angles are equal. It is a type of parallelogram.
<b>Kite</b>	A quadrilateral which has two pairs of adjacent sides (they meet), that are equal in length. The angles are equal where the pairs meet.
<b>Trapezium</b>	A quadrilateral that has at exactly one pair of parallel sides.

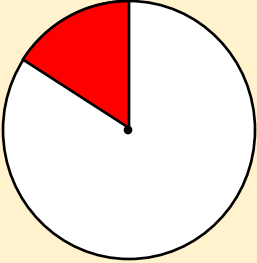


**Diameter**



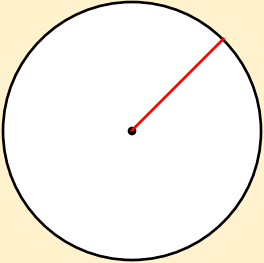
The distance from one point on the circumference **through the centre** to another point on the circumference.  
It is also the longest distance across the circle and twice the radius.

**Sector**



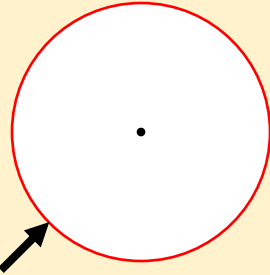
The region within a circle bounded by two radii and one of the arcs they cut off.  
The smaller of the two sectors is the minor sector and the larger one is the major sector.

**Radius**



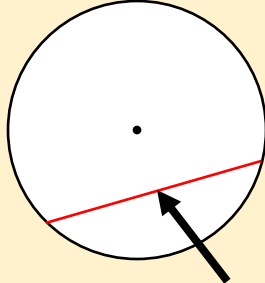
The distance from the centre to the **circumference** of a circle.  
It is half of the circle's diameter.

**Circumference**



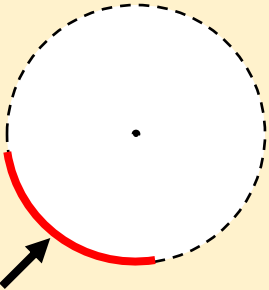
The distance around a circle (its perimeter).

**Chord**



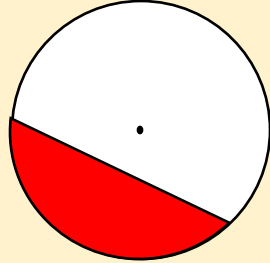
A straight line segment joining two points on a circle or other curve.

**Arc**



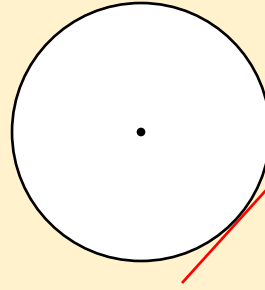
Part of the circumference of a circle or part of any curve.

**Segment**



The region bound by an arc and the chord joining its two end points.

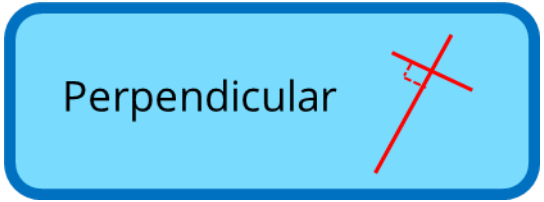
**Tangent**



A line that meets (touches) the circumference at one and only one point.

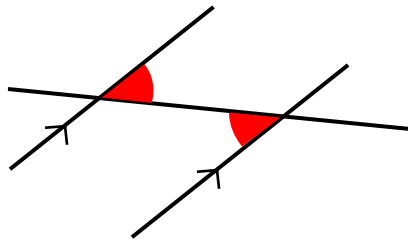
<b>Angle</b>	A measure of turn.
<b>Adjacent</b>	Lying next to each other.
<b>Adjacent angles</b>	Two angles that have a common side and a common vertex (corner point), and don't overlap.
<b>Adjacent sides</b>	Any two sides of a polygon with a common vertex (corner point).
<b>Point</b>	An exact location. It has no size, only position. Points usually have a name, often a letter like "A" or "B" etc.
<b>Vertically opposite angles</b>	The angles opposite each other when two lines cross. They are always equal. "Vertical" refers to the vertex (where they cross), NOT up/down.
<b>Supplementary angles</b>	Angles that sum to 180 degrees.
<b>Complementary angles</b>	Angles that sum to 90 degrees.

<b>Line</b>	A geometrical object that is straight, infinitely long and infinitely thin.
<b>Line segment</b>	The part of a line that connects two points.
<b>Ray</b>	A part of a line with a start point but no end point (it goes to infinity).
<b>Parallel</b>	Lines, curves and surfaces that are always the same distance apart and will never meet.
<b>Perpendicular</b>	At right angles to another line or plane (flat surface).
<b>Intersect</b>	To have a common point or points. For example: Two intersecting lines intersect at a point.

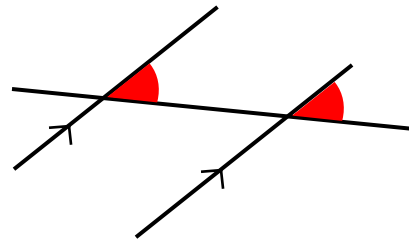


<b>Transversal line</b>	A line that crosses at least two other lines.
<b>Alternate angles</b>	Angles formed when a transversal crosses two or more parallel lines; the angles inside the parallel lines but on opposite sides of the transversal are alternate angles.
<b>Corresponding angles</b>	Angles that are in corresponding positions in relation to the parallel lines AND on the same side of the transversal line. When two angles are corresponding they are equal.
<b>Co-interior angles</b>	Co-interior angles both lie between two lines and on the same side of a transversal. <b>If</b> the two lines are parallel, then co-interior angles add to $180^\circ$ and so are supplementary. Co-interior angles can also be called 'Allied'

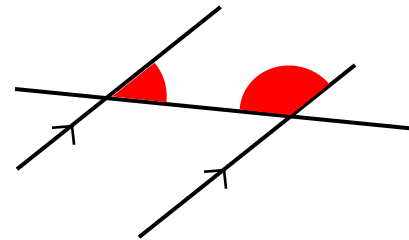
**Alternate Angles**



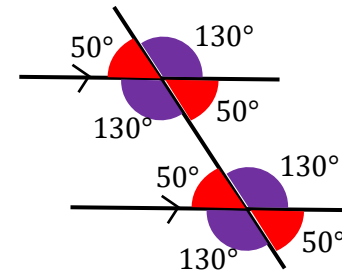
**Corresponding Angles**



**Co-interior Angles**



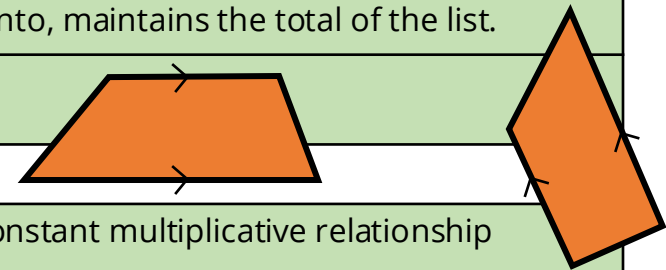
**Example**



<b>Metre</b>	The basic unit of length in the metric system.
<b>Centimetre</b>	One hundredth of a metre (about the width of a fingernail).
<b>Millimetre</b>	One thousandth of a metre (a tenth of a centimetre).
<b>Kilometre</b>	One thousand metres.
<b>Perimeter</b>	The distance around a two-dimensional shape.
<b>Polygon</b>	A closed two-dimensional shape with straight sides.
<b>Regular</b>	A polygon is <b>regular</b> if all the sides equal and angles are equal.

- 5 miles  $\approx$  8 km
- 40 inches  $\approx$  1 m
- 1 foot  $\approx$  30 cm
- 1 inch  $\approx$  2.5 cm
- 1 yard = 3 feet
- 1 foot = 12 inches

<b>Mean</b>	The single value that if all numbers in a list are changed into, maintains the total of the list.
<b>Trapezium</b>	A quadrilateral that has at least one pair of parallel sides.
<b>Proportion</b>	Two quantities are said to be in proportion if there is a constant multiplicative relationship between the two quantities.
<b>Ratio</b>	A part to part comparison.
<b>Fraction</b>	A part to whole comparison.



Basic Fraction, Decimal and Percentage Conversions:

$$\frac{1}{2} = 0.5 = 50\%$$

$$\frac{1}{3} = 0.\dot{3} = 33.\dot{3}\%$$

$$\frac{1}{4} = 0.25 = 25\%$$

$$\frac{1}{5} = 0.2 = 20\%$$

$$\frac{1}{10} = 0.1 = 10\%$$

$$\frac{1}{100} = 0.01 = 1\%$$

$$\frac{1}{8} = 0.125 = 12.5\%$$

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

**Definition of a short story:** 'A story which can be read in a single sitting.' The 19<sup>th</sup> Century was the golden age of the short story.

### Ghost/ Mystery Stories

Rooted in Gothic tales of horror but evolved to reflect the reality of the Victorian age. From mid C19th featured new inventions such as the railway or familiar places such as the pub. 'Penny dreadful' magazines with their stories of criminals reflected the rise in crime in society. Detective figures with great intellects and deductive minds became increasingly popular. Stories first appeared in monthly magazines, with Christmas issues and stories very popular.

### Science Fiction Stories

Scientists were making great discoveries and transforming the understanding of life on earth. Charles Darwin's theory of evolution and the discovery of radioactive power happened. These discoveries inspired writers to explore the implications of scientific progress in short stories. H. G. Wells popularised the genre with his instant bestseller 'The Time Machine' Narratives often explore the dangerous of humanity overreaching.

### Fantasy Stories

As a genre this looks back to the Anglo Saxon oral tradition (Beowulf) and to Shakespeare's comedies. Cautionary tales that include magical characters such as witches and fairies. Despite the fantastical content, these were dark narratives, not necessarily for children. Fantasy Stories are similar to fairy tales in that they show moral learning and growth. The Victorian search for adventure and exploration is reflected in these strange characters and settings.

### Realist Stories

Social upheaval caused by the industrial revolution transformed people's lives. New realities and hardships faced by people as a result of industry was reflected in fiction. Often centred around the poverty stricken streets of London and chronicled the rich/poor divide. The harsh realities of rural life and the plight of farm workers was also depicted. Depicted the fine line that existed between a seemingly respectable life and abject poverty.

### Social and Historical Context

- At the start of the 19<sup>th</sup> century there were only a handful of magazines specializing in prose fiction where authors of short stories could find an outlet for their work.
- Abolition of harsh taxes on publishing in the 1850s led to an explosion of literary magazines featuring all kinds of fiction.
- The Education Act of 1870 meant that all children had to attend school for a minimum of 5 years and led to rapidly increased literacy and a desire for reading as entertainment.
- The Industrial Revolution created such a change in the way people lived that writers felt compelled to depict the consequences of it on the ordinary working person, often as a vehicle for social change.
- The Age of Enlightenment and Victorian desire for exploration made writer's question the boundaries of our universe.
- Rising wages meant that families who had previously been unable to afford novels, could now purchase a weekly or monthly magazine to read together.
- By the end of the century more than 100,000 different newspapers and magazines were being published, giving the short story writer countless outlets for their work.
- Female writers (known as fin-de-siècle writers), responding to the beginnings of the women's liberation movement, embraced the short story as a form for presenting highly stylised depictions of sexual and gender oppression. Fin-de-siècle (turn of the century) reflected the mood of change they depicted.

### Narrative Methods

**Perspective/Voice** Who is telling the story? Is the narrator first person or third person? Are they intradiegetic (a character in the story) or extradiegetic (an uninvolved observer). Are they omniscient (all knowing) or inadequate (don't have all the facts.) Are they reliable (the audience can trust them to fairly relay events) or unreliable (they have a motive and an angle)?

**Structure** Is the story told chronologically (ie with a linear beginning, middle and end) or is it fragmented (may start in the middle or miss out sections). Is there a climax or a series of anti-climaxes? How does the story open/close? Is there a turning point where the mood changes? Is there lots of dialogue or is it mostly description?

**Language** Are there any patterns in the language use (repeated imagery or groups of words with the same meaning)?

### Notable 19<sup>th</sup> Century Short Stories (in chronological order)

- The Mortal Immortal** – Mary Shelley, 1833  
**The Tell-Tale Heart** – Edgar Allen Poe, 1843  
**A Terribly Strange Bed** – Wilkie Collins, 1852  
**The Signal Man** – Charles Dickens, 1866  
**A Tradition of Eighteen Hundred and Four** – Thomas Hardy, 1882  
**The Body Snatcher** – Robert Louis Stevenson, 1884  
**The Star Child** - Oscar Wilde, 1891  
**The Yellow Wallpaper** – Charlotte Perking Gilman, 1892  
**The Adventure of the Speckled Band** – Arthur Conan Doyle, 1892  
**Desiree's Baby** – Kate Chopin, 1893  
**The Star** – H. G. Wells, 1897  
**A White Night** – Charlotte Mew, 1903

Year 8 - 19<sup>th</sup> Century Short Stories Vocabulary Lists

gothic	untarnished	Napoleonic	agony
lonesome	obsequious	rustic	fulfilled
gloomy	decrepit	mirthful	sanctity
shudder	speculative	antiquity	incongruous
gesticulation	grave	venerable	formidable
treacherous	latent	relic	sublime
fiendish	affliction	immoral	repelled
malignant	pride	servility	spectral
celestial	prophecy	loathsome	catastrophe



# KS3 – Computing Systems



## KNOWLEDGE

## ORGANISER

Key vocabulary	
CPU	The central processing unit is computer hardware. It executes programs and manages all other hardware in the computer system.
Clock Speed	The number of instructions a processor can carry out each second
Cores	A processing unit found inside the CPU. Multiple programs can work in parallel to each other.
Fetch - Decode - Execute Cycle	The cycle used to fetch instructions from main memory, load relevant data, decode the instruction and fully execute the instruction repeats to complete a program.
Primary Memory	Memory used to store data and instructions that are required by the CPU.
RAM	Random Access Memory is volatile memory used to store data and instructions which are needed by the CPU. Also referred to as main memory.
Volatile Storage	which needs to have power to store data. If power is lost, data is lost.
Non - Volatile Storage	which does not lose its contents when the power is lost
Secondary Storage	A non-volatile storage medium which stores files and programs. Examples include the hard drive (HDD) and solid state drives (SSD).

CPU Performance	
Clock speed	How fast a processor processes instructions. Normally measured in Megahertz or Gigahertz.
Cache Size	The "size" of the cache is the amount of main memory data it can hold.
Number of cores	Determines how many tasks can be completed at the same time.
Types of Secondary Storage	
Magnetic devices	Magnetic disks are read and written to with a moving head inside the disk drive. They often contain moving parts and are susceptible to damage. Magnetic devices can be either internal or portable.
Solid State devices	SSD has no moving parts. It retains an electronic charge using logic gates. Examples include SD cards and USB memory sticks. Also referred to as flash storage.
Optical devices	Optical media includes CD, DVD and Blu-Ray disks. Lasers are used to read and write data to a disk. Data is stored on tracks around the disk as a series of pits which represent binary code.



Utility Software Vocabulary	
Encryption software	Encryption of data to prevent anyone from gaining unauthorised access to the system and reading the data.
Defragmentation	Reorganising files on the surface of a disk to create large areas of free space and eliminate unused fragments.
Lossy / lossless compression	Software to compress data to use less space in memory, or prepare for sending via the internet
Backup	A technique used to make copies of data in case of data loss or damage.

Operating system main tasks
Allow software to communicate with the hardware
To provide a user interface for the user
To manage the use of memory and the opening, closing, saving and deleting of files
To provide features that look after the security of the computer
To control peripherals (such as keyboards, mice, monitors, printers etc)

**KNOWLEDGE**

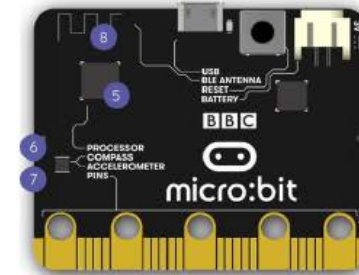
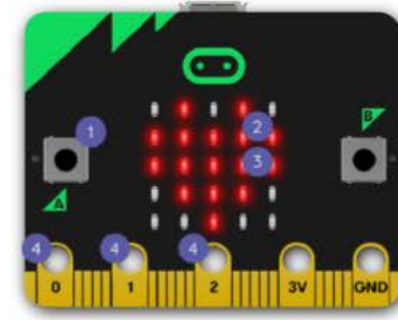


**KS3 - Microbits**

**ORGANISER**

Key Terms	
Micro:bit	An ARM-based embedded system designed by the BBC for use in computer education in the uk
LED	Light Emitting Diode. Allows you to display text, numbers and images.
Buttons	Allows you to detect when the two buttons (A) and (B) are pressed which can then trigger code on the device.
Pins	External connectors on the edge connector of the micro:bit.
Sequence	When we have instructions in our code ordered in the correct way to make a task work.
Selection	When our program chooses which lines of code to run based on a condition being true or false.
Iteration	When we want to repeat a section of code multiple times or until something happens.
Syntax Error	When you are not following the rules of the programming language.
Temperature sensor	Measures how warm the environment is
Compass	Finds magnetic north or measures the strength of magnetic fields
Accelerometer	Detects gestures and measures movements in 3 dimensions

- ① **Buttons: input**  
Capture user input to make things happen
- ② **LED display: output**  
Show pictures, words, and numbers
- ③ **Light sensor: input**  
Measure how much light is falling on the micro:bit
- ④ **GPIO pins: input and output**  
Connect headphones, sense touch, and add other electronics
- ⑤ **Temperature sensor: input**  
Measure how warm the environment is
- ⑥ **Compass: input**  
Find magnetic north or measure the strength of magnetic fields
- ⑦ **Accelerometer: input**  
Detect gestures and measure movement in 3 dimensions
- ⑧ **Radio: communication i/o**  
Communicate with micro:bits and other devices



# KNOWLEDGE

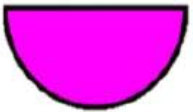
## KS3 – Vector Graphics

# ORGANISER

Keywords for Vector Graphics	
Vector Graphic	A computer made image that is made up of points, lines and curves based upon mathematical equations.
Raster Graphic	A detailed image created with pixels.
Pixel	A tiny square of colour.
Logo	A symbol that is used to represent an organisation or product.
Union	An operation used to combine two or more paths to create a single path.
Intersection	An operation use to create a single path from the overlapping portion of two paths.
Scalable	When an object or image is able to be made bigger or smaller.
Path	A line or a shape used to create vector graphics.
SVG	Scalable Vector Graphic



Six-cornered star  
Rounded corners  
Green fill  
Red dotted stroke



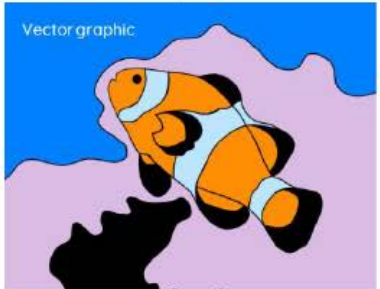
Arc  
Pink fill  
Black stroke



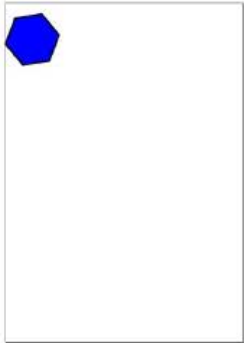
Three-cornered polygon  
Rounded corners  
Yellow fill  
Blue dashed stroke



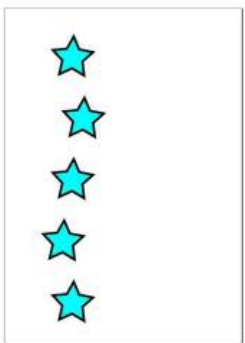
Vector	Raster
Made up with paths	Made up with pixels
Simple images	Detailed/complex images
Maintains image quality when scaled	Loses image quality when scaled
Used for logos, icons and illustrations	Used for real photos



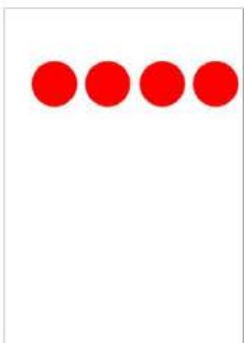
### Alignment



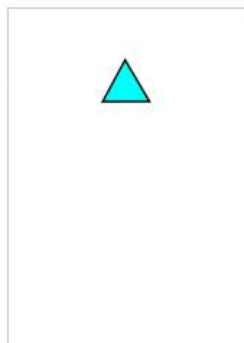
Align left edges to page



Distribute centres equidistantly vertically



Distribute centres equidistantly horizontally



Centre on vertical axis to page



#### Key vocabulary

conduction	Transfer of thermal energy by the vibration of particles.
convection	Transfer of thermal energy when particles in a heated fluid rise.
convection current	The movement of heated fluids where hot fluid moves upwards, and cold fluid moves downwards.
infrared radiation	Radiation given off by the Sun and other objects that brings about energy transfer.
radiation	The transfer of energy as a wave.
temperature	A measure of the motion and energy of particles.
thermal conductor	Material that allows heat to move quickly through it.
thermal energy store	The store containing energy due to the vibration or movement of particles of a substance.
thermal imaging camera	A camera that absorbs infrared and produces a (false colour) image.
thermal insulator	Material that only allows heat to travel slowly through it.
thermometer	Instrument used to measure temperature.
energy	Energy is needed to make things happen.
energy resource	Something with stored energy that can be released in a useful way.
fossil fuel	Non-renewable energy resources formed over millions of years from the remains of ancient plants or animals. Examples are coal, crude oil, and natural gas.
joule	The unit of energy, symbol J.
kilojoule	1 kilojoule = 1000 J, symbol kJ.
kilowatt	1 kilowatt = 1000 W, symbol kW.
kilowatt hour	The unit of energy used by electricity companies, symbol kWh.
non-renewable	An energy resource that cannot be replaced once used up and will run out, such as coal, oil, or gas.
power	How quickly energy is transferred by a device (watts).
renewable	An energy resource that can be replaced and will not run out. E.g. solar, wind, waves, geothermal, and biomass.
watt	The unit of power, symbol W.

#### Key facts

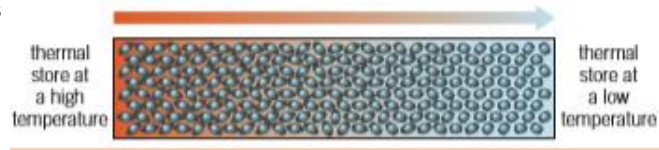
##### Energy and Temperature:

- The **temperature** of a substance is a measure of how hot or cold it is. Temperature is measured with a **thermometer**, it has the units of **degrees Celsius (°C)**
- The **thermal energy** of a substance depends on the individual energy of all of the particles, it is measured in **Joules (J)**

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

##### Energy and Particles:

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



#### Key facts

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



##### Radiation and Insulation:

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





## KNOWLEDGE ORGANISER PHYSICS: Advanced Energy

### Key facts

#### Food and Fuels:

- **Food** stores energy in the form of **Chemical energy store**
- Different foods contain different amounts of energy
- Different **activities** require different amounts of energy
- Different people need different amounts of energy depending on what they do each day

#### Energy Resources:

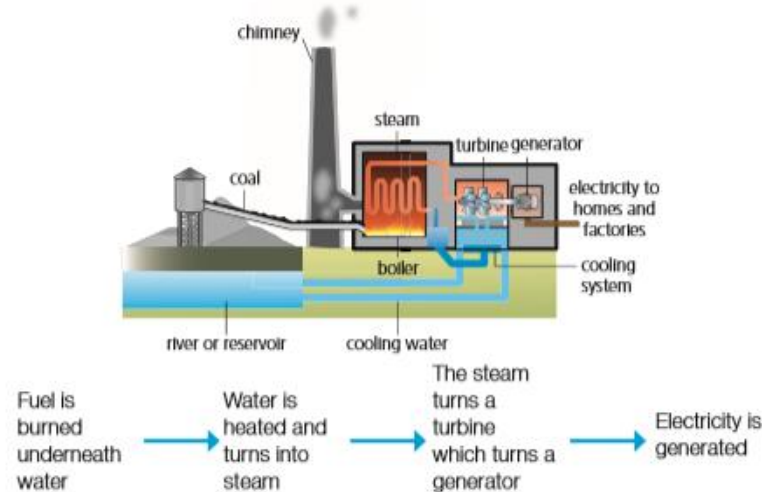
- **Non-renewable** energy cannot be replaced within your lifetime
- Non-renewable energy resources include **coal, oil, natural gas** and **nuclear resources**
- Coal, oil and natural gas are also known as **fossil fuels**, they release **carbon dioxide** when burned which contributes to **global warming**

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

### Key facts

#### Power Stations:

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



#### Energy and Power:

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

$$\text{Power(watts)} = \frac{\text{Energy (joules)}}{\text{Time (seconds)}} \quad P(W) = \frac{E (J)}{t (s)}$$

### Key facts

#### Electricity Costs:

- Energy can be calculated in **kilowatt-hours (kWh)**
- Electricity bills use the number of kWh used to decide the cost of the electricity we use.
- To work out the electricity costs we can use the following **equations**:

$$\text{energy in kWh} = \text{power in kW} \times \text{time in h}$$

$$\text{cost} = \text{number of kWh} \times \text{cost of a kWh}$$

#### Worked Examples:

##### Example 1 - Power calculation

Calculate power if energy transferred is 60J in 4s.

$$E = 60 \text{ J}, t = 4 \text{ s}$$

$$P = \frac{E}{t}$$

$$P = \frac{60}{4}$$

$$P = 15$$

$$P = 15 \text{ W}$$

##### Example 2 – Electricity Cost Calculation

You can calculate the cost of using appliances at home using the formula:

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

Suppose you use a 2.5kW oven for 2 hours. Each kWh costs 10p.

$$\begin{aligned} \text{cost} &= 2.5 \text{ kW} \times 2 \text{ hours} \times 10\text{p/kWh} \\ &= 50\text{p} \end{aligned}$$





### The elements of Group 1

Group 1 elements are also called the **alkali metals**, they are all metals, they are good conductors of heat and electricity and are shiny when they are freshly cut. As you go down the group the melting and boiling points decrease. All group 1 metals have low densities.

Chemical properties describe how substances react with other substances. The group 1 elements are very reactive. All group 1 elements have exciting reactions with water. The reactions produce hydrogen gas. The gas moves the reacting metal around the surface of the water. The reactions also make alkaline solutions, so the universal indicator turns purple. An example of a reaction is:

Lithium + water  $\rightarrow$  lithium hydroxide + hydrogen

There is a pattern in the reactions. The reactions get more vigorous as you go down the group.

### The elements of Group 7

The Group 7 elements are called the **halogens**. The halogens have low melting points and they do not conduct electricity. The melting and boiling points increase as you go down group 7. This is why fluorine and chlorine are gases, bromine is a liquid and iodine is a solid. The colour of the elements also get darker as you go down the group. Group 7 elements all react with iron: **Iron + chlorine  $\rightarrow$  iron chloride**. The reactions get less vigorous as you go down group 7 so fluorine is the most reactive and astatine is the least reactive.

Group 7 elements also undergo displacement reactions. A more reactive halogen will displace a less reactive halogen in its compound. Elements near the top of group 7 displace elements lower in the group from their compounds. Examples of displacement reactions are:

**Chlorine + sodium bromide  $\rightarrow$  bromine + sodium chloride**

Pale green    colourless                      orange    colourless

Another example is:

**Bromine + sodium iodide  $\rightarrow$  iodine + sodium bromide**

Orange    colourless                      brown    colourless

### The elements of Group 0

The Group 0 elements are also called the **noble gases**. They exist in the atmosphere. They have low melting and boiling points and are colourless gases at room temperature. The melting and boiling points of group 0 elements increases as you go down the group. The noble gases glow brightly when electricity is passed through them. This explains why the noble gases are used in advertising signs. Helium has lower density than air, that is why it is used in helium balloons. Argon is a better insulator than air, that is why it is used in the gap between two panes of glass in double glazing. The noble gases take part in few reactions. Scientists say that they are inert. Helium and neon never take part in chemical reactions but krypton and xenon can form compounds with fluorine.

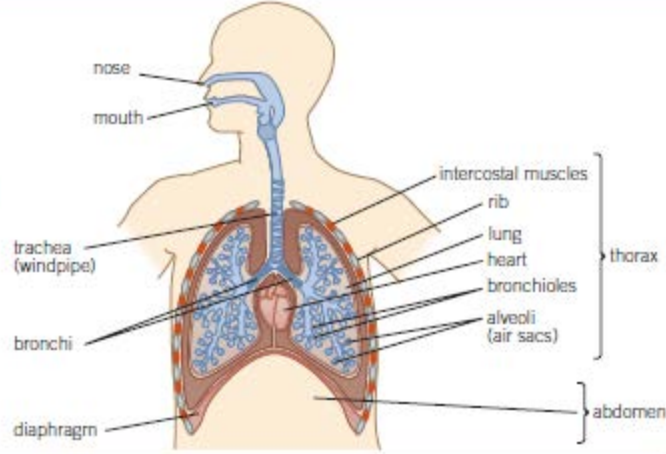




# Biology Topic Respiration

## Gas exchange and breathing

- **Gas exchange** is the process of taking in oxygen and giving out carbon dioxide
- This occurs in the **respiratory system**
- The proportions of gases in the air we **inhale** and **exhale** changes due to using oxygen in **respiration** and producing carbon dioxide

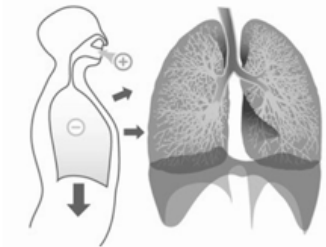


## Drugs

- **Drugs** are chemicals that affect the way that our body works
  - **Medicinal drugs** are used in medicine, they benefit health
  - If medicinal drugs are not taken in the correct way they can harm health
  - Examples include antibiotics and pain killers
- 
- **Recreational drugs** are taken by people for enjoyment
  - Recreational drugs normally have no health benefits and can be harmful for health
  - Examples include alcohol and tobacco
- 
- Drug **addiction** is when your body gets so used to a drug, it feels it cannot cope without it
  - If someone who has an addiction stops taking the drug, they will experience **withdrawal symptoms**

### Inhalation

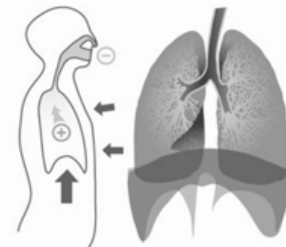
Inhalation is the process of breathing in



- Ribcage is pulled **upwards and outwards**
- Diaphragm **contracts** and moves **downwards**
- **Volume** in the lungs **increases**
- **Air** moves **into** the lungs

### Exhalation

Exhalation is the process of breathing out



- Ribcage is pulled **downwards and inwards**
- Diaphragm **relaxes** and moves upwards into a **dome**
- **Volume** in the lungs **decreases**
- **Air** moves **out of** the lungs

## Adaptations of the lungs



Lots of blood vessels to take away oxygenated blood




Thin walls in the alveoli to reduce distance of diffusion



Alveoli create a large surface area



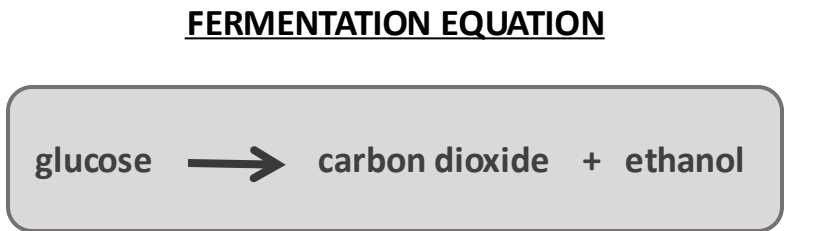
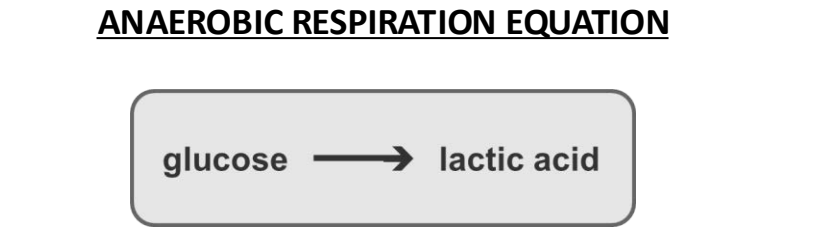
Moist



# Biology Topic Respiration

Key term	Definition
<b>aerobic respiration</b>	Breaking down glucose with oxygen to release energy and producing carbon dioxide and water.
<b>anaerobic respiration</b>	Releasing energy from the breakdown of glucose without oxygen, producing lactic acid (in animals) and ethanol and carbon dioxide (in plants and microorganisms).
<b>biotechnology</b>	The use of biological processes or organisms to create useful products.
<b>fermentation</b>	A type of anaerobic respiration in which glucose is converted into ethanol, carbon dioxide, and energy.
<b>haemoglobin</b>	The substance in red blood cells that carries oxygen around the body.
<b>oxygen debt</b>	Extra oxygen required after anaerobic respiration to break down lactic acid.
<b>plasma</b>	Liquid that transports blood cells and other materials around the body.

- Uses of Biotechnology**
- Fermenting alcoholic drinks e.g wine and beer
  - Using yeast to allow bread to rise before baking.



**Exercising and respiration**  
 When exercising we breathe more quickly (increased breathing rate) to pull more oxygen into the body. Oxygen is needed to release more energy by **AEROBIC RESPIRATION**.

Fitness component	Description	Test and description
Cardiovascular endurance	The ability of the heart, lungs and blood to transport oxygen during sustained activities.	12 minute Cooper run: Maximum distance ran in 12 minutes. Multistage fitness test: Shuttle runs in time to a recorded beep, which gets gradually quicker.
Speed	How quickly you can move the whole body or part of a body.	30m sprint test: How fast you can run 30m.
Muscular endurance	To perform repeated muscular contractions over a sustained period of time.	30s sit up test: Number of sit ups in 30s
Strength	The maximum force a muscle can apply.	Grip dynamometer test: Squeeze the dynamometer as hard as you can with one hand. 1 rep max test: Heaviest weight you can lift for one repetition.
Agility	The ability to change direction at speed	Illinois agility test: How fast you can complete a circuit around cones.
Power	Speed x strength	Vertical jump test: Maximum height reached when jumping, beyond maximum reach point.
Flexibility	The range of movement around a joint.	Sit and reach test: Sit with straight legs and feet against box, measure how far you can reach past feet.

**Key Terminology:**

Key word	Description
Heart	A muscle which pumps blood around your body
Lungs	Organs which breathe in oxygen and breathe out carbon dioxide
Oxygen	A gas needed for creating energy
Anaerobic	High intensity exercise
Acceleration	An increase in speed
Repetition	Each time a movement is repeated
Contraction	A muscle producing a force
Balance	Remaining stable. Centre of mass stays over base of support
Force	A push or pull that changes that causes an object to speed up or slow down.
Suppleness	Moving and bending with ease.

## Unit 4: Knowledge Organiser- Leadership

Roles within physical activity	Description of roles	Qualities
<b>Performer</b>	Takes part in the activity Executes skills and tactics	<ul style="list-style-type: none"> <li>• High effort levels – try to be successful</li> <li>• Fair – enjoyable for everyone</li> <li>• Sportsmanship (good etiquette) – enjoyable for everyone</li> <li>• Can-do attitude – resilient and continue participation</li> </ul>
<b>Coach</b>	Plan and lead warm up & activities Give instructions and demonstrate Give coaching points Time activities and whole session Can do risk assessment if no official.	<ul style="list-style-type: none"> <li>• Organised – good pace</li> <li>• Good communicator – participants understand what to do</li> <li>• Confident – have a good presence</li> <li>• Knowledgeable – improve skill level</li> <li>• Enthusiastic – motivate others</li> </ul>
<b>Official</b>	Time a competition Enforce the rules Risk assessment Start and stop the game	<ul style="list-style-type: none"> <li>• Knowledgeable – can enforce rules</li> <li>• Confident – have good presence</li> <li>• Good communicator – participants understand what is happening</li> <li>• Good decision maker – game is fair</li> </ul>

### How to do a risk assessment:

- Check participants for correct kit, footwear, hair, nails, no chewing gum
- Check the playing area is clear, undamaged and not weather affected e.g. frozen pitch
- Check equipment is in good working order
- Check spare equipment is put away

### Warm up ideas:

- Stuck in the mud
- Cups and saucers with cones (one team turn cones right way round, the other team turn them upside down)
- Truck and trailer (can be dribbling a football/ basketball etc)
- Piggy in the middle
- Obstacle course



# FUSION FEVER

## Classic Indian Style

\*There are lots of different styles of music played in India: pop, folk, rock, classical, film and more

\*Indian classical music has been passed down from generation to generation for more than 3000 years. Although the music varies between the North and South of India, music shares three common ideas: Raga, Tala and Drone

\***Raga** is the pattern of notes and is the tune. A **sitar** might play the melody. A sitar is a plucked string instrument



\***Tala** is the rhythm and is usually played on the **tabla**. Sounds are produced by playing with fingers and the palm of your hand. Sounds can be described in words—Ta, Ghe, Gha, Tin, Dha and Te. Rhythms are not written down but memorised

\*A constant, held, sustained note which harmonises with the Raga is called the **drone**. An instrument called a **tambura** might play the drone. This is another string instrument



\*Musicians learn how to play by imitating and memorising the music from their teachers. This is called *Oral Tradition*

## Bollywood

\*This is the name of the Indian film industry based in Mumbai

\*Bollywood films are like musicals. Song and dance numbers play an important part in the script

\*Stories include lovers and villains, family and kidnapping. They are very melodramatic (over the top!)

\*India produces the largest amount of films each year in the world and is worth billions. Hollywood however makes more money each year

Bass	Sounds in the low pitch
Treble	Sounds in the higher pitch
Musical	A play or a film in which singing and dancing are essential

## 'Kal Ho Naa Ho' Keywords

**BHANGRA**

form of music and dance from the Punjabi region of India and Pakistan

**ZITHER**

A flat string instrument played on a table top

**DOHL**

A double headed Indian drum

**TABLA**

An Indian drum

**SARANGI**

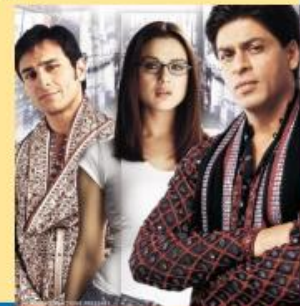
An Indian string instrument

**CHAADRA**

piece of material wrapped around a man's waist to dance the Bhangra

**GHAGRA**

long fanned skirt worn by women to dance the Bhangra



KAL HO NAA HO

## Homework 1:

Learn the information on this knowledge organiser.

# Drama Year 8 Topic 1 Blood Brothers



**Playwright:** Willy Russell

**Written:** 1980's

**Set:** 1950-80's

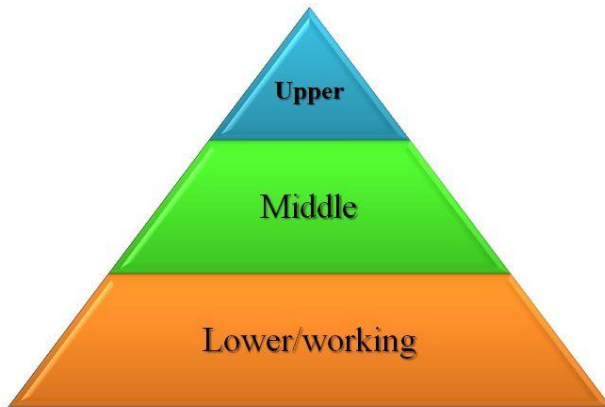
**Theatrical setting:** Liverpool

**Genre:** Comedy, Tragedy, Musical Theatre

Think Netflix! It is like the type of category a film falls under. A play is written with a theme in mind.

**Theme:** Social class divide

Refers to a group of people who have a similar status typically determined by factors such as wealth, education and occupation.



**Proscenium Arch:** This type of staging allows everyone to see the show from one direction. The audience are all sat in rows facing the same way, facing the stage.

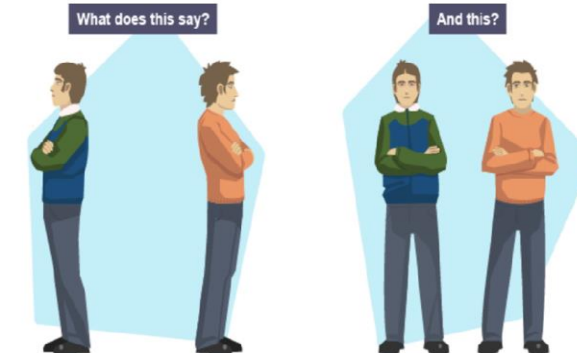
USR	USC	USL
CSR	CS	CSL
DSR	DC	DSL

**Areas of a stage**

Audience

### Proxemics and levels

What do the shapes that you create on the stage say about the character relationships and action? Levels are also important and can be useful in denoting a character's status or power.



**Physical skills** These skills are linked to the ways an actor uses their body to communicate their character. They are all non verbal communication skills, meaning you do not talk or make any sound!

Body Language- Posture  
Body Language – Gestures  
Facial expressions



**Vocal skills** These skills are linked to the ways an actor uses their voice to communicate their character. There are 6 key elements you are going to explore.

Pause, Pitch, Pace, Volume, Accent, Tone



## Drama conventions

**Role on the wall** is a diagram (usually an outline) of a person with information around the edges exploring a character.



**Improvisation** Improvising is inventing and creating content spontaneously. It's a great way to generate new ideas and for creating and developing characters.

**Duologue** Duo = 2 Duologue is a play or part of a play with speaking roles for **only two actors**.



## Homework 2:

Learn the 10 spellings below:

- 1.) Script
- 2.) Proxemics
- 3.) Improvisation
- 4.) Role
- 5.) Blocking
- 6.) Confidence
- 7.) Audience
- 8.) Duologue
- 9.) Performance
- 10.) Character

## Homework 1:

Learn the information on this knowledge organiser.

## Drama Year 8

### **Topic 2: Curious Incident of the Dog in the Night-Time** *By Mark Haddon*



### PHYSICAL SKILLS

- Pace (Slow/Fast)
- Facial Expressions
- Eye Contact
- Gesture
- Body Language
- Posture
- Levels
- Stage Space

### VOCAL SKILLS

- Pace (Slow/Fast)
- Emphasis
- Projection (Strong/Weak)
- Pause (Long/Short)
- Tone (Emotion in Voice)
- Pitch (Low/High)
- Volume (Loud/Quiet)

### PERFORMANCE SKILLS

*How do we create a character?*

1. **Facial Expression** – Happy, Sad, Scared, Excited
2. **Body Language** – Posture, Walk, Proximity
3. **Gestures** – Exaggerated Hand Movements
4. **Levels** – Status, Power, Relationships
5. **Voice** – Pace, Pitch, Pause, Tone, Volume

<b>Physical Theatre</b>	A <b>non-naturalistic</b> theatre style which predominantly uses the body to convey the moods, atmospheres and feelings of the narrative to story tell.
<b>Naturalistic</b>	Realistic and believable, similar to everyday life, creating an illusion of reality
<b>Round</b>	Any move that involves passing closely around the body of your partners
<b>By</b>	Slotting in move that is neat an efficient. Reducing the space between the partners to as small as possible
<b>Through</b>	Passing through the partners, usually confined to the upper body and arms.
<b>Ensemble</b>	An approach to acting that aims for a unified effect achieved by all members of a cast working together on behalf of the play
<b>Canon</b>	Performing the same move at different times (like a Mexican wave)
<b>Unison</b>	Performing the same moves at the same time
<b>Repetition</b>	Repeating the same movement / sequence numerous times

### **PRACTITIONER: Frantic Assembly**

- *Frantic Assembly are a British theatre company co-founded by Artistic Director, Scott Graham, 25 years ago.*
- *Their approach to creating theatre is distinctly creative and has **physical theatre movement at the foreground** of all of their work.*
- *They have worked in over **40 countries world-wide** and regularly **collaborate** on other productions (for example, 'Humans' – Channel 4, and the National Theatre's 'The Curious Incident of the Dog in the Night-Time').*



## **Homework 2:** Learn the 10 spellings below:

- 1.) Physical Theatre
- 2.) Naturalistic
- 3.) Round – by – through
- 4.) Performance
- 5.) Improvisation
- 6.) Ensemble
- 7.) Canon
- 8.) Unison
- 9.) Repetition
- 10.) Sequence

## Getting Started



## Music Knowledge Organiser

- Garage Band -

### Save!!

cmd + S

## Help, I Can't Hear Anything???

1. Make sure the **headphones** are plugged into the back of the computer (not the keyboard)
2. Turn up the **volume** (F12 on the Mac keyboard)
3. Make sure the **'MIDI/Select/Octave'** button is not lit red on the Alesis music keyboard
4. Make sure the **'Mute'** button is not lit on Garage Band

### How Do I Delete? =

Click on (highlight) the thing you want to delete and press:

delete

Start with one of these **chords**...

**C major Triad**

**A minor Triad**

Choose your **instrument** here (if using a keyboard track).

Solo button

Mute button

Volume slider

Press this button to view and use the pre-recorded **'Loops'** and **'Samples'**.

## All the Chords...

Chords In All Major Keys								Chords In All Minor Keys							
Major Keys	I	ii	iii	IV	V	vi	vii°	Minor Keys	i	ii°	III	iv	v	VI	VII
<b>C</b>	C	Dm	Em	F	G	Am	B°	<b>Cm</b>	Cm	D°	Eb	Fm	Gm	Ab	Bb
<b>C#</b>	C#	D#m	E#m	F#	G#	A#m	B#°	<b>C#m</b>	C#m	D#°	E	F#m	G#m	A	B
<b>Db</b>	Db	Ebm	Fm	Gb	Ab	Bbm	C°	<b>Dm</b>	Dm	E°	F	Gm	Am	Bb	C
<b>D</b>	D	Em	F#m	G	A	Bm	C#°	<b>D#m</b>	D#m	E#°	F#	G#m	A#m	B	C#
<b>Eb</b>	Eb	Fm	Gm	Ab	Bb	Cm	D°	<b>Em</b>	Em	F°	G	Am	Bm	C	D
<b>E</b>	E	F#m	G#m	A	B	C#m	D#°	<b>Fm</b>	Fm	G°	Ab	Bbm	Cm	D	Eb
<b>F</b>	F	Gm	Am	Bb	C	Dm	E°	<b>F#m</b>	F#m	G#°	A	Bm	Cm	D	E
<b>F#</b>	F#	G#m	A#m	B	C#	D#m	E#°	<b>Gm</b>	Gm	A°	Bb	Cm	Dm	Eb	F
<b>Gb</b>	Gb	Abm	Bbm	Cb	Db	Ebm	F°	<b>G#m</b>	G#m	A#°	B	C#m	D#m	E	F#
<b>G</b>	G	Am	Bm	C	D	Em	F#°	<b>Abm</b>	Abm	Bb°	Cb	Dbm	Ebm	F	Gb
<b>Ab</b>	Ab	Bbm	Cm	D	E	Fm	G°	<b>Am</b>	Am	B°	C	Dm	Em	F	G
<b>A</b>	A	Bm	C#m	D	E	F#m	G#°	<b>A#m</b>	A#m	B#°	C#	D#m	E#m	F#	G#
<b>Bb</b>	Bb	Cm	Dm	Eb	F	Gm	A°	<b>Bbm</b>	Bbm	C°	Db	Ebm	Fm	G	Ab
<b>B</b>	B	C#m	D#m	E	F#	G#m	A#°	<b>Bm</b>	Bm	C#°	D	Em	F#m	G	A

EXPLORE	DEVELOP	CREATE	EVALUATE
<p>The meanings behind the symbols used. How to develop and refine ideas through the use of visual resources. Exploring the visual elements of a skateboard deck composition. Exploring how Artists create their work.</p>	<p>Understanding of human skull proportion and surface contours/rendering. (yr.7 link to self Portrait) Develop skills with pencil, pen, paint. Develop composition and layout ideas.</p>	<p>A range of outcomes in response to observational drawing and the analysis of Artists. A full size skateboard deck in pencil/ paint/ink.</p>	<p>Their own ideas and the ideas of others. Their use of appropriate DOTD symbols. Their experimentation in mediums and use of colour, tone, pattern and texture.</p>

Essential Knowledge – You will learn to	Techniques and Processes – You will Learn how
<ul style="list-style-type: none"> <li>Understand the meaning/symbols of the Day of the Dead Festival</li> <li>Select and evaluate appropriate written and visual information</li> <li>Recognise and visually analyse an Artist style/work/process</li> <li>Compose a balanced composition</li> <li>Create a range of ideas</li> <li>Analyse and draw accurate DOTD imagery</li> <li>Create a skateboard deck through exploring, developing and creating your own ideas and artwork</li> </ul>	

Key Practitioners – Artists, Designers, Movements and Themes	Materials/ Mediums	Topic Terminology
	<p>4B/2B pencils Measuring, marking out using symmetry/rulers Anilinky Watercolour Paint Fine liner ink pens / contouring &amp; line techniques</p>	<p><b>Line</b> – a mark made usually by a pencil or brush for that can be in any direction, shape or length. <b>Shape</b> – This is an area that is enclosed by a line, shapes can be geometric or organic. <b>Value</b> – This is the darkness or lightness of a colour. <b>Pattern</b> – usually a design that is repeated using lines, shapes, tones or colours. <b>Form</b> –refers to a three-dimensional object. <b>Media</b> – The material used to create art work for example pencil or paint. <b>Composition</b> - is the way in which the objects within a piece of art work are arranged. <b>Technique</b> - the way in which art work is created. <b>Symmetry</b> – this is where an image or pattern is the same on either side of a fixed point or either side of a line of symmetry. <b>Template</b> – a shape or form that is used as a guide to help with accuracy, commonly used when repetition of a shape or pattern is needed. <b>Proportion</b> - means that you make the parts fit well with each other. Proportion in art is the relationship between two or more elements or parts of an object.</p>




Day of the Dead symbols & meaning



David Lozeau – Day of the Dead inspired artist

Tim Fowler – Memento Mori 100 Skulls project

Mexican Sugar Skull designs



Gunpowder Plot (1605)	Causes of the Civil War (1625-42)	English Civil War (1642-45)
<ul style="list-style-type: none"> <li>James I became king of England and Scotland after Elizabeth's death in 1603</li> <li>James passed a number of anti-Catholic laws and a small number of Catholics began plotting against the king</li> <li>Robert Catesby led the plot - planned to blow up the king and Parliament using gunpowder</li> <li>Guy Fawkes was given the task of loading gunpowder into a cellar under Parliament</li> </ul>	<p><b>Charles I (1625-49)</b></p> <ul style="list-style-type: none"> <li>Charles I became king in 1625 after the death of his father James I</li> <li>He believed in the Divine Right of Kings and married a Catholic which upset many Puritans in Parliament</li> <li>Personal Rule – from 1629-40 Charles ruled without consulting Parliament and introduced the hated Ship Money tax</li> </ul>	<p><b>Cavaliers vs Roundheads</b></p> <p><b>Royalists/Cavaliers</b> – fought for the king  <b>Parliamentarians/Roundheads</b> – fought for Parliament</p> <p><b>Three types of soldier:</b></p> <ol style="list-style-type: none"> <li><b>Pikemen</b> – fought with a long, wooden spike</li> <li><b>Musketeer</b> – used a musket (an early type of gun) as their main weapon</li> <li><b>Cavalry</b> – fought on horseback armed with a heavy sword and two pistols</li> </ol>
<p><b>How was the plot uncovered?</b></p> <ul style="list-style-type: none"> <li>One of the plotters sent a warning letter to Lord Monteagle warning him not to attend Parliament on November 5<sup>th</sup></li> <li>The king's men searched the cellars under Parliament and captured Fawkes who was tortured</li> <li>The other plotters were killed or captured, put on trial for treason and hung, drawn and quartered when found guilty</li> </ul>		<p><b>Key battles of the Civil War:</b></p> <p><b>Battle of Edgehill (1642)</b> – ended with no obvious winner, both sides lost about 1,500 men</p> <p><b>Battle of Newbury (1643)</b> – Charles missed a key opportunity to defeat Parliament's army when he withdrew and retreated back to Oxford</p> <p><b>Battle of Marston Moor (1644)</b> – largest battle of the civil war, Oliver Cromwell attacked the Royalists from the rear and won an important victory</p> <p><b>Battle of Naseby (1645)</b> – New Model Army defeated the Royalist army over 5,000 Royalist soldiers were captured and 1,000 killed – the Royalists had lost the Civil War</p>
<p><b>Role of Robert Cecil</b></p> <ul style="list-style-type: none"> <li>Cecil was the king's chief minister and adviser at the time of the plot</li> <li>Some historians believe that he may have known about the plot all along and even helped the plotters to obtain gunpowder and rent the cellar</li> <li>This theory is linked to Cecil's desire to force James to take a tougher line against Catholics by proving their threat to this throne</li> <li>However, not all historians agree with this theory and we cannot be sure about Cecil's role in the plot</li> </ul>	<p><b>Short-term causes of the Civil War</b></p> <p><b>1640</b> – Charles was forced to recall Parliament</p> <p><b>Nov. 1640</b> – Parliament publishes <b>Grand Remonstrance</b> a document attacking Charles and his ministers</p> <p><b>1641</b> – <b>Lord Strafford</b> (Charles closest adviser) was executed on the orders of Parliament – led by John Pym (Puritan)</p> <p><b>January 1642</b> – Charles took troops into Parliament to try and <b>arrest the 5 leading MPs</b> who opposed him (including John Pym)</p> <p><b>August 1642</b> – Charles gathered his forces in Nottingham and Parliament organised their own army to fight against the king signalling the start of the Civil War</p>	<p><b>Why did Parliament win the Civil War?</b></p> <ol style="list-style-type: none"> <li><b>New Model Army</b> – created by Cromwell and Fairfax to fight for Parliament it was disciplined and religious – e.g. their men often prayed together before battle and believed God was on their side</li> <li><b>Leadership</b> – Charles and Prince Rupert made a number of tactical errors during the war whereas Cromwell used clever tactics</li> <li><b>Money</b> – Parliament controlled London – the richest city in England – they could therefore pay their soldiers more and give them better weapons</li> </ol>

Execution of Charles I	Cromwell and Ireland	Witchcraft in the 16 <sup>th</sup> and 17 <sup>th</sup> centuries
<p><b>The Trial</b></p> <ul style="list-style-type: none"> <li>Charles was accused of treason because evidence was discovered that he had been encouraging the Scots and the French to attack England to restore him to the throne</li> <li>Charles did not defend himself as he did not believe the trial was legal</li> <li>He was executed on 30<sup>th</sup> January 1649</li> </ul>	<ul style="list-style-type: none"> <li>Ireland was a mainly Catholic country but James I had tried to give Irish land to English Protestant settlers</li> <li>1641 – Irish Catholics rebelled against the English and killed thousands of Protestants</li> <li>1649 – after the end of the Civil War many English Protestants called for action against the Irish – they wanted revenge for the Protestants killed during the rebellion</li> </ul>	<ul style="list-style-type: none"> <li>Belief in witchcraft seems to have peaked in the 17<sup>th</sup> century</li> <li>Maleficium – evil acts people believed were performed by witches by working with the Devil</li> <li>Single women who were widowed and elderly were most likely to be accused of witchcraft</li> <li>Women who had pets were treated with suspicion because people believed they were a Familiar (a small demon given to her by the Devil)</li> <li>Witches were blamed for farm animals dying or crops failing</li> </ul>
<p><b>Oliver Cromwell – Lord Protector</b></p> <ul style="list-style-type: none"> <li>After Charles’ execution Parliament ran the country – England was a republic (ruled without a king)</li> <li>Disagreement between MPs meant that Parliament did not rule effectively</li> <li>1653 – Cromwell seized power and made himself Lord Protector which he meant he ruled England just like a king</li> <li>Cromwell’s major-generals helped him to rule the country and strict Puritan laws were introduced</li> <li>Theatre, bear-baiting, drinking alcohol and Christmas celebrations were all banned</li> </ul>		<p><b>Why did people believe in witches?</b></p> <ol style="list-style-type: none"> <li><b>Uncertainty</b> –people were scared that everything was changing after the Civil War and were convinced that witches were at work</li> <li><b>The Church</b> – encouraged a belief in witches so people would turn to them for help</li> <li><b>Attitudes</b> – people did not have an understanding of science so they blamed witches for negative events</li> <li><b>Royalty</b> – James I was an avid witch-hunter and wrote a popular book called Demonologie all about the dangers of witches</li> <li><b>Literature</b> – theatre became very popular in the 1600s and many plays included witches e.g. Shakespeare’s Macbeth had three witches as main characters</li> </ol>
<p><b>Painting showing Charles’ execution in 1649</b></p> 	<p><b>Cromwell ‘the curse of Ireland’</b></p> <ul style="list-style-type: none"> <li>August 1649 – Cromwell and his New Model Army of 12,000 soldiers invade Ireland</li> <li>Siege of Drogheda – Cromwell laid siege to this Irish Catholic town and when it refused to surrender he ordered his men to slaughter the people inside the town</li> <li>3,500 people were killed in the siege including civilians</li> <li>Over the next ten years the New Model Army went on to kill or starve about one-third of the Irish population</li> </ul>	

## Knowledge Organiser – Mughal Empire

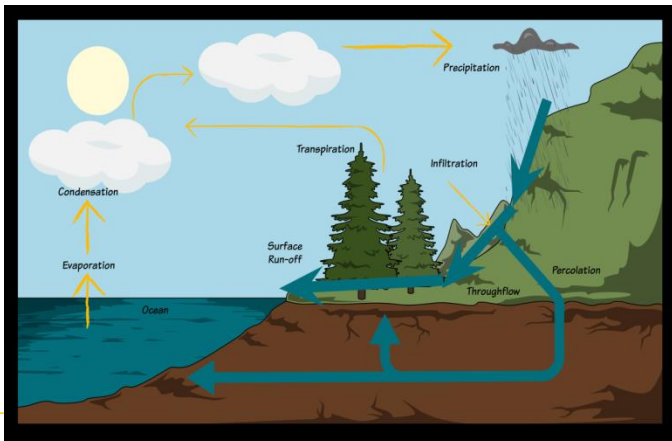
Babur (1483-1530)	Humayun (1530-1556)	Akbar the Great (1556-1605)
<ul style="list-style-type: none"> <li>Babur was the founder of the Mughal Empire in India</li> <li>Battle of Panipat (1526) – Babur defeated Lodi the Sultan of Delhi and took control of northern India</li> <li>Babur was a Muslim but under his rule Hinduism was tolerated and new Hindu temples were built with his permission</li> </ul>	<ul style="list-style-type: none"> <li>1530 - Humayun becomes the second Mughal Emperor following his father (Babur's) death</li> <li>However, during his reign he struggled to maintain control of his empire.</li> <li>March 1539, Humayun's half-brothers Prince Hindal and Prince Kamran rebelled against him, stormed the capital city of Agra and agreed to split the Mughal Empire between them.</li> </ul>	<ul style="list-style-type: none"> <li>Akbar succeeded to the throne at 13 and was determined to expand the size of his Empire - he needed to either defeat the Rajputs (powerful Hindu rulers) or persuade them to join his empire</li> <li>Akbar married the daughter one of the Rajput rulers and gained the loyalty of others by giving them important positions</li> <li>However, other Rajputs resisted Mughal control and fought against Akbar</li> </ul>
<ul style="list-style-type: none"> <li>Trade – under Babur's rule trade with the rest of the Islamic world was encouraged especially Persia</li> <li>The importance of slavery in India reduced and peace was made with the Hindu kingdoms of southern India</li> <li><b>Tolerance</b> - Babur showed tolerance towards other religions. His first act after conquering Delhi was to forbid the killing of cows because that was offensive to Hindus</li> <li><b>Money and taxes</b> - Babur found it difficult to collect taxes from his kingdom. This made it difficult for him to raise money</li> <li><b>Library</b> - Babur built a huge library of rare books and precious manuscripts.</li> </ul>	<p>The map shows the Mughal Empire's growth over time. The legend indicates:         <ul style="list-style-type: none"> <li>Extent of Mughal in 1530 (purple)</li> <li>Expansion of Mughal Empire to 1625 (orange)</li> <li>Expansion of Mughal Empire to 1700 (yellow)</li> <li>Mughal expansion into Babur's Afghan Kingdom (green)</li> </ul>         Key regions shown include Baluchistan, Gujarat, Bengal, and the Deccan. Major cities like Agra, Delhi, and Lahore are marked.       </p>	<p><b>Military success</b> – Akbar's forces won a series of key battles to take control of Rajput territory:</p> <ul style="list-style-type: none"> <li>1567 – Akbar's forces defeated the Rana of Mewar and took over Rajasthan</li> <li>1572 – Akbar took control of Gujarat greatly increasing the wealth of the Mughals</li> <li>1576 – Akbar invaded Bengal and executed the Sultan after her refused to accept Mughal rule</li> <li>1585 – Akbar invaded the mountainous region of Kashmir, where the ruler surrendered</li> <li>1590s – the Deccan in the south of India was the last region that Akbar brought under Mughal control</li> </ul> <p>There were five Muslim sultans who refused to pay tribute to the Mughals and this led to years of fighting until they were defeated in 1600</p>
<ul style="list-style-type: none"> <li><b>Culture</b> - Babur had great ideas about civilisation, architecture and administration. He even wrote an autobiography telling the story of his life, <i>The Babur - Namah</i>.</li> <li><b>Military</b> - Babur's forces defeated an army of 200,000 led by the Rajput Hindu princes at the Battle of Kanua (1527)</li> </ul> <p>After the battle, Babur continued to strengthen his control of Hindustan by capturing important forts such as Chanderi and destroying other challengers such as the Sultan of Bengal.</p>	<ul style="list-style-type: none"> <li>1540 – Humayun was defeated by Sher Shah and had to flee into exile</li> <li>1545 – Humayun gathered a new army to confront his rebellious half-brothers with the help of the ruler of Persia</li> <li>1545-1553 – eight years of fighting before Humayun was able to regain control of his empire</li> <li>1555 – the Mughals took control of Agra and Delhi re-establishing the Mughal Empire</li> <li>1556 – Humayun died after tripping on the stairs and cracking his skull</li> </ul>	<p><b>Administration</b> - Akbar divided his Empire into provinces. Each province was ruled by a Governor, financial official and military commander</p> <p>Akbar also recruited new mansabdars (Nobles) who were given lands to rule for Akbar and served in his army.</p> <p>Akbar introduced a much more effective tax collection system.</p> <p><b>Religion</b> – Akbar was tolerant of other religions, he married Hindu princesses and abolished the jizya tax on non-Muslims</p>



Jahangir (1605-27) and Nur Jahan	Shah Jahan (1628-1658)	Aurangzeb (1658-1707)
<ul style="list-style-type: none"> <li>▪ <b>Religion</b> - Jahangir was the fourth Mughal Emperor and continued Akbar's tolerant religious policies and appointed Hindus to important positions in his government</li> <li>▪ <b>Corruption</b> was a big problem during his rule - the <b>mansabdars</b> began to collect more taxes from the peasants than they were allowed and kept the money for themselves.</li> <li>▪ <b>Foreign traders</b> - in the early 17<sup>th</sup> century huge numbers of Portuguese, Dutch and English traders were setting up trading posts in the Mughal Empire to buy cotton and spices to sell for profit in Europe.</li> <li>▪ Jahangir was unimpressed with these traders and didn't try to encourage the manufacture and sale of goods or to develop a <b>navy</b> to develop trade.</li> <li>▪ <b>Scandal</b> - it was well known that Jahangir drank too much and took too much opium. He even had a coin minted showing him drinking a glass of wine, outraging Muslims.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Shah Jahan was a <b>capable ruler</b> who ruthlessly crushed the rivals to his throne after the death of his father Jahangir</li> <li>▪ He <b>boosted the income</b> he received as emperor by <b>increasing taxes</b></li> <li>▪ Between <b>1630-32</b> there was a <b>famine</b> in Gujarat and the Deccan – Shah Jahan set up <b>food banks</b> and spent 150,000 rupees helping the poor</li> </ul> <div data-bbox="996 439 1620 865" data-label="Image"> </div> <p data-bbox="1141 892 1475 921" style="text-align: center;">Photograph of the Taj Mahal</p>	<p><b>Aurangzeb</b> was the <b>sixth ruler of the Mughal empire</b> and the last emperor before British rule. Aurangzeb has been <b>criticised for helping to destroy the empire</b>. <b>Religious tolerance came to an end</b> and he reintroduced the <b>jaziya tax</b> on non-Muslims and ordered that Hindu temples should be destroyed. This upset many of his subjects.</p> <p><b>Rebellions</b> – as a result of his religious changes there were a series of rebellions during Aurangzeb's reign:</p> <ul style="list-style-type: none"> <li>▪ <b>Deccan – Shivaji</b>, a <b>Hindu</b>, led raids that captured Mughal forts and in 1674 he was crowned king of the Marathas</li> <li>▪ <b>Jat revolt (1669)</b> near Delhi after 20,000 men joined a rebellion over paying taxes to the Mughals</li> <li>▪ <b>Sikh rebellion</b> – <b>Guru Tegh Bahadur</b> was executed by Aurangzeb leading to a huge rebellion amongst Sikhs in northern India</li> <li>▪ <b>Marwar rebellion (1678)</b> – Hindu rebellion after Aurangzeb tried to impose a Muslim ruler on the powerful state of <b>Marwar</b>.</li> </ul>
<p><b>Nur Jahan</b> – wife of Jahangir and the most powerful woman in 17<sup>th</sup> century India</p> <ul style="list-style-type: none"> <li>▪ She married Jahangir in 1611 and for many years ruled the Mughal Empire as Empress alongside her husband</li> <li>▪ In 1617, gold and silver coins, which bore her name opposite that of Jahangir, started circulating.</li> <li>▪ Court chroniclers, foreign diplomats and visitors soon started to note her unique status.</li> <li>▪ Nur lived a life that was unusual for women at the time - hunting, issuing imperial orders and coins, designing public buildings, taking measures to support poor women</li> </ul>	<p><b>Architecture</b> – Shah Jahan spent an estimated 30 million rupees building mosques, hospitals, schools, palaces and forts across his empire</p> <p><b>Taj Mahal</b> was built to express his Muslim faith and as a tomb for his favourite wife Mumtaz Mahal who died giving birth it took 21 years to build</p> <p><b>Military</b> – Shah Jahan sent his son <b>Aurangzeb</b> to defeat the rulers of <b>Bundelkhand</b> in north-east India after they were disloyal</p> <p><b>Hugli</b> - Shah Jahan destroyed a <b>Portuguese base</b> killing thousands after they upset the emperor by taxing Indian ships</p> <p><b>Bijapur and Golconda</b> – two wealthy states were crushed after refusing to accept Shah Jahan's lordship</p>	<p><b>End of the Empire</b> – during the 18<sup>th</sup> century divisions in the Mughal empire were exploited by the <b>British East India Company</b>:</p> <ul style="list-style-type: none"> <li>- Mughal empire was attacked by <b>Nader Shah from Persia (1739)</b> and <b>Ahmad Shah Abdali from Afghanistan (1748-67)</b></li> <li>- <b>Aurangzeb's successors were too weak</b> and there were numerous plots and murders as different rulers tried to seize the throne</li> <li>- <b>The Empire had become too large</b> to be controlled by one ruler from the centre</li> <li>- Mughal rulers became weak and they <b>struggled to maintain control over India</b></li> </ul>

### The Water Cycle

The water cycle is the journey water takes as it moves from the land to the sky and back again. It follows a cycle of evaporation, condensation and precipitation. In the diagram below a river would usually be part of the surface run off.



### The River Valley

The land near the **source** is **high and steep**. Heading towards the mouth the land gets **lower and flatter**. The narrow **V-shaped valleys** open out, eventually becoming wide, flat **flood plains**.

Upper course – steep V shape downward erosion.	Middle course – U shaped lateral erosion.	Lower course – open U shape (wide) lateral erosion and deposition.
<b>Features</b> <ul style="list-style-type: none"> <li>• rapids</li> <li>• waterfalls</li> </ul>	<b>Features</b> <ul style="list-style-type: none"> <li>• meanders</li> </ul>	<b>Features</b> <ul style="list-style-type: none"> <li>• oxbow lakes</li> <li>• floodplains</li> <li>• levees</li> <li>• deltas</li> </ul>

### The River Channel

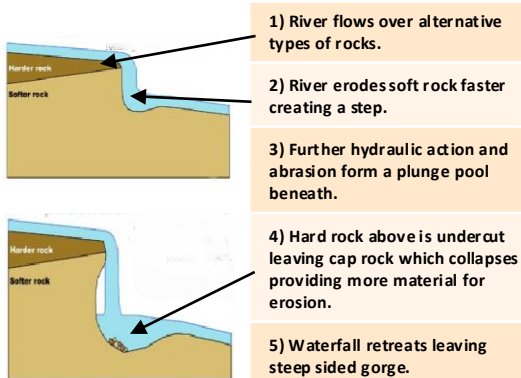
All rivers tend to follow the same pattern; as they flow from the source to the mouth; they start off narrow and **get wider**; they start off straight and end up **meandering**.



### Upper Course of a River

Near the source, the river flows over steep gradient from the hill/mountains. This gives the river a lot of energy, so it will erode the riverbed vertically to form narrow valleys.

### Formation of a Waterfall



### Middle Course of a River

Here the gradient gets gentler, so the water has less energy and moves more slowly. The river will begin to erode laterally making the river wider.

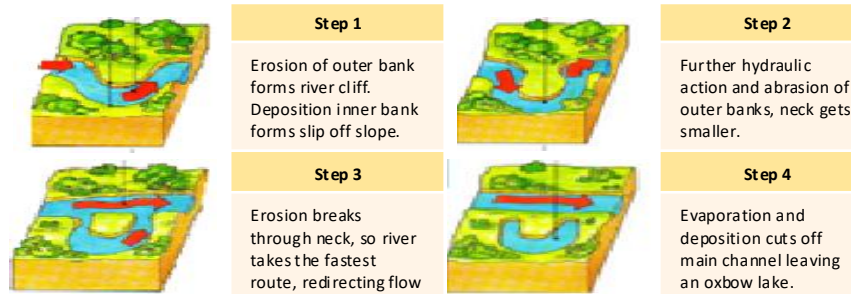
### Lower Course of a River

Near the river's mouth, the river widens further and becomes flatter. Material transported is deposited.

### Key Terms

<b>Condensation</b>	Water vapour cools and is stored as a liquid in clouds.	<b>Meander</b>	A pronounced bend in a river.
<b>Discharge</b>	The quantity of water that passes a given point on a stream or river-bank within a given period of time.	<b>Ox-bow lake</b>	A horse-shoe shaped lake which has been cut off from a meandering river.
<b>Evaporation</b>	Water lost from the ground's surface.	<b>Precipitation</b>	Moisture falling from the atmosphere - as rain, hail, sleet or snow.
<b>Flood</b>	Occurs when river discharge exceeds river channel capacity and water spills out of the channel onto the floodplain and other areas.	<b>Surface run-off</b>	Water flowing on top of the ground, usually in rivers and streams.
<b>Flood plain</b>	The relatively flat area forming the valley floor on either side of a river channel, which is sometimes flooded. Found in the lower course of a river.	<b>Transpiration</b>	Water lost through pores in trees and plants.
<b>Gorge</b>	A narrow, steep sided valley, often formed as a waterfall retreats upstream.	<b>Tributary</b>	A smaller stream or river that flows into a larger river
<b>Infiltration</b>	The flow of water into soil	<b>Waterfall</b>	Sudden descent of a river or stream over a vertical or very steep slope in its bed. Found in the upper course of a river.

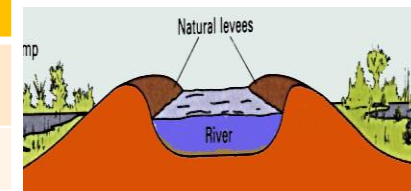
### Formation of Ox-bow Lakes



### Formation of Floodplains and levees

When a river floods, fine silt/alluvium is deposited on the valley floor. Closer to the river's banks, the heavier materials build up to form natural levees.

- ✓ Nutrient rich soil makes it ideal for farming.
- ✓ Flat land for building houses.

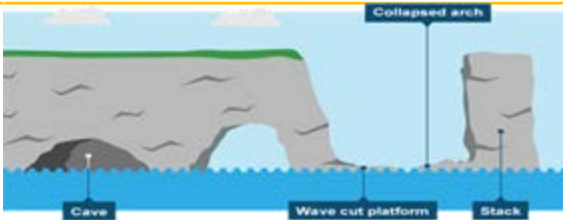


### River Management Schemes

Soft Engineering	Hard Engineering
<b>Afforestation</b> – plant trees to soak up rainwater, reduces flood risk. <b>Demountable Flood Barriers</b> put in place when warning raised. <b>Managed Flooding</b> – naturally let areas flood, protect settlements.	<b>Straightening Channel</b> – increases velocity to remove flood water. <b>Artificial Levees</b> – heightens river so flood water is contained. <b>Deepening or widening river</b> to increase capacity for a flood.

## Deposition

When the sea or river loses energy, it drops the sand, rock particles and pebbles it has been carrying. This is called deposition.



Example: Old Harry Rocks, Dorset

- 1) Hydraulic action widens cracks in the cliff face over time.
- 2) Abrasion forms a wave cut notch between HT and LT.
- 3) Further abrasion widens the wave cut notch to form a cave.
- 4) Caves from both sides of the headland break through to form an arch.
- 5) Weather above/erosion below –arch collapses leaving stack.
- 6) Further weathering and erosion eaves a stump.

## Coastal Defences

### Hard Engineering Defences

Groynes	Wood barriers prevent longshore drift, so the beach can build up.	<ul style="list-style-type: none"> <li>✓ Beach still accessible.</li> <li>✗ No deposition further down coast = erodes faster.</li> </ul>
Sea Walls	Concrete walls break up the energy of the wave. Has a lip to stop waves going over.	<ul style="list-style-type: none"> <li>✓ Long life span</li> <li>✓ Protects from flooding</li> <li>✗ Curved shape encourages erosion of beach deposits.</li> </ul>
Gabions or Rip Rap	Cages of rocks/boulders absorb the waves energy, protecting the cliff behind.	<ul style="list-style-type: none"> <li>✓ Cheap</li> <li>✓ Local material can be used to look less strange.</li> <li>✗ Will need replacing.</li> </ul>

### Soft Engineering Defences

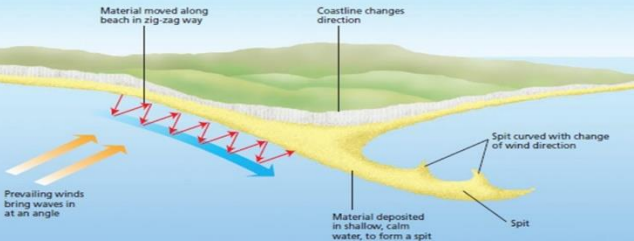
Beach Nourishment	Beaches built up with sand, so waves have to travel further before eroding cliffs.	<ul style="list-style-type: none"> <li>✓ Cheap</li> <li>✓ Beach for tourists.</li> <li>✗ Storms = need replacing.</li> <li>✗ Offshore dredging damages seabed.</li> </ul>
Managed Retreat	Low value areas of the coast are left to flood and erode naturally.	<ul style="list-style-type: none"> <li>✓ Reduce flood risk</li> <li>✓ Creates wildlife habitats.</li> <li>✗ Compensation for land.</li> </ul>

## Formation of Bays and Headlands



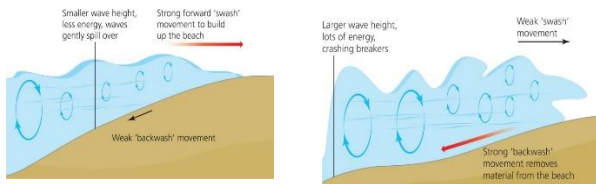
- 1) Waves attack the coastline.
- 2) Softer rock is eroded by the sea quicker forming a bay, calm area causes deposition.
- 3) More resistant rock is left jutting out into the sea. This is a headland and is now more vulnerable to erosion.

## Formation of Coastal Spits - Deposition

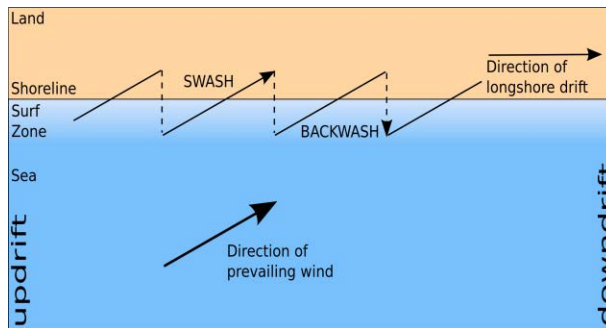


Example: Dawlish Warren spit

- 1) Swash moves up the beach at the angle of the prevailing wind.
- 2) Backwash moves down the beach at 90° to coastline, due to gravity.
- 3) Zigzag movement (Longshore Drift) transports material along beach.
- 4) Deposition causes beach to extend, until reaching a river estuary.
- 5) Change in prevailing wind direction forms a hook.
- 6) Sheltered area behind spit encourages deposition, salt marsh forms.



## What is the longshore drift?



## Why is Miami, Florida threatened by the sea?

Miami is located in south- eastern Florida, which is a peninsula on the the South-east coast of the USA.

Since 1870, global sea levels have risen by an average of 20 cm, but **Southeast Florida's local levels have risen by 30 cm.** By 2060, it could double or triple that.

## Impacts of sea level rise in Miami

- Prolonged flooding after storms damages the city's drainage system (which would cost USD \$206 million to repair).
- Porous limestone ground makes seawalls incapable of stopping salt water from infiltrating aquifers, negatively impacting agriculture and drinking water reserves.
- Beaches are eroding and domestic sand resources are dwindling. This impacts tourism and increases erosion.
- Hurricane-driven storm surges are more frequent and higher causing massive flooding.

## Why are sea levels rising?

- Increase in sea level due to melting of ice sheets; this will remove water stored in a frozen state on land and enable it to flow to the sea increasing amount of water in the sea; relates to underlying cause – global warming and causes of this, e.g. increase in carbon dioxide.

## Responses to sea level rise in Miami

- To build a network of huge pumps that force water out of flood-prone areas and into Biscayne Bay. There are over 30 pumps today, with 90 planned in total.
- The estimated cost for 3 pumps, including land acquisition, is USD \$ 200 million.
- The Army Corps of Engineers estimated that the equivalent of 10,781 football fields covered in 30 cm of sand would be necessary to sustain Miami's beaches for the next 50 years.
- Less affluent areas do not have the financial resources to fight the inevitable. Even if they did, no sea wall or other barrier would be able to keep water from bubbling up through limestone.

### Key word definitions

**Population density:** The amount of people living in a given area, normally a kilometre squared.

**Birth rate:** The number of births per 1000 people per year.

**Death rate:** The number of deaths per 1000 people per year.

**Migration:** The movement of people from one place to another.

**Push factor:** Reasons to leave a place e.g. fewer jobs and schools in rural areas.

**Pull factor:** Reasons that attract people to a new place e.g. higher paid jobs and better schools in urban areas.

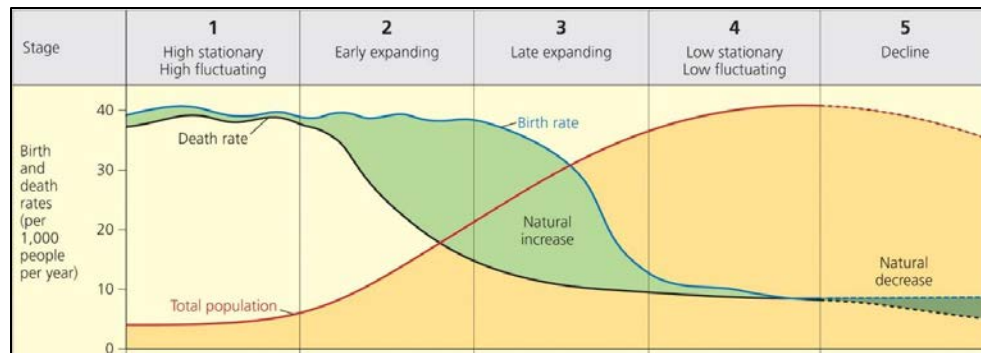
**Urbanisation:** An increase in the proportion of people living in urban areas.

### The world's population

- The world's population in 2022 is 7.9 billion.
- The world's population has grown rapidly over time from 1 billion in 1800, to 7 billion in 2011.
- The UN predict that by 2050 the population will be 9.8 billion, with 50% world's population growth expected to be in Africa, but the population of Europe is ageing (average age increasing).

### The Demographic Transition Model

- This is a model that shows how a country's population changes as it becomes more developed.
- It shows the birth rate, death rate and total population.
- Over time the death rate falls as medical care improves and people live longer.
- The birth rate then falls as there is better access to family planning.
- By stage 5 there is natural decrease - population starts to decline as birth rate is very low.



### Example countries

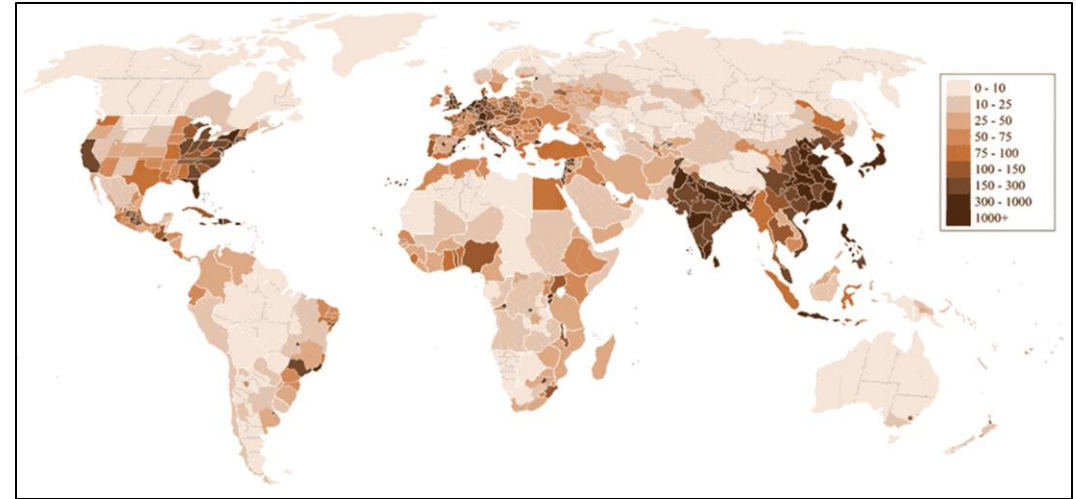
Stage 1: Tribes in the Amazon.

Stage 2: Niger

Stage 3: Brazil

Stage 4: UK

Stage 5: Japan



### Reasons for world population distribution

- As the map shows the world's population is not evenly spread around the world.
- Some areas such as Eastern China and India have high population densities, whilst parts of Canada, Russia and Australia have much lower population densities.

#### **Physical reasons:**

**Climate:** Some places have very hot climates such as the Sahara desert, whilst areas such as Canada have very cold climates which makes it harder to grow food.

**Relief:** Steep slopes in mountain ranges such as the Himalayas and Andes make it harder to build houses.

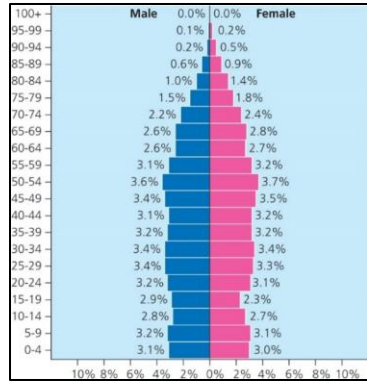
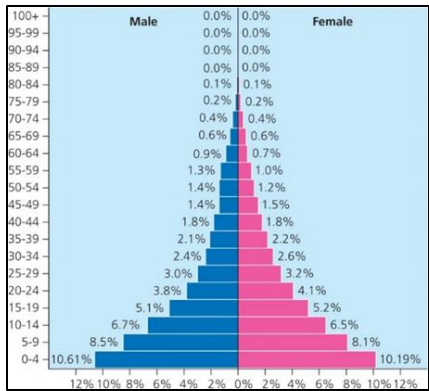
#### **Human reasons:**

**Employment:** Jobs and industry can attract people in search of work e.g. factories in eastern China.

**Infrastructure:** Places that are better connected make it easier for people to work so attract more people to live there.

## Population pyramids

Population pyramids show the number of males and females in each age group. We can then identify the young dependents (aged 0-14), the independent or working population (15-64) and the elderly dependents (65 and over). This allows governments to plan how many schools and other facilities are needed for their population.



The left pyramid has a high birth rate, low life expectancy and high death rate. The right pyramid has a lower birth rate, higher life expectancy and lower death rate.

## What is urbanisation and how is it changing over time?

- Urbanisation is an increase in the proportion of people living in cities. It is caused by rural to urban migration – the movement of people from the countryside (rural area) to the city (urban area).
- The number of megacities is increasing – these are cities with more than 10 million people living there.
- By 2030, 7 of the top 10 largest cities will be in Asia, 2 will be in Africa and 1 will be in S. America.
- Tokyo is the world's largest city with an expected population of 37.2 million by 2030.
- 828 million people currently live in informal settlements or slums and the number keeps rising.
- Rapid urbanisation puts pressure on fresh water supplies, sewage, the living environment, and public health.

## China's strategy to manage their population

- In 1970 China's population was 800 million and it was growing very rapidly so it was at risk of over population when there are too many people for the resources available.
- In 1979 a law was brought in to make it a legal requirement that families only had one child.
- The policy lasted until 2015 and it is thought it reduced population by 400 million.
- Some families wanted a son to carry on the family name which created a gender imbalance with too many males and not enough females, as well as more elder people and less workers.
- The policy was changed to 2 children in 2015 and has recently been changed to 3 children.

## Russia's strategy to manage their population

- Russia was experiencing population decline as there 16 deaths for every 10.4 births. This is called under population when there is not enough people to make use of the available resources.
- They introduced a policy to provide mothers with \$11 000 if they had more than one child. This money could be put towards buying a house, the child's education or the mother's pension.
- By 2015 there were 1.9 million births a year, up from 1.5 million in 2005.
- The death rate also fell due to promotion of a healthier lifestyle but

## Why do people migrate from Central America to Mexico/USA?

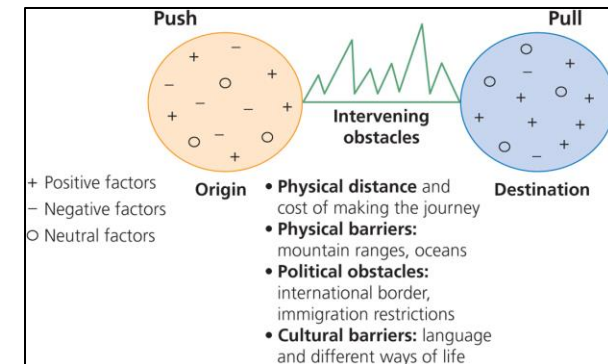
- Migration is the movement of people from one place to another. There are several different types of migration and reasons that people migrate e.g. refugees move due to war, people migrate for a better job or to join family.
- Push factors make people leave a place while pull factors draw them in to a new place.

### Push factors:


- Work on banana plantations in Honduras is low paid - \$5/day.
- Widespread corruption in Honduras so peoples' needs are not always prioritised by the government.
- High rates of violence in Honduras.




### Pull factors:

- The "American Dream" idea that the USA offers lots of opportunities for people migrating.
- There are more jobs available in Mexico and USA.
- USA has a much lower crime rate.



# What do we mean by Sanatan Dharma? Knowledge Organiser

Concept	Explanation
Sanatan Dharma	This is the term that many Hindu's will use for their religion. It means 'eternal truth'. In the UK, 54% of 14-24 surveyed in 2023 said they use the term Hinduism; 16% Hindu Dharm a and 16% Sanatan Dharm a
The Origins of Sanatan Dharm a	Most scholars believe Hinduism started somewhere between 2300 BCE and 1500 BCE in the Indus Valley, India. Many Hindus argue that their faith has always existed. Hinduism has no one founder Hindus have a wide range of beliefs and many different beliefs.
Statistics	Third largest religion in the world 1.2 billion followers (15% of the world) 1.8% of England and Wales identify as Hindu. Of these, 30 % are under 30, 74% under 50 and 10% over 65 17.9% of Leicester identify as Hindu The UK Hindu community has grown 86% in the last 20 years
	The Aum is known as the sym bol of Hinduism and it is the main symbol of Brahm an. It represents the first sound at the start of the universe.
Brahm an	The name for God or ultimate reality. He is a limitless, univer- sal soul or consciousness who is beyond hum an understanding but the source of all life. Brahm an- he is seen as a non-personal God Antaryami- 'the God within' as he is in the heart of everyone Bhagavan- He is a personal God or Lord and is approached through many deities, living in the spiritual world

Concept	Explanation
Isa Upani- shad	About Brahm an: 'He moves, and he moves not. He is fair, and he is near. He is within all and he is outside of all'.
Trimurti	Three aspects of God or three deities (gods) responsible for crea- tion
Brahm a 	Brahm a is the creator. He is the least worshipped of the deities He has four heads- one to represent each of the vedas (ancient Hindu texts), which he constantly recites. He has a consort called Saraswati who is the goddess of knowledge.
Vishnu 	Vishnu is the Preserver and Protector. He is seen as having a hum an body with four arms; each arm rep- represents som ething he is responsible for Conch (shell): Aum- the sound at the start of the universe The Chakra (disc)- the mind. The lotus flower- glorious existence and liberation. The mace- mental and physical strength. He has had 9 incarnation e.g. Ram a (greatest warrior) and Krishna who delivered the holy book the Bhagavad Gita
Shiva 	Shiva is the destroyer who will end the universe but also causes change. He has the following features: A third eye- represents his wisdom and insight Cobra necklace- his power over the most dangerous creatures Vibhuti- three horizontal lines in white ash on his forehead repre- sent his omnipotence and wealth



Lionheart Modern Languages Year 7-9 High Frequency Words – FRENCH CORE

CORE		CORE		CORE	
Time phrases/Sequencers		Key verb phrases		Connectives	
normally	<u>normalement</u>	I have	<u>j'ai</u>	but	<u>mais</u>
often	<u>souvent</u>	I have not	<u>je n'ai pas de</u>	and	<u>et</u>
usually	<u>d'habitude</u>	I am	<u>je suis</u>	because	<u>car/ parce que</u>
from time to time	<u>de temps en temps</u>	I am not	<u>je ne suis pas</u>	also	<u>aussi</u>
sometimes	<u>quelquefois/parfois</u>	I would like	<u>je voudrais</u>	however	<u>cependant</u>
tomorrow	<u>demain</u>	it is	<u>c'est</u>	therefore	<u>donc</u>
next week	<u>la semaine prochaine</u>	it is not	<u>ce n'est pas</u>	as	<u>comme</u>
Summer / Autumn	<u>en été / en automne</u>	there is	<u>il y a</u>	or	<u>ou</u>
Winter / Spring	<u>en hiver / au printemps</u>	there is not	<u>il n'y a pas de</u>	however	<u>pourtant</u>
morning/afternoon/evening	<u>le matin/l'après-midi/le soir</u>	it will be	<u>ce sera</u>	on the other hand	<u>par contre</u>
then	<u>puis</u>	I'm going to....	<u>je vais +infinitive</u>	fortunately	<u>heureusement</u>
always/still	<u>toujours</u>	you must	<u>on doit +infinitive</u>	unfortunately	<u>malheureusement</u>
at the moment	<u>en ce moment</u>	you must not	<u>on ne doit pas +infinitive</u>	in addition	<u>en plus</u>
later	<u>plus tard</u>	you can	<u>on peut +infinitive</u>		
in the future	<u>a l'avenir</u>	you cannot	<u>on ne peut pas +infinitive</u>		
yesterday	<u>hier</u>	it was	<u>c'était</u>	<b>Negatives</b>	
last night	<u>hier soir</u>	it wasn't	<u>ce n'était pas</u>	not	<u>ne....jamais</u>
last week	<u>la semaine dernière</u>	there was	<u>il y avait</u>	never	<u>ne...pas</u>
last year	<u>l'année dernière</u>	there wasn't	<u>il n'y avait pas de</u>	<b>Comparisons</b>	
next	<u>ensuite</u>	it would be	<u>ce serait</u>	more... than	<u>plus ... que</u>
firstly	<u>d'abord</u>	it would not be	<u>ce ne serait pas</u>	less... than	<u>moins ... que</u>
after	<u>après ça</u>	if I was rich	<u>si j'étais riche</u>		
before	<u>avant</u>	in an ideal world	<u>dans un monde idéal</u>		
lastly	<u>enfin / finalement</u>	in my dreams	<u>dans mes rêves</u>		
<b>Quantifiers/ Intensifiers</b>		<b>Opinions</b>		<b>Idioms</b>	
very	<u>très</u>	In my opinion	<u>à mon avis / selon moi</u>	How awful !	<u>Quelle horreur !</u>
too	<u>trop</u>	I think that	<u>je pense que</u>	What luck !	<u>Quelle chance !</u>
quite	<u>assez</u>	I Like	<u>j'aime</u>	What a surprise !	<u>Quelle surprise !</u>
a bit	<u>un peu</u>	I love	<u>j'adore</u>	What an idiot!	<u>Quel imbécile !</u>
really	<u>vraiment</u>	I don't like	<u>je n'aime pas</u>	It's brilliant !	<u>C'est le pied !</u>
a lot	<u>beaucoup</u>	I hate	<u>je déteste</u>	It's not my thing !	<u>Ce n'est pas mon truc !</u>
		I prefer	<u>je préfère</u>	It's a waste of time!	<u>C'est une perte de temps !</u>
		My favourite ... is	<u>ma/mon.... préféré(e) est</u>	It's a waste of money!	<u>C'est une perte d'argent !</u>
		I find that	<u>je trouve que</u>		

Lionheart Modern Languages Year 7-9 High Frequency Words – FRENCH CORE

CHALLENGE					
Time phrases/ Sequencers		Key verb phrases		Opinions	
today	<u>aujourd'hui</u>	you can see	<u>on peut voir</u>	for me	<u>d'après moi</u>
each/every	<u>chaque</u>	if it is	<u>si c'est</u>	I believe that	<u>je crois que</u>
currently	<u>actuellement</u>	there would be	<u>il y aurait</u>	according to...	<u>selon...</u>
the next day	<u>le lendemain</u>	there would not be	<u>il n'y aurait pas de</u>	I really hate	<u>j'ai horreur de</u>
in my dreams	<u>dans mes rêves</u>	you could	<u>on pourrait +infinitive</u>	I really love	<u>j'apprécie</u>
in an ideal world	<u>dans un monde idéal</u>	you couldn't	<u>on ne pourrait pas</u>	I can't stand	<u>je ne supporte pas</u>
when I was little	<u>quand j'étais petit ( e )</u>	you should	<u>on devrait +infinitive</u>	my friends say that	<u>mes copains disent que</u>
when I'm older	<u>quand je serai plus âgé ( e )</u>	you shouldn't	<u>on ne devrait pas</u>	my parents say that	<u>mes parents disent que</u>
for 5 years	<u>depuis 5 ans</u>	you must	<u>il faut +infinitive</u>	my teachers say that	<u>mes profs disent que</u>
since I was 5 years old	<u>depuis l'âge de 5 ans</u>	you must not	<u>il ne faut pas</u>	my mum tells me that	<u>ma mère me dit que</u>
				my dad tells me that	<u>mon père me dit que</u>
Quantifiers/ Intensifiers		Negatives		I would say	<u>je dirais que</u>
so	<u>si</u>	no...more/longer	<u>ne... plus</u>	I like /love it / them	<u>j'aime/j'adore ça</u>
rather	<u>plutôt</u>	nothing	<u>ne... rien</u>	I am for	<u>je suis pour</u>
extremely	<u>extrêmement</u>	no one/nobody	<u>ne... personne</u>	I am against	<u>je suis contre</u>
frankly	<u>franchement</u>	neither ...nor	<u>ne... ni... ni</u>	I agree with	<u>je suis d'accord avec</u>
hugely	<u>énormément</u>			I disagree with	<u>je ne suis pas accord avec</u>
incredibly	<u>incroyablement</u>			what I like is	<u>ce que j'aime c'est</u>
				it seems that	<u>il semble que</u>
				as far as... is concerned	<u>en ce qui concerne...</u>
Connectives		Comparisons/ Superlatives		Idioms	
nevertheless	<u>néanmoins</u>	best	<u>meilleur ( e )</u>	Although it is...	<u>Bien que ce soit...</u>
whereas	<u>tandis que</u>	worst	<u>pire</u>	That's life !	<u>C'est la vie !</u>
even if	<u>même si</u>	the best thing is	<u>la meilleure chose est</u>	What a shame !	<u>Quel dommage !</u>
furthermore	<u>de plus</u>	the most important	<u>la chose la plus</u>	What a disaster !	<u>Quelle catastrophe !</u>
since	<u>puisque</u>	thing is	<u>importante est</u>	What a pain !	<u>Quel ennui !</u>
not at all	<u>pas du tout</u>	what I like the most is	<u>ce que j'aime le plus est</u>	It was so boring !	<u>C'était la barbe !</u>
				I was over the moon!	<u>J'étais aux anges !</u>
				I was bored to death!	<u>Je m'ennuyais à mourir !</u>
				I've had enough!	<u>J'ai le cafard !</u>
				I was so fed up!	<u>J'en avais marre !</u>

## Lionheart Modern Languages Year 7-9 High Frequency Words – SPANISH CHALLENGE

CORE					
Time phrases / Sequencers		Key verb phrases		Connectives	
normally	normalmente	I have	tengo	but	pero
often	a menudo	I have not	no tengo	and	y
usually	generalmente	I am	soy / estoy	because	porque / ya que
from time to time	de vez en cuando	I am not	no soy / estoy	also	también
sometimes	a veces	I would like	me gustaría	however	sin embargo
tomorrow	mañana	it is	es / está	therefore	por lo tanto / por eso
next week	la semana próxima	it is not	no es / está	as	como
summer / autumn	en verano / otoño	there is	hay	or	o
winter / spring	en invierno / primavera	there is not	no hay	however / although	aunque
morning/afternoon/evening	por la mañana/ tarde/ noche	it will be	será	on the other hand	por otro lado
then	luego / después	I'm going to	voy a + infinitive	fortunately	por suerte
always/still	siempre / aún	you must	se debe + infinitive	unfortunately	por desgracia
at the moment	en este momento / ahora	you must not	no se debe + infinitive	in addition	además
later	más tarde / después	you can	se puede + infinitive		
in the future	en el futuro	you cannot	no se puede + infinitive	<b>Negatives</b>	
yesterday	ayer	it was	fue	not	no...
last night	anoche	it wasn't	no fue	never	no... nunca
last week	la semana pasada	there was	había	<b>Comparisons</b>	
last year	el año pasado	there wasn't	no había	more... than	más... que
two years ago	hace dos años	it would be	sería	less... than	menos... que
next	luego	it would not be	no sería		
firstly	primero	if i was rich	si fuera rico/a		
after	después (de)	in an ideal world	en un mundo ideal		
before	antes (de)	in my dreams	en mis sueños		
lastly	finalmente				
Quantifiers / Intensifiers		Opinions		Idioms	
Very	muy	In my opinion	en mi opinión	How great !	¡ Qué bien !
Too	demasiado	I think that	pienso que	How bad !	¡ Qué mal !
Quite	bastante	I like	me gusta(n)	How funny !	¡ Qué divertido !
A bit	un poco	I love	me encanta(n)	How cool !	¡ Qué guay !
so	tan	I don't like	no me gusta(n)	How boring / annoying !	¡ Qué aburrido! ¡Qué rollo !
Really	adjective ending -ísimo/a(s)	I hate	odio	How dreadful !	¡ Qué horror !
A lot	mucho	I prefer	prefiero	It's crazy !	¡ Es una locura !
		My favourite is	mi... favorito/a es...	It's a waste of time!	¡ Es una pérdida de tiempo !
		I find it	me parece	It's a waste of money!	¡ Es una pérdida de dinero !

## Lionheart Modern Languages Year 7-9 High Frequency Words – SPANISH CHALLENGE

CHALLENGE		Key verb phrases		Opinions	
<b>Time phrases / Sequencers</b>					
today each/every currently the next day in my dreams in an ideal world when i was little when i'm older for 5 years (now) since i was 5 years old	<b>hoy</b> <b>cada</b> <b>actualmente</b> <b>al día siguiente</b> <b>en mis sueños</b> <b>en un mundo ideal</b> <b>cuando era pequeño/a</b> <b>cuando sea mayor</b> <b>desde hace 5 años</b> <b>desde que tenía 5 años</b>	you can see if it is there would be there would not be you could you couldn't you should you shouldn't you must you must not	<b>se puede(n) ver</b> <b>si es</b> <b>habría</b> <b>no habría</b> <b>podría + infinitive</b> <b>no podría + infinitive</b> <b>debería + infinitive</b> <b>no debería + infinitive</b> <b>hay que + infinitive</b> <b>no hay que + infinitive</b>	for me as I see it I believe that according to... I really hate I really love I can't stand my friends say that my parents say that my teachers say that my mum/dad tell me that i would say I like/love it / them I am for I am against I agree with I disagree with what I like... it seems that as for me	<b>para mí</b> <b>a mi modo de ver / a mi juicio...</b> <b>creo que</b> <b>según / para...</b> <b>detesto</b> <b>me chifla/ me mola</b> <b>no aguanto / no soporto</b> <b>mis amigos dicen que</b> <b>mis padres dicen que</b> <b>mis profesores dicen que</b> <b>mi madre /mi padre me dice que</b> <b>diría que</b> <b>me gusta(n) / me encanta(n)</b> <b>estoy a favor de</b> <b>estoy en contra de</b> <b>estoy de acuerdo con</b> <b>no estoy de acuerdo con</b> <b>lo que me gusta..</b> <b>me parece que</b> <b>por mi parte / en cuanto a mí</b>
<b>Quantifiers / Intensifiers</b>		<b>Negatives</b>			
so rather extremely frankly entirely/ totally incredibly	<b>tan</b> <b>bastante</b> <b>extremadamente</b> <b>francamente</b> <b>totalmente</b> <b>increíblemente</b>	no...more/longer nothing no one/nobody neither... nor	<b>ya no...</b> <b>no... nada</b> <b>no... nadie</b> <b>no... ni...</b>		
<b>Connectives</b>		<b>Comparisons / Superlatives</b>		<b>Idioms</b>	
nevertheless whereas even if additionally since not at all	<b>aun así</b> <b>mientras que</b> <b>aunque</b> <b>asimismo</b> <b>dado que / ya que</b> <b>en absoluto</b>	best worst the best thing is the most important is what I like the most is	<b>mejor</b> <b>peor</b> <b>lo mejor es</b> <b>lo más importante es</b> <b>lo que más me gusta es</b>	No more excuses ! I am fed up ! What a shame ! What a disaster ! It sounds funny /curious ! A dream come true ! It is the most exciting thing I have ever seen! It has been the most important / unforgettable experience of my life! I have enjoyed it a lot	<b>¡ Basta de excusas !</b> <b>¡ Estoy harto/a !</b> <b>¡ Qué lástima !</b> <b>¡ Qué desastre !</b> <b>¡ Suena muy gracioso / curioso !</b> <b>¡ Es un sueño hecho realidad !</b> <b>¡ Es lo más emocionante que he visto jamás !</b> <b>¡ Ha sido la experiencia más importante / inolvidable de mi vida !</b> <b>¡ Lo he disfrutado muchísimo !</b>



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