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# Knowledge Organiser Booklet

Year 8  
Autumn Term

# Ways to use your knowledge organiser

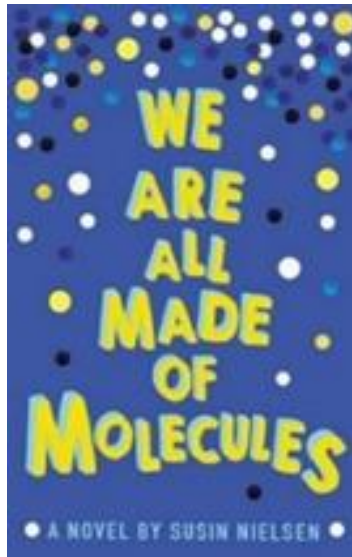
	Look, Cover, Write, Check	Self Quizzing	Mind Maps	Paired Retrieval	Definitions to Key Words
Step 1	<p>Look at and study a specific area of your knowledge organizer.</p> 	<p>Use your knowledge organizer to create a mini quiz. Write down questions using your knowledge organizer.</p> 	<p>Create a mind map 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

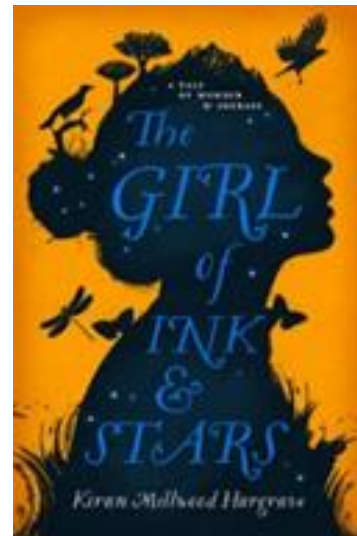
Recommended books to have read by the end of Year 8



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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

**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

<b>Equal division</b>	When a number line is divided into parts that are an equal distance apart.
<b>Interval</b>	The distance between two values or points. <i>This might or might not include the end values.</i>
<b>Scale</b>	A (linear) scale with equal divisions for equal values.
<b>Equal division</b>	When a number line is divided into parts that are an equal distance apart.

<b>Fraction</b>	(from Latin fractus, "broken") represents a part of a whole or, more generally, any number of equal parts.
<b>Equivalent</b>	<b>Equivalent</b> is to have the same value even though it may be presented differently.
<b>Decimal</b>	A <b>decimal</b> is a fraction written in a special form. The <b>decimal</b> system, therefore, has 10 as its base and is sometimes called a base-10 system.
<b>Percentage</b>	(from Latin per centum "by a hundred") is a number or ratio expressed as a fraction of 100. It is often denoted using the <b>percent</b> sign, "%".
<b>Convert</b>	To change the form of a measurement, different units, without a change in the size or amount.

<b>Factor</b>	An integer that divides exactly into that number
<b>Product</b>	The result of multiply factors together
<b>Scaling</b>	The act of multiplying by a scale factor

$$2 \times 3 = 6$$

Diagram illustrating multiplication: 2 and 3 are labeled as **Factor** (with red arrows pointing to them), and 6 is labeled as **Product / Multiple** (with a red arrow pointing to it).

Key conversions to remember:

$$1 = 1.00 = 100\%$$

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

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

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

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



Key terms	Definitions
HTML	Hyper Text Mark-up Language: the language used to write and display web page documents.
Website	A collection of web pages and related content.
Web page	A hypertext document connected to the world wide web.
Web browser	The software which displays a webpage or website on a computer
URL	Uniform Resource Locator – web address
Hyperlink	A word/phrase/image that you can click on to jump to a new web page or document.
Navigation bar	A user interface element within a web page that contains links to other sections of the website.
Search bar	The place where items being searched for are entered
Search term	Keywords that need to be searched for on web pages
Child pages	Related subpages from the main results page that a searcher might find useful
Crawler/spider	A program a search engine uses to find content on the world wide web.
Spam	Irrelevant messages sent to a large number of internet users for illegitimate advertising.

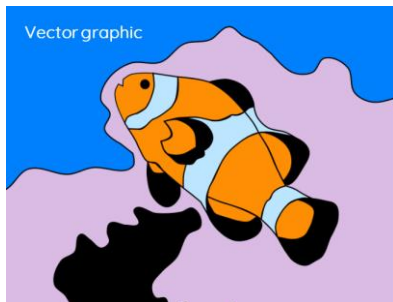


Key terms	Definitions
<html>	States that the document is a HTML document.
<body>	States that the information appears in the body of the page.
<h1>	States that the text will appear as a prominent heading.
<p>	States that this is the beginning of a new paragraph.

```
<html>
  <body>
    <h1>Hello world</h1>
    <p>This is my first webpage</p>
  </body>
</html>?
```



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



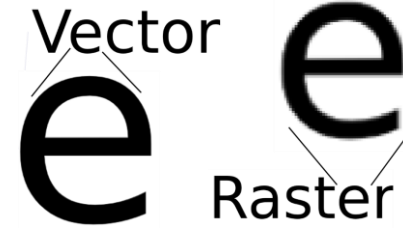
Six-cornered star  
Rounded corners  
Green fill  
Red dotted stroke



Arc  
Pink fill  
Black stroke

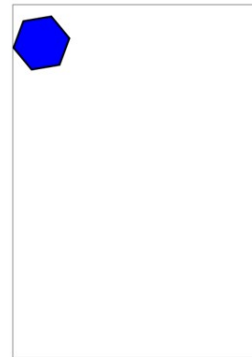


Three-cornered polygon  
Rounded corners  
Yellow fill  
Blue dashed stroke

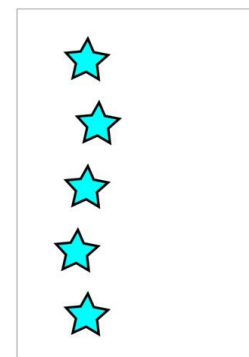


Vector	Raster
Made up with paths	Made up with pixels
Simple images	Detailed/complex images
Maintains image quality when scaled	Loses image quality when scaled
Used for logos, icons and illustrations	Used for real photos

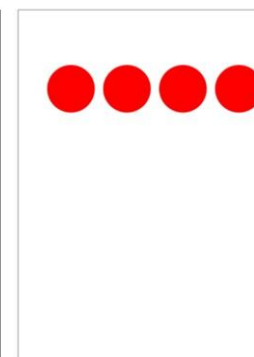
### Alignment



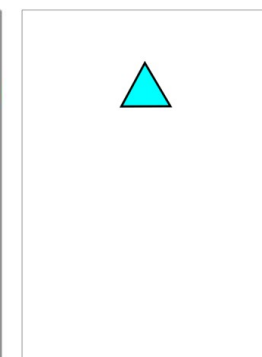
Align left edges to page



Distribute centres equidistantly vertically



Distribute centres equidistantly horizontally



Centre on vertical axis to page

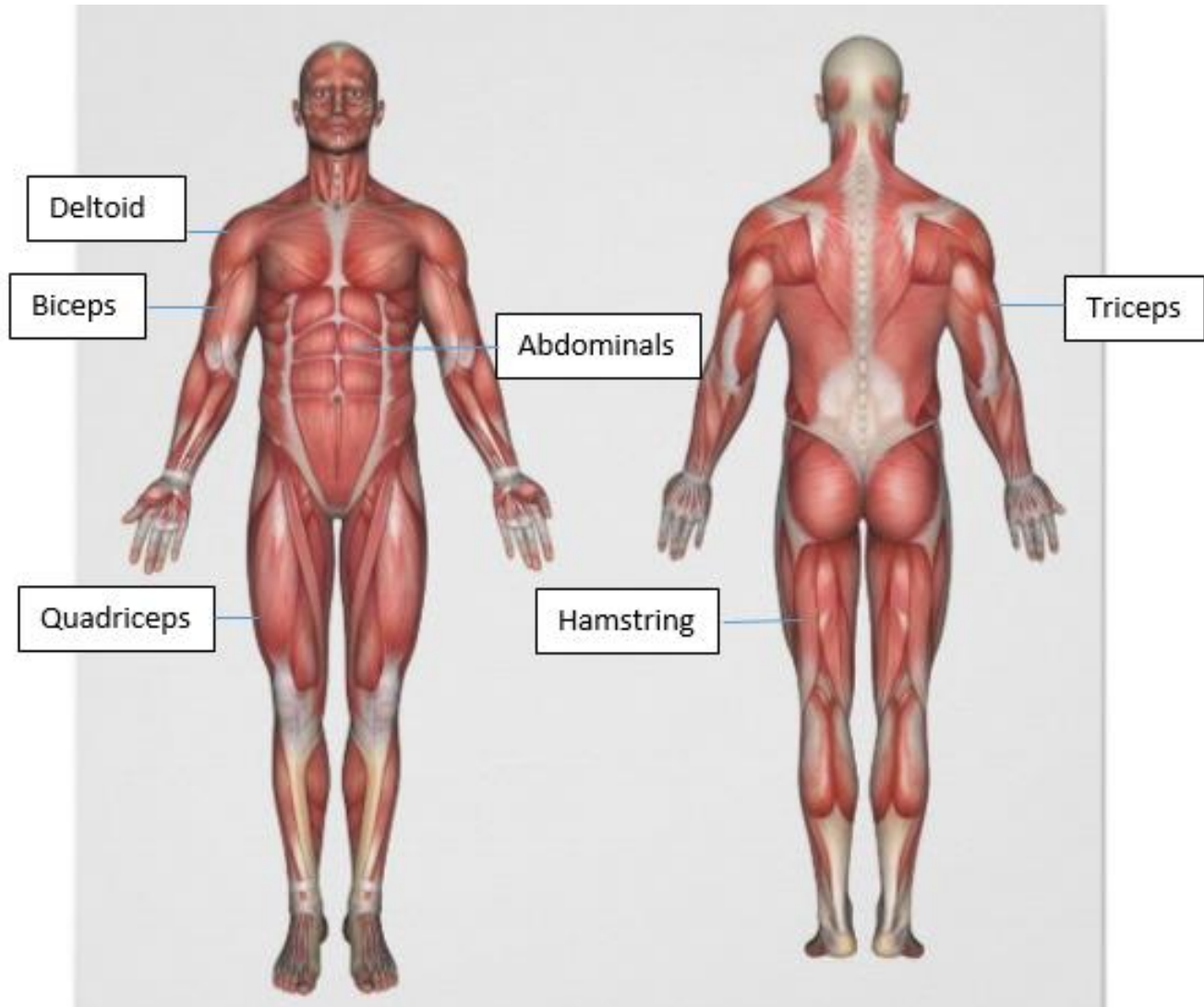
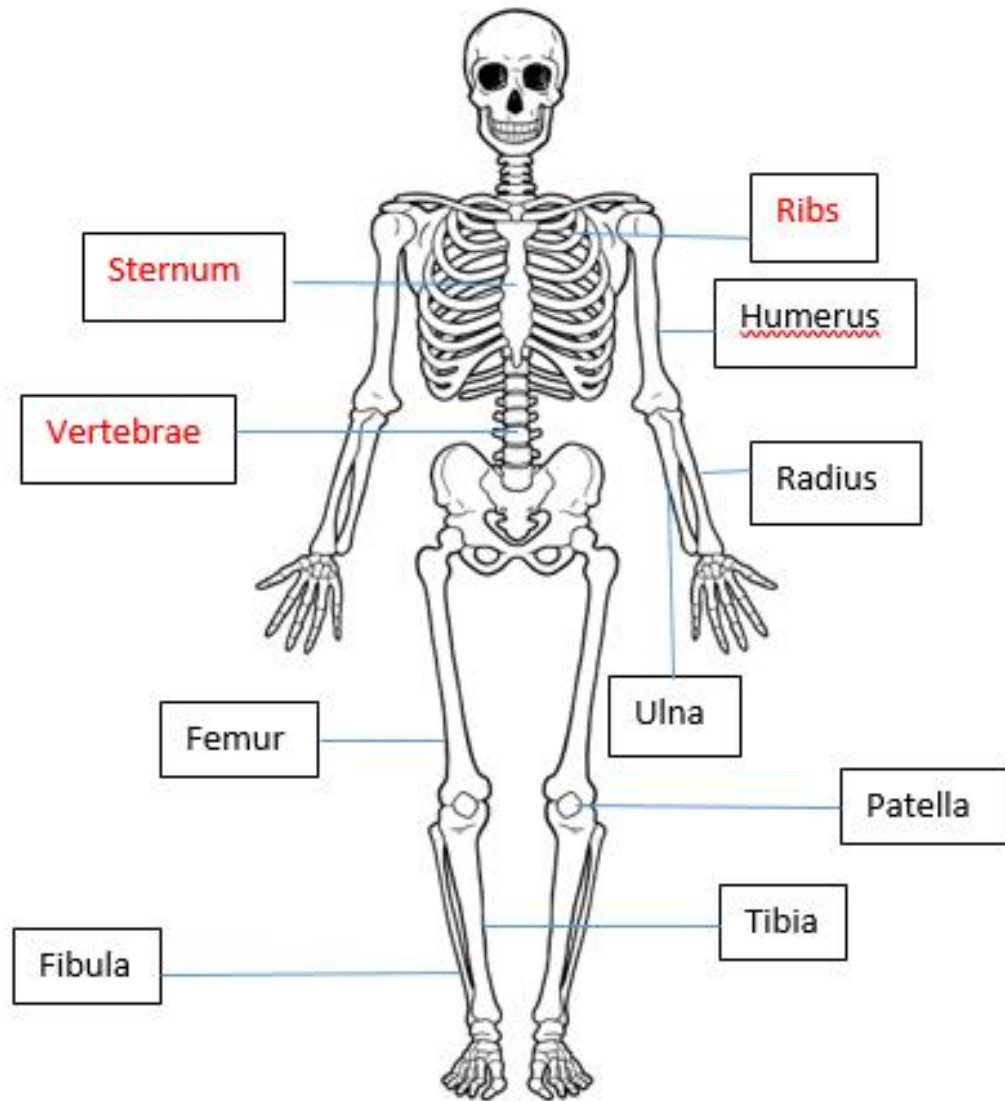


# Unit 1 Physical Education- Knowledge Organiser: Staying safe in Physical Activity

Key learning content	Description / Explanation/ Example
<p><b>Stages of a warm up</b></p> <ul style="list-style-type: none"> <li>• Stage 1 – pulse raiser (5 mins)</li> <li>• Stage 2 – mobility exercises</li> <li>• Stage 3 – stretching (10s+)</li> <li>• Stage 4 – dynamic movement</li> <li>• Stage 5 – skills practice</li> <li>• Names of muscles</li> </ul>	<p><b>Examples of warm up</b></p> <ul style="list-style-type: none"> <li>• Stage 1 – (Low intensity exercise) A 5 minute jog around a netball court.</li> <li>• Stage 2 – (To a move a joint through its full range of motion) Arm circles, ankle circles, hip circles.</li> <li>• Stage 3 – (Static or dynamic stretches) quadriceps stretch.</li> <li>• Stage 4 – (high intensity exercise) Shuttle runs</li> <li>• Stage 5 – (Practice the skills you will be using) Chest/ shoulder passes (netball)</li> <li>• Names of muscles: quadriceps, hamstrings, biceps, triceps</li> </ul>
<p><b>Benefits of a warm up</b></p> <ul style="list-style-type: none"> <li>• Increase temperature and HR</li> <li>• Decreased chance of injury</li> <li>• Increased oxygen transport</li> <li>• Increased flexibility</li> <li>• Increased speed / strength of muscle contractions</li> <li>• Mental preparation</li> </ul>	<p><b>Benefits explained</b></p> <ul style="list-style-type: none"> <li>• Allow more oxygen to reach muscles</li> <li>• Better for overall health. Can maintain involvement in physical activity .</li> <li>• More oxygen gets to muscles, so can create more energy.</li> <li>• Increased flexibility can enhance performance (Reach higher to catch a ball)</li> <li>• Faster/ stronger movements - perform skills more effectively.</li> <li>• Mental preparation – feel more alert/ focussed/ confident/ concentrating/ motivated/ relaxed etc.</li> </ul>
<p><b>Stages of a cool down</b></p> <ul style="list-style-type: none"> <li>• Stage 1 – Low intensity exercise</li> <li>• Stage 2 – Stretching</li> <li>• Names of movements – flexion and extension</li> </ul>	<p><b>Examples of cool down</b></p> <ul style="list-style-type: none"> <li>• Stage 1 – Steady jog on netball court, can move onto a walk</li> <li>• Stage 2 – (Static stretches) Quadriceps stretch, hamstring stretch.</li> <li>• Flexion = bending at an elbow or knee. Extension = straightening at an elbow or knee</li> </ul>
<p><b>Benefits of cool down</b></p> <ul style="list-style-type: none"> <li>• Gradually lower heart rate</li> <li>• Gradually lower breathing rate and temperature.</li> <li>• Speeds up removal of waste products.</li> <li>• Speeds up recovery</li> <li>• Names of joints</li> </ul>	<p><b>Benefits explained</b></p> <ul style="list-style-type: none"> <li>• Gradually lower heart rate from 150bpm when working to 70bpm when resting.</li> <li>• To maintain blood flow/ oxygen transport/ carbon dioxide removal</li> <li>• Carbon dioxide and lactic acid removed faster. Reduces aching, recovery is faster.</li> <li>• Joints: Elbow and knee = hinge. Shoulder and hip = ball and socket</li> </ul>
<p><b>Preparing for physical activity</b></p> <ul style="list-style-type: none"> <li>• Wear appropriate PE kit</li> <li>• Long hair tied back</li> <li>• Jewellery removed</li> <li>• No chewing gum or food</li> <li>• Water for hot weather</li> </ul>	<p><b>Preparation explained</b></p> <ul style="list-style-type: none"> <li>• Sports trainers, shorts, t-shirt to avoid injury yourself or others.</li> <li>• So you can see when playing</li> <li>• Earrings taken out, bracelets off to avoid injuring yourself or others.</li> <li>• To avoid chocking when active.</li> <li>• To stay hydrated /avoid headaches/ feeling weak</li> </ul>
<p><b>Risks and hazards to check for</b></p> <ul style="list-style-type: none"> <li>• Area free from rubbish</li> <li>• Equipment tidied away</li> <li>• Equipment undamaged</li> <li>• Surface dry/ undamaged</li> </ul>	<p><b>Hazards explained</b></p> <ul style="list-style-type: none"> <li>• Check there is no debris such as broken glass on football pitch, to avoid someone injuring themselves.</li> <li>• Check there are no equipment such as bibs left out on a basketball court from a previous activity, to avoid someone slipping/ tripping over when warming up.</li> <li>• Check the trampoline is up properly, to avoid injury to a player.</li> <li>• Check there is no water spilled on the badminton court, to avoid a player slipping and hurting an arm.</li> </ul>

## Year 8: Physical Activity- Key terminology

Key word	Description
Aerobic	Use of oxygen for the duration of the exercise. Usually at moderate intensity at a continuous rate e.g. long distance running. Can be performed for a long period of time.
Anaerobic	Exercise which creates energy without the use of oxygen. Usually high or very high intensity for a short period of time. E.g. sprinting up a hill.
Flexibility	Range of movement available around a joint.
Mobility	The ability to move freely.
Dynamic movement	Movements performed at high speed/ intensity.
Oxygen	The gas we breathe in, transport and use to create energy.
Oxygen transport	Oxygen is transported through blood vessels within the red blood cells.
Gaseous exchange	The movement of oxygen and carbon dioxide within the lungs, muscles and vital organs.
Contraction	A muscle contracts and (usually) gets shorter to apply a force and create movement.
Heart rate	Number of heart beats per minute.
DOMS	Delayed Onset Muscle Soreness. Usually occurs 1 or 2 days after high intensity exercise.
Lactic acid	A waste product produced in the muscle tissues during anaerobic exercise.
Waste products	Bi-products of aerobic exercise are carbon dioxide and water. Lactic acid is also a bi-produce of anaerobic exercise.
Carbon dioxide	We produce carbon dioxide as a waste product. We transport it back to the lungs and breathe it out.
Recovery process	Returning the body to resting levels.
Intensity	How hard you work.
Team work	Working together to achieve a common goal. Requires good communication skills.
Reciprocity	Working positively with others as a group.
Demonstration	Showing someone how something should be done.
Communication	Transferring information by speaking, writing, demonstrating and using body language.
Risk	The chance or probability that someone will be harmed.
Hazard	A source of potential danger.
Injury	Damage or harm to the body.
Sprain	Damage to a ligament.
Mental Preparation	Getting your mind ready for competition through visualising the skills and imagining yourself being successful.



	Description/ Location/ Role
Muscle pair	Muscles that work together to produce a movement. Also called antagonistic pairs.
Hamstrings	A group of muscles located at the back of your thigh. Muscle pair with quadriceps
Quadriceps	A group of muscles located at the front of the thigh. Muscle pair with hamstrings
Biceps	A muscle located at the front of your upper arm.
Triceps	A muscle located at the back of your upper arm.
Abdominals	A group of muscles at the front of your body between the ribs and pelvis.
Deltoids	A group of muscles located at the shoulder.
Femur	A bone in your thigh
Tibia	A bone in your lower leg on the inside
Fibula	A bone in your lower leg on the outside
Patella	A small bone at the front of your knee
Humerus	A bone in your upper arm
Ulna	One of 2 bones in your forearm. The ulna runs down to your little finger
Radius	One of 2 bones in your forearm. The radius runs down to your thumb.
Ribs	Lots of bones in the chest protecting your lungs.
Vertebrae	Lots of bones in your back, sometimes referred to as your spine.
Sternum	Bone down the front of your chest protecting your heart.
Flexion	Bending a joint. This occurs when the angle of a joint decreases. For example, the elbow flexes when performing a biceps curl.
Extension	Straightening a joint. This occurs when the angle of a joint increases, for example, at the elbow when putting a shot.
Contraction	When a muscle produces a force which pulls on a bone.
Agonist	The name given to a muscle which is contracting and causing a movement/ producing a force.
Antagonist	The name given to a muscle which is relaxing while it's paired muscle contracts to perform an action.
Hinge Joint	These include the elbow and knee. They allow flexion and extension to occur.
Ball and Socket Joint	These include the shoulder and hip and allow flexion, extension, abduction, adduction, rotation and circumduction.
Abduction	Movement away from the midline of the body. This occurs at the hip and shoulder joints during a star jump.
Adduction	Movement towards the midline of the body. This occurs at the hip and shoulder, returning the arms and legs back to the centre from a star jump position.
Circumduction	This occurs at the shoulder and hip and involved the arm or leg moving in a circle.
Rotation	This is where the arm or leg moves in a twisting movement around the shoulder or hip. E.g. twisting foot to side to pass a football.
Concentric	A type of muscle contraction where the muscle shortens while it is contracting. E.g. biceps when lifting a weight.

## Homework 1:

Learn the information on this knowledge organiser.

## Drama Year 8 – Topic 1 Blood Brothers



### 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.



### Duologue

Duo = 2

So it is a play or part of a play with speaking roles for **only two actors**

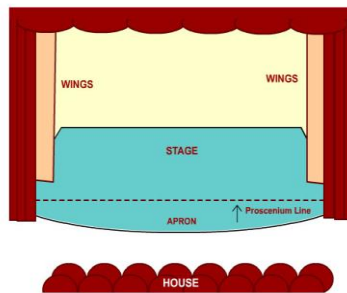
### Improvisation

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

### 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



Proscenium Arch stage

## Blues Music

The Blues is the name given to a style of music created by African Americans at the end of the 19<sup>th</sup> century.

### Melodic Structure (AAB)

**A:** They call it stormy, but Tuesdays just as bad.  
**A:** They call it stormy, but Tuesdays just as bad.  
**B:** Wednesdays worst, and Thursdays also sad.

### Improvisation



### Instruments

**Percussion:** Drum Kit

**Strings:** Bass guitar or double bass often used to play the bass line.

**Brass:** Trumpet and trombone often used for melody.

**Keyboards** often used to play bass, chords and/or melody.

**Voice** – Any kind of voice can sing the blues.

### Swing & Off Beat Syncopation

#### Swing



The rhythm is performed with a long then short duration.



#### Off Beat Syncopation

Performing louder off the beat

1 & 2 & 3 & 4 &

### 7<sup>th</sup> Chord

When an extra note is added to a chord, 7 notes above the root. In this case the F is added to the G chord making a G7.



### 12 Bar Chord Progression

I= Tonic	V= Dominant	IV= Subdominant	I
I	I	I	I
IV	IV	I	I
V	IV	I	I

**Turnaround** = where you swap chord I with chord V in bar 12.

### Call & Response

Where the 2<sup>nd</sup> phrase is a response to the 1<sup>st</sup> phrase of the melody.

Call	Response
	
	
	

### Musical Elements

Dynamics	How loud or quiet the music is
Duration	How long or short a note is
Tempo	How fast or slow the music is
Pitch	How high or low the music/note is
Timbre	The sound quality of an instruments
Structure	The layout of music
Texture	How thick or thin the music is (how many instruments)



## Getting Started



Click this



Then this...



Choose 'Empty Project', and then either 'Software Instrument' (to use the keyboard) or 'Microphone' to record live sounds with a microphone.

## Music Knowledge Organiser

- Garage Band -

### Save!!

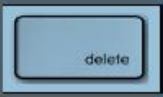


## Help, I Can't Hear Anything!?!?

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

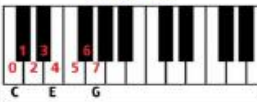
## How Do I Delete? =

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



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

Major Keys	I	ii	iii	IV	V	vi	vii°
C	C	Dm	Em	F	G	Am	B°
C#	C#	D#m	E#m	F#	G#	A#m	B#°
D	D	Ebm	Fm	G	A	Bm	C°
D#	D#	E#m	F#m	G#	A#	B#m	C#°
E	E	Fm	Gm	A	B	Cm	D°
E#	E#	F#m	G#m	A#	B#	C#m	D#°
F	F	Gm	Am	Bb	C	Dm	E°
F#	F#	G#m	A#m	B	C#	D#m	E#°
G	G	Am	Bm	C	D	Em	F°
G#	G#	A#m	B#m	C#	D#	E#m	F#°
A	A	Bm	Cm	D	E	Fm	G°
A#	A#	B#m	C#m	D#	E#	F#m	G#°
B	B	Cm	Dm	E	F	Gm	A°
B#	B#	C#m	D#m	E#	F#	G#m	A#°

Chords In All Minor Keys

Minor Keys	i	ii°	III	iv	v	VI	VII
Cm	Cm	D°	Eb	Fm	Gm	Ab	Bb
C#m	C#m	D#°	E#	F#m	G#m	A#	B
Dm	Dm	E°	F	Gm	Am	B	C
D#m	D#m	E#°	F#	G#m	A#m	B#	C#
Ebm	Ebm	F°	Gb	Ab	Bbm	Cb	D
Em	Em	F°	G	Am	Bm	C	D
Fm	Fm	G°	Ab	Bbm	Cm	D	E
F#m	F#m	G#°	A	Bm	C#m	D#	E
Gm	Gm	A°	Bb	Cm	Dm	Eb	F
G#m	G#m	A#°	B#	C#m	D#m	E#	F#
Abm	Abm	Bb°	Cb	Dbm	Ebm	Fb	G
Am	Am	B°	C	Dm	Em	F	G
A#m	A#m	B#°	C#	D#m	E#m	F#	G#
Bbm	Bbm	C°	D	Em	Fm	G	Ab
Bm	Bm	C°	D	Em	Fm	G	Ab







# Y8 Art & Design–Pop Art Portraits

EXPLORE	DEVELOP	CREATE	EVALUATE
Pupils will explore the techniques and work of Pop Artists such as Andy Warhol and Michael Craig Martin, whilst using the over arching theme of Portraiture and Who we are	They will develop ideas through experiments with a range of 2D and 3D materials using personal objects, inspirational people and masks as inspiration.	Pupils will create a series of observational drawings in a range of media including pencil and collage and create a mask inspired their explorations.	Pupils will reflect on and retrieve knowledge and skills learnt and developed to bring together a final outcome through sketchbook work and 3D outcomes.

ESSENTIAL KNOWLEDGE- You will Learn That	Techniques and Processes- You will learn how
<p>Recording from Observation Primary source observational drawing: drawing something real in front of you. Secondary source observational drawing: drawing something from a picture.</p> <p><b>Portraiture</b> is a very old art form going back at least to ancient Egypt.</p>	<p><b>Add Form to Drawing</b></p> <ul style="list-style-type: none"> <li>Add a wide range of tonal shading when drawing a 3D object.</li> <li>Pressing harder and lighter with a pencil creates the different tones</li> <li>Shading straight across a surface will make an item appear flat</li> <li>Use the direction of your pencil to help enhance the 3D surface</li> <li>Including shadows will also help make objects appear 3D and separate objects from each other</li> </ul>

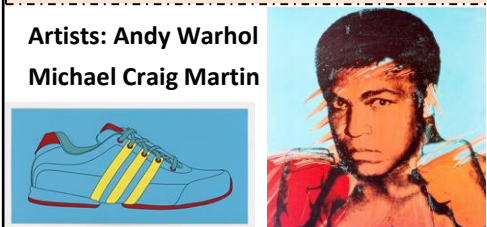
Key Practitioners – Artists, Designers, Movements and Themes	Materials/ Mediums/ Ingredients – Origins and Properties	Topic Terminology
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**Pop Art**  
a deconstruction of images seen in popular culture eg. television, comic books, or films



**A portrait** is a painting, photograph, sculpture, or other artistic representation of a person, in which the face and its expressions are predominant.

**Still life** - a collection of inanimate objects (things that are not living) arranged together in a specific way.



**Collage**  
visual elements are combined to create a new image that conveys a message or idea. layering

**Value**  
the lightness or darkness of a colour.

**Hue**  
origin of the colours (true colour)

**Symbolism**  
using symbolic images and indirect suggestion to express mystical ideas, emotions, and states of mind.

**Grid**  
involves drawing a grid over your reference photo, and then drawing a grid of equal ratio on your work surface

**Juxtaposition**  
placing two or more things side by side

Word	Definition
viewfinder	• A window to select focus area for drawing
composition	• The position and layout of shapes on the paper
line	• Defines shape, the outer edges of something
tone	• How dark or light a shape is
shape	• The outline of the still life objects
form	• Appearing three-dimensional
pattern	• A repeated shape or line
texture	• The feel or appearance of a surface, how rough or smooth it is






EXPLORE	DEVELOP	CREATE	EVALUATE
This is an Food Tech project where pupils will explore Diet, activity and health through exploring knowledge and theory of food tech practice	Pupils will develop their skills of cooking through various meals and apply their knowledge of healthy diet. <b>understand</b> basic healthy eating principles, including the Eatwell Guide.	To learn how to modify a recipe to create it more suitable for individual tastes and dietary needs.	To evaluate food products using the five senses and consider improvements that could be made.

**ESSENTIAL KNOWLEDGE- You will Learn That** **Techniques and Processes- You will learn how**

There are health issues related to dietary excess or deficiency. It is important to include a variety of different activity in everyday living, supporting physical, social and mental wellbeing.

**A balanced diet**  
A balanced diet is based on the Eatwell Guide. An unbalanced diet can lead to dietary related diseases.




**Diet and health**  
There is a link between a poor diet, and the risk of developing some diseases.

This includes the risk of:

- cancer;
- coronary heart disease (CHD);
- bone health;
- anaemia.

**Getting ready to cook**  
Remove blazers/jumpers and roll up long sleeves.  
Tie up long hair and tuck in ties or head coverings.  
Thoroughly wash and dry hands.  
Put on a clean apron



**Diet and CHD**  
80% of CHD and strokes could be prevented by changes to lifestyle, such as diet, physical activity and smoking.

Changes to the diet such as:  
increasing oily fish intake;  
reducing salt intake;  
increasing fruit and vegetables;  
decreasing alcohol consumption.

**Bone health**  
Calcium is important for strong bones. Vitamin D is needed for calcium to be absorbed from food.

**Anaemia**  
Iron is vital for making red blood cells. Iron from the diet forms haemoglobin, which carries oxygen in the blood. Anaemia develops if the body's stores of iron are too low.


**Key Practice Knowledge** **H&S** **Key terms**

**Malnutrition**  
Having intakes of energy and/or nutrients below or in excess of needs for long periods of time can affect health.

The risk of **malnutrition** is increased by:

- increased requirements for some nutrients;
- restricted range of foods;
- reduction in available income;
- very low income;
- medical conditions;
- psychological conditions.

**Over nutrition**  
The most common over nutrition problem is obesity caused by too much energy being consumed, or high levels of inactivity



**Body Mass Index**  
BMI measures your height and weight to work out if your weight is healthy.

Recommended BMI range (adults)	
Less than 18.5	Underweight
<b>18.5 to 25</b>	<b>Desirable</b>
25-30	Overweight
30-35	Obese (Class I)
35-40	Obese (Class II)
Over 40	Morbidly obese

**Deficiency diseases:** Adverse bodily conditions caused by a lack of a nutrient.

**Iron deficiency anaemia:** A condition caused by insufficient iron in the body. Common symptoms include tiredness and lethargy.

**Kwashiorkor:** A severe type of protein-energy malnutrition.

**Malnutrition:** When the diet does not contain the right amount of nutrients.

**Marasmus:** A severe type of energy malnutrition in all forms, including protein.

**Moderate activity:** Will raise your heart rate, and make you breathe faster and feel warmer.

**Obesity:** Extreme overweight. Obese adults have a BMI of 30 or above.

**Sedentary behaviour:** Requires little energy expenditure and includes sitting or lying down to watch television, use the computer, read, work or study, and sitting when travelling to school or work.

**Vigorous activity:** Makes you breathe hard and fast.

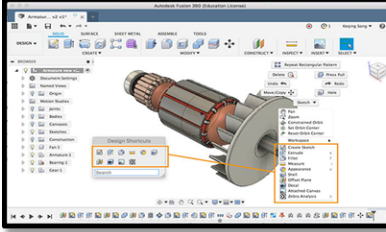


# Y8 Product Design – Phone Holders

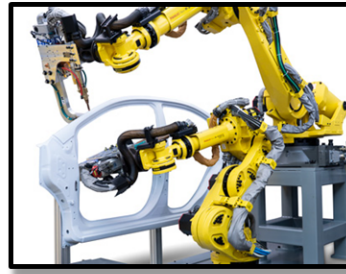

EXPLORE	DEVELOP	CREATE	EVALUATE
Students will <b>explore</b> thermoplastics and thermosetting plastics as well as ferrous / non-ferrous metals and the properties and characteristics of each; write a specification, learn how to sketch in 3D and how to produce a neat and accurate 3D final idea drawing.	Develop practical skills with hand tools and workshop machines – including doing a simple CAD/CAM process (drawing in CAD and cutting using the laser cutter); health and safety and development of independent practice	Students will design and create a plastic, metal and wooden phone holder using a wide range of workshop tools and equipment as an introduction to resistant materials. They will have a design folder full of research, drawings and written analysis that they will have created.	Students will <b>evaluate</b> their progress by undertaking self and peer assessment of the ideas drawings pages, final idea page, card modelling page and their practical work.

**ESSENTIAL KNOWLEDGE-** You will Learn That Techniques and Processes- You will learn how to use

**CAD (Computer Aided Design)** is when you use a computer to **aid you to draw** a design. We used 2D Design to draw phone holder designs.



**CAM (Computer Aided Manufacture)** is when you use a computer to **aid you to manufacture** a design. We used a laser cutter to cut the phone holder designs. Other examples are robots welding cars in factories, 3D printing.

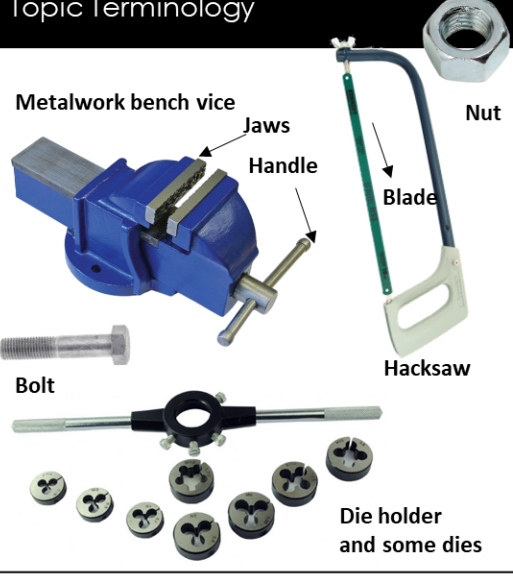



**Strip heater (or line bender)**

**Materials– Origins and Properties** **Materials – Origins and Properties**

Thermoplastics	Thermosetting Plastics	Ferrous metals	Non-ferrous metals
<ul style="list-style-type: none"> <li>Can be heated &amp; melted over and over again</li> <li>Therm means heat</li> <li>Fairly easy to recycle – difficult to sort into groups before melting</li> </ul>	<ul style="list-style-type: none"> <li>Once poured into a mould it sets. Irreversible.</li> <li>Set means it sets</li> <li>Difficult to recycle – it can be crushed into plastic 'gravel' and used in building sites</li> </ul>	<ul style="list-style-type: none"> <li>Contains iron</li> <li>Magnetic</li> <li>Rusts in water / air</li> </ul>	<ul style="list-style-type: none"> <li>Does not contain iron</li> <li>Usually non-magnetic</li> <li>Can corrode to form an oxide</li> </ul>
<b>Acrylic:</b> car lights, baths, plastic fish tanks, shop signs	<b>Melamine formaldehyde:</b> picnic bowls, plates, worksurfaces	<b>Mild steel (low carbon) :</b> table legs, steel beams in houses	<b>Aluminium:</b> drink cans, ladders, kitchen foil, window frames
<b>HIP</b> (high impact polystyrene: yogurt pots, coffee cups	<b>Epoxy resin:</b> 2 part glue e.g. Araldite, glues most materials	<b>Stainless steel:</b> sinks, saucepans, knives, forks	<b>Copper:</b> electrical wiring, water pipes, hot water tanks
<b>HDPE</b> (high density polythene): washing baskets	<b>Urea formaldehyde:</b> white electrical sockets	<b>Cast iron:</b> manhole covers, pans, gates, car engine blocks	<b>Tin:</b> food cans, electrical solder, takeaway trays
<b>Polypropylene:</b> chairs, casings for drills, electrical tools	<b>Phenol formaldehyde:</b> snooker balls, bottle caps	<b>High carbon steel:</b> chisels, knives, railway lines	<b>Zinc:</b> used to galvanise steel to make it rust proof e.g. cars
		<b>High speed steel:</b> drill bits	<b>Gold &amp; silver:</b> jewellery & electronic circuits

**Topic Terminology**



**Keywords – you must know what these all mean (in a D&T context) and be able to spell them:**

CAD	Thermoplastic
CAM	Function
Consumer	Laser cutter
Aesthetics	Acylic
Die holder	Friction
Conductor	Insulator
Therm	Model
Thread	Prototype
Solvent	Geometric
Ferrous	Non-ferrous
Burr	Wet & dry paper
Hacksaw	Buffing machine
Emery cloth	Specification
Thermosetting plastic	Charles Rennie Mackintosh



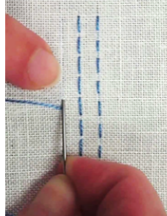



# Y8 Textiles – Monsters

EXPLORE	DEVELOP	CREATE	EVALUATE
Pupils will explore the techniques and work of Pop Artists such as Andy Warhol and Michael Craig Martin, whilst using the over arching theme of Portraiture and Who we are	They will develop ideas through experiments with a range of 2D and 3 D materials using personal objects, inspirational people and masks as inspiration.	Pupils will create a series of observational drawings in a range of media including pencil and collage and create a mask inspired their explorations.	Pupils will reflect on and retrieve knowledge and skills learnt and developed to bring together a final outcome through sketchbook work and 3D outcomes.

ESSENTIAL KNOWLEDGE- You will Learn That Techniques and Processes- You will learn how to use

Running stitch is a basic embroidery stitch that most learners will start with. The needle is pushed down into the fabric before coming back up in the same movement if possible. The needle and thread are then pulled upwards through the fabric to leave a flat stitch on the surface. This action is then repeated






Zig zag adjuster  
1= straight  
2 - 5 = zigzag

Length of stitch adjuster  
1-5 NEVER 0

Tie dye is a technique using elastic bands which block dye, to create patterns.




Key Practitioners Materials & Equipment Topic Terminology













**Jon Burgerman & Louise Evans**


**Jon Burgerman is a UK born, trained at NTU, NYC based artist, famed for his instantly recognisable drawings, doodles, characters and murals.**


Welsh fashion designer and textile artist **Louise Evans** who goes by the name of **Felt Mistress**; uses felt and other fabrics, to bring to life imaginative characters of all different shapes and sizes.

Her creations have appeared in television commercials, shop window displays, exhibitions and music videos across the world.



pins	Embroidery thread	unpicker	Ironing board	Sewing needle	Elastic bands
					
Sewing machine	Bobbin	Iron	Tjanting tool	Batik Pot	Thread
					





WHIP STITCH APPLIQUE

**Textiles** is the study of fibres and fabrics.

**Fibres** are the filaments or staples that make a yarn.

**Fabric** is made from yarn that is held together by weaving, knitting or felting.

**Cotton** is a natural, staple fibre that comes from the seedpod (boll), of the cotton plant and is woven or knitted to make many fabrics like gingham, calico and denim.

**Felt** is a dense, non-woven fabric and without any warp or weft. Instead, felted fabric is made from matted and compressed fibres or fur with no apparent system of threads.

**Appliqué** is ornamental [needlework](#) in which pieces or patches of fabric in different shapes and patterns are sewn or stuck onto a larger piece to form a picture or pattern. It is used as decoration, especially on garments. The technique is either hand stitching or machine.

**Batik** is an Indonesian technique of wax-resist dyeing.

Be REFLECTIVE: Review your learning



# KNOWLEDGE ORGANISER

## BIOLOGY: ORGANISMS - DIGESTION

Name: \_\_\_\_\_

### Nutrients and food tests

To prepare a food solution: 1) crush the food using a pestle and mortar and 2) add a few drops of water, and mix well.

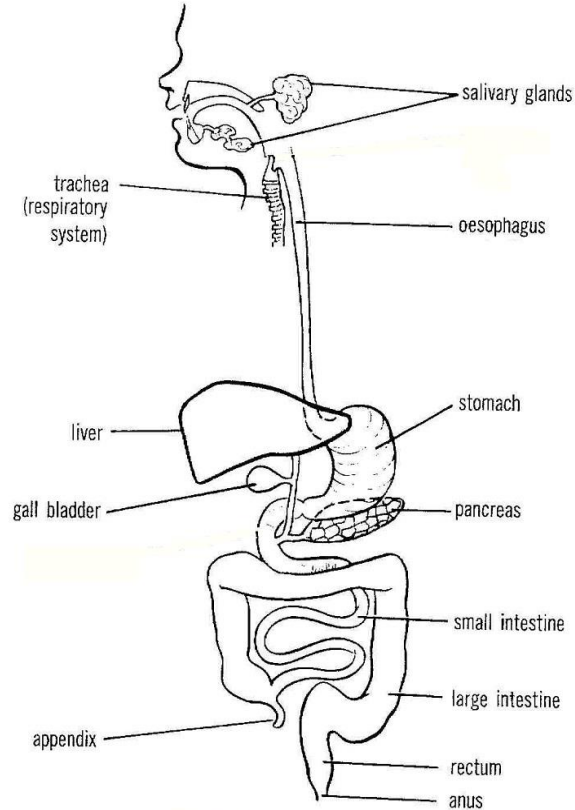
<b>Carbohydrates:</b> <b>Simple</b>	Main source of energy found in sugary foods such as sugar and fruit where they provide a quick source of energy.	<b>Sugar</b> 1) Add a few drops of Benedicts solution 2) Heat test tube in a water bath 3) If turns orange-red, contains sugar
	<b>Complex</b>	Found in starchy foods such as pasta and bread, these are broken down by the body so energy is released slowly.
<b>Lipids</b>	Fats and Oils. 1) Provide with a store of energy, 2) Keep us warm 3) protect our organs from damage	<b>Starch</b> 1) Add a few drops of iodine solution 2) Turns blue/black, contains starch
<b>Proteins</b>	Repair body tissue and make new cells for growth. Muscles, organs and immune system mainly made of protein	1) Rub some food on filter paper 2) If the paper has gone translucent it contains lipids
<b>Proteins</b>	Repair body tissue and make new cells for growth. Muscles, organs and immune system mainly made of protein	1) Add a few drops of copper sulfate solution to your food solution 2) Add a few drops of sodium hydroxide solution 3) Turns purple, food contains protein

<b>Vitamins and Minerals</b>	Only need tiny amounts but are essential for keeping us healthy, Fruits and vegetables are a good source.
<b>Water</b>	Needed in all cells and body fluids
<b>Fibre</b>	Provides bulk to the food to keep it moving through the gut. Stops constipation

### Unhealthy diet

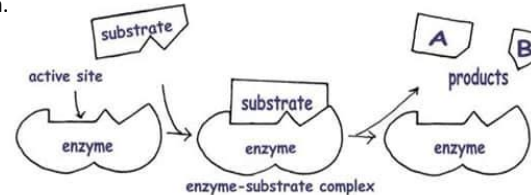
<b>Starvation</b>	When people do not get enough food. Starvation is an extreme example of a lack of food. Leads to you being underweight. Underweight people suffer from health problems such as poor immune system, lack energy and often tired and suffer from a lack of vitamins or minerals.
<b>Overweight</b>	When your body stores too much fat. Caused by eating too much and doing little exercise
<b>Obese</b>	This is when a person is extremely overweight. Obese people have an increased risk of heart disease, stroke, diabetes and some cancers.
<b>Deficiency</b>	When a person doesn't have enough of a certain vitamin or mineral. e.g. Vitamin D deficiency can lead to a condition called rickets where your bones become weak. Vitamin A deficiency can lead to a condition called night blindness.

### Digestive System



### Enzymes

**Enzymes** are biological catalysts made of protein that speed up digestion.



### Digestive system

<b>Digestion</b>	Large molecules of food broken down into smaller ones
<b>Mouth</b>	Chewing breaks food into smaller chunks and saliva is added
<b>Oesophagus</b>	Tube from the mouth to the stomach
<b>Stomach</b>	Food mixed with digestive juices and acid. It churns to mix food.
<b>Small Intestine</b>	Digestive juices from the liver and pancreas are added and small molecules of nutrients pass through the intestine wall into the blood stream
<b>Large Intestine</b>	Food that cannot be digested. Water passes back into the body, leaving a solid waste known as faeces.
<b>Rectum and Anus</b>	Faeces are stored in the rectum until leaving the body through the anus


### Different types of enzyme

<b>Carbohydrase</b>	Breaks down carbohydrates into sugar molecules. This happens in the mouth, stomach and small intestine
<b>Protease</b>	Breaks down proteins into amino acids. Happens in stomach and small intestine
<b>Lipase</b>	Breaks down lipids into fatty acids and glycerol. Happens in small intestine
<b>Bile</b>	Made in liver, breaks lipids into small droplets. Speeds up digestion by lipase

### Useful bacteria in the gut

Help break down food, produces important vitamins.

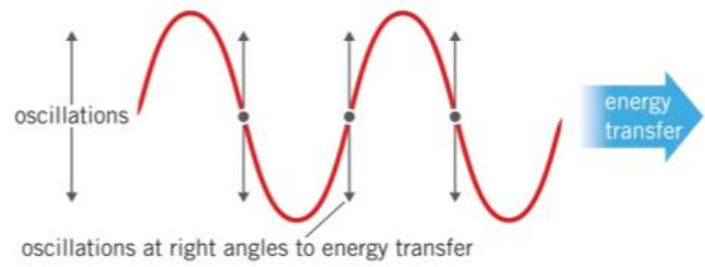
Be REFLECTIVE: Review your learning


**KNOWLEDGE ORGANISER**  
**PHYSICS: SOUND**

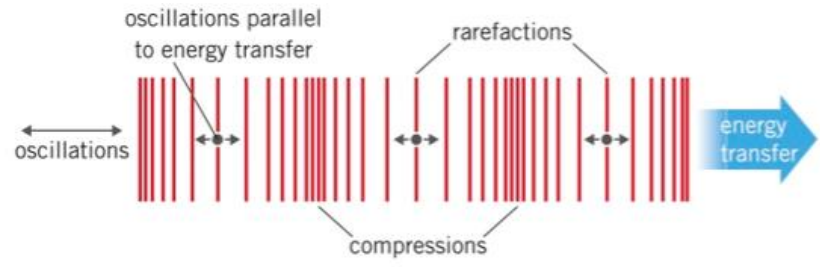
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### Properties of Waves

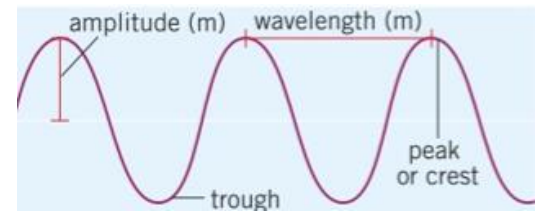
Waves are **oscillations** (vibrations) that transfer **energy**. They can be **transverse**:



or **longitudinal**:



Waves have **wavelength**, **amplitude** and **frequency**:



Frequency is how many waves pass a point in 1 second.

### Sound Waves

Sound waves are longitudinal.

Sound cannot travel through a **vacuum**, it must travel through a material (**medium**).

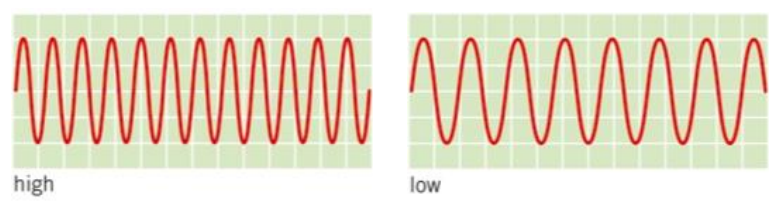
Its speed depends on the medium, e.g.:  
air - 340 m/s, water - 1500 m/s, steel - 5000 m/s

### Loudness and Pitch

The larger the amplitude of a wave, the louder the sound:



The higher the frequency of a wave, the higher pitched the sound is:



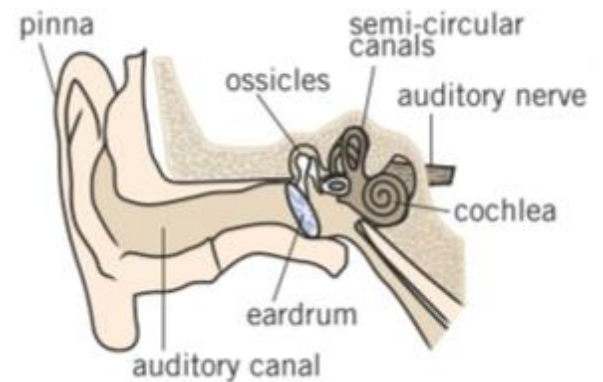
Be REFLECTIVE: Review your learning


**KNOWLEDGE ORGANISER**  
**PHYSICS: SOUND**

Name: \_\_\_\_\_

### Detecting Sound

We hear sounds using our **ears**.



We measure how loud a sound is in **decibels (dB)**. If you are exposed to loud sounds for too long you can permanently damage your hearing.

0 dB	20 dB	40 dB	60 dB	80 dB	100 dB	120 dB	140 dB
cannot be heard	leaves rustling	talking quietly	normal speech	heavy traffic	jet taking off	pain threshold	gun shot

An increase of 10 dB means that the sound has got 10 times louder!

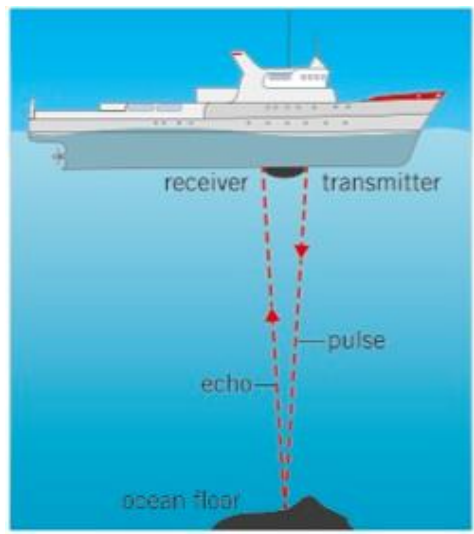
**Microphones** have a **diaphragm** that acts in a similar way to the eardrum to detect sound. An **amplifier** then makes the detected sound louder.

### Echoes and Ultrasound

We can only hear sounds in the human **audible range**: 20-20 000 Hz. Any sound above 20 000 Hz cannot be heard by humans and is known as **ultrasound**.

An **echo** is heard when sound **reflects** off of a surface and you hear it again as it travels back to you. Echoes can be used to measure distances.

Usually it the echo of an ultrasound wave that is used to measure distances, e.g. in sonar:



**Transmitters** send out beams of ultrasound, which travel through the water and hit the seabed. These reflect back up to **receivers** on the ship.

The time this takes is used to calculate the depth of the ocean.

A similar technique is used to image unborn babies.



Be REFLECTIVE: Review your learning



# KNOWLEDGE ORGANISER

## PHYSICS - LIGHT

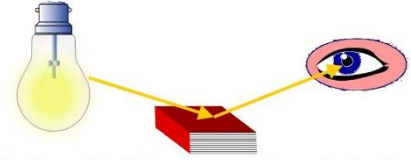
Name: \_\_\_\_\_

### 1. Light

Something that gives out light is called a luminous object. Most objects are non-luminous, you only see them because they reflect light into your eyes. Light travels in straight lines.

Objects that do not give out light are non-luminous.

How does your eye see non-luminous objects such as a book?

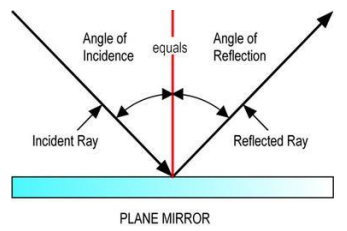


Light from the light source strikes the book and some of the light is reflected into your eye.

When you look through a window, light travels through the glass and into your eye. The glass transmits the light and is transparent. Materials like frosted glass are translucent. Light can travel through it but is scattered so you can't see clearly. Materials that do not transmit light (light cannot pass through) are opaque. Light can travel through gases like air, some liquids like water and some solids like glass. Light can even travel through empty space, which is called a vacuum. The speed of light is 300 000 km/s. Sound travels slower than light. A light year is the distance that light travels in 1 year.

### 2. Reflection

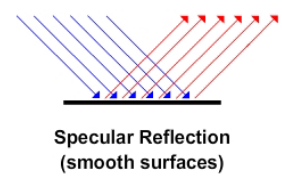
When you look into a mirror it looks like there is someone just like you behind the mirror, this is a virtual image. The image looks the same size and shape as you are, it appears to be as far behind the mirror as you are in front of the mirror. Left and right appear swapped.



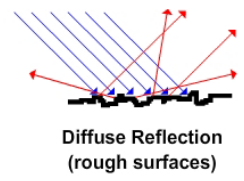
The ray that hits the mirror is called the incident ray. The ray that reflects off the mirror is called the reflected ray. There is an imaginary line at 90° to the mirror called the normal line. The law of reflection is that when light is directed at a mirror the angle of incidence is equal to the angle of reflection.

Reflection from a smooth surface like a mirror is called specular reflection, the rays of light reflect off the surface in the same way so an image is seen in the surface.

Reflection from a rough surface like a wall is called diffuse scattering, the rays are reflected at different angles so you won't see an image.



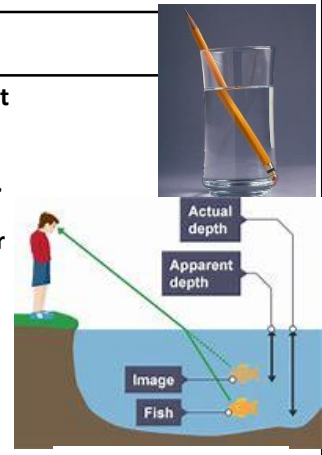
Specular Reflection (smooth surfaces)



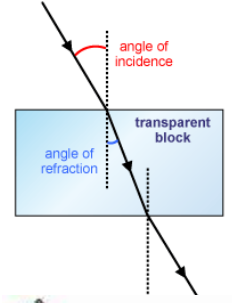
Diffuse Reflection (rough surfaces)

### 3. Refraction

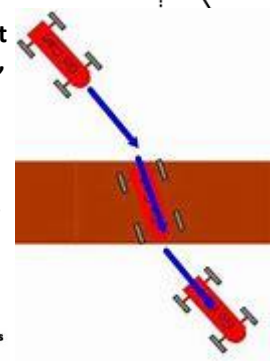
A pencil looks bent when you put it into a glass of water. The pencil reflects light and the light travels from the pencil through the water. It then travels through the air into your eye. As light leaves the water it changes direction, this is called refraction. Refraction happens whenever light travels from one medium (material) to another medium. Refraction also explains why a fish looks higher up than it actually is.



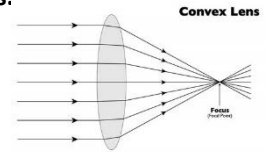
When light travels into a glass block it slows down when it goes in and speeds up when it comes out. Light bends towards the normal when it goes into the glass and away from the normal when it comes out of the glass. The 2 rays outside the block are parallel.



This is similar when a car goes from the road where it travels quickly to mud where it travels slowly. The first wheels hit the mud and travel slowly, the back wheels keep going at the same speed so the car is pushed in another direction.



There is a lens in your eye, this is a convex or converging lens. It focuses light into a point called the focal point, this allows you to see. The light is refracted as it goes into and out of the lens.



Be REFLECTIVE: Review your learning

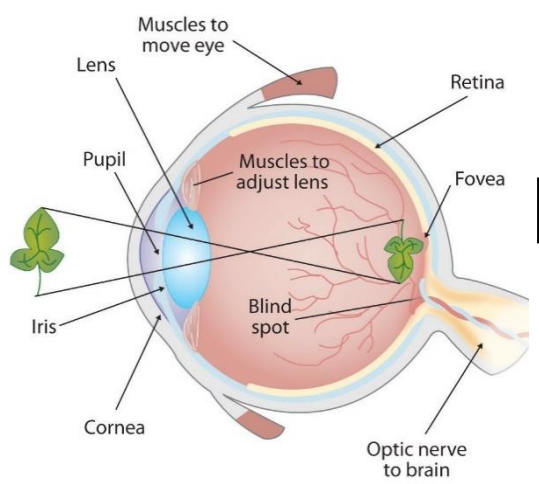


## KNOWLEDGE ORGANISER PHYSICS - LIGHT

Name: \_\_\_\_\_

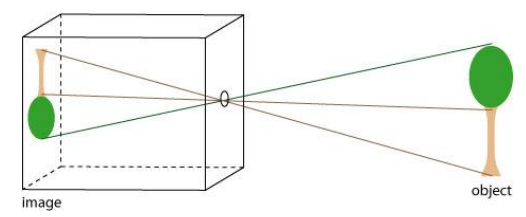
### 1. The eye

When you look at a leaf, an image of the leaf is formed on the retina of your eye. Light reflected from the leaf goes through the pupil of your eye. The iris is a muscle that controls the size of your pupil. The cornea (the transparent outer part of the eye) and the lens focus the light onto the retina. There are photoreceptors (sensitive to light) called rods and cones in the retina. Rods and cones are sensitive to movement and dim light and cones are sensitive to colour and bright light. When light hits the retina an electrical impulse is made that travels along the optic nerve to the brain. The image that forms is inverted (upside down) but your brain sorts it out so you see the leaf the right way up.



### 2. The camera

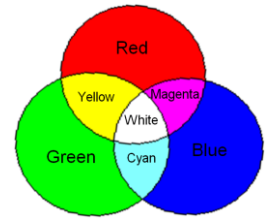
A camera makes an image just like your eye.



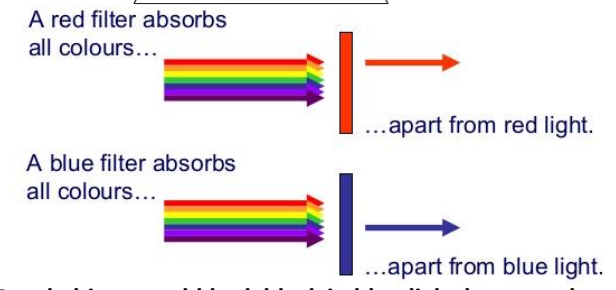
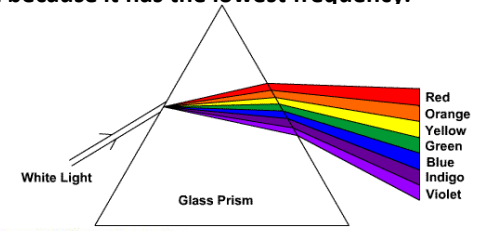
Light travels through the pinhole from the object in a straight line. This is just like the light travelling through your pupil. An image forms on the screen of the camera, this is like the image forming on the retina in your eye. The image is real, this means that it can be made on a screen. The image formed in a mirror is not a real image. Cameras used to contain photographic film, when light hit the film there was a chemical reaction that made the image. Cameras now have a grid of photosensitive picture elements called pixels. When light hits a pixel it makes a charge which is stored.

### 3. Colour

Red, blue and green are primary colours. When you mix primary colours you make secondary colours.

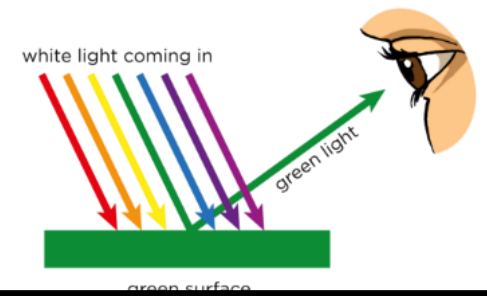


White light is made up of 7 different colours of light. We can show the colours that make white light by using a prism to split white light into a spectrum. This is called dispersion. Dispersion happens because violet light is refracted more because it has a higher frequency and red light is refracted least because it has the lowest frequency.



A red object would look black in blue light because the red object would absorb the blue light and there would not be any other colours of light to reflect in blue light.

White objects appear white because they reflect all colours of light. Black objects appear black because they absorb all colours of light. A green object appears green because it reflects green light and absorbs the other colours.



Be REFLECTIVE: Review your learning



# KNOWLEDGE ORGANISER

## MATTER - Elements

Key Word	Definition
<b>Element</b>	An element contains only <b>one type of atom</b> .
<b>Chemical symbol</b>	A one of two letter code for an element that is issued by scientists in all countries.
<b>Atom</b>	The smallest part of an element that can still be recognised as that element.
<b>Compound</b>	Two or more elements chemically bonded with each other.
<b>Molecule</b>	A group of two or more atoms strongly bonded together.
<b>Chemical formula</b>	A formula that shows the elements present in a compound and their relative proportions.
<b>Physical property</b>	A property of a material that you can observe or measure.
<b>Hydroxide</b>	A compound that includes hydrogen and oxygen atoms. There is one atom of oxygen for every atom of hydrogen. E.g. NaOH
<b>Nitrate</b>	A compound that includes nitrogen and oxygen atoms. There are three atoms of oxygen for every atom of nitrogen. E.g. NaNO <sub>3</sub>
<b>Sulfate</b>	A compound that includes sulphur and oxygen atoms. There are four atoms of oxygen for every atom of sulphur. E.g. MgSO <sub>4</sub>
<b>Carbonate</b>	A compound that includes carbon and oxygen atom. There are 3 atoms of oxygen for every atom of carbon. E.g. MgCO <sub>3</sub>
<b>Polymer</b>	Very large molecules made by joining up thousands of smaller molecules in a repeating pattern.
<b>Natural polymer</b>	A polymer made by plants or animals. E.g. starch, wool, cotton, silk and rubber.
<b>Synthetic polymer</b>	A polymer made by people, often in a factory. E.g. plastic, poly(ethene) and poly(propene).

### Elements

An element is a substance that cannot be broken down into other substances. An element is a substance made of one type of atom only.

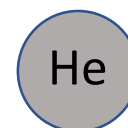
All matter (solids, liquids and gases) in the universe is made up of a combination of different elements.

All elements are found on the periodic table.

Every element has its own symbol. This is a 1 or 2 letter code for the element. The first letter of a symbol is a capital letter and the second letter is lower case, e.g. Na is the symbol for sodium.



Hydrogen is an element and a molecule and is made up of 2 hydrogen atoms strongly bonded to each other.



Helium is an element, it is made from 1 atom of helium.

### Atoms

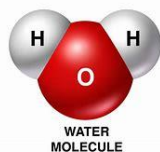
The smallest part of an element that can exist is called an atom. All atoms of an element are the same. The atoms of one element are different to atoms of all other elements.



Be REFLECTIVE: Review your learning

### Compounds

A compound is a substance made up of atoms of two or more elements, strongly joined or bonded together. The properties of a compound are different to the properties of the elements that its made up from. For e.g. the boiling point of water is higher than the boiling point of hydrogen and oxygen because there are stronger forces between water molecules than hydrogen and oxygen molecules. So more energy is needed to separate water molecules from each other compared to the energy required to separate hydrogen and oxygen molecules from each other.



Water is a compound because it is made from 2 different atoms (2 hydrogen atoms and 1 oxygen atom) that are strongly bonded to each other. Water is also a molecule, not all molecules are compounds.

### Chemical formulae

The chemical formula shows the number of atoms of each element in a compound.



The formula of carbon dioxide is  $\text{CO}_2$ . This shows that a molecule of carbon dioxide is made up of 1 carbon atom and 2 oxygen atoms strongly bonded to each other.

Compounds made up of oxygen and another element have two word names. The second word is oxide. E.g. Magnesium oxide  $\text{MgO}$

Compounds made up of chlorine and another element have 2 word names. The second word is chloride. E.g. Sodium chloride  $\text{NaCl}$

### Poly(ethene)

Molecules in Low-density Poly(ethane) LDPE slide over each other making the polymer flexible. LDPE is strong and is used for carrier bags.

High-density Poly(ethene) HDPE is also strong and flexible but is harder than LDPE. It is also smooth and used in artificial knee joints.

### Naming compounds

To name simple compounds of metals and non-metals:

1. Write down the name of the metal
2. Write down the name of the non-metal, changing the ending of the word to  $-\text{ide}$  e.g. Magnesium oxide, sodium chloride.

Many compounds contain more than two elements. For elements containing two elements plus oxygen, the ending of the other non-metal usually changes to  $-\text{ate}$ .

E.g. Nickel, sulphur and oxygen = nickel sulfate  
Magnesium, nitrogen and oxygen = Magnesium nitrate

### Polymers

A polymer is a substance with very long molecules. A polymer molecule has identical groups of atoms repeated many times.

The properties of polymers depend on its molecules.

- Polymers are big and heavy so they melt at higher temperatures than substances with smaller molecules

**Natural polymers** are made by plants and animals. Examples include wool, cotton, starch and rubber. Wool fibres trap air between them so heat is trapped making it useful for jumpers and socks.

**Synthetic polymers** are man made and are produced in chemical reactions.

Examples include plastics like **Poly(ethene)** and Poly(propene)

## Year 8 Knowledge Organiser Islam

### Key Topics:

- Introduction to Islam
- The nature of Allah
- Prophethood
- The prophet Muhammad
- The Qur'an
- The Five Pillars of Islam
- Wealth and poverty
- 21<sup>st</sup> century Muslim



### Islam and Muslims

Muslims can be from any nation or race, anywhere in the world. Islam is an international faith. The religion is called 'Islam,' and a follower of it is a 'Muslim'.

### Islamic Symbol:



This is the **symbol** of the Muslim faith:

- The five-pointed star can represent the **five pillars**, or main beliefs of Islam
- The moon and the star speak about **God's creation**
- A new star rises as the moon fades. Muslims believe that their religion **renewed** God's message on Earth, as had been taught by many prophets over the ages. The last of these was Muhammad.

### Subject Specific Key Terms:

Muslim	Means 'one who finds peace' or 'one who submits.'
Monotheism	The belief in only one God
Halal	An act that is allowed e.g. animals are slaughtered in a way that their blood is drained away. Meat produced in this way is called halal.
Haram	An act that is forbidden e.g. gambling
Qur'an	The most important source of authority as it is believed to be the revealed word of God
Surahs	Chapters in the Qur'an
Tawhid	The Islamic term for the oneness of Allah
The al-Fatihah	The first surah (chapter) in the Qur'an. It means 'the opening'.
<u>Risalah</u>	Prophethood or the belief in prophets.
Sources of authority	People can go to for guidance and help e.g. friends, religious leaders, scripture etc.
Shahadah	saying the declaration of faith, 'there is no God but Allah and Muhammad <u>is</u> the prophet of God'.
Salah	Performing the five daily prayers
Zakat	Giving 2.5% of your wages to charity every year
Sawm	Fasting during the month of Ramadan
Hajj	The religious journey to Mecca in Saudi Arabia
Islamophobia	The fear or hatred of Islam or Muslims



## Year 7 Christianity Knowledge Organiser

### Key Topics:

- God the Creator
- Jesus
- Holy Spirit
- Salvation and Atonement
- The Omni's
- The Judge

Christians believe there is only one God, this belief is known as **monotheism**, so Christianity is a **monotheistic** religion.

All Christians believe that God created everything and is still involved with the world in a mysterious way.

### The Christian Creation Story: Genesis 1

For all Christians what is important is that God is the creator of the universe. They believe that however the universe was created, it was created by God. They believe that God is omnipotent, which means that God is all-powerful. This is shown in the creation story because God creates everything out of nothing (ex nihilo).

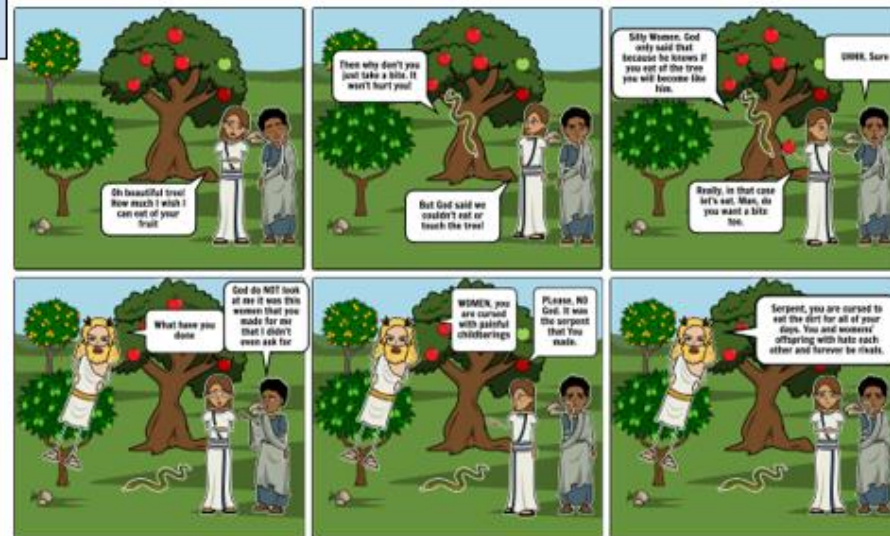
## DAYS OF CREATION IN GENESIS ONE

<b>DAY 1</b>  EARTH, SPACE, TIME & LIGHT	<b>DAY 2</b>  ATMOSPHERE	<b>DAY 3</b>  DRY LAND & PLANTS
<b>DAY 4</b>  SUN, MOON & STARS	<b>DAY 5</b>  SEA & FLYING CREATURES	<b>DAY 6</b>  LAND ANIMALS & MAN

### Subject Specific Key Terms:

Monotheism	The belief in one God
Omnipotent	All-powerful God
Incarnation	God becoming human in the form of Jesus
Miracle	An extraordinary event that can't be explained by science
Saviour	Jesus' role was to save humans
The Holy Trinity	The belief that God is one but made up of three person: the Father, the Son and the Holy Spirit
The Holy Spirit	The part of God that guides Christians to live their lives in the best way possible
Atonement	The belief that Jesus' death on the cross healed the broken relationship between God and humans
Salvation	Taking away sins and consequences of bad behaviour
Gospel	The teachings of Jesus and the apostles
Omniscient	All-knowing God
Omnipresent	God is everywhere
Omnibenevolent	God is all-loving

### The Fall: Genesis 3





### The Incarnation: The birth of Jesus


Some Christians believe that Jesus was God incarnated. This means 'God made flesh' or God in human form.

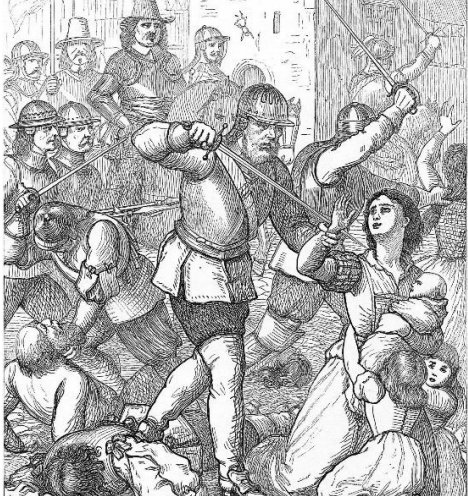



Problems for Elizabeth	Elizabeth and Marriage	Religion and Plots
<p><b>Background and family</b></p> <ul style="list-style-type: none"> <li>Elizabeth's mother, Anne Boleyn, was executed by her father king Henry VIII when she was only two years old</li> <li>Her step-mother Catherine Howard was also executed by Henry</li> <li>Elizabeth was arrested and locked in the Tower of London during the reign of her half-sister Mary I</li> </ul>	<ul style="list-style-type: none"> <li>Elizabeth did not get married throughout her reign</li> <li>She rejected some suitors because they were Catholic and foreign rulers who English people might reject</li> <li>However, the key reason was that Elizabeth did not want to share power with a man and wanted to maintain her independence and make her own decisions</li> </ul>	<p><b>Religious Settlement (1559)</b></p> <p><b>Compromise</b> – Elizabeth's religious settlement attempted to find a 'middle-way' that would keep both Protestants and Catholics happy</p> <p><b>Governor</b> – Elizabeth gave herself the title of Governor of the church of England rather than supreme head this was designed to keep Catholics happy as they saw the Pope as supreme leader</p> <p><b>Church services</b> – would be conducted in English and priests were allowed to marry which pleased Protestants</p>
<p><b>Problems when Elizabeth became queen (1558):</b></p> <ol style="list-style-type: none"> <li><b>Bad harvests</b> – in 1554 and 1556 had caused widespread starvation in England</li> <li><b>Disease</b> – outbreaks of the plague in 1558 and influenza in 1556 had led to more deaths in her kingdom</li> <li><b>Dissolution of the monasteries</b> – Henry VIII had shut down all the religious monasteries that used to help the poor and the sick, Elizabeth would have to find new ways to take care of them</li> <li><b>Population growth</b> – the population of England grew by 1 million during her reign causing unemployment and homelessness</li> <li><b>Enclosure of land</b> – rich landowners forced peasants off their land so they could farm sheep, peasants were forced to move to towns to look for work</li> <li><b>Vagabonds</b> – homeless people who travelled across England looking for work were labelled vagabonds – they were feared by many people</li> <li><b>Religion</b> – there were major divisions between Catholics and Protestants in England and Elizabeth would struggle to keep both sides happy</li> </ol>	<div data-bbox="1205 465 1500 861" data-label="Image"> </div> <p><b>Religious Divisions</b></p> <ul style="list-style-type: none"> <li>Catholics and Protestants were both Christians but there were major disagreements between them</li> <li><b>Language</b> – Catholics believed that the Bible and church services should be in Latin whereas Protestants believed they should be in English</li> <li><b>Church decoration</b> – Protestants wanted their churches to be plain and simple whereas Catholics favoured elaborate decoration</li> <li><b>Leadership</b> – Catholics believed that priests were above ordinary people and that they should not marry, but Protestants believed that all were equal in God's eyes</li> </ul>	<p><b>Catholic plots</b></p> <p>Many Catholics were still angry about their treatment under Elizabeth and there were a number of plots to remove her as queen:</p> <ol style="list-style-type: none"> <li><b>Revolt of the northern earls (1569)</b> – 4600 Catholic rebels took over Durham in the north of England and Elizabeth had to send loyal troops to crush the revolt</li> <li><b>Ridolfi plot (1571)</b> – Duke of Norfolk and Roberto Ridolfi tried to organise an army of foreign Catholics to invade England and overthrow the queen but the plot was discovered and Norfolk was executed</li> <li><b>Throckmorton plot (1583) and Babington plot (1586)</b> were further attempts by Catholics to remove Elizabeth and replace her with the Catholic Mary, Queen of Scots</li> </ol> <p><b>Sir Francis Walsingham</b> – Elizabeth's spymaster helped to keep the queen safe by uncovering plots against her. Walsingham used spies to find Catholic rebels and codebreakers to read their secret messages</p>



Relations with Spain	Elizabethan Exploration	James I and Jamestown
<p><b>Why were relations between England and Spain at breaking point by the 1580s?</b></p> <ol style="list-style-type: none"> <li><b>Personal differences</b> – the Catholic king of Spain Philip II was angry that Elizabeth had made England Protestant and that she refused to marry him</li> <li><b>English privateers</b> – had been sailing to the ‘new world’ and stealing from Spanish ships</li> <li><b>War in the Netherlands</b> – Elizabeth gave her support to Protestants in the Netherlands who were fighting against the Spanish</li> </ol>	<p><b>Why was the Elizabethan era a time of great exploration?</b></p> <ol style="list-style-type: none"> <li>Improvements in <b>shipbuilding</b> meant sailors could make longer journeys</li> <li>New equipment for reading the stars and greatly <b>improved maps</b> helped sailors to find where they were at sea</li> <li><b>Empire and colonies</b> – Elizabeth’s reign saw the early beginnings of empire as English people tried to establish settlements in the ‘New World’ (North America)</li> </ol>	<p>James I became king of England in 1603 when Elizabeth died</p> 
<p><b>The Spanish Armada (1588) – battleplan</b></p> <ul style="list-style-type: none"> <li>Philip II organised a huge Armada of 130 Spanish galleons (warships) to attack England</li> <li>7,000 sailors and 21,000 soldiers came with the Armada</li> <li>The plan involved sailing to the Netherlands to collect more Spanish troops before landing in England</li> <li>The Spanish forces would then march on London and overthrow Elizabeth</li> <li>English navy led by Admiral Howard and Sir Francis Drake would resist the attack</li> </ul>		<p><b>Jamestown</b></p> <ul style="list-style-type: none"> <li>1607 – a successful English colony is established in North America</li> <li>Settlement was named Jamestown in honour of the king of England</li> <li>Early years of the colony were tough as the settlers struggled to grow food, winters were difficult and there were large numbers of deaths</li> <li>Eventually the colony is a success and grew crops such as tobacco which could be traded with Europe</li> <li>More settlements were built and by 1624 the colony of Virginia had been established</li> </ul>
<p><b>Why was the Armada defeated?</b></p> <ul style="list-style-type: none"> <li><b>Leadership</b> – Spanish commander of the Armada was inexperienced</li> <li><b>English ships</b> were faster and more manoeuvrable</li> <li><b>Fireships</b> were used to break up the Spanish formation</li> <li><b>Bad weather and storms</b> wrecked the Armada off the coast of Ireland and Scotland</li> </ul>	<p><b>Slavery</b></p> <ul style="list-style-type: none"> <li>Elizabeth’s reign saw the early stages of England’s involvement in the slave trade</li> <li>English sailors travelled to Africa and bought African slaves</li> <li>These Africans were then transported to the ‘New World’ and forced to work without pay, and in poor conditions</li> <li>John Hawkins and Sir Francis Drake were both very prominent in the slave trade</li> </ul>	<p><b>Native Americans</b></p> <ul style="list-style-type: none"> <li>The Jamestown settlers managed to collaborate with local native American tribes</li> <li>Europeans often assumed that they were more civilised and their way of life was superior to the Native Americans</li> <li>However, without the help and support of the Native Americans it is unlikely that the Jamestown settlers would have been able to survive</li> </ul>

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>	



### Key word definitions

**Development:** People reaching an acceptable standard of living through the use of resources.

**Quality of life:** This is the general well-being of people and includes income, health, education and the environment.

**Extreme poverty:** People living on less than \$1.90 or £1.40 per day meaning they lack essentials such as shelter, food, clean water.

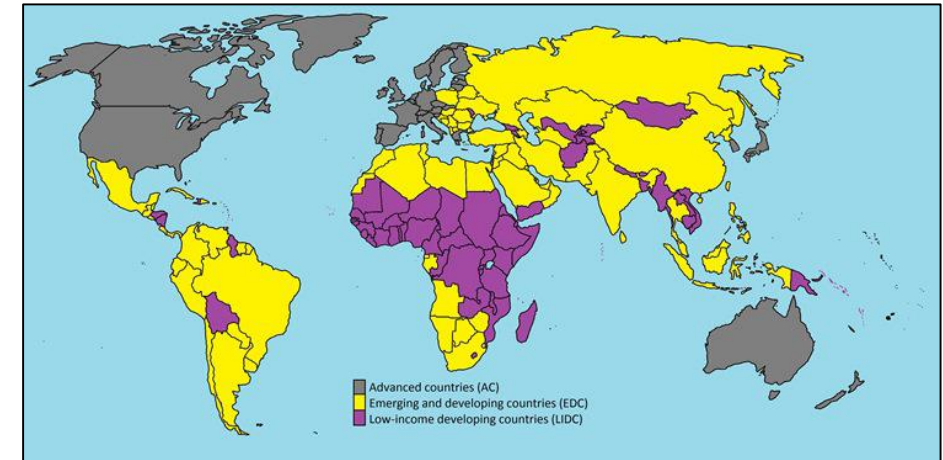
### Classifying countries

The International Monetary Fund divides countries into one of three categories;

**Advanced Countries (ACs):** Countries with higher incomes and many people working in service sector e.g. UK, USA, Japan.

**Emerging and Developing Countries (EDCs):** These countries' economies are rapidly growing and many people work in secondary industries e.g. China and India.

**Low Income Developing Countries (LIDCs):** These are the least developed countries with many people working in primary industries e.g. Nepal, Sudan.



### Economic measures of development

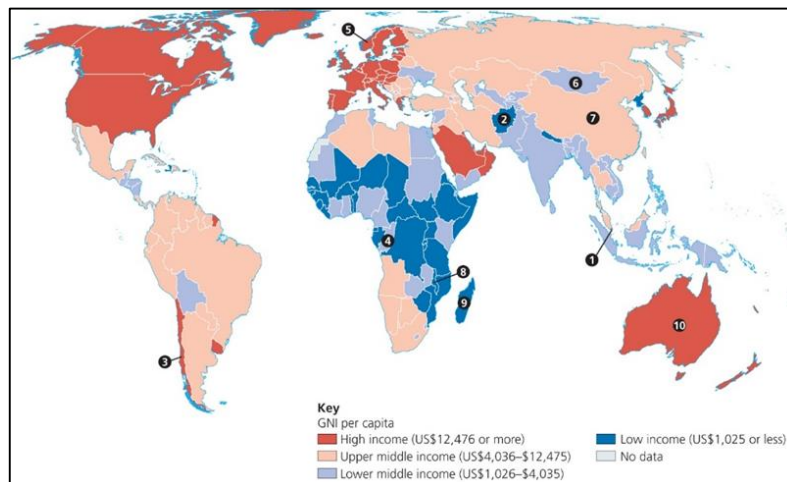
**GNI/capita:** This is a country's final income in a year divided by its population.

- It is an economic measure as it focuses on money in the country.
- The 3 countries with the highest GNI/capita = Norway, Switzerland and Luxembourg.
- The 3 countries with the lowest GNI/capita = The Gambia, Mozambique and Sierra Leone.
- The map shows the distribution of GNI/capita globally.

### Other ways of measuring development: Human Development Index

- The Human Development Index (HDI) is a composite indicator which measures 3 different aspects of a country's development. It includes;
  - Living Standards:** GNI per capita
  - Health:** Life expectancy (average age people live to)
  - Education:** Average number of years of schooling children receive.
- HDI values range from 0 to 1 with numbers closest to 1 representing highest values.
- It is a better measure of development than GNI/capita as it includes more aspects of a country's development and gives a better indication of the quality of life for people in terms of healthcare and education. GNI/capita is simply an economic measure.

Key to the map:  
 Red = high income  
 Pink = upper middle income  
 Pale blue = lower middle income  
 Dark blue = low income



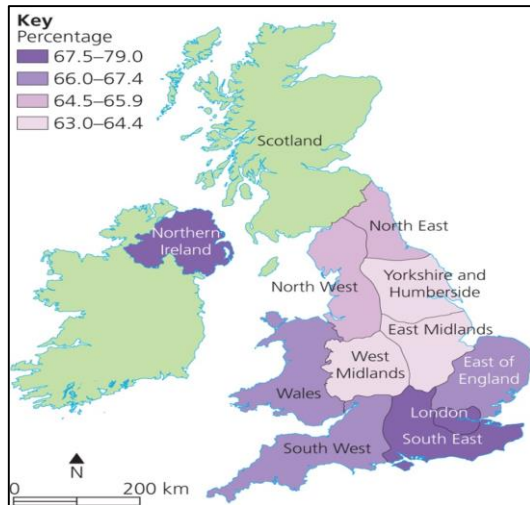
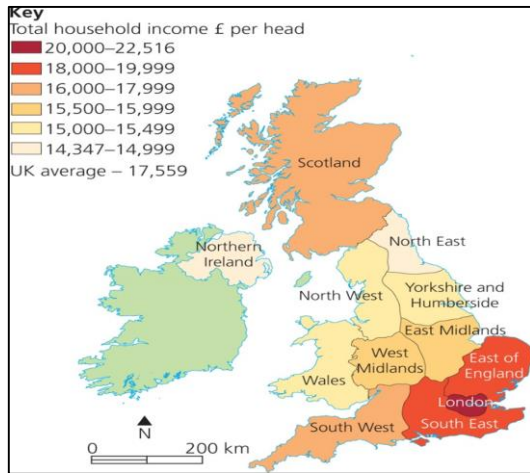
### Development over time: BRICS and MINT countries

- Some countries are developing rapidly and have been grouped together to reflect the pace of their development.
  - The BRICS refers to Brazil, Russia, India, China and sometimes South Africa.**
  - The MINT countries are Mexico, Indonesia, Nigeria and Turkey. The economies of these countries are also growing rapidly but not as rapidly as those of the BRICS countries.**
- These countries are developing rapidly as they are able to benefit from global ideas such as the shipping container which means goods can be transported all around the world.
- Many of these countries are increasing the number of people working in manufacturing.



### Inequalities within countries

- As well as differences in development between countries there are also differences **within** countries, e.g. the UK.
- The North-South divide refers to an imaginary line drawn across the UK to divide the UK into the north and south.
- There are variations in factors such as life expectancy, % GCSE grades (bottom map) and house prices.
- Evidence suggests that in societies that are more unequal people are unhappier.



### What are the causes of poverty?

- There are often several reasons why a country may experience poverty, these can be physical or human factors.
- Physical; natural hazards** – countries that experience earthquakes, floods or hurricanes frequently have to rebuild after disasters which costs money and makes it harder for them to develop, leading to poverty.
- Physical; climate** – in extreme climates such as Ethiopia it can be hard to grow crops as there is often drought and so the price of food increases, meaning more people experience poverty.
- Human; war** – countries that are affected by war such as Syria suffer from people being killed and injured and then cannot work, buildings collapsing, and thousands of people are forced to flee their homes leaving their belongings.
- Human; access to education** – a lack of education means there may be fewer people to do the skilled jobs and so it can be harder to maintain good healthcare for the population.

### How does gender equality promote development?

**Gender inequality is when people are treated differently and given different opportunities just because they are male or female.**

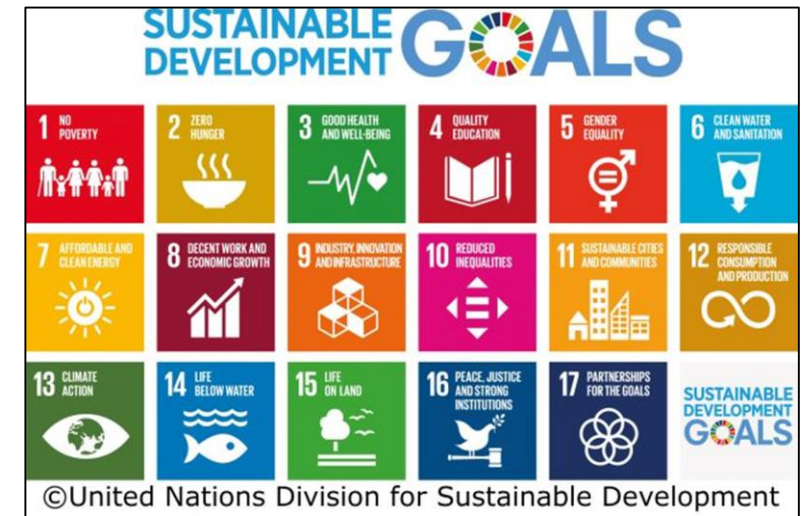
- Gender inequality may be present in education or in the opportunities that are given to some people and not others.
- For example, One in five teenage girls around the world is denied access to education.
- In the UK for every £1 earned by a man, a woman earns 81p.
- Gender equality means treating people equally.
- This can promote development as it means a country is taking full advantage of the skills of its population and so more money can be earned, which improves the economy, and helps with the overall development of the country.

### How do countries and NGOs support development?

**Aid is the donation of money or resources to people in need - 2 types;**

- Bilateral Aid** – a government provides aid to the government of a foreign country.
- Non-Governmental Aid** – charities called Non-Governmental Organisations (NGOs) raise money from the public to support development projects in other countries.

Aid provides money and/or resources e.g. education materials, food, shelter when countries are suffering from natural disasters, war . It helps development as more money can be spent on other costs.



### What are the Sustainable Development Goals?

**Sustainable development: Development that meets the needs of present generations without compromising (reducing) the ability of future generations to meet their needs.**

- The Sustainable Development Goals are a set of 17 goals that aim to end poverty, fight inequality and injustice, and tackle climate change by 2030.
- The goals are not legally binding, but governments are monitored to see if they are working towards them.

### 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.

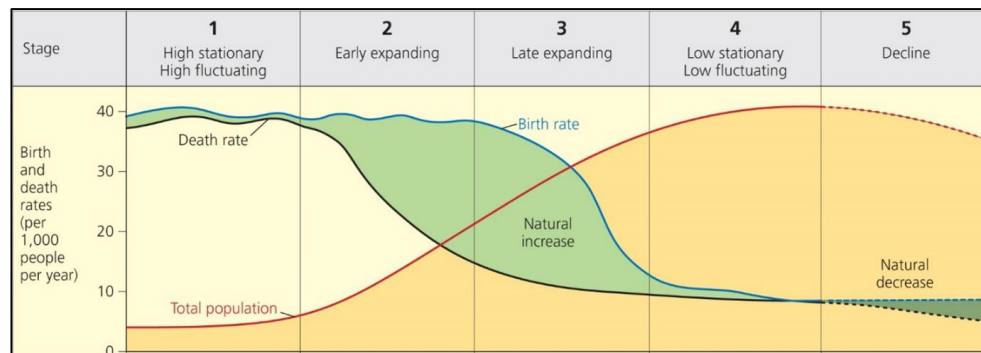
**Urbanisation:** An increase in the proportion of people living in urban areas.

### 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

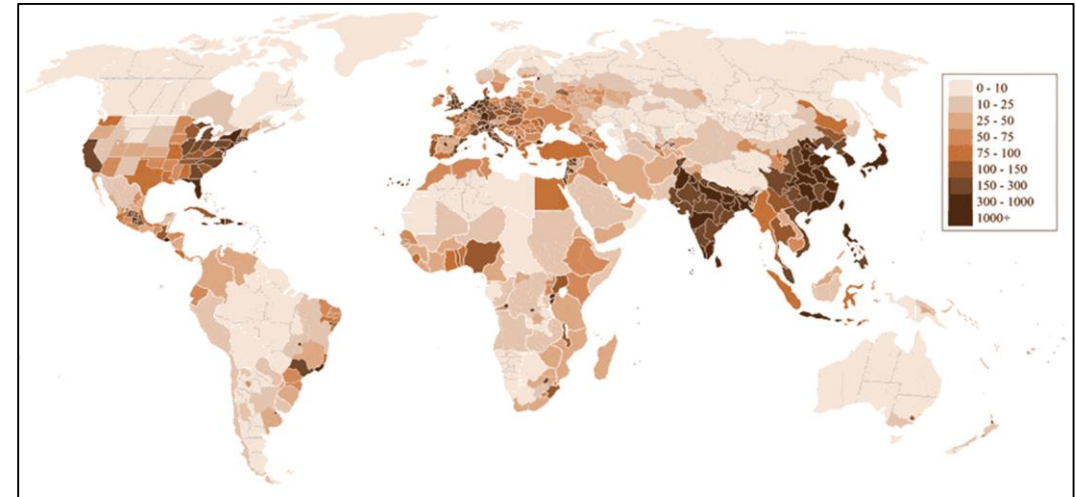
Stage 1: Tribes in the Amazon.

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:**

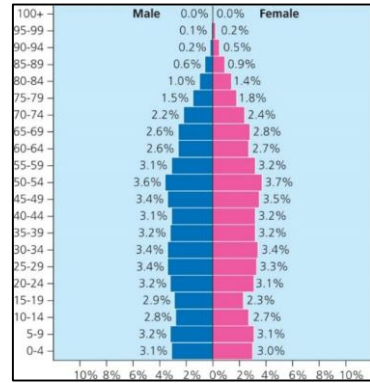
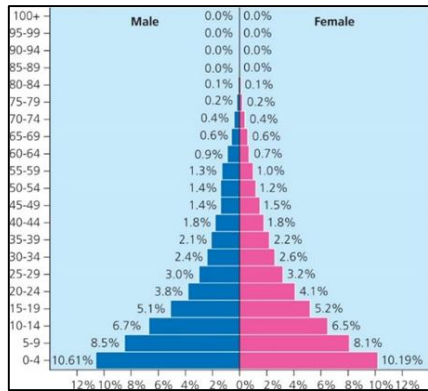
**Employment:** Jobs and industry can attract people in search of work e.g. factories in eastern China.

**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?

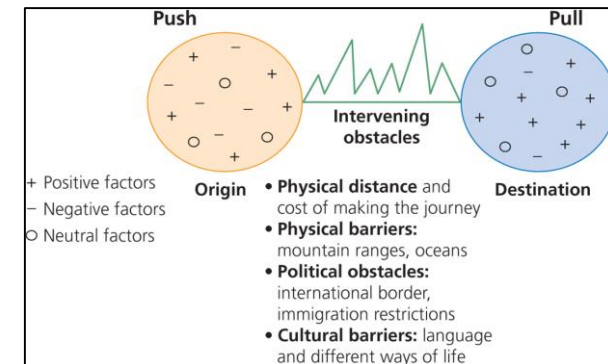
- Migration is the movement of people from one place to another. There are several different types of migration and reasons that people migrate e.g. refugees move due to war, people migrate for a better job or to join family.
- Push factors make people leave a place while pull factors draw them in to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



CORE		Key verb phrases		Connectives	
<b>Time phrases/Sequencers</b>					
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>	<b>Negatives</b>	
yesterday	<u>hier</u>	it was	<u>c'était</u>	not	<u>ne...jamais</u>
last night	<u>hier soir</u>	it wasn't	<u>ce n'était pas</u>	never	<u>ne...pas</u>
last week	<u>la semaine dernière</u>	there was	<u>il y avait</u>	<b>Comparisons</b>	
last year	<u>l'année dernière</u>	there wasn't	<u>il n'y avait pas de</u>		
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>		



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>



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