Home Learning Booklet



Knowledge Goals Year 7 Half Term 5

How to self-test

Mind mapping

- Mind mapping is simply a diagram to visually represent or outline information.
- Use information gathered from your knowledge goals booklet to create mind maps, make sure to use colour and images, keep writing to the bare minimum.

How to mind map:



Information for parents on knowledge retrieval



Flash cards

Use your knowledge goals booklet to make flash cards. Write the questions on one side and on the other record the answer. Test yourself or work with a friend to make sure you know all the key information for each topic.

How to mind map:



How should students use the Knowledge Goals booklets?

Your Knowledge Goals booklet provide the essential knowledge that you need to learn in each subject this half term. You are **expected to spend 30 minutes per subject per week 'learning' the content**. You will be assessed during lessons using 'low stake' quizzing. Your teacher may choose to **set you additional homework.**

How can parents support?

- Read through the organiser with your child if you don't understand the content then ask them to explain it to you 'teaching' you helps them to
 reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they must fill in. Miss out more and more until they are word perfect.

Subjects

Suggested Homework Schedule (1 hour of independent study per night if you have not been set homework by your class teacher). To help you get organized, we have planned out your weekly home learning to cover all subjects. You may choose to create your own version:

Day	Subject 1 (20mins)	Subject 2 (20mins)	Subject 3 (20mins)	
Monday	Art	English Language Physics		
Tuesday	Biology	Technology	Maths	
Wednesday	Chemistry	Spanish	Music	
Thursday	Computer Science	Geography	RS	
Friday	Design Technology	History	PE	

Week A

Week B

Day	Subject 1 (20mins)	Subject 2 (20mins)	Subject 3 (20mins)
Monday	Drama	Personal Development	Teir 2 Vocab
Tuesday	Maths	English	Physics
Wednesday	Chemistry	English	Music
Thursday	Teir 2 Vocab	Maths	Biology
Entides			

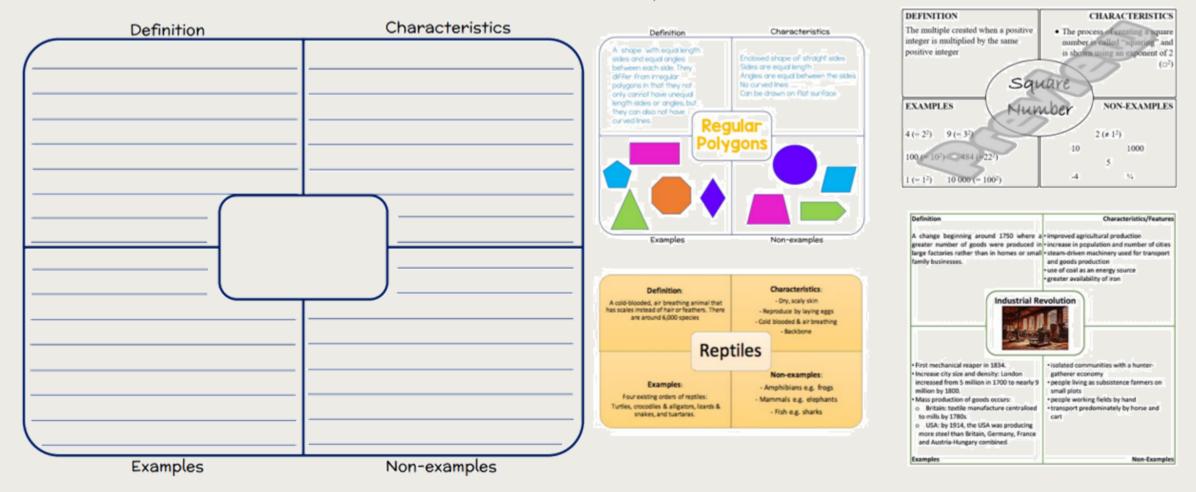
Literacy Tier 2 Vocabulary

These words are all 'tier 2' words; in other words, they are seen as 'academic vocabulary' and if you know them, can understand them and use them, you will do better in your exams and be able to communicate more precisely and effectively in life.

#	Key word	Definition
1	appropriate	
2	amend	
3	assume	
4	commission	
5	discriminate	
6	deduce	
7	emphasis	
8	facilitate	
9	оссиру	
10	policy	

Literacy Tier 2 Frayer Model

examples



Have a go at creating a Frayer Model for each of the 6 tier 2 words from this term (blank templates are at the back of the booklet for you to complete this activity).

Knowledge Goals: ART

Sh

Year 7 term 3

Using imagination as your stimulus, you will develop a letter design using pen. You will develop skills of layout and spatial awareness. Working only in black pen to develop the understanding of the importance of the quality of line and of pattern. You will research modern graffiti artist AJ Purdy to inform your work.

Success Criteria—what will my work be marked on?

Information on Purdy

 \Rightarrow Layout and scale of your letter

- \Rightarrow Clear and identifiable drawings
- ⇒ Smooth pen work including outlines and shading
- \Rightarrow Creatively linking drawings together
- \Rightarrow Variety of line thicknesses
- \Rightarrow Visually links to AJ Purdy's art work
- \Rightarrow Use of pattern to fill spaces
- \Rightarrow 3D appearance of drawings



in 2003. Continual collaboration with artists and designers on various uselessly fun, and unpretentious projects is a great joy for him.

Purdy uses varied thicknesses of line to create focal points. His backgrounds are often plain to draw attention to the fine detail in his drawings.

Purdy uses pattern to create detail and texture within his letters.

nape / Form	Tone	Pattern / Texture	Colour	Line
Closed	Bright	Repeated	Bright	Fluent
Open	Dull	Uniform	Bold	Free
Distorted	Light	Geometric	Primary	Controlled
Flat	Dark	Organic	Secondary	Expressionis
Organic	Faded	Random	Cold	tic
Deep	Smooth	Symmetrical	Warm	Strong
Positive	Harsh	Irregular	Radiant	Angular
Negative	Contrasting	Bold	Dull	Delicate
Foreground	Intense	Bumpy	Vivid	Flowing
Background	Sombre	Rough	Contrasting	Simple
omposition	Strong	Smooth	Complement	Thick
Elongated	Powerful	Broken	агу	Thin
- Compressed	Dramatic	Fine	Monochrom	Horizontal
Large		Bold	е	Vertical
Small		Flat	Harmonious	Broken
2D / 3D		Grid	Natural	Overlapping
Blurred			Saturated	Faint
Movement			Luminous	
Perspective			Opaque	
reispective			Translucent	
			Transparent	

Key words

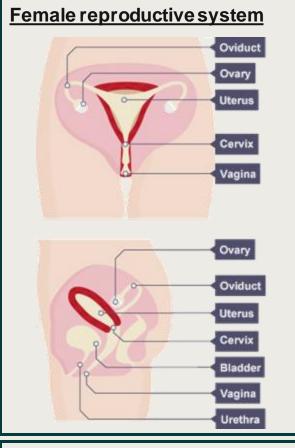
Tone, value, contrast , monochromatic, guidelines , shade, solid, mark making, pattern, illustrative, imaginative



Knowledge Goals: ART

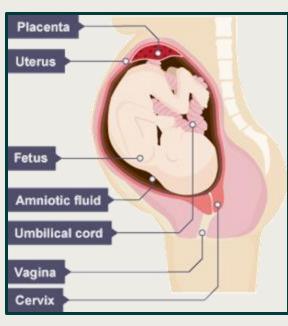
		Half Term 5: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	Tone	Tone refers to the lightness or darkness of colors used, which can help to create a sense of depth or distance in art	
2	Shading	Shading is the darkening or colouring of a drawing with lines or blocks of colour	
3	Contrast	Contrast is the representation of two elements of design in opposite ways. For example, areas of bright light in comparison with areas of dark.	
4	Monochrome	Monochrome means one colour, so in relation to art, a monochrome artwork is one that includes only one colour.	
5	Mark making	Mark making describes the way artists produce different lines, dots, marks, patterns and textures.	
6	Pattern	A pattern is a design in which lines, shapes, forms or colours are repeated. The part that is repeated is called a motif. Patterns can be regular or irregular.	
7	Illustrative	Illustrative describes a decoration, interpretation, or visual explanation of a text, concept, or process, designed for integration in print and digitally published media, such as posters, flyers, magazines, books, teaching materials, animations, video games and films	
8	Imaginative	having or showing creativity or inventiveness.	

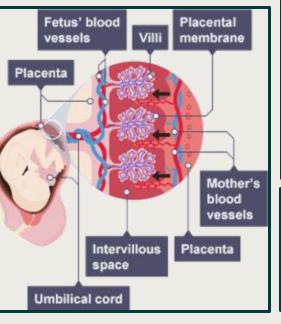
Knowledge Goals: Biology – Human reproduction



The female reproductive system has two ovaries. These have two functions:

- They contain undeveloped eggs.
- They make female sex hormones, which affect the way bodies develop and also regulate the menstrual cycle.





<u>Gestation</u>

The **fetus** relies upon its mother for:

- protection against knock and bumps, and temperature changes;
- **oxygen** for respiration;
- nutrients food and water;
- removal of waste substances.

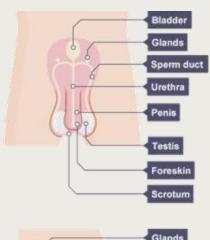
The fetus is protected by the uterus and a liquid called **amniotic fluid**.

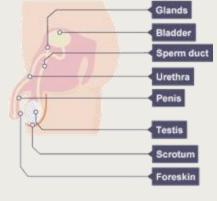
The **placenta** is an organ responsible for providing oxygen and nutrients, and removing waste substances.

Other substances can also pass through the placenta, including **drugs** and **alcohol**. Drugs can affect the fetus - slowing the growth of the fetus, reducing the amount of oxygen and causing bleeding - which can be life threatening.

Humans reproduce through sexual reproduction. This produces offspring that are genetically unique because half of their genetic material (DNA) comes from each parent.

Male reproductive system





The function of the male reproductive system is to produce **sperm** cells - male **gametes** - and release them inside a female.

Knowledge Goals: Biology

		Half Term 5: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	DNA	The store of genetic information for all living things, passed from parents to offspring.	
2	ovum	The egg cell. Plural: ova.	
3	gametes	Gametes are the male and female sex cells.	
4	fertilisation	When the sperm and egg cell join.	
5	uterus	The part of the female reproductive system where a fertilised egg cell develops into an embryo and then a fetus. Also called the womb.	
6	fetus	An unborn baby.	
7	oviducts	Tubes in the female reproductive system which join the two ovaries to the uterus. Also called fallopian tubes.	
8	hormones	Chemical messages produced by glands. They travel in the blood to a target organ where they take effect.	

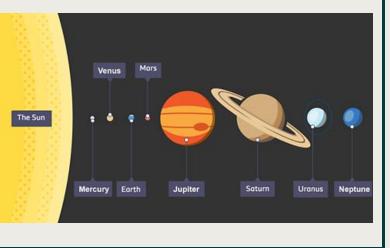
Knowledge Goals: Chemistry

The Sun and Stars

- Our Sun is the star that maintains the conditions that allow life to exist on Earth.
- Inside stars, nuclear fusion is the process which releases huge amount of energy that makes starts so hot and shine so brightly.
- Older stars are known as red giants. When a star approaches the end of its life, its core can collapse to form a white dwarf star. If the star is very massive it can also explode in a supernova to form neutron star or black hole.

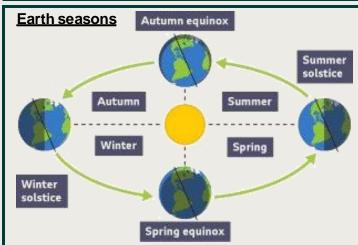
The Solar System

- There are 8 planets in our Solar System (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune). Pluto is a dwarf planet.
- The first four planets are relatively small and rocky, while the four outer planets are gas giants (Jupiter and Saturn) or ice giants (Uranus and Neptune).
- There are also asteroids and comets in the Solar System.
- The Solar System is in a galaxy called the Milky Way.



<u>The seasons</u>

- **The Earth** is the only place we have found life in the Universe.
- It takes a year for the Earth to orbit the Sun 365.2442 days.
- We add **one day every fourth year** (a leap year) because of the extra 0.2442 days.
- The Earth's axis is **tilted 23.4 degrees**, which causes **seasons** (which have different day lengths and temperatures).
- The Earth spins on its axis every **24 hours**, giving us day and night.

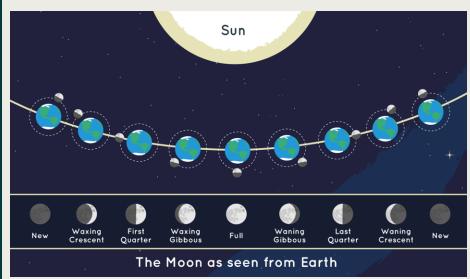


<u>The Moon</u>

- The Moon orbits the Earth every 27 days and 7 hours.
- It takes the same amount of time to spin on its axis, so we always see the same side.

Moon phases

The Sun always illuminates half of the surface of the moon. How much we are able to see of that illuminated half changes as the Moon travels through its orbit.



<u>Models</u>

Scientists use **models** to explain ideas and to test predictions. A model:

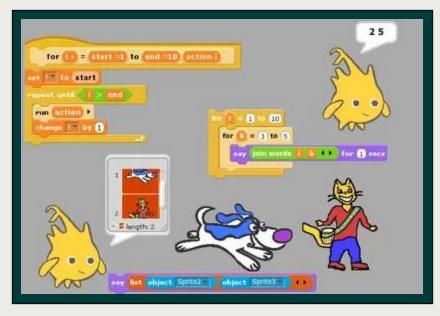
- is a simpler representation of something;
- · includes the key features of the thing being represented;
- is used to explain things, solve problems or to make predictions.

Models cannot explain everything and have limitations.

Knowledge Goals: Chemistry

		Half Term 5: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	galaxy	A group of billions of stars held together by gravity.	
2	light year	The distance light travels in one year.	
3	stars	A massive, luminous sphere of matter held together by its own gravity. The Sun is the star at the centre of our Solar System.	
4	nuclear fusion	The process in stars that joins hydrogen atoms to make helium atoms, heat, and light.	
5	orbit	The path taken by a satellite, planet, or a star moving around a larger body. The Earth completes one orbit around the Sun each year.	
6	exoplanet	Planet that orbits a star outside of our Solar System.	
7	equinox	When the length of a day and night is equal.	
8	season	A division of the year, marked by changes in weather, ecology and hours of daylight; summer, autumn, winter, and spring.	
9	model	Something which describes an aspect or part of the physical world.	

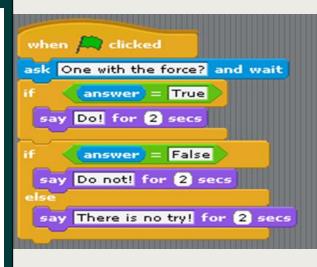
Knowledge Goals: Computer Science



BYOB is a programming language similar to Scratch, in which you can use blocks to create your own programs.

Selection:

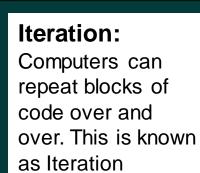
Computers can make decisions on which piece of code to run by evaluating a condition. If the condition is true, then they will run the code. If it is false, then they will skip it. This is known as Selection

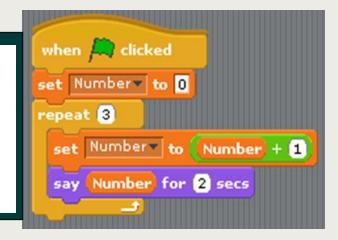




Sequence:

Computers require correct code given in sequence in order to carry out instructions. The code on the left will say "1, 2, 3". If the blocks were out of sequence, then the program would not function correctly and would give a different output.





Knowledge Goals: Computer Science

		Half Term 5: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	Variable	A store for a single piece of data in a computer program	
2	Sequence	Computers read lines of code one at a time in sequence. Making sure your program runs in the correct order is important	
3	Selection	Making a decision in a program on which piece of code to run	
4	Iteration	Repeating a piece of code a number of times	
5	Operators	Use of mathematical symbols to check if a condition is true or false, i.e. =, >, <, >=, <= etc.	
6	Sub-programs	In BYOB, sub-programs or sub-routines can be created making your own blocks	
7	BYOB	"Build Your Own Blocks": BYOB is similar to Scratch, but more advanced as you can create your own blocks	

Knowledge Goals: Drama

DESIGN

COSTUME: With the characters being stereotypical, costume design in melodrama would usually reinforce these stereotypes. Colour might be used symbolically (red for danger, black for a villain, white for purity etc) and accessories might be added for dramatic effect, e.g. a cloak to swish menacingly.

SET & LIGHTING: The set in a melodrama should create an atmosphere. There may be shadowy corners in which a villain could lurk. You may need several doorways for dramatic entrances/exits and thrilling chase sequences. Levels could also suggest status, such as high platforms for the powerful characters. The lighting could help create shadowy corners, or sudden flashes could add dramatic effect to surprise entrances. Colour could be used symbolically such as red for danger and white for purity.

SOUND & MUSIC: Sound effects could be used in melodrama to add atmosphere – a stormy night, driving rain, howling wind, an advancing steam train. Fast music might increase the tension for a chase sequence; slow, creepy music might add tension to a dangerous situation.

STOCK CHARACTERS

Stock characters are a form of stereotype, which we expect to see in a particular style of drama. Their appearance, behaviour and speech is predictable. In melodrama, we would expect to see, for example, the Maiden, the Hero and the Villain, and we would be able to identify them easily from their actions and appearance. The other stock characters include the sidekick and the aged parent (s).

Key Content/Ideas/concepts

A silent film is a film with no synchronized recorded sound (and in particular, no audible dialogue). Though silent films convey narrative and emotion visually, various plot elements (such as a setting or era) or key lines of dialogue may, when necessary, be conveyed by the use of title cards.



NARRATIVE STRUCTURE

The structure of a play is the 'shape' of the action. Typically in silent movies/ melodrama, the opening scene is expositional. It follows a typical linear narrative structure.

1. Background. 2. Rising action. 3. Climax. 4. Falling action. 5. Resolution.

ASIDE- an aside is when the action freezes and a character speaks directly to the audience. This can also be done with the action continuing although the other characters will be unaware of the aside taking place. This is often a useful way to introduce dramatic irony.

DRAMATIC IRONY: when the audience know something the other characters don't.

INTERTITLES: short lines of dialogue visually presented for the audience to read.

SLAPSTICK COMEDY: A physical kind of comedy based around mild comic violence — smacks in

Melodrama is a style of drama in which is characterised by its sensationalism. The characters are stereotypical and their reactions are exaggerated and highly emotional. The storylines extremely eventful, often with 'life and death' situations, intending to entertain and shock the audience. Good triumphs over evil in melodrama, with the baddies.

Knowledge Goals: Drama

Self-Quiz Questions	Self-Quiz Questions	Challenge Self-Quiz Quizzing
1. What is a silent movie?	1. What is the role of costume in melodramatic style?	1. What does sensationalism mean?
2. Silent movie/ melodramatic characters are referred to as what type of characters?	2. What is slapstick comedy?	2. Recall the narrative structure of a melodrama.
3. How would you describe the performance style?	3. What may be added to costumes for dramatic effect?	3. What is an aside and how does it happen?
4. What theme do many silent movies/ melodramatic plots follow?	4. What is the intention of a melodramatic set?	4. What are the 5 stages of a linear narrative structure?
5. What is the performance intention of the silent movie style?	5. Why might their be several doors in a melodramatic set?	5. Give an example of how you would create a non-linear structure.
6. How does every melodrama end?	6. Why would levels be used?	6. Why would you use a non-linear structure?
7. What is the meaning of stock characters?	7. How might lighting be used?	7. What is dramatic irony?
8. The appearance, behaviour and speech of stock characters is p?	8. How is sound used in a silent movie?	8. Why is dramatic irony used in melodramas?
9. Name 3 stock characters.	9. How might sound be used to increase the tension?	9. Why were intertitles used in silent movies?
10. What makes stock characters easily identifiable?	10. List 3 physical performance skills and 3 vocal performance skills.	10. How could intertitles create comedy?

Knowledge Goals: English





Before you start writing you have to think of TAPS			
T- Text Type What are you being asked to write?			
A- Audience Who are you writing for?			
P- Purpose What are you trying to achieve			
S- Style	Is it formal or informal?		

	Some Non-Fiction Text Type			
Article	 Headline and Strap-line Introduction to create interest – (include 5Ws) 3-4 middle paragraphs Short but effective conclusion Use inverted pyramid structure Lively style DAFOREST techniques 			
Letter	 Address and date in the top right of the page Address of the person you are writing to on the left. Short introductory paragraph 3-4 middle paragraphs Concluding paragraph summarising ideas. 			
Speech	 Open with a welcome/greeting Outline what the speech will be about: 'I will talk to you about Make 3-4 key points and expand on them. Conclusion to summarise ideas End acknowledging the audience DAFOREST techniques 			
Review	 Introduction stating what is being reviewed and give an overview of film/product. Middle paragraphs provide positives and negatives. Conclusion to summarise and give a recommendation Make your opinion clear DAFOREST techniques 			

Non-Fiction Writing





teacher for one). Identify the TAPS and any persuasive devices. Explain how the use of devices combined with the TAPS creates an effective text.

Purpose		Persua	sive Techniques	Connec	ctives and Discourse Markers
It's as easy as PIE ersuade	D	Direct Address	"You need to do something about this!"	At the star	Position t Meanwhile
nform	A	Alliteration/ Anecdotes	Six Slippery Snakes Slithered Slowly Southwards	Firstly Secondly Thirdly	Subsequently Finally In conclusion
	ʻ		A story from your life used to illustrate a point	Important	-
Most Newsworthy Info	F	Facts	Scotland's national animal is a unicorn	Significan In particul	ar
Important Details	0	Opinions	English is the best subject in school	Furthermo	
Other General Lafe	R	Rhetorical Questions/	Are you tired of doing homework?	In addition As well as	n
	Repetition E Emotive Language	"I have a dream" in MLK Jr's famous speech	Although	Contrast	
			'Make your wardrobe sparkle with our desirable new winter collection!'	Whereas Otherwise Alternativ Neverthele	ely
m	S	Statistics	About 90% of all people live in the Northern Hemisphere	Ch	"Eating junk food is one of the leading
Good morning ladies and genilemon	Т	Tricolon (Rule of Three)	You are talking to a man who has laughed in the face of death, sneered at doom, and chuckled at	task	causes of unhealthy children. For this reason is should be banned for children under 12." Write a speech for your classmates explaining your view on this statement.
A AAA		hande narad	catastrophe.	Question	Why are (select 2-3 persuasive devices) effective in non-fiction writing?
			april inter you enange.	Analysis	Select a non-fiction text (or ask your



Knowledge Goals: English

		Notes:	
#	Key word	Definition	
1	Alliteration	The repetition of consonant sounds.	
2	Facts	Something you can prove to be true.	
3	opinion	What you think about an idea.	
4	Rhetorical	A question that does not require an answer.	
	question		
5	Emotive	Words that evoke feeling from the audience.	
	language		
6	Statistics	Numbers and data.	
7	Triplet	Repeating a word three times for effect.	
8	Hyperbole	Exaggeration.	
9	Superlatives	Showing the extent of a quality- 'the biggest, the best'.	
10	Imagery	The use of similes and metaphors to create pictures in the audience's head.	

Knowledge Goals: Food Technology

Blue – fish

Red – raw meat

White – bread and dairy

Brown – root vegetables

Green - vegetables and salad

Yellow – cooked meat

Personal Hygeine Good personal hygiene is vital when cooking to avoid the risk of food poisoning.

- Short Fingernails
- Hair Tied back
- Cuts covered with a BLUE plaster
- Wear clean apron
- Jewellery removed
- Wash hands before cooking, after blowing nose, visiting toilet or touching face or hair

Health and Safety <u>These are</u> essential for everyone's safety

- Wash in hot soapy water
- Don't put hot food in fridge
- Turn saucepan handles when using
- Don't touch electrical appliances with wet hands
- Store high risk food in fridges
- Use oven gloves

Food Senses

taste, smell, touch, sight, hear

Needed in large amounts to help the body to function properly Fat Water Carbohydrates Protein Keeps us hydrated. unction Source Energy Function Function: Warmth Drinks, fruit and vegetables, soup. Growth and Repair Energy Protection of organs Energy Sources: Sugars: Function **Too little** Sources Controls body Dehydration leads Bread Cakes Saturated Fat **Unsaturated Fat** Sources: temperature. to headaches. (Bad Fats) (Good Fats) Pasta Sweets Gets rid of irritability and Plant Animal Meat Avocado Rice **Fizzy drinks** waste in the loss of Processed Foods Nuts Nuts Eggs body. concentration Wheat Lard Olive oil Quorn Fish Potatoes We should consume Saturated Fats - solid at room Beans Meat Cereals no more than 30g of Fibre temperature and are from animal Lentils sources. Unsaturated fats are sugar per day Function iquid at room temperature and It helps with digestion are vegetable sources. It helps to get rid of waste Too much **Too little** Too much **Too Much Too little Too Little** Too much Source: **Turns to fat** Anaemia Obesity Tooth Wholegrain, Obesity Fat soluble Constipation if not turned Slow Type 2 decay Type 2 Whole wheat, vitamin **Bowel Cancer** into energy growth in diabetes Type two diabetes deficiencies Wholemeal cereals children diabetes Heart Heart Peas and beans Disease Obesity Disease **Colour Coded Chopping Boards Knife Skills**

Macronutrients

Bridge Hold Claw Hold Knife pointing down Image: Straig Constraints Image: Straints Image: Straige Constraints

Knowledge Goals: Food Technology

		Half Term 4: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	Hygiene	The degree to which people keep themselves or their environment clean, especially to prevent disease	
2	Nutrient	A nutrient is an essential substance that the body needs. There are different types of nutrients, such as carbohydrates, proteins, fats, vitamins and minerals	
3	Protein	Protein is a macronutrient that we need for growth, repair and maintenance in the body, especially for bones and muscles	
4	Carbohydrate	There are two types of carbohydrates: 1. simple carbohydrates or sugars such as biscuits and jam 2. complex carbohydrates or starches such as bread and rice Complex carbohydrates give a steadier source of energy.	
5	Fat	There are two types of fat – saturated fat and unsaturated fat, fat is needed in the body to protect internal organs, to provide warmth and energy	
6	Mineral	Iron and calcium are examples of minerals which the body needs	
7	Hydration	Hydration means adding back water that has been lost.	



Knowledge Goals: Geography Geography ROCKS!

deposition



Click on the link above to find out about the rock cycle.



Click the QR code above to find out more about the 3 different rock types.



erosion and transportation



Rocks are made from a mixture of different minerals: these are solid chemical compounds that occur naturally on Earth. Some rocks are made from interlocking mineral crystals that fit tightly together whereas others are made up from broken fragments, or grains, of older rocks and minerals which have been cemented togethe

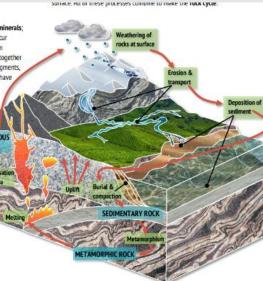


bbro - a rock with interlocking

Rock impose Elicky Inmer St Joh

andstone - a rock made from fragments of older rocks Depending on the way a rock has

formed it will belong to one of these groups: igneous, sedimentary or metamorphic (find out more on the next page!).



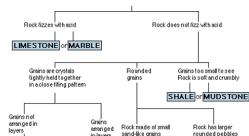
weathering

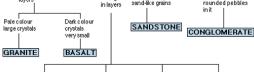


Click the QR code to find out about upland limestone landscapes.



Rocks identification key

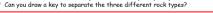






Keys: Keys are used to identify living things or objects.

- 1. A key involves a series of guestions which all have two possible answers.
- The two answers <u>divide</u> a group into <u>two parts</u>.
 Further questions continue to <u>divide the group</u> up until you are just <u>left with one</u>.
- * Is the rocks identification key above a true key? Explain your answer.



THE ROCK CYCL

Rocks on the Earth's surface are gradually broken down into smaller pieces by water, ice, wind, plants and animals (known as weathering). These broken up pieces are called sediment and are transported away, or eroded, by rivers, glaciers and wind. Sediments often collect at the bottom of lakes and oceans. Over time they are squashed and compacted together to become a sedimentary rock such as sandstone, limestone or mudstone

Sedimentary rocks are laid down in layers. They can contain fossils from animals and plants that become trapped in the sediment before it become



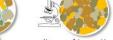
a rock

Ammonite fossil in Beds of sandstone. a sedimentary rock mudstone and limestone in the Grand Canvon

Sedimentary rocks are made up of grains which can be rounded or angular. Under the microscope we can sometimes see gaps between the different grains - these gaps are called pores

If the pores connect together, water, air or oil can flow through the rock, and the rock is called permeable. If a permeable rock is put in water you will see bubbles coming out as water pushes the air out.





Non-porous & impermeable Porous & permeabl









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When rocks are pushed deep enough down into the Earth, they can melt to form molten rock. Below the surface of the Earth. molten rock is called magma but when erupted above the ground, usually through volcanoes, it is called lava.

Igneous rocks form when either magma or lava cools down and turns from liquid to solid. When this happens, igneous rocks form crystals and are said to crystallise.

Lava cools down very quickly because the surface of the Earth is cold. This means that igneous rocks formed from cooling lava, such as basalt, only have time to grow tiny crystals. Often gas bubbles can get trapped in these rocks Obsidian too. Obsidian, or volcanic glass, cools so quickly that you cannot see any crystals at all!

Magma deep within the Earth takes thousands of years to crystallise because is it much hotter below the surface. Crystals have more time to grow, so they grow larger. If you look closely at an igneous rock that has formed deep within the Earth, for example granite or gabbro, you will be able to see the different coloured mineral crystals



Rock & thin section images: @ 2013 Imperial College Lond

The metamorphic rock you end up with depends on 1: the type of rock you start with, and 2: the amount of heat and pressure the rock is put under. Here are a few examples of metamorphism that

Knowledge Goals: Geography Geography ROCKS!

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		Half Term 5: Tier 3 Vocabulary
#	Key word	Definition
1	Igneous rocks	These are formed by the cooling of volcanic rock.
2	Metamorphic rocks	These are formed from another rock by heat and pressure
3	Sedimentary rocks	These are formed by small rock pieces being transported in rivers and laid down in layers
4	Rock Cycle	The recycling of rocks over millions of years changing between the different rock types.
5	Weathering	Weathering breaks down rocks on the surface of the Earth.
6	Biological Weathering	This describes rocks being broken up by the roots of plants, or animals burrowing into them.
7	Chemical Weathering	This describes rocks being broken up because substances in rainwater, rivers and seawater or the air, react with the <i>minerals</i> in the rocks.
8	Physical Weathering	This describes rocks being broken up by changes in temperature, freezing and thawing of trapped water or the action of waves and rivers.
9	Limestone Pavement	A large area of bare limestone where the soil has been removed by ice thousands of years ago to expose the weathered surface.
10	Stalactites	Rainwater containing dissolved limestone drips from the roof of a cave. Water evaporates leaving residues of <i>calcite</i> which build up over time

Year 7 Knowledge Goals: History - How significant are the Tudors today?

OVERVIEW

Henry VII founded the Tudor dynasty in 1485 after his victory over Richard III at the Battle of Bosworth Field. He married Elizabeth of York and had four children: Arthur, Henry, Margaret, and Mary. **Henry VIII** became King in 1509 and married six times. He broke away from the Roman Catholic Church and reigned until 1547. His son **Edward VI** ruled until 1553 and was Protestant. He died aged 15 and was succeeded by **Mary I** ('Bloody Mary') who was a devout Catholic and married Philip II of Spain. Mary's death brought **Elizabeth I** to the throne. There were many important achievements during her reign. She established the English Protestant Church, defeated the Spanish Armada and, although she left no heir, brought a 'Golden Age' to England until her death in 1603.

KEY INDIVIDUALS (other than Monarchs – above)

Thomas Wolsey. A Cardinal of the Catholic Church and key advisor of Henry VIII. He was Lord Chancellor from 1515-29 and fell from power when he failed to secure Henry VIII a divorce from his first wife.

Martin Luther. A German monk and a Protestant. He wrote *The Ninety- Five Theses* which attacked the corruption of the Roman Catholic Church.

Thomas More. Key advisor and friend of Henry VIII. He opposed Henry's divorce and the break with Rome and was executed for treason.

Thomas Cromwell. A Protestant and key advisor of Henry VIII in the 1530s. He helped Henry VIII to break from Rome and set up the Church of England as well as dissolving the monasteries.

Thomas Cranmer. The first Protestant Archbishop of Canterbury, appointed in 1533. He officially divorced Henry VIII and Catherine of Aragon but was eventually burnt at the stake on the orders of Mary I.

Latimer & Ridley. Protestant churchmen who were burnt at the stake on the orders of Mary I in 1555. Their story is told in the *Book of Martyrs*.

Mary, Queen of Scots. A Catholic and a cousin of the Tudors. She lived in exile in England after fleeing Scotland and plotted against Elizabeth I. She was eventually executed after the Babington Plot.

Philip II. Husband of Mary I and King of Spain. A Catholic, he launched the Spanish Armada against England in 1588.

William Shakespeare. Leading playwright of Elizabethan times, part of the 'Golden Age'. His plays, such as *Romeo and Juliet* and *Hamlet*, were performed at the Globe Theatre.







Key Dates	Events	
21 April 1509	Henry VII died and was succeeded by Henry VIII.	
11 June 1509	Henry VIII marries Catherine of Aragon	
24 th December 1515	Thomas Wolsey becomes Chancellor	
18th February 1516	Mary I is born	
11 th October 1521	Henry is given the title 'Defender of the Faith'	
25th January 1533	Henry marries Anne Boleyn	
8 th June 1536	The dissolution of the monasteries	
28 th January 1547	Henry VIII died and Edward VI became king of England.	
19 th July 1553	Edward VI died and Mary I became Queen of England	
17 th November 1558	Mary I died and Elizabeth I became Queen of England.	
8 th February 1587	Mary Queen of Scots is executed	
24th March 1603	Elizabeth I died and James I becomes King of England.	

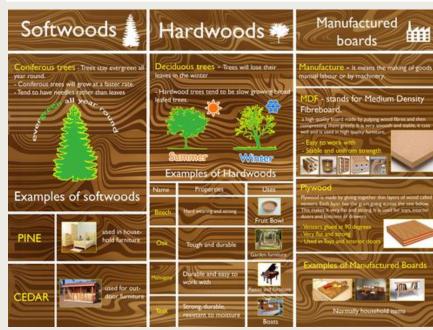
Year 7 Knowledge Goals: : History - How significant are the Tudors today?

		Half Term 5: Tier 3 Vocabulary	
#	Key word	Definition	Notes:
1	Reformation	a 16th-century movement for the reform of abuses in the Roman Church ending in the establishment of the Protestant Churches.	
2	Armada	a fleet of warships.	
3	Dissolution	to close something down (e.g. monasteries)	
4	Protestant	a member or follower of any of the Western Christian Churches that are separate from the Roman Catholic Church in accordance with the principles of the Reformation.	
5	Monastery	a building or buildings occupied by a community of monks living under religious vows.	·····
6	Golden Age	a period of peace and prosperity in a country	
7	Pilgrimage -	a journey, especially a long one, made to some sacred place as an act of religious devotion	
8	Martyr	a person who is killed due to his / her beliefs	
9	Heretic	someone who disagrees with the accepted beliefs	
10	Heir	a person who inherits something	

Knowledge Goals: Materials

Health and Safety It is really important we ASSESS the RISK and REDUCE the RISK of Injury by LISTENING To the TRAINING and following the correct PPE usage

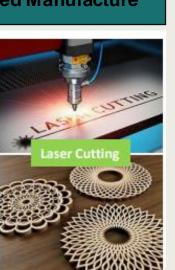
- Hair must be tied up in the workshop
- Blazers and ties must be removed
- Jewellery must be removed
- Only use machines you have been told to use and have been demonstrated to you
- Ensure you know where the emergency stop button is
- Do not eat or drink in the workshop
- No running



CAM: Computer Aided Manufacture

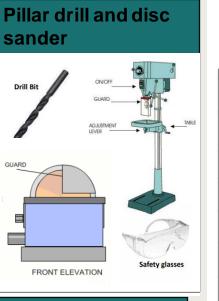
Laser cutter

Laser cutting works by directing the output of a high-power laser The focused laser beam is directed at the material, which then cuts the material leaving an edge with a high-quality surface finish. In school we mainly cut and engrave on Plywood and Acrylic



	×	2 DESI	CAD: Computer Aided Design
ABLE	<u> </u>	Icon	Meaning
-	Ц О О	/	Used to draw straight lines
	σ 🙇	S	Used to draw freeform curves
	ABC ₹⊘ °° ₫	\odot	Used to draw circles
		ABC	Used to add text
		Þ	Click and hold for Shapes tools

Saws				
Tenon S For straight		Coping Saw For cutting curves		
BRASS BACK	HANDLE	FRAME COPING SAW SLOTED PIN		

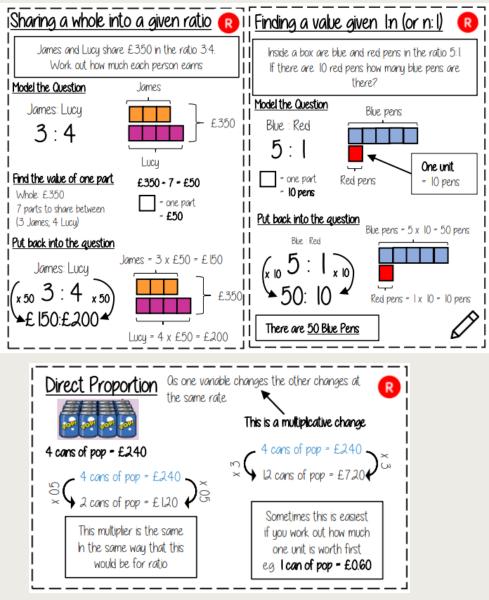


Knowledge Goals: Materials

		Half Term 2: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	Product Analysis	Investigating existing products in terms of their aesthetics, cost, customer, environment, size, safety and function to determine the advantages and disadvantages of the product as part of research	
2	Aesthetics	The look of a product e.g. the colour, theme, texture, finish etc	
3	Tessellation	A tessellation is a pattern of shapes that fit together perfectly, without any gaps or overlaps	
4	Computer Aided Design	Computer-aided design (CAD) is the use of computers to help in the creation of a design, 2D is a piece of software that can allow designs to be laser cut accurately	
5	Timbers	Timbers are different forms of wood that can be used, they are categorised into hardwoods, softwoods and man-made/manufactured boards	
6	Isometric	A design strategy which shows projection or perspective in which the three principal dimensions are represented by three axes 120° apart. They are are a good way of showing measurements and how components fit together.	
7	Scale Drawing	A drawing that shows a real object with accurate sizes reduced or enlarged by a certain amount (called the scale).	

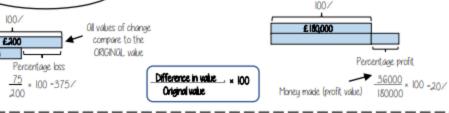
Knowledge Goals: Maths

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Knowledge Goals: Maths

Unit 9 – Percentages			Find the percentage of an amount (Mental methods)		
Торіс	Video	Resource	The whole represents 100% $10\% - \frac{1}{10}$ of the whole 1 Using a multipler Find 65% of 80 Fraction, decimal, percentage conversion		
Fractions to percentages to decimals	Watch This	FDP Mixture Worksheet Check your answers Matching FDP Game Matching Game	$65 / - \frac{65}{100} + \frac{65}{100$		
Percentages of amounts	Watch This	Percentages of amounts Odd Percent Out	$20\% - \frac{2}{10} = \frac{1}{5} \text{ of the whole}$ $5\% - \frac{1}{20} \text{ of the whole}$ $\frac{\text{Using the percent button}}{\text{Find } 65\% \text{ of } 80}$ $\text{Type } 65$ $\text{You will see } 65\%$		
Percentage increase/decrease with & without a calculator	<u>Watch This</u> <u>Watch This Calculator</u>	Worksheet Check your answers Worksheet Check Your Answers	Find $65 \neq of 80$ Method IPressPressMethod IControl of 100 calculatorControl of 100 calculatorCon		
Reverse percentages	Watch This	Reverse Percentage			
£200 🖌 com		a house for £180,000,1 sold It for £,216,000	Percentage decrease: Multipliers 100% 100% 100% 100% 100% 12%		



Knowledge Goals: Maths

		Notes:	
#	Key word	Definition	
1	Percent	Parts per 100 – written using the % symbol.	
2	Growth	Growth: to increase/ to grow.	
3	INVESI	Invest: use money with the goal of it increasing in value over time (usually in a bank)	
4	Proportion	A comparison between two numbers	
5	Ratio:	A ratio shows the relative size of two variables	
6	I JIFACT DECONTION	As one variable is multiplied by a scale factor the other variable is multiplied by the same scale factor	
7	Inverse	As one variable is multiplied by a scale factor the other is divided by the same scale factor.	

Knowledge Goals: Music



	TERM	DEFINITION
	DJEMBE	An hour-glass shaped drum from West Africa.
	MASTER DRUMMER	The Master Drummer plays the calls, teachers the rhythms to new players, leads the ensemble and improvises over the music
	RHYTHM	A pattern of note durations
	OSTINATO	A pattern (rhythmic or melodic) which is repeated over and over, many times
	POLYRHYTHM	A musical texture where multiple different rhythms are played at the same time
	IMPROVISATION	Where musical ideas are made up on the spot. An improvisation will thus be different every time it happens.
	CALL & RESPONSE	Where one person plays (or sings) a call, and the rest of the ensemble answers. The call and response may be the same music, or different (like a question and answer).

Can you find out what the different parts of the drum represent in African Culture?

What is the Djembe made from?

Knowledge Goals – Music

CAPE

SENEGAL

GUINEA

SIERRA LEONE

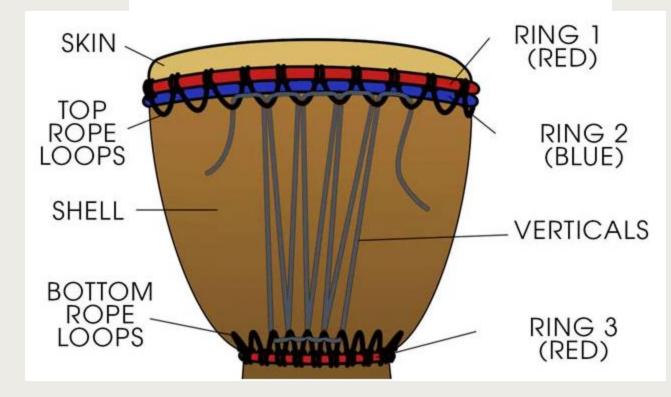
In this unit we focus on the traditional drumming music of West Africa using djembes . A djembe is a rope-tuned skin-covered goblet drum played with bare hands, originally from West Africa. THE GAMBIA GUINEA-

BURKINA-FASO Djembe music was originally used to tell stories and to transmit COTE D'IVOIRE messages through a rich tapestry of oral tradition passed through generations.

Different djembe tones are produced by using different areas of the skin and a variety of hand positions/techniques.

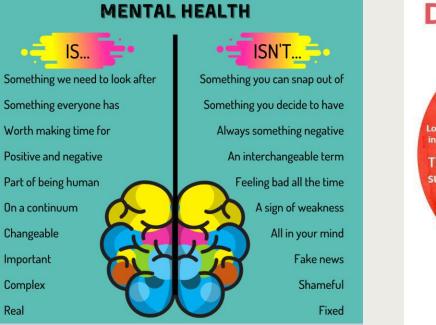
MAURITANI NIGER MAL NIGERI GHANA BENIN LIBERIA TOGO

According to the Bambara people in Mali, the name of the djembe comes from the saying "Anke djé, anke bé" which translates to "everyone gather together in peace" and defines the drum's purpose.





Knowledge goals: PDev





Friendly banter

 There's no intention to hurt and everyone knows the limits

lgnorant banter

 'crosses the line' with no intent to hurt. Will often say sorry

Malicious banter

 Done to humiliate a person - often in public Banter teasing or joking talk that is amusing and friendly

CAM

Bullying repeated behaviour that causes physical or emotional harm

Knowledge Goals: PDev

		Notes:	
#	Key word	Definition	
1	banter	a type of teasing which although usually friendly, easily turns into something people can take offensively.	
2	cyber bully–	a person of any age who harasses you online.	
3	Paedophile	an older person who has sexual feelings towards children	
4	Mental health	like physical health, a measure of how well a person is, just in their mind instead of their body.	
5	Depression	feeling of low mood for a period of time, leading to hopelessness and loss of pleasure in life	
6	Anxiety	a feeling of unease, such as worry or fear, that can be mild or severe	



Knowledge Goals: PE

Athletics



Throwing: Shot Putt, Discus, Javelin

- □ Grip I can use a basic grip to hold the Javelin, Discus and Shot Putt
- □ Stance I can adopt a basic stance to throw the Javelin, Discus and Shot Putt
- □ **Movement** I can use a high to low movement to throw the Javelin, Discus and Shot Putt.
- Delivery & Release I can throw the Javelin, Discus and Shot Putt at a 45° angle with some consistency.



Sprinting: 100m, 200m, 300m, Hurdles

- □ Warm Up I am able to warm up using suitable drills for sprinting with help from my teacher.
- □ Start Technique I can start a race using a basic 2 point start and I understand the key words the starter would use to start a race.
- □ Acceleration I understand the importance of using my arms to accelerate when starting a race.
- □ Maintenance & Finish I am able to maintain a good technique when sprinting over shorter distances using my arms and leg to drive me forward.

Jumping: Long Jump, Triple Jump, High Jump

- □ Warm Up I am able to plan and carry out suitable drills for jumping more independently.
- Run Up I am able to increase my run up maintaining control and take off from 1 foot and land on 2
- □ **Take Off** I am able to take off from one foot using a head up, chest up and drive up technique.
- □ Flight I can use a long and thin shape in the air and begin to lift my arms above my head when in flight.
- □ Landing I can extend my legs out before landing to gain extra distance and land with knees bent.

Endurance: 800m, 1500m

- □ Warm Up I can warm up by gradually increasing intensity and more specifically for endurance events.
- □ **Technique** I am able to demonstrate a more effective running technique with arms and shoulders relaxed and a chest to pocket action.
- □ Pacing I can run a variety of distances and pace myself using previous experience or with the help of a stopwatch.
- □ **Tactics** I am able to judge the correct pace to run depending on my own ability and increase/slow it down depending on how I feel during the race.

Knowledge Goals: PE

	Hal	Notes:	
#	Key word	Definition	
1	Aerobic Exercise	Exercise with Oxygen	
2	Anaerobic Exercise	Exercise without Oxygen	
3	Fosbury Flop	A jumping technique in High Jump	
4	The V grip	A type of grip in Javelin	
5	Chin, Knee, Toe	Body position when setting up for throwing events; shot put & discus	
6	Split Time	Some runners use splits to see if they're pacing a distance evenly and staying on track to hit a specific goal	
7	4-point start	A sprint start position involving both hands and feet	
8	Pocket to Socket	A sprint technique involving the arm action	



Athletics – skills & techniques



English Schools Athletics Association

Knowledge Goals: Physics – Energy shifts

A model for energy In physics, a model of stores and shifts is used to help understand the concept of energy. The model uses the idea that energy is in a store. The energy may be shifted into another store. When energy is shifted out of a store we can think of the stores being emptied, and filled as energy is shifted into them.

Energy stores



Gravitational potential energy store

A box has more energy in its gravitational potential energy store when it is placed on a higher shelf. The amount of energy in the gravitational potential energy store depends on the height of the object.



Elastic potential energy stores

A stretched or squashed object has more energy in its elastic potential energy store.

Kinetic energy stores



A runner has more energy in their kinetic energy store when they are running faster. The amount of energy in the kinetic energy store depends on the speed of the object. **Thermal energy stores**

An object has more energy in its thermal energy store

when it is hot than when it is cold. The amount of energy

in the thermal energy store depends on the temperature of





Chemical energy stores

the object.

Batteries, foods, and fuels store energy in their chemical energy stores. Shifts of energy from the chemical energy store occurs due to chemical reactions. **Useful or not?** Not all energy is shifted to useful stores. An energy flow diagram can show the proportion of energy shifted usefully compared to the energy that is wasted or **dissipated**. Energy is often dissipated to the thermal energy store of the surroundings.

Useful energy out Total energy in Wasted energy out

Energy shifts To describe energy shifts, we need to think about the store the energy **starts** in and the store the energy **ends** in.

When a clockwork toy unwinds, energy from the elastic potential energy store is shifted into the kinetic energy store of the toy.



When a person lifts a book, energy is shifted from the person's chemical energy store to the book's gravitational potential energy store.



When using a hand warmer, energy moves from the thermal store of the hotter object to the thermal store of a cooler object (your hand).



Knowledge Goals: Physics – Energy Shifts

	Half	Notes:	
#	Key word	Definition	
1	system	An object or group of objects.	
2	thermal energy store	Filled when an object gets hotter.	
3	chemical energy store Emptied during chemical reactions when energy is shifted to the surroundings.		
4	kinetic energy store Filled when an object speeds up.		
5	gravitational potential energy store	Filled when an object is raised above the ground.	
6	elastic potential energy store	Filled when an object is stretched or compressed.	
7	dissipated Spread out wastefully.		
8	joule (J)	The unit of energy.	

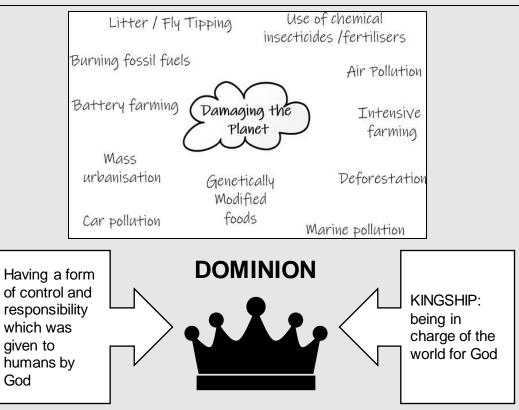


Knowledge Goals: PRE Are we stewards of the earth?



All religions believe that we have a responsibility to care for the world and the environment (including the animals, plants and resources on the Earth). These beliefs are often at the very centre of religious teachings – for example one of the reasons Muslims follow a halal diet is to help to maintain the natural balance or 'fitrah' in the world.

However, believing that we should care for the world is not only a religious belief. Many people who do not follow a particular religion – for example Humanists – believe strongly that we should protect the earth and its' environment.



Because of dominion, believers can use what is on the planet – from plants to animals. Dominion does not, however, give humans the right to exploit or abuse these resources.

Beliefs about the Earth

<u>Christianity</u>

God made the Earth and gave Christians the special responsibility as **Stewards** to look after it. They can use the Earth but cannot abuse it. <u>J</u>

<u>udaism</u>

Jews believe that God created the world and gave human beings a special responsibility within creation to **cultivate** it, **guard** it and use it wisely. This is known as **stewardship**.

<u>Buddhism</u>

Buddhists believe in the **interconnectedness** of all things. Humans depend on nature and nature depends on humans. Harming one part of this whole is the same as harming all of it. Therefore, if people learn to live simply and in **harmony** with the world, the whole of the environment will benefit.

<u>Humanists</u>

Because there is no God or supernatural force, human beings must take sole responsibility for solving the **world's** environmental problems. Only humans are capable of finding the solutions that can lead to a **sustainable** existence. **Sikhism**

The Guru Granth Sahib teaches that Sikhs show **respect and responsibility** towards creation and bear in mind the needs of future generations, as well as their own current needs.

<u>Islam</u>

Allah made the Earth and humans have the duty as **Khalifahs** to care for it and maintain **fitrah** (natural balance) in the world.

<u>Hinduism</u>

Everything around us is part of the Earth and nature. We should practice **Ahimsa** – the principle of **non**-violence – with the Earth. Also, all living things in the natural world are sacred because they are part of **God**.



Knowledge Goals: PRE Are we stewards of the earth?



		Half Term 5: Tier 3 Vocabulary
#	Key word	Definition
1	Stewardship	Looking after something for its real owner. Caring for the Earth on behalf of God
2	Environment	Everything about us in the natural world. The environment includes – people, animals, plants and resources.
3	Sustainability	Using the Earth's resources in a way which protects the environment for present and future generations.
4	Wants	Luxuries – things that humans desire but that are not needed for survival
5	Needs	Necessities - things that we much have in order to survive and thrive
6	Interconnectedness	the state of having different parts or things connected or related to each other:
7	Dominion	Having a form of control and responsibility which was given to humans by God
8	Harmony	Things that go well together and work in tandem with each other
9	Fitrah	Acts that are in line with the expectations of Allah. Actions which show the true nature that Allah intended for humans

Knowledge Goals: Spanish

en las paredes

on the walls

Palabras			1. Westerney and the second				
Los países ¿Dónde vives? vivir Vivo en Vive en Vive en Viven en Viven en Viven en Alemania Escocia España Francia Gales Grecia Inglaterra Irlanda Italia Portugal Mi casa ¿Vives en una casa o en un piso? Vivo en una casa. Vivo en una casa. Vivo en un piso. ¿Dónde está? Está en el campo en la montaña en la costa en una ciudad	Countries Where do you live? to live I live in He/She lives in We live in They live in Germany Scotland Spain France Wales Greece England Ireland Italy Portugal My house Do you live in a house or a flat? I live in a flat. Where is it? It's in the countryside in the mountains on the coast in a city/town	¿Cómo es tu casa? Es antigua moderna bonita fea nueva vieja pequeña cómoda grande Las habitaciones ¿Qué hay en tu casa/piso? ¿Qué hay an tu casa/piso? ¿Qué hay abajo? ¿Qué hay abajo? ¿Qué hay arriba? ¿Qué hay fuera? Hay un comedor un cuarto de baño un aseo un pasillo un salón una cocina un dormitorio un garaje un jardin una terraza	What's your house like? It's old(-fashioned) modern pretty ugly new old small comfortable big Rooms What is there in your house/flat? What is there downstairs? What is there outside? There's a dining room a bathroom a toilet a corridor a living room a kitchen a bedroorn a garage a garden a terrace	En mi casa Comemos en el cornedor. Escuchamos música en el dormitorio. Estudiamos. Hablamos con mamá en la cocina. Leemos libros en el jardin. Vemos la televisión en el salón. Mi dormitorio En mi dormitorio hay un armario un equipo de música un ordenador una alfombra una cama una estantería una lámpara una puerta una silla una televisión una ventana pósters	In my house We eat in the dining room. We listen to music in the bedroom. We study. We talk to mum in the kitchen. We read books in the garden. We watch television in the living room. My bedroom In my bedroom there's a wardrobe a hi-fi a computer a rug a bed a shelf/shelves a lamp a table a door a chair a television a window posters	En mi dormitorio ¿Qué haces en tu dormitorio? Mando mensajes. Escucho música. Bebo Coca-Cola. Duermo mucho. Veo la televisión. Juego con el ordenador. Estudio a veces. Hablo por teléfono. Leo libros. Como bocadillos. Navego por internet. Palabras muy útiles siempre a veces normalmente somos	In my bedroom What do you do in your bedroom? I send text messages. I listen to music. I drink Coca-Cola. I sleep a lot. I watch television. I play on the computer. I study sometimes. I talk on the phone. I read books. I teat sandwiches. I surf the net. Very useful words always sometimes normally we are
en un pueblo ¿Cómo es tu piso? Es antiguo moderno bonito feo nuevo viejo pequeño cómodo grande	in a village What's your flat like? It's old(-fashioned) modern pretty ugly new old small comfortable big	el dormitorio de mis padres el dormitorio de mi hermano	my parents' bedroom	Las preposiciones encima de a la derecha de a la izquierda de debajo de delante de al lado de detrás de entre a la derecha del armano al lado de la coma	Prepositions on to the right of to the left of under in front of beside behind between to the right of the wardrobe beside the bed	You'll find them easie recognise the first par usually stays the same vives, vive, vivimos This is called the stem	ot of different endings. r to learn if you can t of the verb, which a. For example, vivo, all start with viv n of the verb. stems from Chapter 4.

Here are some other Which verbs do they belong to?

est-

hablcom

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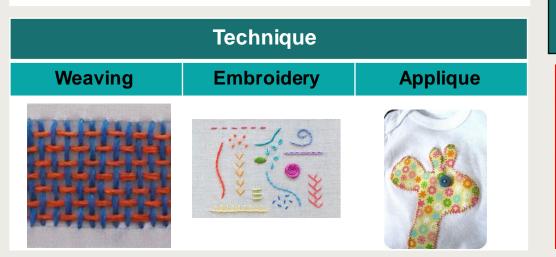
Knowledge Goals: Spanish

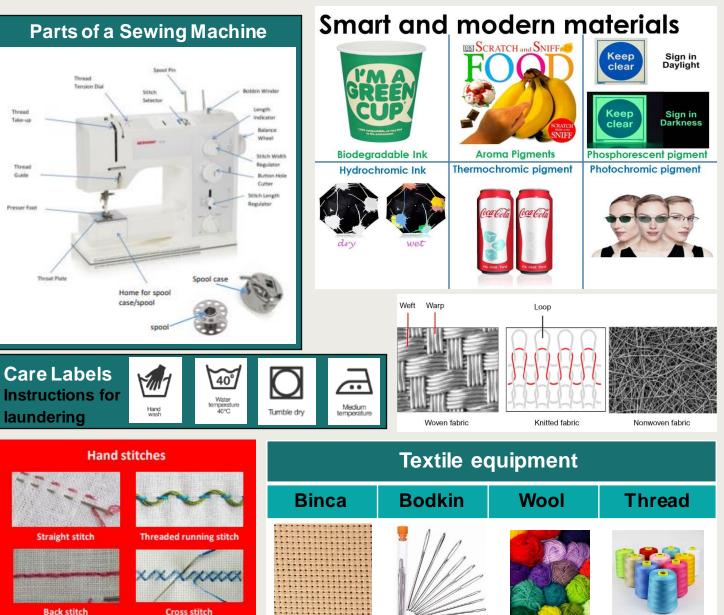
Half Term 4: Tier 3 Vocabulary				
#	Key word	Example		
1	Connective	y, pero, también, porque, sin embargo, ademas		
2	Opinion Verb	Me gusta, no me gusta, me encanta, odio, me gusta mucho, no me gusta nada		
3	Justification	porque es / yaque es / dado que es		
4	Qualifier	poco, un poco, bastante, muy, realmente, extramadamente		
5	Adjective	divertido/a, aburrido/a, grande, pequeño/a		
6	Time Phrase	normalmente, a veces, siempre, mañana		

Knowledge Goals: Textiles

Health and Safety It is really important we ASSESS the RISK and REDUCE the RISK of Injury by LISTENING To the TRAINING and following the correct PPE usage

- You must walk with scissors facing downwards next to your side
- Watch where you are sewing on the machine
- Do not press the foot pedal to the floor when using the sewing machine
- Make sure you had in Bodkin needles at the end of the lessons
- If the sewing machine makes an unusual noise, please stop using it and inform teacher





Knowledge Goals: Textiles

		Half Term 2: Tier 3 Vocabulary	Notes:
#	Key word	Definition	
1	Properties	The qualities the fibres/material have e.g. absorbancy, resistant to abrasion, elasticity etc	
2	Natural fibres	Natural fibres come from plants, animals or insects. They are easily renewable and biodegradable .e.g. cotton, silk, wool	
3	Synthetic fibres	Synthetic fibres are made mainly from <u>non-renewable</u> coal and oil. They do not <u>degrade</u> easily but they can be made into any length (continuous filament) and thickness and for any purpose.	
4	Weft and Warp	Woven fabrics have warps and wefts. The warp runs from left to right and the weft runs 90 degrees to this. Weft yarns are woven over and under warp yarns, and where the weft yarns loop back to form an edge that doesn't <u>fray</u> ,	
5	Smart materials	Smart materials are materials that react to the environment around them, this could be light, temperature, pH level etc	
6	Photochromic	Photochromic is a smart material that reacts to light	
7	Applique	Layers of fabric are placed on top of other fabric in a decorative way and stitched in place	

