



Year 8

Knowledge Organiser

Spring Term (2) 2023

What you need to know!

Knowledge Organisers – FAQ

What is a Knowledge Organiser?

Every ½ term this academic year, a new Knowledge Organiser will be produced and put on the school website. These documents are produced for Year 7, Year 8 and Year 9 students and contain key information, specific subject terminology and links to additional resources to help you and your child fully understand topics within the different subject areas.

Can Knowledge Organisers be used for revision and preparing for assessments?

These Knowledge Organisers are designed around the content delivered in lessons each half term in Year 7, 8 and 9. Therefore, they are an excellent revision tool to help prepare your child for end of unit tests as well as their end of year exams which cover previously learned subject content.

How should I use the Knowledge Organiser?

In order that these documents are useful and not too complicated, the Knowledge Organiser is designed to include the basic facts and information being covered in a specific subject over that half term. You may choose to print a version in order that you annotate or tick off aspects once they are fully understood. You may also choose to use this as an electronic revision guide, using the hyperlinks to webpages to secure or deepen understanding.

What are the Arrow Tasks?

At Liskeard School & Community College, teachers use Arrow Tasks as a way of stretching your child. These tasks often involve extending their knowledge through research or applying a learned concept in another way. Try to complete all the Arrow Tasks within the Knowledge Organiser to increase your knowledge and extend your conceptual understanding.

Contents

Art
Drama
English
Ethics, Philosophy and World Views
French
Geography
History
ICT and Computer Science
Maths

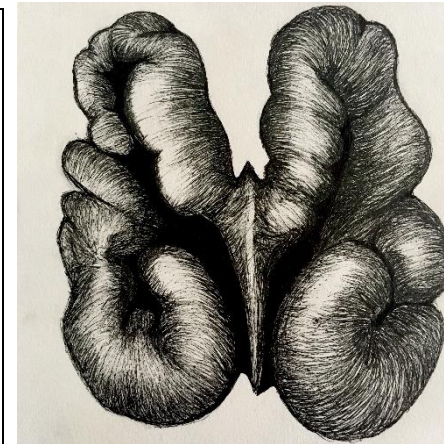
Music
Physical Education
Science
Spanish
Technology: Engineering
Technology: Food
Technology: Product Design
Technology: Textiles
A guide to revision strategies

Please note: These subjects are hyperlinked. Click on the subject to take you to the relevant pages.

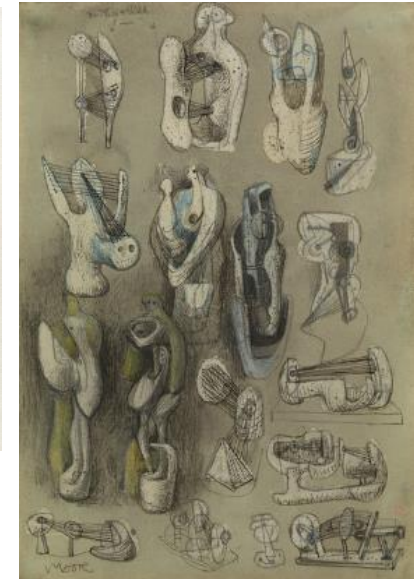
Topic: **Made and natural objects, Constructed spaces and natural environments. (3D Form)**

I need to know: How to interpret Shape vs Form, modelling vs reduction methods of construction and being able to apply appropriate surface embellishment.

Key Words	Definitions
Shape	A shape refers to the external boundary, outline, or external surface of a 3D object.
Form	Form refers to the three dimensional quality of an object. It is a surface or boundary that describes a volume or space.
Volume	Volume is the quantity of three-dimensional space enclosed by a closed surface, for example, the space that a substance or shape occupies or contains.
Weight	Weight might be used in a number of ways in sculpture. A work might be determined by a specific weight of clay to work with, limiting the scale of work. It might also refer to how a sculpture might be made to communicate the weight of something i.e. a figure might be carved with muscular tension and distortion of form to embody the weight of the person.
Line	As a visual element in art and photography, a line can be explicit and also implied. When joined it forms a shape. The quality of line used can convey meaning: i.e. thick - heavy, thin - fragile, faint - delicate, bold - loud, curved - natural, straight – mechanical...
Primary Source	In the study of art history, a primary source is an artefact, document, diary, manuscript, autobiography, recording, or other source of information. In practical work, the artist looks directly at the subject of study, i.e. the real face, object or landscape.
Secondary Source	In the study of art history, a secondary source interprets and analyses primary sources. Secondary sources are one or more steps removed from the event. In practical work, the artist may use a photograph/s to draw from combining multiple sources of information.
Synthesis	Bringing together a number of visual and tactile resources to design a unique sculptural form. The outcome might resemble elements of each but may not be recognisable.
Visual Analysis	When drawing you will ask yourself many silent questions. This internal conversation you will have with yourself is visual analysis, it is what will help you to make judgements about line, shape, tone, texture, contrast, colour.
Measuring	There are various techniques for measuring the real world to enable you to translate what you see onto a 2D surface for others to understand.
Estimating	Estimating in art usually occurs between the processes of measuring, comparing proportion and translating the real world to the 2D or 3D surface. By re-comparing, your estimations become progressively more accurate with increasing information.
Reduction	In sculpture this refers to the idea of taking away. i.e. Carving wood / stone away from a block. Once material has been taken off it is not possible to put it back on.
Modelling	In sculpture this refers to the addition or manipulation of a plastic, pliable material. i.e. Clay, plaster, wax.



Peter Randle Page. Using line to describe form.



Henry Moore. Sculpture study sheet. Using line and tonal washes to describe hypothetical forms and concepts.



Student work modelled in clay.



Gaudi and Gehry's Architecture. Sculpture and architecture are the same things. They share the same visual grammar.

Links to further resources: <https://www.tate.org.uk/art/art-terms/s/sculpture>
<https://www.nga.gov/collection-search-result.html?classification=sculpture&pageNumber=2>

Topic: **Made and natural objects, Constructed spaces and natural environments. (3D Form)**

Asymmetry	Something asymmetrical has two sides that don't match. In art this might result from accurate observation but might also be exploited to 'unsettle' the viewer. In composition, such as the rule of thirds or golden section, it is not unusual to use asymmetry to develop ideas of beauty and aesthetics.
Aesthetics	Aesthetics is a branch of philosophy that examines the nature of art and our experience of it. An aesthetic experience could include a mixture of feelings and determines our appreciation of beauty and taste. It is complex, relies heavily on objective rules, and often influences our decisions and choice. Since virtually everything made or caused by humans will have occurred through a conscious or unconscious design process, you are directly or indirectly influenced by art every day. Clothes, phones, cars, food, websites, buildings...
Site specific	Sculpture is often designed and made for a specific location. This might determine what the work looks like i.e. scale, appearance, material...
Installation	If not made for a specific permanent location, a sculpture might be installed temporarily in various locations. The installation might exploit viewpoints, proxemics, sound, the passage of people to add to the effectiveness of the work.

Thinking, questioning and communicating your visual intelligence using practical skills in ART.

You will be able to organise your thoughts, understanding and expertise in **ART** this term under the following headings.

Skills: *Measuring, estimating, proportion, line, shape, form, 3D dexterity...*

Contexts: *History, responsibility, connections, location, installation...*

Rules: *Adaptability, exploration, organisation, symmetry, aesthetics...*

Audience: *Personal space, community space, tactile, purpose...*

Resolution: *Primary and secondary sources, scale, representation, abstraction, resilience, resolving...*

Communication: **Abstraction**, *representation, evaluation, talk, community engagement, manage emotions...*

Legacy: *Materials, honesty, heritage, culture, celebration, purpose...*

Throughout the year we will be asking you to articulate (to say, explain and use), a number of **Personal, Learning and Thinking skills** to help you develop your knowledge and understanding. This term we will be asking you to reflect upon your **Creative Learning**: Generate ideas, explore, ask questions, extend thinking, question assumptions, experiment, adapt.

Further thinking (why does this matter?):

On a functional level, it is important to us that we can adapt our thinking and improvise with increasingly sensitive, manual dexterity to solve all manner of everyday challenges.

On a more complex level, the plasticity of materials we use to create can mirror the plasticity of our brains. Learning to adapt, modify and improvise are complex cognitive processes often present in the modelling process.



Making a basic thumb pot form.



Adding clay to a form.



Clay being bisque fired to 1080°C in a kiln.



Peter Randall-Page. Planning what to carve away.

Links to further resources: <https://www.tate.org.uk/art/art-terms/s/sculpture>
<https://www.nga.gov/collection-search-result.html?classification=sculpture&pageNumber=2>

Topic: Melodrama!

- I need to know: The background of melodrama, it's stock characters, moves and voices and how to use them to create effective

Key Words	Definitions
<ul style="list-style-type: none">MelodramaStock CharactersExaggerated characterisationComedyScenarioFacial expressionVoicePhysicalityRehearsalProxemicsLevelsAudienceScriptPerformanceRefineStaging.	<p>A genre of theatre.</p> <p>Hero, heroine, villain, villain's accomplice, faithful servant.</p> <p>Use of exaggerated voice and movement.</p> <p>Style of performance that aims to make the audience laugh.</p> <p>The situation</p> <p>Use of face to show emotion.</p> <p>Using voice to express character</p> <p>Movement, gesture, posture, and expression</p> <p>To work on a scene with other performers.</p> <p>Use of space to show relationships</p> <p>Use of height on stage</p> <p>People watching the play</p> <p>The dialogue and directions of the play</p> <p>The presentation of the play</p> <p>To perfect something</p> <p>Use of space, props, set etc.</p>



Wider Reading

'Confusions' by Alan Ayckbourn

Watch "Wacky Races" and "Penelope Pitstop" to see examples of stereotypical characters.

Watch a clip from a Pantomime on YouTube.

Arrow Tasks:

Mark the moment with key techniques to highlight the melodrama.

Experiment with longer sections of script.

Explore original melodrama.

Adapt traditional melodrama to a new setting.

What We Do:

What We Do:

- Explore the style of Melodrama in performance.
- Explore stock characters and plotlines of a Melodrama.
- Explore and experiment with ideas for original melodrama.
- Rehearse and present a polished, refined performance of a scene from "The Black-hearted Villain."

Topic: Heroes and Villains

I need to know some of the ideas associated with heroes and villains. I need to be able to see how writers engage and entertain and be able to use some of those techniques in my own writing.

Key Words

- Exposition – Setting the scene with background information. Often done at the beginning, but expository detail can be given at any point.
- Rising Action – The build-up of plot.
- Climax – The most interesting part of the story.
- Falling action – The conflict between the protagonist and the antagonist unravels, where the story begins to ‘wrap up.’
- Denouement – The resolution of a story; how it ends.

Key themes:

Heroism
Villainy
Crime and punishment
Resilience/adversity
Prejudice
Society’s roles.

Key characters

Hero – the protagonist (main character) who saves the day
Villain – the antagonist (anti-hero) who tries to disrupt everything
Trickster – the funny character who brings humour
Sidekick – the characters who support the hero or villain
Guardian – the protector of the hero
Mentor – the guiding character
Herald – the character who brings about a change of circumstance
Shapeshifter – the untrustworthy character who swaps allegiances.

Big questions:

- 1) How do authors construct archetypal heroes?
- 2) How does authors construct archetypal villains?
- 3) What is an anti-hero?
- 4) Do we need to be able to relate to heroes?
- 5) Do characters have to be violent to be heroes?
- 6) To what extent do heroes need villains in order to be categorised as a hero?
- 7) To what extent can characters be more complex than simple heroes and villains?

Suggested activities:

Take one of the scenes of the stories as an inspiration – set a story in this fantasy land where anything is possible and relationships are controlled by external forces.

Use a key quotation from a story or situation to start a piece of creative writing.

Rewrite the outcome of the story differently for one of the characters – what would you change and how would it make a difference?



Topic: The Church: What is it good for?

I need to know:

- The two main meanings of the term 'Church'.
- To be able to describe key features of a Church.
- The difference between Catholic and Protestant Christians.
- To be able to describe what is meant by the rites of passage and be able to give examples of the.
- To be able to explain the importance of baptism and how this is practiced by different Christians.
- To be able to explain the importance of the Eucharist and how this is practiced by different Christians.
- To be able to explain the role of the church in the local community.
- To be able to evaluate the importance of the church today.

Key Words and Definitions

Denominations:

- Rites of passage: Ceremonies that mark key stages in a person's life such as birth, marriage and death.
- Sacraments: An outward sign of an invisible blessing by God. For example, baptism of the Eucharist.
- Baptism: A service where people join a Church. There are two main types: infant and adult.
- Eucharist: Means 'thanksgiving'. Where Christians share bread and wine to remember the last supper.
- Evangelism*: Peaching of the Gospel (good news) to others with the intention of converting others to the Christian faith.



What is the Church?

- A building built for Christian worship.
- The whole group of Christian believers; a particular group within the wider Christian Church.

Catholics and Protestants

- Catholics are members of the Roman Catholic Church. They are under the authority of the Pope.
- Protestants are members or followers of any of the Western Christian Churches that are separate from the Roman Catholic Church in accordance with the principles of the Reformation, including the Baptist, Presbyterian, and Lutheran Churches.

Baptism: there are different types of service for different denominations.

- **Infant baptism:** Where a baby or child is baptised and the parents and godparents make promises on their behalf. This is important because it allows the child to become a member of the Church, it removes sin, it is a rite of passage and it is a celebration of birth.
- **Adult baptism:** When a person chooses to be baptised. They are fully immersed in water and often will share their faith with the congregation. This is important because Jesus was baptised as an adult and Christians want to follow in his footsteps, it can make you a member of the Church and it is the person's own decision.

Festivals: Christian celebrations are religious festivals which remember important events from the history of the Christian Church or from the life of Jesus. Britain is traditionally a Christian country which means that lots of our celebrations or festivals are the basis of public holidays in Britain. These include Christmas which is the celebration of the birth of Jesus and Easter which remembers the death and resurrection of Jesus. Easter is the most important festival in the Christian calendar.

What was the reformation?

At the beginning of the 16th century, England was an entirely Christian country. All Christians living in Western Europe were part of the Roman Catholic Church. Some people complained about the Catholic Church, as they did not agree with everything. In 1517, the German Priest Martin Luther accused the Catholic Church of being corrupt. He did not agree that rich people could buy their way into heaven or buy forgiveness. So Protestantism was born where people protested (hence the name '**Protestant**') against the Catholic Church. Protestant ideas arrived in England during Henry VIII's reign through links with Europe, through trade or politics. Everything changed in the late 1520s when Henry wanted a divorce. The Catholic Church does not allow divorce; therefore, Henry VIII created the Church of England.

The Eucharist: this is where Christians take bread and wine in remembrance of the last supper Jesus share with his disciples before he died. The bread represented his body and the wine his blood. Christians believe that Jesus sacrificed himself for their lives so that they could be forgiven for things they do wrong.

The role of the Church in the local community...

- Food banks
- Youth clubs
- Parent and baby clubs
- Refreshments are Sunday services
- Coffee mornings for the elderly
- Summer fetes
- Soup kitchens
- Crèche facilities
- Emergency shelters family and community centres.

Arrow Tasks You could enhance your learning by visiting one of the suggested websites below. Evaluation question challenges: 'Churches are no longer important today' Discuss. Or 'the church is just a building.' Discuss. You could visit a local Church and find out what they do for your local community.

Links to further resources: truetube.co.uk – excellent documentaries and clips on some of the topics studied in this course.

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I need to be able to: recognise and use a range of verbs, nouns and adjectives. **I need to be able to describe my town and local area**

Key Words	Definitions
Verb	Words which tell you the action
Subject pronouns	Words that tell you who is doing the action.
Noun	A place, person or a thing.
Gender	In French, nouns and adjectives can be either masculine or feminine.
Adjective	Words which describe nouns. In French adjectives are the same gender as the noun which they describe.
Definite article	'the'
Indefinite article	'a' 'some'
Singular (s)	One
Plural (pl)	More than one Habiter=to live J'habite = I live Tu habites= You live Il/elle/on habite= He/she/we lives Nous habitons= We live Vous habitez = You live (plural) Ils/elles habitent= they live
Positive phrase	'is', 'do' 'does'
Negative phrase	'is not', 'does not', 'don't', 'never'
Possessive adjectives	My (in French, there are 3 forms; masculine singular, feminine singular and plural)

aller= to want

Je vais = I go

Tu vas = you go (sing)

Il/elle/on va= he/she/we goes

Nous allons = we go

Vous allez= you go (plur)

Ils/elles vont= they go

pouvoir= to be able to/can

Je peux = I can

Tu peux = you can (sing)

Il/elle/on peut= he/she/we can

Nous pouvons = we can

Vous pouvez= you can (plur)

Ils/elles peuvent= they can

More vocabulary will be given to you by your teacher.

To say what you can do in an area/town

Use "**on peut +infinitive**" = you can...

Eg: A Liskeard, **on peut aller** à la piscine.

(In Liskeard, you can go to the swimming pool))

A Liskeard, **on ne peut pas aller** au cinéma.

(In Liskeard, we cannot go to the cinema)

Aller à...= to go to ...à+le = **au** I go to the cinema = je vais **au** cinémaà + la = **à la** I go to the swimming pool = je vais **à la** piscineà +les = **aux** I go to the shops = je vais **aux** magasins**Using "il y a .../ il n'y a pas de ..."****Il y a ...** = there is.. / there are...**Il n'y a pas de ...** = there isn't a .. /there are no...In the negative, the article un/une is replaced by "**de**"

Arrow Tasks: Research and present a town or city in France. Include the following details: where it is in France, geography, key monuments/landmarks, places you can visit, activities you can do, food specialities.

Useful websites: Great resources /vocabulary to help you talk about where you live <https://www.bbc.co.uk/bitesize/topics/zix947h/articles/zbqkvk7>

Website to practise the verbs "vouloir" (to want to) and "pouvoir" (to be able to) https://www.languagesonline.org.uk/French/ET2/Vouloir_Pouvoir/Index.htm

Links to further resources: <https://www.bbc.com/bitesize/subjects/zgdqxn>

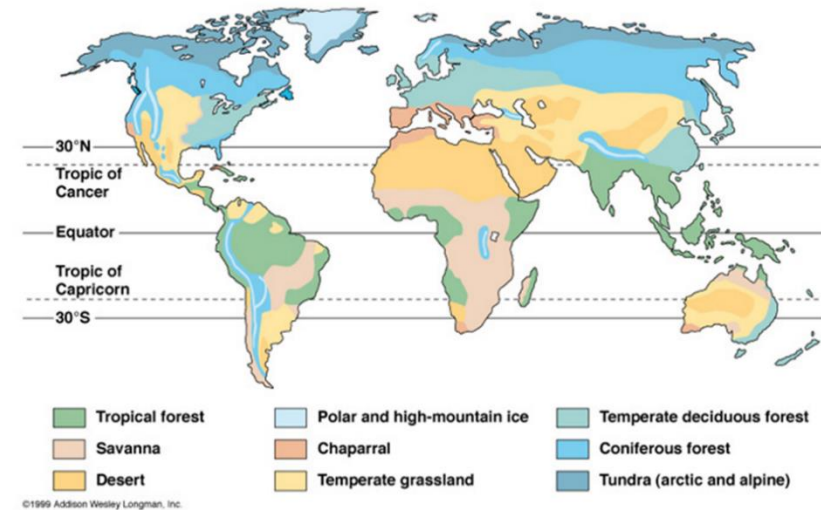
	français	anglais
1	Où habites-tu?	Where do you live?
2	J'habite à <u>Liskeard</u> , dans le sud-ouest d'Angleterre	I live in <u>Liskeard</u> , in the South-West of England
3	Qu'est-ce qu'il y a à Liskeard?	What is there in Liskeard?
4	Il y a ...des magasins, un centre de loisirs, des parcs	There are...shops, a leisure centre, parks
5	Il y a aussi des restaurants, une piscine et des cafés	There are also restaurants, a swimming pool and cafes
6	...mais il n'y a pas de cinéma ou centre commercial	...but there isn't a cinema or shopping centre
7	Tu aimes ta ville?	Do you like your town?
8	Oui, j'aime ma ville car c'est jolie	Yes, I like my town as it's pretty
9	Non, je n'aime pas ma ville car c'est ennuyeux	No, I don't like my town, as it's boring
10	À mon avis, c'est intéressant	In my opinion it's interesting
11	Je pense que c'est vraiment nul	I think it's really rubbish
12	parce que c'est trop petit	because it's too small
13	Tu es d'accord?	Do you agree?
14	Oui, je suis d'accord	Yes, I agree
15	Non, je ne suis pas d'accord	No, I disagree
16	Où est le marché?	Where is the market?
17	C'est tout droit, devant la poste	It's straight on, in front of the post office
18	où sont les magasins?	Where are the shops?
19	Ils sont à gauche	They are on the left
20	C'est où le stade?	Where is the stadium?
21	C'est à droite, entre le musée et la patinoire	It's on the right, between the stadium and the ice rink
22	Tu veux aller au concert?	Do you want to go to the concert?
23	Oui, bonne idée! Je veux bien	Yes, good idea! I want to
24	Tu veux faire du vélo?	Do you want to go cycling?
25	D'accord	Ok
26	Tu peux faire du bowling?	Can you go bowling?
27	Non, je n'ai pas envie	No, I don't want to

Topic: Ecosystems

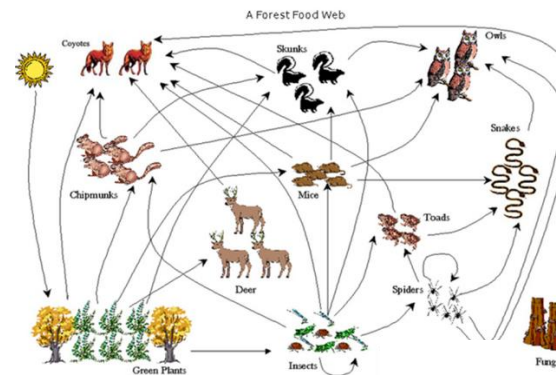
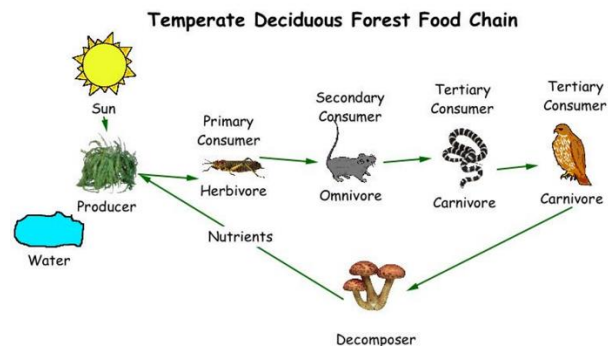
I need to know: The location of global ecosystems and reasons for their location and basic food chains and food webs. Different classes will study different ecosystems. For the ones that you study you need to know; characteristics, adaptations of at least one plant and one animal, the threats that ecosystem faces and how it can be managed.

Key Words	Definitions
Ecosystem	A system where plants and animals interact with each other and their natural environment.
Biome	A specific geographic area notable for the species living there. A biome can be made up of many ecosystems.
Food chain	A series of organisms each dependent on the next as a source of food.
Food web	A series of interlinked food chains.
Producer	Plants that get their energy from the sun.
Herbivore	Animals that only eat plants.
Carnivore	Animals that only eat meat.
Omnivore	Animals that eat both plants and meat.
Decomposer	An organism such as a bacterium or fungus, that breaks down dead tissue which is then recycled to the environment.
Adaptation	How a plant or animal has changed to survive in its surroundings.

Global Ecosystems

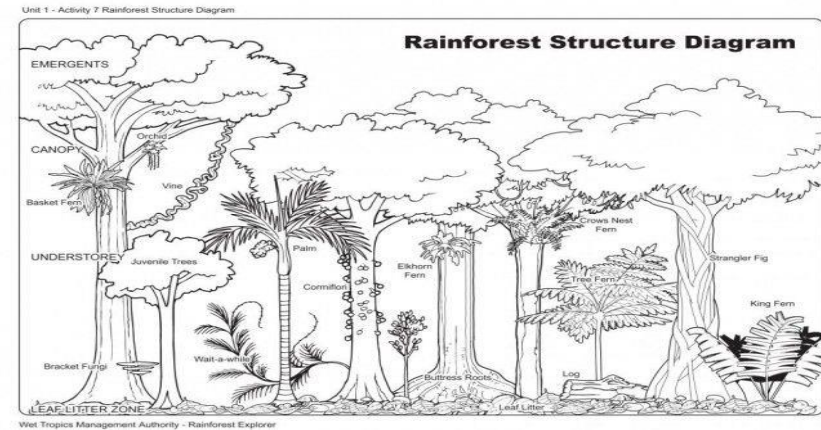


The location of the major global ecosystems is determined by climate. This will depend on latitude, ocean currents and prevailing winds.



Arrows show the direction of movement of energy through the food chain or food web. Energy moves from the plant or animal being eaten to the one consuming it.

Tropical Rainforests



Species adaptations



Gibbons have special ball and socket joints in their wrists so that they can cover 12 meters in one swing! This allows them to move quickly through the rainforest and cover large areas to find food.



Trees in tropical rainforests have drip tips. This helps them shed water as there is heavy rainfall every day. Without these the leaves could get covered in fungus and bacteria because of the hot, humid conditions.

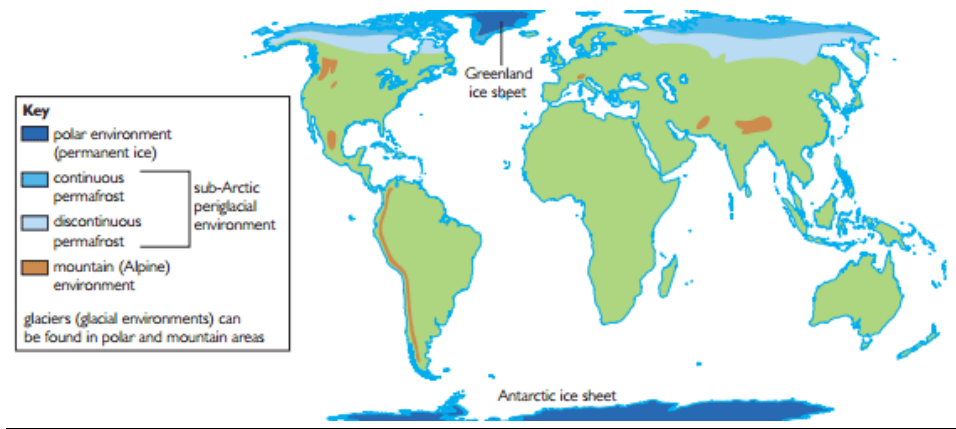
Threats to tropical Rainforests

- Cattle ranching
- Agriculture
- Logging
- Mining
- Increases in population

How can Tropical Rainforests be managed?

- Selective logging
- Replanting
- Education
- Ecotourism
- International agreements

Cold environments



Species adaptations



Polar bears have adapted to cold environments by having small ears to reduce heat loss. They have large paws so it is easier to walk through the snow. They have a thick layer of fat and thick fur to keep them warm.



The hairs on the stems of the Arctic crocus help to trap heat near the plant and act as protection from the wind. They have small waxy leaves to prevent the loss of precious water in this dry environment.

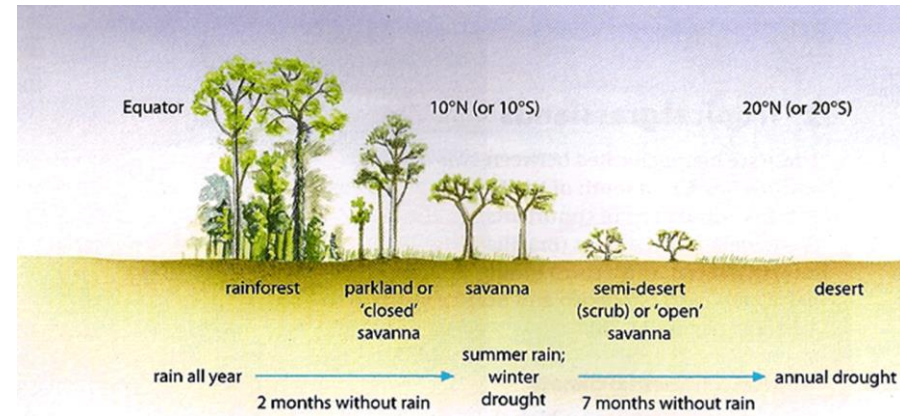
Threats to cold environments

- Climate change
- Invasive species
- Population increase
- Expansion of industry

How can cold environments be managed?

- Using appropriate technology in cold environments to preserve the areas
- Governments creating laws
- International agreements (like the Antarctic Treaty)
- Conservation groups

Savannah Grasslands



Species adaptations



Baobab trees have adapted to the long dry season by having large trunks which they can store water in. It only has leaves in the wet season to preserve energy. It is also fire proof as lightening often starts fires in the Savannah.



Giraffes drink water when it is available but can go weeks without it, they rely on morning dew and the water content of their food. Their very long necks are an adaption to feeding at high levels in the treetops.

Threats to the Savannah Grasslands

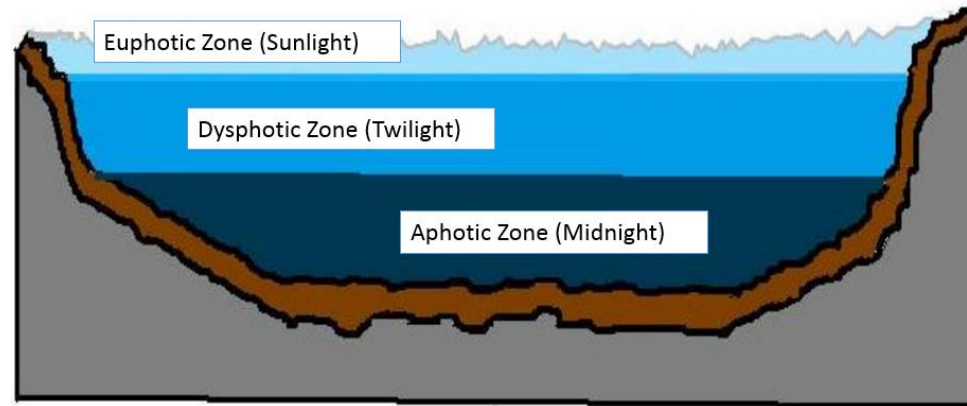
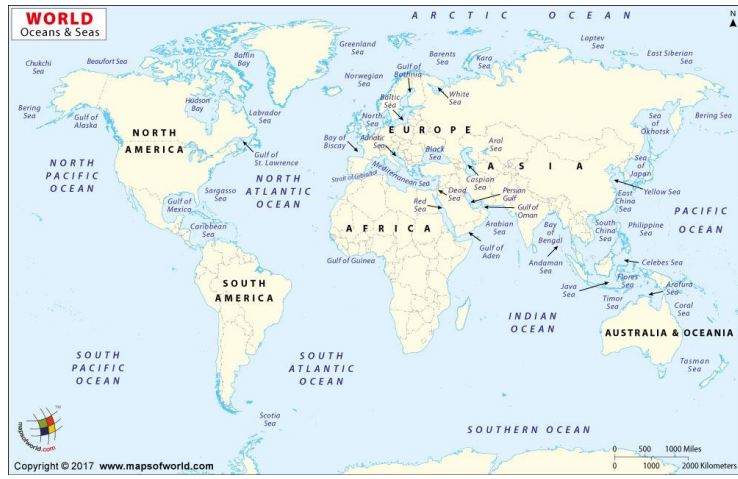
- Climate change
- Farming practices
- Overgrazing
- Deforestation
- These lead to desertification

How can Savannah Grasslands be managed?

- Harvesting branches rather than whole trees to prevent deforestation, soil erosion and desertification.
- Controlled burning of grassland to avoid wildfires.
- Crop rotation to keep a varied supply of nutrients in the soil and prevent soil erosion and desertification.
- The Great Green Wall

Oceans

Structure of the oceans



Species adaptations



Cuttlefish can change their colour and texture to blend into the environment they are in to avoid predators and sneak up on their prey.



Kelp has adapted to live in the ocean by having very fast growing long roots so it can attach itself to the ocean floor to stop it being washed away by storms. Gas bladders allow the kelp to float towards sunlight and perform more photosynthesis.

Threats to the oceans

- Overfishing
- Coastal pollution
- Habitat destruction
- Global Warming
- Acidification

How can oceans be managed?

- Reducing carbon footprints and reduce energy consumption
- Make sustainable seafood choices
- Use fewer plastic products
- Support organizations working to protect the ocean

Topic: 1750-1900: Factories, Living and Working Conditions, Illness and Disease

I need to know: The period 1750-1900 saw vast changes in every aspect of life in Britain. Factories grew rapidly in size and efficiency which in turn drew more people into urban areas. As a result housing was built quickly but with no laws and so was very cramped and unhygienic. Illness and disease spread quickly and the outbreak of Cholera was a deadly epidemic. Life expectancy was very low in cities like London and Liverpool.

Key Words	Definitions
Steam	The new type of power that allowed factories to grow and be much more productive
Privy	An outdoor toilet
Sanitation	Drainage and sewers
Squalor	Filthy, dirty, damp, unclean conditions
Suburbs	'Posher' living areas on the outskirts of towns
Life expectancy	The average age to which people lived
Sewer Hunter	Someone (usually a child) who sieved through waste in the sewer looking for pieces of metal
Climbing Boys	The name for chimney sweeps – usually young boys from 3
Mudlark	Someone (usually a child) who looked through waste in the river banks looking for pieces of metal
Vaccinations	An injected that helps to prevent a person catching a disease
Edward Jenner	The doctor who was key in the development of the first vaccine against a disease called smallpox
Anaesthetics	Pain relief during surgery
Antiseptics	Liquids that would kill germs
Cholera	A deadly disease caused by contaminated water
Revolution	A big change in something

Arrow Tasks:

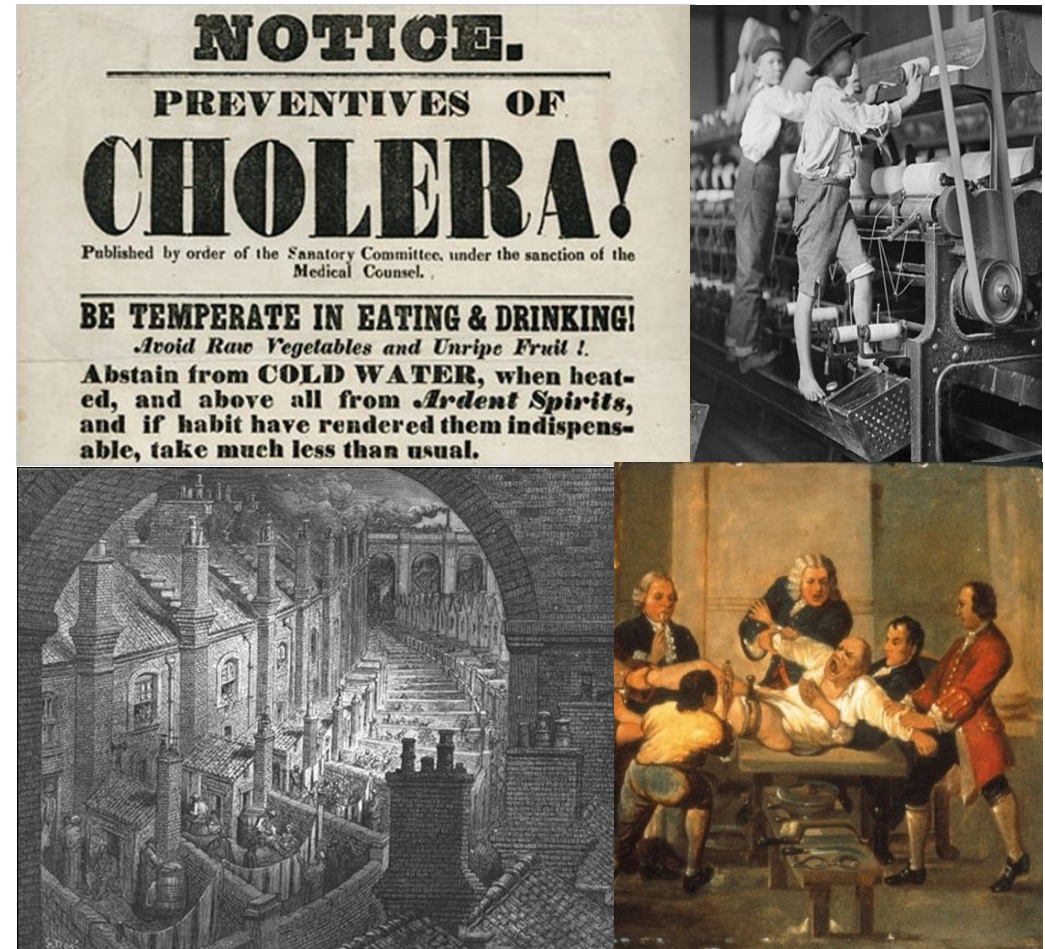
Why was Cholera able to spread so quickly?

What was the greatest change in towns and cities 1750-1900?

Links to further resources:

<https://www.bbc.co.uk/bitesize/guides/zxg6wxs/revision/8>

<https://www.youtube.com/watch?v=xLhNP0qp38Q>



Top left: Cholera warning poster.

Bottom left: Housing in the 1840s

Top Right: Child Mill workers

Bottom Right 1800s surgery

Topic: Computer Systems

I need to know: the different layers of computing systems: from programs and the operating system, to the physical components that store and execute these programs, to the fundamental binary building blocks that these components consist of. You will also learn about artificial intelligence and open source software.

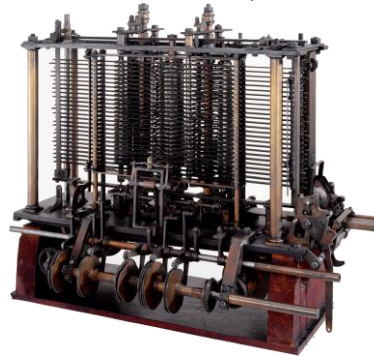
The Antikythera mechanism

- It was retrieved in 1900 from a Roman shipwreck off the coast of Antikythera island.
- It was constructed in the 1st or 2nd century BC.
- We now know that it was a complex geared mechanism that could predict solar eclipses, as well as the position of the moon and known planets.



Babbage's Analytical Engine

- Babbage (1837) conceived of a programmable machine that would perform calculations, as specified by instructions on punched cards.



Modern computers

- Receive an input, processes it, produces output
- General-purpose: designed to automate any process, as specified by a program
- The data and instructions to be performed can be stored in memory.



Your software

You use programs for every task that you perform on your computer.

- The word **software** simply means **programs**.



The **physical components** of a computing system are called **hardware**. Hardware is any component of a computing system that you can touch

- Processor
- Memory
- Storage
- Graphics processor
- Connections

The **storage** (secondary memory) is the set of components that **stores** programs and data. Storage is **persistent**: it retains its contents when the power is off.

- Hard disk drives (HDD)
- Solid-state drives (SSD)
- USB flash drives
- USB sticks
- SD cards

Topic: Computer Systems

The **main memory** is the component that **stores** the programs and data **currently in use**. Memory is **volatile**: its contents are lost when the power is off.

Terminology: The main memory is commonly referred to as **RAM** (random-access memory).

- This is what the main memory looks like in desktops and laptops.
- Sometimes, memory is integrated with other components, rather than being a separate component.



The **processor** is the component that **executes** program instructions.

An instruction may:

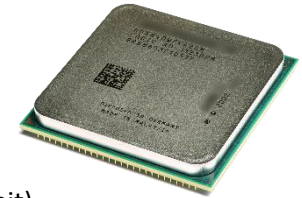
- Perform arithmetic or logic operations on data
- Perform input/output of data
- Control program flow

Terminology: Commonly referred to as the **CPU** (central processing unit).

- This is what the processor looks like in desktops and laptops.
- Sometimes, the processor is integrated with other components, rather than being a separate component.

How it works with other components

- Instructions are **fetch**ed one by one from memory into the processor, along with any required data.
- The processor **decodes** and **executes** each instruction.
- Any resulting data is moved into memory.



The **operating system** is a set of programs that controls the operation* of a computing system.

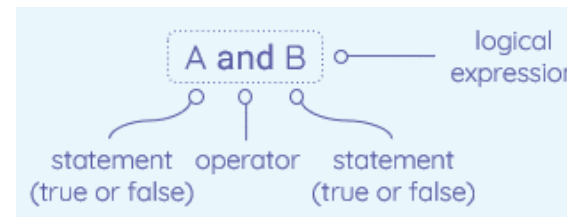
- Program execution
- Memory management
- File system organisation
- Input and output
- Communication
- Graphical user interface



There are three fundamental logical operations:

- not (inversion)
- and (conjunction)
- or (disjunction)

Logical operations operate on statements that are **true** or **false**.



What is **artificial intelligence**?

- Any machine that performs tasks that typically require intelligence in humans

Applications of AI	Moral considerations
Self-driving cars	Who is responsible in an accident? (Accountability)
Medical diagnosis	How can decisions be explained? (Transparency)
Banking Detecting fraud Approving loan & mortgage applications	How can we guarantee that machine training does not lead to discrimination? (Bias) How can decisions be explained? (Transparency)
Automation Performing tasks instead of humans	How will humans handle lower demand for labour? How will the benefits of AI be fairly distributed?

Arrow Tasks: [AI Experiments with Google](https://experiments.withgoogle.com/collection/ai) (experiments.withgoogle.com/collection/ai) is an impressive showcase of AI projects that you can explore. Make sure you check out [Quick, Draw!](https://quickdraw.withgoogle.com) (quickdraw.withgoogle.com), which is very well known.

I need to know how to:	
<u>Fractions & Percentages</u> <ul style="list-style-type: none"> Develop understanding of fractions, decimals and percentages Evaluate percentage increases and decreases Use multipliers to solve percentage problems Express one number as a percentage of another 	<ul style="list-style-type: none"> Estimation, including rounding to a given number of decimal places BODMAS
<u>Standard Index Form</u> <ul style="list-style-type: none"> Convert between numbers in ordinary and standard form Compare numbers given in standard form Calculate with numbers given in standard form, with and without a calculator. 	<u>Additional Higher Content:</u> <ul style="list-style-type: none"> Finding the original given any percentage Understand and use surd notation Negative and simple fractional indices Convert between units of area and volume Use error interval notation
<u>Number Sense</u> <ul style="list-style-type: none"> Develop mental strategies Convert between metric measures & units 	<u>Links to prior learning:</u> <ul style="list-style-type: none"> Revisit fraction/percentage/decimal equivalence Revisit formal methods for calculations, for integers & fraction Compare and use ratios in the context of FDP

Arrow Tasks

- ➔ Explain what you're doing in maths lessons to someone else e.g. teach your Gran!
- ➔ Sign up for Parallelogram and do the quizzes each Thursday.

Digits Power of 10

 $5326.6 = 5.3266 \times 10^3$
A Number In Scientific Notation

Key Words	Definitions
<u>BODMAS</u>	<p>The rules that say which calculation comes first in an expression.</p> <p>They are:</p> <ul style="list-style-type: none"> do everything inside parentheses first: () then do exponents, like x^2, x^3 etc then do multiplies and divides from left to right then do the additions and subtractions from left to right
<u>Index</u>	The index of a number says how many times to use the number in a multiplication. It is written as a small number to the right and above the base number.
Multiplier	The number that you are multiplying by.
Ordinary Number	Any number not written in standard form
<u>Percent</u>	<p>Parts per 100</p> <p>The symbol is %</p>
<u>Standard Form</u>	<p>Another name for "Scientific Notation", where a number is written in two parts:</p> <p>First: just the digits (with the decimal point placed after the first digit),</p> <p>Followed by: $\times 10$ to a power that puts the decimal point back where it should be.</p>
1st decimal place	The first digit after the decimal point. When rounding to 1 d.p. you are rounding to the nearest tenth.

Links to further resources:

www.mymaths.co.uk<https://parallel.org.uk/><https://www.bbc.com/bitesize/subjects/zqhs34j><https://nrich.maths.org/secondary>




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Subject: **Music**
Topic: **Celtic Music**

Year 8: Spring Term 2

*"Carry the lad that's born to be King
Over the sea to Skye".*

I need to be able to: Recognise the characteristics, style and instruments of Celtic music. Know where it comes from. Be able to play 2 well known pieces of Celtic music and compose in a similar style, following Ternary Form.

<u>KEY WORDS</u>	<u>MEANING</u>	OTHER CHARACTERISTICS OF CELTIC MUSIC & TRADITIONS		
Pentatonic scale	A scale pattern of 5 notes. It can be created by playing only black notes on a piano	Celtic Cross – see below – elaborate Celtic design on a cross		
Scotch Snap	A dotted rhythm (jerky) where a very short note is followed by a longer one	Jigs and Reels – <u>traditional</u> dance music which is usually <u>upbeat</u>		
Ternary Form = ABA structure	A piece of music which has 3 sections to it, the first and last being the same .	Lyrics – folk song words usually have a <u>narrative</u> = they tell a story.		
Compound time Eg – 6 8	A time signature with 8 on the bottom. It usually creates music that is faster with some dotted rhythms.	Instruments – Usually: fiddle, flute, penny whistle, bodhran (drum), accordion, bagpipes, guitar, harp, banjo, bouzouki.		
		Oral tradition – music that is passed down from person to person through imitation rather than music that is written down.	SOME OF THE INSTRUMENTS	CELTIC CROSS
				
				PENTATONIC SCALE ON C
			Where can you see these?	

Arrow Tasks: Celtic music is mostly associated with Scotland and Ireland but 3 other places are also Celtic. Where are they? Name 2 British folk musicians or bands. Listen to some of the instruments named above. Which do you like the best and why?



Irish jigs = . https://www.youtube.com/watch?v=VL2XC-RyL7Y&list=PLjHTKsnl473CG93_Rxo0vuKtI2n6i3E1M

Topic: The Muscular system

I need to know: The major muscles in the body.

Muscular System

Key Terminology!

- **Muscular Hypertrophy** - **an increase in muscular size achieved through exercise.**
- **Lactic Acid** – a **byproduct of anaerobic respiration.**
- **Antagonistic Pairs** – **A pair of muscles that work together by contracting or relaxing to generate movement at a joint.**
- **Agonist** - **The muscle that is contracting.**
- **Antagonist** - **the muscle that is relaxing or lengthening.**

Muscles to be labelled For Task 1

Trapezius

Deltoid

Pectoral

Tricep

Bicep

Abdominals

Latissimus Dorsi

Gluteals

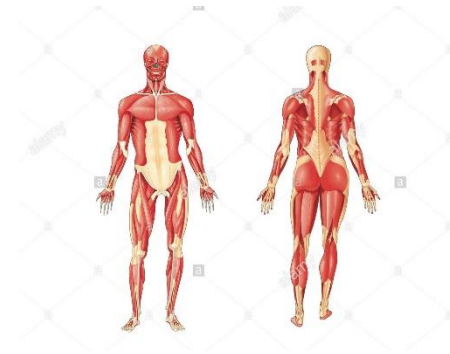
Quadriceps

Hamstrings

Gastrocnemius

Homework Task 1

Label the muscular system with all the major muscles listed in the table. Challenge: Can you show a front (anterior) and back (posterior) diagram.



Homework task 2:

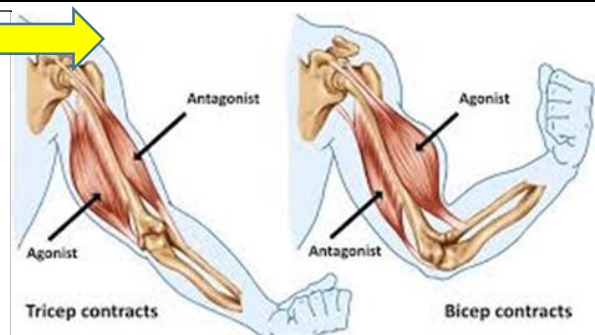
Can you fill in the blanks?

For example, when you perform the upwards phase of a bicep curl, the will be the, as the bicep contracts to produce the movement, while the triceps will be the, as the triceps to allow the movement to occur.

Missing words: relaxes, bicep, agonist and antagonist.

Arrow /Extension Tasks

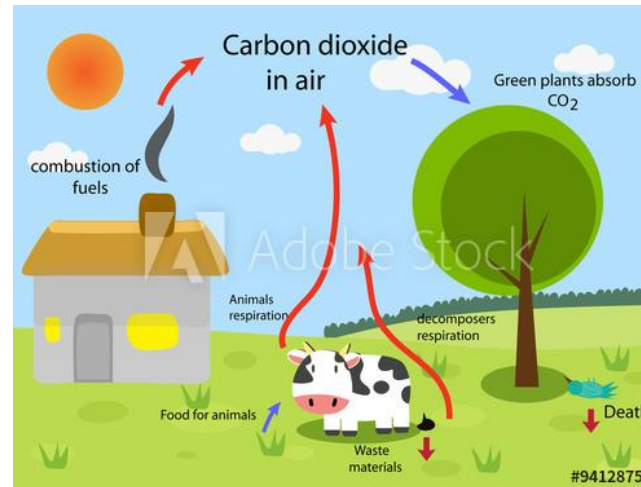
- 1) Can you identify various antagonistic pairs when analysing a participant in a chosen activity/skill?
- 2) Can you describe how these antagonistic pairs create that particular movement?



Topic: Climate

I need to be able to: **Investigate the contribution that natural and human chemical processes make to our carbon dioxide emissions**

Key Words	Definitions
Global warming:	The gradual increase in surface temperature of the Earth
Fossil fuels:	Remains of dead organisms that are burned as fuels, releasing carbon dioxide.
Carbon sink:	Areas of vegetation, the ocean or the soil, which absorb and store carbon.
Greenhouse effect:	When energy from the sun is transferred to the thermal energy store of gases in Earth's atmosphere

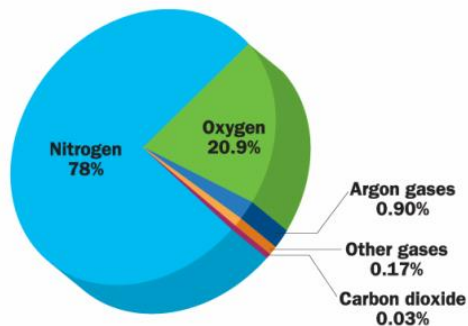


Why does it matter?

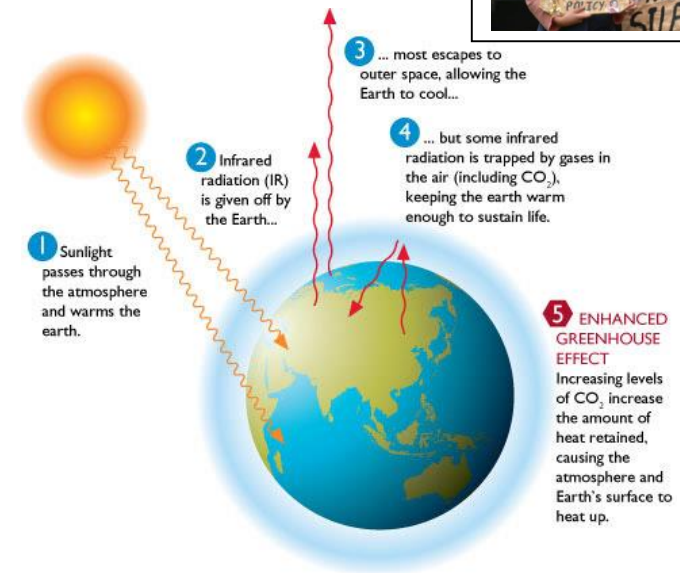
How could climate change affect farming?

How could climate change affect fishing?

How could climate change affect YOU?



Methane and carbon dioxide are 2 very important Greenhouse Gases.



↑ Arrow Task:

Evaluate the proposal to use hydrogen powered cars instead of fossil fuel powered cars in terms of climate change.

Links to further resources: <https://www.bbc.com/bitesize/topics/z3fv4wx>

↑ <https://climatekids.nasa.gov/climate-change-meaning/>

Topic: Earth Resources

I need to be able to: **Predict the method used for extracting metal based on its position in the reactivity series**

Key Words	Definitions
Natural resources:	Materials from the Earth which act as raw materials for making a variety of products.
Mineral:	Naturally occurring metal or metal compound.
Ore:	Naturally occurring rock containing sufficient minerals for extraction.
Extraction:	Separation of a metal from a metal compound.
Recycling:	Processing a material so that it can be used again.
Electrolysis:	Using electricity to split up a compound into its elements



potassium	most reactive	K
sodium		Na
calcium		Ca
magnesium		Mg
aluminium		Al
carbon		C
zinc		Zn
iron		Fe
tin		Sn
lead		Pb
hydrogen		H
copper		Cu
silver		Ag
gold		Au
platinum	least reactive	Pt

Why
recycle?

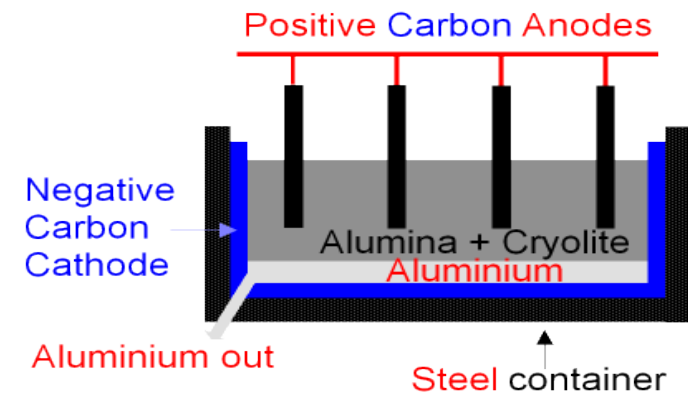
Why does it matter?

What did they do with the ore that was mined years ago around St. Cleer, Minions and Pensilva?

Why did they choose this method?

Most metals are found combined with other elements, as a compound, in ores. The **more reactive** a metal, the **more difficult** it is to separate it from its compound.

Carbon displaces less reactive metals, while **Electrolysis** is needed for **more reactive** metals.



↑ Arrow Task: Why are there no working mines left in Cornwall? Are there any ideas to reopen them or mine minerals that haven't been mined in Cornwall before?

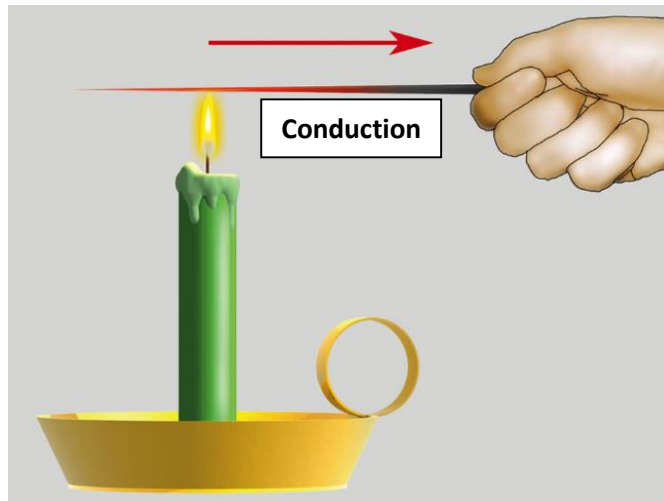
Links to further resources <https://www.bbc.com/bitesize/guides/zt6sfg8/revision/3>

↑ <https://www.nationaltrust.org.uk/lists/ten-things-you-didnt-know-about-cornish-mining>

Topic: Heating and Cooling

I need to be able to: Investigate how to prevent heat loss by conduction, convection and radiation

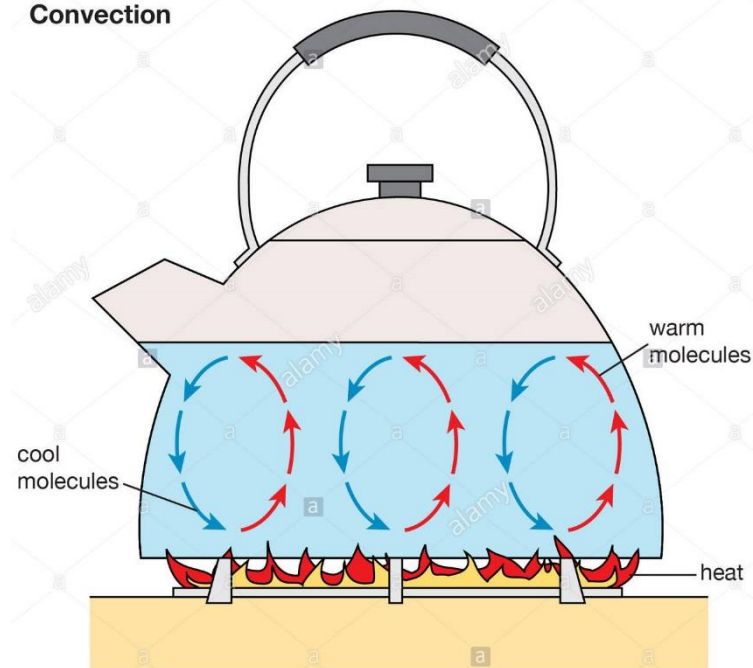
Key Words	Definitions
Thermal conductor	Material that allows heat to move quickly through it.
Thermal insulator	Material that only allows heat to travel slowly through it.
Temperature	A measure of the motion and energy of the particles.
Thermal energy	The quantity of energy stored in a substance due to the vibration of its particles.
Conduction	Transfer of thermal energy by the vibration of particles.
Convection	Transfer of thermal energy when particles in a heated fluid rise.
Radiation	Transfer of thermal energy as a wave.



↑ Arrow Task:

Explain how convection was used to clean the air in Cornish Tin Mines

Convection

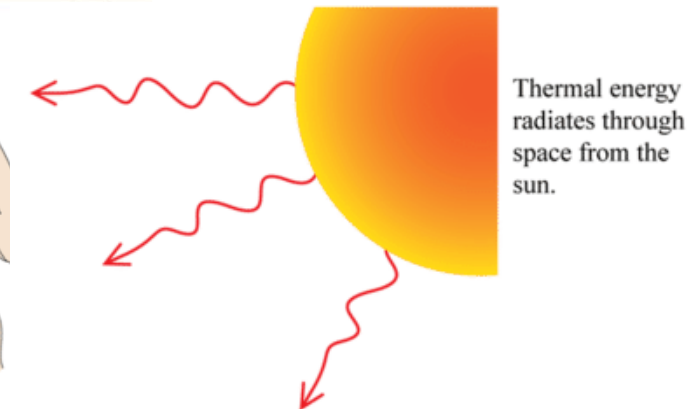
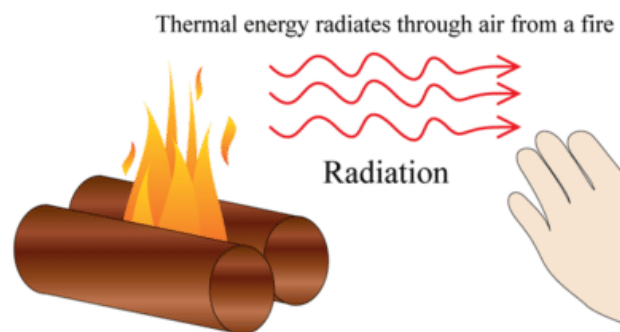


Why does it matter?

Which materials are best for warm clothes?

How do you keep a house warm in winter?

How would you test a fire proof suit?



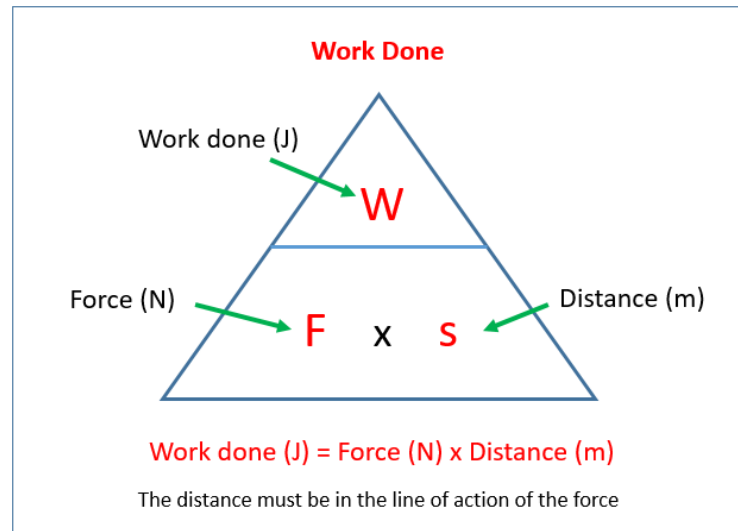
Links to further resources: <https://www.bbc.com/bitesize/clips/zt8fgk7>

↑ <https://www.bbc.com/bitesize/guides/zttrd2p/revision/1>

Topic: Work

I need to be able to: Investigate how work is done when an object is moved or has its shape changed.

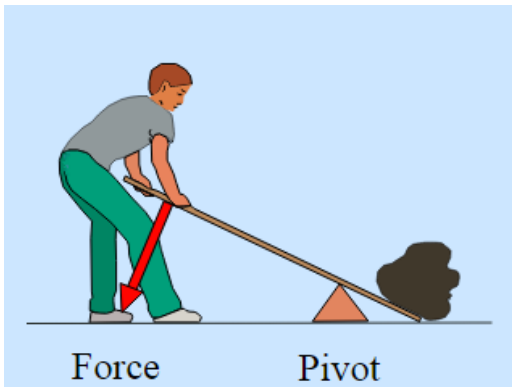
Key Words	Definitions
Work	The transfer of energy when a force moves an object, in joules.
Lever	A type of machine which is a rigid bar that pivots about a point.
Input force	The force you apply to a machine.
Output force	The force that is applied to the object moved by the machine.
Displacement	The distance an object moves from its original position.
Deformation	When an elastic object is stretched or squashed, which requires work.

**Why does it matter?**

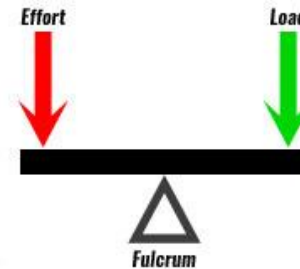
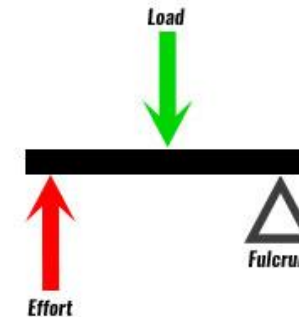
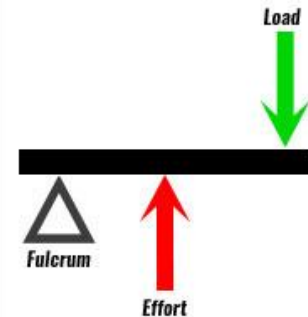
How much energy do certain tasks require?

Are there ways that energy can be saved and work reduced?

How is work done related to cost in the real world?

**↑ Arrow Task:**

Compare work done in lifting a heavy weight with both a long and a short lever.

1st Class Lever**2nd Class Lever****3rd Class Lever**

Links to further resources: <https://www.bbc.com/bitesize/guides/zttfyrd/revision/6>
<https://www.bbc.com/bitesize/guides/ztpjb82/revision/3>

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Topic: Module 3 - ¡A Comer!

I need to be able to: Food using the present/Near Future and Preterite tense.

Key Words	Definitions
Verb Infinitive	Words which tell you the action Original form of verb ending in –ar,-er,-ir
Subject pronouns	Words that tell you who is doing the action.
Noun	A place, person or a thing.
Gender	In Spanish, nouns and adjectives can be either masculine or feminine.
Adjective	Words which describe nouns. In Spanish adjectives are the same gender as the noun which they describe.
Definite article	‘the’
Indefinite article	‘a’ ‘some’
Singular	One
Plural	More than one
Positive phrase	‘is’, ‘do’ ‘does
Negative phrase	‘is not’, ‘does not’, ‘don’t’, ‘never’
Possessive adjectives	My (in Spanish, there are 2 forms; singular and plural – Mi /mis

Present Tense

Comer: To eat

Como: I eat

Comes: You eat

Come: he/she eats

Comemos- we eat

Coméis- you (pl)
eat

Comen- they eat

Preterite Tense:

Comer: To eat

Comí- I ate

Comiste- You ate

Comió- He/she eats

Comimos- we eat

Comiséis- you eat

Comieron- They eat

Near Future Tense

Voy a- I am going to

Vas a- You are going to

Va a- He/she is going to

Vamos a- We are going to

Vais a- You are going to

Van- They are going to

+ Infinitive-

(Comer- to eat

Beber- to drink

Bailar- to dance etc)

Arrow Tasks: What food is popular in South America?
Can you create a Spanish food factfile?

There will be more
specific vocabulary.

This will be given to
you by your class
teacher.

	español	inglés
1	¿Qué te gusta comer/beber?	What do you like to eat/drink?
2	Prefiero los caramelos, odio los huevos	I prefer sweets, I hate eggs
3	Normalmente como las hamburguesas ¡Qué rico!	Normally, I eat hamburgers, how great!
4	¿Qué desayunos?	What do you have for breakfast?
5	Desayuno yogur con limón, no tengo un café	For breakfast I have a lemon yogurt, I don't have a coffee
6	Pero, a las uno como un bocadillo con jamón y queso, no bebo nada agua	But, at one o'clock I eat a sandwich with ham and cheese, I never drink water
7	¿Qué cenas?	What do you eat (for dinner)?
8	Ceno pollo con patatas fritas, pero nunca arroz y pescado.	I eat (for dinner) Chicken with chips, but never rice and fish
9	Ayer cení, paella ¡Qué horroso!	Yesterday, I ate (for dinner) Paella, how awful.
10	Voy a ir a un restaurante con mi familia	I am going to go to a restaurant with my family
11	Voy a tomar chuletas de cerdo	I am going to eat Pork chops
12	Los sábados, es mi cumpleaños. Me gusta mucho una fiesta.	On Saturday, it's my birthday. I really like parties.
13	Voy a traer los fajitas, limonada	I am going to bring fajitas and lemonade
14	Pero, mi favorita es una salsa con chiles, chocolate y almendras. ¡Ñam, ñam!	But my favourite is chili salsa, chocolate and almonds. Yum, Yum!
15	No voy a comprar el pan	I am not going to buy bread.

Subject: Engineering

Year: 8

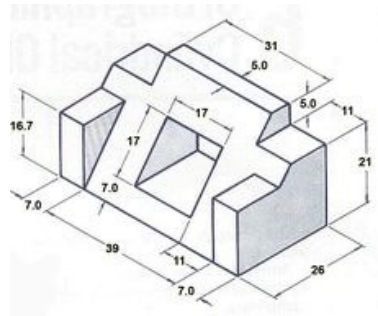
Topic: Phone Stand



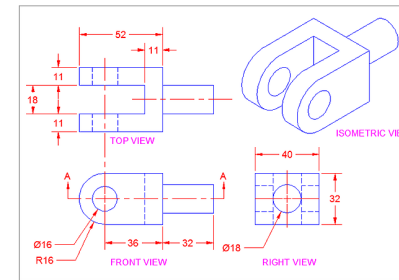
I need to be able to: Design and make a stand that will hold and charge a mobile phone in a safe environment using a variety of engineered materials.

Key Word	Definition
Tolerance:	The permissible limit or limits of variations.
Production:	The action of making or manufacturing from components or raw materials, or the process of being so manufactured.
CAD:	Computer Aided Design
CAM:	Computer Aided Manufacture
Technical Drawing:	A precise and detailed drawing of an object, as employed in architecture or engineering. For example: Isometric, Orthographic and perspective drawing.
Research:	The systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions
Health and Safety:	To be aware of self and others safety within an engineering workshop environment.

Isometric Drawing



Orthographic Drawing



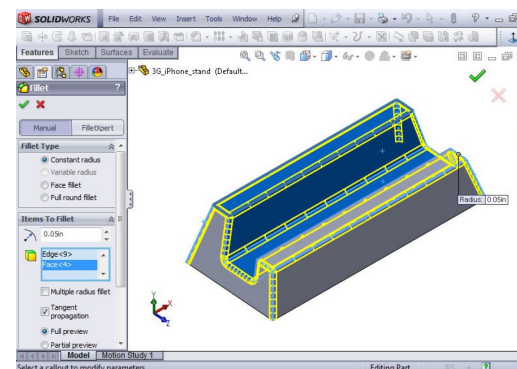
Workshop Safety, Personal Protective Equipment (PPE)



Computer Aided Manufacture (CAM)



Computer Aided Design (CAD)



Arrow Tasks: Research and describe the impact tolerances have when engineering a product.

Links to further resources: <https://www.bbc.com/bitesize/topics/z39mhyc/>

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Topic: Food

I need to be able to: understand how the functional properties (science) of ingredients affect the physical, and sensory qualities of a recipes . To ensure you can design a balance meal using ingredients to supply protein, carbohydrate, fat, vitamin and minerals. To ensure that you take into account your knowledge about diet related diseases.

Key word	Definition
Type 2 diabetes	A health problem when too much sugar is consumed on a regular basis.
Coronary heart disease	A health problem when too many calories or saturated fat is consumed on a regular basis.
Constipation, diverticular disease	A diet low in fibre can cause these dietary related diseases.
Obesity	A health problem when you are not eating too many calories for the amount of energy expended.
Shortening	Rubbing fat into flour prevents long chains of gluten forming resulting in a short crumbly pastry texture.
Proving	Time allowed for the yeast to breathe out carbon dioxide gas to make bread rise.
Glazing	To apply an egg and milk mixture to improve the appearance of a product (shiny brown surface).



Rolling—To make a dough flat by rolling with a rolling pin.

Quality control—level and the thickness stated for the recipes.

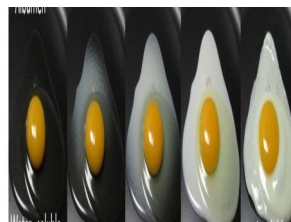


Reduction sauce— to simmer a sauce to evaporate the water to increase the thickness and intensity of the flavour. **Quality control**—thick rich viscosity.



Stir fry—to fry using a small amount of oil (healthy low fat cooking method. FIRE RISK

Quality control—slightly crunchy



Coagulation of egg—heat causes the amino acid protein bond to reform and go from liquid to solid.

Quality control—set structure



How to use industrial equipment correctly to reduce making time.

Quality control—smooth cake batter and creamy topping.



Arrow Tasks -

Explain how the ingredients are produced and link to the affect upon the environment. Are they sustainable? Could alternatives be used? Explain why. Try to link to environmental pollution, the effect of deforestation, use of fossil fuel to power or make the materials.

Topic: Treasure Box

I need to be able to:

- learn about the Art deco design era and to show the influence of Art Deco style in designing the box lid.
- learn about CAD (computer aided design) and develop CAD skills through designing using 'Techsoft 2D design' software and learn about CAM (computer aided manufacture) as knowledge of how the laser cutter works affects the design stage.
- Develop practical skills with particular emphasis on detail and finish.

Stages of the Design Process:

Context Design Brief Task Analysis Research
Investigation Specification Design & Development
Making Testing Evaluation

Key Words

* Design process



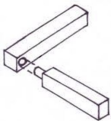
* CAD



* CAM



* Dowe



* QCC

QUALITY CONTROL



Definitions

The steps a designer/maker goes through from identifying a problem and need for a product to its final making, testing and evaluating and improving.

Computer Aided Design is a vital tool for a Product Designer. CAD software allows a designer to quickly produce 3D images/designs. The design can then be rotated, colour rendered and analysed/evaluated.

Computer Aided Manufacture: once a prototype design has been produced, it can be manufactured on a CNC machine or Rapid Prototyping machine. Products and components can be made repeatedly to the same high standard. CAM is much faster than machining by human control / by hand. Large quantities can be produced 24 hours a day, reducing the final cost/price.

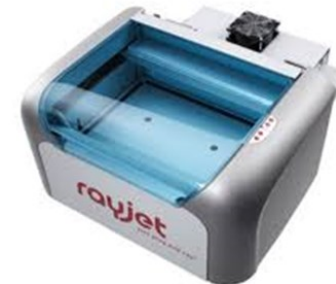
Dowel joints are used to strengthen a joint. It can also be made to swivel, allowing a lid to open and close on a horizontal plane.

Quality Control Checks are used in all areas of manufacturing to check quality against a set standard or a specification. In industry Quality Control requires constant inspection throughout the manufacturing process in order to detect products which are not up to the required standard.

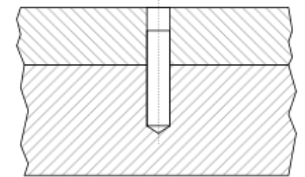
New materials, tools and equipment used in the treasure box project



Techsoft 2D design Software used to produce the surface design for the lid



Rayjet 50 Laser engraver/cutter used to engrave and cut the lid design



The lid could open using a swivelling dowel joint



The treasure box design will be based on Art Deco—a design era that spanned from 1925—1950



Example treasure boxes



Arrow Task:

Design and make a wooden hinge. Here is just one example...



Link to further resources: <http://www.technologystudent.com>
<http://www.mr-dt.com/>
<http://wiki.dtonline.org/index.php/>

[Return to contents page](#)

Topic: Eco Bag

Who is Jasper Johns?

An American painter (born May 15, 1930). His style of work is often very **abstract** and **expressive**. Early pieces of his work were composed on a large scale, using simple graphics such as letters and numbers.



Arrow Task: Compare the environmental impact between a calico shopping bag, a rayon shopping bag and a nylon shopper.

Key Words

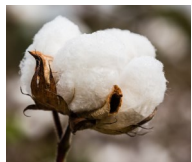
* Stencil



* Hessian



* Natural fibres



* Man-made fibres

**Definitions**

A thin sheet of card with letters cut out of it, used to produce the cut design on the surface below by sponging paint through the holes.

A strong, coarse fabric made from the jute plant.

Fibres that have been produced by plants and animals. These fibres can be spun and then woven.

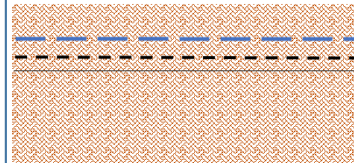
A type of fibre that is made artificially, such as polyester. These are often called 'synthetic'.

Stage 1



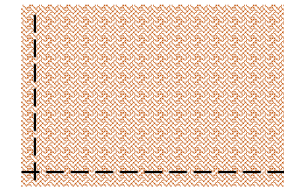
Firstly, get two pieces of hessian and scrape paint on both sides in the style of Jasper Johns and then stencil the lettering.

Stage 2



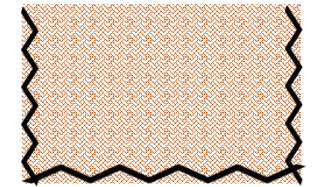
To create the top hem, fold the top of the bag 1.5cm and fold again. Then pin, tack and machine sew. Do this for the top of both panels.

Stage 3



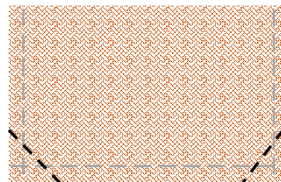
Then pin, tack and sew the two panels of the bag together, with the printed sides facing inwards.

Stage 4



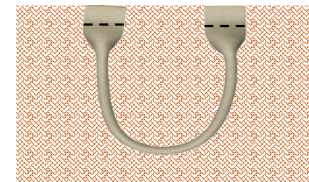
Using the sewing machine's zig zag setting, sew the sides and bottom of the fabric to stop it from fraying.

Stage 5



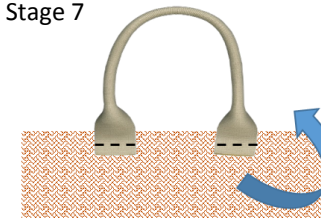
Pinch the two bottom corners and pull them to create a straight edge. Machine stitch along the straight line.

Stage 6



With the bag still inside out, sew the handle strap onto one side, in a downwards position. Then repeat on the other side of the bag.

Stage 7



Now turn the handles up the correct way and sew along the bottom so they are secure.

Stage 8



Turn the entire bag inside out so that the 'correct' side of the bag can be seen. Your Eco bag is now complete!

A Guide to Revision

We hope you find these pages about revision useful. You will need to use these skills throughout your time at school, from Year 7 all the way through to Year 13. Developing these skills early means they will become second nature and revision will become easy!

We want you to achieve the best possible results throughout your time at school and achieve results that will not only increase your life chances but also take you to the next step on your chosen career pathway. Speak to any one of your teachers for more advice on revision.

Points to remember

- Revision is re-looking at information you have learnt previously.
- The idea is that you know the information that will be tested and can remember it for the exam.
- Your attitude is important.
- You only fail if you give up.
- If you fail to plan, you plan to fail.

Believe in yourself, be positive.
If you think you can succeed you will.

Attendance

- Every lesson counts and your attendance is vital.
- Try your best in all lessons and make them work for you.
- It is what you are getting out of it that matters.
- This is YOUR result, so make it count.
- You will get out of it what you put in - so do your best.

Revision materials you'll need



These are to help you organise your revision and keep everything in one place.

Top Tip: Revision materials are available from the school shop in the library.

You can also buy these items very cheaply from a local pound shop!

Revision Strategies

Revision Planner							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Afternoon							
Evening							

- Plan your time – create a revision timetable
- Break revision into chunks
- Find a quiet space to revise



- Revise in 20 minute blocks
 - This is the optimum concentration time
 - Have a short break between blocks



- Avoid distractions!
 - Turn off your phone
 - Turn off the TV



Brain Dump

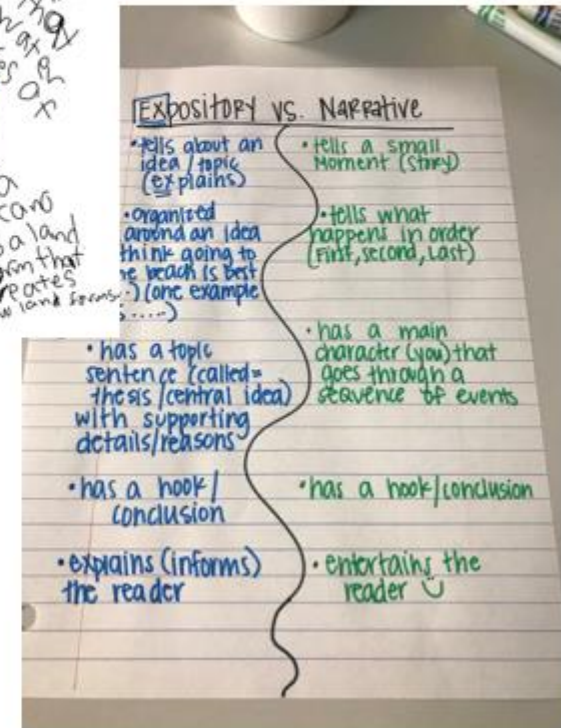
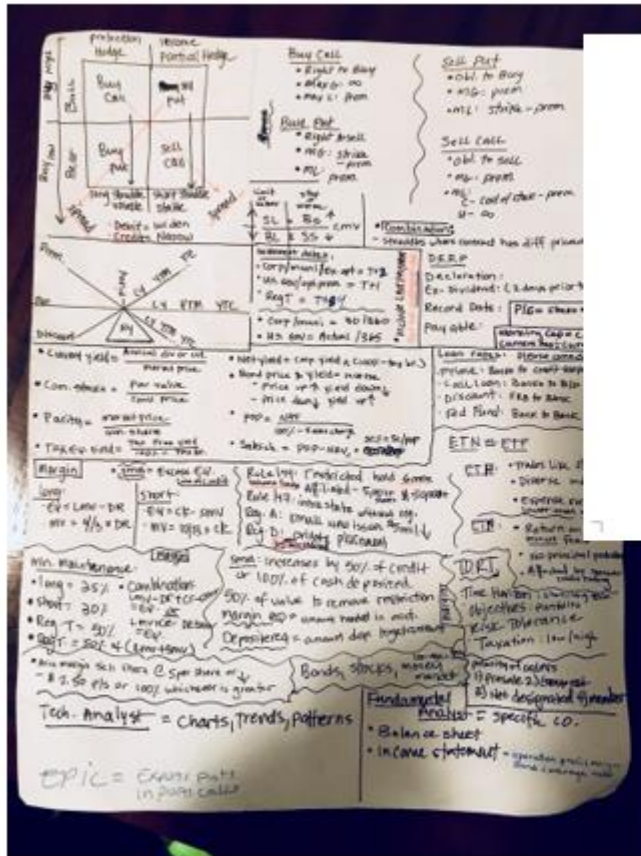
WHEN: beginning of 20 minute revision block

HOW:

- Take a blank piece of paper
- Write down (DUMP!) everything you know about the topic
 - No books
 - No notes
 - Be as messy as you like
- Time limit of 60 seconds
- Now revise the topic (15 minutes)
- Finally, go back to your DUMP and add everything you have learnt
 - Use a different colour pen

IMPACT: you should be able to add 7-15 new things to your DUMP

Examples of Brain Dumps



Top Tip: Repeat a brain dump regularly.

This will help identify which aspects of a topic you have **forgotten** to include. These are the areas you need to **focus on** when revising!

MIND MAPS

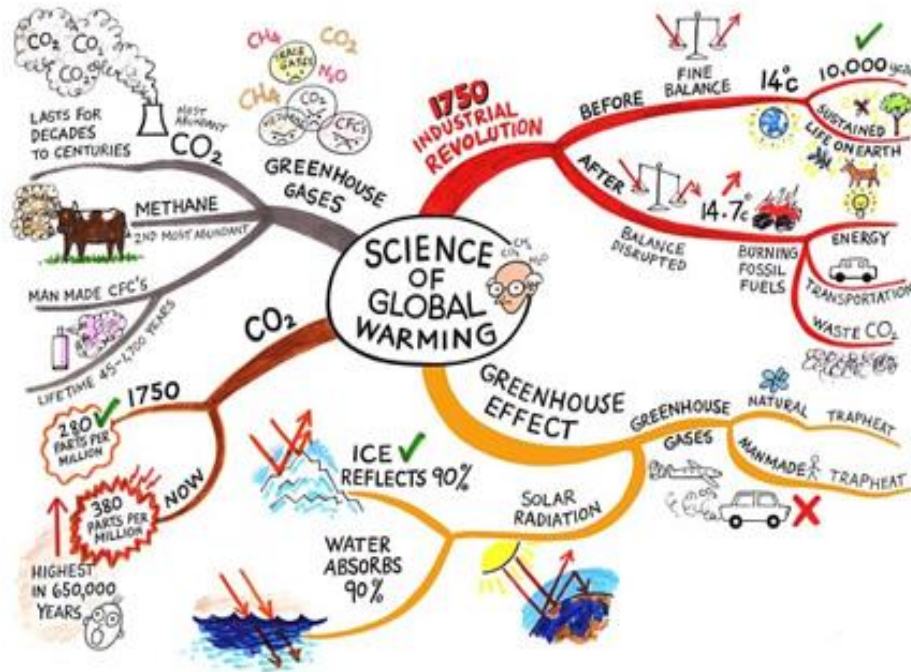
WHEN: to organise information from your exercise/text book.

HOW:

- Put the topic in the centre of a blank page
- Add big branches with the main ideas/themes of the topics
- Add small branches to these with more detail
- Try to write only 1 or 2 words per branch
 - Focus on the key points only
- Add an image to each branch (dual code)
- Revisit your mind map next time you DUMP

IMPACT: whole topic with the key ideas on a single page.

Examples of Mind Maps

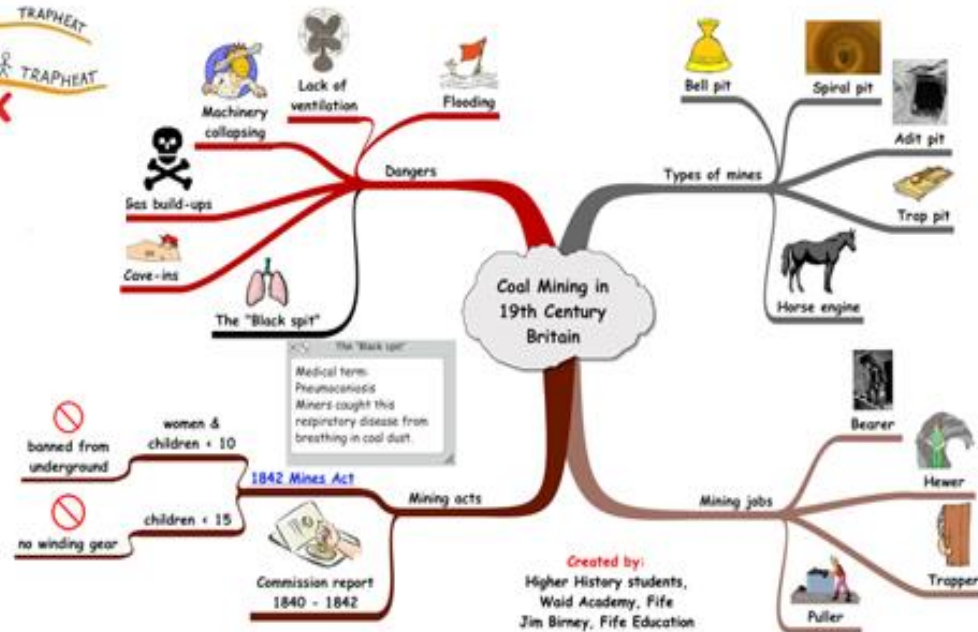


Top Tip: Use different colours for each branch of your mind map.

This helps your brain distinguish between each of the different information stems.

Top Tip: Use 'dual coding' in your mind maps.

Dual coding means using both words and images to record the information you need to remember.



FLASH CARDS

WHEN: to organise information from your exercise or text book.

HOW:

- Put a key question on one side
- Bullet point the key points that answer the question on the other side
- Put a formula / word on one side
- Put the definition on the other side
- You might be able to group key formulae/words together
- Bullet point the key points of a topic on one card (use both sides)

IMPACT: great for targeting key questions/formulae/words that you are finding hard to remember. Easy to carry around.

Examples of Flash Cards



Top Tip: Once you have created your flash cards, take a photo with your phone.

Create revision folders in your gallery so that you can revise in the car, on the bus... in fact anywhere when you've got a few spare minutes!

Mnemonics

WHEN: remembering a list of things or items in a particular order

HOW:

- Create a song, rhyme or poem using the first letter of each word in a sequence

For example:

- Richard of York gave battle in vain (to remember the colours of the rainbow)
- **Red Orange Yellow Green Blue Indigo Violet**



- Write out the first letter of each word in a sequence or list then make up your own rhyme

IMPACT: great for remembering sequences and orders of words relating to a topic.

Top Tip: Be **creative** when using mnemonics.

The sillier the rhyme, the more likely you are to remember it! **Repeat** the rhyme **regularly** to make sure it goes into your long term memory

Liskeard's Six Effective Learning Strategies

Check out the link on our school website for more information:

<http://www.liskeard.cornwall.sch.uk/students/six-strategies-for-effective-learning>

1. SPACE IT OUT



Don't just revise what you've just learnt.
Study older information to keep it fresh.

2. RETRIEVE



Without using your books, write or sketch
everything you know. Then check it!

3. ELABORATE



Think about the detail.
Describe, Explain, Compare, Question...

4. INTER-LEAVE



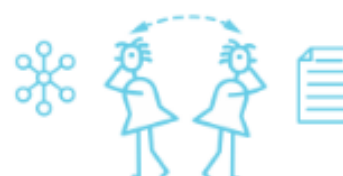
Don't study one topic for too long.
Switch between topics when studying.

5. USE EXAMPLES



Collect examples you have used in
class, or found yourself.
Link the examples to what you are studying.

6. DUAL CODE



Turn your words & notes into diagrams or pictures.
Turn your diagrams & pictures into words or notes.

Revision Websites

In addition to the website links within the subject pages, there are as a wide range of resources available online. Below is just a small section of those available.

<https://www.educationquizzes.com/ks3/>

Interactive resources for a wide range of subjects

<https://www.bbc.com/bitesize/levels/z4kw2hv>

Resources for a wide range of subjects

<https://mathsmadeeasy.co.uk/ks3-revision/>

Great for maths, also offers English and science resources

<https://www.senecalearning.com/>

Quick fire interactive questions across a range of subjects

Top Tip: Ask your teacher for a list of the topics you need to revise.

Websites contain a lot of information, some of which that will not be relevant to your course. Make sure you revise everything you need to know!