

Knowledge Organiser

YEAR

9



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

Contents Page

Knowledge Organisers	3
How We Learn	4-6
Literacy Proofreading	7
Talking Points	8
English	9-10
Maths	11-12
Science	13-15
French	16-19
History	20-21
Computing	22-23
Geography	24-25
Art/ Design	26-28
Drama	29
Philosophy	30
Music	31
PE	32-34



Equipment

all students must have...



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

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

Knowledge Organisers at Redmoor Academy

WHY?

Why do we have knowledge organisers?

Your knowledge organisers help you to be successful in many ways. Firstly, they make the key elements of each topic clear, showing you what you need to have an excellent understanding of in order to be successful. If you know these elements, your teacher will help you to understand them.

WHAT?

What are my teachers' expectations of me?

In Year 7 and 8 your teachers will give you homework. You will be spending 20 minutes a week learning information from your knowledge organiser for each subject, with Sparx used for Maths and Literacy. In Year 9 this will increase to 30-40 minutes. Teachers will test you regularly to make sure that you are completing the homework and remembering your knowledge.

How will my teachers use them?

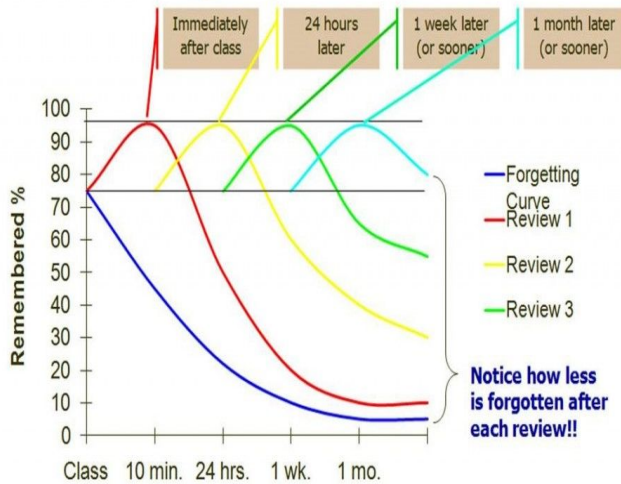
Core subjects will set homework once a week (others less often). This will help you to learn the most important knowledge for each topic. Teachers will also test you regularly to see how well you have remembered it. Research tells us that this practising is a really good way of helping you make sure that the knowledge stays in your memory. Over time, you will build on this knowledge to make sure that you know everything you need to for your subject. Sometimes you may have high stakes quizzes, where teachers will set a certain score that you have to reach to be successful.

HOW?

How will they help me to be successful later on?

When it comes to GCSEs, you have lots of information to remember. Your knowledge organisers will gradually build up this knowledge over 5 years to help support you in Year 11. This means that when you revise you will just be recalling knowledge that you have already stored. Also, all of this practice with lots of different revision techniques now will help you when it comes to your final exams.

How we learn at Redmoor



Why reviewing your learning is so important

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

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

Common methods of revision that are the **least effective**:

- Highlighting key points
- Re-reading
- Summarising texts



Retrieval practice

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

Learn more about retrieval practice here: [Link to the Learning Scientists](#)

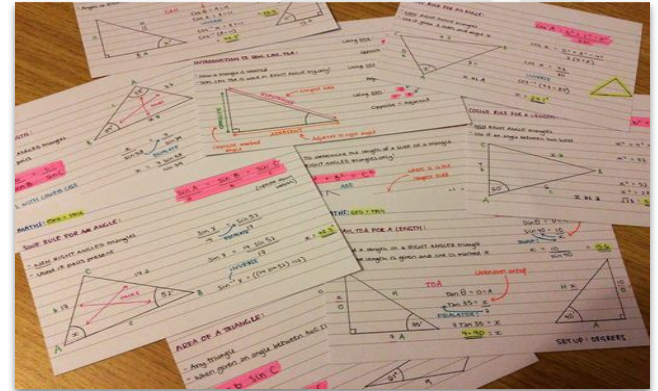
How we learn at Redmoor

Flash Cards

You can use these simply to create questions on one side and answers on the other. You might colour-code the cards for specific topics, and even include keywords and timelines.

Once you have created your flashcards you need to think about how you will use them effectively. There is a link below to a video helping you understand the Leitner system of using flashcards:

[YouTube: The Leitner Method](#)



Dual Coding



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

You can learn more about dual coding here:

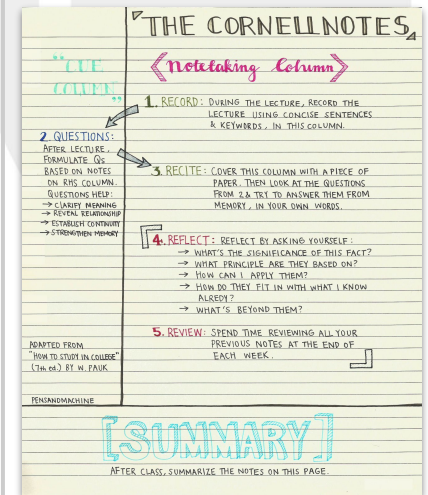
[Link To The Learning Scientists](#)

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

Cornell Notes

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

- Note Taking
- Key words / concepts
- Summary

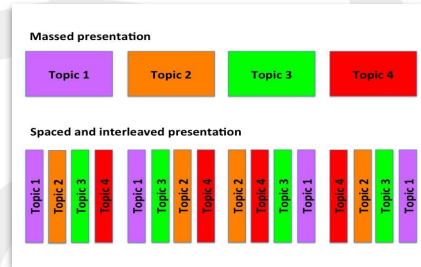


How we learn at Redmoor

Spacing and Interleaving

You shouldn't revise all of your topics in one go - this is called cramming. Instead, you should revise 'chunks' of a topic for small amounts of time, spending around 15-30 minutes on each. You should then move onto another 'chunk' from a different topic.

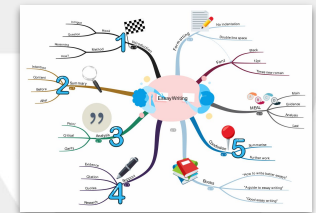
Eg. topic 1 is 'cells', topic 2 is the 'digestive system'. This will improve your memory!



Mind Maps

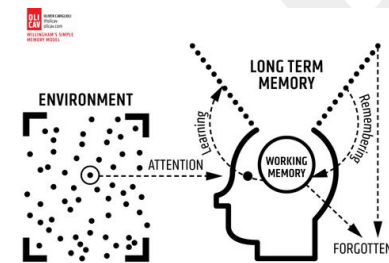
Mind mapping is simply a diagram used to visually represent or outline information. It is a powerful graphic technique you can use to translate what's in your **mind** into a visual picture.

Mind maps help with memorisation of key knowledge as they help to organise information and allow you to begin to make links and connections to different pieces of information. The use of visual images helps your brain to memorise the information with simple words next to them - and this links to dual coding!



Useful links:

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



Literacy

Proofreading Guidance

When we write, we know what we're trying to say, so our brains might skip out words or punctuation. It is important that we proofread to avoid making silly mistakes.

Full Stops & Commas

- A full stop gives a strong pause. It goes at the end of a whole sentence.

e.g. *Jake had four brothers. He got on best with Dan who shared his sense of humour.*

- A comma gives a short pause and is used to separate items in a list e.g.

Bring some milk, eggs, butter and flour.

After introductory words e.g.

However,

Between the different parts of a sentence: *Gran, who had been a champion boxer in the sixties, stepped forward.*

Paragraphs

- Change in time, e.g. *Later that day, an important letter arrived.* - Change in place, e.g. *Back at home things were just as bad. / Chile, however, has a population of...*

- Change of subject, e.g. *As well as mountain biking, I also enjoy swimming...*

- Each time a different person speaks:

"Hey, that's my phone!"

"No it isn't - I had it for my birthday."

Spelling Homophones

Words that sound the same but are spelt differently.

there , their , they're

They're silly to have left their coats over there where there is wet grass.

your , you're

You're such a good friend to lend me your phone.

to , two , too

Two of my friends are coming to Alton Towers too.

Grammar Errors

I have played tennis. ✓ *I of played tennis.* ✗

I should have / should've played tennis. ✓

I should of played tennis. ✗

I/she/he were late. ✗ *I/she/he was late.* ✓

They were late. ✓ *They was late.* ✗

You were late. ✓ *You was late.* ✗

I ran quick, passing the ball brilliant. I played amazing. ✗

I ran quickly, passing the ball brilliantly. I played amazingly. ✓

Apostrophes

- Use an apostrophe to show possession e.g. *John's football is flat.*

- Also use an apostrophe for omissions (the apostrophe shows where a letter or letters are missing) e.g. *I didn't do it. It wasn't me!*

Capital Letters

- At the start of every sentence

- For days, months and celebrations, e.g. *Wednesday, April, Easter*

- For proper nouns (names of people and places) e.g. *James, London, Rutland Water*

- For Titles (except the small words) e.g. *The Hunger Games, Match of the Day*

- For abbreviations e.g. *BBC, RSPCA*

Correct Tense

Are you using the correct tense? Do not switch from one to another. - For days, months and celebrations,

- **Past:** e.g. *I ran to the shops.*

- **Present:** e.g. *I am running to the shops*

- **Future:** e.g. *I am going to run to the shops.*

Literacy Marking Code:

sp	Spelling mistake
^	Missing word/letter
O	Capital letter/Punctuation
~~~~~	Unclear/poorly worded
//	New paragraph
th	Use a thesaurus
w	Wrong word

# Talking Points

Add, Build, Challenge

## To add an new idea to what someone else has been saying:

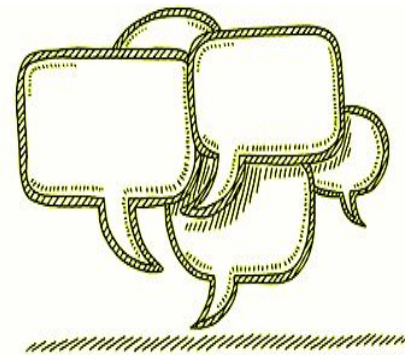
- I would like to add to this...
- I would have to agree with you because...
- Another example of this could be...
- Adding on to this, in my opinion...
- We might also consider...
- As well as this, it is important to think about...
- In addition...

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

- This could be developed by considering...
- This links to...because...
- Furthermore, it could be argued that...
- To elaborate further...
- Building onto this...
- Leading from this...
- Taking this one step forward...
- On top of this...

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

- I would challenge this idea because...
- On one hand I agree with... However I think...
- On the other hand this idea could be challenged because...
- From another perspective you might argue that...
- Although I can see why ___ thinks... I disagree because...
- Whereas ___ seems to think... instead I think...



## Banned words:

- ★ You know
- ★ Like
- ★ Isn't it
- ★ Basically
- ★ Sort of
- ★ Kind of
- ★ Sommit
- ★ Innit
- ★ Dunno
- ★ Gonna
- ★ So...
- ★ Okay....

## Redmoor English Department: Romantic Poetry




<b>BIG QUESTION:</b> What can we learn about the human condition from studying these poems?	
Sublime	Of great excellence or beauty.
Identity	Who or what a person is.
Atheist	Someone who does not believe in a god or gods.
Nature	The beauty and importance of the natural world.
Childhood	The importance and innocence of childhood.

<b>BIG QUESTION:</b> Why do form and structure matter?	
Trochee	One stressed syllable followed by an unstressed syllable. Known as a 'foot'
Metre	The rhythm of a poem. The number of feet per line.
Trimeter	Three feet per line of poetry.
Enjambment	No punctuation at the end of a line of poetry.
Caesura	A dramatic pause in the middle of a line of poetry, caused by punctuation.
Refrain	A line or phrase repeated within a poem.

<b>BIG QUESTION:</b> How are words powerful?	
Imagery	Descriptive language which creates clear images - this could be religious imagery, natural imagery etc.
Imperative	An order or command. Also, something that is very important or urgent.
Irony	The use of words that actually say the opposite of what they really mean.
Metaphor	A phrase which describes one thing as if it is something else.
Personification	When you give an animal, thing or object qualities that only a human can have.
Symbolism	Where an image or object represents something else.
Tone	An attitude of a writer toward a subject or an audience.
Allegory	Something which has a hidden moral, political or religious meaning.
Allusion	A reference to something without explicitly mentioning it

<b>VOCABULARY BOOST</b>	
Word	Definition
Psychological	Related to the mind.
Didactic	Something intended to teach a lesson (a didactic poem).
Transcend	Go beyond the limits of something.
Profound	A great or intense feeling.
Spiritual	Relating to your thoughts and feelings, opposed to physical body.

# Redmoor English Department: Language Skills and The Art of Rhetoric

The Aristotelian Triad	
<b>Ethos</b> 	Appeals to the personality or character. Establishes the author's credibility.
<b>Logos</b> 	Appeals to reason. Establishes an argument based on logic.
<b>Pathos</b> 	Appeals to the emotions of the author's audience.

Key Word	Definition
<b>Rhetoric</b>	The art of persuasive speaking or writing.
<b>Impassioned</b>	Filled with or showing great emotion.
<b>Manipulate</b>	To control or influence cleverly.
<b>Activist</b>	A person who campaigns to bring about social or political change.

Rhetorical Methods	Example
<b>Analogy:</b> an analogy can be used to help an audience understand unfamiliar things by linking them to familiar ideas.	If that politician gets voted in during the next election, it will be like Donald Trump's reign all over again.
<b>Anaphora:</b> the repetition of a word or phrase at the beginning of multiple sentences.	<u>Now is the time to</u> make real the promises of democracy. <u>Now is the time to</u> rise from the dark and desolate valley of segregation to the sunlit path of racial justice.
<b>Anecdote:</b> a short, amusing or interesting story about a real incident or person.	When I was 13, I decided that I needed to improve my attitude towards my education...
<b>Direct address:</b> addressing a person or a group of people directly	Now is the time to lift <u>our nation</u> from the quicksands of racial injustice.
<b>Emotive language:</b> word choices that are made to evoke an emotional response.	The world's wildlife is being <u>brutally slaughtered</u> .

More Rhetorical Methods	Example
<b>Hyperbole:</b> exaggerated statements or claims that are not meant to be taken literally.	My shoes are killing me.
<b>Imperative:</b> a command.	If there is one thing I know for certain, it is that this has to stop.
<b>Maxim:</b> a brief expression of a general rule or principle (a short but wise statement)	Do unto others as you want others to do unto you.
<b>Rhetorical question:</b> a question which does not require an answer.	Why, 35 years ago, fly the Atlantic?
<b>Rule of Three:</b> a series of three parallel words, phrases or clauses.	We can help all people to see it, to draw hope from it, and to move irresistibly towards it. 10

# Y9 MATHS Summer - Mastery

Sparx Code	TOPIC	Covered in lessons	RAG	R/A Reviewed
M112	Drawing and interpreting scale diagrams			
U525	Measuring and drawing bearings			
U107	Calculating bearings			
M774	Converting units of mass and capacity			
M828	Estimating and measuring mass and capacity			
U151	Calculating with speed			
U256	Calculating with rates			
	Calculating Density			
U721	Solving direct proportion word problems			
U357	Solving inverse proportion word problems			
U610	Currency conversion			

Sparx Code	TOPIC	Covered in lessons	RAG	R/A Reviewed
U280	Frequency trees			
M829	Venn diagrams			
M419	Probabilities from Venn diagrams			
U166	Expected results from repeated experiments			
U580	Calculating experimental probabilities			
U403	Plotting distance-time graphs			
U914	Interpreting distance-time graphs			
U199	Plotting scatter graphs			
U277	Interpreting scatter graphs			
U128	Using lines of best fit			

# Y9 MATHS Summer - Stretch

Sparx Code	TOPIC	Covered in lessons	RAG	R/A Reviewed
U665	Combining angle facts			
U826	Angles on parallel lines			
U329	Using quadrilateral properties to find angles			
U427	Angles in polygons			
U525	Measuring and drawing bearings			
U107	Calculating bearings			
U605	Understanding sin, cos, tan			
U283	Finding unknown sides in right-angled triangles			
U545	Finding unknown angles in right-angled triangles			
U151	Calculating with speed			
U256	Calculating with rates			
M901	Financial terminology and calculations			

Sparx Code	TOPIC	Covered in lessons	RAG	R/A Reviewed
U696	Rotation			
U519	Enlargement by a positive scale factor			
M881	Mixed transformations			
U551	Understanding similarity			
U578	Finding unknown sides in similar shapes			
U790	Understanding congruence			
U866	Congruent triangles			
U187	Constructing triangles			
U632	Understanding column vectors			
U903	Adding and subtracting column vectors			
U564	Multiplying column vectors by a scalar			
U660	Identifying parallel vectors			12

## Big Questions:

- How is energy stored and transferred?
- How do we calculate the values of different energy stores?

# GCSE Physics Dissipation & conservation of energy

**By heating** → increases the kinetic of the particles in the system, which increases the energy in the thermal store of the object.

## 1. How is energy stored and transferred?

Energy	The ability to do work.
System	An object or group of objects.
Work done	Energy transferred from one energy store to another.
Conservation of energy	Energy cannot be created or destroyed, it can be transferred between energy stores or dissipated.
Dissipation	Process of energy being transferred, or lost, to the surroundings.



Kinetic energy

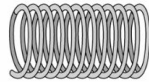
Energy stored in a moving object.

Chemical energy

Energy stored in chemical bonds.



Books on a high shelf.



A stretched or compressed spring.

Gravitational potential energy

Energy stored in an object above the ground.

Elastic potential energy

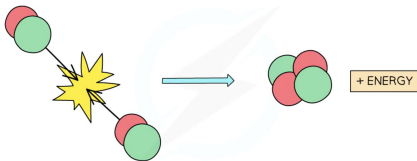
Energy stored in a stretched or compressed object.

Thermal (internal) energy

Energy stored in an object due to their temperature.

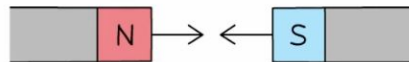
Electrostatic energy

Energy stored in charged objects.



Nuclear energy

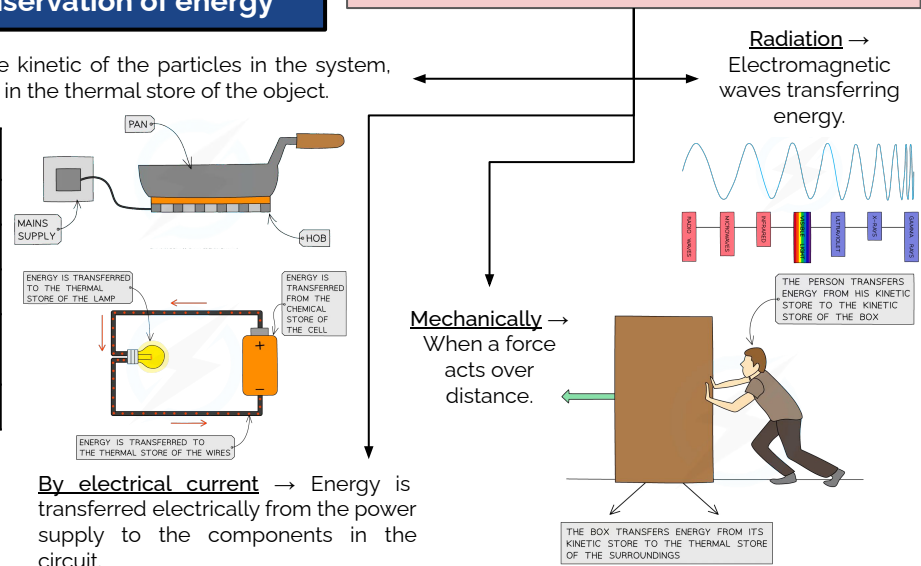
Energy stored in the nuclei of atoms when they split or fuse.



Magnetic energy

Energy stored in magnetic materials when they attract or repel objects.

## Energy transfers



## 2. How do we calculate the values of different energy stores?

Power	Rate at which energy is transferred. Measured in Watts (W).
Joules (J)	Unit for energy and work done.

## Energy equations

$$\text{Gravitational potential energy} = \text{mass} \times \text{gravitational field strength} \times \text{height}$$

$$\text{Power} = \frac{\text{Energy or work done}}{\text{Time}}$$

$$\text{Efficiency} = \frac{\text{Useful energy/power output}}{\text{Total energy/power input}}$$

$$\text{Work done} = \text{force} \times \text{distance}$$

$$\text{Kinetic energy} = \frac{1}{2} \times \text{mass} \times \text{velocity}^2$$

$$\text{Change in thermal energy} = \text{mass} \times \text{specific heat capacity} \times \text{change in temperature}$$

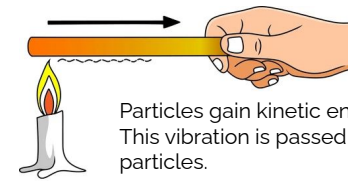
$$\text{Elastic potential energy} = \frac{1}{2} \times \text{spring constant} \times \text{extension}^2$$

## Big Questions:

- Are all energy transfers useful?
- How can we compare different energy resources and why is this necessary?

## GCSE Physics Energy transfers & energy resources

$$\text{Change in thermal energy} = \text{mass} \times \text{specific heat capacity} \times \text{change in temperature}$$

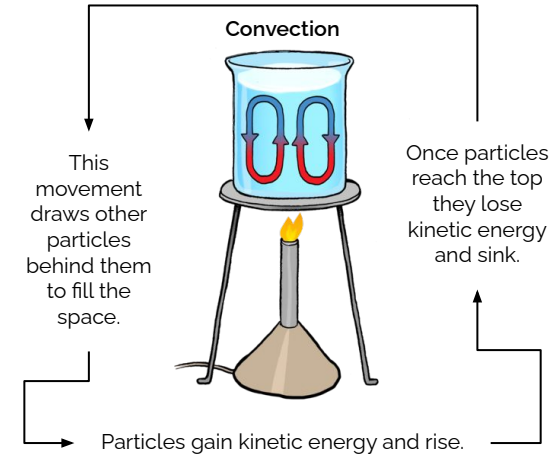


Conduction

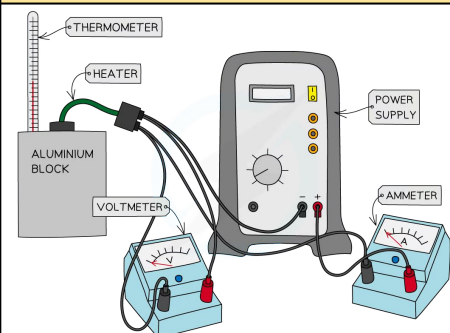
Particles gain kinetic energy and vibrate more. This vibration is passed onto neighbouring particles.

### 3. Are all energy transfers useful?

Thermal conductivity	A measure of how well a material conducts energy when it is heated.
Conductor	A material that allows thermal energy and charge to transfer through it easily. Has a high thermal conductivity.
Insulator	A material that does not allow thermal energy or charge to transfer through it easily. Has a low thermal conductivity.
Conduction	The transfer of heat through a material by transferring kinetic energy from one particle to another.
Convection	The transfer of heat energy through a moving liquid or gas.
Infrared radiation	Electromagnetic radiation emitted from a hot object.
Emitted	Process of sending out energy.
Reflected	When waves bounce off of a surface.
Specific heat capacity	Energy required to raise the temperature of 1kg of a substance by 1°C.

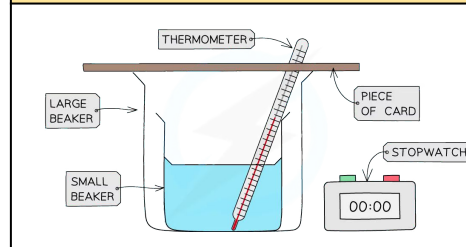


#### Required Practical: Specific heat capacity



Independent variable	Type of metal or material.
Dependent variable	Temperature change of the material.
Control variables	Current supplied, voltage supplied.

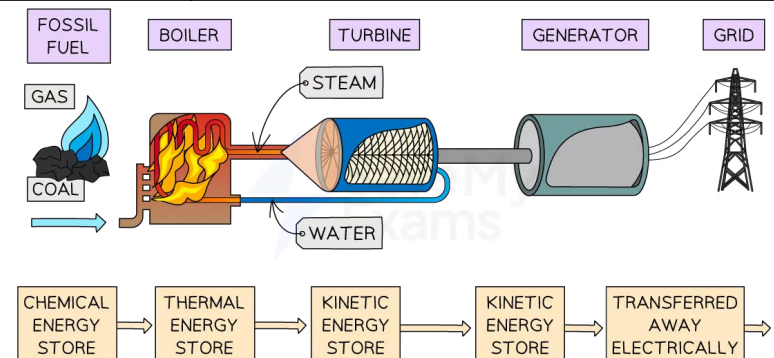
#### Required Practical: Insulation



Independent variable	Type of material
Dependent variable	Temperature change
Control variables	Volume of the water, thickness of the material, start temperature of the water.

### 4. How can we compare different energy resources and why is this necessary?

Energy resource	Useful supply or store of energy.
Renewable	A resource that is replenished at the same rate it is used.
Non-renewable	A resource that is used up faster than it is replenished.



## Big Questions:

- 1) How do plants produce food?
- 2) How does the body transfer energy from food?

## GCSE Biology - Bioenergetics (Respiration and Photosynthesis)

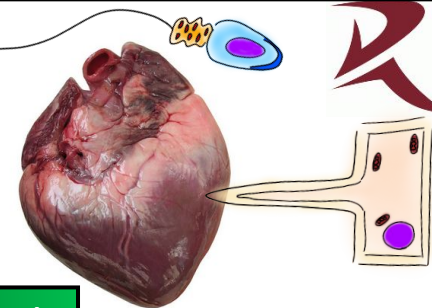
Photosynthesis	An endothermic reaction between water carbon dioxide to form glucose and oxygen - occurs in the chloroplasts $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$
Glucose	A sugar molecule - product of photosynthesis
Starch	A storage molecule - made of a chain of glucose molecules Unlike glucose - starch is insoluble and does not affect osmosis
Endothermic	A reaction that requires energy inputted from the surroundings (In photosynthesis this energy takes the form of sunlight)
Limiting factors	Something that can limit the rate of a reaction - in photosynthesis these are light intensity, [CO ₂ ], temperature, amount of chloroplasts
Hydroponics	An environment for growing plants which controls all of the limiting factors affecting photosynthesis
Greenhouse	A glass house which traps heat and light energy in an attempt to increase the amount of photosynthesis
Aerobic respiration	An exothermic reaction which breaks down glucose in the <b>presence</b> of oxygen order to release energy - occurs in the mitochondria $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$
Anaerobic respiration	An exothermic reaction which breaks down glucose in the <b>absence</b> of oxygen order to release energy - occurs in the cytoplasm $C_6H_{12}O_6 \rightarrow$ lactic acid
Exothermic reaction	A reaction that releases energy into the surroundings - often in the form of heat
Glycogen	How glucose is stored in the human body - Excess blood glucose is converted to glycogen
Lactic Acid	The product of anaerobic respiration
Oxygen Debt	The amount of oxygen required to break down lactic acid after anaerobic respiration
Metabolism	The sum of all the reactions taking place in the body

Why do these cells have a lot of mitochondria?

Sperm Cell

Muscle Cell

Root Hair Cell



### Anaerobic Respiration in Plants

Glucose  $\rightarrow$  Ethanol + Carbon Dioxide

Similarities and differences of anaerobic respiration in animals and plants

**EXAM TIP:** You need to be able to **COMPARE** and **CONTRAST** anaerobic respiration in **PLANTS** and **ANIMALS**

Similarities

Differences

Have glucose as a reactant

Animal cells produce lactic acid (O₂ Debt)

Releases energy

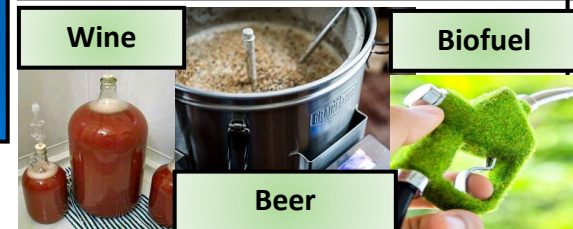
Plant cells produce CO₂ and ethanol

Uses for plant anaerobic respiration

Wine

Biofuel

Beer



Photosynthesis

Carbon Dioxide + Water  $\rightarrow$  Glucose + Oxygen



Aerobic Respiration

Glucose + Oxygen  $\rightarrow$  Water + Carbon Dioxide



### Adaptations of leaves for photosynthesis

Contains chloroplasts (the site of photosynthesis)

Thin - increases the rate of diffusion for gases

Stomata open and close to allow gases to enter/leave the leaf.

Large surface area to absorb more sunlight

Veins in leaf carry water in the xylem and transport glucose in the phloem

Air spaces allow carbon dioxide to get to the cells for photosynthesis

## Qu'est-ce qui fait ton identité? What makes your identity?

1	2	3	4	5	6	
<p>Ce qui fait mon identité c'est <i>What makes my identity is</i></p>	<p>mes amis. <i>my friends.</i> ma langue. <i>my language.</i> ma personnalité. <i>my personality.</i> ma religion. <i>my religion.</i> ma famille. <i>my family.</i></p>	<p>Je dirais que <i>I would say that</i> Je pense que <i>I think that</i> À mon avis <i>In my opinion</i> Selon moi <i>According to me</i></p>	<p>je suis <i>I am</i></p>	<p>assez <i>quite</i> très <i>very</i> vraiment <i>really</i> plutôt <i>rather</i></p>	<p>agaçante <i>annoying</i> aimable <i>likeable</i> amusante <i>amusing/funny</i> arrogante <i>arrogant</i> bavarde <i>talkative/chatty</i> charmante <i>charming</i></p> <p>drôle <i>funny</i> égoïste <i>selfish</i> fidèle <i>loyal</i> forte <i>strong</i> sympa <i>nice</i> Tête <i>stubborn/pig-headed</i> triste <i>sad</i> généreux/-euse <i>generous</i> gentille <i>kind</i> impatiente <i>impatient</i></p>	<p>travailleur/-euse <i>hard-working</i> jaloux/-euse <i>jealous</i> paresseux/-euse <i>lazy</i> de bonne humeur <i>in a good mood</i> compréhensif/-ive <i>understanding</i> équilibrée <i>balanced/level-headed</i> indépendante <i>independent</i> sûre de lui/d'elle <i>self-confident</i> énergique/pleine d'énergie <i>energetic</i></p>

Extra detail...

1	2	3	4	5	6
<p>mais <i>but</i> par contre <i>on the other hand</i></p>	<p>mes copains pensent que <i>my friends think that</i> mes parents pensent que <i>my parents think that</i> mon frère pense que <i>my brother thinks that</i> ma soeur pense que <i>my sister thinks that</i> les gens disent que <i>people say that</i></p>	<p>Je suis d'accord avec <i>I agree with</i> Je ne suis pas d'accord avec <i>I disagree with</i></p>	<p>eux. <i>them.</i> lui. <i>him.</i> elle. <i>her.</i></p>	<p>Ma meilleure qualité est <i>My best quality is</i></p>	<p>le sens de l'humour. <i>a sense of humour.</i> la générosité. <i>generosity.</i> la gentillesse. <i>kindness.</i> le courage. <i>courage.</i> le respect. <i>respect.</i></p>

## Qui est dans ta famille? Who is in your family?

Dans ma famille, il y a _____ personnes. *In my family, there are _____ people.*



GCSE Module 2  
Mon clan, mon tribu  
Part 1 Ton identité



1	2	3	4	5	6	
<p>j'habite avec <i>I live with</i> je vis avec <i>I live with</i></p>	<p>ma mère <i>my mum</i> mon père <i>my dad</i> ma belle-mère <i>my step-mum</i> mon beau-père <i>my step-dad</i> mes parents <i>my parents</i> mon (petit) frère <i>my (little) brother</i> ma (petite) soeur <i>my (little) sister</i> mon frère (aîné) <i>my (older) brother</i> ma soeur (aînée) <i>my (older) sister</i> mes grands-parents <i>my grandparents</i></p>	<p>mes deux soeurs <i>my two sisters</i> mon frère (jumeau) <i>my (twin) brother</i> ma sœur (jumelle) <i>my (twin) sister</i> mon demi-frère <i>my step-brother</i> ma demi-soeur <i>my step-sister</i> ma tante <i>my aunt</i></p>	<p>et <i>and</i> mais <i>but</i> cependant <i>however</i></p>	<p>la plupart du temps <i>most of the time</i> en général <i>in general</i> d'habitude <i>usually</i></p>	<p>je m'entends bien avec <i>I get on well with</i> je ne m'entends pas bien avec <i>I don't get on well with</i> je me dispute avec <i>I argue with</i></p>	<p>ma mère. <i>my mother.</i> mon père. <i>my father.</i> mes parents. <i>my parents.</i> mon frère et ma sœur. <i>my brother and sister.</i> mes deux soeurs. <i>my two sisters.</i> mon demi-frère. <i>my step-brother.</i> ma demi-sœur. <i>my step-sister.</i></p>
<p>je suis enfant unique <i>I am an only child</i></p>				<p>je n'ai pas de frères ou soeurs <i>I've no brothers and sisters</i></p>		

# Décris ta famille. Describe your family

1	2	3	4	5	6	7
<b>Mon beau-père</b> My stepfather/ father-in-law <b>Ma belle-mère</b> My stepmother /mother-in-law <b>Mon beau-frère</b> My brother-in-law <b>Ma belle-sœur</b> My sister-in-law <b>Mon demi-frère</b> My half-brother/ stepbrother <b>Ma demi-sœur</b> My half-sister/ stepsister	est is	<b>agaçante</b> annoying <b>aimable</b> likeable <b>amusante</b> amusing/funny <b>arrogante</b> arrogant <b>bavarde</b> talkative/chatty <b>charmante</b> charming <b>drôle</b> funny <b>égoïste</b> selfish <b>fidèle</b> loyal <b>forte</b> strong <b>généreux/-euse</b> generous <b>gentille</b> kind <b>intelligente</b> intelligent	<b>jaloux/-ouse</b> jealous <b>méchante</b> nasty/mean <b>paresseux/-euse</b> lazy <b>polie</b> polite <b>patiente</b> patient <b>sensible</b> sensitive <b>sérieux/-euse</b> serious <b>sympa</b> nice <b>têtue</b> stubborn/pig-headed <b>travailleur/-euse</b> hard-working <b>fier / fière (de moi)</b> proud (of me) <b>de bonne humeur</b> in a good mood <b>compréhensif/-ive</b> understanding	et and	<b>les cheveux</b> ... hair courts/longs/mi-longs short/long/mid-length raides/bouclés/frisés straight/curly noirs/bruns/châtains black/brown/chestnut blonds/roux/gris/blancs blond/red/grey/white	<b>les yeux</b> ... eyes bleus/verts blue/green gris/marron grey/brown
		des boutons <i>spots</i> une barbe <i>a beard</i> une moustache <i>a moustache</i> le visage long <i>a long face</i> un joli sourire <i>a nice smile</i>	<b>grand</b> <i>tall</i> <b>petit</b> <i>short</i> <b>de taille moyenne</b> <i>average height</i> <b>chauve</b> <i>bald</i>			
		des lunettes <i>glasses</i> un chapeau <i>a hat</i>			ressemble à mon / son grand-père looks like my / his/her grandfather.	

Je me dispute avec *I argue with*  
 Je m'entends bien avec *I get on well with*  
 Je me fâche contre *I get angry with*  
 Je m'occupe de *I look after*  
 Je me confie à *I confide in*

lui *him*  
 elle *her*  
 eux *them*  
 elles *them (f)*

On se chamaille  
*We bicker with each other*  
 On s'aime  
*We love each other*  
 On ne se dispute jamais.  
*We never argue.*

## Possessive adjectives

	masculine	feminine	plural
my	<b>mon</b>	<b>ma</b>	<b>mes</b>
your	<b>ton</b>	<b>ta</b>	<b>tes</b>
his/her	<b>son</b>	<b>sa</b>	<b>ses</b>

**mon** grand-père my grandfather  
**ta** grand-mère your grandmother  
**son** frère his/her brother  
**sa** demi-sœur his/her step-sister / half-sister

GCSE Module 2  
**Mon clan, mon tribu**  
**Part 2 Ta famille**



**Que fais-tu le week-end en famille?** *What do you do at the weekend with your family?*

1	2	3	4	5	6	7	8	9
<p><b>D'habitude</b> <i>Usually</i></p> <p><b>En général</b> <i>In general</i></p> <p><b>Souvent</b> <i>Often</i></p> <p><b>La plupart du temps</b> <i>Most of the time</i></p>	<p><b>le vendredi</b> <i>on Friday</i></p> <p><b>le samedi</b> <i>on Saturday</i></p> <p><b>le dimanche</b> <i>on Sunday</i></p>	<p><b>matin</b> <i>morning</i></p> <p><b>après-midi</b> <i>afternoon</i></p> <p><b>soir</b> <i>evening</i></p>	<p><b>on va au restaurant</b> <i>we go to the restaurant</i></p> <p><b>on va au cinéma</b> <i>we go to the cinema</i></p> <p><b>on fait une promenade</b> <i>we go for a walk</i></p> <p><b>on va voir mes grands-parents</b> <i>we visit my grandparents</i></p> <p><b>on fait les magasins</b> <i>we go shopping</i></p> <p><b>on mange au fast-food</b> <i>we eat in a fast food restaurant</i></p> <p><b>on va au cinéma</b> <i>we go to the cinema</i></p> <p><b>on regarde un film</b> <i>we watch a film</i></p> <p><b>on joue à des jeux vidéos</b> <i>we play video games</i></p> <p><b>on reste chez nous</b> <i>we stay at (our) home</i></p> <p><b>on prépare un bon repas</b> <i>we prepare a good meal</i></p> <p><b>on va au lit</b> <i>we go to bed</i></p> <p><b>nous nous levons</b> <i>we get up...</i></p> <p><b>on s'amuse bien</b> <i>we have fun</i></p> <p><b>on se prépare</b> <i>we get ready</i></p>	<p><b>après</b> <i>after</i></p> <p><b>ensuite</b> <i>next</i></p> <p><b>puis</b> <i>then</i></p> <p><b>plus tard</b> <i>later</i></p>	<p><b>je joue à des jeux</b> <i>I play games</i></p> <p><b>je m'habille ...</b> <i>I get dressed...</i></p> <p><b>je m'amuse (bien)</b> <i>I have fun</i></p> <p><b>je me couche</b> <i>I go to bed</i></p> <p><b>je m'entraîne</b> <i>I train</i></p> <p><b>je mets des vêtements</b> <i>I get dressed / put on some clothes</i></p> <p><b>je me lave</b> <i>I wash (myself)</i></p> <p><b>je me lève</b> <i>I get up</i></p> <p><b>je m'occupe de (mon jardin)</b> <i>I look after (my garden)</i></p> <p><b>je me repose</b> <i>I relax</i></p> <p><b>je travaille</b> <i>I work</i></p> <p><b>je reste au lit</b> <i>I stay in bed</i></p> <p><b>je fais la grasse matinée</b> <i>I have a lie in</i></p> <p><b>je me détends un peu</b> <i>I relax a bit</i></p> <p><b>je vais en ville</b> <i>I go into town</i></p> <p><b>je fais du sport</b> <i>I can do sport</i></p> <p><b>je dois aider ma mère</b> <i>I must help my mother</i></p>	<p><b>c'est</b> <i>it is</i></p>	<p><b>un peu</b> <i>a bit</i></p> <p><b>assez</b> <i>quite</i></p> <p><b>très</b> <i>very</i></p> <p><b>plutôt</b> <i>rather</i></p> <p><b>vraiment</b> <i>really</i></p>	<p><b>amusant.</b> <i>funny.</i></p> <p><b>sympa.</b> <i>cool.</i></p> <p><b>divertissant.</b> <i>entertaining.</i></p> <p><b>agréable.</b> <i>pleasant.</i></p>



Tu t'entends toujours bien avec tes amis? Pourquoi / Pourquoi pas ? Do you always get on well with your friends? Why / Why not?

1	2	3	4	5	6		
Généralement Generally	je m'entends bien <i>I get on well</i>	avec <i>with</i>	mes ami(e)s <i>my friends</i>  mes copains <b>mes copines</b> <i>my friends</i>	parce que / qu' <i>because</i>  car <i>because</i>  puisque/ puisqu' <i>as</i>	ils <i>they</i>	ont un bon sens de l'humour. <i>have a good sense of humour.</i> m'aident avec mes devoirs. <i>help me with my homework.</i> m'offent de l'aide. <i>offer me help.</i>	me font rire. <i>make me laugh.</i> me respectent. <i>respect me.</i> me soutiennent toujours. <i>always support me a lot.</i> écoutent mes problèmes. <i>listen to my problems.</i>
	elles <i>they</i>					me comprennent. <i>understand me.</i> m'écoutent. <i>listen to me.</i>	
	D'habitude Usually				je m'entends assez bien <i>I get on quite well</i>	on ne se dispute jamais. <i>we never argue.</i> on a les mêmes goûts. <i>we have the same tastes.</i> on apprécie les mêmes choses. <i>we appreciate the same things.</i>	on s'entend bien. <i>we get on well.</i> partagent quelques intérêts avec moi, mais pas tous. <i>share some, but not all, interests with me.</i>
En général In general	je m'entends très bien <i>I get on very well</i>	ils <i>they</i>	critiquent tout ce que je fais. <i>criticise all I do.</i> sont toujours de mauvaise humeur. <i>are always in a bad mood.</i> me jugent tout le temps. <i>judge me all the time.</i> m'insultent. <i>insult me.</i> ne me comprennent pas. <i>don't understand me.</i>	se fâchent pour un rien. <i>get angry for nothing.</i> se moquent de moi. <i>mock me.</i> ne sont pas là pour moi. <i>are not there for me.</i> sont en colère. <i>are angry.</i> sont trop sérieux. <i>are too serious.</i>			
La plupart du temps Most of the time	je ne m'entends pas bien <i>I don't get on well</i>				elles <i>they</i>		
	je ne m'entends pas très bien <i>I don't get on very well</i>				nous nous disputons tout le temps. <i>we argue all the time.</i> nous sommes trop différent(e)s. <i>we are too different.</i>		



# HISTORY THEMATIC STUDY: C&P- PUNISHMENTS

## KT1: c1000-c1500 medieval England

**1066** William crowned King - end of Anglo-Saxon England

**1352** Hang, Draw and Quarter: brutal punishment for treason introduced

**Capital punishment:** death penalty /

**Capital crime:** crime carrying the death penalty

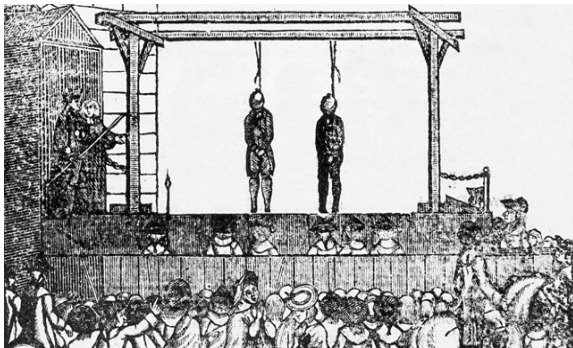
**Corporal punishment:** punishment involving harm to the body, e.g whipping

**Mutilation:** punishment that maims or removes part of the body

**Wergild:** a fine that was paid to the family of a victim in Anglo-Saxon England

**William of Normandy:** becomes William I after Battle of Hastings

**Stocks and pillories:** devices that put criminals on public view



## KT2: c1500-c1700 early modern England

**1576** Houses of Correction begin

**1605** Gunpowder Plot

**1660** Transportation begins

**1680s** The Bloody Code begins

**Carting:** criminal is paraded around the streets to shame/humiliate them

**Bridewells (Houses of Correction):** and hard labour aim to reform

**The Bloody Code:** series of laws extend the death penalty to many minor crimes

**Transportation:** removing the criminal to another country (1st US colonies then Australia)



## Aims of Punishment

**Deterrence:** To warn others not to commit the same offence

**Reform/Rehabilitation**

To help the criminal improve their behaviour in the future, through making them think about their actions or giving them skills to avoid criminality in the future

**Removal:** To physically remove the criminal from society or the country

**Compensation:** The victim, government or society is paid back for the trouble or harm caused by the criminal

**Retribution:** The punishment should fit the crime so victims are satisfied

# HISTORY THEMATIC STUDY: C&P- PUNISHMENTS



## KT3: c1700-c1900 18th & 19th C Britain

- 1776 End of Transportation to America
- 1778 Transportation to Australia starts
- 1823 Gaols (Jails) Act (Peel's reforms)
- 1832 Punishment by Death Act - reduces number of capital crimes to 60
- 1839 Prisons Act introduces **Separate System**
- 1842 **Pentonville Prison** opens
- 1865 Prisons Act introduces **Silent System**
- 1857 Transportation to Australia ends
- 1868 End of public executions

**Prison Hulk:** old ships used as prisons, very unsanitary  
**Separate System:** prison system aimed to reform through useful work

**Silent System:** harsher evolution of the separate system involving pointless hard labour, aim now changed to deterrence  
**Pentonville Prison:** blueprint for purpose built silent system prisons  
**Reformers:** people who want to change punishments for the better *(be careful not to mix up with reform as an aim of punishment)*  
**John Howard:** Reformer - Inspected prisons and suggested improvements

**Elizabeth Fry:** Reformer - Visited women's prisons and campaigned to improve them

**Robert Peel:** Reformer - Home Secretary who introduced prison reform laws

**Jeremy Bentham:** Reformer - influenced aims of punishment and prison design



## KT4: c1900-present modern Britain

- 1902 First Borstal opens
- 1933 Hanging of under 18s ended
- 1933 First open prison
- 1952 Derek Bentley Case
- 1965 Death Penalty ends
- 1972 Community Service introduced
- 1990s Electronic tag introduced
- Borstal:** reform schools for offenders under 18 years old
- Attendance Centre:** young offenders' last chance before **Young Offenders Institution (YOI)**
- Open prison:** Prison where offenders could leave to work in the day
- Parole:** where a prisoner is released early if they behave well in prison
- Probation:** where an offender avoids a prison sentence but is closely monitored

**Ruth Ellis/Derek Bentley/Timothy Evans:** Controversial trials which made the public question the death penalty

**Open prison:** Prison where offenders could leave to work in the day  
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## Aims of Punishment

**Deterrence:** To warn others not to commit the same offence

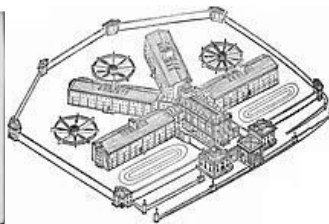
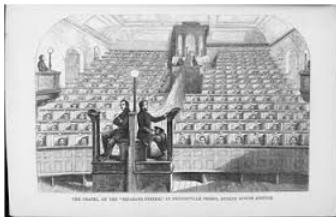
### Reform/Rehabilitation

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**Removal:** To physically remove the criminal from society or the country

**Compensation:** The victim, government or society is paid back for the trouble or harm caused by the criminal

**Retribution:** The punishment should fit the crime so victims are satisfied



# Computing

## Cyber Security



<b>Malware</b>	<b>Stands for malicious software. Software that is designed to disrupt or damage a computer</b>
Virus	A type of malware that inserts itself into normal programs so when that program runs, so does the virus
Worm	A type of malware that can spread itself without the need to insert itself into another program
Trojan	A type of malware that disguises itself as software that you would want to run
Spyware	A type of malware that collects data about activities on a computer then sends it back to the attacker e.g. recording passwords entered
Adware	A type of malware that shows unwanted adverts

<b>Social Engineering</b>	<b>Where people (e.g. employees, users) are targeted when attacking a computer or network</b>
Phishing	A social engineering attack, when an attacker sends emails pretending to be a company such as a bank to try and convince someone to hand over sensitive information such as passwords and credit card numbers
Brute Force Attack	A social engineering attack, when an attacker keeps trying to guess someones password until they get it right

<b>Prevention</b>	
Eavesdropping	When an attacker uses software to intercept data that is being transferred, either by cable or wireless
Encryption	Where data is scrambled using a keyword so it can't be read if it is intercepted
Anti-malware software	Software that can scan your computer and find malware. Once found it can be quarantined or removed from the computer

<b>Hacking</b>	
White Hat Hacking	An attacker who hacks legally. Usually they have been paid to hack a computer system and will then hand the company information about where their security problems are so the company can fix the problems that have been found
Grey Hat Hacking	An attacker who hacks illegally and for the fun of it or for the challenge. They can sometimes be referred to as 'troll hackers'
Black Hat Hacking	An attacker who hacks illegally and wants to cause harm or disruption. They can often be trying to make money by using data that has stolen to either be sold or used for blackmail

# Year 9 Computing

## Office IT Skills

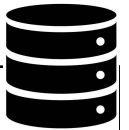


### Word Processing Terminology

Cursor	a flashing vertical bar on the screen that indicates where entered text or objects will be placed in the document
Document	The file that is created using a word processor
Formatting	How the document will look in its final form on the screen and when printed.
Margin	The white space between the edge of the page and where text or other items can be placed in your document. Margin settings can be adjusted to include more or less space around the edge of the page
Alignment	The way text is arranged in the document between the margins. Text can be left aligned, right aligned or centered.
Header	An area that appears at the top of every page in a document
Line Spacing	The amount of white space between lines of text in a paragraph
Toolbar	The buttons that provide a shortcut way of performing a commonly used function
Table	A collection of text, data or other items that are arranged in columns and rows.

### Spreadsheet Terminology

Cell	A single rectangle on a spreadsheet that can hold a single value
Range	A collection of cells
Formula	A calculation that can be written to work something out based on what is in a range
Function	Like a formula but preset and part of the software. They usually have a keyword e.g. SUM, AVERAGE, IF
Worksheet	A collection of cells organised in rows and columns
Workbook	A collection of worksheets



### Database Terminology

Database	An organised store of data, either paper based or electronic
Record	All of the data about one person or thing (also known as a row)
Field	One specific piece of data about a group of things (also known as a column)
Table	A collection of records storing data about one type of thing
Query	A search for a specific piece of data in a database

## What is an Ecosystem?

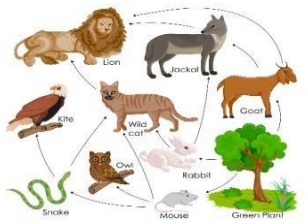
An ecosystem is a system in which organisms interact with each other and with their environment.

## Ecosystem's Components

**Abiotic** These are **non-living**, such as air, water, heat and rock.

**Biotic** These are **living**, such as plants, insects, and animals.

L	<b>Flora</b>	Plant life occurring in a particular region or time.
	<b>Fauna</b>	Animal life of any particular region or time.

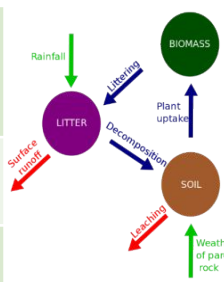


## Food Web and Chains

Simple **food chains** are useful in explaining the basic principles behind ecosystems. They show only one species at a particular trophic level. **Food webs** however consists of a network of many food chains interconnected together.

## Nutrient cycle

Plants take in **nutrients** to build into new organic matter. Nutrients are taken up when animals eat plants and then returned to the soil when animals die and the body is broken down by **decomposers**.

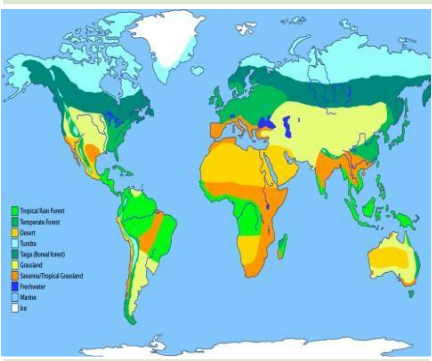


**Litter** This is the **surface layer** of vegetation, which over time breaks down to become **humus**.

**Biomass** The total **mass of living organisms** per unit area.

## Biomes

A biome is a **large geographical area of distinctive plant and animal groups**, which are adapted to that particular environment. The climate and geography of a region determines what type of biome can exist in that region.



Coniferous forest
Deciduous forest
Tropical rainforests
Tundra
Temperate grasslands
Tropical grasslands
Hot deserts.

The **most productive biomes** – which have the greatest biomass- grow in climates that are **hot and wet**.

## Biome's climate and plants

Biome	Location	Temperature	Rainfall	Flora	Fauna
<b>Tropical rainforest</b>	Centred along the Equator.	Hot all year (25-30°C)	Very high (over 2000mm/year)	Tall trees forming a canopy; wide variety of species.	Greatest range of different animal species. Most live in canopy layer
<b>Tropical grasslands</b>	Between latitudes 5°- 30° north & south of Equator.	Warm all year (20-30°C)	Wet + dry season (500-1500mm/year)	Grasslands with widely spaced trees.	Large hoofed herbivores and carnivores dominate.
<b>Hot desert</b>	Found along the tropics of Cancer and Capricorn.	Hot by day (over 30°C) Cold by night	Very low (below 300mm/year)	Lack of plants and few species; adapted to drought.	Many animals are small and nocturnal: except for the camel.
<b>Temperate forest</b>	Between latitudes 40°- 60° north of Equator.	Warm summers + mild winters (5-20°C)	Variable rainfall (500- 1500mm /year)	Mainly deciduous trees; a variety of species.	Animals adapt to colder and warmer climates. Some migrate.
<b>Tundra</b>	Far Latitudes of 65° north and south of Equator	Cold winter + cool summers (below 10°C)	Low rainfall (below 500mm/ year)	Small plants grow close to the ground and only in summer.	Low number of species. Most animals found along coast.
<b>Coral Reefs</b>	Found within 30° north – south of Equator in tropical waters.	Warm water all year round with temperatures of 18°C	Wet + dry seasons. Rainfall varies greatly due to location.	Small range of plant life which includes algae and sea grasses that shelters reef animals.	Dominated by polyps and a diverse range of fish species.

## Year 9 Geography

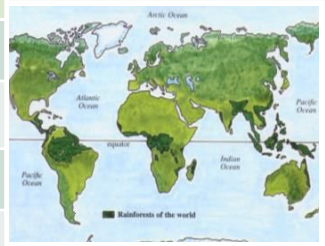


# The Living World

**Tropical Rainforest Biome**  
Tropical rainforest cover about **2 per cent** of the Earth's surface yet they are home to **over half of the world's plant and animals**.

## Interdependence in the rainforest

A rainforest works through **interdependence**. This is where the plants and animals **depend on each other** for survival. If one component changes, there can be **serious knock-up effects** for the entire ecosystem.



## Distribution of Tropical Rainforests

Tropical rainforests are **centred along the Equator** between the Tropic of Cancer and Capricorn. Rainforests can be found in South America, central Africa and South-East Asia. **The Amazon** is the world's largest rainforest and takes up the majority of northern South America, encompassing countries such as Brazil and Peru.

## Rainforest nutrient cycle

The **hot, damp conditions** on the forest floor allow for the **rapid decomposition** of dead plant material. This provides plentiful nutrients that are easily absorbed by plant roots. However, as these nutrients are in high demand from the many fast-growing plants, they do not remain in the soil for long and stay close to the surface. If vegetation is removed, the soils quickly become **infertile**.

## Climate of Tropical Rainforests

- Evening temperatures rarely fall below **22°C**.
- Due to the **presence of clouds**, temperatures rarely rise above **32°C**.
- Most afternoons have heavy showers.
- At night with no clouds insulating, temperature drops.

## CASE STUDY: UK Ecosystem: Epping Forest, Essex



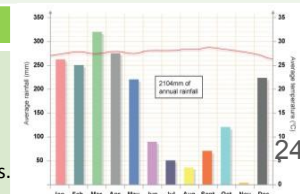
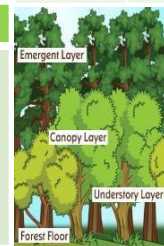
This is a typical English lowland deciduous woodland. **70% of the area** is designated as a **Site of Special Scientific Interest (SSI)** for its biological interest, with **66 %** designated as a **Special Area of Conservation (SAC)**.

## Components & Interrelationships

Season	Components & Interrelationships	Management
<b>Spring</b>	<b>Flowering plants</b> (producers) such as bluebells store nutrients to be eaten by consumers later.	-Epping has been managed for centuries. -Currently now used for <b>recreation and conservation</b> .
<b>Summer</b>	Broad tree leaves grow quickly to <b>maximise photosynthesis</b> .	-Visitors <b>pick fruit and berries</b> , helping to <b>disperse seeds</b> .
<b>Autumn</b>	Trees shed leaves to <b>conserve energy</b> due to sunlight hours decreasing.	-Trees cut down to encourage <b>new growth for timber</b> .
<b>Winter</b>	Bacteria <b>decompose</b> the leaf litter, releasing the nutrients into the soil.	

## Layers of the Rainforest

<b>Emergent</b>	Highest layer with trees reaching <b>50 metres</b> .
<b>Canopy</b>	Most life is found here as it receives <b>70% of the sunlight</b> and <b>80% of the life</b> .
<b>U-Canopy</b>	Consists of trees that reach <b>20 metres high</b> .
<b>Shrub Layer</b>	Lowest layer with <b>small trees</b> that have adapted to living in the <b>shade</b> .





# Tropical Rainforests: Case Study Malaysia





Malaysia is a LIC country in south-east Asia. 67% of Malaysia is a tropical rainforest with 18% of it not interfered with. However, Malaysia has the fastest rate of deforestation compared to anywhere in the world


Adaptations to the rainforest		Rainforest inhabitants
<b>Orangutans</b>	Large arms to swing & support in the tree canopy.	Many tribes have developed sustainable ways of survival. The rainforest provides inhabitants with... <ul style="list-style-type: none"> <li>• <b>Food</b> through hunting and gathering.</li> <li>• <b>Natural medicines</b> from forest plants.</li> <li>• <b>Homes and boats</b> from forest wood.</li> </ul>
<b>Drip Tips</b>	Allows heavy rain to <b>run off leaves easily</b> .	
<b>Lianas &amp; Vines</b>	Climbs trees to reach sunlight at canopy.	

## Issues related to biodiversity


Why are there high rates of biodiversity?	What are the causes of deforestation?
<ul style="list-style-type: none"> <li>• <b>Warm and wet climate</b> encourages a wide range of vegetation to grow.</li> <li>• There is <b>rapid recycling of nutrients</b> to speed plant growth.</li> <li>• Most of the rainforest is <b>untouched</b>.</li> </ul>	<p><b>Logging</b> </p> <ul style="list-style-type: none"> <li>• Most widely reported cause of destructions to biodiversity.</li> <li>• Timber is harvested to create <b>commercial items</b> such as furniture and paper.</li> <li>• <b>Violent confrontation</b> between indigenous tribes and logging companies.</li> </ul> <p><b>Agriculture</b> </p> <ul style="list-style-type: none"> <li>• Large scale <b>'slash and burn'</b> of land for ranches and palm oil.</li> <li>• Increases <b>carbon emission</b>.</li> <li>• <b>River saltation and soil erosion</b> increasing due to the large areas of <b>exposed land</b>.</li> <li>• Increase in <b>palm oil</b> is making the <b>soil infertile</b>.</li> </ul>

Main issues with biodiversity decline	Mineral Extraction	Tourism
<ul style="list-style-type: none"> <li>• <b>Keystone species</b> (a species that are important of other species) are extremely important in the rainforest ecosystem. Humans are threatening these vital components.</li> <li>• <b>Decline in species</b> could cause tribes being unable to survive.</li> <li>• <b>Plants &amp; animals</b> may become <b>extinct</b>.</li> <li>• Key medical <b>plants</b> may become <b>extinct</b>.</li> </ul>	<p></p> <ul style="list-style-type: none"> <li>• <b>Precious metals</b> are found in the rainforest.</li> <li>• Areas <b>mined</b> can experience <b>soil and water contamination</b>.</li> <li>• <b>Indigenous people</b> are becoming <b>displaced</b> from their land due to roads being built to transport products.</li> </ul>	<p></p> <ul style="list-style-type: none"> <li>• <b>Mass tourism</b> is resulting in the building of hotels in extremely <b>vulnerable areas</b>.</li> <li>• Lead to <b>negative relationship</b> between the government and indigenous tribes</li> <li>• Tourism has <b>exposed animals</b> to human diseases.</li> </ul>

Impacts of deforestation	Energy Development	Road Building
<p><b>Economic development</b> </p> <ul style="list-style-type: none"> <li>+ Mining, farming and logging creates employment and tax income for government.</li> <li>+ Products such as palm oil provide valuable income for countries.</li> <li>- The loss of biodiversity will reduce tourism.</li> </ul>	<p></p> <ul style="list-style-type: none"> <li>• The <b>high rainfall</b> creates ideal conditions for <b>hydro-electric power (HEP)</b>.</li> <li>• The <b>Bakun Dam</b> in Malaysia is key for creating energy in this developing country, however, both people and environment have suffered.</li> </ul>	<p></p> <ul style="list-style-type: none"> <li>• <b>Roads</b> are needed to bring supplies and <b>provide access</b> to new mining areas, settlements and energy projects.</li> <li>• In Malaysia, logging companies use an <b>extensive network of roads</b> for heavy machinery and to transport wood.</li> </ul>

**Soil erosion** 

-Once the land is **exposed by deforestation**, the soil is more **vulnerable to rain**.  
 -With **no roots to bind soil together**, soil can easily **wash away**.

**Climate Change** 

-When rainforests are cut down, the climate becomes **drier**.  
 -Trees are **carbon 'sinks'**. With greater deforestation comes more greenhouse emissions in the atmosphere.  
 -When trees are burnt, they **release more carbon in the atmosphere**. This will enhance the greenhouse effect

**Sustainability for the Rainforest**

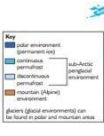
**Uncontrolled and unchecked exploitation can cause irreversible damage** such as loss of biodiversity, soil erosion and climate change.

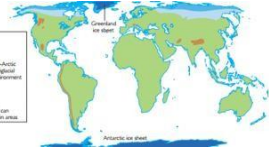
**Possible strategies include:**

- **Agro-forestry** - Growing trees and crops at the same time. It prevents soil erosion and the crops benefit from the nutrients.
- **Selective logging** - Trees are only felled when they reach a particular height.
- **Education** - Ensuring those people understand the consequences of deforestation
- **Afforestation** - If trees are cut down, they are replaced.
- **Forest reserves** - Areas protected from exploitation.
- **Ecotourism** - tourism that promotes the environments & conservation

# Cold Environments Case Study: Svalbard

Svalbard is a Norwegian territory in the Arctic Ocean and the most northerly permanently inhabited group of islands in the world. It experiences Polar and Tundra climates. The main town of Longyearbyen has a population of 2700.

Distribution of the world's cold environments	Major characteristics of cold environments
<p></p> <p>Cold environments are located at, and surrounding the North and South Pole. The very most north and south points have Polar Biome. Tundra climate is found between 90 and 60 degrees north.</p>	<p><b>Major characteristics of cold environments</b></p> <p><b>TUNDRA:</b> Winter temps as low as -20, short, but quite warm summers, high amounts of snow, Permafrost soil (permanently frozen), infertile soil, soils may be waterlogged, low growing flowering plants</p>



## Adaptations



**Major characteristics of cold environments**

**POLAR:** Temp as low as -50, low precipitation, permanently frozen soil, some plants like Moss and Lichens, Polar Bears in Arctic, Penguins in Antarctic

**Characteristics of Cold Environments**

Different parts of the cold environment ecosystem are closely linked together and depend on each other, especially in a such a harsh environment.

Behavioral Adaptations	Physical Adaptations
<ul style="list-style-type: none"> <li>• Polar bears dig dens to protect themselves from cold winds.</li> <li>• The ability to be a strong swimmer helps with hunting and swimming through ice.</li> </ul>	<ul style="list-style-type: none"> <li>• The white fur of the polar bear helps it blend in with the snow and ice.</li> <li>• The thick layer of fat under its skin helps it stay warm in such cold temperatures.</li> <li>• Its large and round ears help maintain body heat and don't allow the cold water to enter the ears.</li> </ul>

Adaptations to the cold environments
<p><b>Arctic Fox</b> Lives on cliff sides for shelter, white fur to camouflage, one of thickest furs of all mammals.</p> <p><b>Bearberry</b> Red berried plant. Low growing and thick stems to survive strong winds, leathery leaves to retain moisture in dry climate, hairy stems to retain heat,</p>

## Opportunities and challenges in Cold Environments - Svalbard

Opportunities	Challenges
<p><b>Mineral extraction:</b> coal mining vital. Employs 300+</p> <p><b>Energy Development:</b> coal mined on island is burned to generate electricity at Longyearbyen power station. Is Norway's only coal fired power station . Geothermal energy used as sits on constructive plate margin</p> <p><b>Fishing:</b> Barents Sea home to reserves of Cod, Herring and Haddock. Fishing monitored by Norway and Russia to ensure sustainability</p> <p><b>Tourism:</b> 70,000 visitors a year (30,000 on cruise ships). Longyearbyen harbour has been enlarged. 300 jobs for locals</p>	<p><b>Extreme Temp:</b> temps fall to -30 in Winter. Dangerous to work outside (frostbite). Several layers of clothing must be worn which makes work difficult</p> <p><b>Construction:</b> Construction (houses, shops, roads, harbour facilities, mines) is difficult due to temp and limited daylight hours. Most construction happens in Summer</p> <p><b>Accessibility:</b> Only reached by plane or ship. Limited transport around the 5 islands. One international airport. Only 50kn of road in Longyearbyen – none serve outlying communities. Most people use snowmobiles.</p>

Threats to Cold Environments	Why do we need to protect cold envs?	Strategies to manage
<p><b>Cold Environments are fragile.</b></p> <p><b>Tundra wildlife takes a long time to recover</b></p>	<p><b>Indigenous Tribes</b></p> <p>Inuit live in Arctic Alaska – depend on wildlife for hunting and fishing</p>	<p><b>Use of Tech:</b> Trans Alaskan Pipeline (raised and insulated to not melt permafrost, raised to allow animal migrations, earthquake resistant)</p> <p><b>Action by Governments:</b> Natural Environment Policy Act (protects rights of native people from Oil companies)</p> <p>National Oceanic and Atmospheric Administration ( oversees sustainable fishing)</p> <p><b>International Agreements:</b> Antarctic Treaty</p> <p><b>Conversation Groups:</b> WWF</p>
<p><b>Oil Spills</b></p> <p>Polluted rivers and habitats, risk of fire, forest cleared for building of pipes</p>	<p><b>Species</b></p> <p>Home to many birds, animals and plants</p>	
<p><b>Off Road Vehicle Damage</b></p> <p>Takes place in summer when snow has melted which make soil soggy. Can take decades for the soil to recover</p>	<p><b>Scientific Research</b></p> <p>Unpolluted and unspoilt environments are important for scientific research in climate change</p>	

# Year 9 Art - Cubism and Lino Printing

## Does all art need to be realistic?

Realistic and abstract art differ mainly in how they represent the world. Realistic art aims to depict subjects as they appear in real life, focusing on accurate detail, **proportion**, and **perspective**. In **contrast**, abstract art does not try to represent reality directly; instead, it uses shapes, colours, lines, and forms to express emotions, ideas, or concepts.

Personal opinion can help you understand artwork by encouraging deeper engagement and emotional connection. When you express your own thoughts, feelings, and **interpretations**, you actively explore the meaning behind the piece. This reflection helps you consider the artist's choices—such as colour, composition, and subject matter—and how they affect you personally. Your opinion may reveal cultural, emotional, or symbolic layers that aren't immediately obvious. It also opens the door to seeing art from different perspectives, making your understanding more thoughtful and personal rather than just technical or factual. In short, your opinion turns passive viewing into active understanding.

## How can artists use pattern in art?

Patterns are all around us, in nature as well as in art and design. We see patterns where shapes, lines or colours are repeated. How complicated a pattern is depends on what is repeated and the way in which it is repeated.

Patterns can be **regular** or **irregular**.

In regular patterns the motif (or motifs) is repeated in a way that is **predictable**. It could be exactly the same each time, or it could change in a way that is regularly repeated. An irregular pattern is one in which the motif changes or the way it is repeated is unpredictable.

A radiating is a pattern that is arranged around a central point is called a radiating pattern. It seems to radiate out in all directions. Radiating patterns result in designs that feel balanced. They can be an effective way to create a focal point at the centre of the pattern.

Cubism  
and  
Pattern



## How do you think Art will look in the future?

**Fine artist** - Fine artists create and sell their original artwork, often specialising in mediums such as painting, drawing or sculpture. There are no formal qualification requirements for a career.

**Illustrator** - Illustrators work to a brief to create designs for products such as books, cards and clothes. You can start out by taking on small or unpaid commissions and freelancers can register with the Association of Illustrators to access resources and opportunities for self-promotion.

**Graphic designer** - Graphic designers create clear and eye-catching graphics for media products such as websites, magazines and advertisements.

**Photographer** - Photographers take and edit photos according to a brief and usually specialise in an area such as commercial photography (including areas such as weddings or photojournalism) or fine art photography.

**Interior designer** - Interior designers design and renovate interiors according to the wishes of clients, considering cost, the type of building and the space they are working with – giving them an opportunity to use both creative and practical skills.

**Curator** - Curators look after and organise artworks that a museum or gallery owns or has on loan, often specialising in a specific style or period.

**Art therapist** - Art therapists use art to guide and help people suffering from mental or physical health problems.

**Product designer** - Product designers design and improve everyday items according to a brief, and often create and test prototypes. A good level of computer literacy is essential for this.

# Year 9 Design - Medical Art

## The Art of the Scalpel and Sketchpad

For centuries, art and medicine were not seen as separate subjects, but as two sides of the same coin. Long before the invention of X-rays, MRI scans, or high-definition cameras, the only way for doctors to learn about the inner workings of the human body was through the eyes and hands of an artist. Medical art is the bridge between **scientific fact** and **visual communication**.

## The Renaissance Revolution

The most famous pioneer of this field was **Leonardo da Vinci**. While many know him for the *Mona Lisa*, Leonardo spent years in the morgues of hospitals, dissecting bodies to understand how muscles attached to bones. He was one of the first to use "exploded views"—drawing parts of the body pulled apart so you could see how they fit together. He believed that to paint a human being, you had to understand the "machinery" hidden beneath the skin.

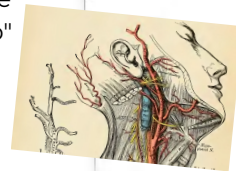
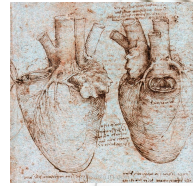
## The Purpose of Precision

Unlike "Fine Art," where an artist might change colors or shapes to express a feeling, a medical artist must be **objective**. Their goal is to eliminate confusion. If a surgeon is looking at an illustration of a heart, they don't want a "creative" interpretation; they need to know exactly where a specific artery sits.

This requires a mastery of **tonal rendering**. Artists use light and shadow to show the difference between the hard, matte texture of a bone and the smooth, glistening surface of a lung. By using techniques like **stippling** and **cross-hatching**, artists can create a 3D effect on a flat piece of paper, making the anatomy "pop" for the reader.

## Medical Art Today

Today, medical artists don't just use pencils; they use 3D modeling software and virtual reality. However, the core skill remains the same: **observation**. A computer can take a photo, but a medical artist can choose to "hide" certain tissues or highlight specific nerves to make a complex surgery easier to understand. They simplify the chaos of the human body into a clear, educational map.



## "Art-Science" Connection

### Why Medicine Needs Artists

Many students believe that if they want to be a doctor, they must drop "creative" subjects to focus entirely on the sciences. However, many of the world's leading medical schools now actively encourage students to study Art. Why? Because medicine is a **visual discipline**.

A surgeon performing a delicate operation must have incredible **hand-eye coordination** and **spatial awareness**—the exact same skills you develop when mastering a paintbrush or a charcoal pencil. When a doctor looks at a rash or an X-ray, they are using **visual analysis** to spot patterns and anomalies. Studying Art trains your brain to see what is *actually* there, rather than what you *expect* to see.

Furthermore, "Empathy" is a core part of healthcare. Art allows us to explore the human condition, helping future doctors understand the person behind the patient. An artist-doctor doesn't just see a broken bone; they see the structural beauty of the body and the best way to explain the healing process to a worried patient.

### Why Take Art for a Medical Course?

1. **Fine Motor Skills:** Developing "dexterity" (control over your hands) is essential for surgery and clinical procedures.
2. **Visual Literacy:** You learn how to interpret diagrams and data visualizations more quickly.
3. **Communication:** You can explain complex surgeries to patients by sketching them—a skill that builds huge trust.
4. **Observation:** You become a "super-observer," noticing tiny changes in a patient's skin color or physical alignment that others might miss.

*"To draw is to see." — In medical school, being able to sketch a heart valve from memory proves you truly understand how it functions, not just that you've memorized its name.*

# Year 9 Design - Architecture

How does architecture shape the way people experience their daily lives?

Architecture influences how people feel, behave and move through the world. Buildings are not just structures, they shape our experiences.

Features such as light, scale, colour, materials and layout can change mood or comfort. There are also buildings that are designed to support wellbeing, like hospitals, schools and community spaces.

Architects have responsibilities: to design safely, to make spaces accessible for everyone, and to consider sustainability and cultural context.

Architecture can improve quality of life and strengthen communities.

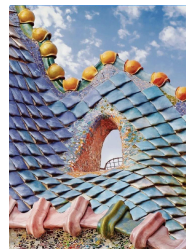
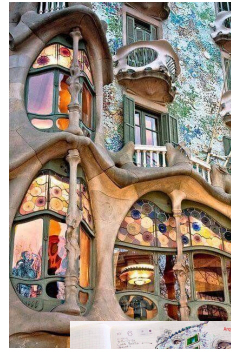
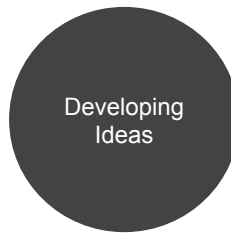
Is designing more about expressing personal creativity or solving practical human needs?

Architecture is a balance between imagination and usefulness. Think about how architects combine creative expression with practical needs such as structure, purpose, and safety.

There is a difference between expressive designs and functional, problem-solving architecture and how many buildings blend both approaches.

Layout, materials, shape, and scale affect how a building works. Architects have to prioritise creativity and function when designing.

It is important for a designer to use a variety of design strategies to be able to generate the most innovative and functional solution to a design problem. This will help to gather information and feedback from others to ensure the best design to fit the brief is created. Different projects might benefit from different kinds of design strategy.



How might taking creative risk lead to new ways of thinking about the future?

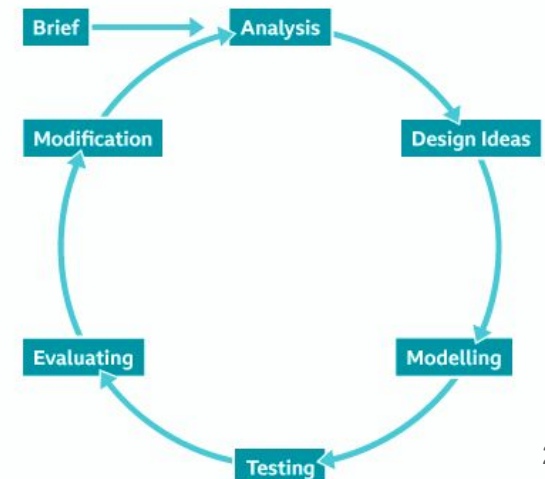
**Experimentation** helps designers take risks, explore ideas, and discover new possibilities.

Experimenting with **materials** and **techniques** such as card construction, foam board, recycled materials, clay modelling, bending, folding, joining, and digital modelling help designers to realise their intentions.

Understanding how experimentation leads to **innovation** is important: experimental architecture challenges traditional ideas about structure and space. Testing, refining, and adapting ideas is a key part of developing strong final outcomes.

Designing a product for a client can be done in several ways. Manufacturers cannot risk investing large amounts of money into the production of a product that has not had adequate design, modelling, testing, prototyping and evaluation.

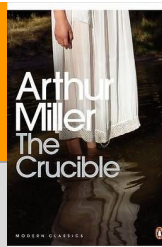
**Iterative design** is a circular design process that models, evaluates and improves designs based on the results of testing.



## Drama Keywords

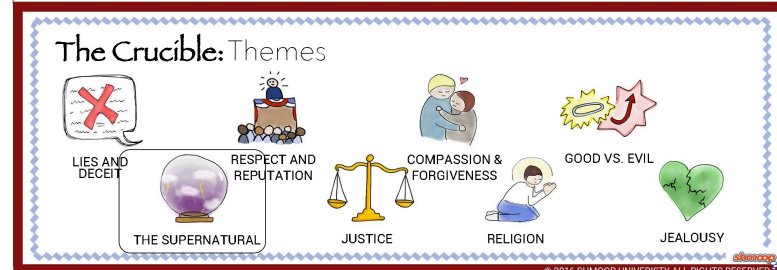
<b>Proxemics</b>	The distances between characters/actors in a play. It shows their feelings & emotions- not through speaking!
<b>Semiotics</b>	How meaning is created through systems of signs & symbols of drama. All elements that makes up a theatrical performance- the audience read & interprets them (costume, lighting, etc.)
<b>Body Language</b>	To show your emotions towards someone or a situation with your body.
<b>Posture</b>	How a character stands, e.g. upright, hunched, slumped.
<b>Gesture</b>	Movements of parts of the body, often hands, arms or head. E.g pointing, waving, shrugging.
<b>Sound effects</b>	As any sound produced by mechanical or human means to create for the audience a noise or sound associated with the play being produced

## Year 9 Drama Summer Term 'The Crucible' by Arthur Miller



### What are we going to do?

- We are going to be looking at the GCSE set text 'The Crucible'
- We will look at the plot, characters and themes
- We will be exploring extracts of key scenes
- We will be using skills and techniques learnt throughout KS3 to explore extracts as a director, designer and performer



## Drama techniques, skills and technical theatre

## Year 9 Drama Summer Term Live Theatre Project

### What are we going to do?



- Watch sections of a range of plays across different styles, genres and playwrights
- Learn about the different roles involved in creating live theatre eg. lighting designer, costume designer, set designer, actor, director
- Learn how to analyse live theatre and how to create and communicate meaning for an audience



# Philosophy - Prejudice and Discrimination - Key Terms

STEREOTYPE	Oversimplified idea or mental image of a group of people.
TOLERANCE	Respecting the beliefs and practices of others.
COMMUNITY	A collection of people who live and work together to help each other so everyone benefits.
SCAPEGOATING	When you blame or use a particular group as an excuse for a problem.
PREJUDICE	To prejudge someone without good reason. What a person thinks and feels.
JUSTICE	Bringing about what is right, fair according to the law or making up for a wrong that has been committed.
DISCRIMINATION	To treat someone differently because of a prejudice against them. How a person acts and behaves.
HARMONY	To live peacefully with understanding and respect.
EQUALITY	Where everyone has the same value and importance.
MINORITY	A small group often discriminated against by larger groups.
POSITIVE DISCRIMINATION	Where benefits are given to those who usually face negative discrimination.
RACISM	Treating someone unfairly because of the colour of their skin (race).
SEXISM	Treating someone unfairly because of their gender.
AGEISM	Treating someone unfairly because of their age.
HOMOPHOBIA	Treating someone unfairly because of their sexual orientation.

## The Parable of the Good Samaritan

On one occasion an expert in the law stood up to test Jesus. "Teacher," he asked, "what must I do to inherit eternal life?" "What is written in the Law?" he replied. "How do you read it?" He answered, "'Love the Lord your God with all your heart and with all your soul and with all your strength and with all your mind'; and, 'Love your neighbour as yourself.'" "You have answered correctly," Jesus replied. "Do this and you will live." But he wanted to justify himself, so he asked Jesus, "And who is my neighbour?" In reply Jesus said: "A man was going down from Jerusalem to Jericho, when he was attacked by robbers. They stripped him of his clothes, beat him and went away, leaving him half dead. A priest happened to be going down the same road, and when he saw the man, he passed by on the other side. So too, a Levite, when he came to the place and saw him, passed by on the other side. But a Samaritan, as he traveled, came where the man was; and when he saw him, he took pity on him. He went to him and bandaged his wounds, pouring on oil and wine. Then he put the man on his own donkey, brought him to an inn and took care of him. The next day he took out two denarii and gave them to the innkeeper. 'Look after him,' he said, 'and when I return, I will reimburse you for any extra expense you may have.'" "Which of these three do you think was a neighbour to the man who fell into the hands of robbers?" The expert in the law replied, "The one who had mercy on him." Jesus told him, "Go and do likewise."



### Sources of wisdom - Bible:

*Everyone is made in the image of God'*

*'Love your neighbour as yourself'*

*There is no difference between men and women, Jews and Gentiles we are all one in Christ'*

# Key terms:

<b>MELODY</b> Register – high or low Range – wide or narrow Sequence Ascending/descending Scale or broken chord movement Steps or leaps Ornaments Melodic ostinato/riff	<b>ARTICULATION</b> Strummed Finger-picking Sustained Stab Staccato Legato Slurred Pizzicato/arco Accents	<b>DYNAMICS</b> Pianissimo Piano Mezzopiano Mezzoforte Forte Fortissimo Crescendo Diminuendo	<b>TIME/TEMPO</b> Number of beats in a bar Tempo Accelerando/ rallentando	<b>STRUCTURE</b> How many sections What order Which sections are the same Ternary form: ABA 12-bar blues Pop song structure: intro/verse/chorus/bridge/ outro	<b>HARMONY</b> Major or minor Inversions Consonant or dissonant Key change Added notes in chords Harmonic rhythm Drone/pedal note 'Blue' notes	<b>INSTRUMENTS</b> Strings: violin/viola/violoncello Woodwind: flute/oboe/clarinete/bassoon/saxophone Brass: trumpet/horn/trombone/tuba Percussion: timpani/xylophone/cymbals (and many others) Voice: soprano/alto/tenor/bass Keyboards: piano/harp/sichord/organ/synthesiser Rock/pop: electric/acoustic guitar/bass guitar/drums/loop/samples	<b>RHYTHM</b> Duration: long or short notes Even or uneven rhythms Dotted rhythms Triplets Syncopation On a particular beat of the bar Rests/pauses Rhythmic ostinato/riff	<b>TEXTURE</b> Note or chord Bass/chords/melody Thick/thin Simple/complex Melody + accompaniment Counter melody Parallel/contrary motion Unison Imitation Call & response
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## Key information for a stringed instrument:

**C**      **Am**      **F**      **G**

## Key information for a percussion instrument:

### Standard 8th Note Groove

**Questions:**  
 What are the key features of this musical performance?  
 Do you know how to rehearse a piece of music?  
 Can you play in time with others?  
 Can you play your own part in time with others?  
 Can you lead a group?

# Year PE 9 - Athletics

## TRACK EVENTS

SPRINT 100M, 200M, 300M, 400M

MIDDLE DISTANCE 800M, 1500M, 3000M

HURDLES 80M (G), 100M (B), 300M (G), 400M (B)

The sport of competing in track and field events, including running races and various competitions in jumping and throwing.

## FIELD EVENTS

SHOT PUT

DISCUS

JAVELIN

LONG JUMP

TRIPLE JUMP

HIGH JUMP

## KEY TERMS

JUMP

RUN UP

TAKE OFF

FLIGHT

LANDING

THROW

INITIAL STANCE

GRIP

PREPARATION

MOVEMENT

RELEASE

RECOVERY

## KEY TERMS

### SKILLS / TECHNIQUE

START

POSTURE

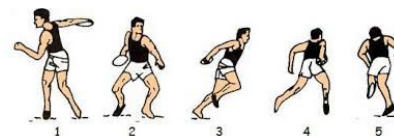
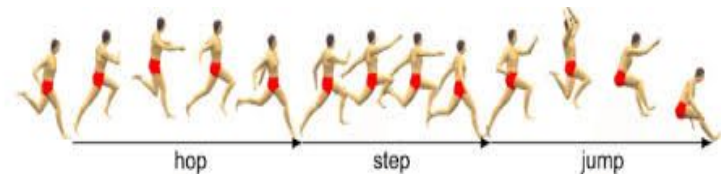
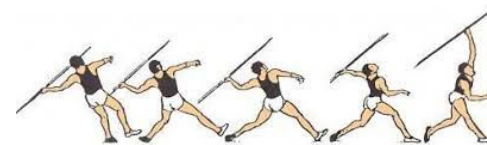
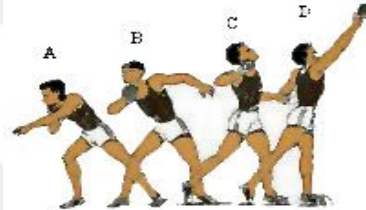
PACING

LEG AND ARM ACTION

COORDINATION OF LEGS

AND ARMS

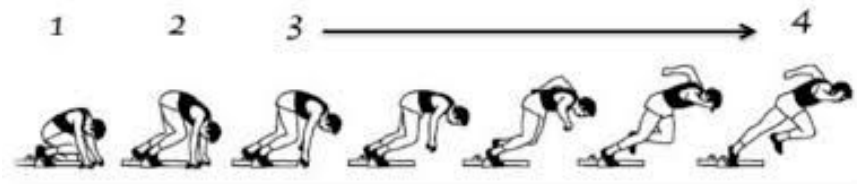
STRIDE PATTERN



YOU CAN FIND OUT MORE ABOUT BRITISH ATHLETICS BY VISITING THIS WEBSITE:  
WWW.BRITISHATHLETICS.ORG.UK/ATHLETICS

## Questions

1. Can you lead track or field warm up to a small group?
2. Can you demonstrate a sprint start?
3. Can you improve your pace on long distance running?
4. What are the 4 phases of a throwing event?
5. Can you identify and carry out correct safety for throwing events?



# PE - Striking and Fielding Y9

## Bowling and Pitching



1. Can you lead a S&F specific warm up to at least half of the class?
2. What skills do you need to have to outwit your opponents?
3. Can you evaluate and justify your fitness component strengths in S&F?
4. Can you evaluate and justify your fitness component weaknesses in S&F?
5. Can you apply tactical strategies to a game?

### Cricket - Bowler

1. The bowler must not throw the ball, but bowl the ball overarm at the stumps, which are at either end of a 22-yard area called a wicket.
2. A batter is declared out if the bowler knocks off the bails of the stumps with a delivery.



### Rounders - Bowler

1. Must bowl under arm
2. They must bowl from inside the bowling square
3. The ball must be between the batter's shoulder and knee
4. The ball must travel through the batting square

Keywords / Skills

Grip	Umpire
Stance	Call
Shot	Out
Catch	
Swing	
Hips	

- ### Softball - Pitcher
1. Must bowl under arm
  2. Must reach 6f in flights
  3. Must be between batters shoulder and waist at the base
  4. Must travel through the base

