

# Knowledge Organiser

YEAR

9



*Design work by  
Charlotte Smith,  
Dilara Kocak, Hannah  
Jenkins and Quinn Paton*

**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	9-11
Maths	12-13
Science	14-16
French	17-18
History	19-20
Computing	21-22
Geography	23-24
Art/ Design	25
Drama	26
ME	27
Music	28
PE	29-32



## 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?

### **How will my teachers use them?**

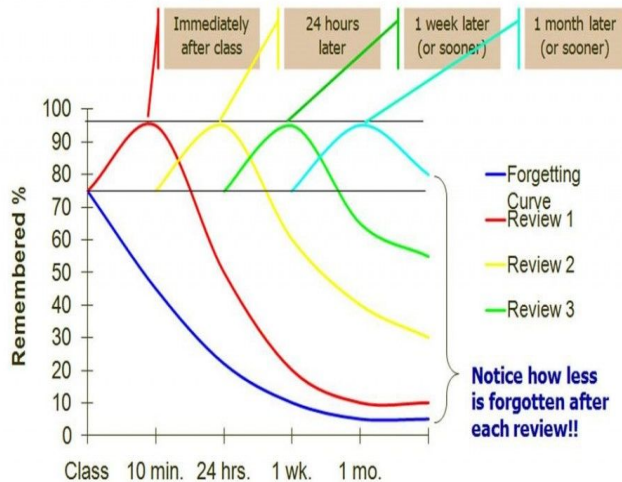
Core subjects will set homework once a week (others less often). This will help you to learn the most important knowledge for each topic. Teachers will also test you regularly to see how well you have remembered it. Research tells us that this practising is a really good way of helping you make sure 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 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](#)

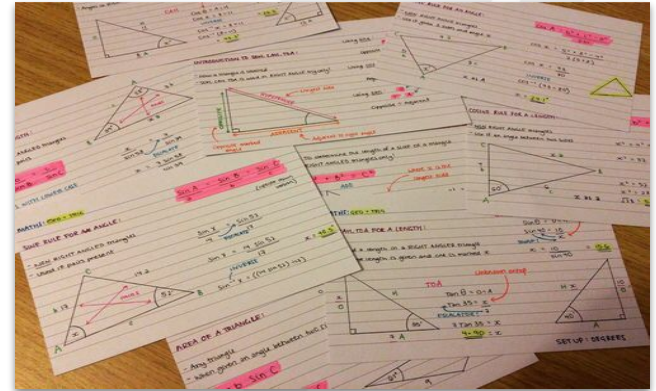
# How we learn at Redmoor

## 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:

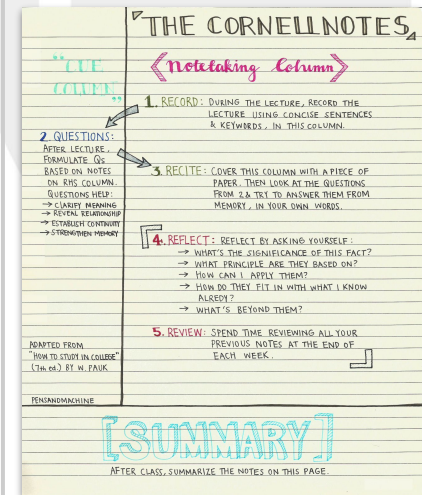
[Link To The Learning Scientists](#)

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

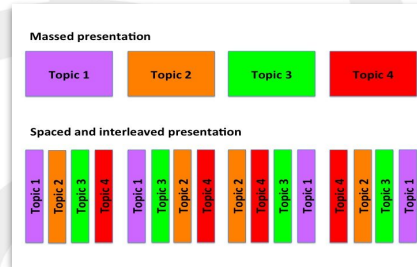


# How we learn at Redmoor

## 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.

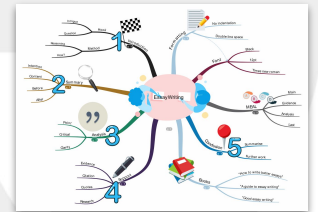
Eg. topic 1 is 'cells', topic 2 is the 'digestive system'. This will improve your memory!



## Mind Maps

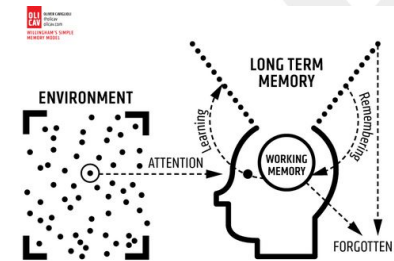
**Mind mapping** is simply a diagram used to visually represent or outline information. It is a powerful graphic technique you can use to translate what's in your **mind** into a visual picture.

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

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

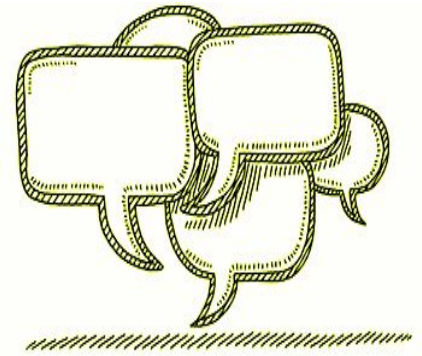
- I would like to add to this...
- I would have to agree with you because...
- Another example of this could be...
- Adding on to this, in my opinion...
- We might also consider...
- As well as this, it is important to think about...
- In addition...

## 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....

Add, Build, Challenge



## Redmoor English Department: Romeo and Juliet

<b>BIG QUESTION:</b> To what extent is 'Romeo and Juliet' a tragedy?	
Aristotle	An ancient Greek philosopher who first defined what a tragedy is
Tragedy	A play dealing with tragic events and having an unhappy ending, usually a death
Fate	The belief that your life is mapped out for you, and you cannot change your destiny
Tragic Hero	A character who starts the play well respected but cause their own downfall and demise due to their fatal flaw
Fatal Flaw	A trait of the tragic hero's personality which causes their downfall and death
Catharsis	A feeling of emotional release

<b>BIG QUESTION:</b> How does Shakespeare use language to create meaning?	
Oxymoron	A figure of speech where a writer combines two ideas which are opposites
Metaphor	A figure of speech that is used to make a comparison between two things that aren't alike but have something in common
Foreshadowing	Hinting at events to come later in the text
Imagery	Descriptive language which creates a picture in your mind
Pathetic Fallacy	Using the weather to reflect the mood or atmosphere

<b>BIG QUESTION:</b> How do form and structure create dramatic effects / meaning?	
Structure	The order in which the events in a story occur.
Prologue	A speech addressed to the audience at the beginning of play. It tells the audience what happens
5 Act Play	A five-part structure of a play: prologue, rising action, climax, falling action and denouement
Dramatic Irony	When the audience know something the characters do not
Foreshadowing	When the writer hints at what's to come later in the story
Sonnet	A 14-line poem, usually about love
Soliloquy	When a character gives a speech alone so the audience can hear their thoughts and ideas
Stage Directions	Instructions given from the writer to the actors about what to do, where to move or how to speak

Key Word	Definition
Hierarchy	A system in which members of society are ranked according to status.
Duplicity	Being deceitful or two-faced.
Authority	The power to give orders
Stereotype	A fixed view of people or things
Fate	Destined to happen by supernatural forces out of our control
Loyalty	A strong feeling of support or alliance

## 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: 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.

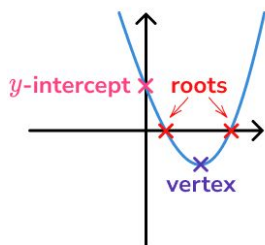
Rhetorical Methods	Example
<b>Analogy:</b> an analogy can be used to help an audience understand unfamiliar things by linking them to familiar ideas.	If that politician gets voted in during the next election, it will be like Donald Trump's reign all over again.
<b>Anaphora:</b> the repetition of a word 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</u> to 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>Tricolon:</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 <b>it</b> .

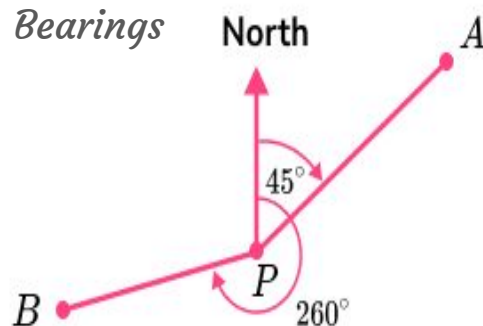
# MATHS - Assessment 5

Sparx Code	TOPIC	Covered in lessons	Pre-test reflection	Post test reflection
U989	Plotting graphs of quadratic functions			
U667	Interpreting graphs of quadratic functions			
U601	Solving quadratic equations graphically			
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			

## Quadratic Graph

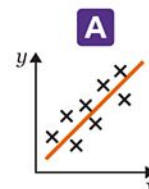
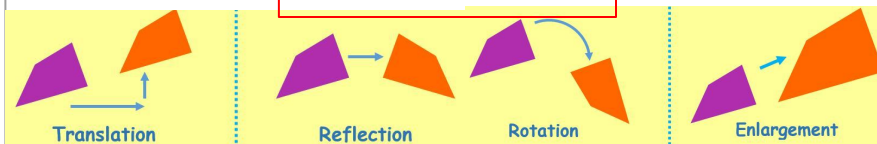


## Bearings

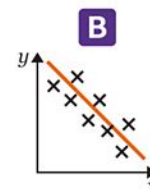


Measure from **North Line**  
Measure **Clockwise**  
Written with **three figures 045°**

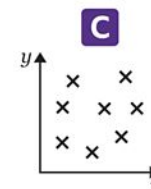
## Transformations



Graph A =  
positive  
correlation



Graph B =  
negative  
correlation



Graph C =  
no correlation

## Scatter Graphs

Sparx Code	TOPIC	Covered in lessons	Pre-test reflection	Post test reflection
U696	Rotation			
U519	Enlargement by a positive scale factor			
M881	Mixed transformations			
U322	Types of data			
U520	Comparing populations using diagrams			
U717	Choosing suitable averages and solving problems			
U199	Plotting scatter graphs			
U277	Interpreting scatter graphs			
U128	Using lines of best fit			



# MATHS – Assessment 6

Sparx Code	TOPIC	Covered in lessons	Pre-test reflection	Post test reflection
U312	Interpreting frequency tables with grouped data			
U877	Finding averages from grouped data			
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			

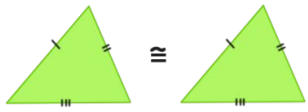
Length ( $x$ cm)	Frequency	Midpoint	Midpoint $\times$ frequency
$0 < x \leq 10$	4	$\times 5$	$= 20$
$10 < x \leq 20$	10	$\times 15$	$= 150$
$20 < x \leq 30$	7	$\times 25$	$= 175$
$30 < x \leq 40$	4	$\times 35$	$= 140$
	<b>25</b>		<b>485</b>

## Grouped Frequency

$$\frac{\text{Midpoint Frequency}}{\text{Total Frequency}}$$


## Congruent Triangles

**SSS (side-side-side)**




3 sides are respectively equal

**SAS (side-angle-side)**




2 sides and the included angle are respectively equal

**ASA (angle-side-angle)**



2 angles and the included side are respectively equal

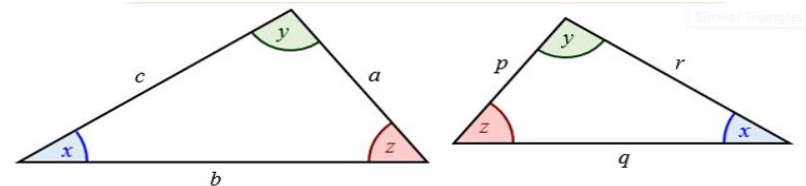
**RHS (right angle-hypotenuse-side)**



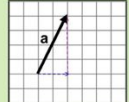
Hypotenuse and one side are respectively equal

## Similar Triangles

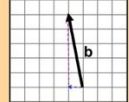
- Same shape, but not necessarily the same size.
- Corresponding angles are equal.
- Corresponding sides are in the same ratio.



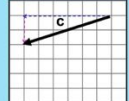
**Column Vectors**



$a = \begin{pmatrix} 2 \\ 4 \end{pmatrix}$  Move 2 right  
Then move 4 up



$b = \begin{pmatrix} -1 \\ 5 \end{pmatrix}$  Move 1 left  
Then move 5 up



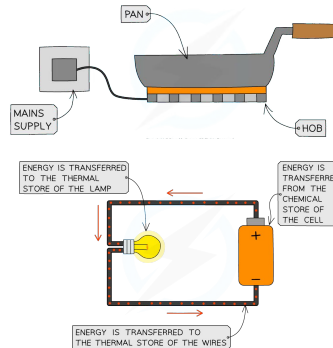
$c = \begin{pmatrix} -6 \\ 2 \end{pmatrix}$  Move 6 left  
Then move 2 down

## Big Questions:

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

## GCSE Physics Dissipation & conservation of energy

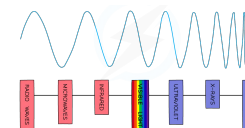
**By heating** → increases the kinetic of the particles in the system, which increases the energy in the thermal store of the object.



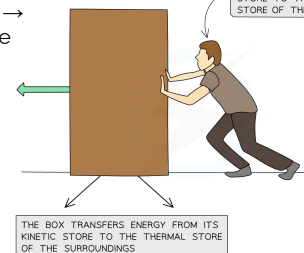
**By electrical current** → Energy is transferred electrically from the power supply to the components in the circuit.

## Energy transfers

**Radiation** → Electromagnetic waves transferring energy.



**Mechanically** → When a force acts over distance.



### 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

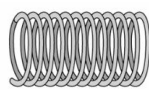
Energy stored in a moving object.

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

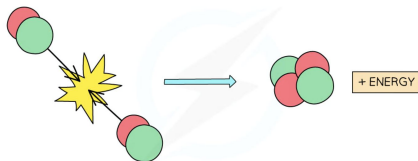
Energy stored in a stretched or compressed object.

Thermal (internal) energy

Energy stored in an object due to their temperature.

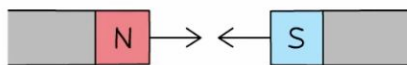
Electrostatic energy

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.

### 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

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

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

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

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

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

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

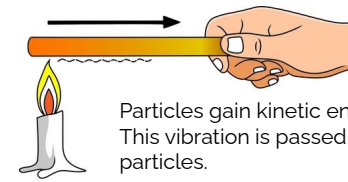
$$\text{Elastic potential energy} = \frac{1}{2} \times \text{spring constant} \times \text{extension}^2$$

## Big Questions:

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

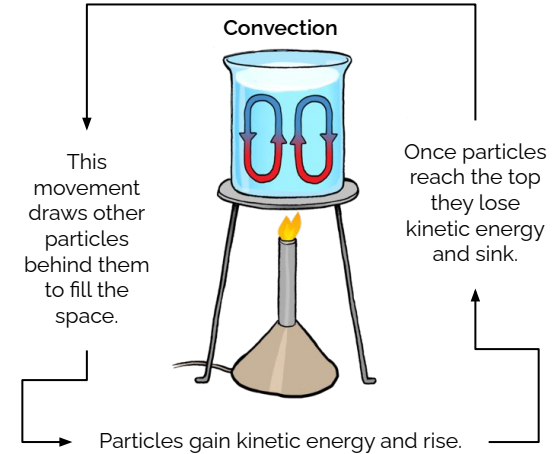
## GCSE Physics Energy transfers & energy resources

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



Conduction

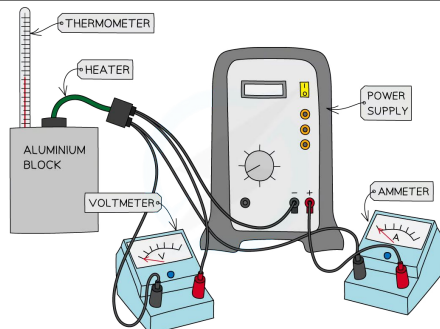
Particles gain kinetic energy and vibrate more. This vibration is passed onto neighbouring particles.



### 3. Are all energy transfers useful?

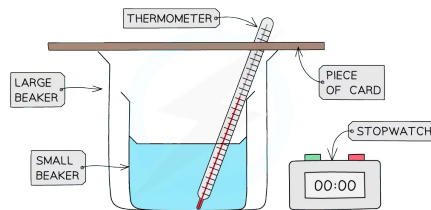
Thermal conductivity	A measure of how well a material conducts energy when it is heated.
Conductor	A material that allows thermal energy and charge to transfer through it easily. Has a high thermal conductivity.
Insulator	A material that does not allow thermal energy or charge to transfer through it 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.

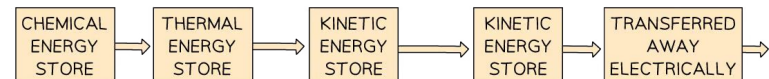
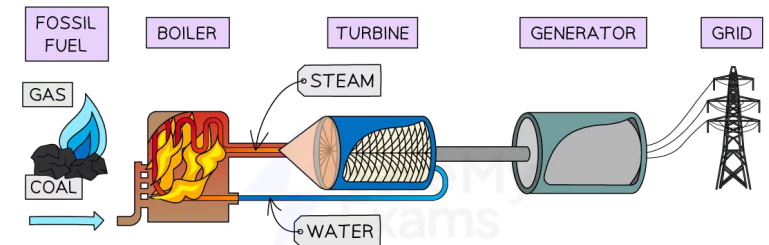
### Required Practical: Insulation



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:

*The topic is split into two sub-topics:*

*The digestive system;*

*Animal and plant organisation*

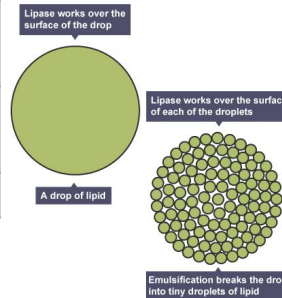
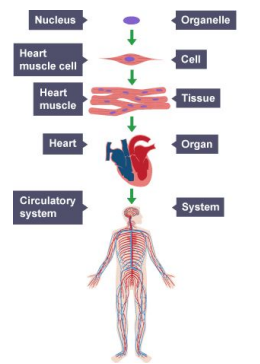
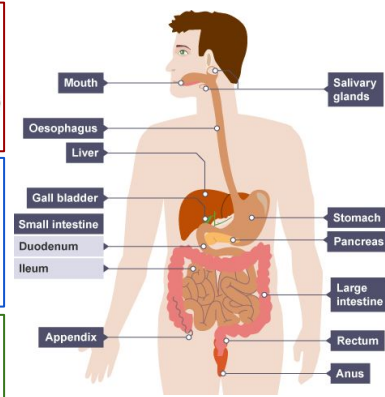
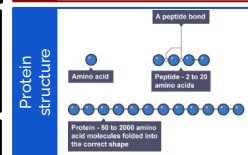
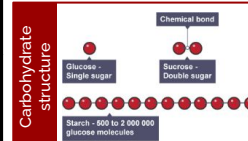
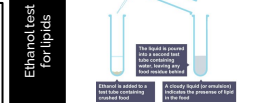
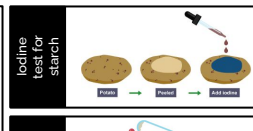
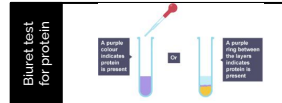
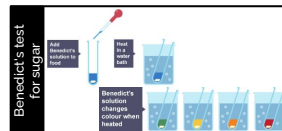
- How are complex organisms organised?
- How does the human system supply the body with nutrients?
- How is oxygen and carbon dioxide exchanged with the air and cells?
- How can someone reduce their risk of developing a non-communicable disease and how can it be treated?
- How are plants adapted to transport food and water and how can this be affected?

### 1. How are complex organisms organised?

Organelle	A specialised unit within a cell which performs a specific function
Cell	The basic building block of all living organisms
Tissue	A group of cells working together to perform a shared function, and often with similar structure
Organ	A structure made up of groups of different tissues, working together to perform specific functions
Organ system	A group of organs with related functions, working together to perform certain functions within the body
Exchange surface	A surface where substances, e.g gases, food substances, wastes, are moved across membranes.
Multicellular	Having more than one cell.

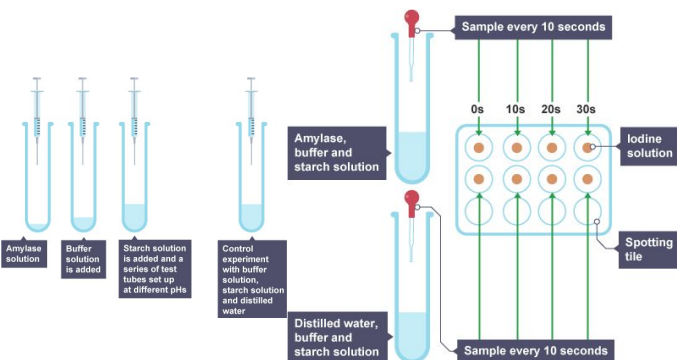
## Redmoor Science Department

### GCSE Biology - Organisation → Digestive system

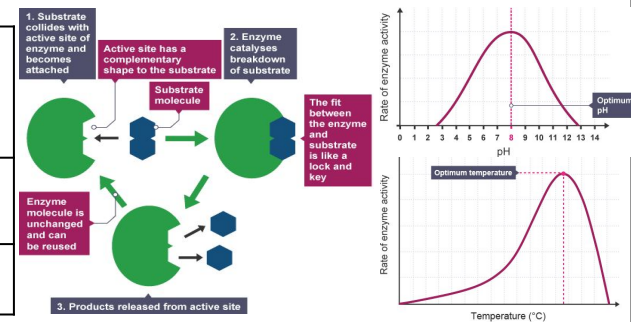


### 2. How does the digestive system supply the body with nutrients?

Carbohydrates	Source of energy, glucose is the main respiratory substrate.
Proteins	Organic compound made up of amino acid molecules Growth and repair.
Lipids	Fat or oils, composed of fatty acids and glycerol. Energy, make up part of cell membranes so essential for normal growth
Digestive system	Organ system involved in breaking down large insoluble molecules into smaller soluble molecules to be absorbed into the bloodstream.
Enzymes	A large protein that is a biological catalyst (speeds up chemical reactions) without being used up.
Active site	The part of the enzyme to which a specific substrate can bind or fit on to. It has a specific shape.
Substrate	A substance that has a complementary shape to the active site of the enzyme it binds to.
Denature	To change the shape of an enzyme's active site due to high temperatures or extremes of pH. The substrate can no longer fit the active site of the enzyme.
Optimum	The best or most appropriate - for instance, the conditions under which an enzyme works best.



Emulsify	Process of lipids being broken down tiny droplets. Tiny droplets have a much larger surface area, over which lipases can work, than larger pieces, or drops of lipid.
Bile	A substance produced in the liver. It emulsifies fats to prepare them for digestion.
Stomach acid	Acid produced by the stomach that gives protease enzymes an optimum pH.







Qu'est-ce que tu aimes regarder à la télé/au cinéma? What do you like to watch on TV/at the cinema?

Opinion (1)	Verb(2)	Noun(3)	Noun(4)	Connective(5)	Quality Vocab(6)	Verb(7)	Adjective(8)
<b>J'adore</b> I love <b>J'aime assez</b> I quite like <b>J'aime beaucoup</b> I really like <b>Je n'aime pas du tout</b> I don't like at all <b>Je déteste</b> I hate <b>Je préfère</b> I prefer <b>Je ne supporte pas</b> I can't stand	<b>regarder</b> to watch / watching	<b>les actualités</b> the news <b>les dessins animés</b> (the) cartoons <b>les feuilletons</b> (the) soaps <b>les jeux télévisés</b> (the) game shows <b>les publicités</b> (the) adverts <b>les séries</b> (the) series <b>les émissions de télé-réalité</b> (the) reality TV shows <b>les émissions de sport</b> (the) sports shows <b>les documentaires</b> (the) documentaries <b>la météo</b> the weather forecast	<b>les films de guerre</b> (the) war films <b>les films policiers</b> (the) crime films <b>les films d'action</b> (the) action films <b>les films de science fiction</b> t(the) sci-fi films <b>les films d'amour</b> (the) love films <b>les comédies romantiques</b> (the) Rom-Coms <b>les films d'horreur</b> (the) horror films	<b>parce que</b> because  <b>car</b> because  <b>puisque</b> as	<b>on me dit que</b> people say that <b>il faut admettre que</b> I must admit that <b>heureusement</b> fortunately <b>malheureusement</b> unfortunately <b>je dirais que</b> I would say that <b>c'est vrai que</b> it's true that <b>ce n'est pas vrai que</b> it's not true that <b>pour moi</b> for me <b>selon mes amis</b> according to my friends <b>j'estime que</b> I reckon that	<b>c'est</b> it is  <b>ce n'est pas</b> it's not  <b>ça peut être</b> it can be	<b>émouvant.</b> moving. <b>triste.</b> sad. <b>effrayant.</b> scary. <b>comique.</b> funny. <b>banal.</b> dull. <b>romantique.</b> romantic. <b>idiot.</b> stupid. <b>original.</b> original. <b>bizarre.</b> weird. <b>formidable.</b> great.

Tu aimes quelle sorte de musique? What sort of music do you like?

Opinion (9)	Verb(10)	Noun(11)		Opinion (12)	Connective(12)	Reason (13)
<b>J'adore</b> I love <b>J'aime assez</b> I quite like <b>J'aime beaucoup</b> I really like <b>Je ne supporte pas</b> I can't stand	<b>écouter</b> to listen to/ listening to	<b>de la musique rap</b> (some) rap music <b>de la musique RnB</b> (some) RnB music <b>de la musique pop</b> (some) pop music <b>de la musique rock</b> (some) rock music <b>de la musique classique</b> (some) classical music <b>des chansons françaises</b> (some) French songs <b>des chansons anglaises</b> (some) English songs	<b>et</b> and  <b>mais</b> but	<b>mon chanteur préféré est...</b> my favourite male singer is  <b>ma chanteuse préférée est...</b> my favourite female singer is...  <b>mon groupe préféré est...</b> my favourite group is...	<b>car</b> (because)  <b>parce que</b> (because)  <b>puisque</b> (as)	<b>j'aime les mélodies.</b> I like the tunes. <b>j'aime les paroles.</b> I like the lyrics. <b>j'adore les chansons.</b> I love the songs. <b>il est génial.</b> he is great. <b>elle est fantastique.</b> she is fantastic.

# Present Tense

Qu'est-ce que tu fais? What do you do?

Time Phrase(14)	Verb(15)	PVS(16)	Noun(17)	Subordinate Clause(18)
<b>Normalement,</b> Normally,  <b>D'habitude,</b> Usually,  <b>Le weekend,</b> At the weekend,  <b>Pendant la semaine,</b> During the week,  <b>Quelquefois,</b> Sometimes,  <b>De temps en temps,</b> From time to time,  <b>Souvent,</b> Often,  <b>Rarement,</b> Rarely  <b>Tout le temps,</b> All the time,  <b>Tous les jours,</b> Every day  <b>Tous les soirs,</b> Every evening,  <b>Tous les weekends,</b> Every weekend,	<b>je joue</b> I play  <b>je fais</b> I do  <b>je regarde</b> I watch  <b>je vais</b> I go  <b>je mange</b> I eat  <b>j'écoute</b> I listen  <b>je retrouve</b> I meet	<b>au</b> at (m) <b>aux</b> at (pl)  <b>du</b> some (m) <b>de la</b> some (f) <b>de l'</b> some (v)  <b>la</b> the (f) <b>un</b> a (m)  <b>en</b> to <b>au</b> to the (m)  <b>du</b> some (m) <b>de la</b> some (f) <b>de l'</b> some (v) <b>des</b> some (pl)  <b>de la</b> some (f)  <b>mes</b> my (pl)	<b>foot.</b> football. <b>jeux vidéos.</b> video games.  <b>vélo.</b> cycling. <b>natation.</b> swimming. <b>équitation.</b> horse riding.  <b>télé.</b> TV. <b>match de foot.</b> football match.  <b>ville</b> town <b>cinéma</b> cinema  <b>poulet.</b> chicken. <b>pizza.</b> pizza. <b>ananas.</b> pineapple. <b>frites.</b> chips.  <b>musique.</b> music.  <b>amis.</b> friends.	<b>avec mes ami(e)s.</b> with my friends. <b>avec mes copains.</b> with my mates (m). <b>avec mes copines.</b> with my mates (f). <b>avec ma famille.</b> with my family. <b>avec mon équipe.</b> with my team.  <b>chez moi.</b> at my house <b>chez mon ami(e).</b> at my friend's house. <b>chez mon père.</b> at my dad's house. <b>au centre sportif.</b> at the sports centre. <b>en ville.</b> in town. <b>au collège.</b> at school. <b>au restaurant.</b> at the restaurant. <b>au parc.</b> at the park. <b>dans ma chambre</b> in my room.

# Future Tense

Qu'est-ce que tu vas faire? What are you going to do?

Time Phrase (19)	Verb(20)	PVS (21)	Noun(22)
<b>Demain,</b> Tomorrow,  <b>Ce weekend,</b> This weekend,  <b>La semaine prochaine,</b> Next week,  <b>Le weekend prochain,</b> Next weekend,	<b>je jouerai</b> I will play	<b>au</b> at (m)	<b>rugby.</b> rugby.
	<b>je ferai</b> I will do	<b>du</b> some (m)	<b>footing.</b> jogging
	<b>je regarderai</b> I will watch	<b>la</b> the (f)	<b>télé.</b> TV.
	<b>j'irai</b> I will go	<b>à la</b> to the (f)	<b>bibliothèque.</b> library.
	<b>Je mangerai</b> I will eat	<b>des</b> some (pl)	<b>chips.</b> crisps.
	<b>j'écouterai</b> I will listen	<b>de la</b> some (f)	<b>musique.</b> music.
	<b>je retrouverai</b> I will meet	<b>mes</b> my (pl)	<b>amis.</b> friends.

Qu'est-ce que tu as fait? What did you do?

# Perfect Tense

Time Phrase (23)	Verb(24)	PVS(25)	Noun(26)
<b>Hier,</b> Yesterday,  <b>Ce weekend,</b> This weekend,  <b>La semaine dernière,</b> Last week,  <b>Le weekend dernier,</b> Last weekend,	<b>j'ai joué</b> I played	<b>au</b> at (m)	<b>netball.</b> netball.
	<b>j'ai fait</b> I did	<b>de la</b> some (f)	<b>danse.</b> dance.
	<b>j'ai regardé</b> I watched	<b>une</b> a(f)	<b>série Netflix.</b> Netflix series.
	<b>je suis allé(e)</b> I went	<b>au</b> to the (m)	<b>parc.</b> park.
	<b>j'ai mangé</b> I ate	<b>chez</b> at	<b>McDo.</b> McDonald's.
	<b>j'ai écouté</b> I listened	<b>un</b> a (m)	<b>podcast.</b> podcast.

# 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

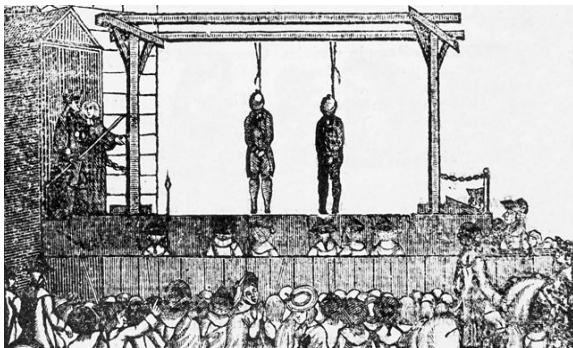
**Corporal punishment:** punishment involving harm to the body, e.g whipping

**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

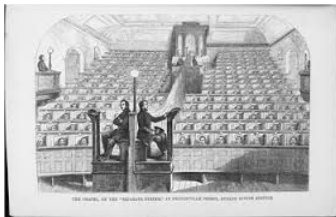


## KT3: c1700-c1900 18th & 19th C Britain

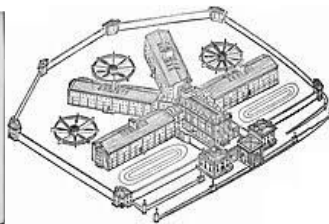
- 1776 End of Transportation to America
- 1778 Transportation to Australia starts
- 1823 Gaols (Jails) Act (Peel's reforms)
- 1832 Punishment by Death Act - reduces number of capital crimes to 60
- 1839 Prisons Act introduces **Separate System**
- 1842 **Pentonville Prison** opens
- 1865 Prisons Act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



COURTESY, K&N/SHIRAZI IN FORTY-NINTH FIFTH.



THE PRISON, OR THE 'HUMANITARIAN' SYSTEM, AS PRACTICED IN THE PRISON, BOSTON, 1840.



## 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



## 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



# 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 <b>non-living</b> , such as air, water, heat and rock.
Biotic	These are <b>living</b> , such as plants, insects, and animals.

	Flora	Plant life occurring in a particular region or time.
	Fauna	Animal life of any particular region or time.

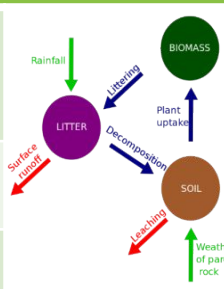


### Food Web and Chains

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.

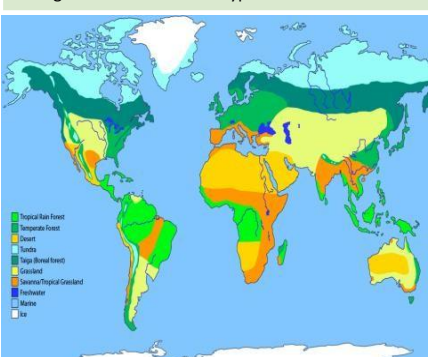
### Nutrient cycle

	Plants take in <b>nutrients</b> 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 <b>decomposers</b> .
Litter	This is the <b>surface layer</b> of vegetation, which over time breaks down to become <b>humus</b> .
Biomass	The total <b>mass of living organisms</b> 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.



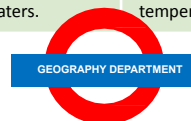
The **most productive biomes** – which have the greatest biomass- grow in climates that are **hot and wet**.

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

## Biome's climate and plants

Biome	Location	Temperature	Rainfall	Flora	Fauna
Tropical rainforest	Centred along the Equator.	Hot all year (25-30°C)	Very high (over 200mm/year)	Tall trees forming a canopy; wide variety of species.	Greatest range of different animal species. Most live in canopy layer
Tropical grasslands	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.
Hot desert	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.
Temperate forest	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.
Tundra	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.
Coral Reefs	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



AQA

# 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.



### 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**.

### 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.

### Climate of Tropical Rainforests

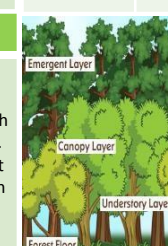
- Evening temperatures rarely fall below **22°C**.
- Due to the **presence of clouds**, temperatures rarely rise above **32°C**.
- Most afternoons have heavy showers.
- At night with no clouds insulating, temperature drops.

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



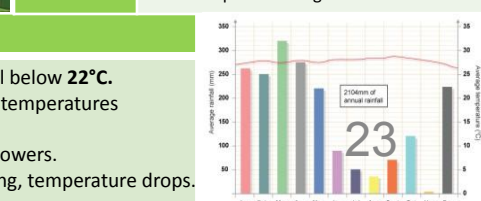
This is a typical English lowland deciduous woodland. **70% of the area** is designated as a **Site of Special Scientific Interest (SSI)** for its biological interest, with **66 %** designated as a **Special Area of Conservation (SAC)**.

Components & Interrelationships		Management
Spring	<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> . -Visitors <b>pick fruit</b> and berries, helping to <b>disperse seeds</b> . -Trees cut down to encourage <b>new growth for timber</b> .
Summer	Broad tree leaves grow quickly to <b>maximise photosynthesis</b> .	
Autumn	Trees shed leaves to <b>conserve energy</b> due to sunlight hours decreasing.	
Winter	Bacteria <b>decompose</b> the leaf litter, releasing the nutrients into the soil.	



### Layers of the Rainforest

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

Orangutans	Large arms to swing & support in the tree canopy.
Drip Tips	Allows heavy rain to <b>run off leaves easily</b> .
Lianas & Vines	Climbs trees to reach sunlight at canopy.

### Rainforest inhabitants

Many tribes have developed sustainable ways of survival. The rainforest provides inhabitants with...

- **Food** through hunting and gathering.
- **Natural medicines** from forest plants.
- **Homes and boats** from forest wood.

### Issues related to biodiversity

#### Why are there high rates of biodiversity?

- **Warm and wet climate** encourages a wide range of vegetation to grow.
- There is **rapid recycling of nutrients** to speed plant growth.
- Most of the rainforest is **untouched**.

#### Main issues with biodiversity decline

- **Keystone species** (a species that are important of other species) are extremely important in the rainforest ecosystem. Humans are threatening these vital components.
- **Decline in species** could cause tribes being unable to survive.
- **Plants & animals** may become **extinct**.
- Key medical **plants** may become **extinct**.

### Impacts of deforestation

#### Economic development



- + Mining, farming and logging creates employment and tax income for government.
- + Products such as palm oil provide valuable income for countries.
- The loss of biodiversity will reduce tourism.

#### 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

### What are the causes of deforestation?

#### Logging



- Most widely reported cause of destructions to biodiversity.
- Timber is harvested to create **commercial items** such as furniture and paper.
- **Violent confrontation** between indigenous tribes and logging companies.



#### Mineral Extraction

- **Precious metals** are found in the rainforest.
- Areas **mined** can experience **soil and water contamination**.
- **Indigenous people** are becoming **displaced** from their land due to roads being built to transport products.

#### Agriculture



- Large scale '**slash and burn**' of land for ranches and palm oil.
- Increases **carbon emission**.
- **River saltation and soil erosion** increasing due to the large areas of **exposed land**.
- Increase in **palm oil** is making the **soil infertile**.



#### Tourism

- **Mass tourism** is resulting in the building of hotels in extremely **vulnerable areas**.
- Lead to **negative relationship** between the government and indigenous tribes
- Tourism has **exposed animals** to human **diseases**.

#### Energy Development



- The **high rainfall** creates ideal conditions for **hydro-electric power (HEP)**.
- The **Bakun Dam** in Malaysia is key for creating energy in this developing country, however, both people and environment have suffered.

#### Road Building



- **Roads** are needed to bring supplies and **provide access** to new mining areas, settlements and energy projects.
- In Malaysia, logging companies use an **extensive network of roads** for heavy machinery and to transport wood.

### Sustainability for the Rainforest

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

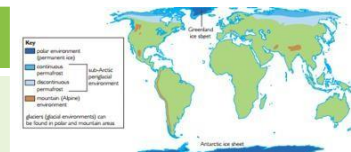
#### Possible strategies include:

- **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



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.

### Major characteristics of cold environments

**TUNDRA:** 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

### Adaptations to the cold environments

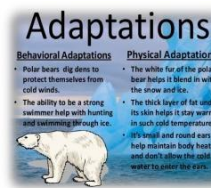
**Arctic Fox** Lives on cliff sides for shelter, white fur to camouflage, one of thickest furs of all mammals.

**Bearberry** 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,

### 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 50km 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>Cold Envs.</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>	



**Adaptations**

**Behavioral Adaptations**

- Polar bears dig dens to protect themselves from cold winds.
- The ability to be a strong swimmer helps with hunting and swimming through ice.

**Physical Adaptations**

- The white fur of the polar bear helps it blend in with the snow and ice.
- The thick layer of fat under its skin helps it stay warm in such cold temperatures.
- Its large and round ears help maintain body heat and don't allow the cold water to enter the ears.

### 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 Major Antarctic Characteristics of Cold Environments

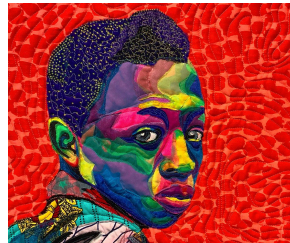
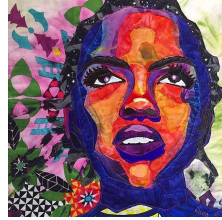
Different parts of the cold environment ecosystem are closely linked together and depend on each other, especially in a such a harsh environment.



# Year 9 Art - Portraits

## How does the use of colour generate an emotive response?

1. Artist Bisa Butler draws from an **array** of vibrant patterned fabrics to create portraits of everyday people.
2. She uses **representational** colours, favoring layered jewel-toned hues to form the skin of her Black subjects, and often groups figures together into strong **silhouettes**.
3. She began using fabric in her paintings in college, and then converted to quilting as a way to continue her dedicated art practice while protecting her young daughter from toxic materials and fumes.
4. She would often start her pieces with a black and white photo which would allow her to tell the story.
5. The portraits tell stories that may have been forgotten over time.



Colour

## How can line express meaning?

Mark making describes the different lines, dots, marks, patterns, and textures to create in an artwork. It can be loose and **gestural** or controlled and neat. It can apply to any material used on any surface: paint on canvas, ink or pencil on paper, a scratched mark on plaster, a digital paint tool on a screen, a tattooed mark on skin. Artists use gesture to **express** their feeling and emotions in response to something seen or something felt – or gestural qualities can be used to create a purely **abstract composition**.

For pencil or pen-and-ink drawing, using *hatching* is one of the easiest and cleanest ways to fill in the dark areas. By drawing fine lines that are more or less parallel, the area as a whole is perceived as being darker than the individual lines are in reality.

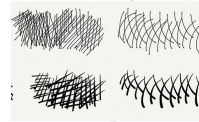
*Cross Hatching* adds a second layer of lines that are drawn in the opposite direction. The second layer of lines are applied at right angles. Using cross hatching builds the **illusion** of darker tones.

*Stippling* involves placing individual dots across a surface in a pattern that will be identifiable, especially when viewed from a distance; the further you are, the more your mind is forced to fill in the gaps on its own. Basically, instead of drawing a circle, you compose this shape with tiny dots, and shade it the same way to create the **impression** of depth.

## Why capture a portrait?

A portrait is a **representation** of a particular person. A self-portrait is a portrait of the artist by the artist. Portraiture is a very old art form going back at least to ancient Egypt, where it **flourished** from about 5,000 years ago. Before the invention of photography, a painted, sculpted, or drawn portrait was the only way to record the appearance of someone.

But portraits have always been more than just a record. They have been used to show the power, importance, virtue, beauty, wealth, taste, learning or other qualities of the sitter.



## How has impressionism influenced work of today?

- Impressionism developed in France in the nineteenth century and is based on the practice of painting **spontaneously** 'on the spot' rather than in a studio from sketches. Main impressionist subjects were landscapes and scenes of everyday life
- Instead of painting in a studio, the impressionists found that they could capture the momentary effects of sunlight by working quickly, in front of their subjects, in the open air rather than in a studio. This resulted in a greater awareness of light and colour and the shifting pattern of the natural scene. Brushwork became rapid and broken into separate dabs in order to **render** the fleeting quality of light.

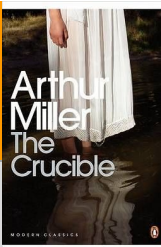


## Drama Keywords

<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

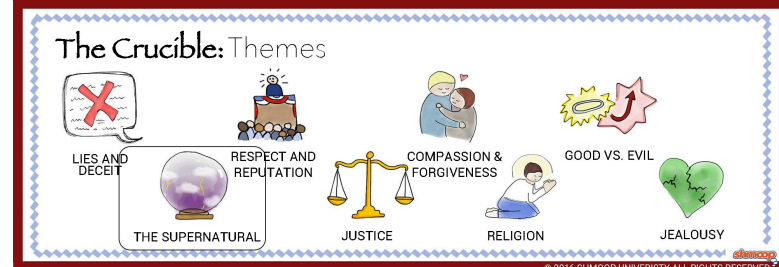
Drama techniques, skills and technical theatre

## 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



## 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



# ME - 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. **31** A priest happened to be going down the same road, and when he saw the man, he passed by on the other side. **32** 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[[c](#)] 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."



*'Everyone is made in the image of God'*

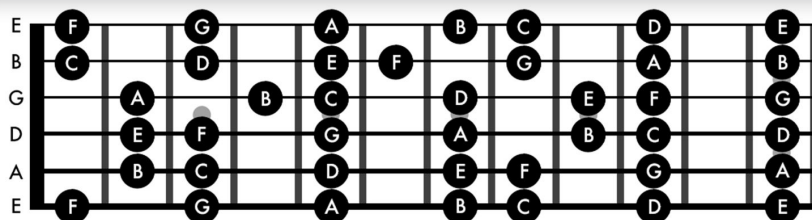
*'Love your neighbour as yourself'*

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

# Key terms:

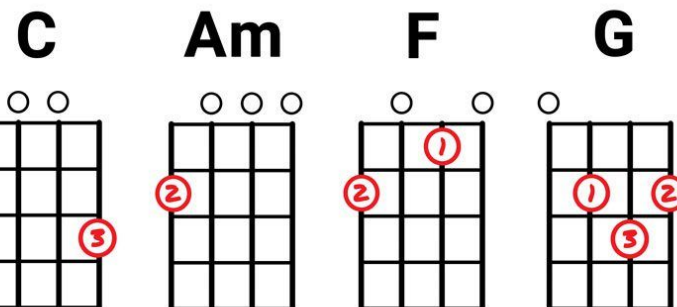
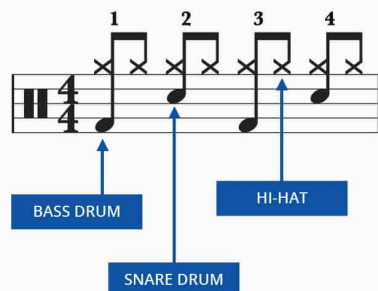
MELODY	ARTICULATION	DYNAMICS	TIME/TEMPO	STRUCTURE	HARMONY	INSTRUMENTS	RHYTHM	TEXTURE
<p>Register – high or low</p> <p>Range – wide or narrow</p> <p>Sequence</p> <p>Ascending/descending</p> <p>Scale or broken chord movement</p> <p>Steps or leaps</p> <p>Ornaments</p> <p>Melodic ostinato/riff</p>	<p>Strummed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

## Key information for a stringed instrument:



## 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

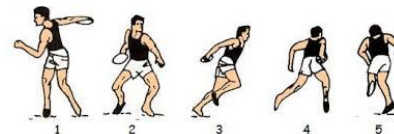
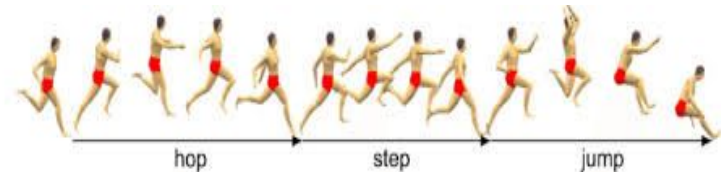
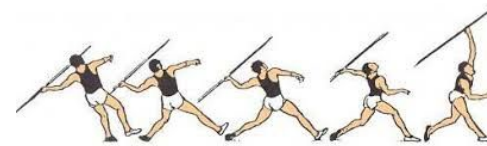
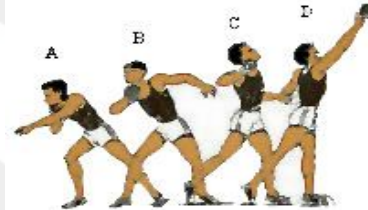
PACING

LEG AND ARM ACTION

COORDINATION OF LEGS

AND ARMS

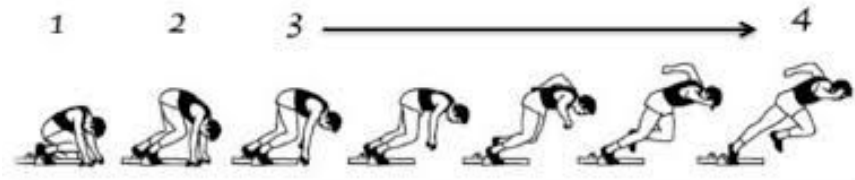
STRIDE PATTERN



YOU CAN FIND OUT MORE ABOUT  
BRITISH ATHLETICS BY VISITING THIS  
WEBSITE:  
[WWW.BRITISHATHLETICS.ORG.UK/ATHLETICS](http://WWW.BRITISHATHLETICS.ORG.UK/ATHLETICS)  
TES

## 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

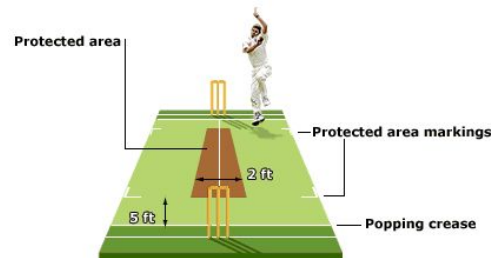
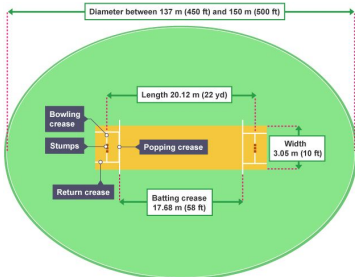
1. Must bowl under arm
2. They must bowl from inside the bowling square
3. The ball must be between the batter's shoulder and knee
4. The ball must travel through the batting square

### 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

### Keywords / Skills

Grip	Umpire
Stance	Call
Shot	Out
Catch	
Swing	
Hips	



## RULES AND REGULATIONS

There are two teams of **five players**.

Players cannot hold the ball for longer than five seconds

**FOOTWORK** – A player must not move their landing foot before passing the ball.

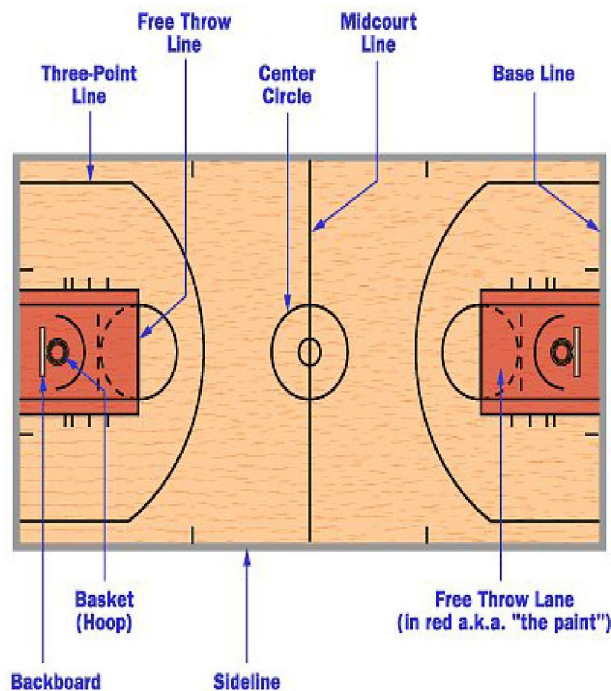
**CONTACT** – Fouls are given for hitting, holding or pushing an opponent. A **FOUL** on the shooter gives them 1-3 free throws (each 1 point).

**DOUBLE DRIBBLE** - To dribble the ball with two hands at the same time or to dribble, stop, and then begin to dribble again.

**TRAVEL** - To move the pivot foot illegally, fall to the floor without maintaining a pivot foot or to take 3 steps without dribbling the ball.

Once the attacking has brought the ball across the mid-court line, they cannot go back across the line during possession.

**BACKCOURT VIOLATION** - Touching the ball in the backcourt after it has entered the frontcourt or failing to bring the ball from the backcourt into the frontcourt within the allotted time of 8 seconds.



©2003 HowStuffWorks

## Year 9 Basketball



### APPLICATION OF SKILLS

- 3 man weave, moving screen
- Decision making
- Demonstrate communication on court
- Positional strengths
- Adhere to the rules and safety advice

### SKILLS IN ISOLATION

**PASSING & RECEIVING** – chest, bounce, javelin, overhead

**SHOOTING** – lay-up, reverse lay-up with weak hand, set, jump

**DRIBBLING** – either hand, changes of direction, pace, crossover, spin

**REBOUNDING & BOXING OUT**

**FOOTWORK** – pivot, stop.

## KEY TERMS

Players cannot remain in the **KEY** for 3 seconds or more.

**SCREEN** - to prevent a defender from guarding a teammate by standing in the defender's way. The player must remain stationary; a moving screen is an offensive foul.

**TECHNICAL FOUL** - A foul assessed for unsportsmanlike non-contact behaviour, (eg. having too many players on the floor). Penalized by loss of possession after a free throw.

**VIOLATION** - An infraction of the rules other than a foul, such as traveling or a three-second violation.

## COMPONENTS OF FITNESS FOR BASKETBALL

**Cardiovascular fitness** - the ability to work the whole body for long periods without tiring.

**Agility** - Being able to change direction quickly.

**Balance** - Being able to keep your body stable when still or moving.

**Coordination** - using 2 or more body parts at once.

**Power** - Combines strength and speed.

**Speed** - The ability to move quickly.

HOW CAN YOU APPLY THESE TO BASKETBALL?

★ What components of fitness do you need for basketball?

★ When do you score 2 points and 3 points?

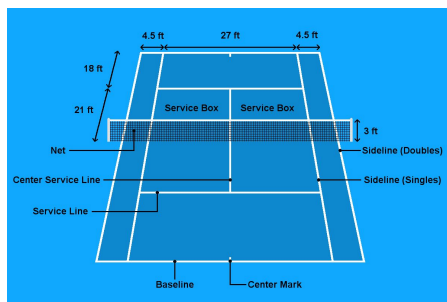
# PE - Tennis Year 9

**Singles** - In order to win the **game**, a **player** must win at least four points. If you are up 40-30, 40-15 or 40-love, and win one more point, you win the **game**.

**Doubles** - The **rules** for **doubles** are the same as singles, except the wider court is used. Players within a pair do not have to hit alternate shots. However, the serve rotates so that each player serves once every fourth game.

Skills in isolation	Application of Skills
Forehand Lob	Tactical application: movement pressure, variation, deception, serve and volley
Backhand Lob	Appropriate shot selection with length, height, speed and angle
Drop shot	Take into account opponents strengths and weaknesses.
Serve	Demonstrate communication effectively in doubles.

Can you identify any famous singles and doubles players?



?

1. Can you lead a tennis 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 tennis?
4. Can you evaluate and justify your fitness component weaknesses in tennis?
5. Can you apply tactical strategies to a game?