The Trafalgar School at Downton

Knowledge Organiser

Year 7: Terms 3 and 4

Contents

Name……House……

Using a Knowledge Organiser well

What is a Knowledge Organiser? A Knowledge Organiser is a document that sets out the key information you need to understand, learn and memorise in each of the subjects you study this term.	**Why do I have to carry my Knowledge Organiser around with me?** Your teachers will want you to use your Knowledge Organisers in lessons. They are yours forever and you may want to annotate or highlight on them when your teacher talks about things in them. They will certainly be used in lessons when you have a cover teacher and you can use them whenever you find yourself with some spare time.
How should I use my Knowledge Organiser? You should use your Knowledge Organiser to learn this key information and commit it to memory. Your teachers will often quiz you on the information on the Knowledge Organiser in your lessons. The best way of using it is to use the look, cover, write, check method which you will have been introduced to in your Knowledge Organiser launch assemblies.	**What do I do with my Knowledge Organiser at the end of the term?** You don't have to carry your Knowledge Organiser around with you anymore but you should keep it somewhere safe where you can easily get it out and use it. Remember that the information on the Knowledge Organiser includes things you will need to remember for your GCSE exams, so your teachers will continue to quiz you on it.
Why is a Knowledge Organiser important? New GCSE specifications mean that students have to memorise more facts, equations, quotations and information than ever before and there are things you will learn right from the start of year 7 that you will need to know in year 11 when you sit your GCSE exams – the Knowledge Organiser helps you to identify the things that you need to try and commit to your long term memory and return to over and over again during your time at secondary school. There are also things that we think it is important you learn about and remember that might not be in a GCSE exam but represent useful knowledge for life.	

Being Trafalgar

At the end of your time at the school your knowledge organisers will provide you with lots of help and support when your prepare for your GCSE exams.

To help yourself you should:

- Keep your Knowledge Organisers as tidy as possible
- Highlight parts of them as you go through learning lessons or add in post-it notes etc. to help you learn key knowledge
- Keep your used Knowledge Organisers safe at home. If you have used them since Year 7 you will end up at the end of Year 11 with 14 Knowledge Organisers. Line them up on your shelf at home and keep coming back to them for your revision, homework and learning
- Show them to your parents and talk through with them the facts and knowledge you have learned about in lessons – help them to learn new things too!
- Take your Knowledge Organiser for the term you are in to school every day and use it in every lesson you can!

Winner – Connie Trewin (10W)

Quiz It
- Create some quiz-style questions to test yourself.
- Ask a friend or a family member to ask you the questions!

Lecture / Teach It
- Present the information you have revised as a speech to teach others about the topic.
- Read it to your friends or peers and see if it's useful to them.

Act / Mime / Film It
- Act – turn the information into a script and act it out with a group.
- Mime – turn the information a series of silent actions to mime.
- Film – once you have done one of the above methods, record your performance and improve it!

Flash Cards
- Cut up pieces of paper or card, with enough room to write facts on.
- Write a question on one side of a piece of card or write a sentence with a word missing.
- Flip the card over, and write the answer down!

Mind Map
Present your ideas or key facts you need to revise around a diagram/mind map like this.

Self Quiz
- Read and revise a section of text
- Turn over or cover the section of text you are revising and see if you can copy it word for word correctly. If not then count the number of words copied
- Try to improve your score each time you do this.

Condense It
- Read a section of text and highlight or underline important facts that you may need to know.
- In a few sentences, summarise these key ideas / facts, in a way you can easily revise from.

Chant It
Read a section of text out repeatedly, saying it louder so you will remember it!

Q and A
- Read through a section of text or information you are trying to revise.
- Highlight or underline some key facts or information, as these will become your answers.
- Come up with questions for you to answer that will lead you to the answer.

A and Q
This is the same concept as Q and A, except you have to link the Answers to its correct question.

Knowledge Drop
- Choose a specific topic to revise, for example the industrial revolution.
- Write everything you can remember about the topic on a piece of paper, without looking at the original text.

Retrieval Practice
- Ask a peer, parent, or teacher to question you on information in the KO
- Using the KO, retrieve the answers

Gap Fill
- Select a paragraph or small section of text to revise
- Remove a few words from the section, and write this out, leaving the words you have taken out below the section of written text.
- Try and put the words back in their right spaces.
- Remove more words gradually.

Transform
Rewrite a paragraph or section of text as an article, letter, diary entry or another form of writing.

Sketch It
Turn pieces of information or events into small, simple sketches so you'll be able to remember what is happening in that image.

Connie Trewin 10W

Mrs Keighley ran a competition this term with her Year 10 English class.

Students were asked to produce posters showing techniques they used to remember key knowledge.

The winners were awarded by Mrs Keighley and Mr. Cole.

1st prize: Connie Trewin (10W)

Runners up:
Poppy Smeaton (10C)
Edward Gibbons (10C)

to Make

STICK

Edward Gibbons (left)
Poppy Smeaton (right)

1: **Q&A** is a memory skill technique involves a student writing down a question they want to know and later, once they know it, they can answer it! Example: When was 'An Inspector Calls' set? Answer: 1912

2: **Gap Fill** is a handy memory tool for those who can't remember certain key words in sentences and paragraphs. You write a piece of text down you wish to remember and every so often leave gaps in the text. Example: The ___ spoken language in the world is Mandarin Chinese Answer: Most

3: **Self Quiz** involves a student practicing key pieces of knowledge by remembering it and covering the text and writing it down without looking back at the text. You can then mark your answer and try to beat your best score.

4: **Transform** is a way of remembering knowledge by turning it into a different format such as, a newspaper article, a diary, or a letter.

5: **A&Q** is the complete reverse of Q&A where you are given an answer and must find the question that would make the answer true. Example: Answer Thomas Edison Question: Who invented the light bulb?

6: **Knowledge Drop** involves someone asking you a question off the spot which you must answer correctly, you could even turn this into a mini competition!

7: **Sketch it** includes an artier way of remembering key text and knowledge by drawing something that correlates to the text. Example: The man was lean and mysterious. I could then draw a tall man with a mysterious attribute.

8: **Lecture It** is a way of memorising as you can teach others knowledge that you may want to know as well. This is good because all the knowledge sinks into your brain as you help other's knowledge stick.

9: **Mind Map** is an interesting way to convey ideas or remember things in this case! Essentially you have a big bubble in the centre and have branches coming off with ideas about the main subject. Example: If the subject was Mr Birling, I would put capitalist, foolish and as many ideas I could think of down onto the mind map!

10: **Act/Mime** is a far more active than any other. To simplify this idea, you just mime or act out the text you want to learn. Example: If the text was talking about the horrors of war, you would act like a soldier or anything related.

11: **Flash Cards** are basically just small revision notes about the subject which you can look at often to further your understanding on important topics

12: **Chant** is quite self-explanatory you quite literally just chant the words to cement the knowledge into your brain. You could make it a song or a little rhyme, just as long as it sticks and isn't too complicated!

memorising techniques

Q&A: Give yourself a Question and answer it.

Gapfill: copy a paragraph but leave gaps. fill thoughs gaps with a diffrent colour

Self-quiz: try and memorise a paragraph and copy it out. How many words did you remeber?

transform: take the infomation from a paragraph and turn it into a diffrent type of text, e.g. Newspaper, Menu.

Relrival pratice: (Need another person) A teacher/another person asks for infomation, use your K.O to find it!

A & Q: give yourself an answer, what would the Question be to get that answer?

Sketch it: take infomation and turn it into a drawring (even if it's not good!)

Know lage drop: try and memorise a paragraph and drop all relevent Knowlage into your book!

Condence it: write the infomation in 20 words or less!

Mind Map: Pick a subject and gather all your Knowlage about around it.

Lecture/teachit: teach a peer all you Know about the subject.

Act/mime it: Act or mime out the infomation to a peer to see if they can guess it!

Flash cards: create some flash cards about the topic.

Chant: chant the infomation intill you have memorise it.

Quiz it: give questions to a peer and see if they can answer all of them.

Fortnightly Writing Challenge: First Person Narrative

Here is the form, genre, purpose of the writing. It might be hyperlinked to a model to help you.

Write a short story based on visit to a haunted mansion!

Here you will find the task details. Read them carefully as it will provide more information about about what you are writing (form, purpose) when you have your Week A FWC lesson.

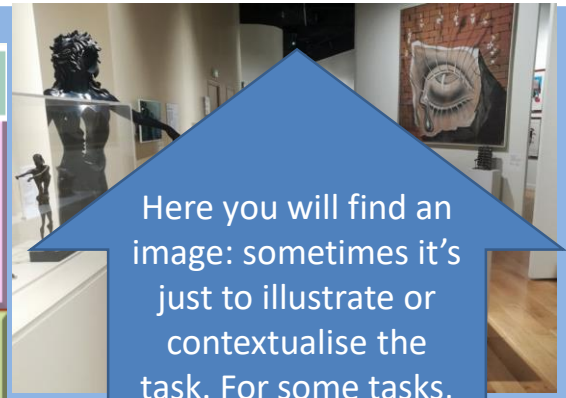
Methods to include:

sensory description: olfactory (smell) and audi (sound)

th that e)

om th of an

You should include these methods. They are colour-coded to match the pages of your FWC Knowledge Organiser. If you click on each one on the slide, it's hyperlinked to another slide to help you learn about that method, with examples.



Here you will find an image: sometimes it's just to illustrate or contextualise the task. For some tasks, the image will be part of the writing challenge.

Don't forget to plan writing!

T l Accuracy er:

Here you will find prompts so you don't forget important things like planning, punctuating accurately, etc.

y:
tter at
ning
top,
ion or
question mark at the end.

- Use paragraphs.
- Spell accurately.

Each Week B, you will have an FWC PPT loaded onto Classcharts. Your homework is to make notes, learn from, and prepare for the task and methods included, ready to write it in your Week A FWC writing lesson.

When writing non-fiction in Year 7, you should practise using the APE FOR REST rhetorical methods:

A – Anecdote: Telling your own story

P – pronouns: we, our, us

E – Emotive language: Make the reader feel an emotion

F – Fact: Real event that can be prove.

O – Opinion: Point of view

R – Repetition: Repeat a key phrase/word

R – Rhetorical Question: Asked to make a point/for effect, not an answer

E – Expert: Expert quote

S – Statistic: Using numbers to prove a point.

T – Triple: Three powerful and effective words or phrases in a row

Fortnightly Writing Challenge Year 7

Language Methods to Practise in your Fortnightly Writing Challenge

alliteration:	You'll never put a better bit of butter on your knife
anecdote:	Talking to his children about the dangers of running in the house, a dad might include an <u>anecdote</u> about falling in his home as a boy and breaking his arm.
antithesis:	That's one small step for man, but a giant leap for mankind.
chiasmus:	'Let us never negotiate out of fear, but let us never fear to negotiate.'
emotive language:	Think about the poor, defenceless animals that suffer due to our rubbish!
experts:	'Group chat can often be a source of upset,' <u>warned psychologist Dr Linda Pappadopolis.</u>
extended metaphor:	*The Road Not Taken*, by Robert Frost, is one of the most famous examples of extended metaphor; in the poem, he compares life's journey to a forest path.
foreshadowing:	The witches in Macbeth are used to foreshadow that Macbeth is not innocent: 'Fair is foul and foul is fair', a line he echoes in his first appearance when he says 'so foul and fair a day I have not seen'.
imperative verbs:	Chill out! Do as I say! Don't eat the daisies! Please be quiet! Be quiet!
metaphor:	'The sun in the west was a drop of burning gold that slid near and nearer the sill of the world.'
modal verb:	You <u>must</u> be home by midnight. You <u>could</u> be tired if you're any later. E.g. <u>mustn't</u>, <u>can</u>, <u>might</u>, <u>shouldn't</u>, <u>may</u>, <u>will</u> etc.
pathetic fallacy:	In *Macbeth*, the night the King is murdered 'has been unruly ... in th' air, strange screams of death .... Some say the Earth was feverous and did shake.'
sensory description:	Wind swirled around the beach house, whistling loudly. He felt the snowflakes melting on his skin, their liquid trickling down his neck, cold, wet, seeping into his clothes.
simile:	Without warning, Lionel gave one of his tight little sneezes: it sounded like a bullet fired through a silencer.
statistics:	You only have a 20% chance of surviving a 60mph crash if you don't wear a seatbelt!
superlative:	This is the <u>worst</u> day of my life but at least we're in the <u>finest</u> café in London.
onomatopoeia:	The dog knocked over the vase with a crash!
personification:	Dancing on the water, the sun shone endlessly.
repetition:	'As my grandfather went, arm over arm, his heart making sour little shudders against his ribs, he kept listening for a sound, the sound of the tiger, the sound of anything but his own feet and lungs.'

Apostrophe To Show Ownership

1 normal singular noun

the man's idea ✓

add 's

2 normal plural noun

the girls' idea ✓

add '

3 singular noun ending s

Moses' idea ✓

add '

or...

Moses's idea ✓

add 's

4 plural noun not ending s

the children's idea ✓

add 's

Using Apostrophes (Showing Joint Ownership)

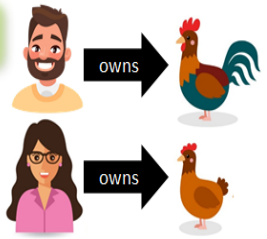
The Rules

Joint possession?
Make the last word in the series possessive.

Individual possession?
Make all parts possessive.

Examples

Janet and John's chickens



Janet's and John's chickens

Use fronted adverbials:

Rather slowly, (manner)
During the night, (time/temporal)
Every minute or two, (frequency)
At the end of the corridor, (spatial)

Just beyond the stairwell on his left, he opened the door.

Use a two and then three word sentence:

It hurt. I was dying!

Snow fell. Flakes floated precariously.

Use anaphora:

Now is the time for action. **Now is the time** to take up arms. **Now is the time** to fight for your country.

Use epiphora (epistrophe)

I can't believe I was robbed. Everything is **gone**. My television and electronics are **gone**. The money I left on my nightstand is **gone**.

Use a range of sentence structures:

The spotted green frog jumped into the pond.
(simple)

The spotted green frog jumped into the pond **and** he splashed water on me.
(compound – coordinating conjunction: for, and, nor, but, or, yet, so)

The spotted green frog jumped into the pond **when** the hawk flew overhead.
(complex – subordinating conjunction: if, although, as, before, because, when, after, since, until, so that, while etc.)

When the hawk flew overhead, the spotted green frog jumped into the pond.
(subordinate/dependent clause start)

The frog, **which had been lurking underwater,** jumped on the lily pad.
(embedded clause)

Use a past participle - 'ed' start:
Glazed with barbecue sauce, the rack of ribs lay nestled next to a pile of sweet coleslaw.

Use a present participle - 'ing' start:
Whistling to himself, he walked down the road.

Use a tricolon (tripartite list):

'I stand here today **humbled** by the task before us, **grateful** for the trust you have bestowed, **mindful** of the sacrifices borne by our ancestors.'

Snap! Crackle! Pop! **(Rice Krispies slogan)**

Use a conditional sentence:

When people smoke cigarettes, their health suffers.

If I had cleaned the house, I could have gone to the cinema.

Use paired adjectives to describe a noun:

Take a look at this bright red spider.

Luckily, it isn't a wild, dangerous one.

Use anadiplosis (yoked sentence):

Building the new motorway would be **disastrous, disastrous** because many houses would need to be destroyed.

'Fear leads to **anger**. **Anger** leads to **hate**. **Hate** leads to suffering.'
Yoda, *Star Wars*.

Use different sentence types:
The wind is blowing. **(declarative)**

Put your pen down. **(imperative)**

Who do you trust most in the world? **(interrogative)**

Pollution is killing us! **(exclamation)**

Use discourse markers to begin paragraphs and start/link some sentences:
First of all, To begin with, Firstly,

Therefore, Consequently, Hence, As a result,

Furthermore, In addition, Additionally, Moreover,

Meanwhile, Later that day, Seconds later, Subsequently, That afternoon,

On the whole, Interestingly, Basically, In short, Broadly speaking,

Alternatively, Conversely, Similarly, On the other hand, Despite this, Likewise, However,

To conclude, Finally, In conclusion, Eventually, In the end,

PUNCTUATION PIT STOP

Full Stop

Full stops are used to:

1) **mark the end of a sentence.**

Carefully, he kicked the ball into the goal.

2) show when a word has been abbreviated.

Saint Peter's Road is on the High Street.
→ St. Peter's Road is on the High Street.

COMMAS

Commas are used to separate:

1) items in a list .

Bert, Ernie and Elmo are my three pet rats.

2) dependent clauses and phrases.

While I was in the bath, the cat scratched at the door. That meant, because I was on my own in the house, I had to get out to let him in. Thankfully, I had a towel handy!

Quotation Marks

Quotation marks show exact words that are spoken or written by someone.

'Don't be late!' shouted Mrs Smith.

'I will be,' Molly said, and added, 'so **d**on't expect me before 11.'

Question Mark

Question marks are used at the end of direct questions instead of a full stop.

What is your favourite food?
How do you feel today?

An indirect question ends with a full stop, rather than a question mark:

I'd like to know what you've been doing all this time. I wonder what happened.

Exclamation Mark

Exclamation marks express strong emotions: forcefulness, commands, anger, excitement, surprise etc.

Don't buy that car! Stop telling me what to do! I'm free! You're late! She actually won!

They're also used for most interjections:

'Hi! What's new?' 'Ouch! That hurt.'
'Oh! When are you going?'

Semi-colon

Semi-colons are used to separate two sentences that are closely related:

It was winter; the snow was falling heavily.

They can also be used to separate items in a list made of longer phrases. I have been to Newcastle, Carlisle, and York in the North; Bristol, Exeter, and Portsmouth in the South; and Cromer, Norwich, and Lincoln in the East.

Colon

Colons are used to:

1) **begin a list.**

I have three pet rats: Bert, Ernie and Elmo.

2) **indicate that what follows it is an explanation or elaboration of what precedes it.**

Unfortunately, the weather forecast was wrong: it rained all day!

Apostrophe

An apostrophe is used to show:

1) **omission - where a letter or letters has been missed out.**

does not → doesn't I am →I'm

2) possession – when some thing/one owns something. Thankfully, they played Susan's game. Interestingly, David's house has no garden, but Susan's ~~house~~ does.

Dash –

Dashes are used for parenthesis: a word or phrase inserted as an explanation or afterthought into a passage which is grammatically complete without it. E.g.

Last year, they roasted the winning brisket — the size of a pillow — in a mighty clay oven. Paul felt hungry – more hungry than he'd ever been.

Brackets

Brackets are used in pairs for parenthesis: a word or phrase inserted as an explanation or afterthought into a passage which is grammatically complete without it. E.g.

Andrew Jacklin (last year's losing finalist) is expected to win this heat.
Tigers are carnivores (meat eaters)!

Ellipsis ...

Ellipsis is used to:

1) **show a pause or hesitation in someone's speech or thought.**

I don't know … I'm not sure.

2) build tension or show that something is unfinished.

Looking up, Paul couldn't believe what he saw …

Writing the text for a leaflet

Stay Safe and Sound Online

clear/apt/original title

Manage your online reputation

subtitles

Anything that you upload, email or message could stay online forever. Therefore, before you post anything online, consider whether or not you would want your parents, teacher or a future employer seeing it. If the answer is no, don't post it! Your privacy is key here.

Privacy Matters

effectively/fluently sequenced paragraphs

Make sure you set high privacy settings on networks. Regularly you should change passwords and never share or put online any of your personal details like a phone number, address or your school details. Make sure your safety and privacy settings are activated on your mobile devices too, so you aren't sharing private information. Be aware that using public WiFi might not filter inappropriate content, so look for friendly WiFi symbols when you're out and about.

Writing Forms

….

Remember:

- make sure you know how to block abusive comments and report worrying content;
- don't arrange to meet people in real life that you've only talked to online;

bullet points

Text for a Speech

'Address to Nation on the Challenger' by Ronald Regan (28th January, 1986)

Ladies and Gentlemen, I'd planned to speak to you tonight to report on the state of the Union, but the events of earlier today have led me to change those plans. Today is a day for mourning and remembering. Nancy and I are pained to the core by the tragedy of the shuttle Challenger. We know we share this pain with all of the people of our country. This is truly a national loss.

…

a clear address to an audience

For the families of the seven, we cannot bear, as you do, the full impact of this tragedy. But we feel the loss, and we're thinking about you so very much. Your loved ones were daring and brave, and they had that special grace, that special spirit that says, 'Give me a challenge and I'll meet it with joy.' They had a hunger to explore the universe and discover its truths. They wished to serve, and they did. They served all of us.

…

rhetorical indicators that an audience is being addressed throughout

The crew of the space shuttle Challenger honoured us by the manner in which they lived their lives. We will never forget them, nor the last time we saw them, this morning, as they prepared for the journey and waved goodbye and 'slipped the surly bonds of earth' to 'touch the face of God.'

Thank you.

a clear sign off e.g. 'Thank you for listening'

Article

Andy Murray's Appliance of Science

clear/apt/original title

By Jim White

by-line

If the Caledonian superman wins Wimbledon this year, it will be thanks to [illegible] pieces of sushi a day, a magic potion and a battalion of experts.

strapline

If you want to know what it is about Andy Murray that makes him stand out from the rest of us – apart from that fizzing backhand return and the huge-mouthed celebratory yodel – it is summed up in one word: science!

sub-headings

introductory (overview) paragraph

Sample Check

Today, before he even steps out on to the Centre Court for his Wimbledon semi-final against huge-hitting Pole Jerzy Janowicz, Murray will have been subject to several of these. He does [illegible] time he pops to the lavatory. The osmolarity check is conducted by one of his staff, its purpose to gauge the percentage of water and minerals in his urine, to show whether his body is correctly hydrated. The fact is, if Murray wins today, it will certainly be thanks to the bloke who inspects his wee.

fluently sequenced paragraphs

fluently sequenced paragraphs

Daily Diet

At 7.30 this morning, while many of those arriving at Wimbledon's press restaurant will have begun their day assaulting a tottering Himalaya of fried starch, Murray will have eaten yogurt, fruit and a bagel smeared in peanut butter …

Writing in the Essay Form

clear title

Zoos Should be Banned

effective introduction

In America, approximately 175 million people visit a zoo each year. That's half of America's population. Clearly this suggests that zoos remain popular places for people to visit for entertainment and to learn about wild animals. However, although some people are of the opinion that zoos can provide a source of educational entertainment and a sanctuary for endangered animals, I believe that the cruelty that animals suffer outweighs this benefit, and that they should be shut down!

effectively/fluently linked paragraphs to sequence a range of ideas

On the surface, zoos are a huge tourist attraction because they allow families to spend a day out in the sun, looking at animals, and eating overpriced junk food. But what most people don't know is that zoos are far more sinister than selling small bottles of water for £5.00. Statistics show that in all zoos, fifteen percent of animals die every year due to living in captivity. Obviously then, zoos must be an unsuitable environment for wild animals and should, therefore, be abolished. How can zoos justify their existence by claiming animals in captivity provide people with the experience of observing wildlife they wouldn't otherwise experience, when it comes at a cost to their life?

…

a range of ideas (no room to reproduce the other two paragraphs here)

convincing conclusion

In conclusion, a zoos only purpose is to make as much money as possible by allowing thousands of people per day to gawk at animals and spend far too much money on souvenirs and junk food. Zoos do not protect or help to repopulate animals, nor do they educate people on the specifics of these animals, and therefore should be abolished.

Writing a formal letter

Writing Forms

writer's address

35 Hibiscus Crescent
Andover
Hants
SP10 3WE

221B Bakers Street
London
NW1 6XE

reader's address

date

20th February, 2020

Dear Sir or Madam

Formal Salutation: Sir/Madam/Mr Roderick/Mrs Roderick

I am writing because you chair a committee in charge of the compulsory wearing of school uniforms. I am a student at Brinsley High School, a friendly and successful [illegible]ool where uniforms are not worn.

Of course, [illegible] that students won't spend all morning choosing what to wear or beg parents for clothes th[illegible] [illegible]ere is another side to this case: uniforms breed uniformity. We are a culturally diverse nation a[illegible] all dress the same, this encourages us to be the same. At Brinsley High, we are encouraged to expr[illegible]ndividuality, yet this seems to be in contradiction of the message enforced uniform sends to us.

fluently sequenced paragraphs

fluently sequenced paragraphs

Furthermore, ...

Yours faithfully
Boris Johnson

formal sign off: Yours faithfully (Sir/Madam = Faithfully) (Mr/Mrs = Sincerely)

Description of Place

spatial discourse markers

adjectives

Green limbs tangled above the decaying shells of long-abandoned vehicles, forming a canopy that barely permitted the harsh rays of the sun to burn through. The stealthy fingers of squat oak trees reached out tenaciously towards them. The vehicles themselves were coated in a thick layer of r[illegible] [illegible]our of bur[illegible] copper – and were battered and bruised through years of exposure to th[illegible]ts.

Metaphor, simile, personification

sensory description

Like a queue of taxi cabs, the vehicles waited patiently [illegible] forgotten depths of the forest. Specks of lig[illegible] from the midday sun, which had successfully fought their way through the overhead canopy, lit up their broken bodies. Their trunks gaped open woefully and their shattered eye sockets stared blindly forward.

sensory description

The aroma of rust and decay occupied the clearing: it was choking, corrosive. No fresh breeze could infiltrate the thick shrubbery to provide relief. The cars lay there, suffocating on their own putrid stench. It was overpowering. Meanwhile, the squawks of blackbirds echoed like sirens around the clearing. The chilling sound was relentless. It echoed through the car's hollow bodies, fee[illegible] its way through the cracks in windows and doors, stroking the upholstery of the rotting seat as it passed.

sensory description

spatial discourse markers

Spread over the floor of the clearing, a thick blanket of autumn leaves hid the earth beneath. They had turned a shade of burnt red and had bleached edges that resembled torn parchment. They were brittle and cracked f[illegible] [illegible] the clearing. Amongst them, all manner of insects scuttled- manoeuvring themselves between moments of shade, before the unforgiving rays of sun could scorch their exposed bodies.

adjectives

Dystopian Narrative: *The Machine Stops* by E.M. Forster

Above her, beneath her, and around her, the Machine hummed eternally; she did not notice the noise, for she had been born with it in her ears. The earth, carrying her, hummed as it sped through silence, turning her now to the invisible sun, now to the invisible stars. She awoke and made the room light.

"Kuno!"

"I will not talk to you," he answered, "until you visit me."

"Have you been on the surface of the earth since we spoke last?"

His image faded.

Again she consulted the book. She became very nervous and lay back in her chair palpitating. She directed the chair to the wall, and pressed an unfamiliar button. The wall swung apart slowly. Through the opening she saw a tunnel that curved slightly, so that its goal was not visible. Should she go to see her son, this would be the beginning of the journey.

Of course she knew all about the communication-system. There was nothing mysterious in it. She would summon a car and it would fly with her down the tunnel until it reached the lift that communicated with the air-ship station: the system had been in use for many, many years, long before the universal establishment of the Machine. Those funny old days, when men went for change of air instead of changing the air in their rooms! And yet — she was frightened of the tunnel: she had not seen it since her last child was born.

Journey Description

Sitting in my seat – aisle, two rows from the front – I look out. Illuminating a town engulfed in darkness, lights flash past me: shop lights, street lights, car lights, and as the clouds part just enough for the moon to penetrate through the smog, moonlight!

Inside it's silent. No one speaks. The bus windows shut, lulled by the rocking motion, side-to-side, back-and-forth, up-and-down, my eyes feel heavy. Outside, I'm mesmerised by the noise I can only see, only imagine: mouths asking, replying, laughing, traffic screeching, angry drivers honking, shop doors opening and closing.

Once more the bus door opens and, as if I've lifted my head out from underwater, I can hear the street bustle, smell the takeaways, taste the diesel fumes.

Climax (problem at its worst)

- Use exciting/dynamic verbs;
- Quicken pace;
- Show characters feelings through action;
- Attempts to solve problem fail/intensify problem.
- Vary sentence length: short for action, longer for description.

Fail to Plan
Plan to Fail!

Rising Action (build up/conflict)

- Build on character, setting and plot;
- Introduce a problem/conflict/dilemma;
- Build tension/excitement using interesting adjectives, metaphors, similes etc.

Falling Action (fix problem)

- Character/s solving conflict/dilemma/ problem.

Exposition (introduction)

- Use a story hook to grab attention e.g. atmosphere, sudden event etc.;
- Use descriptive vocabulary to set the scene and describe the main character;

Resolution/Dénouement (ending)

- Link back to the start.
- What has the character learned?
- Is there an exciting twist?
- Is there a cliff-hanger ending?

Freytag's Pyramid/ the Story Mountain is the best for planning narratives (stories).

Conclusion:
To conclude, repeat RQ, Yes.

Yours Sincerely

Intro: My address right hand side, + date, school address left,
Dear Mr Curtis
Should we consider discontinuing wearing a school uniform, you've asked? Quite simply, yes! Within this letter, you will find several arguments setting out precisely why we should make this change.

Counter: old-fashioned tradition, so easier to continue
Argument: other traditions - burnt witches, slept on straw, walked barefoot – now discontinued so …
Reasons to: anecdote, use experts

P1

Form: Letter
Audience: Headmaster
Purpose: Argue change uniform

P2

Counter: all look same so no prejudice/bullying over clothes,
Argument: no individualism, learning who we are
Reasons to: RQ +triple
Isn't part of our learning at school about learning how to dress appropriately, learning who we are, learning how to judge people on what is inside, not what wear?

P3

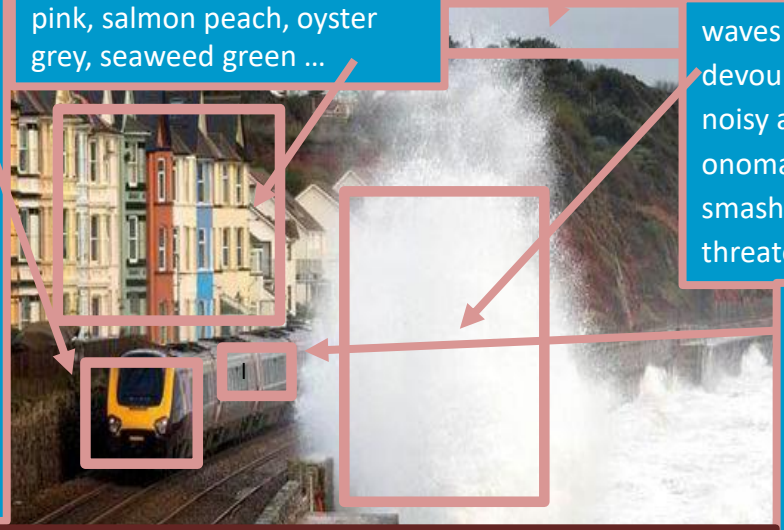
Counter: cost cheaper as not designer or from shops making huge profit
Argument: cost of blazers, trousers and skirts from school uni shop expensive as no competition, own clothes mix 'n' match so fewer outfits needed, wear weekends so more use,
Reasons to: emotive language: force poorer families to go without, statistics

Mind maps/spider diagrams, allow you to jot down content ideas in no particular order and then decide on the best order to write them up in – so they're ideal for non-fiction writing. Each leg = a paragraph

Personify train - a victim moving along railway line, past houses, towards destination - metaphor: caterpillar train sways and pitches precariously along the track to its daily destination. Snatching bites, the sea salt nips at its metal skin as passes, gnawing at it, killing it. Rattles. Will it survive?

houses , like soldiers standing to attention - defending their inhabitants. Diff pastel colours of a seaside town: prawn pink, salmon peach, oyster grey, seaweed green …

canopy of sky above threatening Adjectives for mood: grey sky, stuffed clouds full of cold, sharp rain, Verb: beating down, attacking!



waves engulfing and devouring the sea side town - noisy and disruptive, onomatopoeia: Crash! whip, smash personify so violent/ threatening movement.

zoom in - one carriage window. Windows hit by spray that's 'like a tame cat turned savage'. Passenger pitched side-to-side; bubbling sickness, rising bile from stomach!

Plan describing pictures by boxing/framing parts of the image to help you to focus <u>description</u> on specific areas, zooming in on minute detail, and out again to another area. Each boxed area = a paragraph.

1. Intro: Here you will find everything you need to know about buying a goldfish. Follow this advice to …
2. First of all, research the fishes needs and best fish breeds …
3. Next, decide where to put … bedroom could be best habitat for your fish because … However, it might be better to …
4. After this, it's back to the research. Make a list of … Don't …. Do …
5.

Linear flow and vertical charts are useful for planning writing that has to follow a step-by-step process. Each section/shape = a paragraph.

The Grid Plan is good for making sure you include lots of different methods, or to compare two/more things side-by-side. Each row/column = a paragraph.

Paragraph content/ topic	Language method/vocab	Sent structures	Punc
1: waves engulfing and devouring the sea side town - noisy and disruptive, movement	onomatopoeia crash, whip, smash personify so violent/threatening	'ing' start verbs (pres part)	! ;
2: train victim moving across railway line past houses towards destination	personify - victim, alliteration, metaphor: A caterpillar, the train sways and pitches precariously along the track to its daily destination. Snatching bites, the sea salt nips at its metal skin as it passes, eating away at it, killing it. Rattles. Will it survive?	Chain/ tricolon Question	? - -
3: zoom in on one carriage window, motion sick	Windows hit by spray that 'like a tamed ca' has 'turned savage' today. Passenger pitched side-to-side; bubbling sickness rising bile from stomach!	Anadiplosis (yoked)	' ' ; !
4: houses	Like soldiers standing to attention they are defending their inhabitants. Diff pastel colours of a seaside town: prawn pink, salmon peach, oyster grey, seaweed green, cracking paintwork	Fronted spatial adverbials	( ) :
5: canopy of sky above threatening	Adjectives for mood: grey sky, stuffed clouds full of cold, sharp rain, Verb: beating down, attacking,	Two then three word sentences	… ;

Fail to Plan
Plan to Fail!

Public Speaking Unit – Knowledge Organiser

Possible Speech Topics

- Physical Education should be required of all students throughout secondary school.
- Schools should block YouTube.
- Single-sex schools are better for students.
- All people should be vegetarians.
- It is never appropriate for the government to restrict freedom of speech.
- Human cloning should be banned.
- Poetry should be removed from the curriculum.
- All citizens who do not vote should pay a fine.
- The death penalty should be re-introduced.
- The voting age should be lowered.
- Video games are too violent.
- History (or other subject _____) is an important subject in school.
- The UK should not give foreign aid to other countries.
- People should be fined for not recycling.
- Parents should be allowed to choose their baby's gender.
- Animal testing should be banned.
- Drone attacks against specific targets are a necessary part of modern warfare.
- School uniform is unnecessary.

When thinking about your own topics, consider the following…

- Is there a charity which is close to your own heart?
- Is there a sport you love which more people should be aware of, or should it be in the Olympics?
- Is there a disease which has affected you or your family you would like to raise awareness of?
- Has something the government has done angered you?
- Is there a change you would like to bring about?

Success Criteria for Your Speech

Delivering your speech…

✓Confidence.
✓Clear and articulate.
✓Uses persuasive techniques to affect the audience.
✓Body language / gestures used.
✓Makes eye contact with the audience (you!)
✓Puts across a detailed and well-planned speech.

Writing & Planning your speech…

- When it is delivered, it should last for between one and two minutes.
- It should contain many techniques from A FOREST.
- It should be structured properly and put across several different arguments.
- It should be written up neatly, so you are able to read it to the class clearly.

Structuring Your Speech

1. Say what your issue is and set out your argument.
2. Give two or three persuasive reasons why your argument is correct.
3. Give one reason why people might disagree with you, but ensure you then explain why this isn't correct.
4. Give a final persuasive reason why your argument is correct.
5. Thank your audience for listening and remind them what they should be thinking and feeling.

When writing a speech, be persuasive; use A FOREST to help with this…

A F O R E S T

ALLITERATION (WORDS BEGINNING WITH THE SAME SOUND) EFFECT: EMPHASISES/FOCUSES ATTENTION ON POINT
"A really rich and rewarding opportunity"

ANECDOTE A SHORT PERSONAL STORY/MEMORY EFFECT: ADDS AUTHENTICITY/RELATABILITY. CAN BE EVOCATIVE
"I'll always remember year 7, because that was the year I was horrendously bullied. I know what it feels like to…"

FACTS (SOMETHING WE KNOW OR HAVE PROVEN TO BE TRUE) EFFECT: ADDS PLAUSIBILITY TO AN ARGUMENT
"We know/it has been proven/research has shown that… English is the best subject."

OPINION (ADVICE/PERSONAL VIEW) EFFECT: ADDS PERSONAL/RELATABLE EVIDENCE/INVESTMENT
"I strongly believe that we need to…"

RHETORICAL QUESTIONS (QUESTION ASKED FOR EFFECT). EFFECT: ENGAGE, PROVOKES THOUGHT
"How many more elephants have to die before we start enforcing harsher punishments on the ivory trade?"

REPETITION (REPEATING INFORMATION) EFFECT: EMPHASIS & CLARITY
"It is everybody's responsibility to keep our school clean, and everybody can do more."
"Research has found that 65% of girls…" "If 65% of girls are more likely too…"

EMOTIVE LANGUAGE (ENGAGES AUDIENCES/READER'S EMOTIONS) EFFECT: HELPS CREATE SUPPORT/OPPOSITION
"An innocent bystander was brutally attacked by a violent thug by Tesco's last Tuesday."

EXAGERATION/HYPERBOLE (STATEMENTS/CLAIMS NOT TO BE TAKEN SERIOUSLY) EFFECT: DRAMATIC, HEIGHTENS EMOTIONS, MORE INTENSE
"I died from laughing when I learnt that…" "This week I had six tonnes of homework to do – it's too much!"

STATISTICS (PERCENTAGES, FRACTIONS) EFFECT: ADDS PLAUSIBILITY AND GARNERS SUPPORT FOR ARGUMENT.
"74% of people agree..."

THREE (RULE OF) (LISTING IN GROUPS OF THREE) EFFECT: MEMORABLE, CONCISE, EMPHASIS
"Fast, convenient and secure".

TONE (THE ATTITUDE OF A PIECE OF WRITING) EFFECT: DRAWS IN THE AUDIENCE
Sincere, ironic, sarcastic, sentimental, enthusiastic, apathetic, bossy, instructive, assertive, outraged…

Public Speaking Unit – Knowledge Organiser

Structuring Your Speech

1. Say what your issue is and set out your argument.
2. Give two or three persuasive reasons why your argument is correct.
3. Give one reason why people might disagree with you, but ensure you then explain why this isn't correct.
4. Give a final persuasive reason why your argument is correct.
5. Thank your audience for listening and remind them what they should be thinking and feeling.

Say what your issue is and set out your argument.
I am here today to talk to you about why every person in our society should be a vegetarian. I know that not everyone will want to be a vegetarian, but I hope to explain why it would be better for society if we were.

Give two or three persuasive reasons why your argument is correct.
According to the U.N., it is estimated that the meat, egg, and dairy industries account for an astonishing 65 percent of worldwide nitrous-oxide emissions. Nitrous Oxide is a greenhouse gas for more potent than Carbon Dioxide. Surely nobody here is a climate change denier? Surely we all want to ensure we leave behind a world safe for our children and their children after them?

Give one reason why people might disagree with you, but ensure you then explain why this isn't correct.
Of course some people would argue that vegetarianism is a personal choice and we should not be forced to change our lifestyle. But I would remind these people that smoking in public places was once a personal choice. Fox hunting was once a personal choice. In fact, slavery was once a personal choice – would we ever suggest that these changes have made society a worse place?!

Thank your audience for listening and remind them what they should be thinking and feeling.
Thank you for taking the time to listen to me today, I am adamant that for intelligent people like yourselves, the conclusion is obvious: vegetarianism can save our planet from destruction.

Persuasive speech techniques: Martin Luther King - I have a dream

Introduction engages the audience

Moves through first person (I), second person (you) and returns to first person plural (we) to engage and draw in listeners

Use of a 'catchy' phrase to stick in memory

I am happy to join with you today in what will go down in history as the greatest demonstration for freedom in the history of our nation.

I am not unmindful that some of you have come here out of great trials and tribulations. Some of you have come fresh from narrow jail cells. Some of you have come from areas where your quest for freedom left you battered by the storms of persecution and staggered by the winds of police brutality. You have been the veterans of creative suffering. Continue to work with the faith that unearned suffering is redemptive.

Go back to Mississippi. Go back to Alabama. Go back to South Carolina. Go back to Georgia. Go back to Louisiana. Go back to the slums and ghettos of our northern cities, knowing that somehow this situation can and will be changed. Let us not wallow in the valley of despair.

I say to you today, my friends, so even though we face the difficulties of today and tomorrow, I still have a dream. It is a dream deeply rooted in the American dream.

I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self-evident: that all men are created equal."

I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood.

I have a dream that my four little children will one day live in a nation where they will not be judged by the colour of their skin but by the content of their character.

I have a dream today.

And when this happens, When we allow freedom to ring, when we let it ring from every village and every hamlet, from every state and every city, we will be able to speed up that day when all of God's children, black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing in the words of the old Negro spiritual, "Free at last! free at last! thank God Almighty, we are free at last!"

Short sharp sentences - particularly those combined with repetition create impact

Imperative commands

Use of repetition

Vocabulary & ideas which appeal to the audience involved.

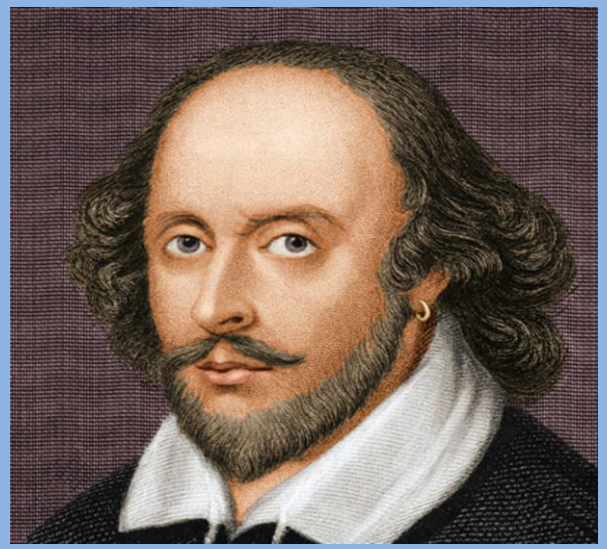
Rule of Three: repetition of a phrase three times helps it to slip into the memory.

A rousing closing - virtually invites the audience to applaud

YR 7 INTRODUCTION TO SHAKESPARE

WHY DO WE STUDY SHAKESPEARE?

Shakespeare has had a huge influence over literature, the English language, and Western Culture so it is important to have an awareness and an understanding of his work. His writing is very skillful and covers a large number of genres (e.g. poems, plays, comedies, histories, and tragedies). In addition to this, his writing covers themes that are still relevant today such as jealousy, revenge, the pursuit of power, and many different kinds of love. In other words Shakespeare wrote about what it means to be human.



FACT FILE

Full name: William Shakespeare
Born: 1564 (baptised 26th April), Stratford-Upon-Avon
Died: 23rd April 1616, Stratford-Upon-Avon
Occupation: Poet, actor, playwright, theatre owner
Place of work: London
Wife: Anne Hathaway (married 1582)
Children: Susanna (1583-1649), Judith (1585-1662), and Hamnet (1585-1596).

Sadly, we don't know much about Shakespeare's life. There is no record about where he was or what he was doing between 1585 and 1591 (these are referred to as 'the lost years') but by 1592 he was working in London and he is thought to have divided his time between there and Stratford-Upon-Avon. His wife and children did not move to London with him but stayed at the family home in Stratford-Upon-Avon.

Shakespeare became hugely successful during his lifetime – his plays were often performed for the monarch and they drew enormous crowds to his theatre, The Globe. He wrote at least 38 plays, 154 sonnets and 2 long narrative poems.

TERMINOLOGY

Act – a play is divided into sections called Acts, based on the events of the plot.

Scene – Acts are divided into smaller sections called Scenes, based on which characters/settings are needed.

Character – the people who are represented in the play.

Protagonist – the central or main character in the play.

Antagonist – a character who opposes the protagonist an places obstacles in his/her way.

Soliloquy – a character thinks aloud or talks to himself, usually they are alone on stage but if other characters are present they cannot hear what is said.

Monologue – a long speech by one character which can be heard by other characters on stage.

Aside – a character makes a brief remark aloud which is unheard by other characters in the scene, this shows the audience that character's thoughts.

Stage directions – instructions by the writer about the setting or performance of the play, usually written in italics.

Foreshadowing – when the writer gives the audience a hint of what is to come later in the play.

Shakespeare's Theatre

Just like us, people living in Shakespeare's time wanted to be entertained. Remember that electricity had not yet been discovered so there were no T.V.s, computers or cinemas; live entertainment was the only option.

Popular Elizabethan entertainments included bear baiting and bull baiting where trained dogs were set upon a tethered bear or bull. Another common blood sport was cockerel fighting which involved two cockerels fighting each other in a special enclosure called a cockpit. Elizabethans loved to bet on the outcomes of these bloodthirsty activities.

Watching plays and performances at the theatre was another very popular pastime. From the 1570's the first purpose built theatres appeared in London. These were largely open air to make the most of the daylight. They were also huge holding 2,500 -3000 people.

Shakespeare's theatre company the Lord Chamberlain's Men built their own theatre , the Globe Theatre, in 1599, south of the river Thames in a district called Bankside. You can visit a recreation of this theatre in Bankside today. The Globe was shaped like a giant ring doughnut with covered seating around the sides for the well off and a large open air section in the centre where the poorer members of the audience stood (they were nicknamed the groundlings).

The theatre would have been very noisy and rowdy so plays needed to capture and hold the audience's attention. The stage jutted out into the audience and it was not uncommon for the actors to have to deal with heckling and things being thrown at them.

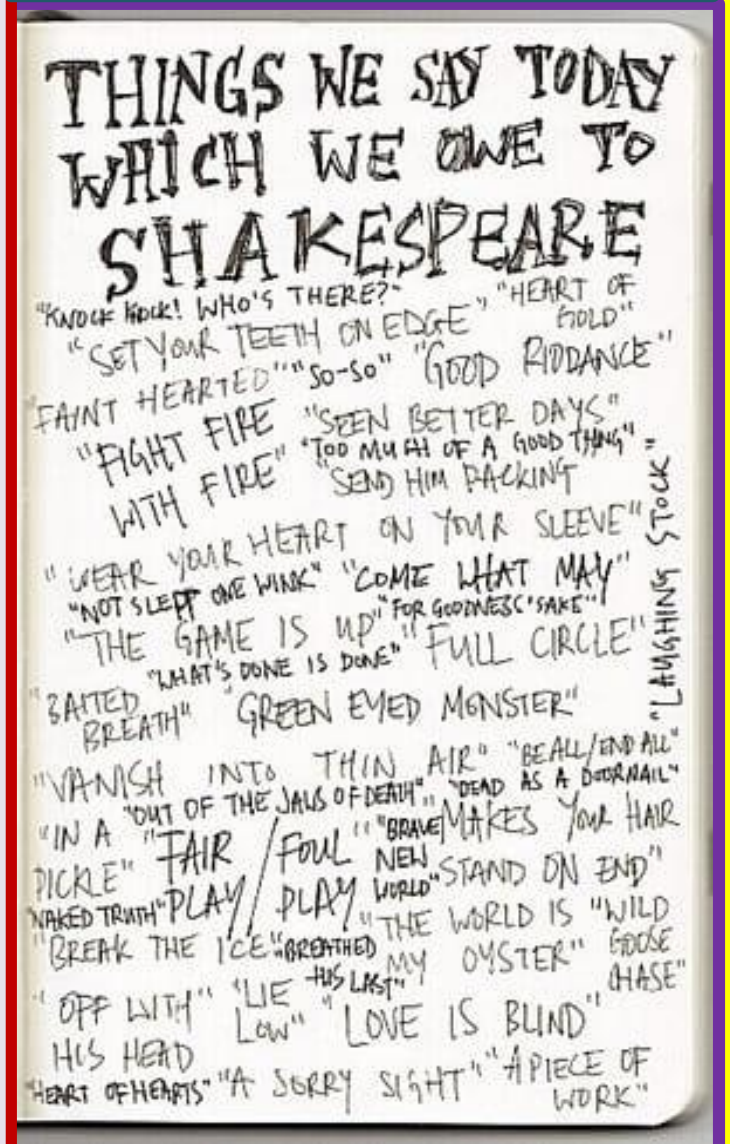
In the winter plays were sometimes performed at smaller, indoor venues which were more expensive and exclusive. Blackfriars theatre was often used by Shakespeare's company.

In addition to the public performances, Shakespeare's plays were also performed for both Queen Elizabeth I and James I at their palaces. Royal patronage was very important and it is further evidence of how popular Shakespeare's work was at the time.

Shakespeare's Language

Shakespeare invented or introduced 1,700 words to the English language – here are just a few of them: alligator, bedroom, critic, downstairs, eyeball, fashionable, gossip, hurry, lonely, nervy, zany.

He also invented many common phrases…



Shakespeare's plays are often divided into the following categories:

The Comedies

The comedies have common elements: they involve lovers and they almost always have a happy ending. Examples include: Twelfth Night, As You Like It, Much Ado About Nothing, The Merchant of Venice, and A Midsummer Night's Dream.

The Tragedies

All the tragedies have a hero (or protagonist) that must overcome external and internal obstacles. Often, the protagonist has a 'tragic flaw' that leads to his ultimate destruction. A good example is Macbeth, whose evil ambition for the throne overtakes him and causes his downfall. Other examples include: Romeo and Juliet, King Lear, Hamlet, and Othello.

The Histories

The history plays are based on real historical figures. Shakespeare received most of his information and plot ideas from one book, Holinshed's Chronicles of England, Scotland, and Ireland. The central theme of the history plays is the gain and loss of power, and, in particular, the theme of divine right. Shakespeare spends a lot of time discussing what makes a good, wise, and successful ruler in his history plays.
Examples include: Henry VI Parts 1, 2, and 3, Henry IV, Parts 1 and 2, Henry V and Richard III

The Romances

Sometimes Shakespeare's late comedies are grouped together as romances. These are Pericles, Cymbeline, The Winter's Tale, and The Tempest. These plays, at times, seem more like tragedies than comedies, but they have the standard 'happy ending'.

Historical context

Shakespeare lived in interesting times – it was the end of what is know as the **Renaissance** period (which means rebirth) when European interest in art, science and exploration was revived. **Religion** was also a hot topic throughout his life because tensions between Protestants and Catholics continued.

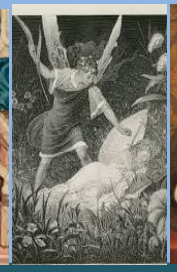
When Shakespeare was born **Queen Elizabeth I** was already on the throne and she remained in charge until her death in 1603. During this time **Sir Francis Drak**e became the first explorer to circumnavigate the globe (sail all the way round the world), England defeated the **Spanish Armada**, the **potato** was introduced to Britain, and there were several outbreaks of the **plague**. When **James I** became King he was already **King of Scotland** and he ordered the creation of the **Union Jack flag**. Early in James' reign **Guy Fawke**s and others were involved in the attempted assassination of the King through the **Gunpowder Plot**.

Interestingly, belief in the **supernatural** was common throughout Shakespeare's lifetime. People absolutely believed in ghosts, fairies, witches and potions.

Shakespeare's writing shows the influence of all these events and beliefs. Many of his plays would have seemed quite topical when they were written.









Timeline showing when Shakespeare's plays are thought to have been written

1591 or earlier
The Taming of the Shrew
The Two Gentlemen of Verona
Titus Andronicus

1592:
Henry VI: Part II
Henry VI: Part III
Henry VI: Part I
Richard III

1594:
The Comedy of Errors

1595:
Midsummer Night's Dream
Love's Labour Lost
Romeo and Juliet
Richard II

1596:
King John
Merchant of Venice

1597:
Henry IV: Part I
Henry IV: Part II

1598:
Much Ado about Nothing

1599:
Henry V
As You Like It
Julius Caesar

1600:
Hamlet

1601:
The Merry Wives of Windsor
Twelfth Night
Troilus and Cressida

1604:
Othello
Measure for Measure

1605:
All's well that Ends Well
King Lear
Timon of Athens

1606:
Macbeth
Antony and Cleopatra

1608:
Coriolanus
Pericles

1610:
Cymbeline

1611:
The Winter's Tale
The Tempest

1613:
Henry VIII

1614:
The Two Noble Kinsmen

Act and Scene – Clarifies where in the play this part of the script is from.

Scene location – Gives the reader the place the scene is set.

ACT I SCENE I *A desert place.*

[Thunder and lightning. Enter three Witches]

First Witch	When shall we three meet again	
	In thunder, lightning, or in rain?	
Second Witch	When the hurlyburly's done,	
	When the battle's lost and won.	
Third Witch	That will be ere the set of sun.	5
First Witch	Where the place?	
Second Witch	Upon the heath.	
Third Witch	There to meet with Macbeth.	
First Witch	I come, graymalkin!	
Second Witch	Paddock calls.	10
Third Witch	Anon!	
ALL	Fair is foul, and foul is fair:	
	Hover through the fog and filthy air.	

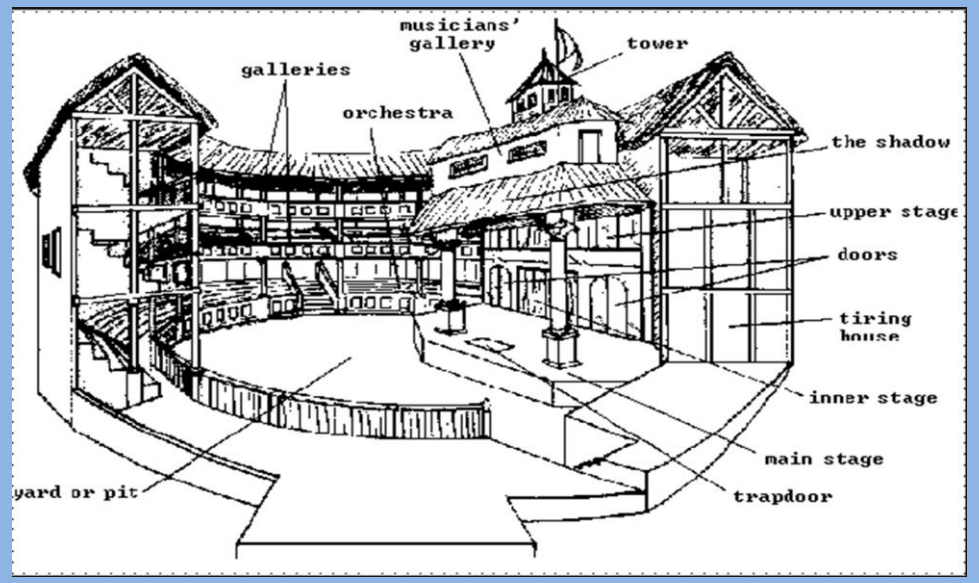
Stage directions – There are a range of stage directions (see page 9). The most common at the start of a scene are which characters should enter.

Lines of the play – The key part we analyse in a play. The words the actors speak on stage, sometimes with stage directions to the actor to instruct them exactly **how** to say the line.

Line number – Every line is given a line number to aid the actor/director/reader. So this line would be 1.1.10 – act 1, scene 1, line 10.

Character – This indicates who speaks each line, with ALL indicating all characters.

SHAKESPEARE'S THEATRE…THE GLOBE



WHAT DOES A PLAY SCRIPT LOOK LIKE? HOW IS IT DIFFERENT TO TEXTS WE ARE USED TO?

Year 7 Maths Term 3 & 4

Command Words in Maths questions

These words are the clue to what the examiner expects you to do. Remember to always show your workings. You can get marks for it, even if you get the final answer wrong.

TECHNICAL VOCABULARY	
Factor	A number which divides exactly into another.
Multiple	A multiple is a number made by multiplying two other numbers.
Prime	A prime number has exactly two factors.
Integer	The positive and negative whole numbers.
Estimate	Usually a calculation where the numbers have been rounded before the operation is performed.
Index (indices plural)	An index is a power or exponent.
Square root	Is the number that was multiplied by itself to get the square number.
Square number	Is a number that has been multiplied by itself.
Cube number	Is a number that is multiplied by itself then again by the original number.
Cube root	Is the number that was multiplied by itself and itself again to get the cube number
Numerator	The number on the top of the fraction. Shows how many part there are.
Denominator	The number on the bottom of the fraction. Shows how many equal parts the item is divided into.
Common denominator	When two or more fractions have the same denominator.
Equivalent	Having the same value
Inverse	The opposite mathematical operation.
Reciprocal	The number produced by dividing 1 by a given number
Odd	An integer that cannot be divided exactly by two.
Even	An integer that can be divided exactly by two.

	Divisibility Test
2	Even
3	Digits sum to a multiple of 3
4	Last 2 digits are divisible by 4
5	Ends in 5 or 0
6	Divisible by 2 and 3
8	Can be halved 3 times
9	Digits sum to a multiple of 9

Millions	Hundreds of thousands	Tens of thousands	Thousands	Hundreds	Tens	Units	Tenths	Hundredths	Thousandths
1000000	100000	10000	1000	100	10	1			
M	HTh	TTh	Th	H	T	U	$^1/_{10}$	$^1/_{100}$	$^1/_{1000}$
5	2	9	7	8	2	1	6	0	3

Five million, two hundred and ninety seven thousand, eight hundred and twenty one point six zero three.

12 X 12 Multiplication Table

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

Squares

$1^2 = 1 \times 1 = 1$	$5^2 = 5 \times 5 = 25$	$9^2 = 9 \times 9 = 81$
$2^2 = 2 \times 2 = 4$	$6^2 = 6 \times 6 = 36$	$10^2 = 10 \times 10 = 100$
$3^2 = 3 \times 3 = 9$	$7^2 = 7 \times 7 = 49$	$11^2 = 11 \times 11 = 121$
$4^2 = 4 \times 4 = 16$	$8^2 = 8 \times 8 = 64$	$12^2 = 12 \times 12 = 144$

Square Roots

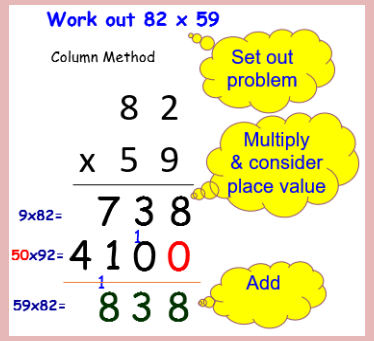
$\sqrt{1} = \pm 1$	$\sqrt{25} = \pm 5$	$\sqrt{81} = \pm 9$
$\sqrt{4} = \pm 2$	$\sqrt{36} = \pm 6$	$\sqrt{100} = \pm 10$
$\sqrt{9} = \pm 3$	$\sqrt{49} = \pm 7$	$\sqrt{121} = \pm 11$
$\sqrt{16} = \pm 4$	$\sqrt{64} = \pm 8$	$\sqrt{144} = \pm 12$

Websites to help you with understanding and revision

- HegartyMaths.com
- CorbettMaths.com
- Trafalgar Maths Site
- Maths Genie
- Maths Bot

Written Multiplication - Integers

- Consider place value and add a 0 on the second line
- Include your carries



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Multiplying and Dividing Negatives

When multiplying or dividing two numbers, if the signs are the same the answer is positive
If the signs are different, then the answer is negative

+ x + = +	Examples:	+ ÷ + = +
− x − = +	1) −7 x 5 = -35	− ÷ − = +
+ x − = −	2) −3 x −7 = 21	+ ÷ − = −
− x + = −	3) 24 ÷ −8 = −3	− ÷ + = −
	4) −30 ÷ −5 = 6	

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Short Division ("Bus Stop")

Division into an integer

2931 ÷ 3 = 977

```
  0 9 7 7
3 ) 2 9 3 1
```

Division into an integer with remainder

1985 ÷ 4 = 1) Continue ÷ into decimals 496.25

2) Remainder as fraction $496\frac{1}{4}$

```
  0 4 9 6.2 5
4 ) 1 9 8 5.0 0 0
```

e.g."1 out of 4" is left over

Division into a decimal

27.6 ÷ 6 = 4.6

```
  0 4 . 6
6 ) 2 7 . 6
```

Division into a decimal with "remainder"

57.2 ÷ 8 = 7.15

```
  0 7 . 1 5
8 ) 5 7 . 2 0
```

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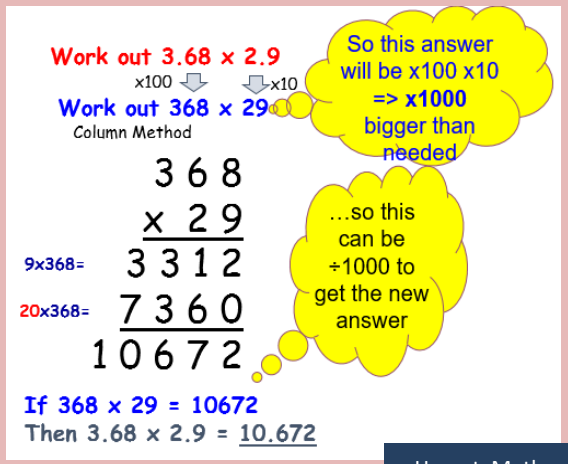
Written Multiplication - Decimals

- Multiply both decimals by a power of 10 to change them to integers
- Divide by the same power of 10 to obtain your final answer



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Long Division

2829 ÷ 23 = 123

```
      1 2 3
23 ) 2 8 2 9
     - 2 3
       5 2
     - 4 6
       6 9
     - 6 9
         0
```

Show the subtraction problem that finds the "carry"

Rather than squeeze the "carry" under the bus-stop, bring down the next digit to the carry. The number you need to divide into now can be clearly seen.

Dividing by a decimal

- Change the number you are dividing by into an integer by multiplying by a power of 10.
- Multiply the dividend by the same power of 10.
- There is no need to alter you answer at the end.

Example: Calculate 6.4 ÷ 0.08	6.4	÷	0.08
Step 1: Multiply both numbers by 100	x100		x100
Step 2: Calculate the answer	= 640	÷	8 = 80

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B	Do brackets first
I	Then indices or square roots
D M	Then division and multiplication, reading from left to right
A S	Then add and subtract, reading from left to right

3 – 5 + 2 = 0 (not -4)
Add and subtract have the same precedence, so you read from left to right.

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Addition and Subtraction

Year 7 Maths Terms 3 Number

Mental Methods

Complements

Group numbers that add to a multiple of 10 together to make numbers simpler to add or subtract:

3 + 4 + 26 + 17

20 + 30 = 50

Partitioning

Break down the number you are adding so you can do the calculation in stages:

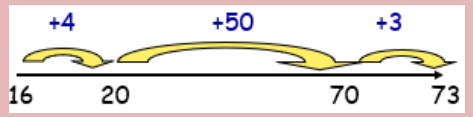
54 + 68 =

50 + 60 = 110
4 + 8 = 12
54 + 68 = 122

Counting on

Find the difference between two numbers by counting on from the smaller

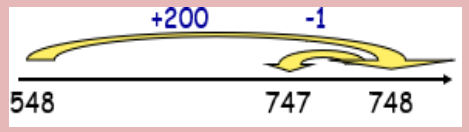
73 - 16 = 57



Compensation

Solve problems by adding or subtracting a near multiple of 10 then adjusting

548 + 199 = 747

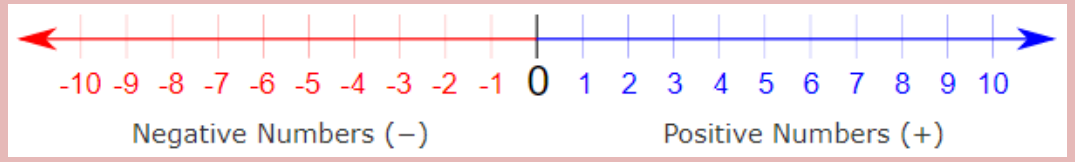


Estimation

When we estimate, we round to one significant figure. It is a good strategy to work out a rough size of a calculation.

Example
Estimate 0.724 + 0.849
Round each of them to 1 s.f.
Answer: **0.7 + 0.8 = 1.5**
This is an **under-estimate** as we rounded each number down.

Example
Estimate 374 + 297
Round each of them to 1 s.f.
Answer: **400 + 300 = 700**
This is an **over-estimate** as we rounded each number up.



Negative Numbers

+ + / – – } +

Same signs together give a positive: 3 + (+2) = 3 + 2 = 5
Same signs together give a positive: 3 – (-2) = 3 + 2 = 5

+ – / – + } –

Different signs together give a negative: 3 + (-2) = 3 – 2 = 1
Different signs together give a negative: 3 – (+2) = 3 – 2 = 1

Careful! This changes sign of the middle operation NOT the answer

Column Method – Addition

- Estimate your answer first.
- Remember to line up the columns by value.
  - Use the decimal points as the marker to line up the columns
  - Write decimals with the same number of decimal places – fill in with zeros as needed
- Add columns from right - "carry" tens to next column over …. and remember to add onto total for that column

543 + 379 =

```
  5 4 3
+ 3 7 9
  9 2 2
  1 1
```

5.4 + 3.79 =

```
  5 .4 0
+ 3 .7 9
  9 .1 9
  1
```

Column Method – Subtraction

- **Estimate** your answer first.
- Remember to line up the columns by value … and to write the number to be taken away on the bottom
  - Use the decimal points as the marker to line up the columns
  - Write decimals with the same number of decimal places – fill in with zeros as needed
- Subtract columns from right
  - If the bottom digit is bigger than the top, "take 10" from the next column over which has a digit > 0
  - Move "taken 10" back one column at a time to account for size!

543 - 379

```
  4 13 1
  ~~5~~ ~~4~~ 3
- 3 7 9
  1 6 4
```

9.1 - 2.76

```
  8 10 1
  ~~9~~ ~~1~~ 0
- 2 .7 6
  6 .3 4
```

5.04 - 3.79

```
  4 9 1
  ~~5~~ ~~0~~ 4
- 3 .7 9
  1 .2 5
```

Year 7 Maths Term 3 - Fractions

$\frac{3}{8}$

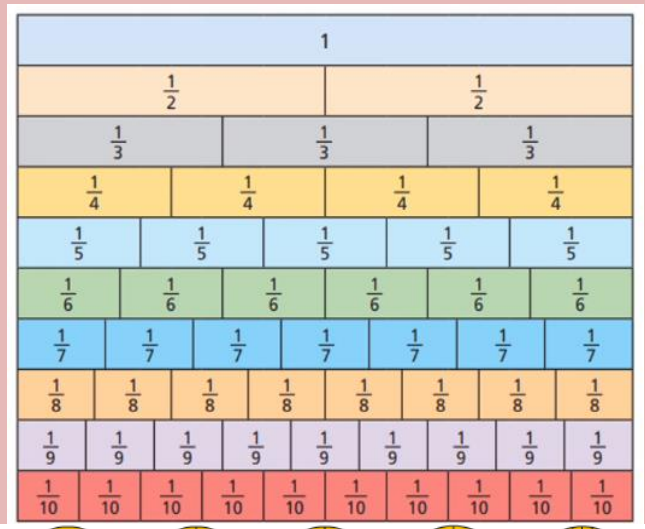
Numerator - how many equal parts are needed

Denominator - how many equal parts are there in the whole

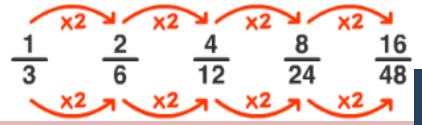
What do I need to be able to do?

To determine and generate equivalent fractions
To write fractions in their simplest form
To convert between improper fractions and mixed numbers
To add and subtract fractions
To multiply and divide fractions
To find a fraction of an amount
To find a whole given a fractional amount

Equivalent Fractions



You can make equivalent fractions by multiplying or dividing the numerator and denominator by the same number.



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Simplifying Fractions

Simplifying a fraction means finding an equivalent fraction where the numbers are reduced as much as possible.

To simplify a fraction, we divide the numerator and denominator by the same number, a common factor.

You could do this in multiple steps:

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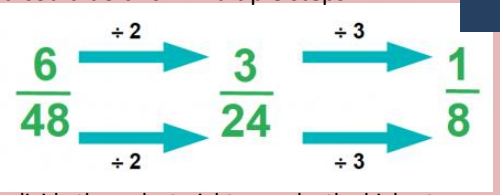
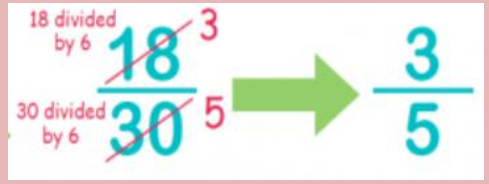
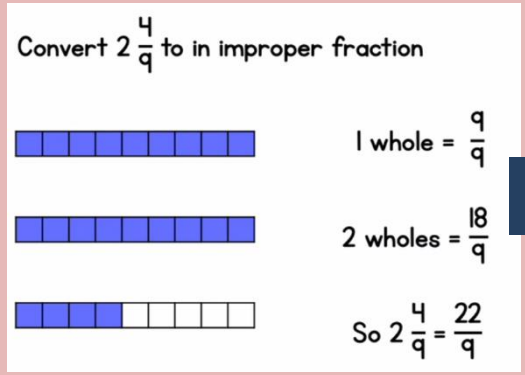


Or divide through straight away by the highest common factor:



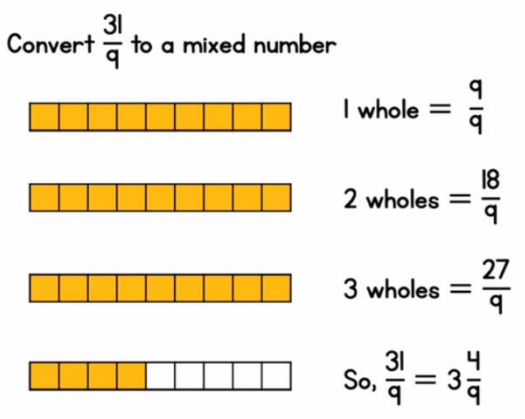
Mixed Numbers and Improper Fractions

An **improper fraction** is a 'top heavy' fraction where the numerator is bigger than the denominator



Or: Multiply the whole number by the denominator and add on the numerator.
2 x 9 + 4 = 22

HegartyMaths clips 63, 64



Or: Ask yourself how many times the denominator fits into the numerator, with what remainder? 31 ÷ 9 = 3 with 4 remaining.

Keywords:

Numerator	Multiple
Denominator	Convert
Whole	Mixed Number
Equivalent	Improper
Simplify	Lowest Common Multiple
Common Factor	Reciprocal
	Original

Adding and Subtracting Fractions

HegartyMaths clips 65, 66

To add or subtract fractions you need to have common denominator.

You can only add or subtract the numerators when the denominators are the same.

$$\frac{7}{15} - \frac{2}{5} = \frac{7}{15} - \frac{6}{15} = \frac{1}{15}$$

(×3) (×3)

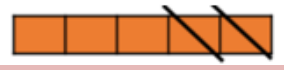
$$\frac{1}{4} + \frac{3}{10} = \frac{5}{20} + \frac{6}{20}$$

(×5) (×2) (×5) (×2)

When the denominators are different, find the lowest common multiple of the two numbers and re-write the fraction using this as the denominator. What ever you do to the denominator, you do to the numerator, to ensure the fractions are equivalent to the original.

$$\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$$

$$\frac{5}{5} - \frac{2}{5} = \frac{3}{5}$$



Multiplying Fractions

To multiply fractions, you simply multiply the numerators, multiply the denominators and simplify if needed.

$$\frac{1}{4} \times \frac{2}{3} = \frac{1 \times 2}{4 \times 3} = \frac{2}{12} = \text{reduces to } \frac{1}{6}$$

$$1\frac{3}{4} \times 2\frac{1}{2} = ?$$

1x4 + 3 = 7

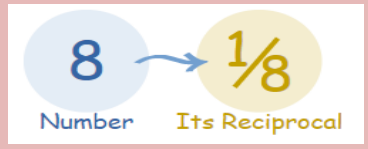
2x2 + 1 = 5

$$\frac{7}{4} \times \frac{5}{2} = \frac{35}{8} = 4\frac{3}{8}$$

HegartyMaths clips 68, 69

Dividing Fractions

Instead of dividing by a fraction, we multiply by the reciprocal. The product of a number and reciprocal is 1. So to get the reciprocal of a number, we divide 1 by the number. It is like 'flipping' the numerator and denominator.



To divide fractions:

1) Keep the first fraction the same.
2) Take the reciprocal of the second fraction.
3) Change the division sign to a multiplication sign and proceed to multiply the fractions.

$$\frac{2}{5} \div \frac{2}{3} = \frac{2}{5} \times \frac{3}{2} = \frac{2 \times 3}{5 \times 2} = \frac{6}{10} = \frac{3}{5}$$

take the reciprocal of the divisor

$$\frac{4}{7} \div 2 = \frac{4}{7} \times \frac{1}{2} = \frac{4 \times 1}{7 \times 2} = \frac{4}{14} = \frac{2}{7}$$

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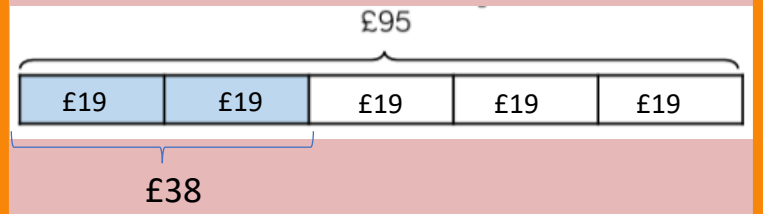
Fraction of an Amount

To work out $\frac{2}{5}$ of £95, you could use a bar model to help:



Or, without a diagram:

$\frac{1}{5}$ of £95 = £95 ÷ 5 = £19

So $\frac{2}{5}$ of £95 = 2 x £19 = £38

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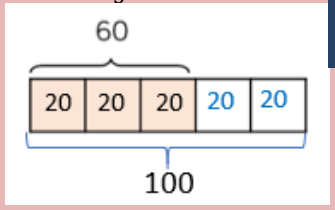
Finding a whole

If $\frac{3}{5}$ of a number is 60, what is the number?

Well, if $\frac{3}{5}$ is 60, then $\frac{1}{5}$ is 60 ÷ 3 = 20



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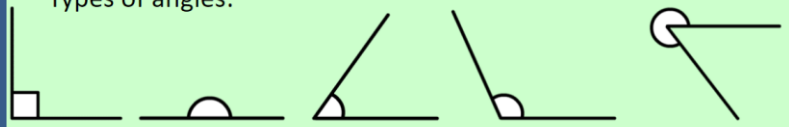
So the $\frac{5}{5}$ (a whole, which is the original number) must be 5 x 20 = 100

Year 7 Maths Term 4: Geometry, constructions and properties of shape

Types of angles:

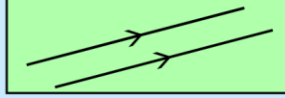


Right angle	Straight Line	Acute Angle	Obtuse Angle	Reflex Angle
L shaped and is shown as a box	Straight Line	Smaller than right angle	Bigger than a right angle but smaller than a straight line	Bigger than a straight line, the angle is on the outside

HegartyMaths clip 455

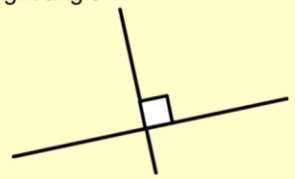
Parallel and Perpendicular Lines

Parallel lines are two lines which travel in the same direction
They are always the same distance apart and will never meet



Parallel lines are marked with arrows

Perpendicular lines meet at a right angle

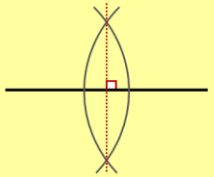


Drawing a Perpendicular Bisector of a Line

HegartyMaths clip 660

Bisecting a line means 'cutting it in half'
You need to use a set of compasses and a ruler to bisect a line

- Place the point of a compass on one end of the line and open it so that it is more past the halfway point of the line
- Draw an arc above and below the line
- Move the point of the compass to the other end of the line (keeping it the same size)
- Draw another arc above and below the line
- Join the points where the arcs cross with a ruler to form the perpendicular bisector

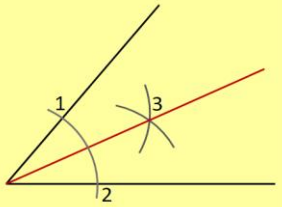


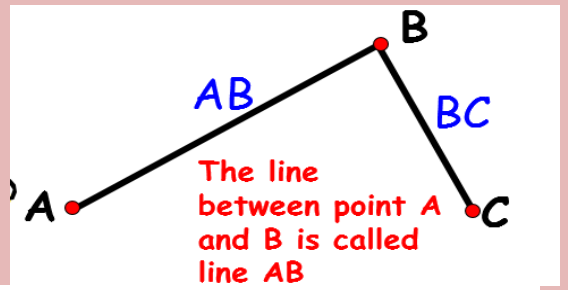
Bisecting an angle

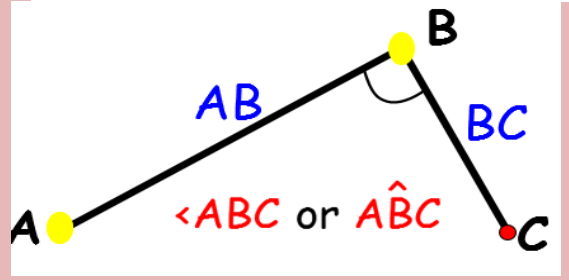
HegartyMaths clip 661

Bisecting a line means 'cutting it in half'
You need to use a set of compasses and a ruler to bisect a line

- Place the point of a compass at the corner of the two lines and extend open
- Place an arc through the both lines that are creating the angle
- Keeping the compass at the same width, place the compass where the arc crosses the line (1) and draw an arc
- Repeat the process from the other cross (2)
- Draw a line to the point where the two arcs cross to make the angle bisector

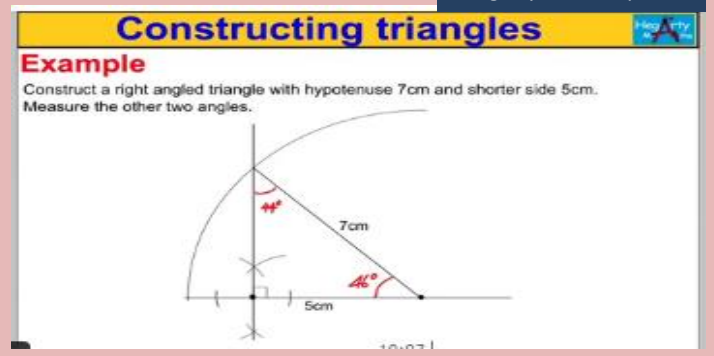


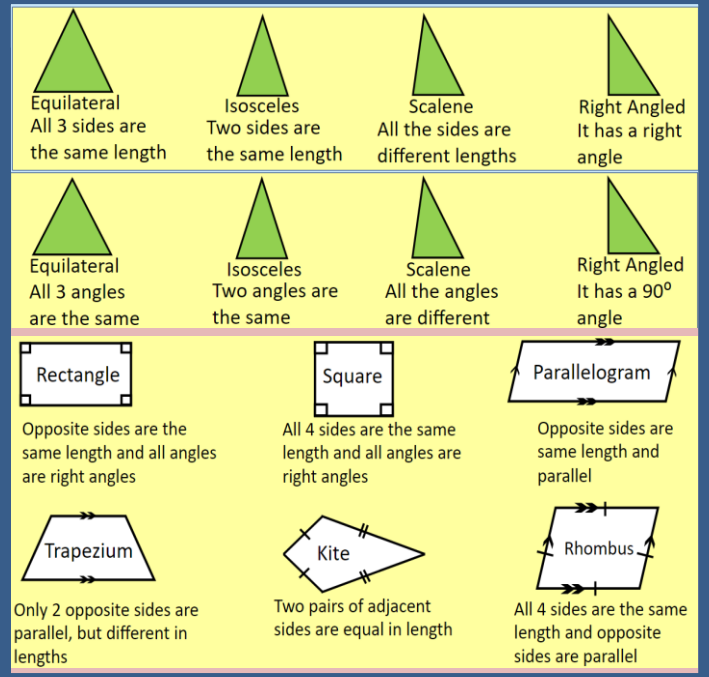




Construct triangles using protractor and compass.

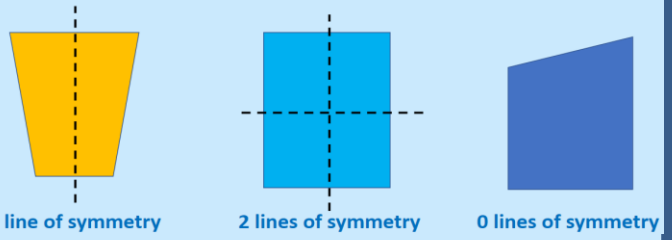
HegartyMaths clip 683





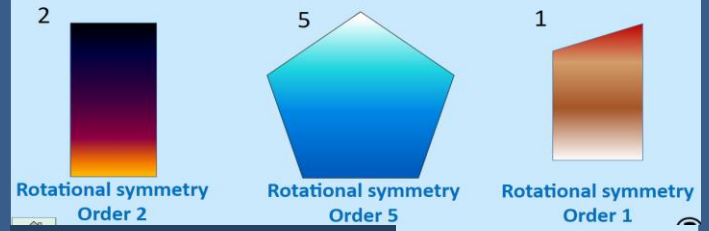
Reflection Symmetry

A shape is symmetrical if you can draw a line through it and it is the same both sides
If you fold the shape along the line, one side should fit on top of the other



Rotational Symmetry

A shape has rotational symmetry if it fits inside itself more than once when rotated
The order of rotational symmetry is the number of times the shape fits inside itself

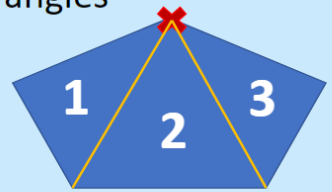


HegartyMaths clip 827 - 828

Year 7 Maths Term 4: Geometrical Reasoning

Angles in a Polygon

Any polygon can be split into triangles to find the sum of the interior angles



Step 1: Pick a corner

Step 2: Draw the lines to the other corners from the chosen point

Step 3: Multiple the number of triangles by 180°

Sum of Interior Angles = 3 x 180° = 540°

There are two fewer triangles than sides so:

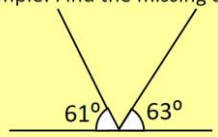
Sum of interior angles = (n – 2) x 180 n is the number of sides

HegartyMaths clip 477 to 479

Straight Lines

Angles on a straight line equal 180°

Example: Find the missing angle



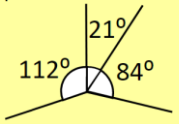
Subtract the know angles from 180°

180 – 61 – 63 = 56°

Around a Point

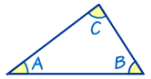
Angles around a point add up to 360°

Example: Find the missing angle?



Subtract the know angles from 360°

360 – 112 – 21 – 84 = 143°



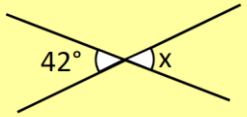
In a triangle, the three interior angles always add to 180°:

A + B + C = 180°

Vertically opposite, alternate, corresponding and co-interior angles

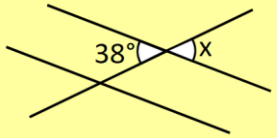
HegartyMaths clip 480 to 483

a)



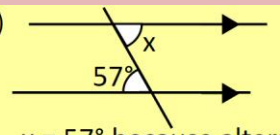
x = 42 because vertically opposite angles are equal

b)



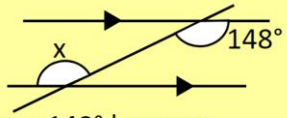
x = 38 because vertically opposite angles are equal

a)



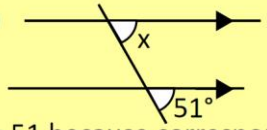
x = 57° because alternate angles are equal

b)



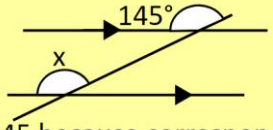
x = 148° because alternate angles are equal

a)



x = 51 because corresponding angles are equal

b)

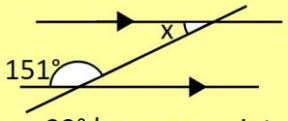


x = 145 because corresponding angles are equal

a)

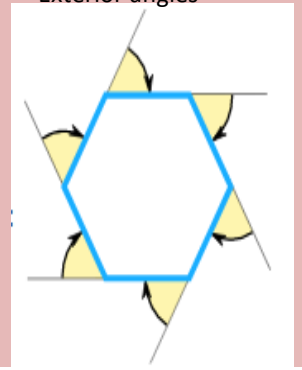
x = 130° because co-interior angles sum to 180°

b)

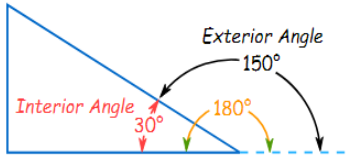


x = 29° because co-interior angles sum to 180°

Exterior angles



An Interior Angle is an angle inside a shape



HegartyMaths clips 560 to 564

Interior & Exterior Angles

You can calculate the interior angle of any regular polygon by dividing the sum of the interior angles by the number of sides

Example: Calculate the size of the interior and exterior angles in a regular octagon

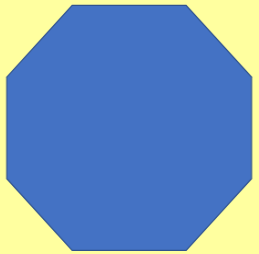
Sum of the interior angles = (8 – 2) x 180°

= 1080°

Interior angle = 1080° ÷ number of sides

= 1080° ÷ 8 = **135°**

Exterior angle = 180° – 135 = 45°



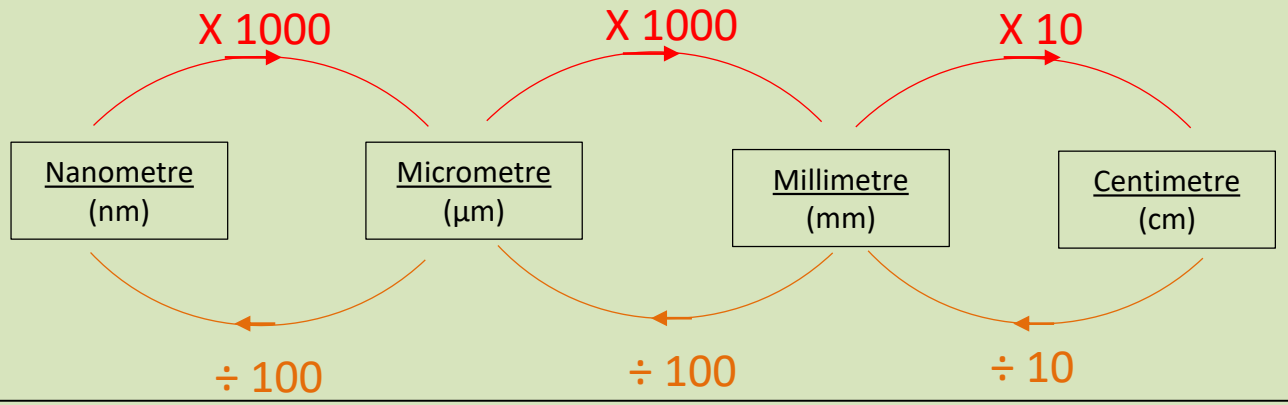
Exterior angle of a regular shape can also be calculated by dividing 360 by the number of sides 360° ÷ 8 = 45°

Science: Useful Information

Key Word / Term	Definition
Accuracy	Results are close to the true value
Precision	Results are similar to each other but not necessarily close to the true value
Repeatable	Similar results are obtained if the investigation is done again by the same person
Reproducible	Similar results are obtained if it is repeated by a different person
Resolution	Is the smallest change a measuring instrument can detect
Validity	A measure of how correct the results of an experiment are

Prefix	Number	Standard Form	e.g. metres
Giga	1,000,000,000	$1x10^{9}$	Gm
Mega	1,000,000	$1x10^{6}$	Mm
kilo	1,000	$1x10^{3}$	km
----------	1	1	m
milli	0.001	$1x10^{-3}$	mm
micro	0.000001	$1x10^{-6}$	µm
nano	0.000000001	$1x10^{-9}$	nm

Converting units of measure:



Variables:

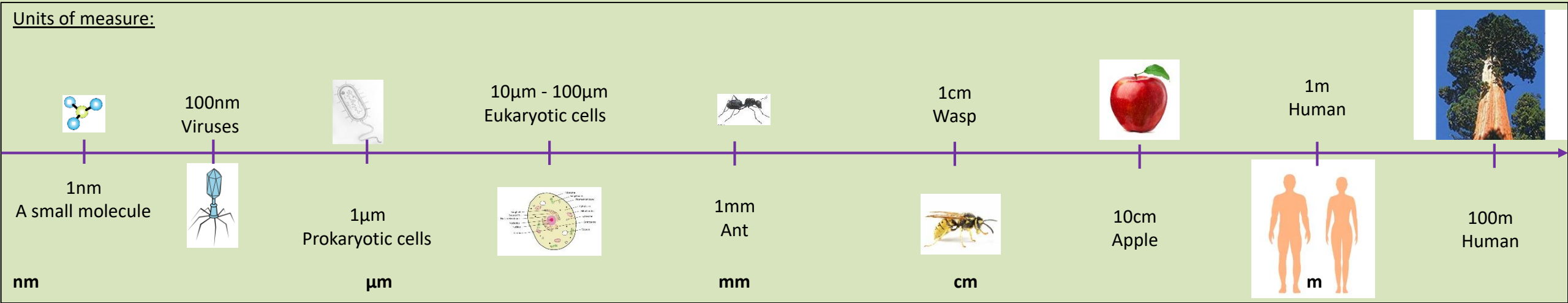
Independent: the variable that is being changed during the experiment

Dependent: the variable being tested or measured during the experiment

The independent variable affects the dependent variable, the others must be controlled

Control: Keep the same (there can be more than one control variable) so that they do not affect the independent variable

Units of measure:



The Periodic Table of Elements

KEY: RELATIVE ATOMIC MASS / Atomic Symbol / name / ATOMIC (PROTON) NUMBER

1	2											3	4	5	6	7	0
							1 H hydrogen 1										4 He helium 2
7 Li lithium 3	9 Be beryllium 4											11 B boron 5	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluroine 9	20 Ne neon 10
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulfur 16	35.5 Cl cholorine 17	40 Ar argon 18
39 K potassium 19	40 Ca calcium 20	45 Sc scandium 21	48 Ti titanium 22	51 V vanadium 23	52 Cr chromium 24	55 Mn manganese 25	56 Fe iron 26	59 Co cobalt 27	59 Ni nickel 28	63.5 Cu copper 29	65 Zn zinc 30	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36
85 Rb rubidium 37	88 Sr strontium 38	89 Y yttrium 39	91 Zr zirconium 40	93 Nb niobium 41	96 Mo molybdenum 42	[98] Tc technetium 43	101 Ru ruthenium 44	103 Rh rhodium 45	106 Pd palladium 46	108 Ag silver 47	112 Cd cadmium 48	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54
133 Cs caesium 55	137 Ba barium 56	139 La* lanthanum 57	178 Hf hafnium 72	181 Ta tantalum 73	184 W tungsten 74	186 Re rhenium 75	190 Os osmium 76	192 Ir iridium 77	195 Pt platinum 78	197 Au gold 79	201 Hg mercury 80	204 Tl thanllium 81	207 Pb lead 82	209 Bi bismuth 83	[209] Po polonium 84	[210] At astatine 85	[222] Rn radon 86
[223] Fr francium 87	[226] Ra radium 88	[227] Ac* actinium 89	[267] Rf rutherfordium 104	[270] Db dubnium 105	[269] Sg seaborgium 106	[270] Bh bohrium 107	[270] Hs hassium 108	[278] Mt meitnerium 109	[281] Ds darmstadtium 110	[281] Rg roentgenium 111	[285] Cn copernicium 112	[286] Nh nihonium 113	[289] Fl flerovium 114	[289] Mc moscovium 115	[293] Lv livermorium 116	[293] Ts tenessine 117	[294] Og oganesson 118

*the Lanthanides (atomic numbers 58-71) and the Actinides (atomic numbers 90-103) have been ommited. Relative antomic masses for Cu and Cl have not been rounded to the nearest whole number.

KS3 Biology: Plants and photosynthesis

Green plants and algae do not eat food to get their energy, instead they make their own food by a process called photosynthesis
Photosynthesis takes place inside chloroplasts, found within certain plant cells.

Chloroplasts contain a green pigment, called chlorophyll. This absorbs the light energy needed for photosynthesis to occur.

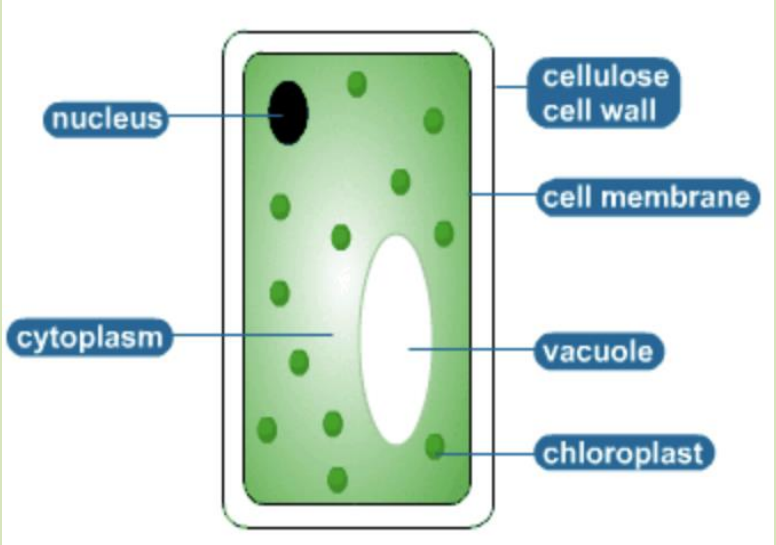
carbon dioxide + water → glucose + oxygen

$$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$$

Carbon dioxide enters through the **stomata** on the underside of the leaf. These are like pores in our skin.

Water is absorbed by the **root hair cells** and is transported to the leaf by the **xylem vessels** (like veins)

Oxygen is released through the stomata on the underside of the leaf; glucose is transported around the plant in the **phloem vessels** (also like veins)

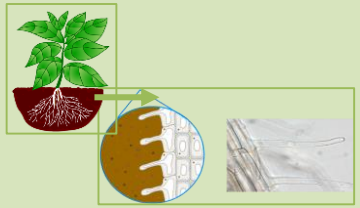


Root Function and Structure

Absorb water

Absorb minerals

Anchorage (hold the plant to the ground)



- The roots are covered with millions of tiny **root hair cells.**
- These have a **very large surface area**, allowing the roots to absorb large amounts of water and minerals.

How are leaves adapted for photosynthesis?

- They are **green** because they contain lots of chlorophyll to absorb sunlight.
- They have a **large surface area** to maximise the amount of sunlight they can absorb.
- They are **thin**, allowing easy diffusion of gases into and out of the leaf.
- They have **veins** (xylem and phloem) to allow the transport of water, mineral ions and glucose.

Keyword	Definition
Anthers	Produce make sex cells (pollen grains)
Chlorophyll	Green pigment in chloroplasts of plant cells. It enables photosynthesis to take place
Chloroplasts	Organelle found in plant cells, the site of photosynthesis
Lower Epidermis	Contains stomata to regulate the loss of water vapour (transpiration)
Nectary	Produce a sugary solution called nectar, which attracts insects
Ovary	Produces the female sex cells (contained in the ovules)
Palisade Mesophyll	Main region for photosynthesis. Contains lots of chloroplasts
Petals	Brightly coloured to attract insects
Photosynthesis	Process carried out where plants make their own food
Stamen	The male part of the flower (each consist of an anther held up on a filament)
Spongy Mesophyll	Cells are more loosely packed, contains air spaces allowing gas exchange
Stigma	The top of the female part of the flower which attracts pollen
Stomata	Hole on the leaf that are surrounded by a pair of guard cells that control the opening/closing of the hole
Upper Epidermis	Thin and transparent allowing light to through
Waxy Cuticle	Waxy layer found on the leaf, prevents water loss

Plant reproduction is called **pollination**. The pollen grains need to move to an anther of a different flower.
Pollination is carried out by insects or the wind.

Seed dispersal
The seeds must be spread away from each other and the parent plant. Seed dispersal is carried out by:
Animals – eat fruit and seed passes through the animal, or seeds stick to fur and fall off
Wind – seeds are blown to a different area
Water – seeds float to another area
Self propelled – seeds burst from their pod

Bioaccumulation can occur if organisms low in the food chain get poisoned and when they get eaten that poison is taken into the next organism. The poison can build up through the organisms in the chain.

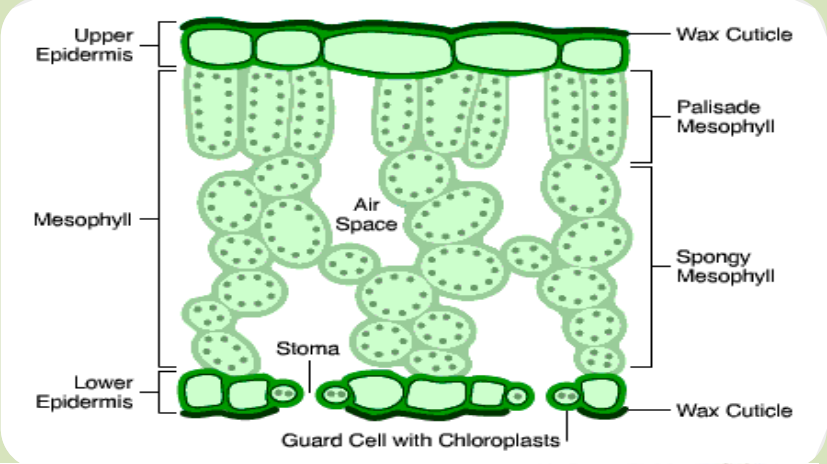
Leaf Function and Structure

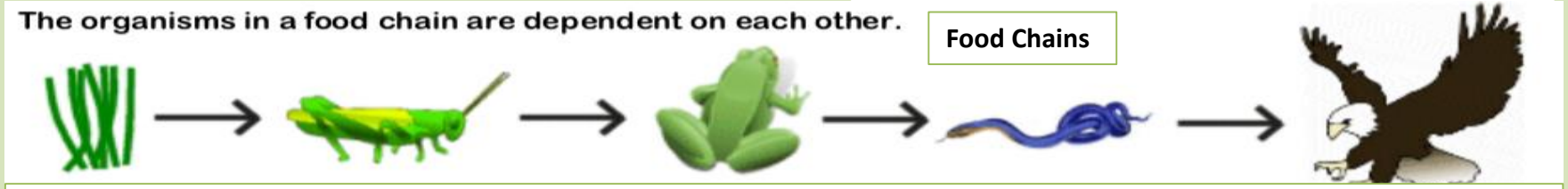
Absorb sunlight

Where photosynthesis takes place

To store glucose as starch

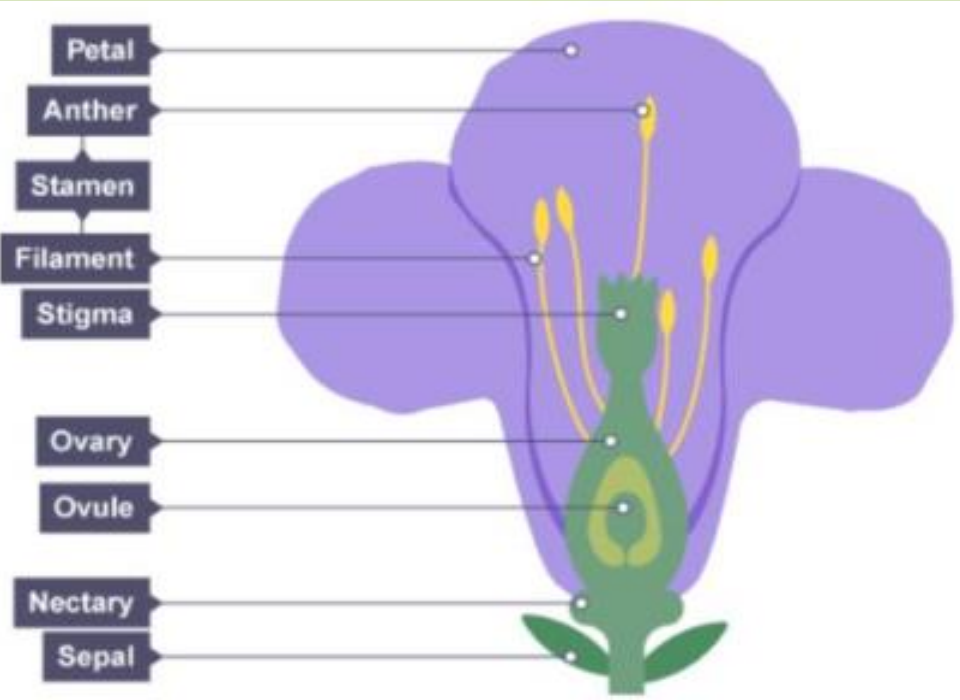
To absorb carbon dioxide into the plant and let oxygen out.





Food Chains

Eg) grass is eaten by the grasshopper, which is eaten from the frog, which is eaten by the snake, which in turn is hunted by the bird



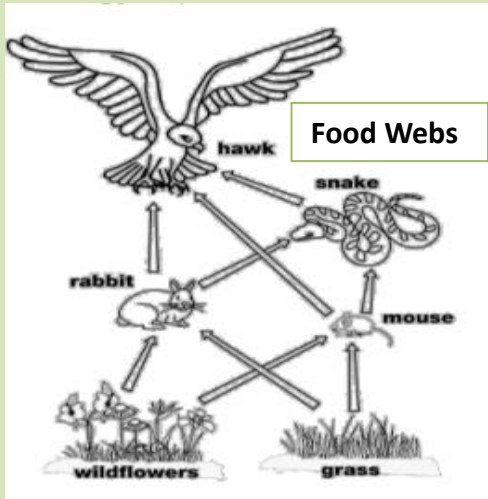
- **The grass is a producer in this food chain and producers are at the start.**
- **Grass captures the energy from the sunlight to photosynthesise and make glucose.**
- **Glucose provides energy for growth.**
- **Grasshopper eats the grass, the energy in the grass is transferred to grasshopper.**
- **This keeps happening down the food chain.**

Carnivore: eats meat
Herbivore: eats plants
Omnivore: eats plants and meat

Changes in the number of one organism in an area can affect the other organisms.
The number of plants in an area can be affected by the amount or rain, sunlight, minerals and space available to grow.
The number of animals can be affected by the availability of food habitats, mates, water and disease.

If the population of mice caught a disease, there would be more competition between the hawk and the snake to catch the rabbit.
This could cause the number of rabbits to decrease.

Food Webs



KS3 Physics: Current electricity and magnetism

Key word	Definition
Potential difference (voltage)	a measure of the energy given to the charge carriers in a circuit
Current	The movement of electrical charges (such as electrons moving through a wire)
Resistance	The opposition in an electrical component (such as a fuse or wire to the movement of electrical charge through it
magnet	A metal that attracts iron, cobalt and nickel
Electromagnet	a metal core made into a magnet by the passage of electric current through a coil surrounding it
Solenoid	cylindrical coil of wire acting as a magnet when carrying electric current
Static electricity	an imbalance of electric charges within or on the surface of a material. The charge remains until it is able to move away by means of an electric current

Introduction to circuits

Circuit Symbols

Symbol	Name
	Bulb
	Cell
	Battery
	Wire
M	Motor
	Switch
	Buzzer
V	Voltmeter
A	Ammeter

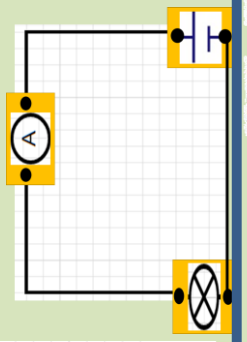
When looking at and drawing circuits we use symbols to represent common components that are used.

When talking about circuits we refer to three main factors. Current, potential difference (voltage) and resistance

Electric Current

Amps

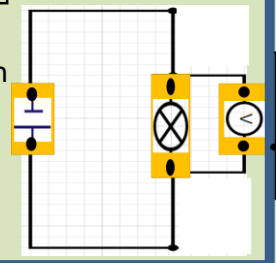
Is measured with a ammeter which can be used in series around the circuit. And is a measure of the amount of electric charge flowing through the circuit



Potential Difference

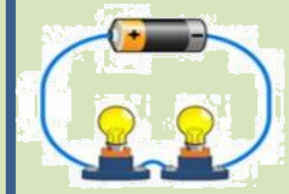
Volts

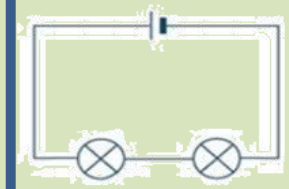
Is measured with a voltmeter . Potential difference is how much energy each charge has gained or lost across a component the voltmeter must be used in parallel to the circuit



Series and parallel circuits

Series circuits

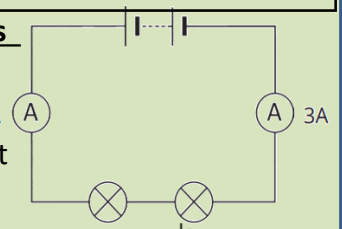




In a series circuit, the components are connected end to end in a loop as shown in the diagram. If one bulb breaks, none of the bulbs will be lit as the circuit is no longer complete.

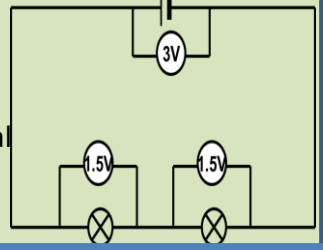
Electric Current in series circuits

The current is the same everywhere in a series circuit. It doesn't matter where you put the ammeter, it will always show the same reading.

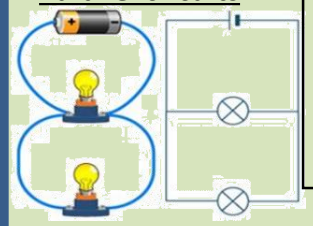


Potential difference in series circuits

In a series circuit, the voltage supplied by the battery is shared by the components. So, the sum of the potential difference across the components equals the battery voltage.



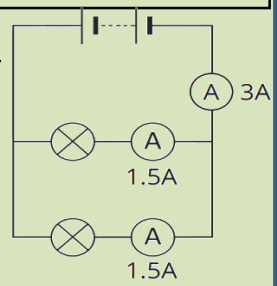
Parallel circuits



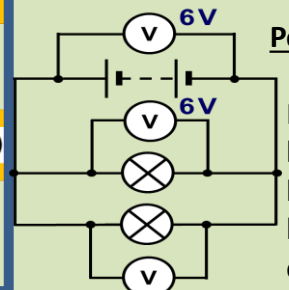
In a parallel circuit, the components are connected on separate branches. This gives the current several different paths to flow down. If one bulb stops working, the other bulbs will remain lit as the circuit is still complete

Electric Current in parallel circuits

In a parallel circuit, the current divides at the point where the circuit branches and then recombines to complete the circuit.



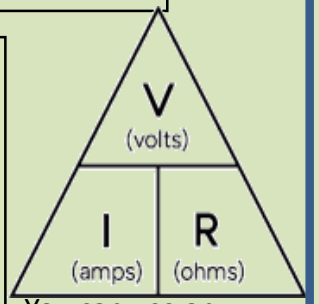
Potential difference in parallel circuits



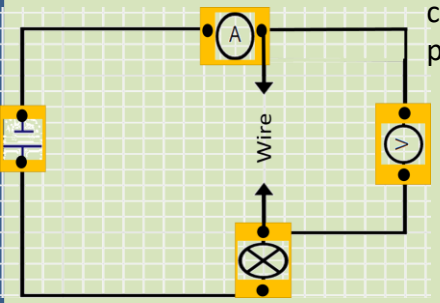
In a parallel circuit, the potential difference across each bulb is the same as the potential difference across the battery. This means that all the bulbs have the same brightness, and they are brighter than the same number of bulbs in a series circuit.

Resistance

Resistance is a measure of how hard it is for charges (electrons) to move in an electrical circuit.
Resistance is measured in ohms (Ω).
If there is high resistance there will be low current and low resistance will have a high Current.



You can use an ohmmeter to measure resistance **but** it can be calculated from the current and potential difference



You can test the resistance of different materials with this test circuit

Factors that can affect the resistance through a wire include:
- Temperature
- Thickness of wire
- Length of wire
Material of wire

Conductor

low resistance

Insulator

High resistance

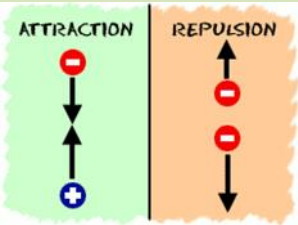
As the width of the wire increases, resistance decreases. This is because there is more space for the electrons to flow.

As the length of the wire increases, resistance increases because the electrons collide with more metal ions as they flow through the wire.

Static Electricity

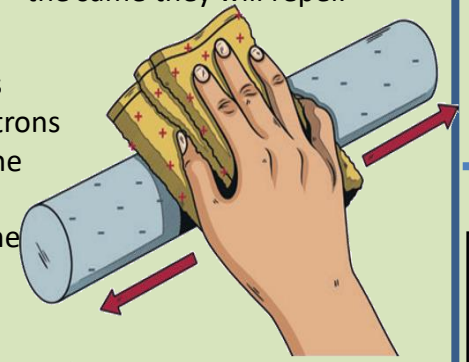
Static charge can build up when two insulating materials are rubbed together. Friction between the materials causes electrons to be transferred from one material to the other.

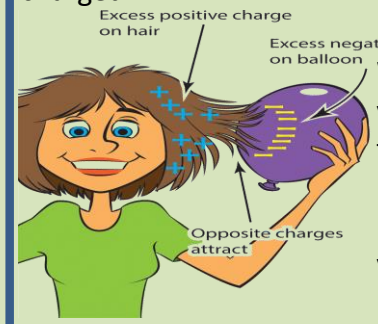
Electrons are negatively charged, so objects that <u>lose electrons become positively charged</u> overall, while <u>objects that gain electrons become negatively charged</u> overall.



If objects with different charges are near each other they will attract and if they are the same they will repel.

When a polythene strip is rubbed with a cloth, electrons move from the cloth to the strip. The strip becomes negatively charged and the cloth becomes positively charged.





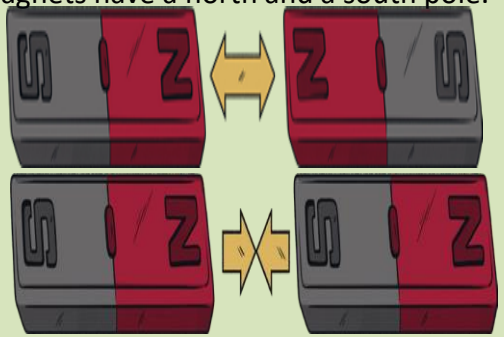
When you rub a balloon against your hair, electrons are transferred from your hair to the balloon. The balloon and your hair have opposite charges so your hair is attracted to the balloon, making it stand on end.

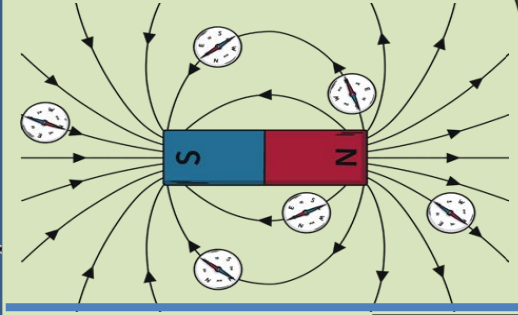
Magnetism

Magnetism is a non-contact force. That attracts or repels the 3 magnetic metals, these metals are Iron (Fe), cobalt (Co) and nickel (Ni). Steel is also magnetic because it contains iron. Magnets have a north and a south pole.

Like poles repel. This means that the two poles push each other away.

Opposite poles attract. This means that the magnets pull the poles towards each other

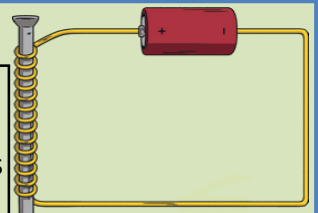




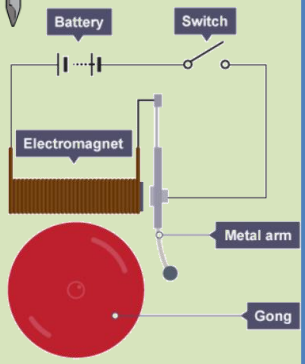
All magnets exert a magnetic field- this is the area where the magnet has an influence on currents and other magnets. It can be shown by placing compasses around the magnet and plotting where it points

Electromagnets

We can pass an electrical current through a wire, this creates a weak magnetic field. If we combine this with a metal core then we have a stronger field- we call this combination an electromagnet. They are useful because they have the ability to be turned "on and off"



Electromagnets can be made even stronger by:
- adding more coils
- increasing the current or voltage
- winding the coils closer together



Uses of electromagnets

There are many uses for electromagnets such as scrap metal sorters, speakers and electric bells. An example of how a bell uses an electromagnet is when the electromagnet is turned on it attracts the springy metal arm towards the bell. Here is hits the bell and makes a sound. This movement breaks the circuit and turns off the electromagnet. The arm moves away from the bell as it is not being attracted by the electromagnet. This cycle then repeats itself

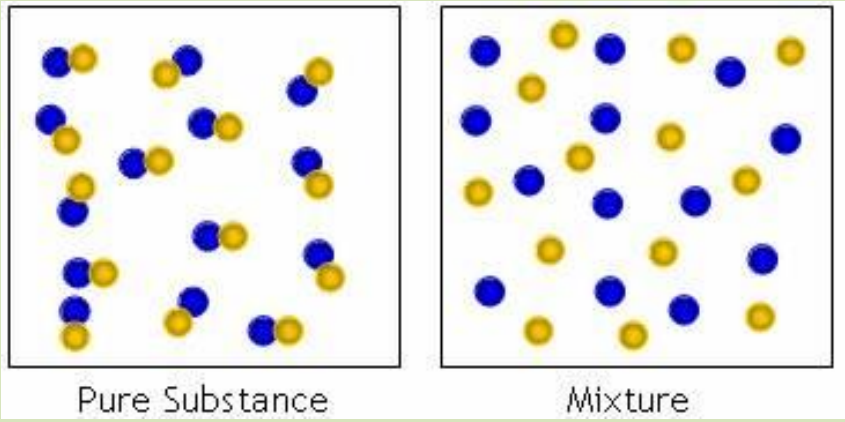
KS3 Chemistry:
Pure and Impure Substances

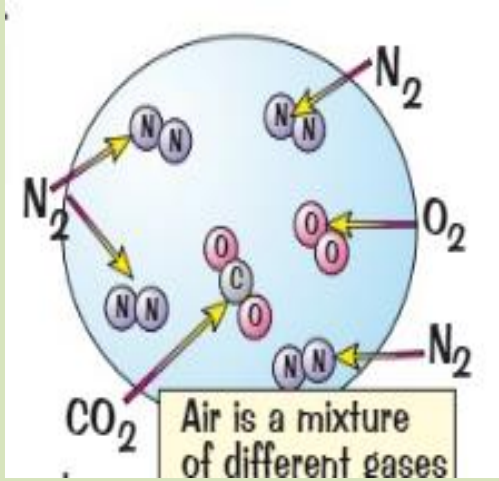
Term	Definition
Chromatography	Method used to separate the substances I a mixture based on how the components interact.
Compound	Substance made of atoms of at least two different elements chemically joined together.
Diffusion	The passive movement of particles from an area of high concentration to an area of low concentration.
Distillation	A way of separating out a liquid from a mixture. You heat the mixture until the bit you want evaporates, then cool the vapour to turn it back into a liquid.
Evaporation	A liquid changes into a gas, also a way of separating a solid from a liquid.
Filtering	Method used to separate an insoluble solid from a liquid.
Insoluble	Substance does not dissolve in a solvent
Mixture	Substance made from two or more elements or compounds that are not chemically bonded together.
Soluble	Substance that does dissolve in a solvent.
Solute	A substance dissolved in a solvent to make a solution.
Solution	A mixture made up of one substance dissolved in another.
Solvent	A liquid in which another substance can be dissolved.

Mixtures and pure substances

A pure substance contains only one type of element or one type of compound. e.g. pure water is made of H_2O molecules only and cannot be separated into H and O atoms without a chemical reaction.

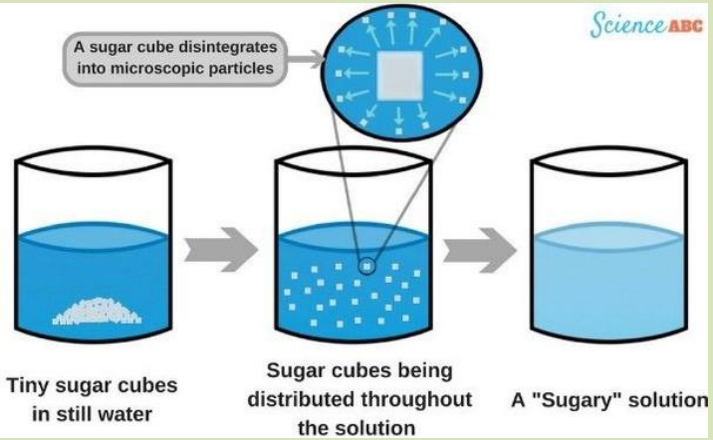
A mixture contains two or more different substances, these substances are not chemically combined. This allows mixtures to be separated using physical methods.
Seawater and air are good examples of mixtures.





Dissolving

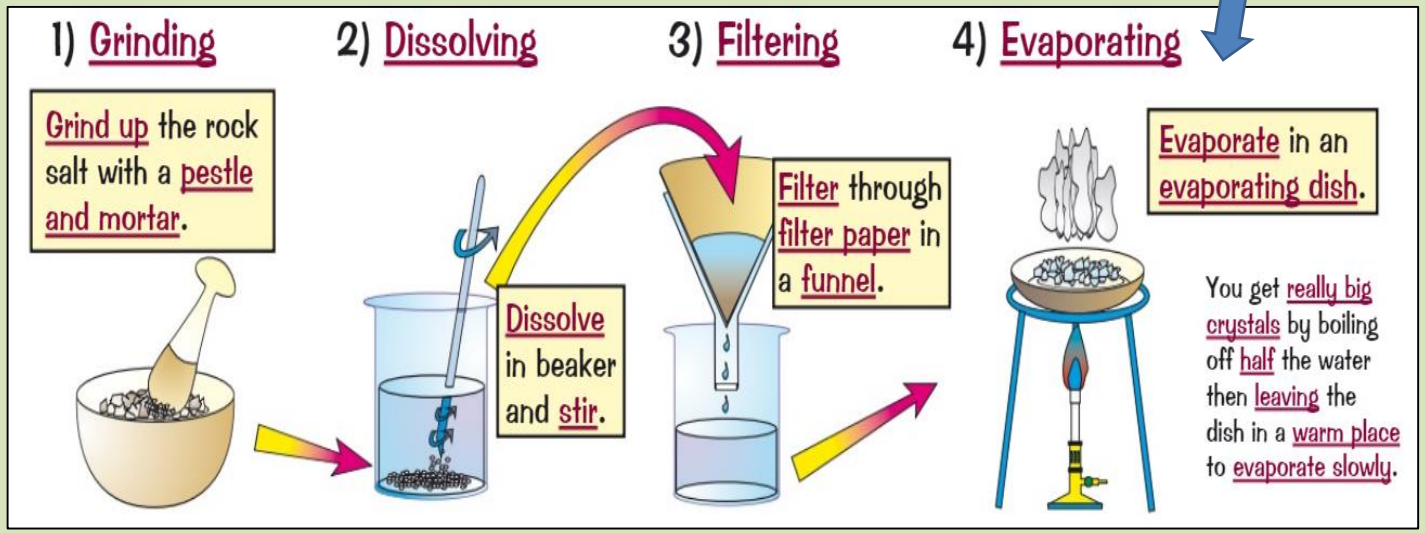
Dissolving is one way to make a mixture. For example, when salt is stirred into water, the salt dissolves in the water to make salt solution.
In a solution: the substance that dissolves is called the solute and the substance that the solute dissolves in is called the solvent
In salt solution, salt is the solute and water is the solvent. The particles of solute and solvent are completely mixed together.

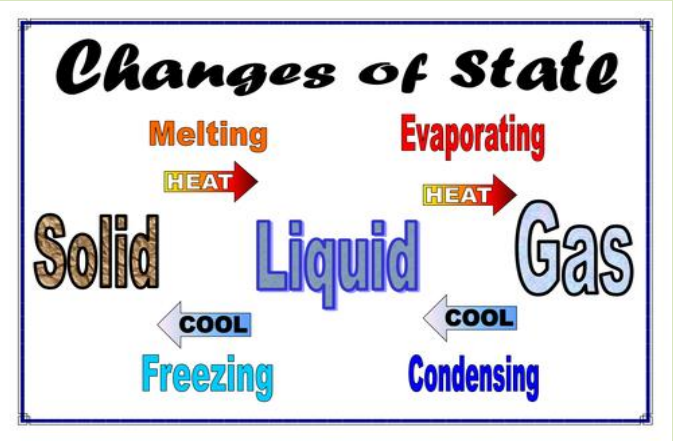


Mixtures can be separated using physical methods:

1. Filtration
2. Evaporation
3. Chromatography
4. Distillation

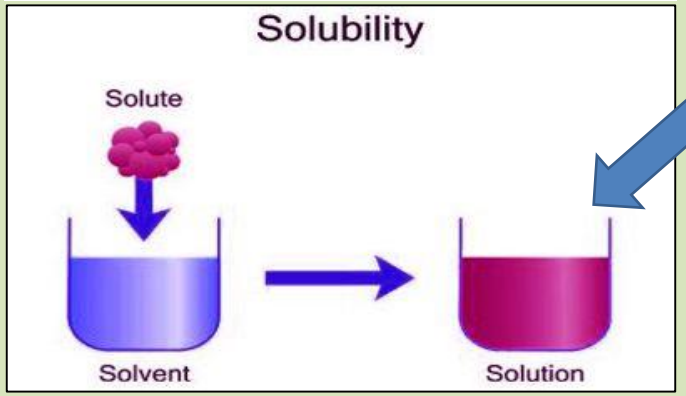
How to make crystals from rock salt





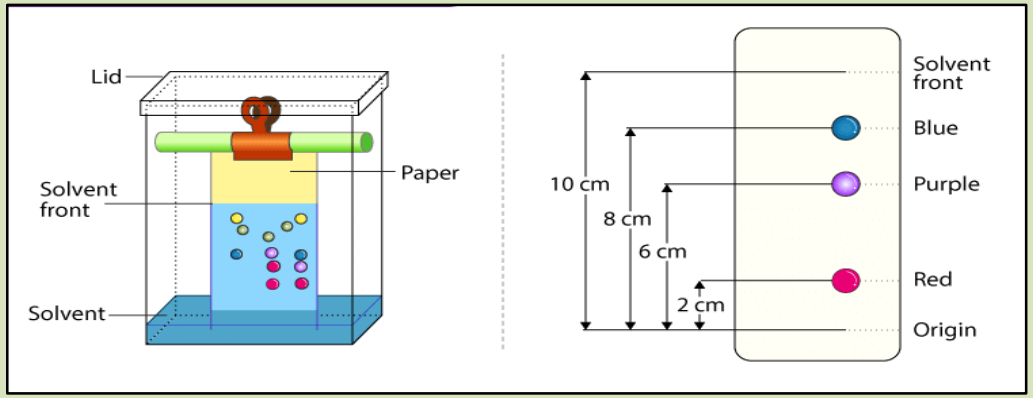
Solubility increases with temperature:

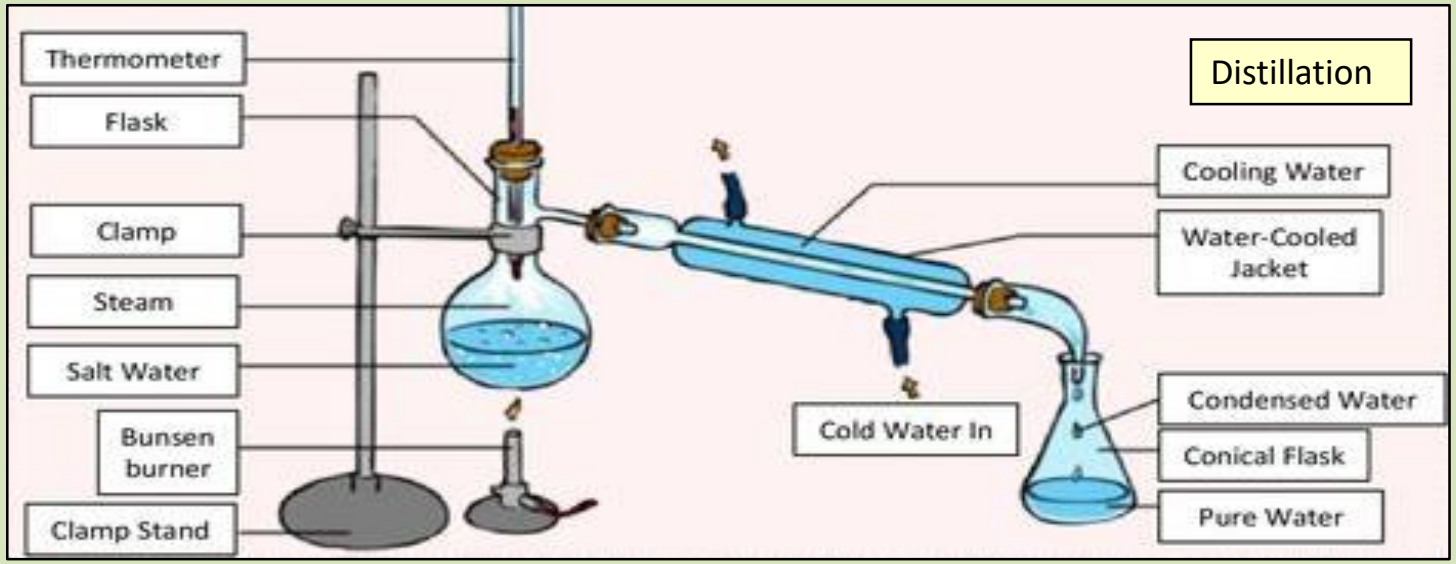
- At higher temperatures more solute will dissolve in the solvent because particles move faster.
- Some solutes will not dissolve in certain solvents
- When a solid is dissolved in a solvent a solution is made



Chromatography is used to separate mixtures and to help identify substances

If two coloured dots move the same distance up the chromatogram (paper) they contain the same chemical.





Computational Thinking – Spreadsheets – Term 3

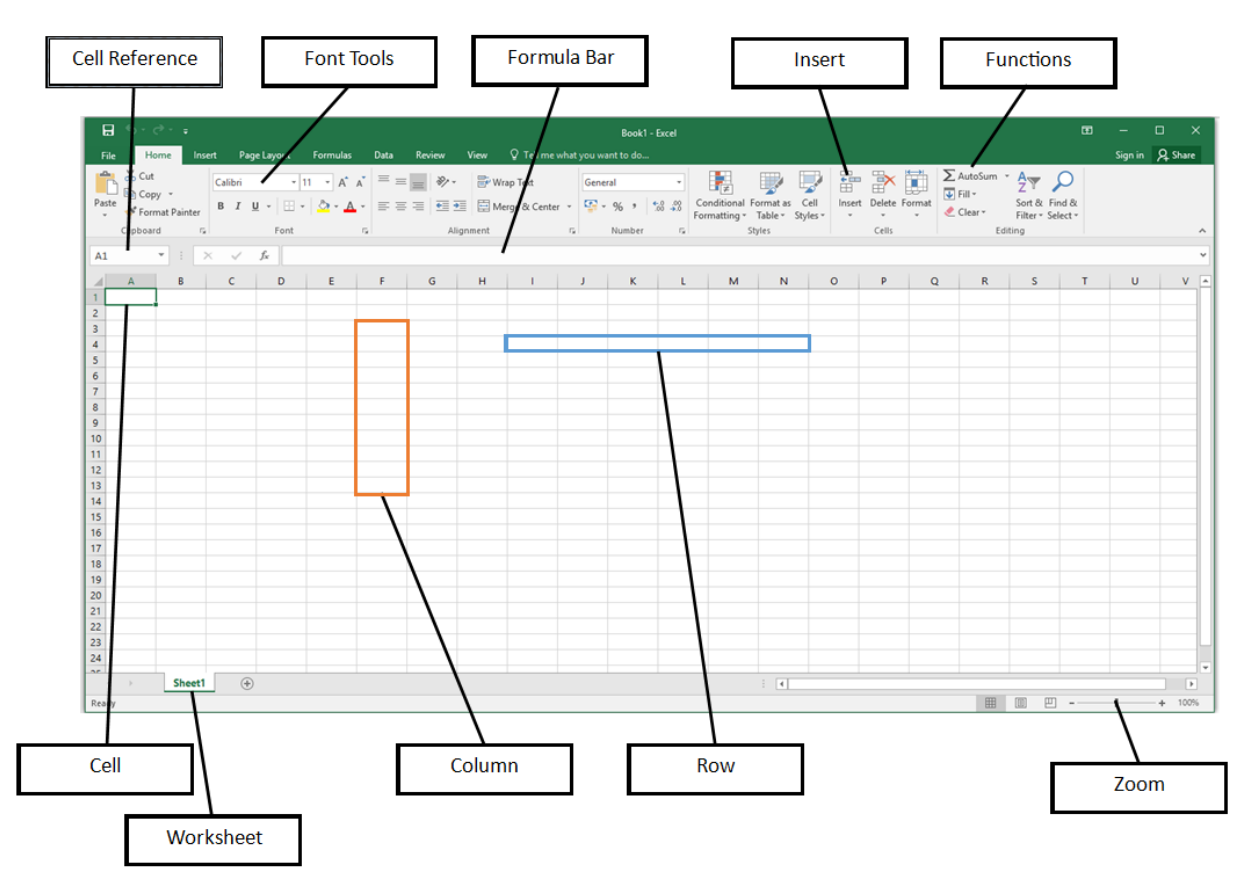
Why do we use Spreadsheets?

Spreadsheets are used to store information and data. Once we have our information in a spreadsheet we can run powerful calculations, make graphs and charts and analyse patterns. Uses of spreadsheets:

- Budget tracker
- Stock tracking of a business
- Money use in a business
- Teacher may use it to keep a record of students grades

Formulas

Only use when creating a calculation between 2 cells.
E.g.
= **A1 + B1** (adds)
= **A1 - B1** (subtracts)
= **A1 * B1** (multiplies)
= **A1 / B1** (divides)

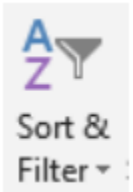


Cell reference

A **cell reference** is the name given to a cell to uniquely identify it.
E.g. E4
An **absolute cell reference** ensures that 1 cell always remains constant even when autofill is used.
E.g. E4

Sort & Filter

Sorting data organises it in a specific way.
e.g. alphabetically

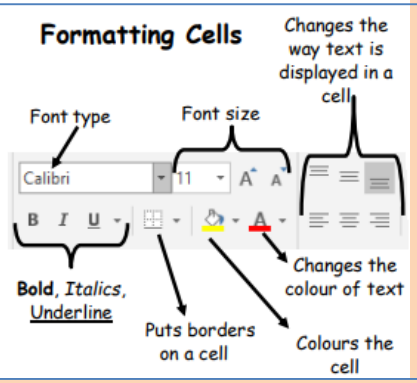


Filtering data makes it easy for us to find one specific piece of data without having to look through every piece of data

Autofill

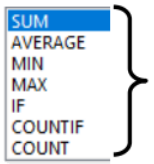
Click on the cell you want to duplicate, grab the black cross in the bottom right-hand corner and drag it down to the remaining cells.

Formatting Cells



Functions

Click on this button to insert a function

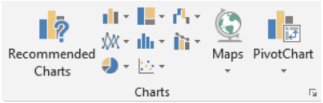


Click on the function you need or type it in to find it

Graphs

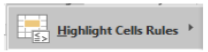
Click on the insert tab at the top of Excel

Pick the chart that you need:



Conditional Formatting

Click on this button to add conditional formatting



Then click on highlight cell rules, depending on what your rule is select the next option that matches the rule you want to create.

Data Validation

Click on the Data tab at the top of Excel

Click on this button to get the data validation window

Use these headings to set up your data validation.

Computational Thinking – Spreadsheets – Term 3

Keywords				
Spreadsheet an electronic document in which data is arranged in the rows and columns of a grid and can be used in calculations.	Worksheet a collection of cells organized in rows and columns	Cell a box in which you can enter a single piece of data.	Cell Reference is the name given to a cell to uniquely identify it. E.g. E4	Absolute Cell Reference # A cell reference that does not change when the cell is moved, copied or filled
Autofill/Fill Handle a software function that automatically enters data in spreadsheets	Data Validation restrict data entry to certain cells, it displays an error message when a user enters invalid data.	Formula an expression which calculates the value of a cell	Function a predefined formula that performs calculations using specific values in a particular order.	Formatting To change the appearance, layout or organisation of a spreadsheet
Sort the arrangement of data into a specific sequence. E.g. A-Z, smallest to highest	Filter to allow only certain data to be displayed.	Graphs/Charts a visual representation of data from a worksheet that can bring more understanding to the data than just looking at the numbers.	Conditional Formatting a feature of Excel which allows you to apply a format to a cell or a range of cells based on certain criteria.	Data types a particular kind of data item, as defined by the values it can take, e.g. Numbers, text, date
Ascending arranged in a series that begins with the least or smallest and ends with the greatest or largest	Descending arranged in a series that begins with the greatest or largest and ends with the least or smallest	Borders forms an edge along or beside (something)	Column Heading is the grey coloured row containing the letters (A, B, C, etc.) used to identify each column in the worksheet.	Profit a financial gain, especially the difference between the amount earned and the amount spent in buying, operating, or producing something.
Rows the range of cells that go across (horizontal) the spreadsheet/ worksheet.	Columns a vertical series of cells in a chart, table, or spreadsheet.	IF statement The Excel IF Statement tests a given condition and returns one value for a TRUE result and another value for a FALSE result.	VLookUp ‘Vertical Lookup'. It is a function that makes Excel search for a certain value in a column (the so called 'table array'), in order to return a value from a different column in the same row.	Macro an action or a set of actions that you can run as many times as you want. When you create a macro, you are recording your mouse clicks and keystrokes.

Computational Thinking – iDEA - Term 4

Steps of Computational Thinking

Never heard of it? We do it all the time! It is the fundamental stages of creativity. It is a framework we can use to help solve any given problem.

Step 1:
Don't panic! Understand the problem
- This is Comprehension

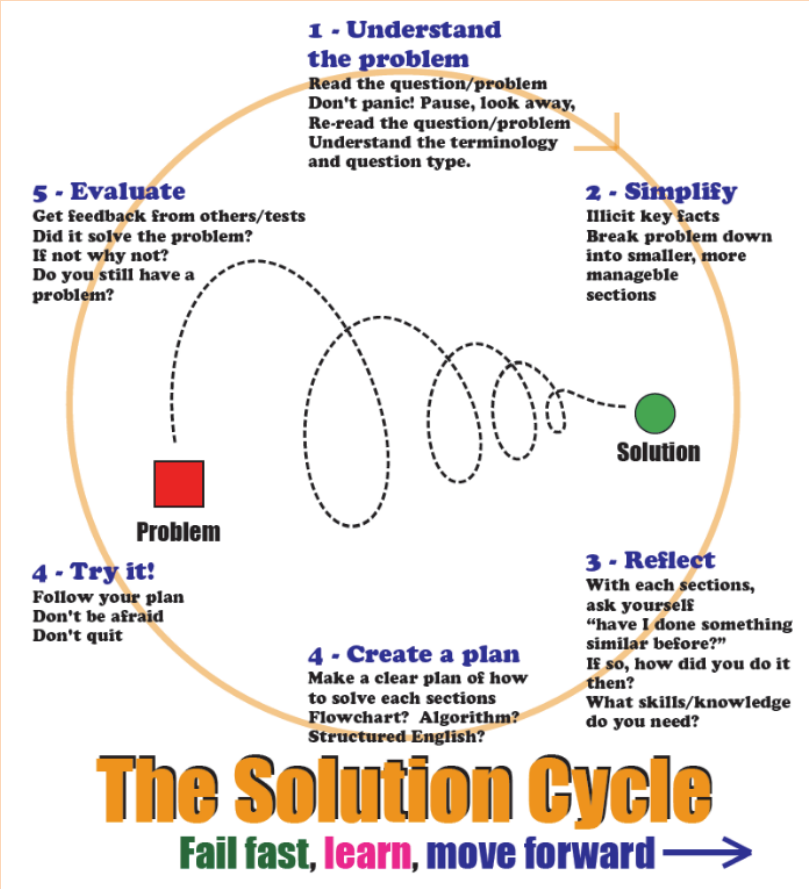
Step 2:
Break the problem down. Simplify the problem.
- This is Decomposition

Step 3:
Déjà vu? Use your knowledge and experience. Spot patterns
- This is Abstraction, studying and your wisdom

Step 4:
Create a plan!
- Using Algorithms and communication

Step 5:
Try it! What's the worst that could happen?
- Self confidence and risk taking!

Step 6:
Evaluate. Did it work? If not, go back to 1 and try again!
- Perseverance and resilience



Scan this with your phone to take you to iDEA

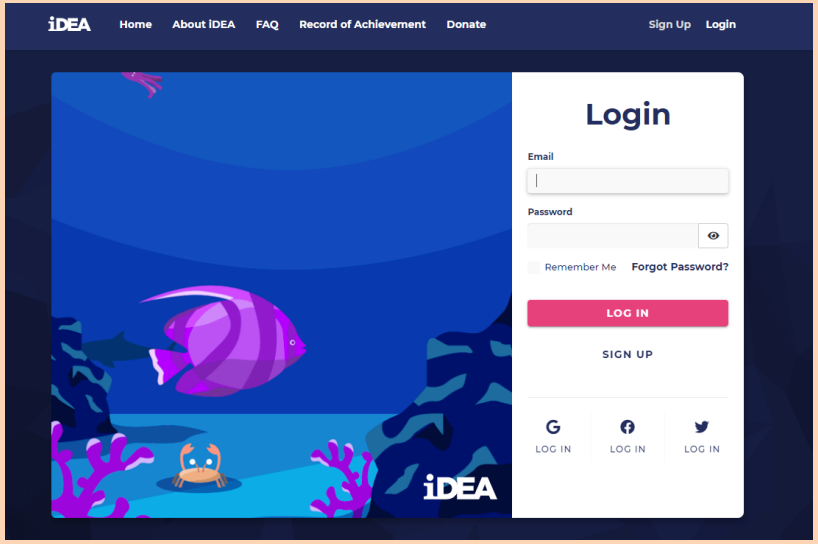
iDEA

The Inspiring Digital Enterprise Award, known as iDEA is an international award winning programme that helps you develop digital, enterprise and employability skills for free.

Your username and password will be the same one used to log in to the computer so:

Example - Username: 21smithJ
*Password: ********

You will use this website to work through a number of badges which will help develop your skills in Computer Science and Computational Thinking!

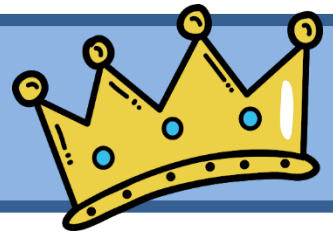


History – Term 3

Power of the Kings

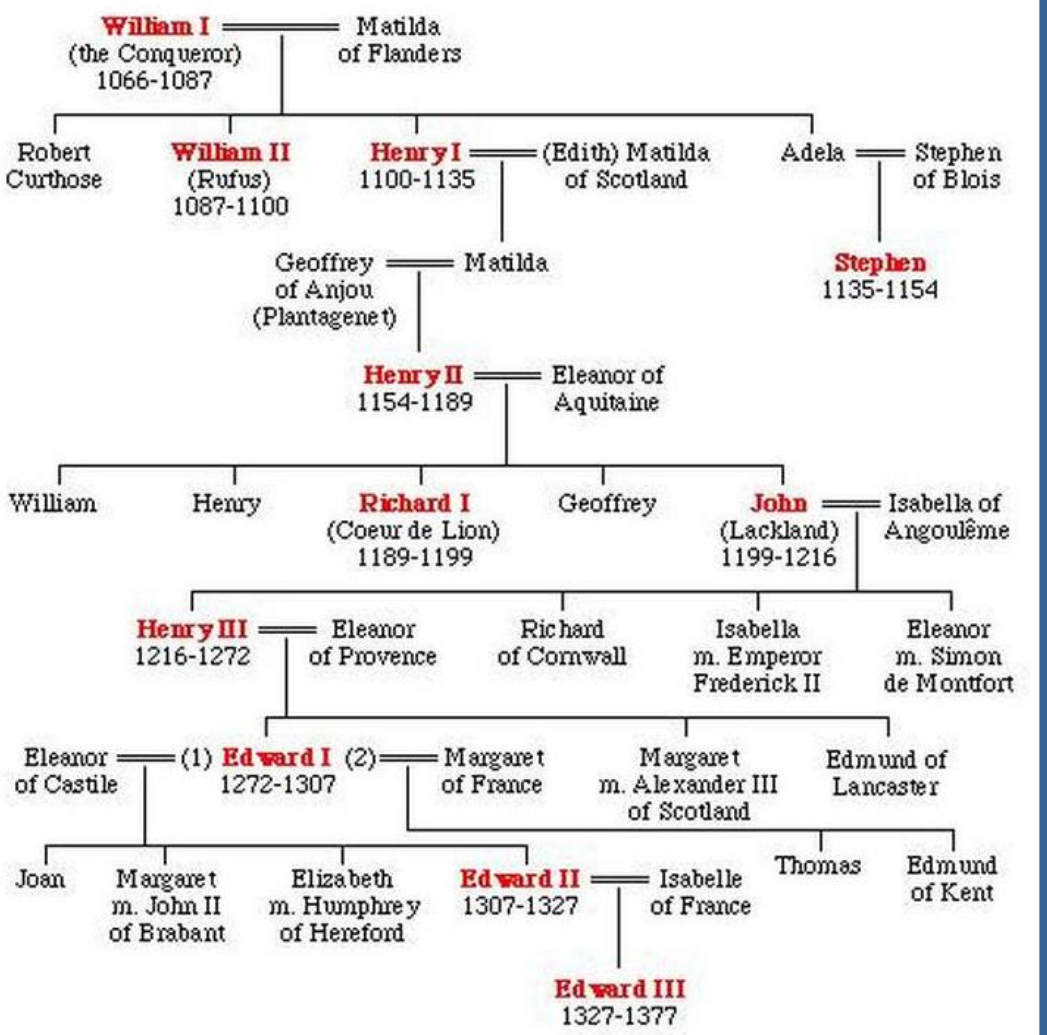
Medieval monarchs faced many challenges to their position, sometimes from other countries, their own family, or the Church.

They had to adopt various tactics of dealing with the difficult circumstances, some monarchs were better at this than others!

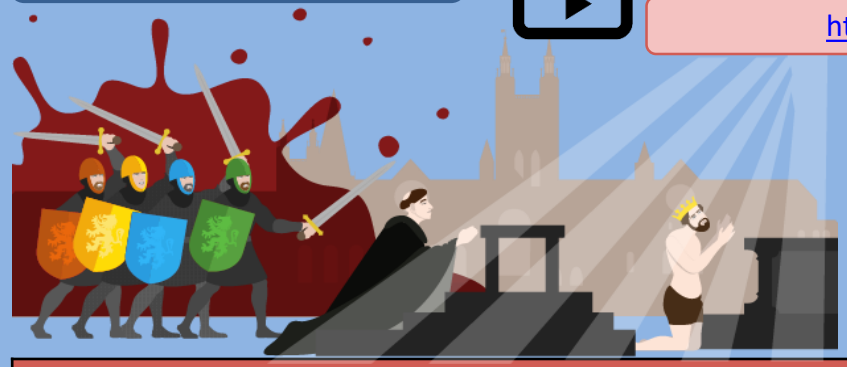


- Monarchs gained **legitimacy** because they **inherited** their power from a previous monarch
- Female monarchs were seen as weak because they could not lead an army into battle
- Monarchs could gain power and **legitimacy** by showing their military strength by winning battles
- Monarchs needed the support of powerful people, such as the **barons** or the **Pope**
- Monarchs needed to be popular. Unpopular monarchs could be rejected or face **rebellion**

Medieval Kings



Henry II & Thomas Becket



Overview of the problems between the Monarch and the Church:

https://tinyurl.com/HenryandBecket

In the Middle Ages, it was unclear whether the King had more power than the Church. This was demonstrated in the story of Thomas Becket:

In 1162, Henry II named his friend Thomas Becket as **Archbishop** of Canterbury.

Henry wanted Becket to force priests to use the **King's Courts**, instead of getting away with light punishments in the **church courts**. He also wanted Becket to help him control the bishops.

When Becket refused to do this, the two men fell out. In a rage, Henry shouted "Will no one rid me of this troublesome priest?". A group of knights overheard him and murdered Becket.

Henry was horrified when he heard of Becket's death and ordered **monks** to whip him to show he was sorry.

Key words and names:	
Religious	Things to do with what people believe and who and how they worship
Monarchy	A form of government with the monarch (a king or queen) at the head
Baron	An important nobleman, who was given lands directly by the King to rule on his behalf. Barons are referred to as 'Lord' and had a very high status.
Henry II	King of England in 1154-1189. Great-grandson of William the Conqueror. He argued with his Archbishop, Becket, over control of the English Church
Becket	Appointed the Archbishop of Canterbury by King Henry II. He was later killed by four knights in Canterbury Cathedral after quarrelling with Henry.
Law Court	Where a judge decides if someone is guilty of breaking the law after hearing evidence. Church courts were controlled by priests, not the king.
Archbishop	A bishop of the highest rank in the English Church, in charge of churches and other bishops in a certain area. They had a very high status.
Monk	Member of a religious community of men, living in a monastery, who took special vows showing their dedication to God (e.g. poverty, obedience)
Edward Grim	The man who witnessed the death of Thomas Becket in Canterbury Cathedral in 1170, and later published a book about Becket.
Knight	A man who served his Lord (often a Baron), by fighting as a soldier mounted on a horse, wearing armour. Knights are referred to as 'Sir'.
Pilgrimage	A journey to a holy place, to show faith in God. After he died, many went to Canterbury to pay their respects to Saint Thomas Becket.
Crusade(s)	'Holy Wars' fought between Christians and Muslims over the Holy Land (especially Jerusalem), located in modern-day Israel and Palestine
Sin	A deliberate action that goes against God. Sins range from 'big' acts like murder to 'smaller' acts like envy. The Pope said that if people went on Crusade, all sins would be forgiven. This was called an indulgence.

The Power of the Church

Heaven and Hell

People in the Middle Ages believed that heaven and hell were real places.

After death, they believed, angels would decide if you would spend **eternity** in heaven or hell.

Heaven was the kingdom of Jesus. It was reserved for those who had lived a good life.

Hell was the kingdom of the Devil. Sinners were sent here. Living in hell meant an eternity of pain and suffering.

Getting into Heaven

There were several ways to increase your chances of going to heaven and avoiding hell:

Becoming a nun or a monk and spending life in a nunnery or **monastery**. Nuns and monks dedicated their lives to God, praying eight times a day and serving their community. The rich often gave money to support **monasteries**.

Earning an **indulgence**. These were certificates that forgave sins. They could be bought or earnt by charity work.

Going on **crusade**. Christians and Muslims fought over the holy city of Jerusalem. The Pope promised to forgive the sins of crusaders.

Church Hierarchy

The Pope
God's representative on earth. Lived in Rome. Could **excommunicate** kings.

Archbishop of Canterbury
The Pope's representative in England and the most powerful member the Church.

Bishop
The leader of the church in a local area. There were 17 bishops in the Medieval Church, each based at a **cathedral**.

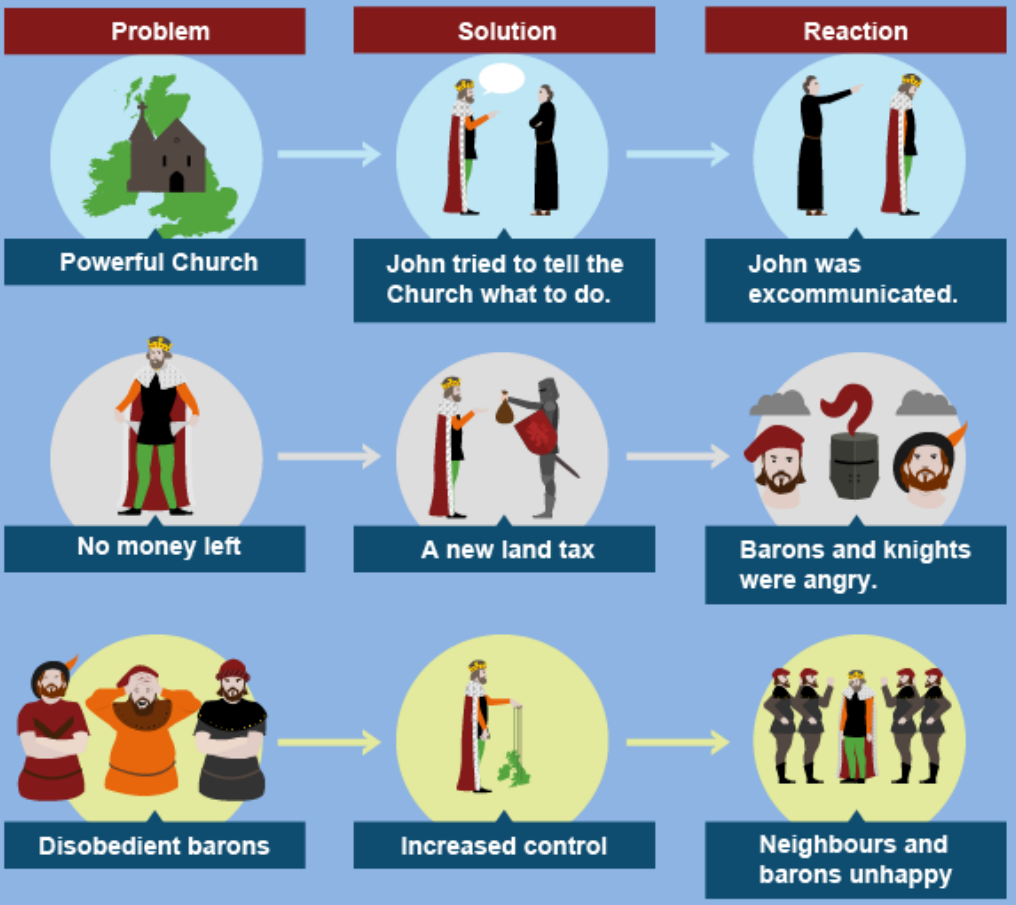
Priest
Each town and villages had a priest to run church services.

King John and the Magna Carta

Overview King John and the Magna Carta

https://tinyurl.com/KingJohnMagnaCarta

Background to King John's Problems



Why was John unpopular?

John was forced to introduce a new land **tax** to repay money that his brother, Richard I, had borrowed to pay for the **Crusades**.

The French invaded English **territory** in Normandy. John tried to win it back but lost the Battle of Bouvines in 1214. He was nicknamed 'Softsword'

John tried to force the Church to accept his choice for **Archbishop**. In response, the Pope **excommunicated** John and stopped church services in England.

Baron's Revolt 1215

In May 1215, 40 English **barons** rebelled against King John.

With support from the French and Scottish, they formed an army and captured London.

John met the rebels at Runnymede, near London and agreed to **Magna Carta**.

Magna Carta

Magna Carta - or 'Great **Charter**' - was a document signed by King John limiting the power of kings. It was the first time that a set of rules had been written for the king.

The most important parts:

- Gave all free men the right to **trial by jury**
- Limited the amount of **tax** the barons had to pay
- Limited the power of the King over the Church

History – Term 4

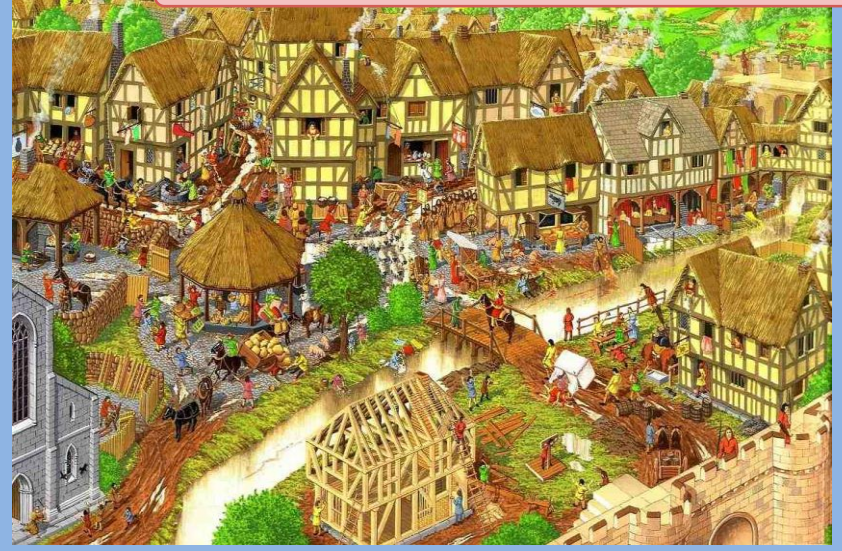
Medieval Lives

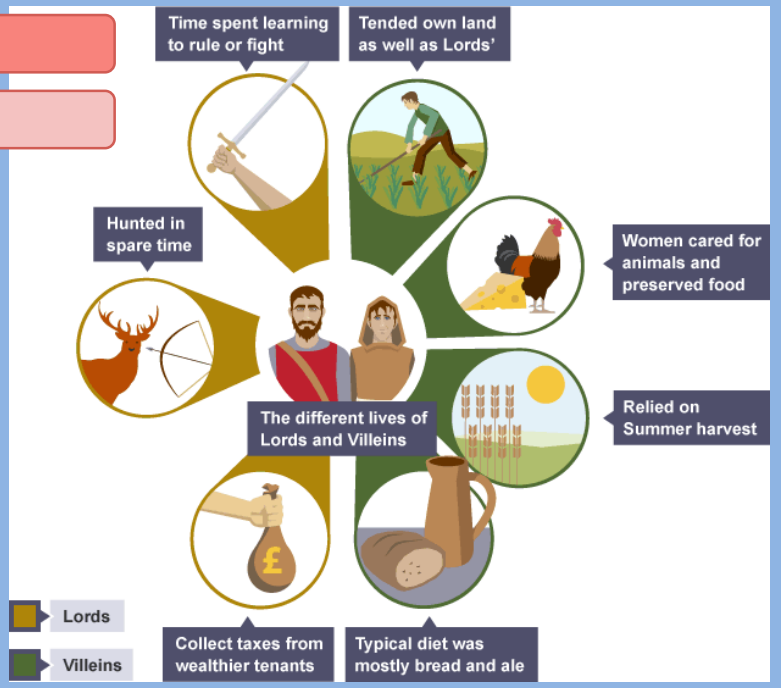
Society, Status and Life in the Medieval Village
Most people were peasants, who had very few rights and who lived in villages called 'manors'. Life for an average peasant was hard and work was back-breaking.
The Feudal System is the name for a power structure where people held land in return for promising loyalty and services such as working or fighting for their lord.
Village life was not all misery. Holy days meant a day off work. Peasant fun was rough, including wrestling, shin-kicking and cock-fighting. The ball was almost unnecessary to a medieval ball game, which was basically a fight with the next village.
Noblemen had a high status, often living in castles with a great hall and servants.

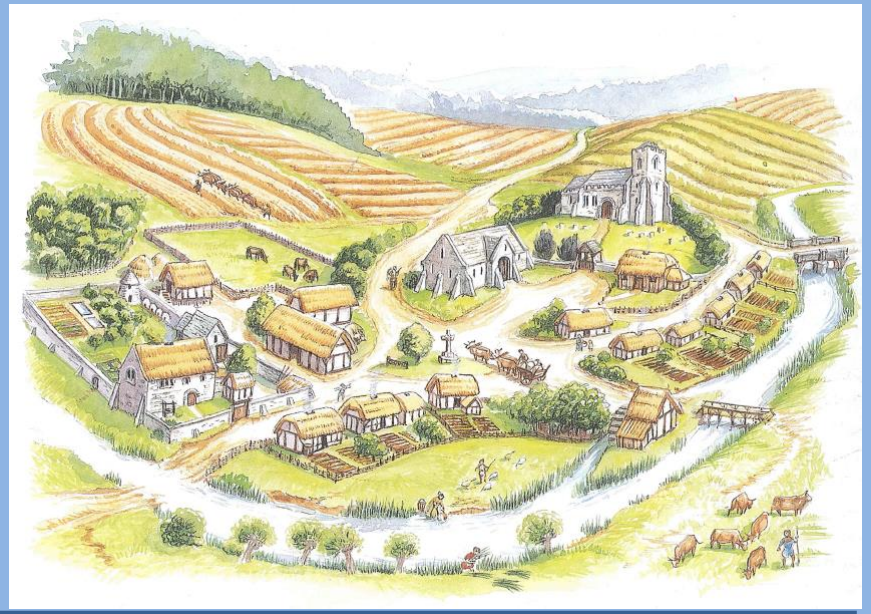
Key Vocabulary	
Economic	Things to do with money, finances, jobs, trade and wealth. There were many economic causes, for example, of the Peasants Revolt.
Political	Things to do with leaders (monarchy and Parliament), laws, government and rulers. The Peasants Revolt, for example, was a political protest.
Social	Things to do with 'normal people' and how they lived (e.g. home life, community). The Black Death, for example, had huge social consequences
Tax	Where people pay money to the government or to the church. It is compulsory (people have to do it), so it isn't popular amongst the poor
Status	The position you hold in society. In Medieval times, people had a fixed status (low, medium or high); they were part of a social hierarchy.
Freeman	These people paid rent to the lord to farm their land, but they weren't 'owned' by the Lord, and could come and go as they pleased.
Villein	They were Medieval peasants who were 'tied' to the Lord's land. They had to farm their own land and the land of the Lord, and they had to get the Lord's permission to do things like get married or leave the village.
Black Death	A plague (fast spreading disease). It is said that between a quarter and a third of the population died, wiping out c. 40% of the English population in 1348-1350. It was carried by fleas who lived on rats.
Buboes	Painful swellings that appeared on a victim's armpits and groin if they were infected by the Black Death. Often led to a painful death.
Bubonic & Pneumonic	The two different types of plague. Bubonic plague, which was carried by rats and caused buboes, was the most common form. Pneumonic plague was an advanced stage of Bubonic plague that spread to the lungs.
Statute of Labourers	This Statute (law), passed after the Black Death, said labourers could not earn more than 2 pence per day. It was bitterly resented by the peasants.
Flogging	To be beaten with a stick or whip as a punishment. Some people flogged themselves in the Middle Ages to show God they were sorry for their sins.

Overview Medieval Towns:

https://tinyurl.com/townandvillages







Living in a medieval town:

- A medieval town would seek a charter giving it the right to become a borough. The rich merchants would then be allowed to choose a mayor and hold a market.
- Houses were made of a wooden frame, with the gaps filled with woven strips of wood, known as 'wattle', and covered, or 'daubed', with clay and horse-dung. Most roofs were thatch.
- Medieval shops were workshops, open to the street for customers, with the craftsman's house above. Because few people could read, shops signs were a huge model showing the craftsman's trade. People of the same trade often worked in the same street.
- The streets of a medieval town were narrow and busy. They were noisy, with the town crier, church bells, and traders calling out their wares. There were many fast food sellers, selling such things as hot sheep's feet and beef-ribs.
- Criminals were put in the stocks or the pillory. These were wooden boards with holes for feet, hands or head. Medieval punishments were cruel, and crimes such as theft were punished by hanging.
- Holy Days would be marked by colourful processions, as the different guilds competed to make the best display.
- If a serf ran away from his village to a town and remained free for a year and a day, he could become a 'freeman' of the town.

Living in a medieval village:

- Life for the peasants was hard.
- Work followed the seasons – ploughing in autumn, sowing in spring, harvesting in summer. Work began at dawn, preparing the animals, and it finished at dusk, cleaning them down and putting them back into the stalls.
- A peasant's hut was made of wattle and daub, with a thatch roof but no windows.
- Inside their homes there was space for animals to be kept. Animals lived with the family. A fire would be built in the middle of the house, meaning the air would be smoky. There would be a lack of furniture too, maybe some stools, cooking pots and somewhere to keep the bedding. Peasants would sleep on the floor.
- Peasant food was mainly vegetables, plus anything that could be gathered – nuts, berried, nettles. The usual drink was weak, home-brewed beer. Honey provided a sweetener. If bread was eaten, it would not have been white bread, but black rye bread.

The Black Death

Black Death	The name given to the plague because of the black spots which caused death
Buboes	Large swellings under the arm and the groin, which were filled with black pus and exploded
Miasma	‘Bad air’ which was blamed for spreading the disease
Bubonic	The Black Death caught by flea bites to humans
Rats	The fleas on the rats caused the Black Death. People at the time did not know they caused the disease
Pneumonic	The Black death spread human to human by breathing
Mass Grave	A grave where large numbers of bodies are laid to rest
Herbal Remedy	Medicine made from plants with natural cures
Anti-Semitism	Anti-Jewish actions - Jews were blamed for causing the Black Death by poisoning water supplies
Flagellant	People who whipped themselves to show God they were sorry so he would cure their disease
Leeching	The use of leeches for drawing blood from patients
Plague Doctor	A doctor that wore protective clothing who would diagnose the Black Death
Epidemic	A widespread outbreak of a disease
Sins	Wrongdoings which people believed God punished you for by giving you the plague such as gambling or drinking alcohol

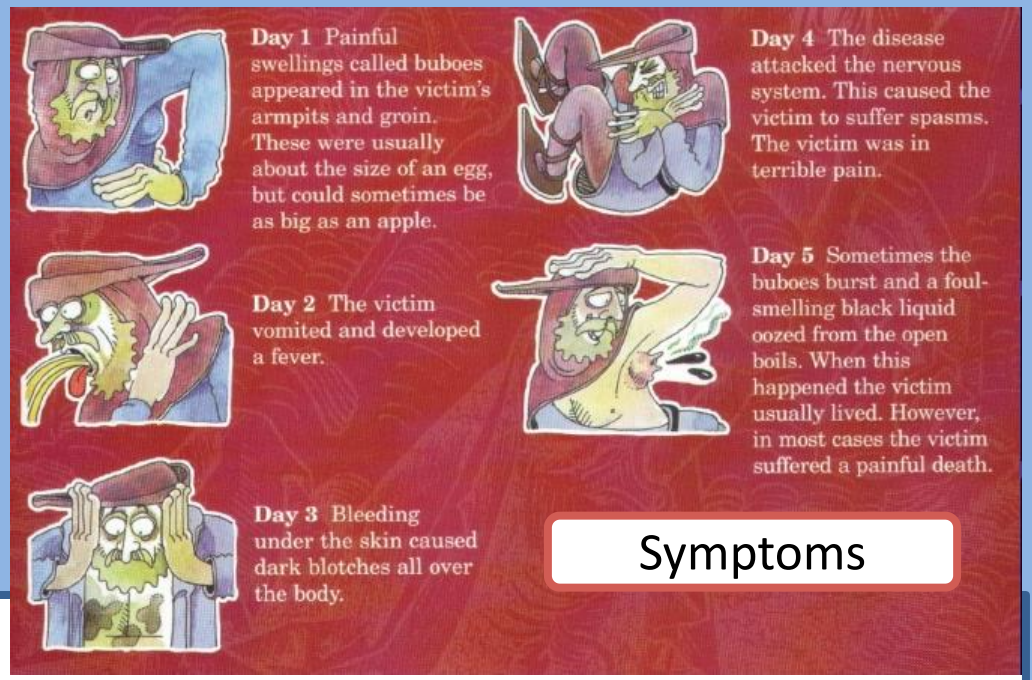
The Black Death
The plague spread very quickly in the warm winter of 1348-9.
Some methods which people at the time thought would cure the plague or stop them catching it included: flogging and praying to ask God for forgiveness; isolation (keeping away from the sick); cleaning the streets; holding sweet herbs to the nose.
The nursery rhyme ‘ring-a-roses’ is a reference to the Black Death.
After the plague, prices of food and other goods fell. The shortage of labourers meant that wages went up. Some villages were abandoned. In other villages, survivors were able to buy or rent all the spare land. So some peasants became much richer.

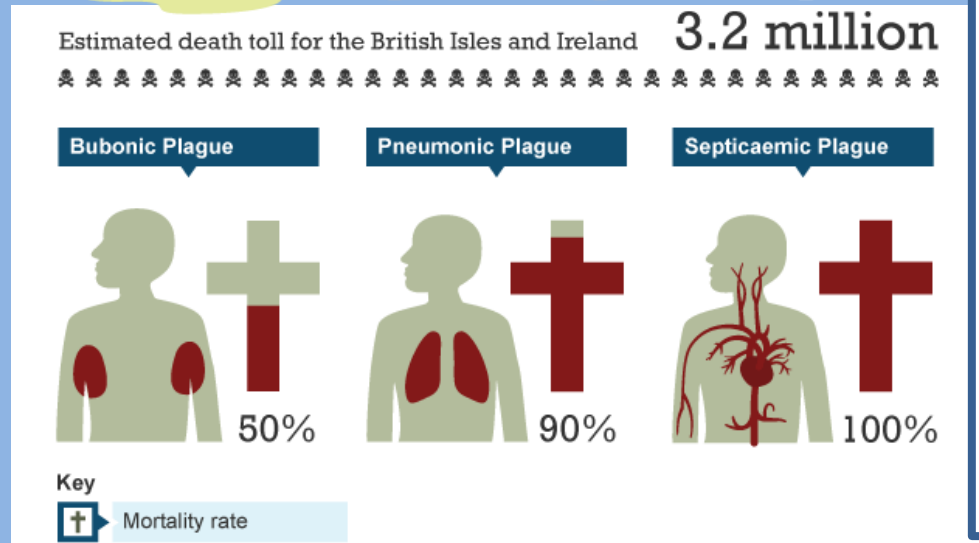
Overview of the Black Death:

https://tinyurl.com/BlackDeathPlague

Some of the cures they tried included:

- Rubbing onions, herbs or a chopped up snake (if available) on the boils or cutting up a pigeon and rubbing it over an infected body.
- Drinking vinegar, eating crushed minerals, arsenic, mercury or even ten-year-old treacle!
- Sitting close to a fire or in a sewer to drive out the fever, or fumigating the house with herbs to purify the air.
- People who believed God was punishing you for your sin, 'flagellants', went on processions whipping themselves.
- In the 1361 - 1364 outbreak, doctors learned how to help the patient recover by bursting the .
- Doctors often tested urine for colour and health. Some even tasted it to test.





Consequences of the Black Death

Deaths

Estimates differ, but most historians believe that the Black Death killed half the population of Europe. In some places, eg the village of West Thickley in County Durham, it killed everybody. The death-rate was especially bad in monasteries, where the monks stayed together and cared for each other. Some historians (Benedictow 2004) suggest that the wealthier classes were less affected due to their wealth enabling them to flee from outbreaks.

Effects

The precise effects are difficult to assess given the huge loss of life and subsequent inconsistent records. In some places there was even no-one left to bury the dead let alone record the effects. However, historians have suggested the Black Death had significant consequences:

Psychological: the Black Death had a huge influence on the way people thought about life. Some lived wild, immoral lives, others fell into deep despair, whilst many chose to accept their fate. Many people were angry and bitter, and blamed the Church – some historians think this helped the growth of the new 'Lollard' religion in the 15th century. It could also be argued that the Black Death had brought down rich and poor alike. Having faced and survived the plague, people at the bottom of society were more prepared to question their position in society.

Social: poor people began to hate their poverty and their 'betters' – some historians think this helped to destroy the feudal system.

Economic: there was a great shortage of workers, and when Parliament passed laws to stop wages rising, poor people became very angry – some historians think this helped to cause the Peasants' Revolt of 1381.

Limestone Landscapes

UK Geological Map

The Rock Cycle

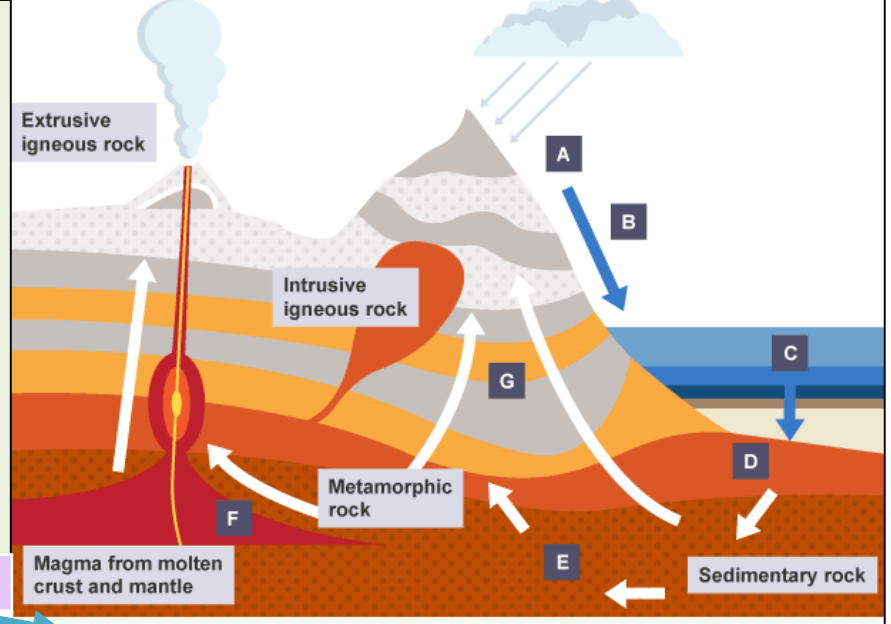
There are three main categories of rock:

- **igneous** (for example, basalt and granite)
- **sedimentary** (for example, limestone, sandstone and shale)
- **metamorphic** (for example, slate and marble)

Continual change

The Earth's rocks do not stay the same forever. They are continually changing because of processes such as **weathering**, **erosion** and large earth movements. The rocks are gradually recycled over millions of years. For example, **sedimentary rocks** can be changed into **metamorphic rocks.** These can then be weathered, eroded or even pieces transported away. The pieces of rock could be deposited in a lake or sea, eventually forming new sedimentary rock. Many routes through the rock cycle are possible – look at the diagram (right):

	Description
A	Weathering breaks down rocks on the surface of the Earth. There are three types of weathering (biological physical and chemical). Wind and water move the broken rock particles away. This is called erosion.
B	Rivers and streams transport rock particles to other places. Rock particles are deposited in lakes and seas.
C	Rock particles form layers
D	Compaction and cementation presses the layers and sticks the particles together. This creates sedimentary rock.
E	Rocks underground get heated and put under pressure, and are changed into metamorphic rock.
F	Rocks underground get heated and melt into magma. Magma is found deep inside the Earth, from a region called the mantle. Pressure can force magma out of the ground, creating a volcano. When the magma (lava) cools quickly, it turns into solid extrusive igneous rock., if it cools slowly it forms solid intrusive igneous rock.
G	Areas of rock can move slowly upwards, pushed up by pressure of the rocks forming underneath. This is called uplift.



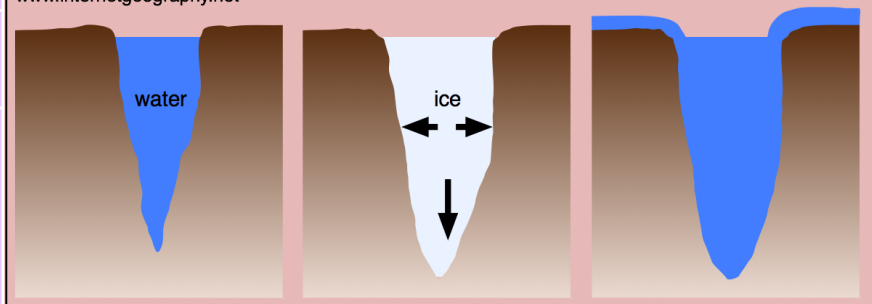
- A Weathering and erosion
- B Transportation and deposition
- C Sedimentation
- D Compaction and cementation
- E Burial, high temperatures and pressures
- F Melting
- G Slow uplift to the surface

KEY WORDS:

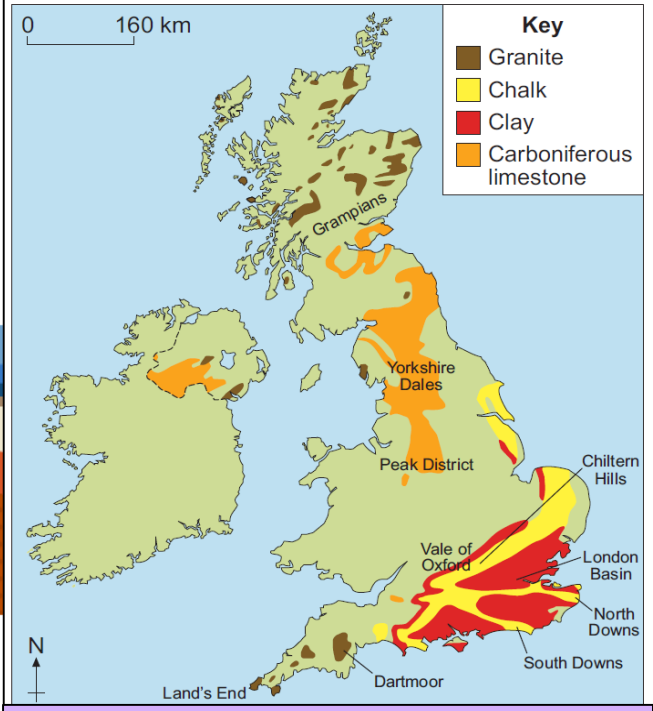
Extrusive igneous rock	**Metamorphic Rock**	**Magma**
Intrusive igneous rock	**Erosion**	**Carbonation**
Sedimentary Rock	**Weathering**	**Deposition**

How does freeze-thaw weathering take place?

www.internetgeography.net



Water enters cracks in the rock. Temperatures fall at night, causing water to freeze. When water turns to ice it expands by ten percent. This puts pressure on the rock, prising the crack apart. The ice melts, water seeps deeper into the crack and freezes again. Over a period of time large blocks of rock can be shattered by repeated freeze-thaw weathering.



In the UK, we have all three categories of rock. While you don't need to know where all the rocks are found (very complicated!), knowing some key locations where chalk, clay, granite and limestone are found would be very useful!

Chemical weathering is the breakdown of rock through changing its chemical composition. When rainwater hits rock it **decomposes** it or eats it away. This is known as **carbonation**. This occurs when slightly acidic (**carbonic**) rain or sea water comes into contact with **sedimentary rock,** such as limestone or chalk, it causes it to dissolve. A chemical reaction occurs between the acidic water and the calcium carbonate and forms calcium bicarbonate. This is **soluble** and is carried away in solution. **Carbonation weathering** occurs in warm, wet conditions.

Limestone pavement

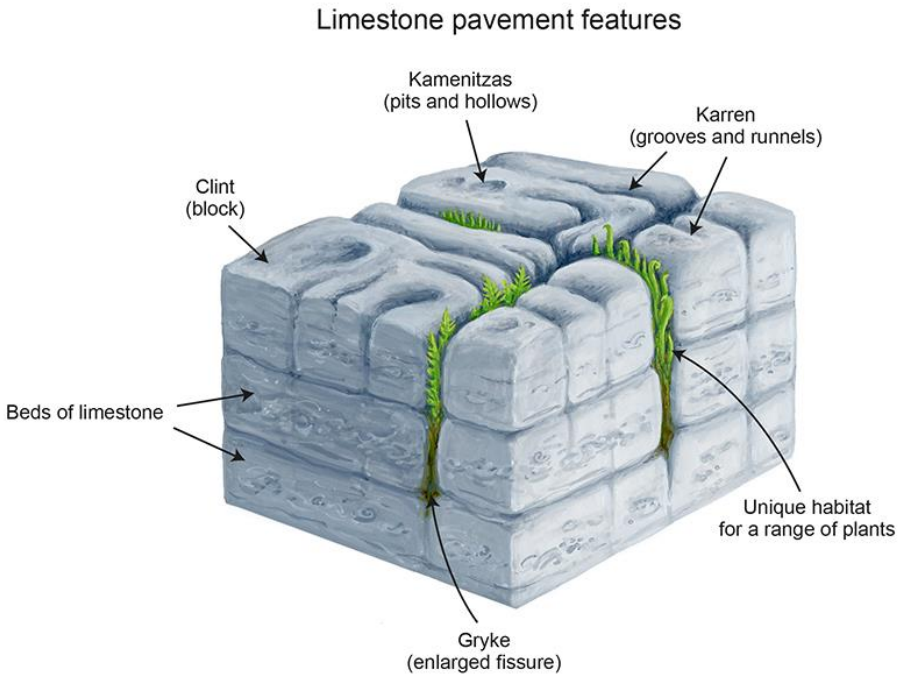
Is a flat expanse of exposed limestone formed by a combination of chemical weathering and erosion.

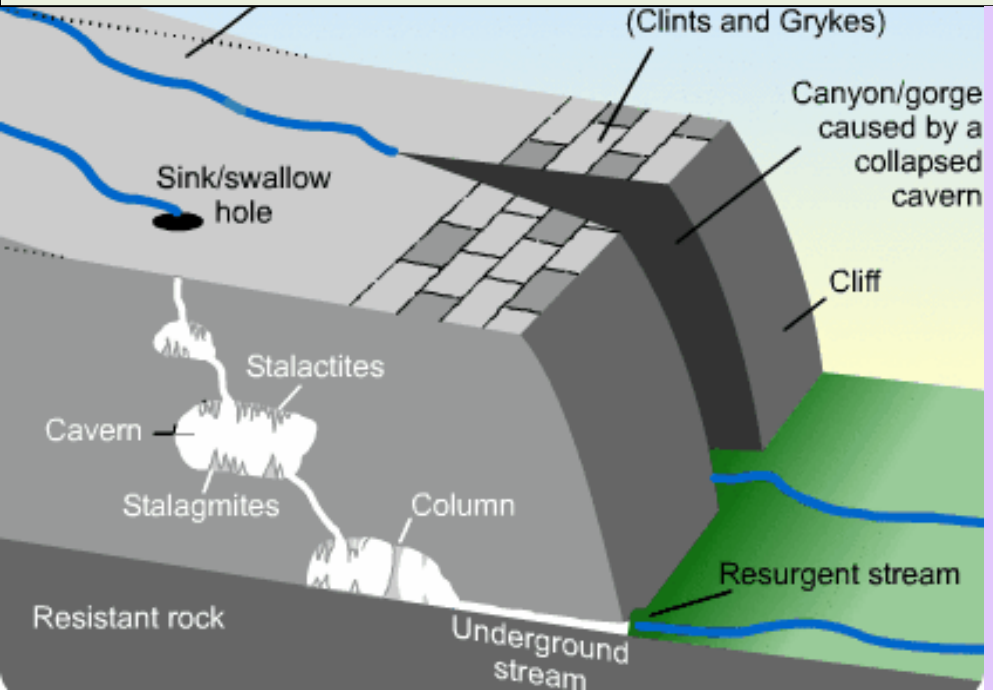
Clints and Grykes

- **Clints** are the blocks of limestone that form the pavement. They are chemically weathered so that their surface is covered by a series of pits and hollows (called karren).
- **Grykes** are fissures separating the clints in a limestone pavement. They may be well over a metre in depth, and formed when the joints in the limestone were widened by chemical weathering.

How do limestone pavements form?

During the last ice age, much of Britain was covered by ice sheets and glaciers. During this time the soil and weaker surface rocks were **scoured** away, leaving broad expanses of exposed limestone such as those at Malham, Yorkshire. With the retreat of the glaciers, a forest eventually established itself. Rain water that **percolated** through the soils and it became **acidic** and gradually **dissolved** the limestone surface. Under the soil, rain water picked out the joints in the limestone and gradually widened them by dissolving the rock. This created **deep fissures** called **grykes**. The blocks of limestone (the **clints**) were also attacked by the rain and small holes and **gulleys** formed on their surface, which are called **karrens**. The ice finally retreated about 12 000 years ago. The soil on the top of the limestone pavement was eroded, washed down into the **grykes** and removed altogether by the drainage system. This erosion has increased during the past few thousand years, first by forest clearance and later by agricultural pursuits. The exposed limestone pavements have been constantly **weathered chemically**, which further widens the **grykes** and deepens the **karren**.





Limestone landscapes

The Yorkshire Dales are located in the North west of England where the underlying ground is principally carboniferous limestone rock

Malham in the Yorkshire Dales is famous for it's limestone scenery. One feature that is particularly prominent is the limestone pavement (shown below)

Onion skin weathering

During the day the sun heats up the surface of the rock causing the rock to expand.

During the night the rock cools down and contracts.

As the rock expands and contracts over and over again, small pieces of surface rock begin to flake and fall off.

Cave features

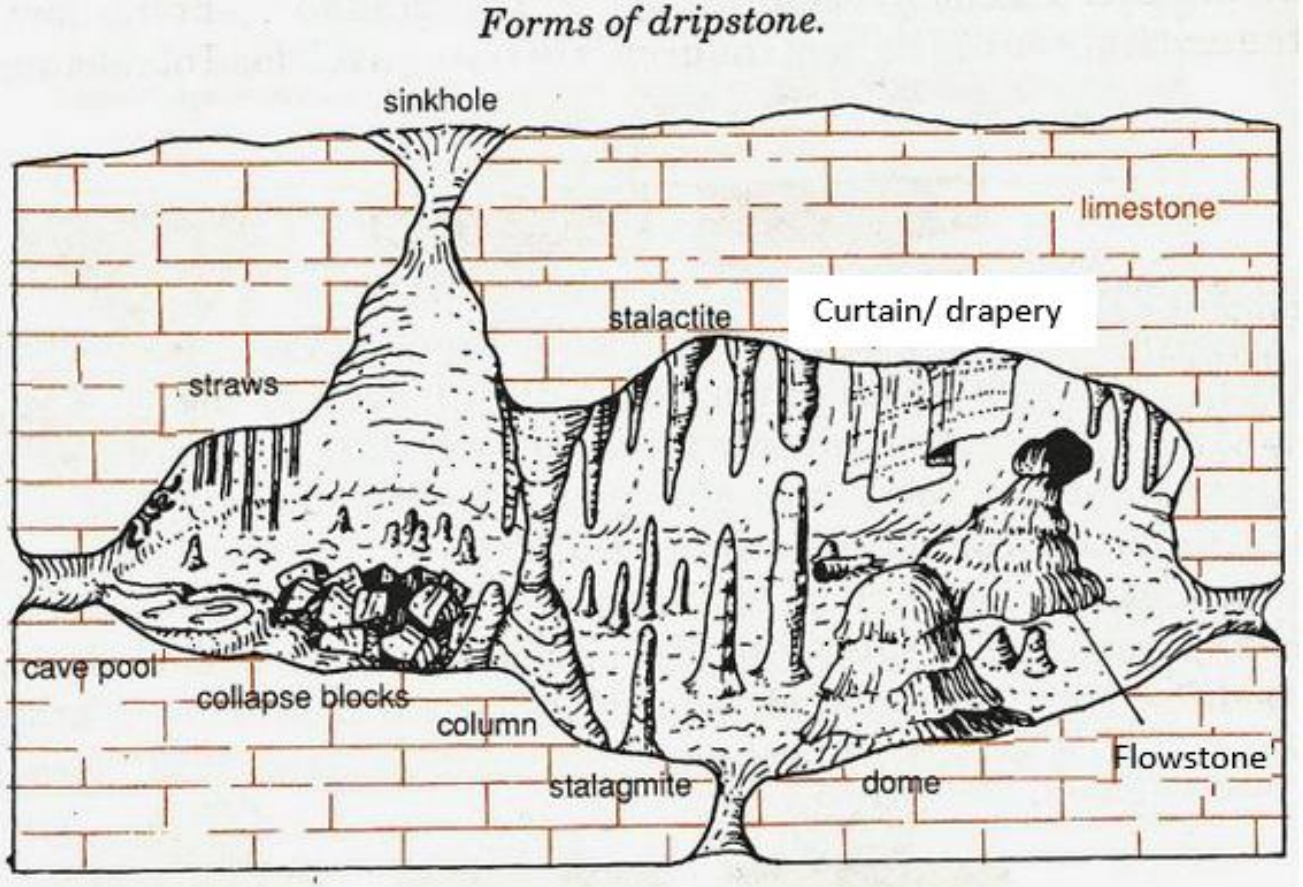
We can trace the words **stalactite** and **stalagmite** back to the Greek word "stalassein," which means "to drip." This is fitting because it describes how both are formed in nature.

Limestone caves, where most stalactites and stalagmites are found, are mainly composed of calcite, a common mineral found in **sedimentary** rocks. When rainwater falls over a cave and trickles through rocks, it picks up **carbon dioxide** and minerals from **limestone**. If we add water, carbon dioxide and calcium carbonate together, we get this equation:

$$H20 + CO2 + CaCO3 = Ca\ (HCO3)2$$

Ca (HCO3)2 is known as **calcium bicarbonate**, and the water carries the substance, basically dissolved **calcite**, through the cracks of the roof of a **cave**. Once water comes into contact with the air inside the cave, however, some of the calcium bicarbonate is transformed back into calcium carbonate, and calcite starts to form around the crack. As water continues to drip, the length and thickness of the calcite grows, and eventually a straw forms on the ceiling. If the end of the straw gets blocked up by calcite, the water then has to flow down the outside and the straw becomes a **stalactite**. It can take a very long time for most **stalactites** to form -- they usually grow anywhere at less than 1mm a year!

Of course, **stalagmites** don't just emerge from the ground. The water dripping from the end of a stalactite falls to the floor of a cave and deposits more calcite into a mound. Soon enough, a stalagmite will form in a cone like shape. This is why you usually find stalactites and stalagmites in pairs, and sometimes they'll even grow together to form one big **column**.



Key term	Definition
Flowstones	are composed of sheet-like deposits of calcite or other carbonate minerals, formed where water flows down the walls or along the floors of a cave.
Stalactite	A long, thin icicle shaped piece of limestone hanging from the ceiling of a cavern.
Stalagmite	A short, stumpy piece of limestone growing up from the floor of a cavern.
Swallow holes	natural depression on the surface of a limestone landscape eroded by chemical weathering (also called a pot hole).
Caverns	A natural underground space carved out by chemical weathering and running water.
Calcium Carbonate	The main chemical composition of limestone

Cheddar Gorge is a limestone gorge in the Mendip Hills, near the village of Cheddar, Somerset, England. The gorge is the site of the Cheddar show caves, where Britain's oldest complete human skeleton, Cheddar Man, estimated to be 9,000 years old, was found in 1903. Older remains from 12,000–13,000 years ago have also been found. The caves, produced by the activity of an underground river, contain stalactites and stalagmites. The gorge is part of a Site of Special Scientific Interest. The maximum depth of the gorge is 137 m, with a near-vertical cliff-face to the south, and steep grassy slopes to the north. The gorge itself was formed by meltwater floods during the cold periglacial periods which have occurred over the last 1.2 million years. During the ice ages, permafrost blocked the caves with ice and frozen mud and made the limestone impermeable. When this melted during the summers, water was forced to flow on the surface, and carved out the gorge. During warmer periods, the water flowed underground through the permeable limestone, creating the caves and leaving the gorge dry, so that today much of the gorge has no river until the underground Cheddar Yeo river emerges in the lower part from Gough's Cave. The gorge is susceptible to flooding. In the Chew Stoke flood of 1968, the flow of water washed large boulders down the gorge, damaging the cafe and entrance to Gough's Cave and washing away cars.

Cheddar Gorge, including the caves and other attractions, has become a major tourist destination. In a 2005 poll of Radio Times readers, following its appearance on the television programme Seven Natural Wonders (2005), Cheddar Gorge was named as the second greatest natural wonder in Britain, surpassed only by Dan yr Ogof caves. The gorge and all of it's combined attractions have in the past attracted about 500,000 visitors per year, but this number has fallen dramatically in the past two decades. Unfortunately, as a result of the COVID-19 crisis in 2020, the show caves, museum and associated attractions have been shut indefinitely, with the direct loss of 30 jobs and the indirect loss of many more in the town as a result of reduced visitor numbers. You can, however, still walk around the top of the Gorge.

The south side of the gorge is owned and administered by the Longleat Estate. The cliffs on the north side of the gorge are owned by The National Trust. Every year, both of the gorge's owners contribute funds towards the clearance of scrub, bush and trees from the area, to reduce the risk of rockfall caused by erosion, and to allow climbers access to the rock faces. Most of the commercial visitor activity in the gorge is on the Longleat-owned south side, including access to the two main commercial show caves and the visitor centre. Visitors to the show caves alone have decreased from 400,000 a year in the 1980s to 150,000 in 2013. As a result, the Longleat Estate had in recent years been looking into what new attractions could be developed in the area to rejuvenate the area. Proposals made formally, were opposed by the National Trust.

Source 2 – an extract from 'Managing Cheddar Gorge and the Mendips' by Garrett Nagle

"Nearly 500,000 people a year visit the caves at Cheddar Gorge, while nearby Bath is the second most popular city for tourists to visit in the UK. Visitors to the attractions created by Mendip Limestone brings about £25 million a year into the area. Many of the attractions in Cheddar Gorge are operated by the Cheddar Gorge and Caves company which includes 300 acres of land, 50 caves and the whole of the south side of the gorge."

Source 1 – site map of the existing attractions in the gorge

Source 3 – an extract from www.cheddargorge.co.uk

"Longleat Estate is currently considering a range of potential regeneration projects at Cheddar Gorge, with the aim of creating a significant new visitor attraction for the area. Such a project would need to help support ongoing conservation work and make the Gorge more accessible to all visitors. It could also provide an educational resource and bring significant economic benefits to local businesses and employers."

Source 4 – an extract from 'Tourism, Leisure and Recreation' by Garrett Nagle

"Cheddar Gorge in the Mendip Hills of Somerset is a tourist 'honeypot'. It is an excellent example of rugged relief (terrain) about which there is a conflict of interest. Tourist related businesses want to bring more visitors into the area, whereas mining companies want to continue to quarry the limestone. Many residents and environmentalists want to preserve the unique landscape of gorges, caves …and other spectacular limestone scenery, as well as unusual plants and birds."

Source 5 – a satellite image of Cheddar, the Gorge and some of the local quarries

Source 6 – a map of the area

Source 7 – an extract from a consultation paper looking at the future of Cheddar Gorge

"A Gorge walk takes approximately 1.5 hours, 4 hours if combined with cave visit. We estimate around 10% of visitors climb Jacob's Ladder with just 2% reaching the top. Numbers have declined and tend to be at certain times of day (usually 11am-4pm) resulting in shorter trading hours. New investments would be aimed at extending the options available and time visitors spend in the area. …Currently local businesses are reluctant to extend their leases. If the new attraction increases visitors to the area they are likely to use/support local businesses as well."

Source 8 – A council document on quarrying in the area

"At one time there were 40 large quarries open in the Mendip Hills. Of these, 16 are still active and about 6% of all limestone in the area has been quarried. The value of the 300 million tonnes taken out so far is about £1.4 billion at current prices. Sales every year are worth about £43 million. However, with only two quarries served by the railway, there are up to 3000 lorries snaking their way through narrow country lanes every day."

BVT
Christianity

Eucharist

Why is the Eucharist important?
The Eucharist is a special service taken by all Christians. It may vary between different denominations and be called slightly different names, but it is generally the same. In the service the preacher will give bread and wine to the congregation which represents Jesus' blood and body. It is a service to remember Jesus' sacrifice that he gave to man (**atonement**), dying for their sins. It shows Christians devotion and love for God and Jesus Christ.

Why does the Eucharist come from?
The Eucharist comes from what happened at the Last Supper in Holy Week. When Jesus knew he would be have to die, he wanted his disciples and followers to remember his sacrifice so they can connect with God and have salvation (eternal life with God in heaven). At the last supper Jesus had said "Take, eat; this is My body which is broken for you; do this in remembrance of Me." In the same manner he also took the cup after supper, saying, "This cup is the new covenant in My blood. Do this, as often as you drink it, in remembrance of Me."

Key vocabulary
Eucharist
Holy Communion
Holy mass
Atonement
Salvation
Pilgrimage

Why do Christians go on pilgrimage?

- To follow the footsteps of Jesus e.g. to Jerusalem
- To visit a sacred place e.g. place of Jesus or a disciple / saint
- For healing – physical or spiritual
- To break from normal life and focus on God
- To reflect on their life
- To connect with God
- For forgiveness of sins
- To meet other Christians
- To connect with Christian communities around the world

The Shell emblem of the Santiago de Compostela pilgrimage

What happens at the Eucharist?
Some Christians call the Eucharist Holy Mass or Holy Communion. At a Catholic Eucharist the bread and wine are blessed at the Altar and a Eucharist prayer is read. The wine is passed around in a chalice. While at a protestant Eucharist the wine or non-alcoholic alternative is passed in small cups, the story of the last supper is read.

Example of a Pilgrimage: Santiago de Compostela.

Santiago is the local Spanish name for Saint James. James was one of the 12 disciples of Jesus. According to legend, the remains of St James were carried by boat from Jerusalem to northern Spain where he was buried on what is now the city of Santiago de Compostela.

Today, thousands of Christian pilgrims travel a pilgrimage route to Santiago de Compostela. Most travel by foot, some by bicycle and a few travel, as some of their medieval forbears did, on horseback or by donkey. It takes 35 days to walk the 500 miles. Many of the pilgrims wear cockle-shell badges and this is the emblem of pilgrims to Santiago.

Churches

BVT: Christianity

What are churches used for in the community?

- Regular Worship
- Special services - Christmas, Easter, baptism, Eucharist, Weddings, funerals
- Social activities e.g. scouts/guides, coffee mornings
- Help for different groups e.g. Mother and baby groups, meals for the elderly
- Charity and fund raising events
- Music concerts

Key vocabulary

Altar
Preacher
Font
Pulpit
Lectern
Stained glass window

The Lectern (right):

- Usually a wooden stand which hold the bible
- The preacher reads the bible from here
- Sometimes this is of an eagle, which symbolises different things; one of which is the eagle flying and spreading the words of Jesus.

Church features

An Altar:

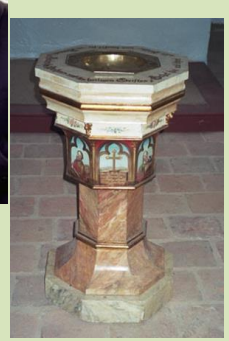
- The table at the front of the church.
- Holds the bread and wine for Eucharist

The Pulpit:

- A wooden stand at the front to one side in the church
- Where the preacher stands to give his sermon
- The preacher can connect and speak to his congregation

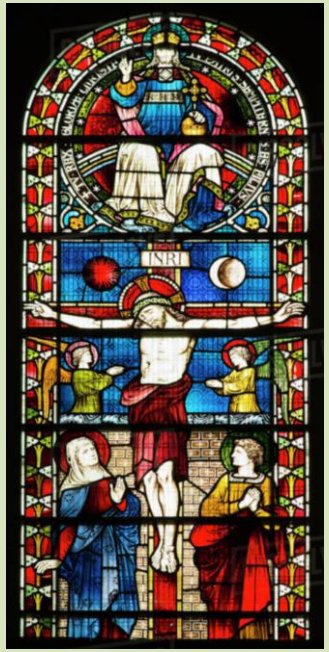
The Font:

- The basin that is filled with Holy water used for baptism
- Usually by the door of the church – as when you are baptised you are welcomed into the Christian church community



Stained Glass Windows:

- These were traditionally used to show stories and messages from the bible as not everyone could read.
- Now they are a way to decorate the church and still elaborate on stories from the bible



SCAN ME

BVT: Christianity

Christian Church around the world

The Christian church helps in different ways around the world. It helps fight against poverty, conflict, discrimination and persecution and supports Christians and non-Christians, inspired by the teachings of Jesus.

Key vocabulary

Charity
Peace
Discrimination
Persecution
Apartheid

Christian Teachings that inspire helping others

These are different quotes from Jesus, the bible or Jesus' parables

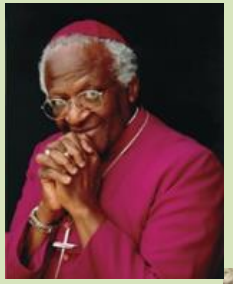
- "Love thy neighbour"
- "Let's not love with words but with actions"
- "Love your enemies and pray for those that persecute you"
- "For I was hungry and you gave me something to eat. I was thirsty and you gave me something to drink".
- The parable of the Widows Offering.
- The parable of the Good Samaritan.

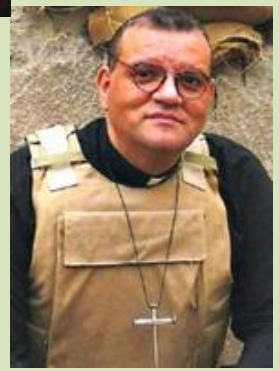
Helping against discrimination

Archbishop Desmond Tutu

Archbishop Desmond Tutu helped towards rebuilding relationships that had been destroyed in **South Africa** from the **persecution** of black people.

During a period called **Apartheid** black people were treated very badly by white people in South Africa. Many blacks were discriminated against, stopping their rights such as voting, being allowed in education and jobs. White people were often violent towards them. This period of discrimination / Apartheid was ended by the campaigning of Nelson Mandela and **Tutu worked with Mandela** to end this treatment.





Christian Charities

Christian Aid

Christian Aid works by helping **poorer countries** and countries when they face **natural disasters** like floods or earthquakes.

1. Giving emergency aid which is immediate help that is needed after a disaster e.g. clean water and food
2. Setting up **projects** in poverty areas such as **clean water projects or health projects**.

Christian Aid gets money from our **government and companies but also individuals** too. There is a **Christian Week** where fund raising goes on and you may get an envelope through your door to give money to help.

Tear Fund

Tear Fund, like Christian Aid, provides emergency help to areas suffering from **disasters** and also **long term projects too.**

- One example was a project to help set up **education** in Ethiopia to help children read and write and to provide them with a meal at school each day.

Tear Fund rely on fund raising by **churches rather than the government**. They rely on donations from **individuals** too.

Working for peace

The Vicar of Baghdad

Andrew White, nicknamed the Vicar of Baghdad as he works in the **Middle East** (where Baghdad is), created the "Foundation for Relief and Reconciliation in the Middle East". This provides support and help for people living in the Middle East. This area has seen wars over the years such as the Iraq war, wars in Palestine and Afghanistan. The Vicar of Baghdad's main aim is to work with the **different religious leaders to create peace** between them. He sees his role as being a mediator – someone that talks between 2 groups that are not getting on. This work is important because if he can work towards **encouraging peace**, the lives of ordinary people will improve.

BVT: Judaism

Origins of Judaism

Judaism was started about 4,000 years ago by a man called **Abraham**.

God spoke to Abraham and Abraham knew that there was only one true God. God told Abraham to go to his promised land; a place called Canaan (now Israel). God told him that he and his family would be blessed.

God said "Leave your country…. I shall make you a great nation… I shall bless those that bless you".

- Anyone that followed Abraham and God would blessed and protected. These were Gods **chosen people**.
- God gave them his promised **Holy land**.
- In return they followed his commandments.
- This agreement is called the **covenant**.

God said that Abraham's faith to God would be tested 10 times. The first test was when he had to leave him home (above).

The final and greatest test was when God asked Abraham to **sacrifice** his son Isaac as an offering to him. Both Abraham and Isaac were willing for God, but just before Abraham was going to kill him, God intervened and stopped him. A ram was sacrificed and given to Abraham instead.

They had passed God's test. This showed Abraham's loyalty and dedication to God.

Key vocabulary

Israelite
Covenant
Mount Sinai
Plagues
Pharaoh
Commandment
Holy Land
Abraham
Canaan

Abraham's sacrifice of Isaac

Moses parting the Red Sea

Moses

1,000 years had passed since Abraham. Abraham's descendants were called the Israelites (this is what the Jewish people were called then) and they had spread to many countries.

In Egypt the Pharaoh saw the Israelites as a threat and made the Israelites his slaves. He ordered all Israelite slave baby boys to be killed.

The story of Moses is a teaching to show how one man was chosen by God to free his promised people.

This is how this happened:

- God appeared to Moses in the flames of a fire in a burning bush and said "You shall tell the Pharaoh that I am the only God and shall lead the Israelite slaves out of Egypt to freedom".
- Moses was scared but went to tell the Pharaoh that he should free the Israelite slaves, but the Pharaoh said no.
- Moses used the power of God to send **10 plagues** to the Egyptians: some of these include the plagues of frogs, locusts, darkness, killing cattle, flies.
- But it was the last plague that was the worst. The first born son of every Egyptian was to be killed.
- After this plague the pharaoh was so angry, but allowed Moses to lead the Israelites out of Egypt. But the Pharaoh's soldiers chased them. They came to the Red Sea, **Moses parted the sea** so the Israelites could be free.
- Moses and the Israelites spent 40 days together in the desert and on top of Mount Sinai and God gave Moses "…the two tablets of the covenant law, the tablets of stone inscribed by the finger of God made a promise to God". This was the promises of the **10 commandments**.

Judaism - Religious Practices

Worship

The Jewish place of worship is called a synagogue; this place contains a variety of symbols which represent and remind Jews of their religious history.

Synagogues contain:

- **An Ark** – which holds the scrolls of Jewish law called the **Torah**
- **Bimah** – a raised platform where readings from the Torah are given
- An **eternal candle** - which represents the light of God

The most famous Jewish prayer is known as the **Shema** – "Hear O Israel, the Lord our God, the Lord is one. You shall love the Lord your God with all your heart and with all your soul and with all your might".

Jews may use these items to also worship:

- **Tefillin** are cubic black leather boxes with leather straps. Inside them are 4 prayers. They are worn in morning prayers.
- A **Tallit** is a shawl for prayer which is often worn too. This represents God wrapping around the person, protecting them.

Key vocabulary

Synagogue
Tefillin
Ark
Torah
Bimah
Shema
Monotheist
Omnipotent
10 Commandments
Mitzvot

Tallit

Tefillin

"Commandment 4: You shall remember the Sabbath and keep it Holy"

The Jewish Sabbath is known as **Shabbat** which runs from sundown on Friday to sundown on Saturday.
A traditional Jewish family will gather at the synagogue for worship on Friday night, and then eat together after the service. Special bread called **Challah** is eaten and candles are lite.
This special time for Jews is about worship but also community – meeting together as a family.

Beliefs

- Jews believe there is only one God. This makes them a Monotheistic religion.
- The Jewish God is the same God as the Christian and Muslim God.
- Jews believe God is **omnipotent** and **all loving** and because of this made the world for them.
- However, Jews believe that **Jesus was a prophet** (not the son of God like Christianity)
- Jews were given the **10 commandments** by God. These were told to Moses on Mount Sinai.
- These are the laws which they live by, as they are the Word of God. These laws need to be followed so that Jews can go to Heaven.
- These 'laws' are known as **Mitzvot**. There are 613 Mitzvot, of which 10 are the main commandments.

Jewish Festivals

Hannukah

History:

- 2,200 Years ago the Jewish people lived in their Promised Land. However at this time the Greeks wanted to increase their empire.
- Greek King **Antiochus** invaded the Promised Land; banned the Jews worshipping their God and banned them reading their Holy Book the **Torah**. Many Jews were killed.
- The Greek army smashed up the religious temple in Jerusalem, including a sacred lamp in the temple and the oil needed to brunt the lamp.
- A family called the **Maccabees** stood up against the Greek army. They beat them and marched back to Jerusalem.
- A new lamp was found and lit, however they only had enough oil for one day. A miracle from God allowed the oil to last 8 days, giving the Jews light in their holy temple.

Key vocabulary

Pesach
Seder plate
Hannukah
Maccabees
Menorah Candle
Antiochus
Menorah

Pesach (Passover)

The main Jewish festival which takes place in April (but moves, like Easter). It celebrates **Moses freeing the Israelites.**
The Jewish home is cleaned of any old food. Special foods are bought, prepared and eaten.

The leader of the house wears white linen robes to signify freedom. He reads the story of Moses freeing the Israelites before the special meal. The special meal contains certain foods. These foods are placed on the **Seder plate** and have special meaning. E.g. the bone represents God's mighty arm helping them. 10 drips of wine are split, one for each plague.

Festival of Light

Hannukah is therefore named the Festival Light for the lamp burnt for 8 days.
Jews celebrate this festival by coming together as a family, with friends and sharing special food; one is called **sufganiyot** (like donuts) and play games using a **Dreidel**.
The candle that is lit every one of the 8 days in remembrance is called the **menorah.**

sufganiyot

Dreidel

Sedar Plate

FRENCH YEAR 7: ALL ABOUT ME

Quelle est la date de ton anniversaire?
Mon anniversaire, c'est le... *(my birthday is the …)*

1. premier	11. onze	21. vingt et un
2. deux	12. douze	22. vingt-deux
3. trois	13. treize	23. vingt-trois
4. quatre	14. quatorze	24. vingt-quatre
5. cinq	15. quinze	25. vingt-cinq
6. six	16. seize	26. vingt-six
7. sept	17. dix-sept	27. vingt-sept
8. huit	18. dix-huit	28. vingt-huit
9. neuf	19. dix-neuf	29. vingt-neuf
10. dix	20. vingt	30. trente
		31. trente et un

de *(of)*

janvier (January)	février (February)	mars (March)
avril (April)	mai (May)	juin (June)
juillet (July)	août (August)	septembre (September)
octobre (October)	novembre (November)	décembre (December)

Eg Mon anniversaire est le trois septembre (my birthday is the third of September)

Comment es-tu? *(What are you like?)*

Je pense que / je crois que *(I think that)*
A mon avis *(In my opinion)*
Mes parents disent que *(my parents say that)*

Je suis *(I am)*
amusant/e, *(funny, fun)*
bavard/e *(talkative)*
sérieux / -euse *(serious)*
paresseux/ -euse *(lazy)*
genereux/ -euse *(generous)*
travailleur/ -euse*(hard-working)*

NB The following adjectives have the same spelling for both masculine and feminine.
timide *(shy)*
bête *(silly)*
sympa *(nice)*

Don't forget to add a connective so that you can extend your answers!
Et = and
Mais = but

Asking questions

Comment? = *how / what … like*
Examples:

Comment est le chien? = *What is the dog like?*
Comment vas-tu? = *How are you (going) ?*
Comment tu t'appelles? = *How do you call yourself / what's your name?*

Où? = *where?*
Examples:

Où habites-tu? = *Where do you live?*
Où est la gare? = *Where is the station?*

Quel/s, quelle/s? = *which?*
Examples:

Quel chien aimes-tu? = *Which dog do you like?*
Quelle voiture est la plus rapide? = *Which car is the fastest?*
Quelle est la date…? = *Which date is it / what's the date…?*

Quand? = *when?*
Examples:

Quand vas-tu en France? = *When are you going to France?*
Quand ouvert le magasin? = *When does the shop open?*

Combien? = *how much / many?*
Examples:

Combien de soeurs as-tu? = *How many sisters do you have?*
Où est la gare? = *Where is the station?*

Qui? = *who?*
Examples:

Qui est ton prof d'anglais? = *Who is your English teacher?*
Qui est-ce? = *Who is that?*

Pourquoi? = *why?*
Examples:

Pourquoi fait-il si froid? = *Why is it so cold?*
Pourquoi tu n'aimes pas les maths? = *Why don't you like maths?*

Game!

Que fais-tu dans ton temps libre? (What do you do in your free time?)

toujours *(always)*
normalement *(normally)*
une fois par semaine *(once a week)*
le weekend *(on the weekend)*
quand il fait beau / chaud *(when it is nice weather / hot)*
si / s'il pleut / neige *(if it rains/snows)*

Je fais… (*I do…*)

de l'athlétisme *(athletics)*
du cyclisme *(cycling)*
du ski *(skiing)*
du patinage *(skating)*
de l' équitation *(horse riding)*
de la natation *(swimming)*
de la voile *(sailing)*

Je joue … *(I play)*

au badminton *(badminton)*
au rugby *(rugby)*
au basket *(basketball)*
au squash *(squash)*
au foot / football *(football)*
au volleyball *(volleyball)*

NB:
faire de
jouer à

BUT
jouer de + an instrument

je joue ***au*** foot et je joue ***du*** piano

Parle-moi de ta routine *(tell me about your daily routine)*

Le matin (in the morning)

Je me réveille *(I wake up)*
Je me lève *(I get up)*
Je me douche *(I shower)*
Je me brosse les dents*(I brush my teeth)*
Je m'habille *(I get dressed)*

Je prends mon petit déj(euner) *(I have breakfast)*
Je vais au collège *(I go to school)*

L'après-midi / le soir *(in the afternoon/ at night)*

Je rentre à la maison *(I come home)*
Je fais mes devoirs *(I do my homework)*
Je me couche *(I go to bed)*

à … *(at)*
une heure, deux heures, trois heures… *(at 1, 2, 3… o'clock)*
et quart *(quarter past)*
et demie *(half past)*
moins le quart *(quarter to)*

Verbs – understanding conjugation.

If you find a verb in a dictionary, it will be in its INFINITIVE form. This means that, in English, it has the word **'to –'** in front.
faire = *to do*
jouer = *to play*
prendre = *to take*
s'appeller = *to be called*
se coucher = *to go to bed / put yourself to bed*

BUT, to use it properly in sentence, we need to **conjugate** the verb. That means, change its spelling to match WHO is doing the verb and WHEN they are doing it.
We conjugate verbs in French in a easy-to-remember way. Look at the examples below. Notice how the spelling of the verb changes. Can you see any patterns?

faire = *to do*

je fais = *I do*
tu fais = *you do*
elle / il / on fait = *s/he, one does*

nous faisons = *we do*
vous faîtes = *you (pl) do*
elles / ils font = *they do*

jouer = *to play*

je joue = *I play*
tu joues = *you play*
elle / il / on joue = *s/he, one plays*

nous jouons = *we do*
vous jouez = *you (pl) do*
elles / ils jouent = *they do*

Some verbs (they are called 'reflexive' verbs) have an extra word too. Don't worry – there aren't too many of them.

se coucher = *to go to bed / put yourself to bed*

je **me** couche = *I go to ged*
tu **te** couches = *you go to bed*
elle / il / on **se** couche = *s/he, one goes to bed*

nous **nous** couchons = *we go to bed*
vous **vous** couchez = *you (pl) go to bed*
elles / ils **se** couchent = *they go to bed*

A useful video here!

SPANISH YEAR 7: ABOUT ME

¿Cuándo es tu cumpleaños? (When is your birthday?)

Mi cumpleaños es el *(my birthday is the …)*

1. uno	11. once	21. veintiuno
2. dos	12. doce	22. veintidos
3. tres	13. trece	23.veintitres
4. cuatro	14. catorce	24. veinticuatro
5. cinco	15. quince	25. veinticinco
6. seis	16. dieciseis	26. veintiseis
7. siete	17. diecisiete	27. veintisiete
8. ocho	18. dieciocho	28. veintiocho
9. nueve	19. diecinueve	29. veintinueve
10. diez	20 veinte	30. treinta
		31. treinta y uno

de *(of)*

enero (January)	febrero (February)	marzo (March)
abril (April)	mayo (May)	junio (June)
julio (July)	agosto (August)	septiembre (September)
octubre (October)	noviembre (November)	diciembre (December)

e.g Mi cumpleaños es el once de abril *(my birthday is 11th April)*

¿Cómo eres? *(What are you like?)*

Pienso que/ Creo que *(I think that)*
En mi opinion *(In my opinion)*
Mis padres dicen que *(my parents say that)*

Soy *(I am)*
simpático/a *(nice)*
serio/a *(serious)*
gracioso/a, *(funny, fun)*
perezoso/a *(lazy)*
tímido/a *(shy)*
bueno/a *good*
malo/a , travieso/*a (bad, naughty)*
tonto/a *(silly)*
callado/a *(quiet)*
generoso/a *(generous)*
trabajador/a *(hard-working)*
hablador/a *(talkative)*

Don't forget to add a connective so that you can extend your answers!

NB The following adjectives have the same spelling for both masculine and feminine.
sociable *(outgoing)*
paciente *(patient)*
impaciente *(impatient)*
optimista *(optimistic)*
pesimista *(pessimistic)*
egoísta *(selfish)*
feliz *(happy)*

Asking questions

¿Cómo? = *how / what … like*
Examples:

¿Cómo es el perro? = *What is the dog like?*
¿Cómo se escribe?= *How is it spelt?*
¿Cómo te llamas? = *How do you call yourself / what's your name?*

¿Dónde? = *where?*
Examples:

¿Dónde vives? = *Where do you live?*
¿Dónde está la biblioteca? = *Where is the library?*

¿Cual/Cuales?= *which/what?*
Examples:

¿Cual es tu color favorito? = *Which is your favourite colour?*
¿Cual es el coche lo más rápido? = *Which is the fastest car?*
¿Cual es la fecha…? = *Which date is it / what's the date…?*

¿Cuando? = *when?*
Examples:

¿Cuando vas de vacaciones? = *When are you going on holiday?*
¿Cuando abre la tienda? = *When does the shop open?*

¿Cuanto(s)/cuanta(s)? = *How much / many?*
Examples:

¿Cuantos hermanos tienes? = *How many siblings do you have?*
¿Cuanto mides? = How tall are you? (How much do you measure?)

¿Quien(es)? = *who?*
Examples:

Quien es tu profe d'anglais? = *Who is your English teacher?*
Quien**es son** tus profess favoritos? = *Who **are** your favourite teachers?*

¿Por qué? = *Why?*
Examples:

¿Por qué hace calor? = *Why is it cold?*
¿Por qué no te gustan las matematicas? = *Why don't you like maths?*

¿Qué haces en tu tiempo libre? (What do you do in your free time?)

siempre *(always)*
normalmente *(normally)*
una vez a la semana *(once a week)*
dos veces a la semana *(twice a week)*
el fin de semana *(on the weekend)*
cuando hace buen tiempo/sol/calor/frío *(when it is nice weather/sunny/cold/hot)*
si llueve/nieva *(if it rains/snows)*

Hago/ Practico … (*I do/ I practise…*)

(el) atletismo *(athletics)*
(el) ciclismo *(cycling)*
(el) esquí *(skiing)*
(el) patinaje *(skating)*
(la) equitación *(horse riding)*
(la) natación *(swimming)*
(la) gymnasia *(gymnastics)*
(la) Vela *(sailing)*

Juego … *(I play)*

al badminton *(badminton)*
al rugby *(rugby)*al baloncesto *(basketball)*
al squash *(squash)*
al fútbol *(football)*
al voleibol *(volleyball)*

Describe tu rutina diaria *(describe your daily routine)*

Por la mañana (in the morning)

me despierto *(I wake up)*
me levanto *(I get up)*
me ducho *(I shower)*
me lavo los dientes *(I brush my teeth)*
me visto *(I get dressed)*
desayuno *(I have breakfast)*
voy al colegio *(I go to school)*

Por la tarde/noche *(in the afternoon/ at night)*

vuelvo en casa *(I come home)*
hago mis deberes *(I do my homework)*
descanso *(I relax)*
me acuesto *(I go to bed)*

a la* una *(at 1 o'clock)*
a las dos, tres, cuatro, cinco, seis, siete, ocho, nueve, diez, once, doce *(at 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 o.clock)*

y cuarto *(quarter past)*
y media *(half past)*
menos cuarto *(quarter to)*

Verbs – understanding conjugation.

If you find a verb in a dictionary, it will be in its INFINITIVE form. This means that, in English, it has the word **'to –'** in front.
hacer = *to do*
jugar = *to play*
tomar = *to take*
llamarse = *to be called*
acostarse= *to go to bed / put yourself to bed*

BUT, to use it properly in sentence, we need to **conjugate** the verb. That means, change its spelling to match WHO is doing the verb and WHEN they are doing it.
We conjugate verbs in Spanish in a easy-to-remember way. Look at the examples below. Notice how the spelling of the verb changes. Can you see any patterns?

hacer = *to do*

hago= *I do*
haces= *you do*
hace= *s/he, one does*

hacemos= *we do*
haceis= *you (pl) do*
hacen= *they do*

jugar = *to play*

juego= *I play*
juegas= *you play*
juega= *s/he, one plays*

jugamos= *we do*
jugais= *you (pl) do*
juegan= *they do*

Some verbs (they are called 'reflexive' verbs) have an extra word too. Don't worry – there aren't too many of them.

acostarse= *to go to bed / put yourself to bed*

Me acueso= *I go to ged*
Te acuestas= *you go to bed*
Se acuesta= *s/he, one goes to bed*

Nos acostamos= *we go to bed*
Os acostais= *you (pl) go to bed*
Se acuestan= *they go to bed*

THE FORMAL ELEMENTS

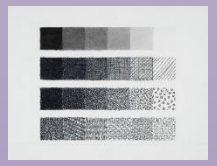
TERM 1, 2, 3 & 4

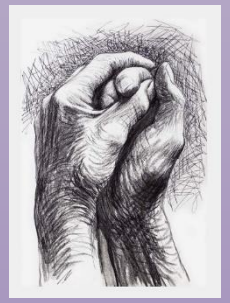
LINE

A **LINE** is the path left by a moving point, eg. A pencil or a brush dipped in paint. A **LINE** can take many forms, eg.
Horizontal, diagonal or curved.
A **LINE** can be used to show contours, movements, feelings and expressions.


TONE

TONE means the lightness or darkness of something. This could be a shade or how dark or light a colour appears.

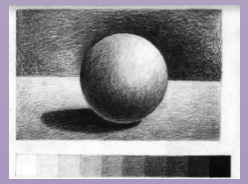




SHAPE/FORM

A **SHAPE** is an area enclosed by a **LINE**. It could be just an outline or it could be shaded in.
FORM is a three dimensional shape such as a sphere, cube or a cone.

Sculpture and 3D design are about creating **FORMS**




TEXTURE

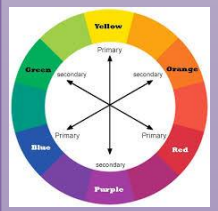
TEXTURE is the surface quality of something, the way something feels or looks like it feels.
There are two types of texture: **ACTUCAL TEXTURE** and **VISUAL TEXTURE**.
ACTUAL TEXTURE: really exists so you can feel it and touch it
VISUAL TEXTURE: created using different marks that represent actual **TEXTURE**



COLOUR

There are 3 primary **COLOURS**: RED, YELLOW, BLUE

By mixing any 2 **PRIMARY COLOURS** together you create **SECONDARY COLOURS**; ORANGE, GREEN, PURPLE




PATTERN

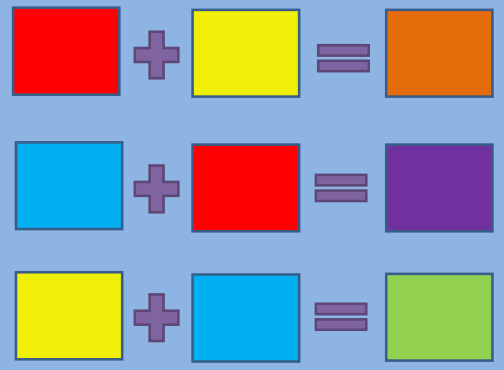
PATTERN is a design that is created by repeating **LINES**, **SHAPES**, **TONES** or **COLOURS.**

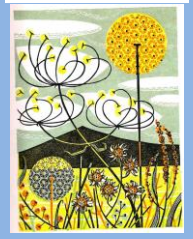
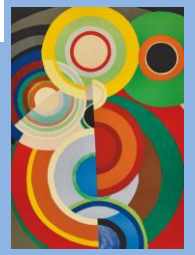
Patterns can be manmade or natural.


SENTENCE STARTERS

I can vary tone by…
- layering mark making
- using a range of pencils
- varying the pressure of my marks
- using an eraser to add highlights

My work is successful because…
I could develop my work further by…
My design was inspired by the work of…




Artists you could research:
- Pablo Picasso
- Sonia Delaunay
- Vincent Van Gogh
- Henry Moore
- Henri Matisse
- Angie Lewin
- Yayoi Kusama

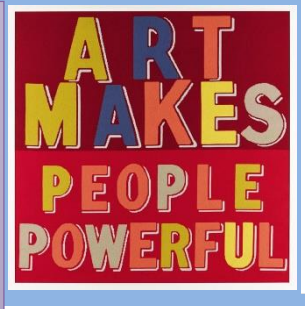
The Fundamentals of Art

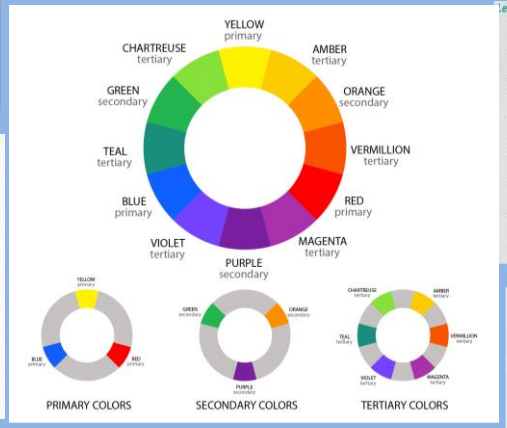
ESSENTIAL EQUIPMENT:

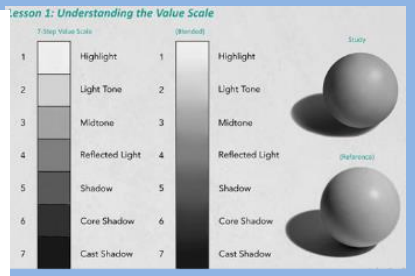
- PENCIL PACK (2B, 4B, 6B ETC)
- ERASER
- SHARPENER
- SKETCHBOOK

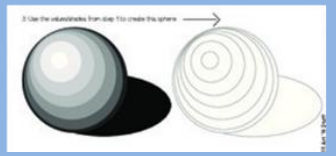
OPTIONAL EQUIPMENT:

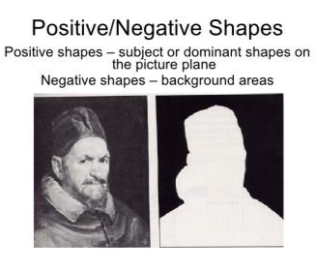
- DRAWING PENS
- WATERCOLOUR SET
- WATERCOLOUR PENCILS
- PAINTBRUSHES





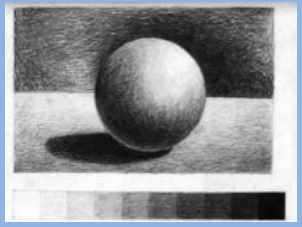






TALKING ABOUT ART:

- What are you looking at?
- How was it made?
- Who made it?
- How will it inspire your work?
- Do you like it or dislike it? Why?



ARTIST

ATTITUDE

Be positive and try your best!

RESPECT

Respect others, work and the room

THINK

Understand and demonstrate.

IMAGIINE

Be creative, use you imagination!

SPOTLESS

Tidy up after yourself.

TARGET

Follow directions.

Techniques you will explore:

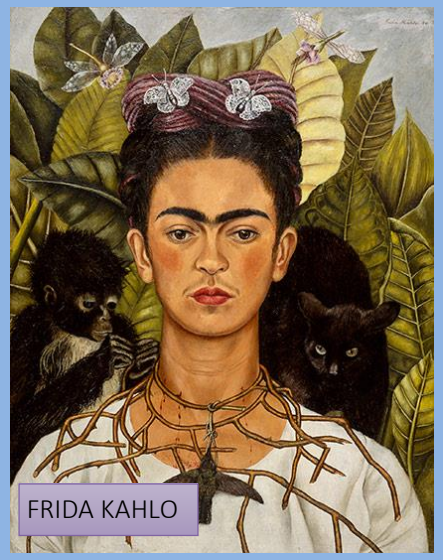
- Observational drawing
- Experimental drawing
- Mono-printing
- Poly-printing
- Extending the frame
- Painting
- Collage
- Colour theory
- Photography

COLOUR	LINE	SHAPE/FORM/SPACE	PATTERN AND TEXTURE	TONE
BRIGHT	FLUENT	CLOSED	REPEATED	BRIGHT
BOLD	CONTINUOUS	OPEN	UNIFORM	DARK
VIBRANT	CONTROLLED	DISTORTED	GEOMETRIC	FADED
PRIMARY	LOOSE	FLAT	RANDOM	SMOOTH
SECONDARY	POWERFUL	ORGANIC	SYMMETRICAL	HARSH
TERTIARY	STRONG	POSITIVE	SOFT	CONTRASTING
RADIANT	ANGULAR	NEGATIVE	IRREGULAR	INTENSE
VIVID	FLOWING	FOREGROUND	UNEVEN	SOMBRE
DULL	LIGHT	BACKGROUND	ROUGH	STRONG
CONTRASTING	DELICATE	COMPOSITION	BROKEN	POWERFUL
COMPLIMENTARY	SIMPLE	ELONGATED	GRID	LIGHT
HARMONIOUS	THICK	LARGE	FLAT	MEDIUM
MONOCHROME	THIN	SMALL	WOVEN	DARK
NATUARL	BROKEN	2D	ORGANIC	LAYERED
SATURATED	OVERLAPPING	3D	SMOOTH	DEPTH
PASTEL	LAYERED	TWISTED	ABSTRACTED	DEVELOPED
COOL	MARK MAKING	JAGGED		SOFT
WARM				

The Formal Elements In Art


EDVARD MUNCH


HENRI MATISSE

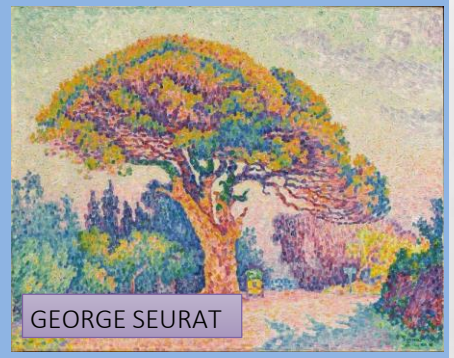

FRIDA KAHLO

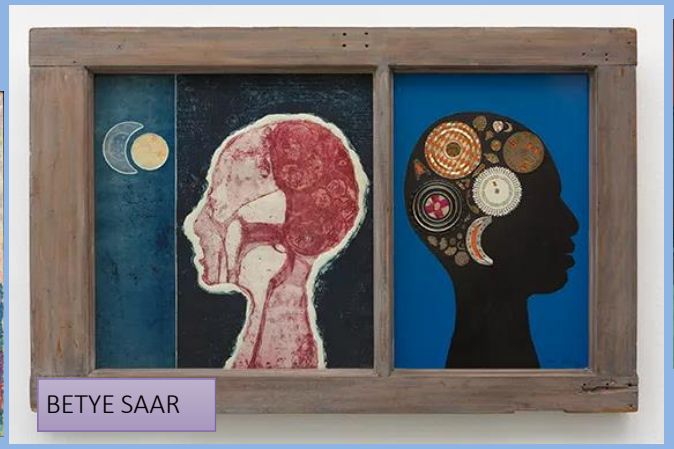

WASSILY KADINSKY

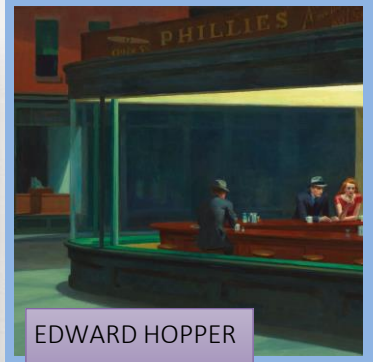

BANKSY


BRIDGET RILEY


VINCENT VAN GOGH


GEORGE SEURAT


BETYE SAAR



EDWARD HOPPER

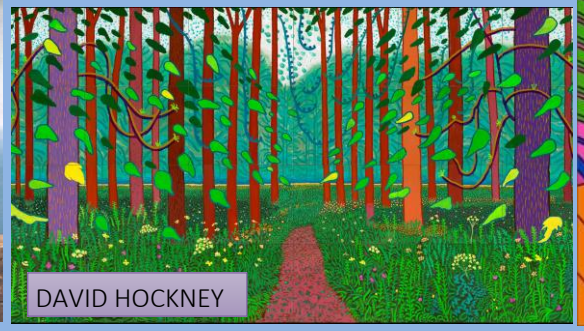

ALBRECHT DURER


MICHAEL CRAIG MARTIN


ANDY WARHOL


BARBRA HEPWORTH


RENEE MAGRITTE


DAVID HOCKNEY

Year 7 Music

#Learning Objectives

Rhythm and Pulse (Tempo) are two of the most important Elements of Music. During this project we will investigate, compose and perform awesome global rhythmic masterpieces! Plus, we will:

- **Understand how pulse is a fundamental element upon which music is built and performed.**
- **Develop a feeling for and an awareness of rhythmic styles in music from different times and places.**
- **Distinguish between pulse/tempo and rhythm.**
- **Develop and understanding of note values in terms of duration, bars and simple time signatures.**

Drop Some Drums
By
[Love] Tattoo

Listen for....

Gradual build up of textures (layers). Once playing, the instrument rhythms don't change. This is a great example of **OSTINATO!** Once all instruments are in (and there are a lot!) the texture begins to reduce again.
This music uses mostly untuned **PERCUSSION** SAMBA instruments along with plenty of music tech. to make a really exciting track! Check out the drop at 5.43!

D Dynamics
(volume)

R Rhythm
(order of Musical Events)

P Pitch
(Highness or Lowness of a note)

S Structure
(how the composition is built)

M Melody
(the tune)

I Instrumentation
(instruments used when composing)

T Tempo
(the speed of the Music)

H Harmony
(This supports the melody)

Watch and Listen

FOLI!

Foli" is the word used for rhythm by the Malinke tribe in West Africa. But Foli is not only found in Malinke music, but in all parts of their daily lives. Watch this film. It gives you a glimpse inside their culture of rhythm. As the Malinke man says, "Tous les choses, c'est du rythme." ("Everything is rhythm.")

Kodo - "O-Daiko"
Japanese Taiko Drumming.

Listen for....

Use of untuned percussion. The most amazing use of **DYNAMICS** and **OSTINATO**. Co ordination between just 3 musicians. Taiko drumming is both physical and brilliantly theatrical! The use of silence is really effective in this piece!

I've Got Rhythm

Exploring Rhythm and Pulse

I've Got Rhythm

Exploring Rhythm and Pulse

A. Key Words

PULSE – A regular **BEAT** that is felt throughout much music. Certain beats of the pulse can be emphasised to establish regular pulse patterns *e.g.*

1 *2 3 4,* ***1*** *2 3 4 = a 4-beat pulse*

1 *2 3,* ***1*** *2 3 = a 3-beat pulse (often called a* ***WALTZ****)*

1 *2,* ***1*** *2,* ***1*** *2 = a 2-beat pulse (often called a* ***MARCH****)*

RHYTHM – A series of sounds or notes of different lengths that create a pattern. A rhythm usually fits with a regular pulse. Everyday sentences can be used to create rhythms. The patterns made by words create rhythms and this rhythm has a 4-beat pulse:

Music is my favourite

♩ ♩ ♪ ♪ ♪ ♪

ACCENT – Emphasising or stressing a particular note or notes. Accents affect the **ARTICULATION** and are shown with this symbol >

DURATION – The length of a sound – *long/short*

TEMPO – The speed of a sound or piece of music – *fast/slow*

TEXTURE – Layers of sound or how much sound is heard – *thick/thin*

STRUCTURE – The organisation of sound or how sounds are ordered

SILENCE – The absence of sound or no sound, shown in music by **RESTS**.

RHYTHM GRID NOTATION – A way of writing down and recording rhythms using boxes

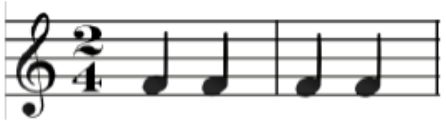
B. Time Signatures

A **TIME SIGNATURE** tells us how many beats (and what type of beats) there are in each **BAR** of music and is made up of two numbers at the beginning of a piece of music.

Top Number = **HOW MANY BEATS**

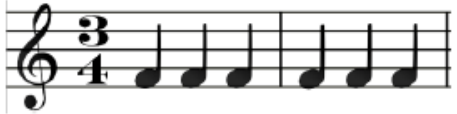
Bottom Number = **TYPE OF BEAT**

2/4 = **TWO CROTCHET** beats per **BAR**



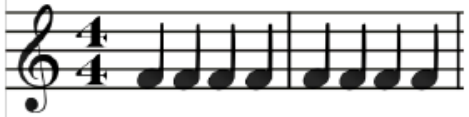
e.g. a ***MARCH***

3/4 = **THREE CROTCHET** beats per **BAR**



e.g. a ***WALTZ***

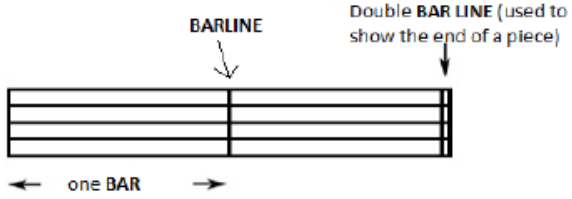
4/4 = **FOUR CROTCHET** beats per **BAR**



Bottom Numbers:

2 = Minim 4 = Crotchet 8 = Quaver

BARS AND BARLINES



C. Ostinatos, Cyclic and Polyrhythms

RHYTHMIC OSTINATO – a short repeated pattern made up of notes of different lengths but without a particular pitch.

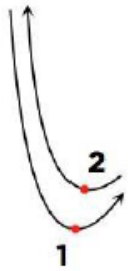
CYCLIC RHYTHM – a rhythm which is repeated over and over again (in a cycle) many times.

POLYRHYTHM - the use of several rhythms performed simultaneously, often overlapping to create a thick, **POLYRHYTHMIC TEXTURE**. A common polyrhythm often used in Latin-American and African Music is to play a 3-beat and 2-beat rhythm simultaneously as shown below. This is called a "3 against 2 Polyrhythm"

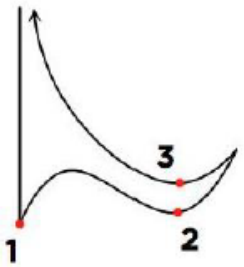
3 beat rhythm	X		X		X		X		X		X	
2 beat rhythm	X			X			X			X		

D. Conducting Pulses and Beats

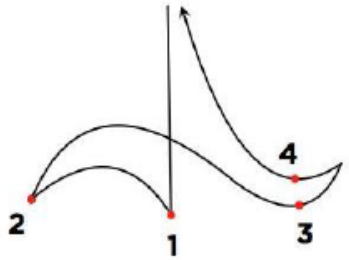
Conducting a 2-beat Pulse/Beat (*e.g. a March*)



Conducting a 3-beat Pulse/Beat (*e.g. a Waltz*)



Conducting a 4-beat Pulse/Beat



E. Note Values - Note Names, Symbols and Duration

Note Name	Note Symbol	Note Value
Semibreve	𝅝	4 beats
Minim	𝅗𝅥	2 beats
Crotchet	♩	1 beat
Quaver	♪	½ of a beat
Pair of Quavers	♫	2 x ½ beats = 1

Year 7 Music

#Learning Objectives

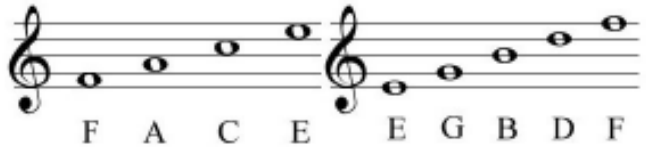
This project will help you to develop your knowledge and understanding about orchestral instruments and families/sections found in the orchestra and how composers use the different musical colours (timbre) of the instruments in their creative process.

- **You will learn about the layout and structure of the symphony orchestra.**
- **You will develop an understanding of musical instruments and how they are played, the families/sections, construction , different sound production methods and characteristic timbres/sonorities.**
- **You will perform on orchestral instruments (if possible) or use orchestral tones/voices/sounds from keyboards as part of a 'class orchestra' with an awareness of the experience of 'performing together' as an ensemble and the roles of different instrumental parts and textural layers on the music as a whole.**
- **You will learn about the origins and uses of fanfares.**

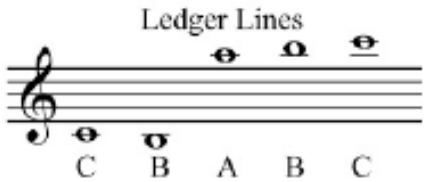
BBC Symphony Orchestra

Listen to the 'Young Persons' Guide to the Orchestra' with the BBC Symphony Orchestra. Here you will find the orchestra broken right down to show you how it works!!

NOTES IN THE TREBLE CLEF



For the notes on the lines think 'Every Green Bus Drives Fast'



Ledger lines are added once the notes go higher or lower than the stave

Orchestra Families

Strings		Brass	Woodwind	Percussion	
Bowed *(arco)*	**Plucked** *(pizzicato)*			**Tuned**	**Untuned**
Violin	Harp	Trumpet	Piccolo	Piano	Bass Drum
Viola	Harpsichord	French Horn	Flute	Xylophone	Snare Drum
Cello		Trombone	Oboe	Glockenspiel	Cymbals
Double Bass		Tuba	Clarinet	Timpani	Triangle
			Bassoon		Gong

Sonority City

Exploring Instruments of the Orchestra

Sonority City

Exploring Instruments of the Orchestra

A. Strings Section/Family

Made from wood and have strings. They are usually played with a **BOW** (**ARCO**) – not the Harp *(shown right)* but can also be **PLUCKED** (**PIZZICATO**). The smaller the instrument, the **HIGHER PITCHED** it is. The bigger the instrument, the **LOWER PITCHED** it is. However, the Harp has many more strings so can play both high- and low-pitched notes.

Violin Viola Cello Double Bass

B. Woodwind Section/Family

A selection of instruments divided into two subsections: **FLUTES** (create a sound by air passing over a small hole and include the Flute and Piccolo) and **REEDS** (use a piece of bamboo reed to create a vibration). The Saxophone *(shown above right)* is not traditionally used in an orchestra. However, some modern composers have included it.

Piccolo Flute Clarinet Oboe Bassoon

C. Brass Section/Family

There are more brass instruments used in brass bands, but the orchestra normally has four. They are made of metal and the sound is made by blowing into the mouthpiece by buzzing the lips in a similar way to blowing a raspberry! The bigger the instrument, the lower the pitch. The smaller the instrument, the higher the pitch – the Trumpet is the highest.

D. Percussion Section/Family

Includes a vast range of instruments which produce sound when *hit, struck, scraped or shaken*. These fall into two subsections: **TUNED PERCUSSION** (able to play different pitches) and **UNTUNED PERCUSSION** (*e.g. drums)*

TUNED PERCUSSION

Piano Xylophone Glockenspiel Timpani

UNTUNED PERCUSSION

Bass Drum Snare Drum Cymbals Woodblock Guiro

Triangle Gong Tambourine Cabasa Maracas

E. Key Words

ORCHESTRA – A large **ENSEMBLE** (group of musicians) divided into four **SECTIONS** or **FAMILIES** of musical instruments – **STRINGS, WOODWIND, BRASS** and **PERCUSSION** - led by a **CONDUCTOR** who stands at the front of the orchestra and directs it. They will indicate the main beats in the music using a **BATON** (a "stick" that they hold and beat time with). All musicians look at the conductor whist playing as they are ultimately in control of the whole piece.

SONORITY (also called **TIMBRE**) – Describes the **unique sound or tone quality** of different instruments and the way we can identify orchestral instruments as being distinct from each other – "each instruments' own unique sound". Sonority can be described by many different words including – *velvety, screechy, throaty, rattling, mellow, chirpy, brassy, sharp, heavy, buzzing, crisp, metallic, wooden etc.*

PITCH - The **highness** or **lowness** of a sound, a musical instrument or musical note (high/low, getting higher/lower, step/leap).

FANFARE – A short, lively, loud piece of music, usually for **BRASS INSTRUMENTS** and sometimes **DRUMS** and other **PERCUSSION**. A Fanfare is usually warlike or victorious in character and can be used to mark the arrival of someone important, give a "signal" e.g. in battles or be used to signal the opening of something *e.g. a large sporting event or similar ceremony*. Fanfares often use only notes of the **HARMONIC SERIES** – a limited range of notes played by bugles and Valveless trumpets.

F. Map/Plan of an Orchestra

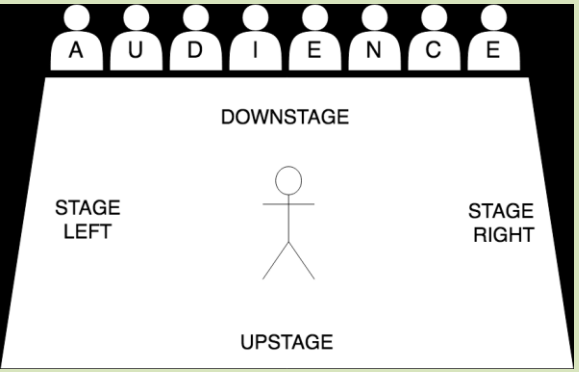
Mime, movement & physical theatre

The things you will learn

- In this scheme of work you will learn how to create an **illusion** of an object and the sense of where a scene is set using your voice and body so that you can communicate effectively with your audience without the need for extensive props or cumbersome set… It will give you great creative freedom.
- You will learn to think about mime in two parts; **internal mime technique** & **external mime technique.** This will allow you to analyse & evaluate mime work easily. It will also give you a clear structure and framework so that you can develop and refine your mime and all future acting techniques.
- Mime and physical theatre are two of the bedrocks of our theatre practice. They are an increasingly popular theatre style, with many international companies choosing this genre to work in.
- You will learn the techniques of clear and informed communication so that you can give and receive feedback that is effective.

Study Focus

- The focus of our early study will be on developing your ability to mime effectively. You will work alone and in focused pairs to understand and master the **physical** (outside/ external) and **psychological** (inside/ internal) skills needed to mime effectively and creatively.
- There will be a very high level of input from the teacher so that you have the necessary individual attention and coaching to identify the exact ways that you can develop your skills.
- We begin with an improvisation in pairs. One student plays a shopkeeper- the other a customer. Because of technical problems, the customer has to mime each item that they want.
- Later on, when the class has a certain level of understanding, there will be more peer assessment opportunities, but this will only be when the level of understanding is sufficient. There will be opportunities for you to share your work with your family and for them to share their thoughts with me. In this way you will have a number of viewpoints and ideas on how to progress.
- In our later studies, you will work with others in small groups to develop your ability to communicate your ideas in the increasingly popular genre of ***physical theatre.*** We will use exercises from a variety of physical theatre companies **including;** ***Theatre de Complicite, Might & Main Productions*** and the ***KOSH***



Key words and ideas - a glossary of terms

- **Mime**- the technique of making something appear to be there when it is not- an illusion.
- **Physical theatre** – a genre of theatre where there is less reliance on set, props, sound or lighting. the actor uses their voice and body to create the various settings, environments, moods and atmospheres. Physical theatre often makes use of dance, movement, mime, martial arts and song as well as the spoken word.
- **Sound scape**- using voice and body – sometimes objects and musical instruments- to create a sense of the environment and setting of the scene e.g. water dripping in a cave.
- **Vocal atmosphere**- this is the use of voice and sometimes instruments- to create the mood and atmosphere of a scene a bit like how music is used in a film. A vocal atmosphere is usually made 'live,' by actors on the stage.
- **Abstract** – in drama, we use this term to mean a scene or a piece of acting that portrays an idea- like, heaven or love or silliness, rather than something naturalistic like a person.
- **Up stage / downstage-** Some years ago the stages in theatres were raked (sloped) so that they were lower at the front, near the audience and higher towards the back. So, when an actor walked towards the audience they literally walked, ***downstage*** and as they walked away they walked, ***upstage***. In this way the actors at the front did not completely block out by those actors at the back.
- **Stage left / right** – left and right on stage are always from the point of view of the actor looking out at the audience.
- **Levels** – The idea of thinking about the stage space as being divided into a high level e.g. standing, medium and low level eg lying on the floor.
- **Aesthetics** – The study of what is beautiful in art. In this scheme, we look for balance in the body and symmetry in use of stage space.

Making Tea – an overview

This is the main assessment task for this term. You will be assessed practically on your acting/ mime skills and you will be assessed on your understanding of the theory in a written homework and a written test.

The homework will involve you booking some time with a member of your household. This could be a parent, guardian or other member of your family. You will ask them to watch your mime of making a cup of tea and then give you some written feedback on a piece of paper which you bring in for me. You will ask them to comment on all 5 assessment skills; use of stage space, use of levels, your internal mime technique, your external mime technique, your ability to keep the level of work surfaces constant and consistent, your aesthetic sense as shown through your balanced use of left and right hands.

Making Tea – The Process

- Take kettle to sink and fill with water. Switch on.
- Take cup from cupboard.
- Take tea bag and put in cup.
- Fill with boiled water from kettle.
- Take teaspoon from draw and stir and steep the tea bag in the water..
- Remove tea bag with spoon and place in pedal bin.
- Place spoon by cup.
- Take sugar from its place and add 2 sugars to tea with a separate teaspoon.
- Put sugar back in its place.
- Stir the sugar until it dissolves with the original tea spoon.
- Take milk from fridge and pour the right amount into tea.
- Take milk back to fridge.
- Stir milk into tea.
- Rinse the spoon under tap and leave to drain.
- Take cloth from sink and wipe down work surface.
- Return cloth.
- Have sip of tea.

Making Tea

Assessment Areas

- Mime Technique
- Creative and competent use of stage space
- Consistent height of work surfaces.
- A variety of levels; high, medium and low.
- A clear sense that you are ‘picturing’ yourself in the kitchen of your choice.
- Balanced use of left & right hand- a sense of aesthetic.

It can be useful to think about mime in 2 parts; the things you do in your mind- **internal** and the things you do with your hands/ body - **external** TO SHOW what you see in your mind. Mime is the skill of making an illusion that something is there when it is not there

Internal & External Mime Technique

Internal Technique (psychological)

- Using your **mind** & **emotions** to;
  - ***Imagine*** the object
  - ***Picture*** what it is like
  - ***See*** where you are
  - ***Focus*** on the image in your mind
  - ***Believe*** in what you see & **make** the object 'real' for you and the audience.

External Technique (physical)

- Using your **hands** and **body** to show;
  - The **shape**
  - The **size**
  - The **weight**
  - The **temperature**
  - The **feel** and **texture**
  - The **use** of and **function** of
  - The **value** of
  - The **fragility** of
  - The **taste** of
  - The **smell** of … the object

Badminton

Intent: To replicate the core skills required to outwit opponents, so that a you can maximise the use of the space.

Impact: Students should develop their execution of core skills, demonstrating anticipation and coordination.

Skills & Techniques:

Forehand Grip:
- Shake hands with the racket
- V of hand down the side of the racket

Backhand Grip:
- Thumb on the flat side of the grip

Ready Position:
- Side on
- Racket up
- Non-racket up too for balance
- On your toes - ready to move

Serve
- Hold the shuttle by the feathers
- Racket head below net height
- Drop in the swing of the racket
- Weight transfer for power
- Watch the shuttle as it hits the strings

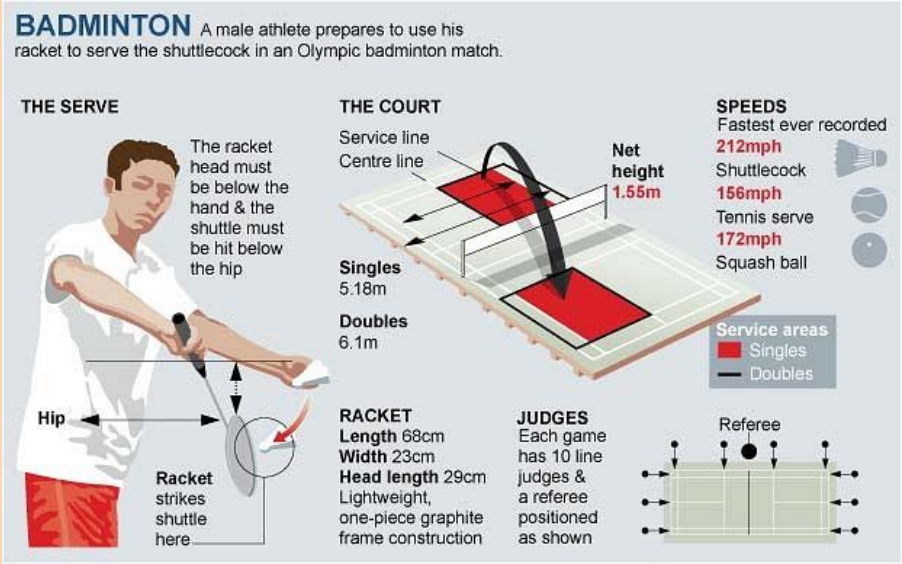
(Forehand low serve/ Backhand low serve/ Forehand high serve)

Overhead clear
- Focus on contact point with shuttle above your head
- Aim towards flight of shuttle with non-racket hand.
- Snap wrist on contact,
- High arc of shuttle
- Sideways on
- Weight Transfer – from back through to front – racket foot follows through forwards – helps to gain more power

Stretch and Challenge Task:
- How confident are you to umpire?
- How easily can you place the shuttle to the space on your opponents side?
- Can you use your serve to your advantage?
- What movements help you to cover the court?

Rules:
- A match consists of the best of three games of 21 points.
- The player/pair winning a rally adds a point to its score.
- The player/pair winning a game serves first in the next game.
- A badminton match can be played by two opposing players (singles) or four opposing players (doubles).
- A point is scored when the shuttlecock lands inside the opponent's court or if a returned shuttlecock hits the net or lands outside of the court the player will lose the point.
- At the start of the rally, the server and receiver stand in diagonally opposite service courts.
- A legal serve must be hit diagonally over the net and across the court.
- A badminton serve must be hit underarm and below the server's waist height with the racquet shaft pointing downwards, the shuttlecock is not allowed to bounce. After a point is won, the players will move to the opposite serving stations for the next point.
- A player is not able to touch the net with any part of their body or racket.

Key Vocabulary:
- Serve
- Forehand
- Backhand
- Underarm
- Overhead clear
- Shuttle
- Out/ In
- Love
- Ready position
- Footwork



Health and Fitness

Why do we warm-up?	
Prevent injury	To loosen the muscles and increase heart rate and body temperature
Raise heart rate	To increase blood flow to working muscles
Increase flexibility	Increases the range of movement at a joint, allows skills and movements to be performed easier.
Increase mental alertness	Warm-up prepares the performer mentally and makes then alert ready for performance

Intent:
To replicate specific techniques in a range of fitness based activities and use this to investigate the bodies' ability to exercise and adapt.

Impact:
To conduct a suitable warm-up and explain why exercise is good for health and a sustainable life.

Key Vocabulary:
- Heart Rate
- Pulse Raiser
- Recovery Rate
- Working Heart Rate
- Component of fitness
- Cardiovascular endurance
- Muscular endurance

How can we test our cardiovascular fitness levels?
- Cardiovascular endurance: 12 minute Copper Run
- Recovery Rate: Harvard Step Test
- Multi-stage fitness test

Benefits of physical activity:	
Physical	
Social	
Mental	

Couch to 5k

Download App
- Week 1: 60 secs run / 90 secs walk
- Week 2: 90 secs run/ 2 min walk
- Week 3: 2 x 90 secs run/ 90 secs walk, 3 min run/ 3 min walk
- Week 4: 3 min run/ 90 secs walk, 5 min run/ 2 ½ min walk, 3 min run/ 1 ½ min walk, 5 min run
- Week 5: 5 min run/ 3min walk, 5 min run/ 3 min walk, 5 min run
  5 min walk/ 8 min run, 5 min walk/ 8 min run
  5 min walk/ 20 min run
- Week 6: 5 min run/ 3min walk, 8 min run/ 3 min walk, 5 min run
  10 min run/ 3 min walk, 10 min run
  25 min run
- Week 7: 25 min run x 3
- Week 8: 28 min run x 3
- Week 9: 30 min run x 3

Notes:

Challenge Question:
How can we use our heart rate to measure our fitness as well as inform us of how hard we are working?

Aerobic Training Zone – 60-80% MHR

Table Tennis

Key Skills:

Grip (Shake Hands)

- As the name suggests, players 'shake hands' with their bat.
- The thumb and first finger are on the playing surface and lie roughly parallel with the straight edge of the rubber.
- Other three fingers wrap loosely around the handle to provide stability and balance.

Specific Shots

4 stages: 1. Ready position 2. Backswing 3.Forward movement 4.Follow through

Backhand Push and Forehand Push

1. Stand square to the table keeping you feet shoulder width apart. Slightly flex your knees, leaning forward and hold your arms out in front. Keep close to the table.
2. Draw the bat backwards to the side of the body. Hold the bat in an open angle with a straight wrist and your playing arm just in front of the body.
3. On impact, bring arms forward and ensure that power comes from the elbow and forearm (it is not a swing shot). Aim to hit the ball at its highest point. Transfer body weight from back to front foot.
4. After impact, point the bat to where you want to hit the ball. Ensure that your arm does not swing across your body to the left. Return back to ready position for the next shot.

Forehand Serve

1. Stand on the balls of your feet, with knees slightly flexed. Face sideways with your shoulder pointing towards the target. Hold the ball in front of your body with left hand, right hand held back. Body weight should be on the back foot, keeping low.
2. Throw the ball gently in the air (about 6 inches) with the palm of your hand.
3. As the ball begins to drop, hold a forward stance and strike the ball flat with a fast arm in the middle of the ball. Transfer body weight from back to front foot.
4. Follow through with the bat pointing towards the intended target and return to ready position for the next shot.

Intent:

To use the correct grip whilst holding the bat, serve correctly and perform both forehand and backhand shots. To understand how to score accurately.

Impact:

- Perform core skills with varying success.
- Use basic game strategy to effectively outwit opponents.

Stretch and Challenge Task:

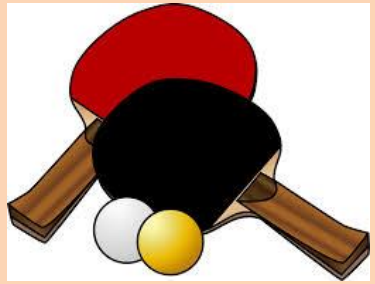
1. Can you play a variety of shots effectively in a game?
2. Can you start to place the shots to make it difficult for your opponent to return?
3. Can you add any spin to your shots?

Basic Rules of Table Tennis

1. To start a point, the server must stand at the back of the table and can serve either forehand or backhand. The ball must be thrown up either equal to or above the height of the net before striking the ball and the ball must be thrown from an open palm to stop finger spin.
2. A serve must hit both your side of the table and your opponent's side to be seen as a 'good' serve.
3. If the ball hits the net on a serve but continues over the other side then a 'let' is played.
4. There are no second serves.
5. Service must can be straight or diagonal in singles but can only travel diagonal in doubles.
6. Players are allowed to hit the ball around the side of the net.
7. The ball must bounce on a player's side of the table before playing their shot.
8. During play, competitors are not allowed to touch the table.

Scoring System

1. A game consists of 11 points
2. There must be a gap of at least two points between opponents.
3. If the score is 10-10, the game goes in to extra play until one of the players has gained the lead of 2 points, at the earliest when the score is 12-10.
4. The point goes to the player who successfully ends the rally.



Key Vocabulary:

- Backhand
- Forehand
- Bat
- Stance
- Grip
- Serve
- Rally
- Coordination
- Attack
- Return
- Push
- Topspin
- Backspin
- Side spin
- Slice
- Let
- Shake Hand
- Stroke
- Point
- Game
- Receive
- Smash
- Game point
- Footwork

Design and Technology

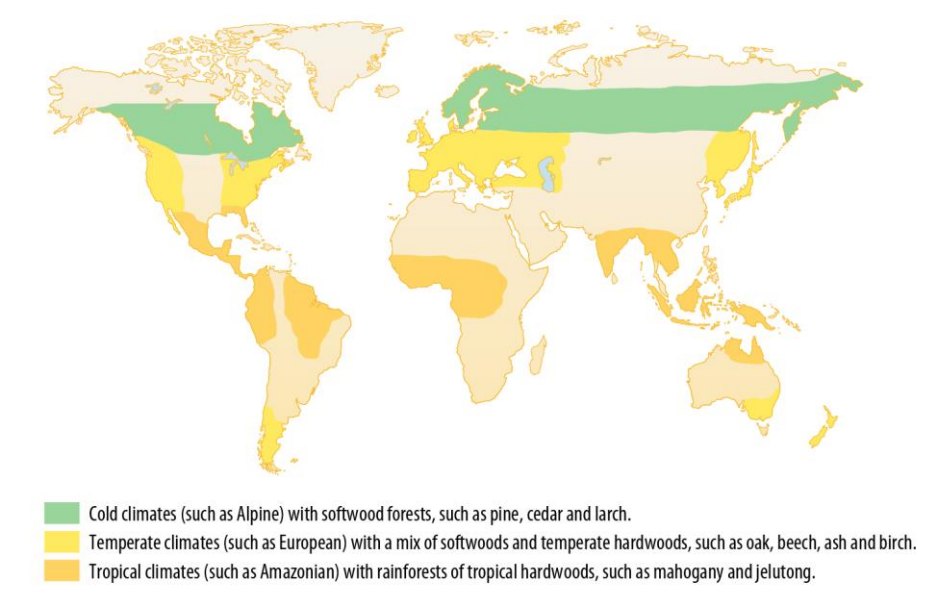
Hardwood comes from a broad leaved tree whose seeds are enclosed in a fruit. They grow quite slowly, often taking over 100 years to be big enough to be used for timber.

Timber is wood that has come from tree trunks and has been dried and cut into planks. Timber has been used as a building material for thousands of years to make homes, furniture and tools. Timber is still used a lot as trees grow naturally, their wood is easy to work with and it is relatively strong and lightweight.

Softwood comes from a tree with needle like leaves, and seeds in a cone, they are coniferous. Most softwood trees are evergreen, meaning they have leaves all year. They grow quite quickly, and can be used for timber after about 30 years. This means they can be grown commercially, which is why softwood is a lot cheaper than hardwood.

Hardwoods	Advantages	Disadvantages	Common uses
Oak	Strong and durable Has an attractive grain when well finished	Expensive, becoming rarer Harder to work than other woods Corrodes iron and steel	Building houses and boats, high quality furniture, wine and whisky barrels
Mahogany	Has a very attractive finish Quite easy to work with	Expensive, environmental problems with sourcing from tropical forests, oil in the wood can cause skin or breathing problems	High quality furniture, jewellery boxes and window frames
Beech	A tough wood Does not crack or splinter easily Hard	Expensive, not very resistant to moisture Not suitable for exterior use	Toys, cooking implements, solid wood and laminated furniture
Ash	Strong, tough and flexible Finishes well	Low resistance to rot and insect attack	Handles for tools, sports equipment and ladders
Balsa	Very lightweight Easy to cut	Much too soft and weak for most products	Model making, surfboard cores, buoyancy aids
Jelutong	Even close grain Easy to cut and shape	Soft and not very strong Not good for structural use	Model making, moulds for casting or vacuum forming
Birch	Regular even grain Easy to work	Low resistance to rot and insect attack	Veneers to make plywood and surface cheaper materials that are used for furniture or doors

Softwoods	Advantages	Disadvantages	Common uses
Pine	Very durable, easy to work, quite cheap as it grows quickly enough to be forested, reasonably strong and lightweight	Can warp, crack and splinter more than some other woods	House construction for roof joists and floorboards Furniture doors and interior woodwork
Cedar	Natural oils make it resistant to water and fungal growth	More expensive than pine and not as strong	Outdoor furniture, fences, sheds and boats
Larch	Tough, durable and resistant to water It can be used outside untreated and weathers to a silvery grey	Costs more than other softwoods	Small boats, yachts, exterior cladding on buildings



Manufactured timbers use natural timbers to make boards that have different properties to plain timber. Because of the size of a tree trunk timber is limited to fairly narrow planks. If you need large, thin sheets of wooden material you will need a manufactured board.

Boards	Advantages	Disadvantages	Common uses
Plywood	Flat and structurally sound, surface looks like real wood, resistant to warping, cracking and twisting	Quite expensive, edges can look rough, susceptible to water damage if using the wrong grade	Building and furniture panels that need some strength
MDF	Cheap (made from waste wood), smooth ungrained surface is good for painting or staining, easy to machine	Poor aesthetics, so needs coating, weak compared to real or plywood, tools blunt quickly due to glue content	Flat pack furniture, wall panels, display cabinets, storage units and kitchen units
Chipboard	Use waste materials so is cheap to produce	Poor structural strength, especially in damp conditions, surface is very rough so usually plastic coated	Desktops, kitchen worktops, cheap flat pack furniture

Properties

It is important to know the correct meaning of the words that describe a material's properties. Comparing materials helps to define each material's properties. For example, do not say oak is hard, because there are lots of harder materials. Say: oak is harder than pine.

Hardness is the ability of a material to withstand cutting and scratching. Timber is generally quite a soft material. It can easily be scratched and cut with metal tools, which are much harder than wood. Oak is quite hard for a wood. Balsa is very soft for a wood. This should not be confused with the classification of trees as hardwoods and softwoods.

Toughness is the ability of a material to withstand being hit. A tough material can be quite soft, and might bend or deform when hit, but not break. Timber is quite a tough material. If you hit it with a hammer it may dent, but not break.

Durability is the ability of a material to last a long time. Timber that has been dried out and is kept dry is durable. Oak beams in old buildings can be hundreds of years old. However, wood that is left wet can rot quite quickly and won't then be very durable. Some timbers contain natural oils that make them more durable outside. Timber can be treated with preservatives to make it more durable for outside use.

Orthographic views

Orthographic projection is used to show the detail and measurements of the product clearly from a range of angles so that a stranger could use the drawing to work out the shape and dimensions for manufacture. A furniture designer would be a perfect example of someone who may use orthographic projection.

To create an orthographic projection, you draw the front view, side view and plan view of your product in 2D. You can either draw them out by hand or generate the views using various CAD programs from your CAD model. You can use first angle projection or third angle projection – although the views may appear the same, the order that they are laid out differ.

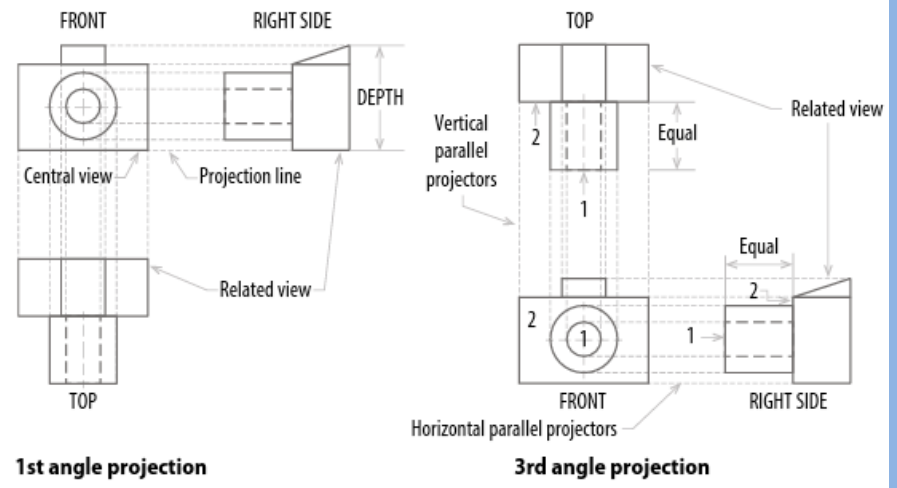
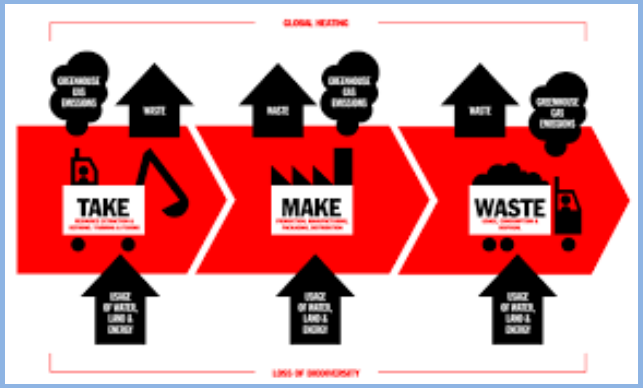
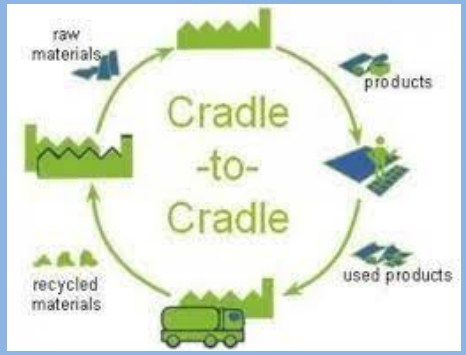


Figure 1.17.7 First and third angle projections for orthographic projection showing all sides of the product

Tools and equipment	
Try Square	
Steel rule	
Marking gauge	
Saws (tenon, hand, coping, scroll and jigsaw)	
Mallet	
Chisel	
Pillar drill	
Centre lathe	
Disc sander	





The environmental impact of manufacturing and using products

Life Cycle Assessment	
Raw materials	Where have your materials originated from? For example certain plastics will have come from crude oil.
Timber processing	How were your raw materials made into the actual material that you used? For example, extrusion of PVC.
Manufacture	How did you shape/join/finish/ embellish your raw materials? For example CAM embroidery of designs.
Distribution	If you were to make this product on a larger scale, how would you distribute it to the retailers?
Product in use	Having observed your user interacting with your product, what impact could it have? For example, using batteries/mains/renewable sources of energy to power your product.
Repair and maintenance	Thinking ahead like Dyson does with its highly accelerated life test, how would your product be maintained or repaired? For example, does it have the ability to use rechargeable batteries that are easily accessible by the user so that the product can continue working?
Disposal	Thinking ahead, what would happen to your product at the end of its life? Could it be easily disassembled and sorted for recycling? Have you included recycling symbols to make this process easier for your user?

Knowledge Organiser – Year 7 Food

Macro & Micro Nutrients


Carbs


Protein


Fats

What are Nutrients?
Nutrients are the building blocks that make up food and have specific and important roles to play in the body. Some nutrients provide energy while others are essential for growth and maintenance of the body.

Macro Nutrient	Role in the body	Food Example
Carbohydrate	The main source of energy for the body.	Bread, rice, pasta, potatoes
Protein	Provides the body with growth and repair.	Meat, poultry, beans, eggs, lentils, tofu, fish
Fat	Provides the body with insulation and a small amount protects vital organs. Provides essential fatty acids for the body.	Butter, oil, cheese, cream, nuts, oily fish, crisps

Vitamin	Role in the body	Food examples
A	Helps to keep the eyes healthy and strengthen the immune system.	Dark green leafy vegetables, carrots, liver
B	Helps to release the energy from the food we eat.	Bread, milk, cereals, fish, meat
C	Help with skin healing and healthy skin. Help with the absorption of Iron.	Fresh fruit, broccoli, tomatoes
D	Important for absorbing calcium and help with healthy bone structure.	Oily fish, eggs, butter, Sunshine

Vitamins -Help to keep our immune system up and help our body to stay healthy – they important for body maintenance.

Mineral	Role in the body	Food Examples
Calcium	Important for strong teeth and bones. It also helps with blood clotting.	Milk, yoghurt, soya, dark green leafy vegetables
Iron	Needed for red blood cells which help to transport oxygen around the body.	Nuts, whole grains, dark green leafy vegetables, meat, liver

Minerals- Help to keep our immune system up and help our body to stay healthy. Vitamins and minerals are Micronutrients.

Key Temperatures

Fridge
Between 1 - 5◦C

Freezer
Below -18◦C

Danger Zone
Bacteria multiply quickest between 5 - 63◦C

Cooking
Food should be cooked above 75◦C

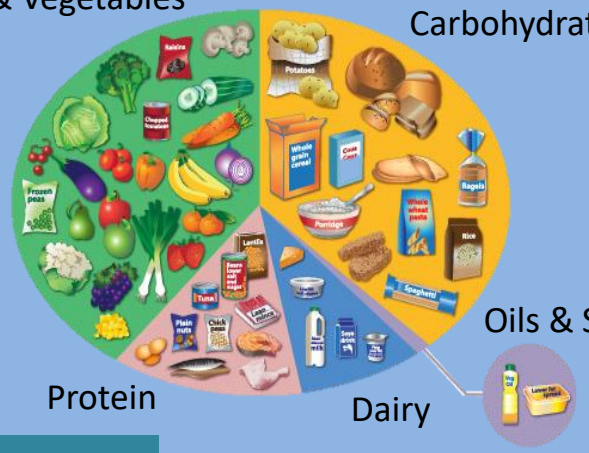
Knife Skills

Bridge Hold – Hand creates a bridge holding the food in between. The knife slices through the middle of the bridge. Used for cutting food in half.

Claw Grip – Fingers tucked under holding food. Knife comes down from flat knuckles to slice food. Used for slicing.

Knowledge Organiser – Year 7 Food

Eatwell Guide



The Cooker

8 Tips for healthy eating

1)Base your meals on starchy foods
2)Eat lots of fruit and veg
3)Eat more fish
4)Cut down on saturated fat and sugar
5)Eat less salt
6)Get active and be a healthy weight
7)Drink plenty of water
8)Don't skip breakfast

Weighing and Measuring

For good results in most recipes, **accurate** weighing and measuring is essential. When you are baking with flour, sugar and liquids, you must measure accurately or your cooking will be spoiled. If you weigh out too much sugar or too little raising agent, your cakes would not rise or you could spoil the taste and/or texture.
Food can be weighed in **Grams (g)** and there are **1000g** in a **Kilogram (kg)**. Liquid is measured in **Millilitres (ml)** or **litres.**

Equipment

Weighing scales, knife, chopping board, measuring spoons, saucepan, wooden spoon, tablespoon, teaspoon dessert spoon, mixing bowl, grater, pan-stand, baking tray, cooling rack, peeler, pastry brush, spatula.

Hygiene

Personal
Hair up – Reduces the risk of bacteria transferring to food through hair dropping in
Aprons on – Protects you from spillages and reduces risk of bacteria transferring to food from everyday clothing
Washing hands - regularly using hot soapy water to reduce the bacteria on your hands
Blue plasters – Blue plasters should be used to cover cuts and grazes as they will be easily seen if they accidentally fall into food.

Food – Understanding the 4 C's Concept
Cooking – thorough cooking kills bacteria so ensure food is cooked to 75°c to make sure all bacteria are killed – check this by using a food probe.

Cleaning – effective cleaning removes harmful bacteria and stops them spreading so ensure all work tops, utensils and equipment are cleaned thoroughly with hot soapy water.
Cooling – effective chilling prevents harmful bacteria multiplying so ensure all food is stored at the correct temperatures, ensure cooked food is cooled within 90 minutes.

Cross contamination – Good hygiene practice prevents Cross contamination so when raw food comes into contact with ready to eat food. For example raw meat juices spilling onto salad.

Wider thinking / further reading: www.foodafactoflife.org.uk www.grainchain.com

Year 7 Design Technology Knowledge Organiser - Product Design
Inclusive Design



Learning to design for others needs. Looking at the world through different eyes and answering a need through design.

Adapting products to become more inclusive.

Products can keep the same function but with adapting the design slightly, can increase the amount of consumers able to use the product. This can be seen in the example below.


A Peeler:
The direction of the blade has been changed the handle has been made of a nonslip plastic and is wider so that it is easier to grip.



Design which includes the needs of minority groups of people (e.g.. disabled) is regarded as not just socially desirable but a commercial opportunity for companies to make money

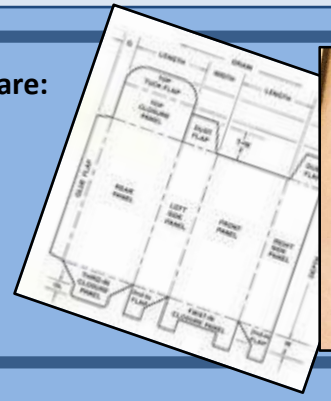
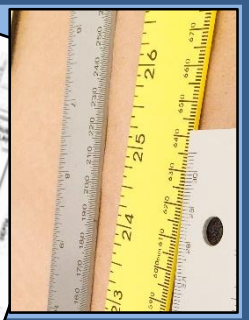
Two major trends have driven the growth of Inclusive Design are . . .

1. An aging population
2. To integrate disabled people into society.

KEY TERMS	DEFINITION
Inclusive	The design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible.
Adapt	Make (something) suitable for a new use or purpose; modify.
Needs	Something that is needed in order to live or succeed or be happy.
Consumer	A person who purchases goods and services for personal use.
Commercial Product	Making or intended to make a profit
Integrate	Bring (people or groups with particular characteristics or needs) into equal participation in or membership of a social group or institution.
Population	All the inhabitants of a particular place.
Society	People living together in a more or less ordered community.
Product	An article or substance that is manufactured or refined for sale.

Designing Skills:
When designing for others it is important to keep their needs in mind at all time. All designs start with a **Design Brief** (Task set). From this you will complete research into the areas of need. In this case the elderly **(Target audience)** and use this to guide you when problem solving through design. You should always have a variety of initial design ideas, for this project you will show at least 4 initial designs. You will then produce a neat, coloured and annotated Final design to show what you will create in 3D. (A Model).

Skills you will learn during this project are:
- Designing for someone else
- Measuring accurately
- Making NETs
- Thinking in 3Dimensions
- Cutting accurately and scoring
- Modelling

Step by Step instructions: How to make a saucepan base.

1. Get an A4 piece of card, Sellotape or compass, 30cm ruler and a sharp pencil.
2. In the corner of the paper draw around the inside and outside of the sellotape making sure you do not move it whilst doing this. (You could use a compass to draw your two circles if you do not have sellotape)
3. Measuring from the edge of the card making sure the 0cm is on the edge measure in 7cm and make a dot. Do this 3-4 times down the long side of the piece of card. Then Join the dots up so that you have a line down the page using your long ruler.
4. Cut down this line and keep the strip of card to one side
5. Now cut the circle out along the outside line
6. Cut small slits in from the edge of the circle to the inner line but no further. Do this all the way around the circle.
7. Fold the slits up.
8. Curl the long strip of card around to make a cylinder and measure that it fits inside the circular disk.
9. Stick the edge together and then put the circular disk into the cylinder shape from the top. Do this very carefully. Stick the folded tabs to the side of the cylinder with sellotape.

This will also be demonstrated during the lesson.

These are some examples of other students work for you to get an idea of what you will be creating.

EQUIPMENT

Always make sure you come to lesson with

- A Pencil
- 30cm ruler
- Black fine liner pen or biro.
- Colouring pencils
- Rubber and pencil sharpener
- Compass
- Small scissors
- Sellotape
- Pritstick glue

The resources highlighted in blue are due to not being able to share resources during the current situation as easily.

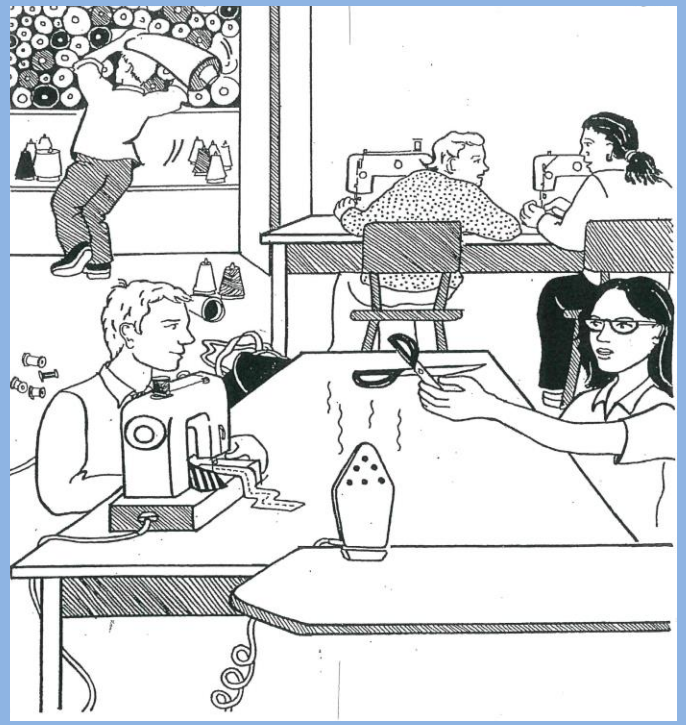
Safety Rules in Design Technology:

Although we do not work in a technology specific classroom these rules are for your safety and will show us that you can be responsible in all the different Technology rooms (Specialisms).

- Listen to each other and the teacher when being given instructions or explanations.
- Walk when moving around the classroom.
- Hold scissors correctly when moving around the classroom or passing them to another member of the class.
- Share equipment and resources fairly
- Do not shout out.
- Only have water in the classroom to drink and keep away from working area.
- Wash hands thoroughly before and after practical lessons.
- Tuck your chairs under when not in use.

Follow the Safety Rules in the Textiles Technology workroom to stay safe!

1. ***FOLLOW*** **instructions.**
2. **Put all bags and coats under the table.**
3. **Keep chairs tucked in.**
4. **Do NOT run in the Textiles workroom – WALK!**
5. **Use all equipment correctly and appropriately.**
6. **Put all equipment away in the correct place after you have used it.**
7. **Always make sure that you have been shown how to use equipment before using it.**
8. **Tie long hair back.**
9. **Carry scissors closed and by the blades.**
10. **A sewing machine is used by one person – don't try to use a sewing machine with someone else.**
11. **NEVER distract anyone who is using a sewing machine.**
12. **Turn sewing machines off when you have finished using them.**
13. **No food and drink in the Textiles workroom.**



Key Terms

Safety: taking care not to hurt or injure yourself or others.

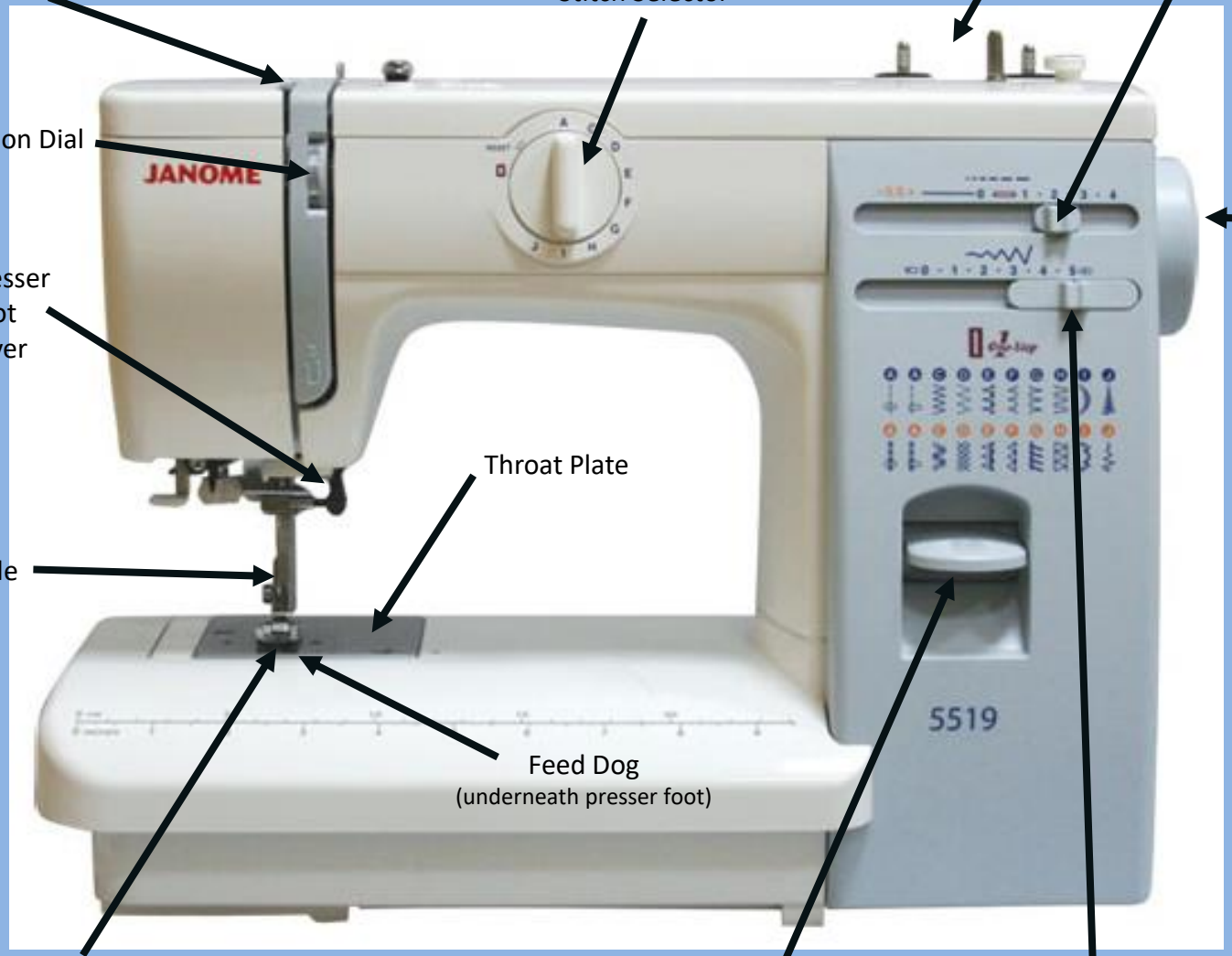
Hazard: any feature of a situation which may cause harm or injury.

Risk: the chance of a hazard causing harm or injury.

Risk Assessment: calculating how big a risk is by thinking about whether the harm or damage is likely to happen.

Risk Control: action taken to ensure that the harm or damage is less likely to happen.

SEWING MACHINE- the main parts.



Thread Take-Up hook

Tension Dial

Presser Foot Lever

Needle

Presser Foot

Stitch Selector

Throat Plate

Feed Dog
(underneath presser foot)

Reverse Lever

Spool Pins

Stitch Width Selector

Stitch Length Selector

CAM Wheel

Bobbin Compartment

Bobbin

Bobbin Case

Bobbin Case Finger

Bobbin Case 'Latch'

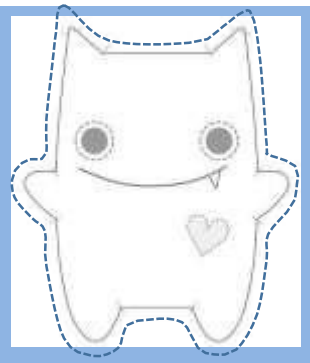
Foot Pedal and Lead

Hand sewing Needle		Used to hand sew fabric and creating embroidery designs. The ‘eye’ of the needle is where the thread is fed through.
Pins		Used to hold fabrics in place temporarily when sewing, with an ‘down/in/out’ motion.
Pin Magnet		Used to hold and store pins and needles safely.
Fabric Shears		Used to cut fabrics and threads only, **NOT** paper. Using these makes sure the fabric is cut ACCURATELY.
Embroidery Scissors		Used to trim threads and cut delicate work into fabrics.
Pinking Shears		Used to give a zigzag edge to fabric, instead of a straight edge, to stop the fabric from fraying.
Paper Scissors		Used to cut paper, cardboard and paper products.

Tape Measure		Used to measure fabrics and the human body to help make patterns accurate to the desired size.
Quick Unpick		This is used to unpick threads and stitches.
Aqua Pen		This is a water-erasable marking pen is especially useful for tracing markings to fabric, which must not be visible, once the sewing or embroidery has been finished.
Tailors Chalk		Used to trim threads and cut delicate work into fabrics.
Machining Thread		Used to sewing fabrics together, either by hand or with a sewing machine.
Embroidery Thread		Comes with 6 threads intertwined that can be ‘split’ to reduce the thickness. Used to create decorative stitches on products.

Y7 Textiles Key Words	
Stitch	**Thread passes through fabric to keep it together.**
Needle	**A thin piece of metal with a point at one end and an 'eye' at the other for thread to attach – then used to sew.**
Pins	**A thin piece of metal with a flat and pointed end to temporarily join fabrics together.**
Thread	**A piece of spun polyester or cotton to sew with.**
Seam	**Where two pieces of fabric join together by stitching.**
Seam allowance	**The area between the edge of your fabric and the line of stitching being used to join two or more pieces of material together.**
Sewing Machine	**An electrical product that is used to sew fabrics together securely. The machine can produce a range of stitches including straight & zig-zag.**

Seam Allowance



A **seam allowance** is the space between a stitching line and the edge of the fabric.
Sewing a seam right against the edge of two pieces of fabric can lead to fraying and may not hold in place. It is important to include a seam allowance that makes sure that the seam will be sturdy and not come away from the raw edge of the fabric.

Add **seam allowance** all the way around your design.

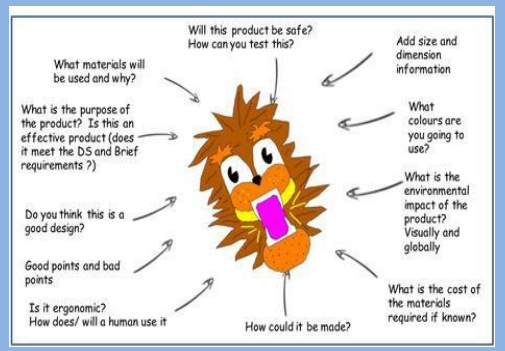
Seam allowances are also useful when making garments or products that may need to be altered, such as clothing.

The Design Process	
Design Brief	**A statement outlining what is to be designed and made.**
Research	**Sourcing information and inspiration to help with design work.**
Specification	**A list of design criteria.**
Design Ideas	**A range of potential solutions to the problem.**
Development	**Further improving an idea.**
Final Design Idea	**A presentation drawing of chosen idea.**
Manufacture	**Making the final outcome.**
Evaluation	**Reviewing strengths and weaknesses of final product and design work.**

Designing

Communicating your ideas with others.

Carefully sketching our your ideas and neatly shading in your ideas to ensure your ideas are clear.

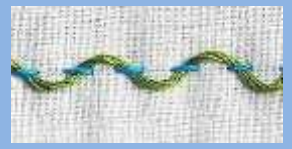


Annotation

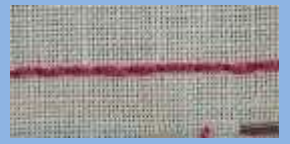
Additional explanation of your ideas.

Hand stitches

Straight stitch



Threaded running stitch



Back stitch

Cross stitch

Appliquè

Applying one layer of shaped fabric to another. This can be done either by hand or by a sewing machine.

Reduce

Minimise the amount of materials you use, reduce the amount we need to buy and make long-lasting products .

Refuse

Don't use or buy a product if you don't need it or if its unsustainable or wasteful.

Repair

When a product breaks down, or doesn't function properly, try to fix it – it's better than throwing it away into landfill.

Rethink

Ask whether we can sustain our current way of life and the way we design and make. Can something be made in a different way?

Recycle

Take an existing product that has become waste and reprocess the material to use in a new product. This uses less energy than obtaining new materials.

Reuse

Take an existing product that has become waste and use the material or parts for another purpose, without processing it.

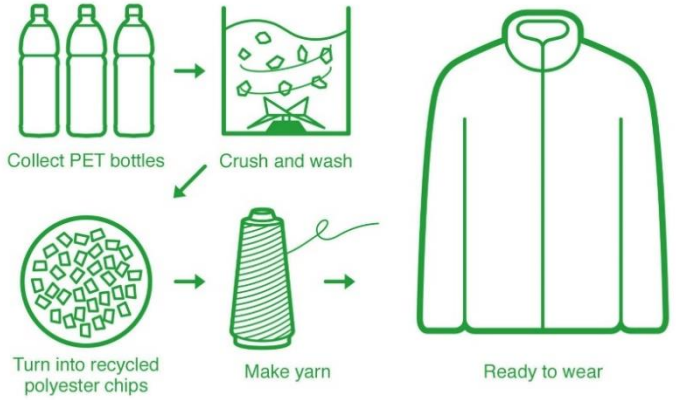
This symbol is called the **MOBIUS LOOP** or 'recycling symbol' and indicates that a product **can** be **recycled**, but not necessarily that it **has** been itself produced from **recycled** materials.

The **6 RS OF SUSTAINABILITY** are used to remind us of how we can improve the impact textile products have on society.

FAST FASHION' - inexpensive clothing produced rapidly by mass-market retailers in response to the latest trends.

The **6R's** are a way of helping you think about the reducing the impact of a new product on the **ENVIRONMENT** and **PEOPLE.**

Unwanted textile items will end up in **LANDFILL** – a place where unwanted materials are sent, which are then buried underground.



FLEECE fabric is made from **RECYCLED PLASTIC BOTTLES**. This makes a polyester yarn that can be woven or knitted into fabric to make clothing.

Year 7 PSHCE

What is PSHCE?

Personal
Social
Health
Citizenship
Education

Our aim in PSHCE is to guide you, support you and give you as much information as we can so that you can make informed decisions and keep yourselves safe.

There are many different topics that we will cover from Year 7 all the way through to Year 11.

Drugs Alcohol Mental health Healthy relationships Friends Bullying Body image How media affects our mental state Sexual health Committed relationships Politics and How to vote Careers and Aspirations How to write a CV and Interview skills Consent Laws Cyber safety Racism Diversity and being part of a community Gender issues Sexuality How our bodies develop and change with age Support with Option choices for GCSE Explore Post 16 options Gangs and Radicalisation Democracy Contraception Keeping yourself safe

We can't make choices for you. You will have to make decisions for yourself. But we want you to have the best advice and knowledge so that you can become the best version of yourselves

Some of the topics you will learn about, you will feel that they are not relevant to you. And you are right, at the moment they are probably not. But our job is not to teach you for just here and now it is also to give you the chance to explore topics that you will need to know about when you go to college, or university or start work.

As a grown up, you don't always get a chance to discuss how you feel about issues, the world or get the chance to see why others around you see the world differently. So we give you the chance to do that in PSHCE

Quite often you will be in a Math lesson, Geography lesson or PE lesson and things that we learn in PSHE will also be relevant in those lessons.

When we learn about child labour laws in Year 8 we will be talking about what it was like before we had those laws and looking at Victorian Britain (History). When in year 9 we are looking at Radicalisation and Gang culture we will be also learning about this in (English) when we are reading Romeo and Juliet.

Many of the things you learn in the PSHE curriculum are also learnt in other areas of the school and you will be able to bring that knowledge with you to support your learning in this room and also help you see the relevance to that learning in everyday life.

CLASSROOM RULES IN PSHCE

No Question is silly or stupid

Everyone will have differing opinions and that is ok

We must always listen and not judge

Give each other a chance to talk

PSHE classrooms are a safe place

If you find it hard to ask a question out loud then you can ask it quietly to your teacher, or you can put a question in the question box in P1

This is our classroom and we as teachers will learn just as much from you as you do from us.

This is OUR classroom

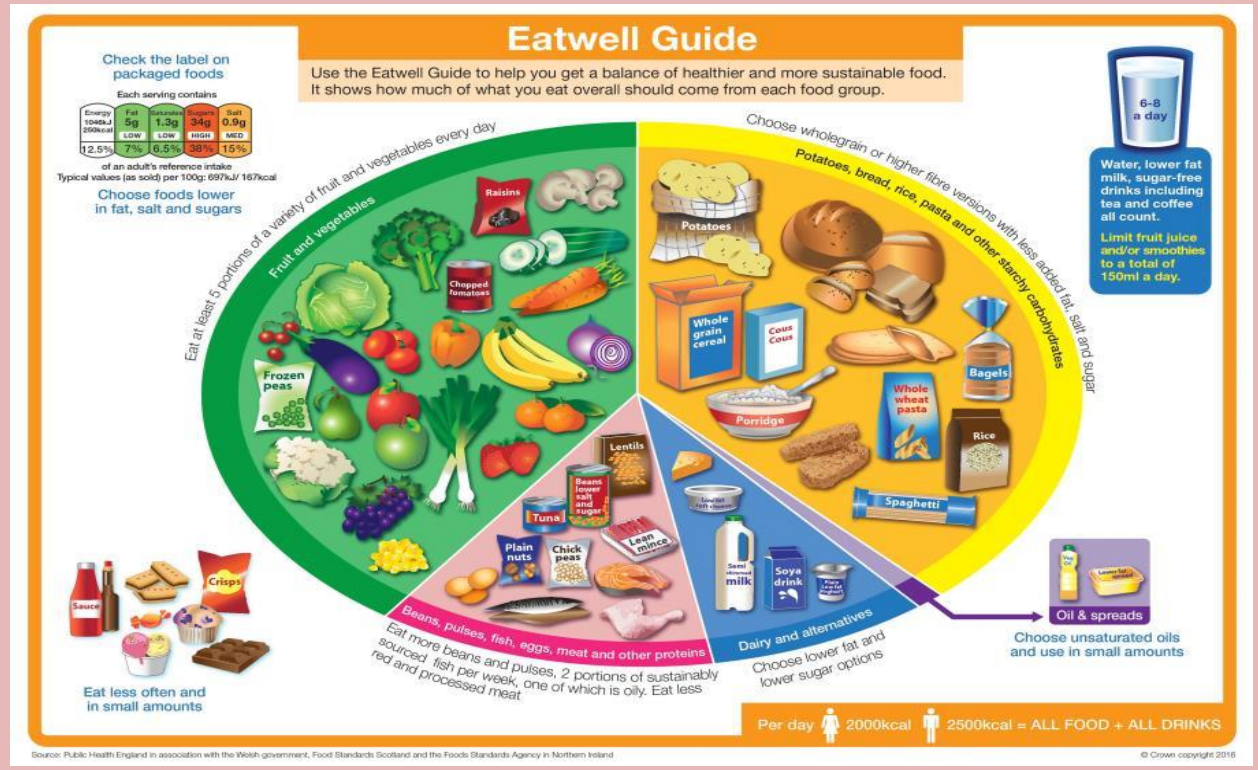
PSHCE Year 7 Key Terms

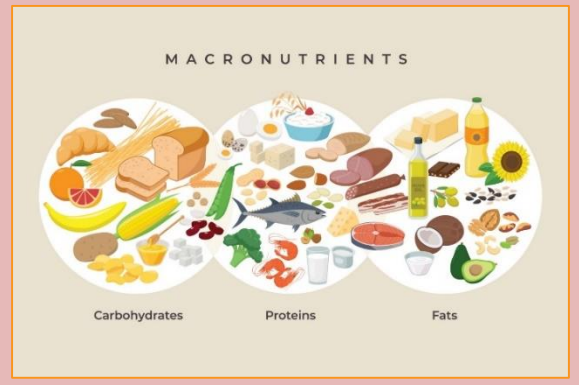
Community Topic	Definition
Rights	A moral or legal entitlement to have or do something.
Responsibilities	The state or fact of being accountable or to blame for something.
Community	A group of people living in the same place or having a particular characteristic in common.
Anti-Social behaviour	Antisocial behaviour is defined as 'behaviour by a person which causes, or is likely to cause, harassment, alarm or distress to persons not of the same household as the person.
Criminal damage	A person who without lawful excuse destroys or damages any property belonging to another, intending to destroy or damage any such property, or being reckless as to whether any such property would be destroyed or damaged, shall be guilty of an offence.
Vandalism	Deliberate damage or destruction of public or private property.
Graffiti	Writing or drawing scribbled, scratched, or written on a wall or other surface in a public place.
Arson	The criminal act of deliberately setting fire to a property.
Theft	The criminal act of stealing.
Knife Crime	The criminal act of carrying a knife to threaten and attack other people.

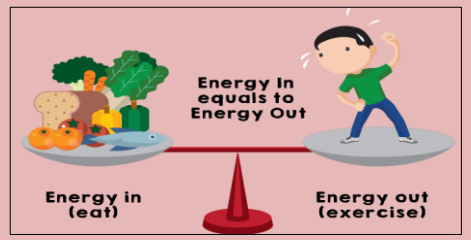
Supporting our community.

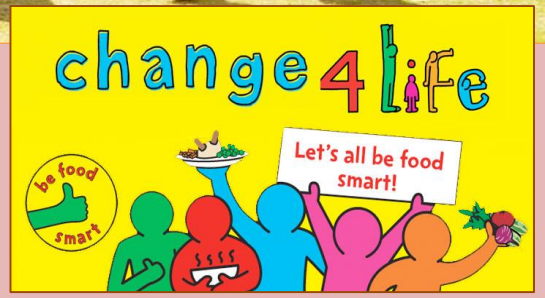
Transition to KS3 topic	Definition
Pastoral System	The provision a school makes to ensure the physical and emotional welfare of pupils.
Academic support	The term academic support refers to a wide variety of instructional methods, educational services, or school resources provided to students in the effort to help them accelerate their learning progress, catch up with their peers, meet learning standards, or generally succeed in school.
Student Services	Is a resource that students can use to help with practical and logistical issues within school as well as emotional and health issues.
House System	The House system is emplace to support students as part of our Pastoral support. It Includes staff in Senior Management roles as well as Heads of House and Tutors. They also co-ordinate the tutor programme that is followed during tutor time.
Head of House	A Head of house role is to manage a team of tutors in supporting their tutees well being and behaviour.
Tutor	A Tutor is the first contact for all students and their parents should they have any worries or need support. They deliver the tutor programme during tutor time and also support their class in inter house competitions.
Subject leader	A Subject leader is in charge of the curriculum development of a subject and management of a team of specialist subject teachers. They are part of the academic support throughout the school.
Tutee	All members of a tutor group are called tutees.
Behaviour support	Behaviour support is a place where students can go when they find it challenging to make good choices. They have a chance to talk and explore what the barriers are to their learning and how the school can support them in making the right choices when it comes to their behaviour.

Healthy Lifestyles topic		Definition	
Lifestyle		The way in which a person lives	
Healthy		In a good physical or mental condition; in good health.	
Nutrients		A substance that provides nourishment essential for the maintenance of life and for growth.	
Physical activity		Physical activity is defined as any voluntary bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity encompasses all activities, at any intensity, performed during any time of day or night. It includes both exercise and incidental activity integrated into daily routine.	
Eat well guide		The Eatwell Guide is a visual representation of how different foods and drinks can contribute towards a healthy balanced diet. The Eatwell Guide is based on the 5 food groups and shows how much of what you eat should come from each food group.	
Macro nutrients		A type of food (e.g. fat, protein, carbohydrate) required in large amounts in the diet.	
Micro Nutrients		A chemical element or substance required in trace amounts for the normal growth and development of living organisms.	
Obesity		Obesity is defined as abnormal or excessive fat accumulation that presents a risk to health.	
Eating disorders		Having an eating disorder means having a difficult relationship with food. This can include eating too little or too much, or becoming fixated with your weight or shape. You may use food as a coping mechanism or a way to feel in control.	
NHS		The National Health Service	









Changing adolescent bodies topic	Definition
Hygiene	Personal hygiene is how you care for your body. This practice includes bathing, washing your hands, brushing your teeth, and more. ... Personal hygiene practices can help you and the people around you prevent illnesses
Germs	A microorganism, especially one which causes disease
Body Odour	The unpleasant smell of a person's unwashed body also related to sweating.
Sweat glands	A small gland that secretes sweat, situated in the dermis of the skin. Such glands are found over most of the body, and have a simple coiled tubular structure. There are two types, The Apocrine gland and the Eccrine gland.
Puberty	The period during which adolescents reach sexual maturity and become capable of reproduction.
Sexual organs	A sex organ is any part of an animal or plant that is involved in sexual reproduction. The reproductive organs together constitute the reproductive system. In animals, the testis in the male, and the ovary in the female, are called the primary sex organs.
Menstrual Cycle	The menstrual cycle is a series of natural changes in hormone production and the structures of the uterus and ovaries of the female reproductive system that make pregnancy possible. The ovarian cycle controls the production and release of eggs and the cyclic release of estrogen and progesterone.
Testicles	Either of the two oval organs that produce sperm in men enclosed in the scrotum behind the penis.
Ovaries	A female reproductive organ in which ova or eggs are produced, present in humans as a pair.
Hypothalamus	A region of the forebrain below the thalamus which coordinates both the autonomic nervous system and the activity of the pituitary, controlling body temperature, thirst, hunger, and other homeostatic systems, and involved in sleep and emotional activity.
Pituitary Gland	The major endocrine gland, a pea-sized body attached to the base of the brain that is important in controlling growth and development and the functioning of the other endocrine glands.
Hormones	A regulatory substance produced in an organism and transported in tissue fluids such as blood to stimulate specific cells or tissues into action.

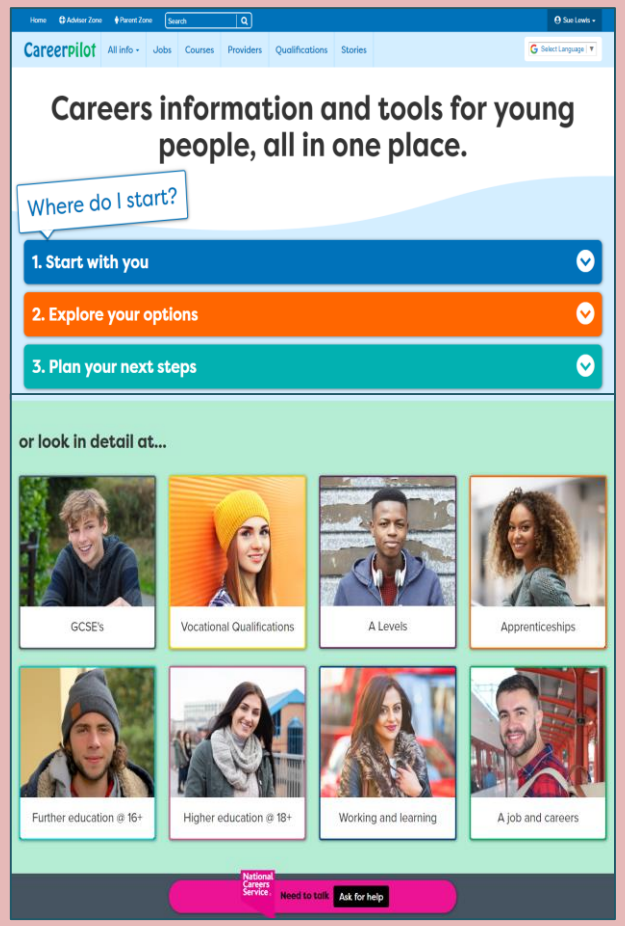
Friendship Topic	Definition
Relationship	The way in which two or more people or groups regard and behave towards each other.
Qualities	A distinctive attribute or characteristic possessed by someone or something. For example someone can be trustworthy or loyal.
Communication	The successful conveying or sharing of ideas and feelings through, talking, writing, other mediums as well as listening.
Maturity	In psychology, maturity is the ability to respond to the environment being aware of the correct time and location to behave and knowing when to act, according to the circumstances and the culture of the society one lives in.
Body language	The conscious and unconscious movements and postures by which attitudes and feelings are communicated.
Compromise	An agreement or settlement of a dispute that is reached by each side making concessions.
Sacrifice	Give up (something valued) for the sake of other considerations.
Influence	The capacity to have an effect on the character, development, or behaviour of someone or something, or the effect itself.
Social Circle	A group of people who are socially connected.
Dominant personality	The definition of dominant is a person who is in a position of power or who is exhibiting powerful or controlling tendencies.
Egoism	A doctrine that individual self-interest is the actual motive of all conscious action.
Utilitarianism	The doctrine that actions are right if they are useful or for the benefit of a majority.
Inclusive	Not excluding any of the parties or groups involved in something.
Group Dynamic	Is a system of behaviours and psychological processes occurring within a social group.

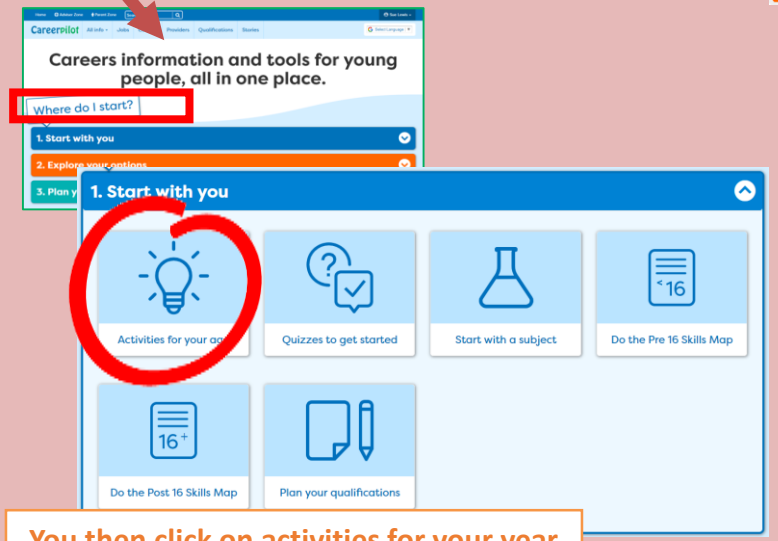
Careerpilot

careerpilot.org.uk

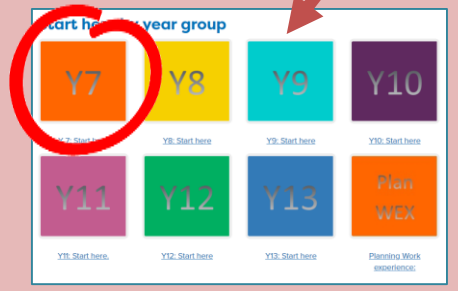
Careerpilot is a free website used across the South of England. Helping students to find out about all of their options. Important for finding out more about jobs and courses & support when making key decisions like choosing GCSE options.
The website can be used to save your choices – you can bookmark pages to come back to later. You can record the jobs that you are interested in etc. in Career Tools and that creates their report.

Where to start? You start with you!





You then click on activities for your year group.



Y7

1. Register on Careerpilot

2. Quiz about you

You will begin this work in class, but you can access Careerpilot from home, as long as you sign in, at anytime and it will log all the things you are looking at for you to go back to at a later date.

3. Explore jobs sectors

4. Explore jobs

5. Choose job sectors you like

Sector: Animal:

- Vet
- Animal nurse
- Farmer
- Dog groomer

We are not expecting you to know what you would like to have as a career in Year 7. What Career Pilot helps us to do at this early stage is to start exploring. It helps us to see what is possible and what goals we may like to set ourselves to reach those dreams.
You are all individual and very capable, let us help you towards a life fulfilled.