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.	

Learning the knowledge in the organiser

Your Knowledge Organiser is a vital document. It contains all the key things from your lessons that you will need to work on committing to your long-term memory.
The best method to use when you are working on memorising things from your Knowledge Organiser is to self-quiz, using the Trafalgar Revision Method, below:

Really read and understand	Read the information 3 or more times and ask for help in understanding
Reduce the knowledge	Rewrite the information, making revision cards or mind maps
Remember	Reread and test that you can remember
Repeat	Repeat the process above until you can recall the information quickly and accurately. Only at this point have you acquired the knowledge!

How do I remember? Activating your memory

Students often say “I can’t remember” and the reason for this is that the information they are trying to remember and learn is not yet in their **long term memory**.

Your long term memory gets activated by repetition over a number of days. And so repeat the following process to embed knowledge in your long term memory.

Look	Read the information 3 or more times 
Cover	Now cover what you have just read up
Write	Now try and write down the information you have just read 
Check	Did you write down the information correctly? If you made mistakes, correct them with a different colour pen and repeat daily until you “just know it”.

YR 7 INTRODUCTION TO SHAKESPARE

WHY DO WE STUDY SHAKESPEARE?

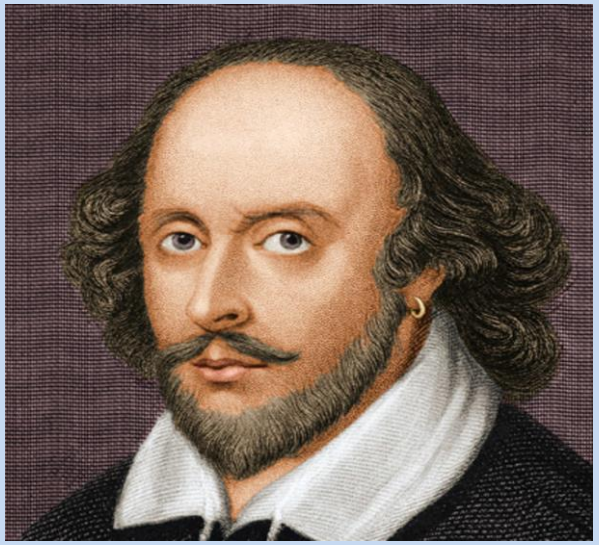
Shakespeare has had a huge influence over literature, the English language, and Western Culture so it is important to have an awareness and an understanding of his work. His writing is very skillful and covers a large number of genres (e.g. poems, plays, comedies, histories, and tragedies). In addition 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.

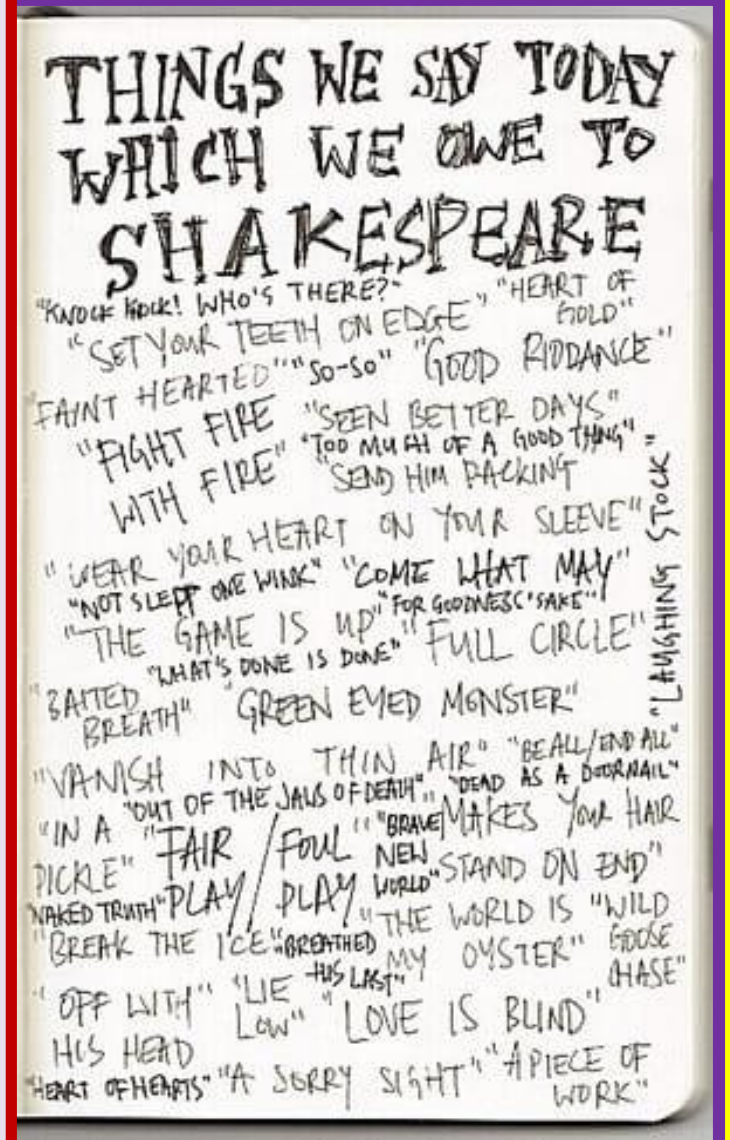
In the winter plays were sometimes performed at smaller, indoor venues which were more expensive and exclusive. Blackfriars theatre was often used by Shakespeare's company.

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 Drake** 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**.

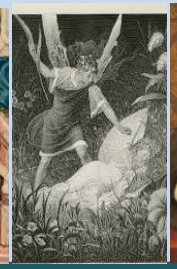
When **James I** became King he was already **King of Scotland** and he ordered the creation of the **Union Jack flag**. Early in James' reign **Guy Fawkes** and others were involved in the attempted assassination of the King through the **Gunpowder Plot**.

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.

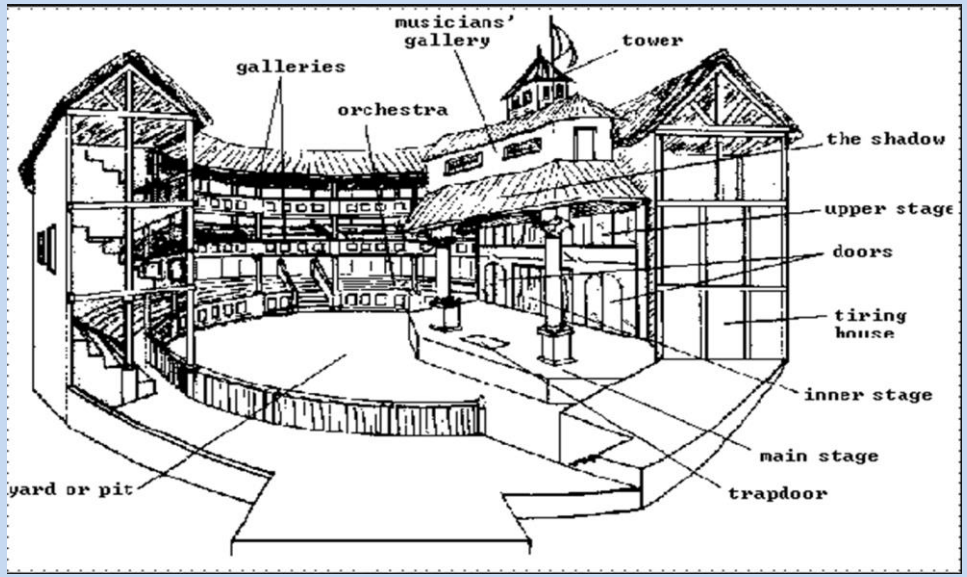
Lines of the play – The key part we analyse in a play. The words the actors speak on stage, sometimes with stage directions to the actor to instruct them exactly **how** to say the line.

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.

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

SHAKESPEARE'S THEATRE…THE GLOBE



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

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…"

F

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."

O

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

R

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…"

E

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!"

S

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

T

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.

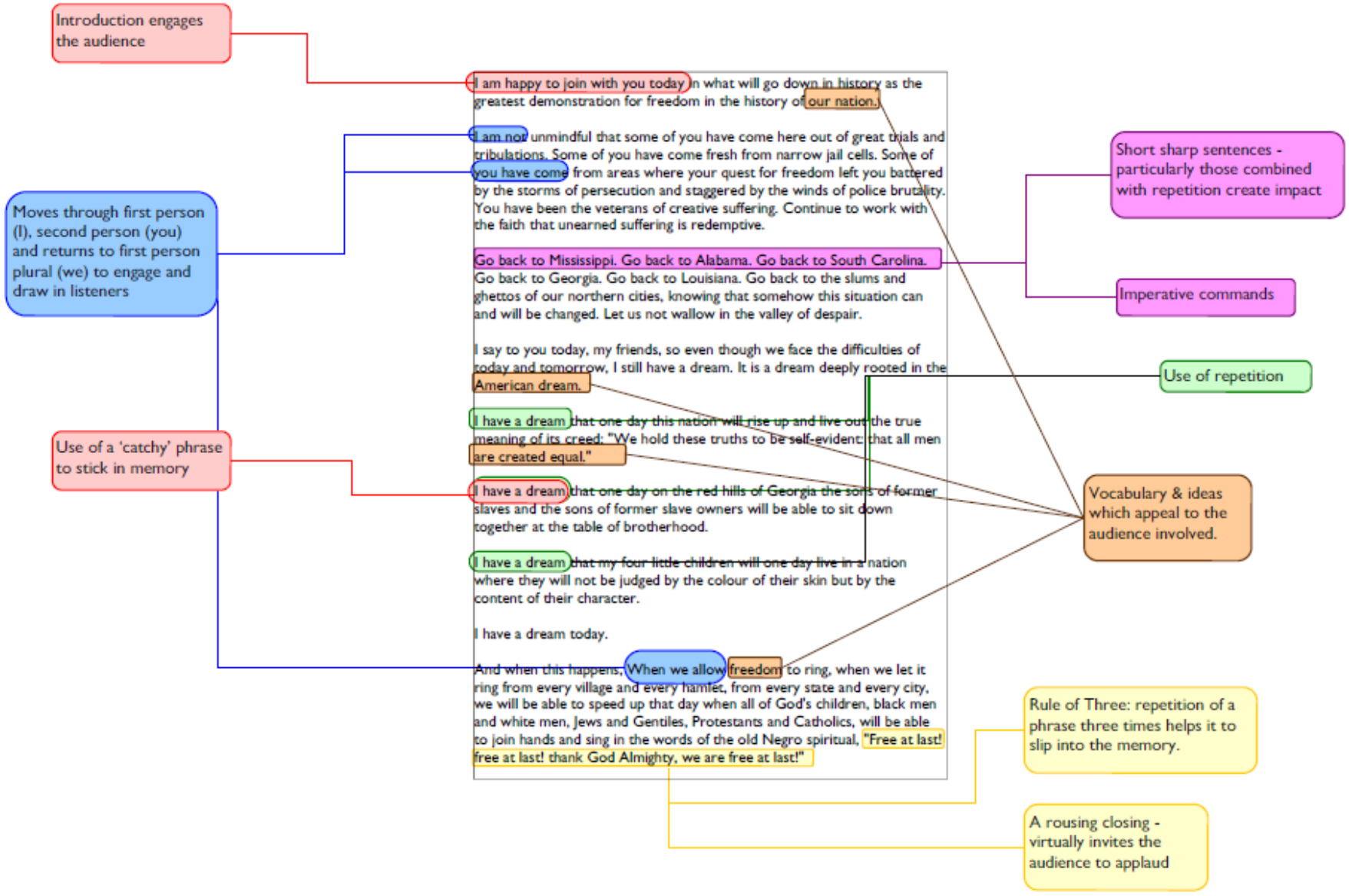
Say what your issue is and set out your argument.
I am here today to talk to you about why every person in our society should be a vegetarian. I know that not everyone will want to be a vegetarian, but I hope to explain why it would be better for society if we were.

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



Fortnightly Writing Challenge: TITLE

Methods to include:

Here you will find some challenges – these are skills that we would like you to include.

These will be colour coded and, if you click on them, they will take you to another slide explaining the technique and giving you some examples.

Here you will find details about the actual task.
You will need to read this carefully as it will provide clues about what you need to do in your writing lesson.

Every Week B, you will have a FWC ppt loaded to your google classroom. Your homework is to ensure that you practise the skills/methods ready for your writing lesson in Week A.

Here you will find an image. Sometimes, the image will be to illustrate or contextualise your task. For some tasks, the image will be part of the writing challenge.

Don't forget to plan writing!

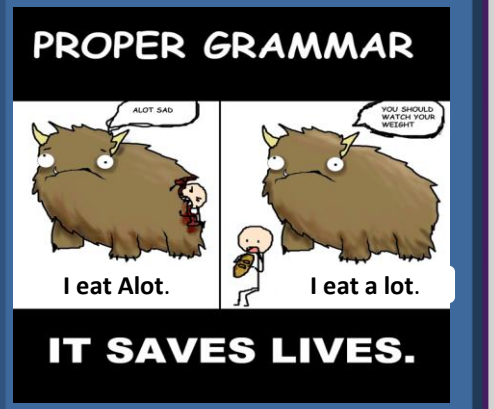
Here you will find information to help you during your writing session. There will be prompts so you do not forget the important things – full stops, capital letters, paragraphs etc

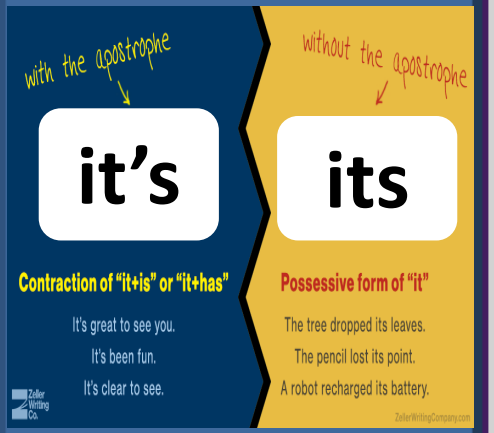
Homophones

- **there**: I'd love to go **there**.
  their: Is that **their** cat?
  they're (they are): **They're** late.
- **to**: I'm going **to** work.
  too: I've had **too** much to eat**!**
  two: I have **two** hands.
- **no**: We have **no** chance.
  know: How do you **know** that?
- **your**: What's **your** name?
  you're (you are): **You're** not alone.
- **new**: She has a **new** phone.
  knew: I already **knew** that.
- **which**: **Which** colour do you like?
  witch: She was a wicked **witch**.
- **of**: Please have a piece **of** pie.
  off: Get **off** the grass**!**
- **where**: **Where** are you going?
  wear: What should I **wear**?
  were (was): **Were** you joking?
- **our**: **I** want **our team to win!**
  are: When **are** you home?
- **here**: Please come back **here**.
- **hear**: Can you **hear** the birds?

Use *lie* to indicate the act of reclining: I am tired just watching the dog *lie* in the warm sunlight.
(to lie: lie(s), lay, lain, lying)

Use *lay* to indicate the placement of something: Please *lay* the paper on the table.
(to lay: lay(s), laid, laid, laying)





FORTNIGHTLY WRITING CHALLENGE

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 anecdote about falling 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.'**
EXPERTS:	'Group chat can often be a source of upset,' warned psychologist Dr Linda Pappadopolis.
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 must be home by midnight. You could be tired if you're any later. You should ring your uncle. E.g. mustn't, can, might, shouldn't, may, will
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 have a 20% chance of surviving a 60mph crash if you don't wear a seatbelt!
SUPERLATIVE:	This is the **worst** day of my life but at least we're in the **finest** 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.'**

FORTNIGHTLY WRITING CHALLENGE

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, 'don't expect me before 11.'

Mrs Smith replied, 'What time?'

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, excitement, anger, 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?'
'Oh! When are you going?'
'Ouch! That hurt.'

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.
Interesting, David's house does not have a garden, but Sarah'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 pillow — in a mighty clay oven.

Paul was scared – more scared 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.

effectively/fluently sequenced paragraphs

Privacy Matters

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.

....

Remember:

bullet points

- 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;

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.

Writing Forms 1

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.

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 rust, a colour of burnt copper – and were battered and bruised through years of exposure to the elements.

Metaphor, simile, personification

sensory description

Like a queue of taxi cabs, the vehicles waited patiently in the forgotten depths of the forest. Specks of light 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, feeding 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 from the heat in 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

FORTNIGHTLY WRITING CHALLENGE

Writing a formal letter

Writing Forms 2

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 stude
Brinsley High School, a friendly and successfu ool where uniforms are not worn.

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

fluently sequenced paragraphs

fluently sequenced paragraphs

Furthermore, ...

Yours faithfully
Sherlock Holmes

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

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 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

Sample Check

introductory (overview) paragraph

Today, before he even steps out on to the Centre Court for his Wimbledo huge-hitting Pole Jerzy Janowicz, Murray wi ve been subject to several of these. He does time he pops to lavatory. The osmolari heck is conducted by one of his staff, its purpose to gaug the percenta ater and mi s in his urine, to show whether his body is correctly hydrated. The fact is, if Murray wins to y be thanks to the bloke who inspects his wee.

fluently sequenced paragraphs

fluently seq ed paragraphs

Daily Diet

At 7.30 this ng, while many of arriving at Wimbledon's press restaurant will have begun their day assaulting a ttering 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 th mals suffer outweighs this benefit, and that they should be shut down!

effectively/fluently linked paragraphs to sequence a range of ideas

On the surface, z 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 pe le with the experience of observing wildlife they wouldn't otherwise experience, when it s 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 owing thousands of people per day to gawk at animals and spend far too much money 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.

FORTNIGHTLY WRITING CHALLENGE

BEST FOR PLANNING NARRATIVES (STORIES).

HOW TO PREPARE AND PLAN EFFECTIVELY

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: 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?

P2

F: Letter
A: Headmaster
P: Argue
change uniform

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

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

F = FORM
A = AUDIENCE
P = PURPOSE

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

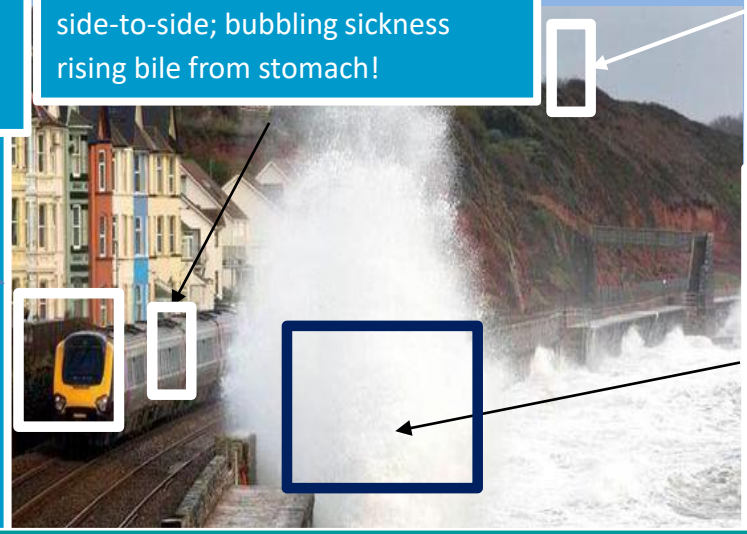
Best for planning descriptions from a picture: Boxing/framing sections of a picture forces you to focus your description on specific areas within the image, zooming in on specific detail and then out again to focus on another area. Each boxed area = a paragraph

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

zoom in on one carriage window, motion sick. Windows hit by spray that 'like a tamed cat' has 'turned savage' today. Passenger pitched side-to-side; bubbling sickness rising bile from stomach!

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

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?



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

1. **introduction: Here you will find everything you need to know about buying a goldfish. Follow this advice to**
2. **First of all, research fish needs and best fish breeds for starters**
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 …**

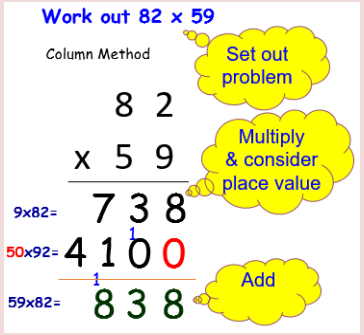
Linear flow and vertical charts are useful for planning writing that has to follow a step-by-step process. Each section/shape = a paragraph.

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 struc	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 cat' 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	… ;

Written Multiplication - Integers

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



HegartyMaths clip 21

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	

HegartyMaths clips 42, 43

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 = 496.25

1) Continue ÷ into decimals
2) Remainder as fraction

0 4 9 6.2 5
4) 1 9 8 5.1 0 2 0 0

$496\frac{1}{4}$

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"

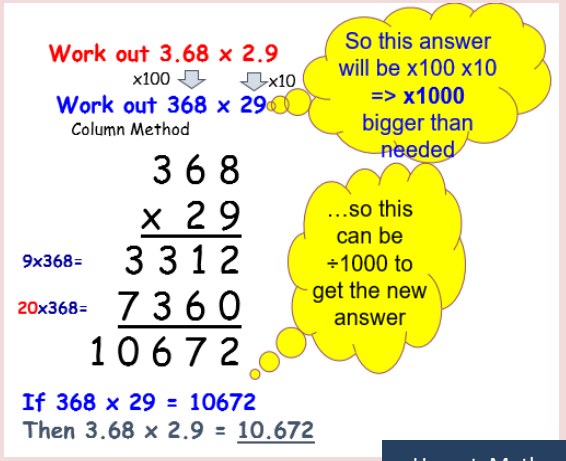
57.2 ÷ 8 = 7.15

0 7 . 1 5
8) 5 7 . 2 4 0

HegartyMaths clip 22

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



HegartyMaths clip 48

Long Division

2829 ÷ 23 = 123

123
23) 2829
− 23
52
− 46
69
− 69
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

HegartyMaths clip 50

B	• Do brackets first
I	• Then indices
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.

HegartyMaths clip 24

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

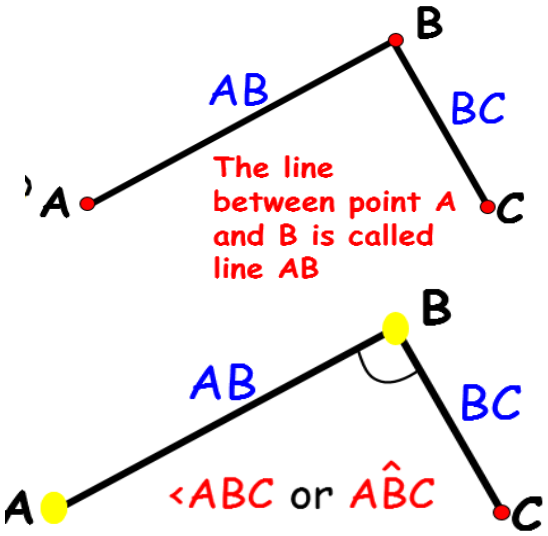
Place the point of a compass at the corner of the two lines and extend open

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

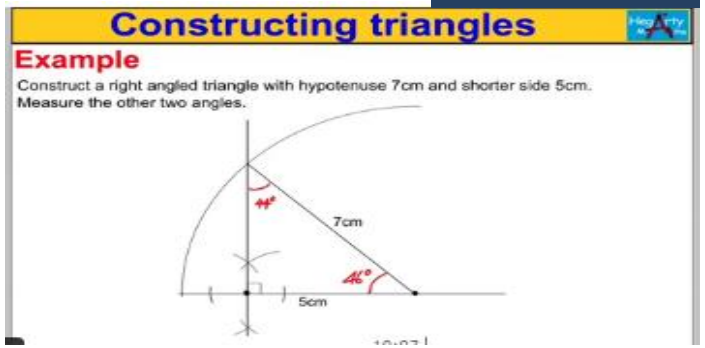
Repeat the process from the other cross (2)

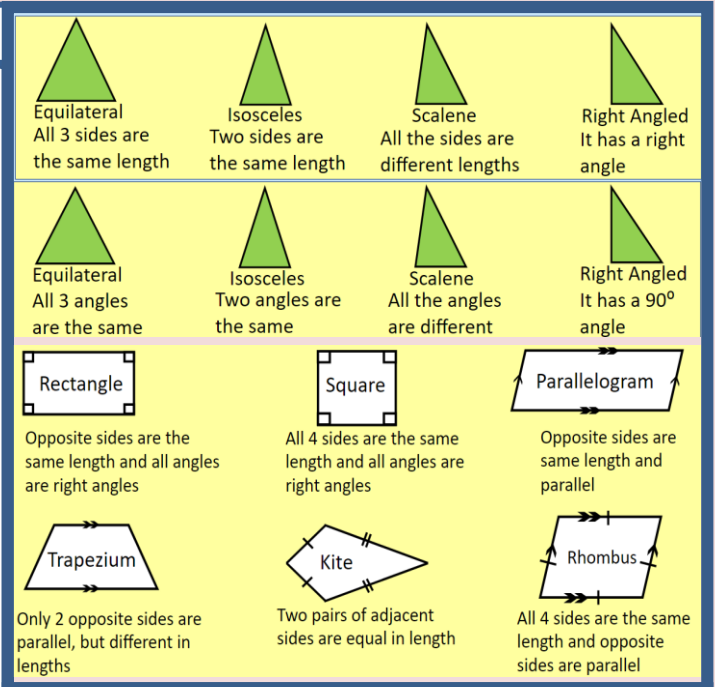
Draw a line to the point where the two arcs cross to make the angle bisector



Construct triangles using protractor and compass.

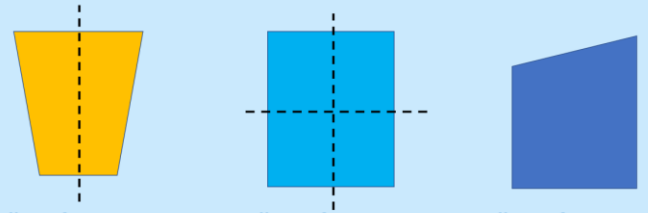
HegartyMaths clip 683





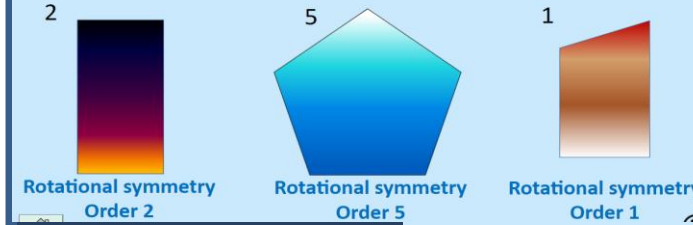
Reflection Symmetry

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

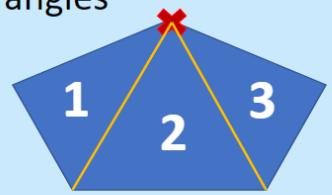


HegartyMaths clip 827 - 828

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

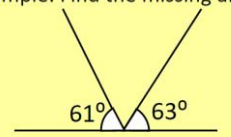


Step 1: Pick a corner
Step 2: Draw the lines to the other corners from the chosen point
Step 3: Multiple the number of triangles by 180^o
Sum of Interior Angles = $3 \times 180^o = 540^o$

There are two fewer triangles than sides so:
Sum of interior angles = $(n - 2) \times 180$ n is the number of sides

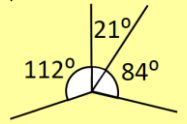
HegartyMaths clip 477 to 479

Straight Lines
Angles on a straight line equal 180^o
Example: Find the missing angle

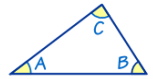


Subtract the know angles from 180^o
$180 - 61 - 63 = 56^o$

Around a Point
Angles around a point add up to 360^o
Example: Find the missing angle?



Subtract the know angles from 360^o
$360 - 112 - 21 - 84 = 143^o$

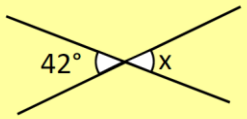


In a triangle, the three interior angles always add to 180°:
A + B + C = 180°

Vertically opposite, alternate, corresponding and co-interior angles

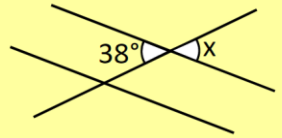
HegartyMaths clip 480 to 483

a)



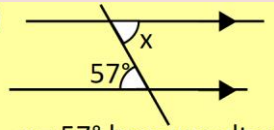
x = 42 because vertically opposite angles are equal

b)



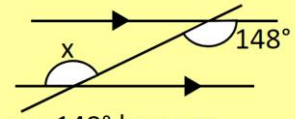
x = 38 because vertically opposite angles are equal

a)



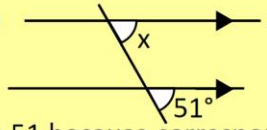
x = 57° because alternate angles are equal

b)



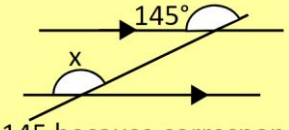
x = 148° because alternate angles are equal

a)



x = 51 because corresponding angles are equal

b)

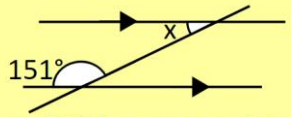


x = 145 because corresponding angles are equal

a)

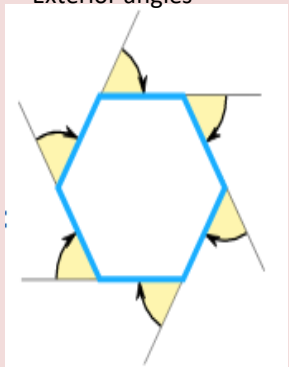
x = 130° because co-interior angles sum to 180°

b)

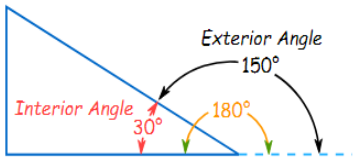


x = 29° because co-interior angles sum to 180°

Exterior angles



An Interior Angle is an angle inside a shape



HegartyMaths clips 560 to 564

Interior & Exterior Angles

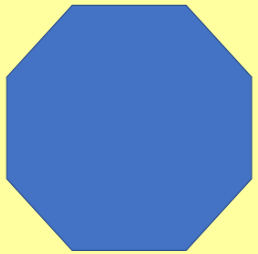
You can calculate the interior angle of any regular polygon by dividing the sum of the interior angles by the number of sides

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

Sum of the interior angles = $(8 - 2) \times 180^o$
$= 1080^o$

Interior angle = $1080^o \div$ number of sides
$= 1080^o \div 8 = \mathbf{135^o}$

Exterior angle = $180^o - 135 = 45^o$



Exterior angle of a regular shape can also be calculated by dividing 360 by the number of sides $360^o \div 8 = 45^o$

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.

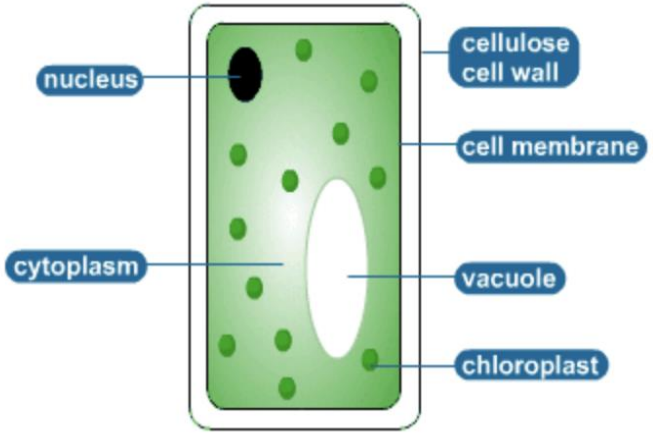
carbon dioxide + water → glucose + oxygen

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

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)

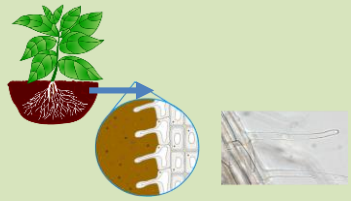


Root Function and Structure

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.

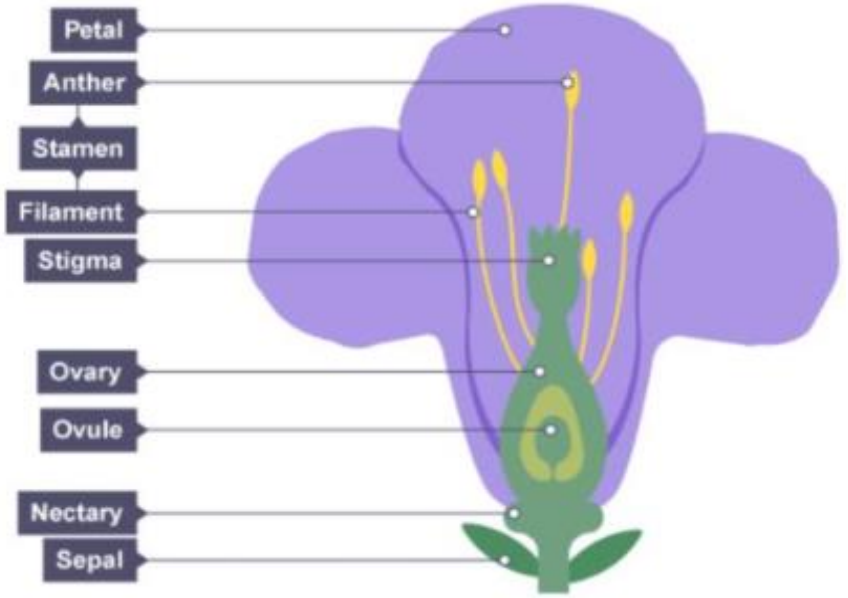
Keyword	Definition
Photosynthesis	Process carried out where plants make their own food. Carbon Dioxide + Water → Glucose + Oxygen
Chlorophyll	Green pigment in chloroplasts of plant cells. It enables photosynthesis to take place.
Chloroplasts	Contain the green pigment chlorophyll; the site of photosynthesis.
Waxy Cuticle	Waxy layer, prevents water loss.
Upper Epidermis	Thin and transparent allowing light to pass through.
Palisade Mesophyll	Main region for photosynthesis. Lots of palisade cells containing lots of chloroplasts.
Spongy Mesophyll	Cells are more loosely packed. Contains air spaces between cells allowing gas exchange.
Lower Epidermis	Contains stomata to regulate the loss of water vapour (transpiration)
Stomata	Each stomata surrounded by a pair of guard cells. Guard cells control whether they're open or closed.
Petals	Brightly coloured to attract insects.
Stamen	The male part of the flower (each consist of an anther held up on a filament)
Stigma	The top of the female part of the flower which attracts pollen.
Anthers	Produce make sex cells (pollen grains)
Ovary	Produces the female sex cells (contained in the ovules)
Nectary	Produce a sugary solution called nectar, which attracts insects.

KS3 Biology: Plants and Photosynthesis

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.

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

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



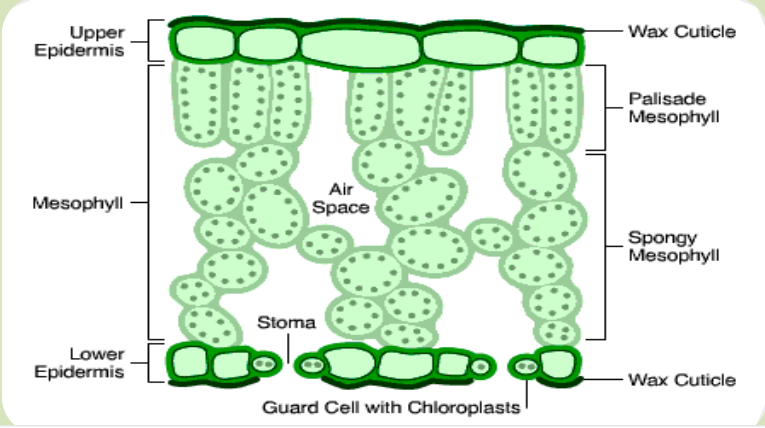
Leaf Function and Structure

Absorb sunlight

Where photosynthesis takes place

To store glucose as starch

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



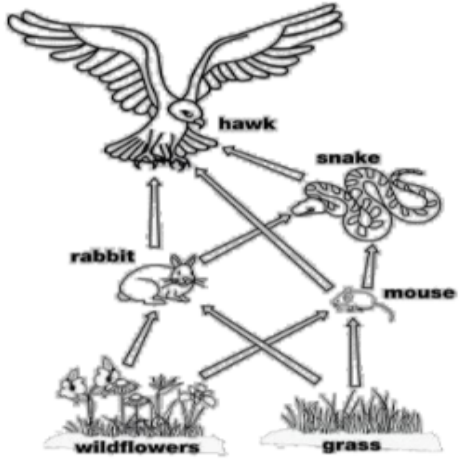
Food Webs & Interdependence

The organisms in a food chain are dependent on each other.

For example, grass is eaten by the caterpillar, which eaten by the frog, which is eaten by the snake, which in turn is hunted by the bird.

The grass is the producer in this food chain, and producers are at the start of all food chains. The grass captures the energy from the sunlight to photosynthesise and make glucose. The glucose provides energy for the grass to grow. When the caterpillar eats the grass, some of the energy left in the grass is transferred to the caterpillar. This energy is passed down the food chain.

Changes in the number of one organism in an area – its population can affect other organisms in the same food chain.
The number of plants in an area can be affected by the amount of 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.



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.

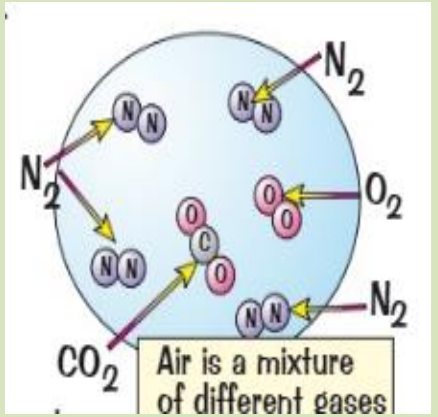
If the population of mice caught a disease, then there would be more competition between the Hawk and Snake to catch the Rabbit. This could then cause the number of Rabbits to decrease.

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 H2O molecules only and
cannot be separated into H and O atoms without a chemical reaction

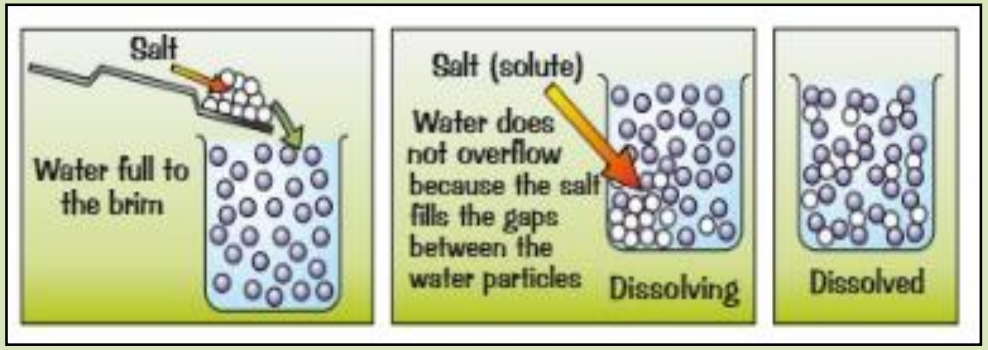


A mixture contains two or more different substances, these substances are not chemically combined. This allows mixtures to be separated using physical methods. Sea water and air are good examples of mixtures

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 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.

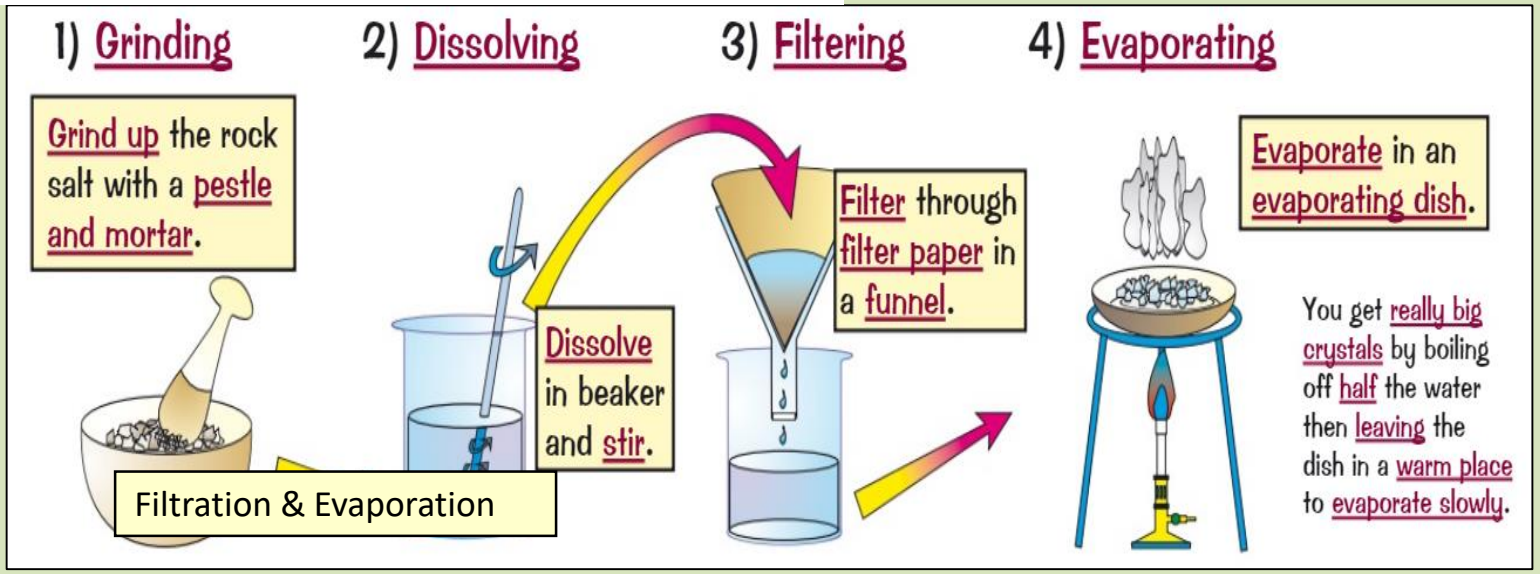


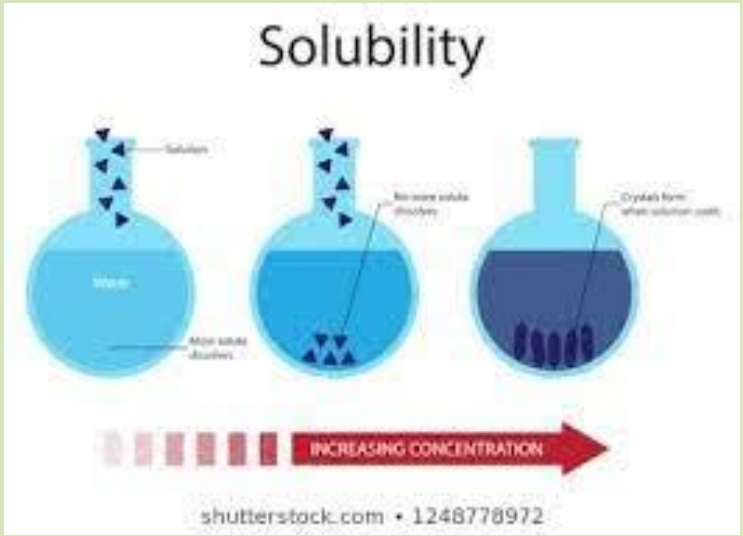
Mixtures can be separated using physical methods:

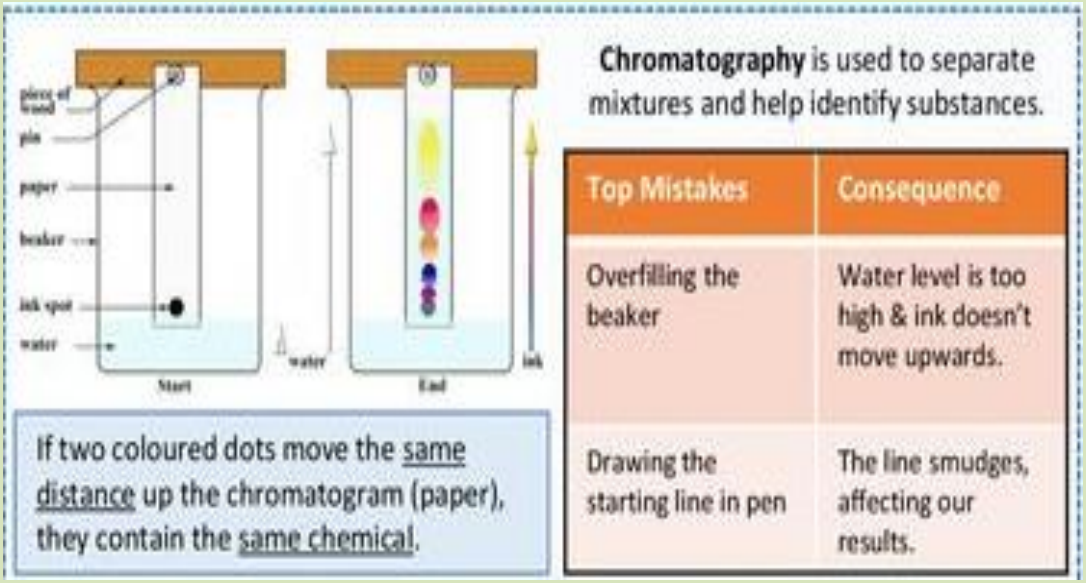
1. Filtration
2. Evaporation
3. Chromatography
4. Distillation

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.



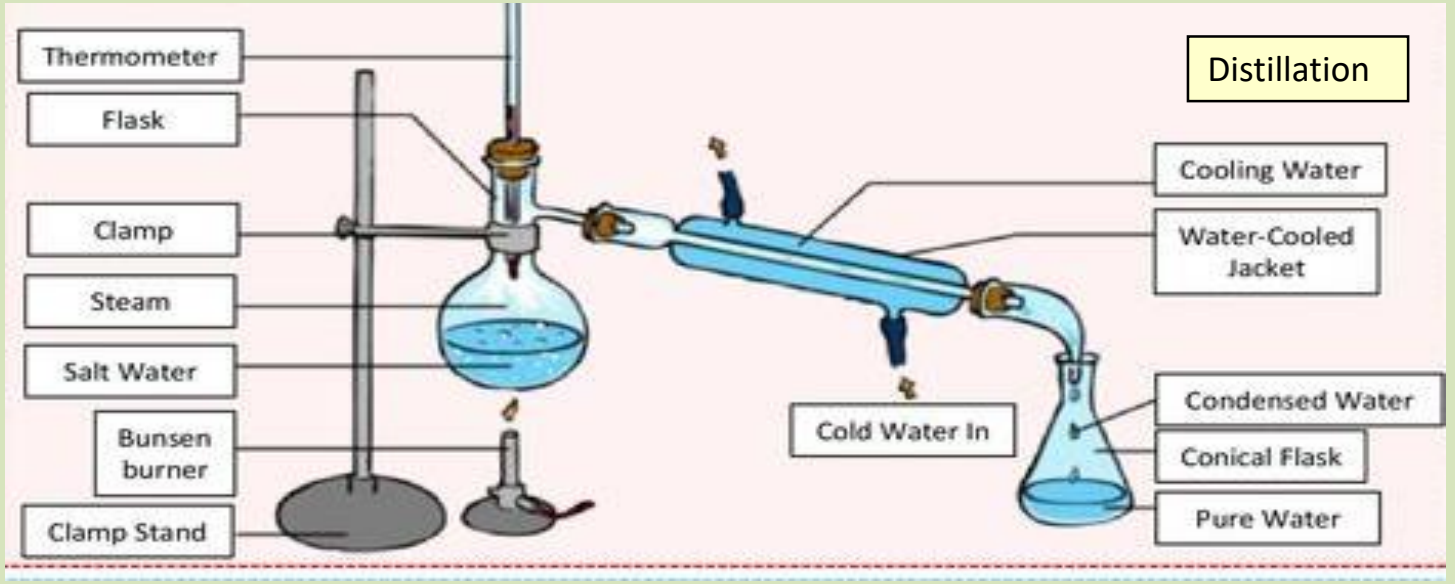




Chromatography is used to separate mixtures and help identify substances.

Top Mistakes	Consequence
Overfilling the beaker	Water level is too high & ink doesn't move upwards.
Drawing the starting line in pen	The line smudges, affecting our results.

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

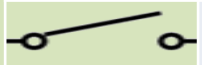
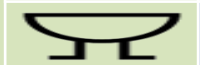


KS3 Physics: Current electricity and magnetism

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

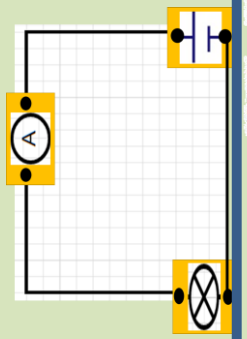
Symbol	Name
	Bulb
	Cell
	Battery
	Wire
	Motor
	Switch
	Buzzer
	Voltmeter
	Ammeter

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

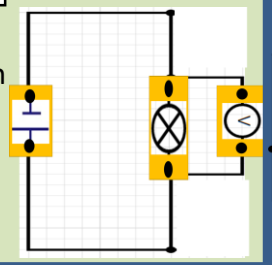
Electric Current Amps

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



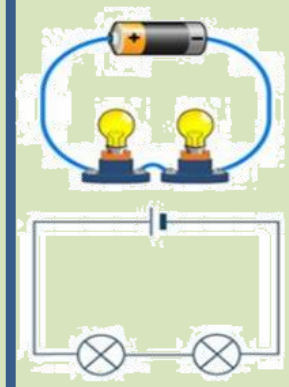
Potential Difference Volts

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

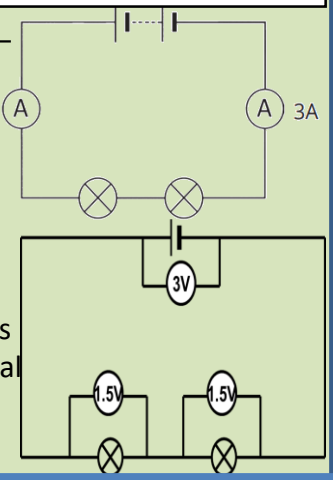
Series circuits



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

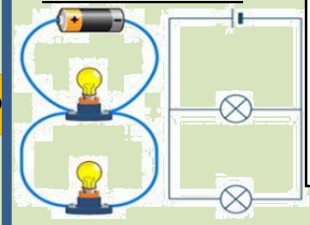
The current is the same everywhere in a series circuit. It doesn't matter where you put the ammeter, it will always show the same reading.



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.

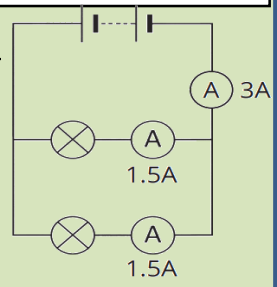
Parallel circuits

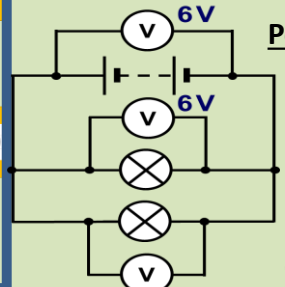


In a parallel circuit, the components are connected on separate branches. This gives the current several different paths to flow down. If one bulb stops working, the other bulbs will remain lit as the circuit is still complete

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.



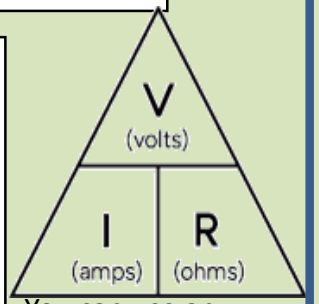


Potential difference in parallel circuits

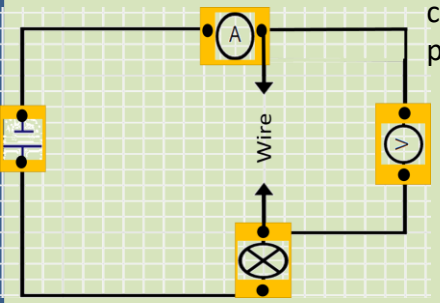
In a parallel circuit, the potential difference across each bulb is the same as the potential difference across the battery. This means that all the bulbs have the same brightness, and they are brighter than the same number of bulbs in a series circuit.

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

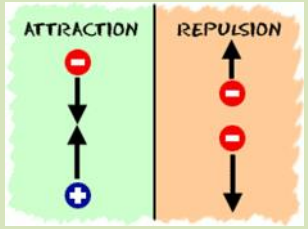
As the width of the wire increases, resistance decreases. This is because there is more space for the electrons to flow.

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

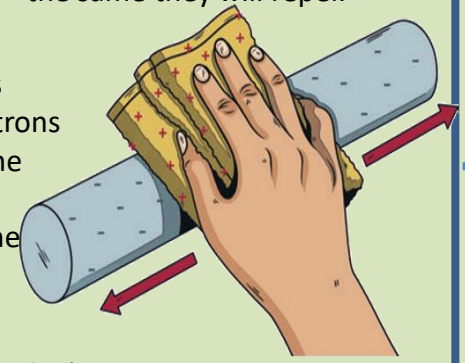
Static charge can build up when two insulating materials are rubbed together. Friction between the materials causes electrons to be transferred from one material to the other.

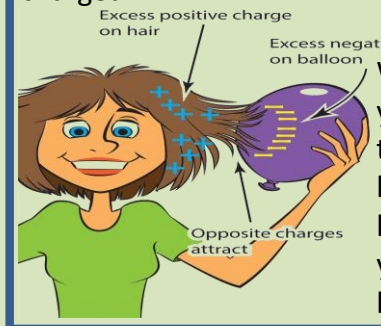
Electrons are negatively charged, so objects that lose electrons become positively charged overall, while objects that gain electrons become negatively charged overall.



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.





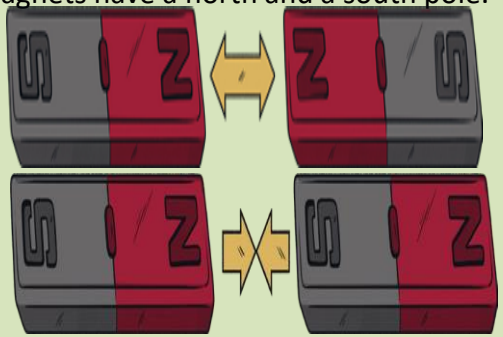
When you rub a balloon against your hair, electrons are transferred from your hair to the balloon. The balloon and your hair have opposite charges so your hair is attracted to the balloon, making it stand on end.

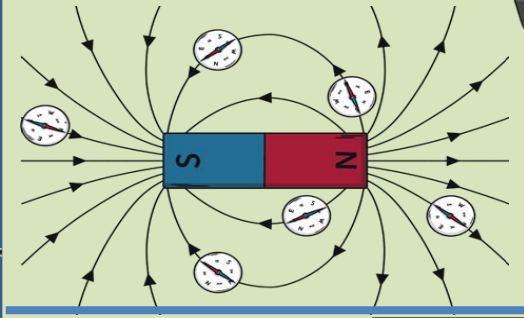
Magnetism

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

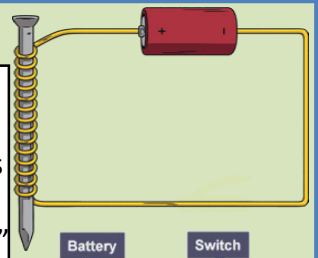




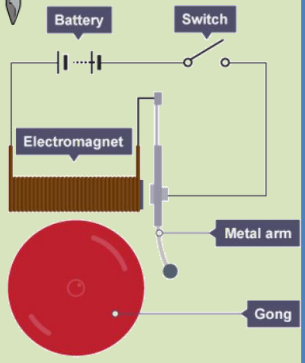
All magnets exert a magnetic field- this is the area where the magnet has an influence on currents and other magnets. It can be shown by placing compasses around the magnet and plotting where it points

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

Y7 CT Term 3 – Spreadsheets

A SPREADSHEET IS AN ELECTRONIC DOCUMENT THAT CAN:

- **QUICKLY CREATE GRAPHS OR CHARTS**
- **AND PERFORM CALCULATIONS**

ON DATA STORED IN CELLS THAT ARE ORGANISED INTO **ROWS** AND **COLUMNS**.

Common spreadsheet applications:

- Microsoft Excel
- Apple Numbers
- Google Sheets
- LibreOffice Calc

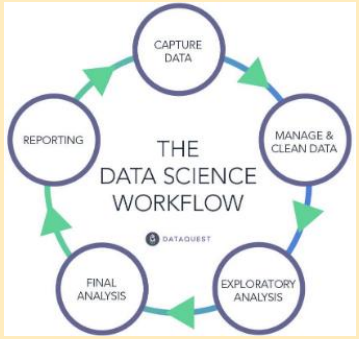
But they all do pretty much the same thing.

Spreadsheets are used by all sorts of people:

- Business people that need to calculate profit and loss, tax etc.
- Scientists using graphs to find patterns or trends in collected data
- Small clubs and organisations as a basic flat file database of members
- Engineers modelling a new bridge / engine / aeroplane

It doesn't matter what you want to do when you are older, you will most likely need to use a spreadsheet.

Spreadsheets are key in **Data Science**



Spreadsheet practice

File Edit View Insert Format Data Tools Add-ons Help Last edit was made on 12 February by B Taylor

	A	B	C	D	E	F	G	H	I	J
1	Follow these instructions exactly									
2	1	***Make this bold, underlined and italic***								
3	2	Make this red and 20 point in size								
4	3			Center this between column B and column H						
5	4	Put a thick border around this								
6	5	Make this courier font, size 15, yellow on a blue background								
7	6	Sort these: By family alphabetically								
8										
9		ISBN	Name	Family						
10		1040-1042	Harthacanut	House of Denmark						
11		757-796	Offa	House of Mercia						
12		1100-1135	Henry I	House of Normandy						
13		1066-1087	William I	House of Normandy						
14		1087-1100	William II	House of Normandy						
15		1216-1272	Henry III	House of Plantagenet						
16		856-860	Aethelbald	House of Wessex						
17		860-866	Aethelbert	House of Wessex						
18		866-871	Aethelred I	House of Wessex						
19		839-856	Aethelwulf	House of Wessex						
20		871-899	Alfred the Great	House of Wessex						
21		925-940	Athelstan	House of Wessex						
22		959-975	Edgar	House of Wessex						
23		940-946	Edmund	House of Wessex						
24		1016-1016	Edmund Ironside	House of Wessex						
25		946-955	Edred	House of Wessex						
26		1042-1066	Edward the Confessor	House of Wessex						
27		899-925	Edward the Elder	House of Wessex						
28		975-978	Edward the Martyr	House of Wessex						
29		955-959	Edwy	House of Wessex						
30		802-839	Egbert	House of Wessex						
31		978-1016	Ethelred II the Unready	House of Wessex						
32		1066-1066	Harold II	House of Wessex						
33										
34										
35										

A cell: an addressable location
This cell address is: F9
(column F, row 9)

Why use spreadsheets?

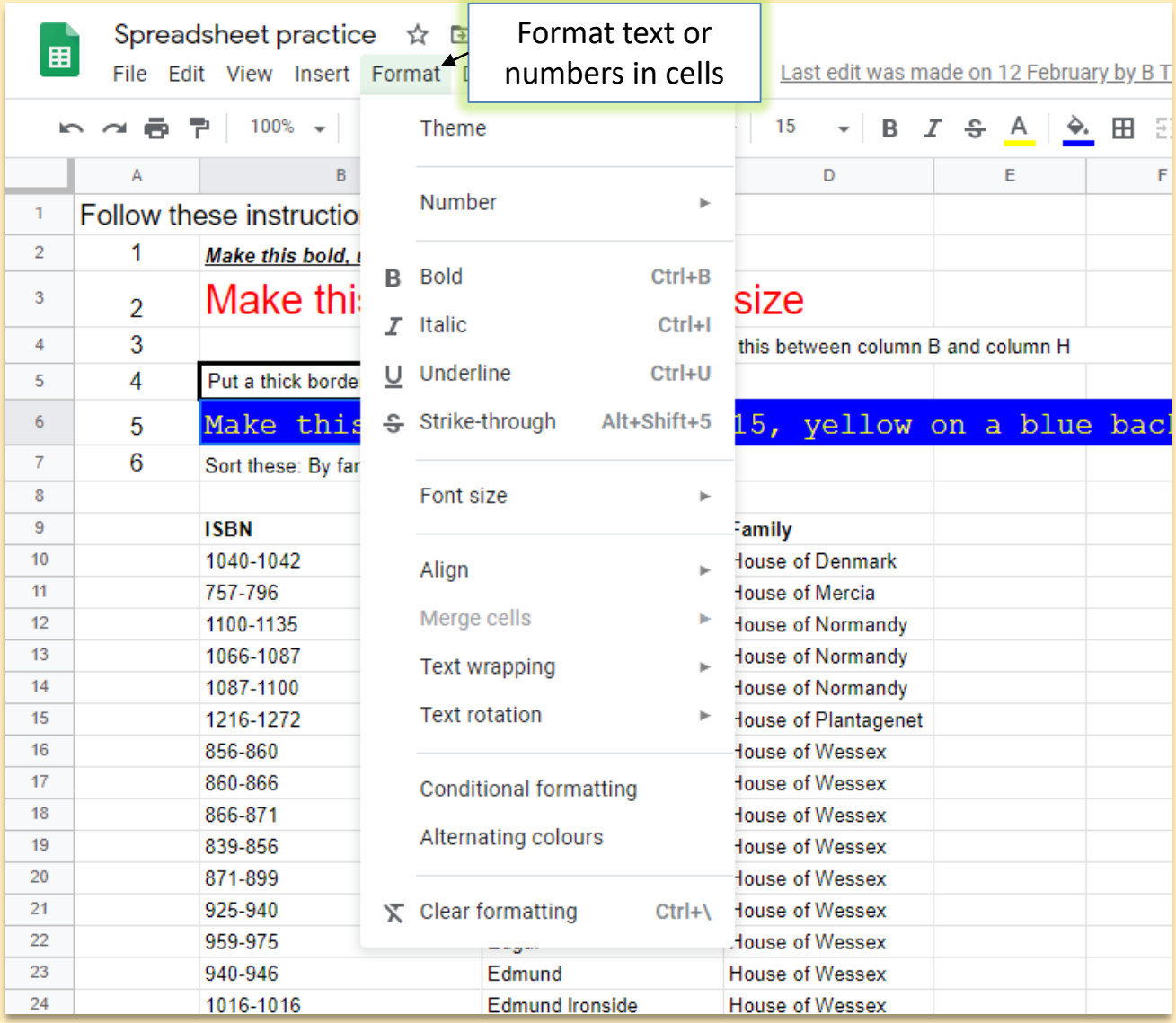
- They are essentially a massive calculator so you can perform calculations without error
- They can create graphs really quickly and accurately (humans are not good at) so trends and patterns can be spotted (which is what humans are good at)
- They enable models to be created to simulate a real world process to test "what if...?" questions

Y7 CT Term 3 – Spreadsheets

A SPREADSHEET IS AN ELECTRONIC DOCUMENT THAT CAN:

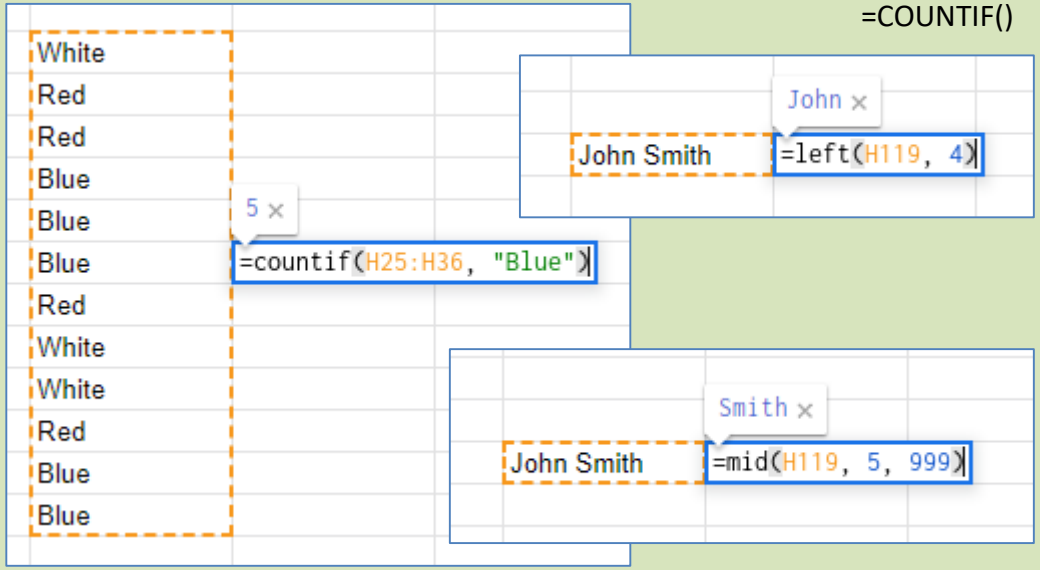
- **QUICKLY CREATE GRAPHS OR CHARTS**
- **AND PERFORM CALCULATIONS**

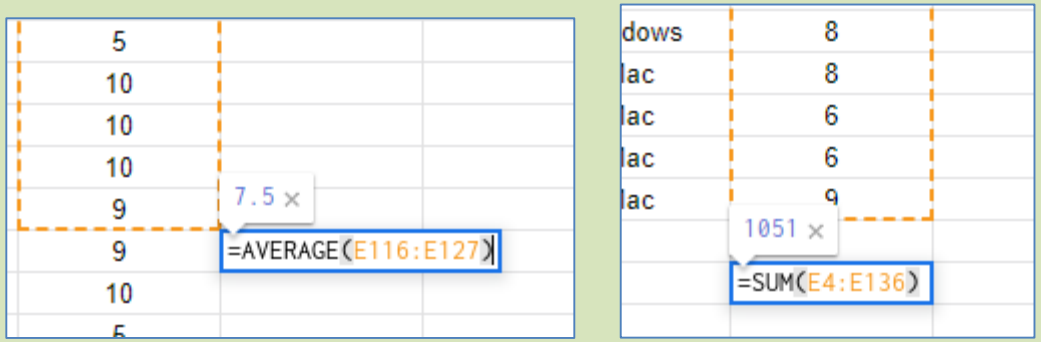
ON DATA STORED IN CELLS THAT ARE ORGANISED INTO **ROWS** AND **COLUMNS**.



Functions: Pre-existing formulae that do a job for you:

=SUM()
=AVERAGE()
=LEFT()
=MID()
=COUNTIF()





Y7 CT Term 3 – Spreadsheets

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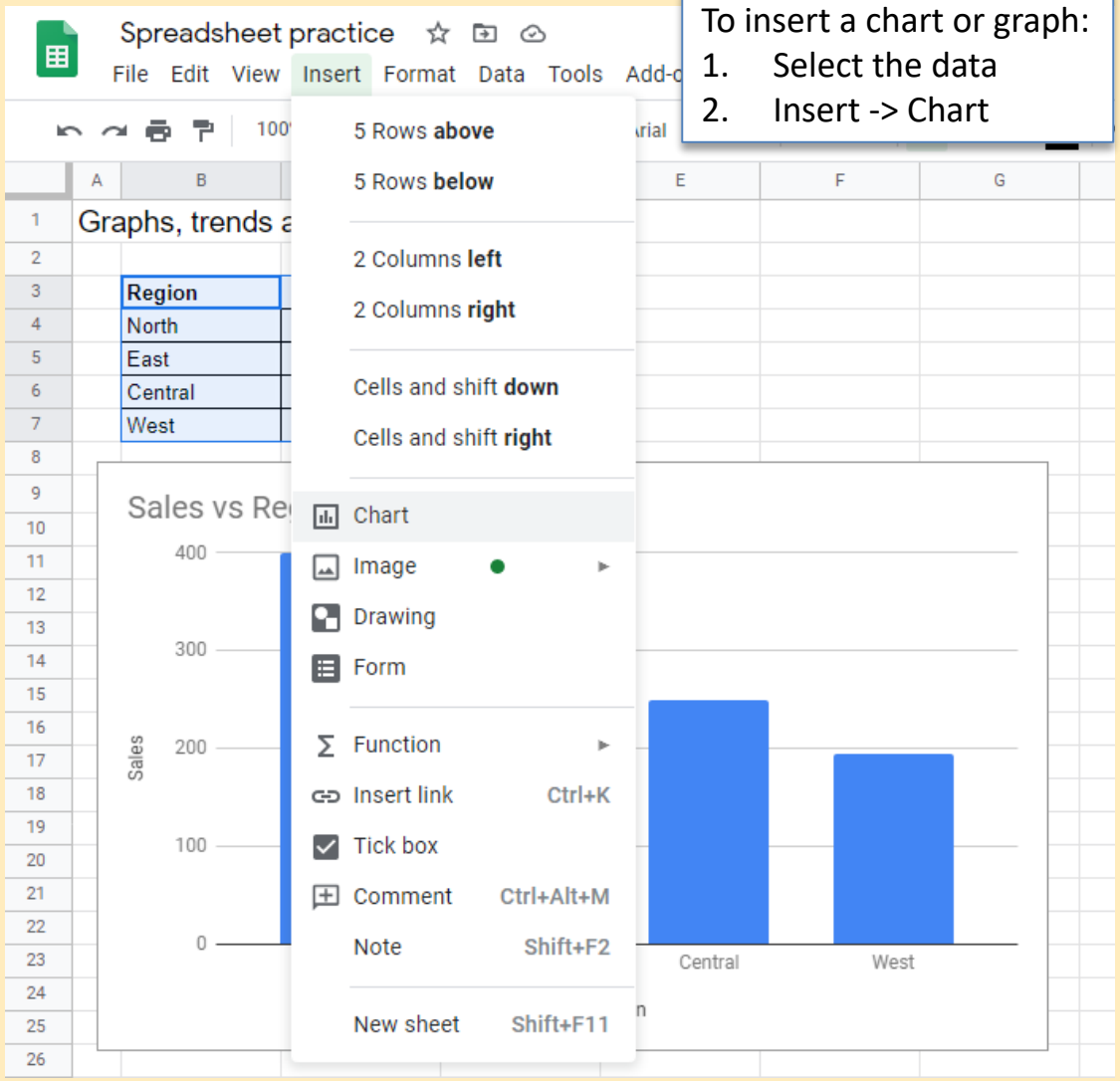
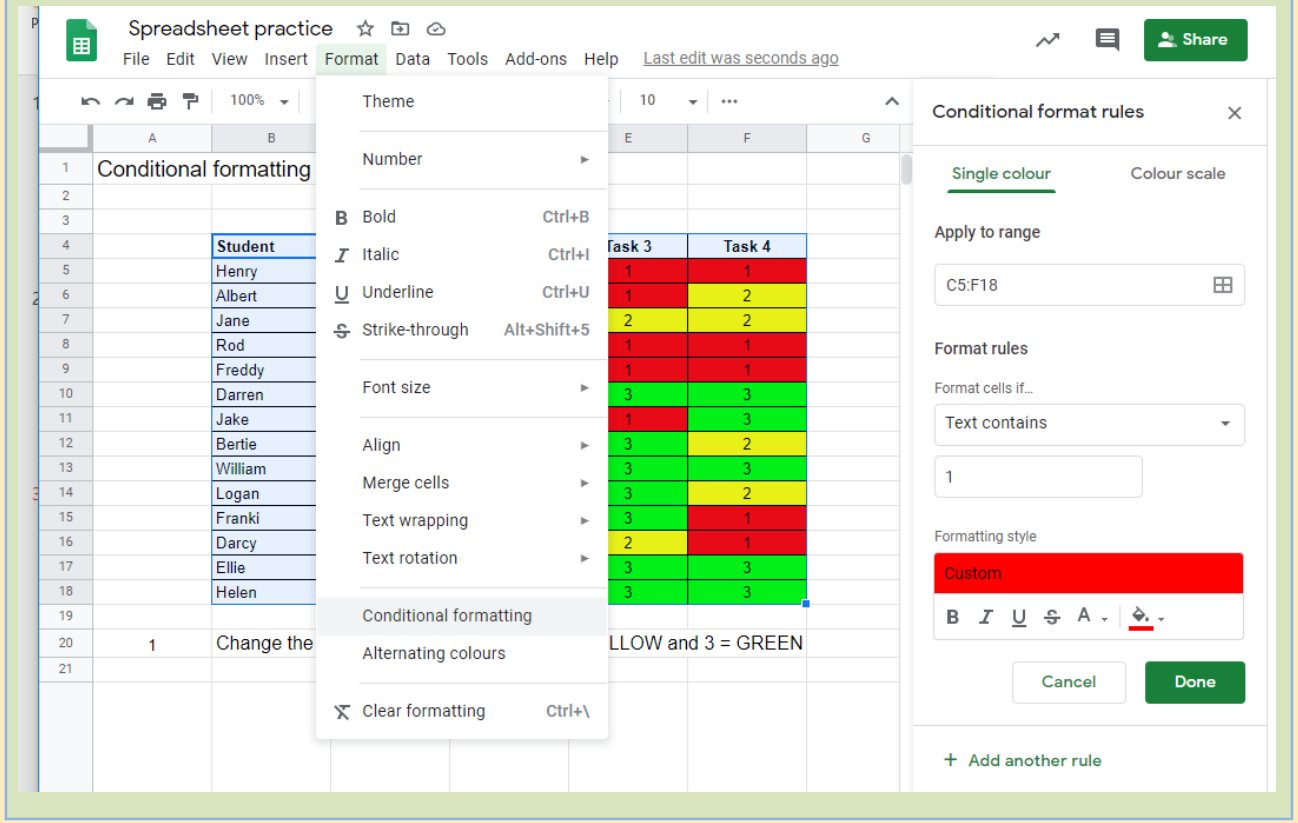
To insert a chart or graph:

1. Select the data
2. Insert -> Chart



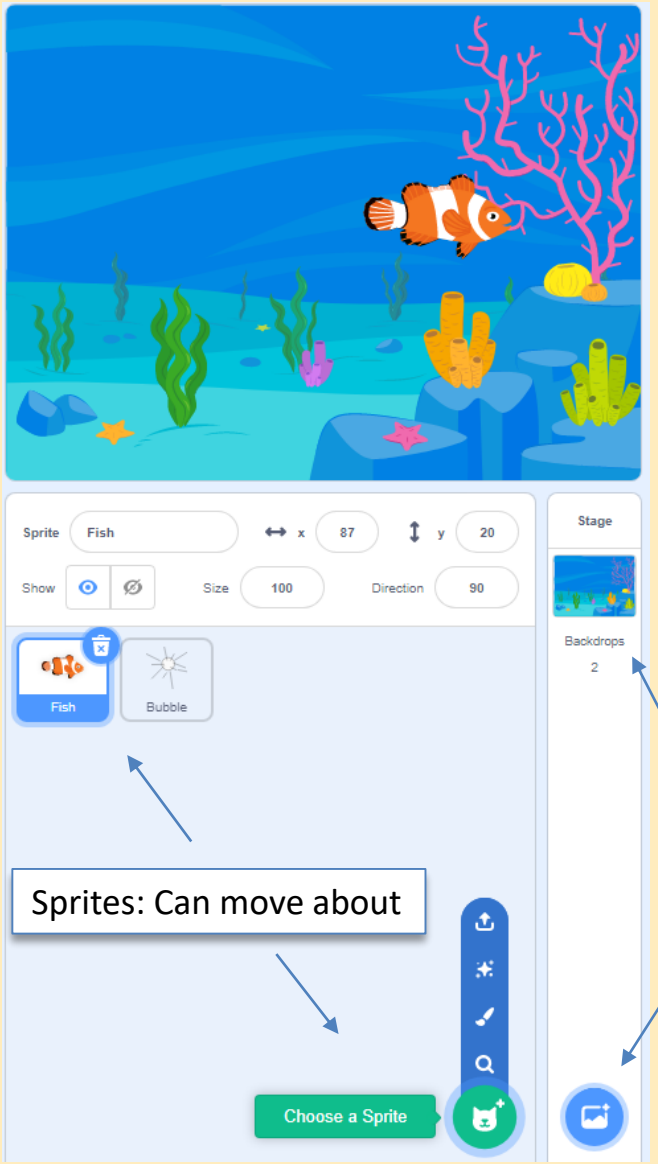
Conditional formatting changes the format of a cell if something is true



Spreadsheets are used by almost everyone, in almost every career.

Y7 CT Term 4 – Scratch coding

- Core coding skills
- Pro-Coder Rules



Sprites: Can move about

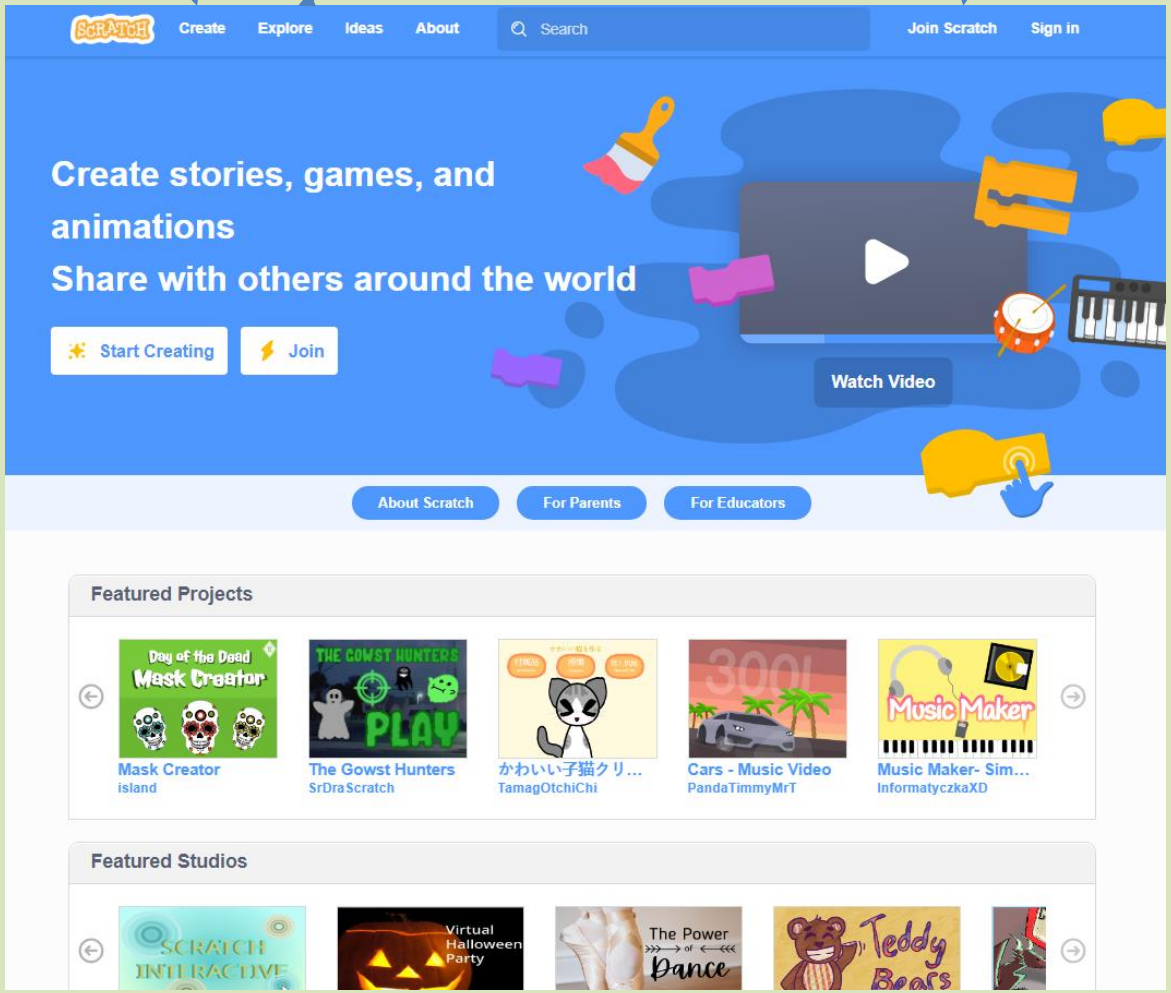
Backgrounds:
Can NOT move about

scratch.mit.edu
Created to enable you to explore your ideas using code

Create your own app, game, animation

Discover other peoples apps, games and animations **(then remix them!)**

Save your work online by creating an account



Y7 CT Term 4 – Scratch coding

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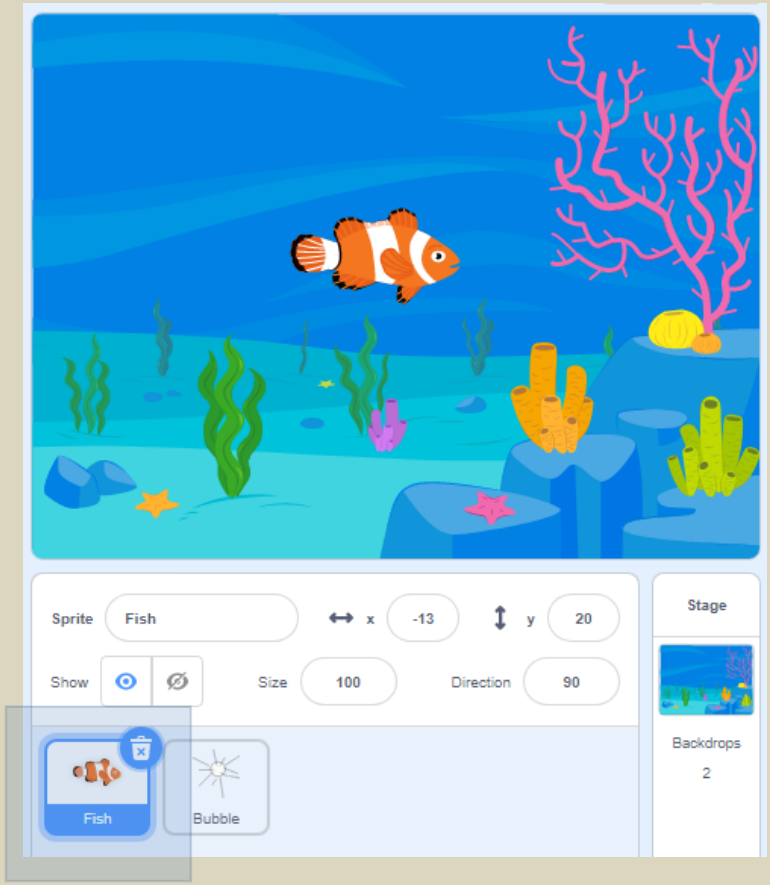
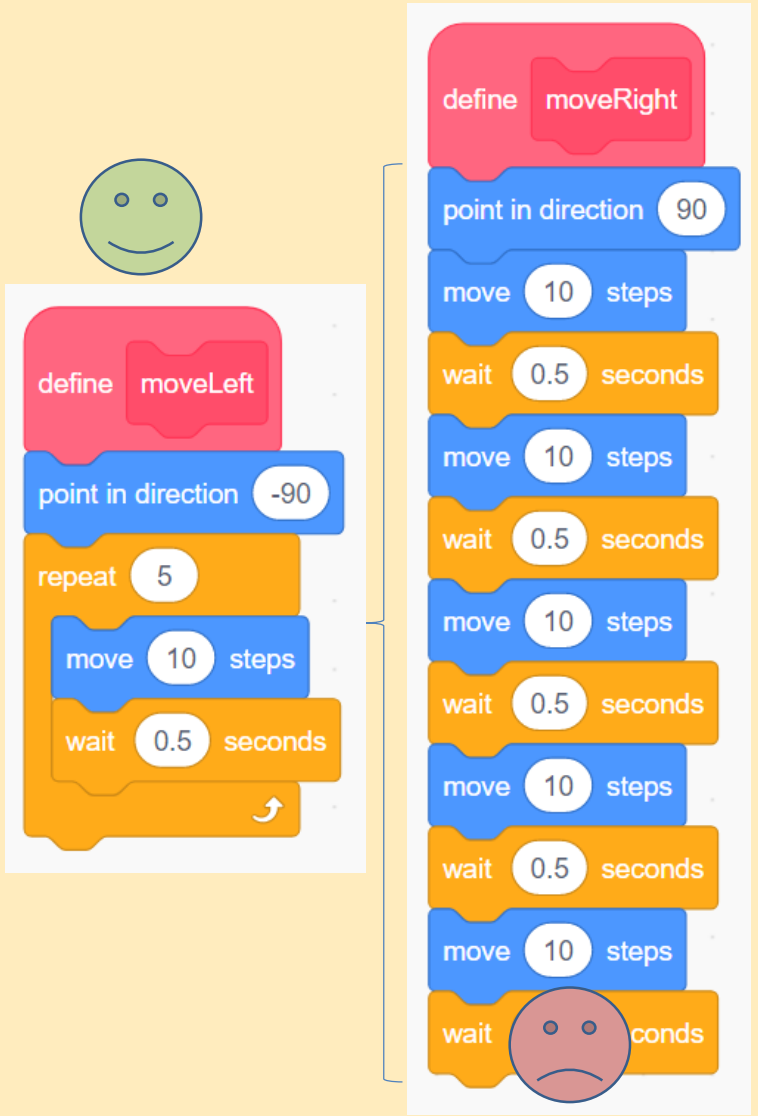
- Pro-Coder Rules



A sprite that is a fish is called 'fish'

Pro-Coder Rule #1: Give all variables, sprites and sub-routines an appropriate name

Pro-Coder Rule #2: Convert all repeated instructions into loops



Core coding skills:

- Sequence
- Input/Output
- Loops (iteration)
- Decisions (IF…THEN…)

Pro-Coder Rule #3: Convert all repeated functionality into sub-routines (blocks)

History – Term 3

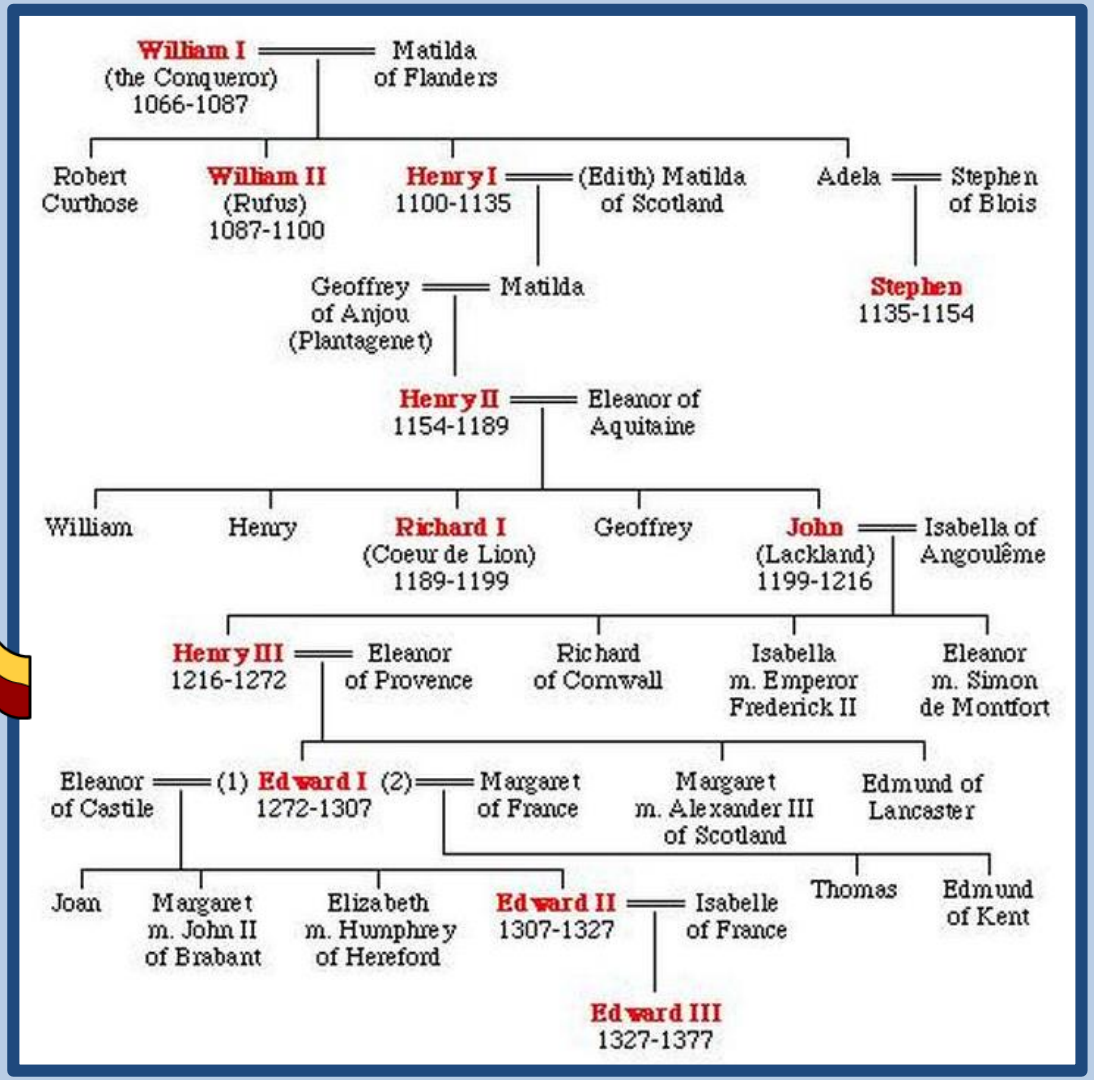
Power of the Kings

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

Problem	Solution	Reaction
Powerful Church	John tried to tell the Church what to do.	John was excommunicated.
No money left	A new land tax	Barons and knights were angry.
Disobedient barons	Increased control	Neighbours and barons unhappy

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

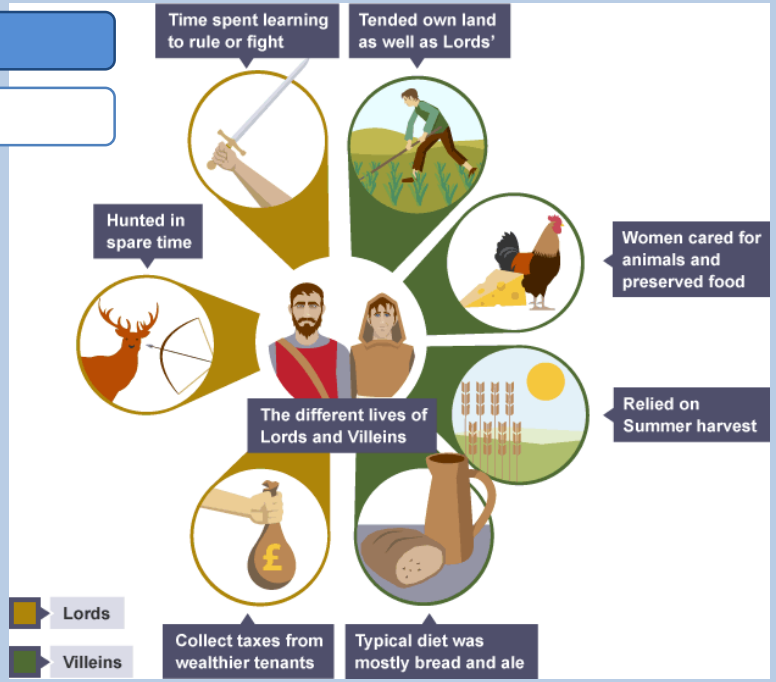
Medieval Lives

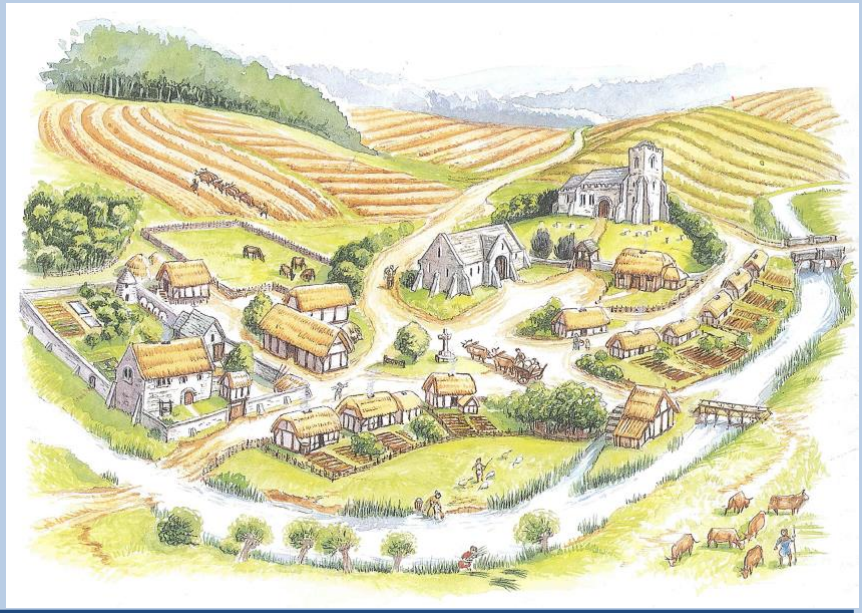
Society, Status and Life in the Medieval Village
Most people were peasants, who had very few rights and who lived in villages called ‘manors’. Life for an average peasant was hard and work was back-breaking.
The Feudal System is the name for a power structure where people held land in return for promising 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

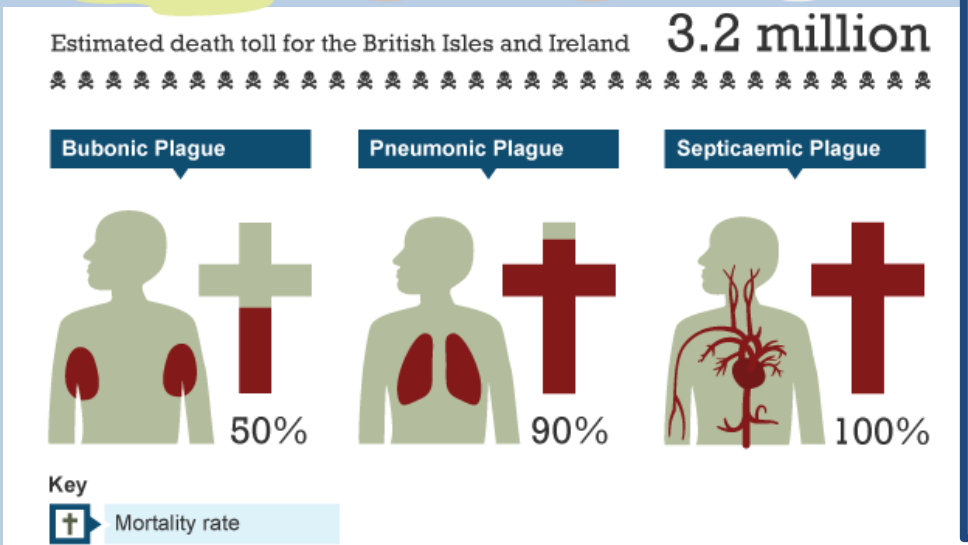
The Black Death
The plague spread very quickly in the warm winter of 1348-9.
Some methods which people at the time thought would cure the plague or stop them catching it included: flogging and praying to ask God for forgiveness; isolation (keeping away from the sick); cleaning the streets; holding sweet 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.

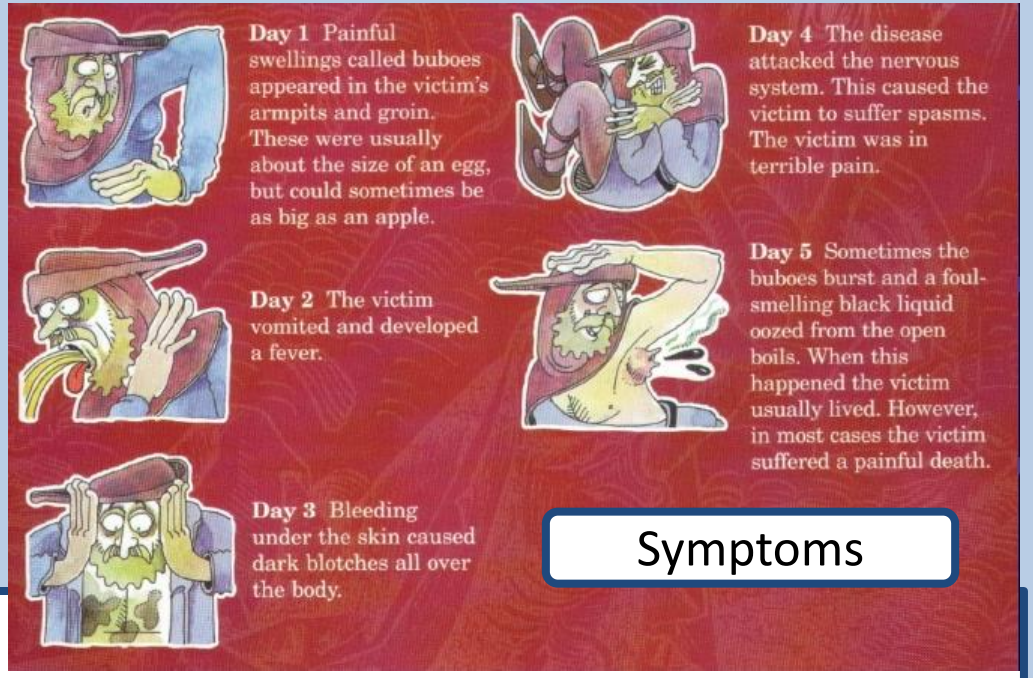
Overview of the Black Death:

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.

Geography – Terms 3 & 4

The Rock Cycle

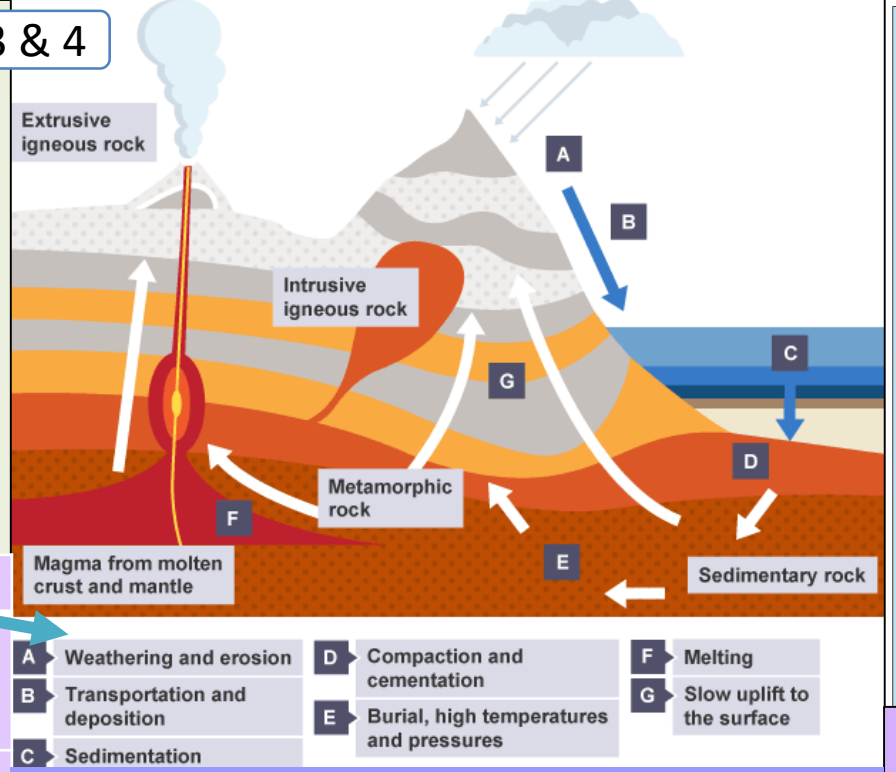
There are three main categories of rock:

- **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.

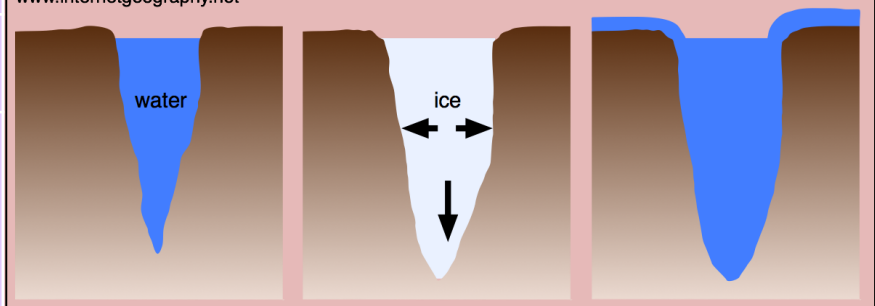


KEY WORDS:

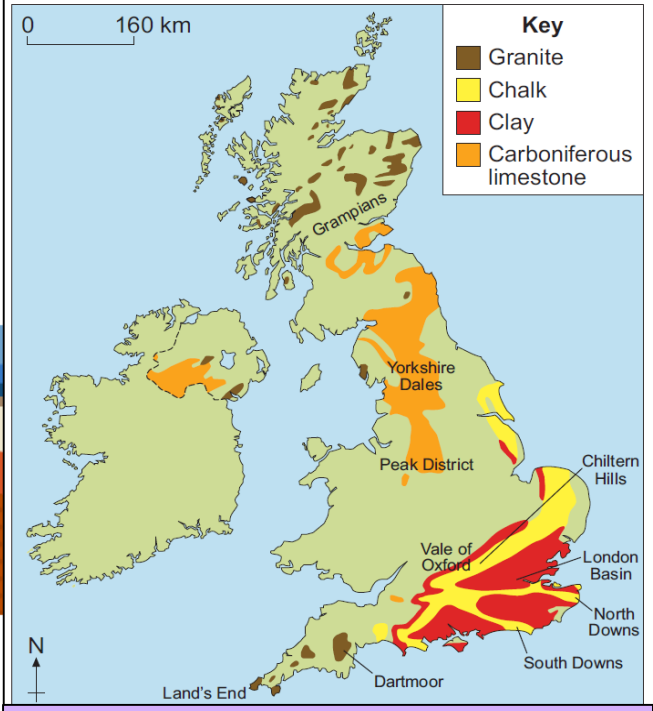
Extrusive igneous rock	**Metamorphic Rock**	**Magma**
Intrusive igneous rock	**Erosion**	**Carbonation**
Sedimentary Rock	**Weathering**	**Deposition**

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

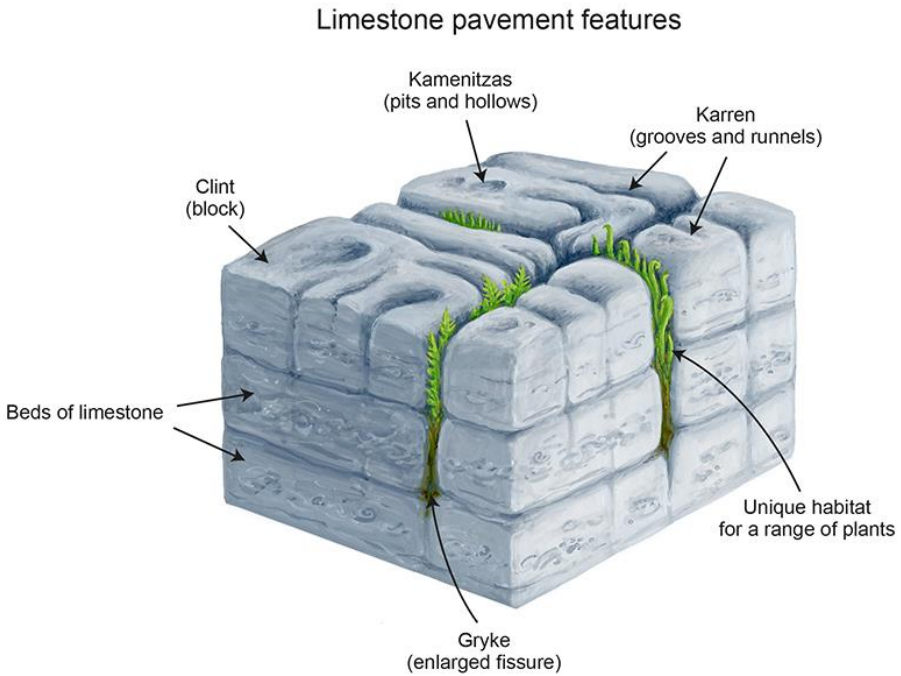
Is a flat expanse of exposed limestone formed by a combination of chemical weathering and erosion.

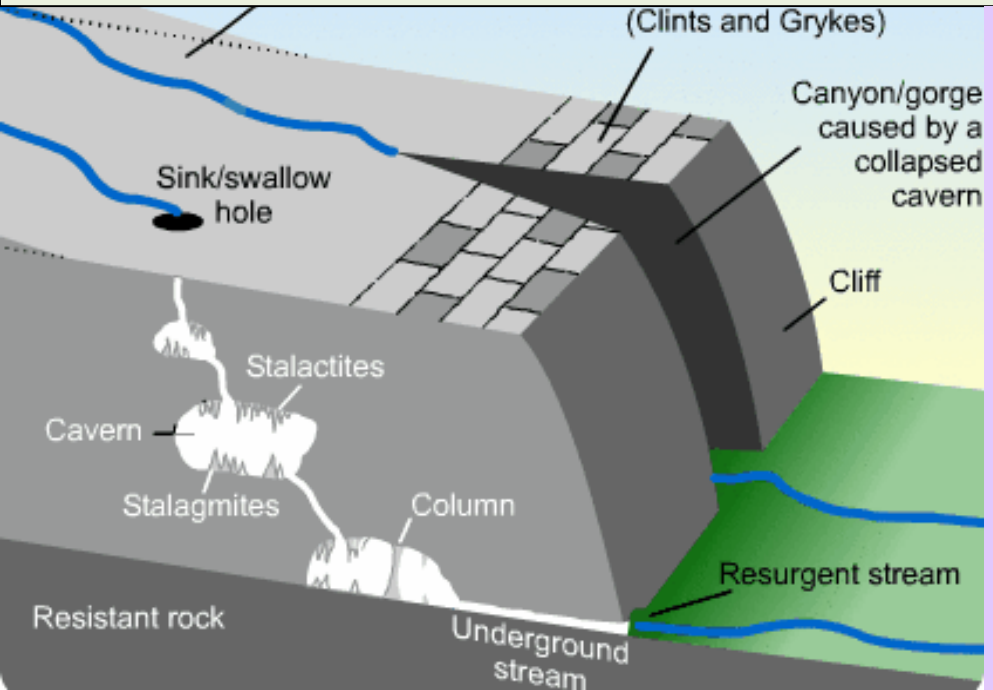
Clints and Grykes

- **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**.



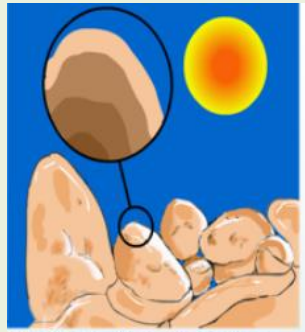


Limestone landscapes

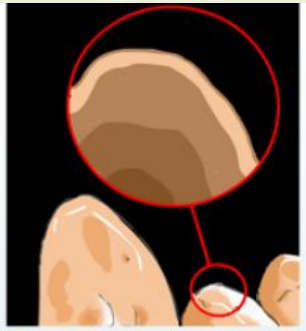
The Yorkshire Dales are located in the North west of England where the underlying ground is principally carboniferous limestone rock

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

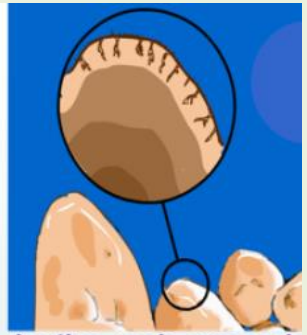
Onion skin weathering



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

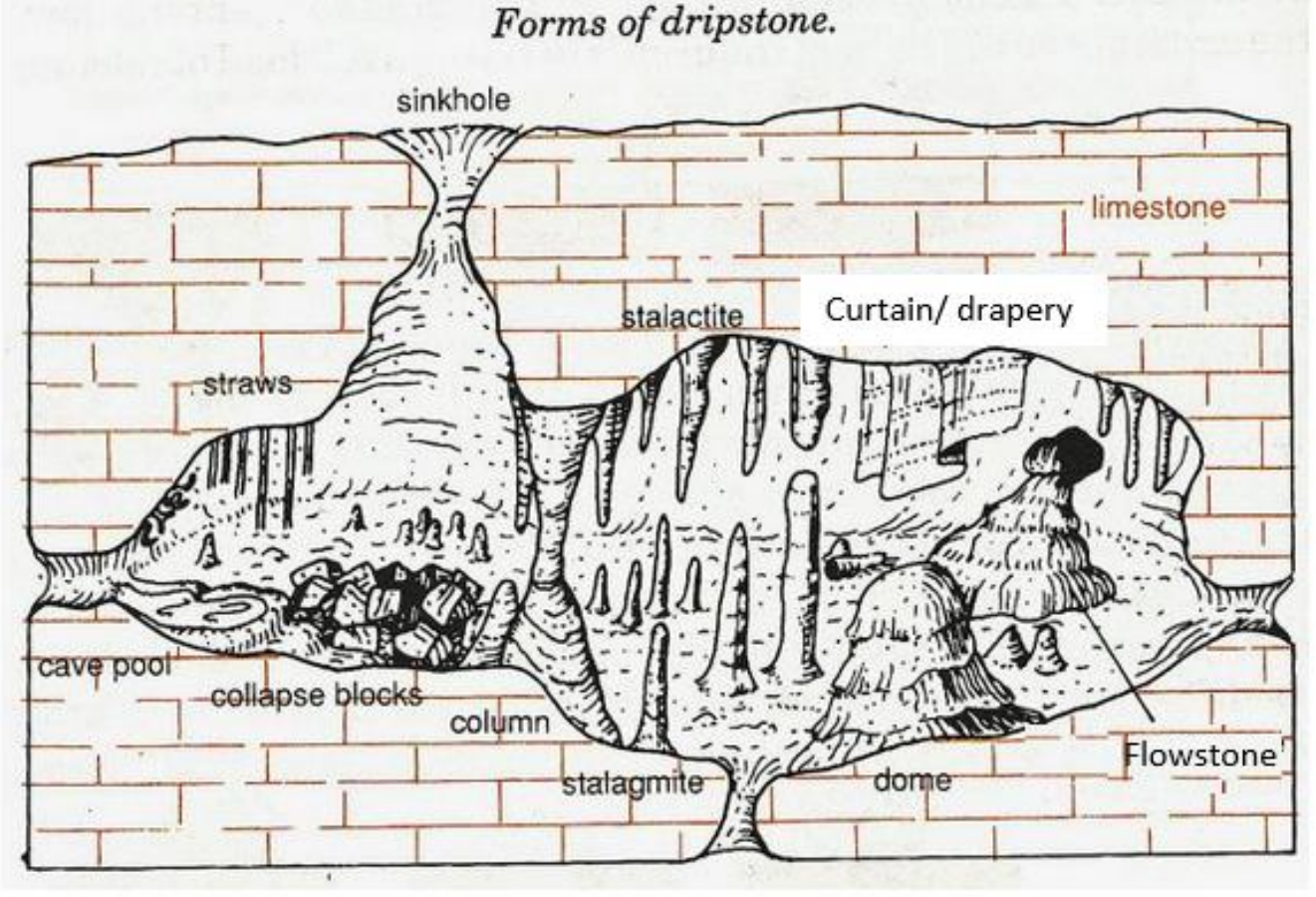
We can trace the words **stalactite** and **stalagmite** back to the Greek word "stalassein," which means "to drip." This is fitting because it describes how both are formed in nature.

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

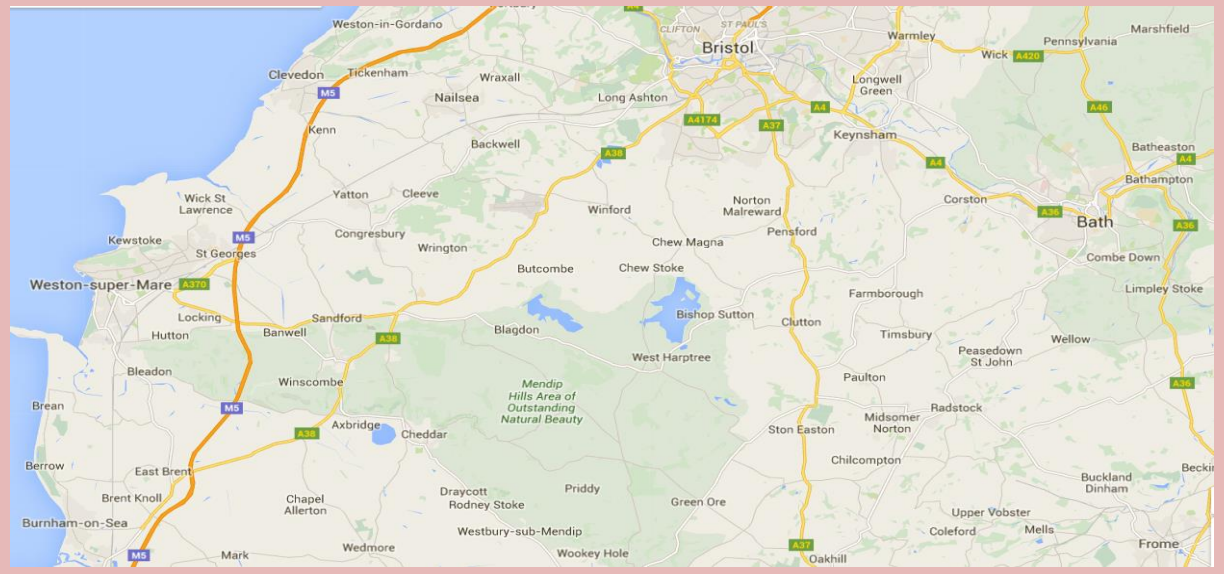
"Longleat Estate is currently considering a range of potential regeneration projects at Cheddar Gorge, with the aim of creating a significant new visitor attraction for the area. Such a project would need to help support ongoing conservation work and make the Gorge more accessible to all visitors. It 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."

Churches

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

BVT - Christianity

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:

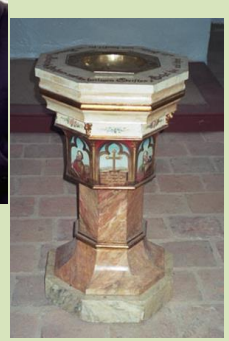
- The table at the front of the church.
- Holds the bread and wine for Eucharist

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

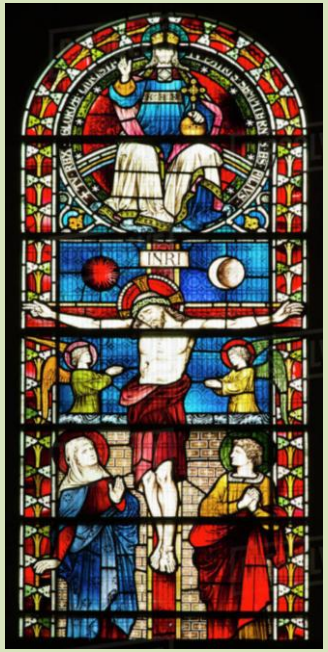
The Font:

- 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



Inside a church

Christian Church around the world

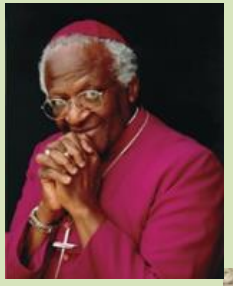
The Christian church helps in different ways around the world. It helps fight against poverty, conflict, discrimination and persecution and supports Christians and non-Christians, inspired by the teachings of Jesus.

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.

Christianity

Key vocabulary

Charity
Peace
Discrimination
Persecution
Apartheid

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**.

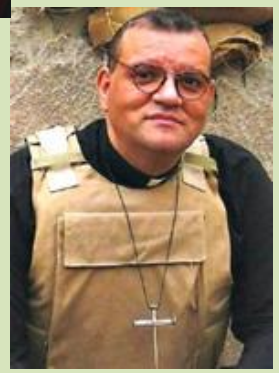
Christian Aid gets money from our **government and companies but also individuals** too. There is a **Christian Week** where fund raising goes on and you may get an envelope through your door to give money to help.

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** (Baghdad is in Iraq), 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 2 Gulf Wars, 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.

Origins of Judaism

Judaism was started 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.

BVT: Judaism

Key vocabulary

Israelite
Covenant
Mount Sinai
Plagues
Pharaoh
Commandment
Holy Land
Abraham
Canaan

Abraham's sacrifice of Isaac

Moses parting the Red Sea

Moses

https://www.youtube.com/watch?reload=9&v=RdSQT7DS1lI

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

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.

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)*

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)*

¿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)*

Year 7 – Term 3 and 4

ART TERMINOLOGY YOU SHOULD KNOW LEARN AND USE

These words and terms are the fundamental/ basic words which you need to understand and be able to use in order to explain art and artwork. You will use these throughout key stage 3, 4 and beyond.

Shape, form, space

Closed
Open
Distorted
Flat
Organic
Deep
Positive
Negative
Foreground
Background
Composition
Curvaceous
Elongated
Large
Small
2D 3D

Tone

Bright
Dark
Faded
Smooth
Harsh
Contrasting
Intense
Sombre
Grey
Strong
Powerful
Feint
Light
Medium
Dark
Dramatic
Large
Small

Pattern and Texture

Repeated
Uniform
Geometric
Random
Symmetrical
Soft
Irregular
Coarse Bold
Uneven
Bumpy
Rough
Smooth
Uneven
Spiky
Broken
Furry
Fine Flat
Grid

Line

Fluent
Free Rough
Controlled
Powerful
Strong
Geometric
Angular
Light
Delicate
Flowing
Simple
Thick Thin
Horizontal
Broken
Interrupted
Rounded
Overlapping
Feint

Colour

Bright Bold
Primary
Secondary
Tertiary
Radiant
Dull Vivid
Contrasting
Deep
Monochrome
Harmonious
Complementary
Natural
Earthy
Subtle
Pale
Cool Warm
Saturated
Luminous
Strong

Fenella Elms -
A contemporary ceramic artist who creates highly textured art in clay. Look at more of her work

https://www.fenellaelms.com/free-standing/22-tall-flow-pot

Vincent van Gogh
'A Starry Night' – an important artist for you to know. Look at the use of directional lines and colour in this painting.

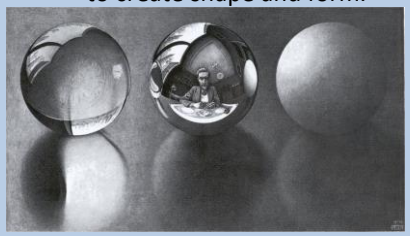
Basic, simple, solid, loud, quiet, bright, realistic, stylised, observed, busy, vibrant, strange, interesting, balanced, lively, negative, recognisable, abstract, tactile, meaningful, symbolic, depressing, unique, emotive, hidden, textural, dynamic, powerful, intentional, concealed, subtle.

Sonia Delaunay –
'Petite automne'
She used colour pattern and abstract shapes in her art and this woven tapestry …look at her work

Romero Britto –
Look at how he uses colour and pattern in his work

Vermeer –
Look at his work to see how he uses tone in his painting – light and dark

Escher –
'Three spheres' An artist and mathematician you need to know. Look at his use of tone and shading to create shape and form.



Year 7 – Term 3 and 4

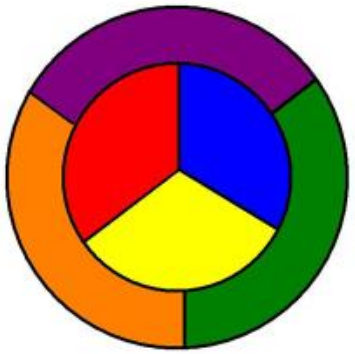
Colour

Understanding how to use and mix colours is an important skill in Art.
You need to practise this skill.

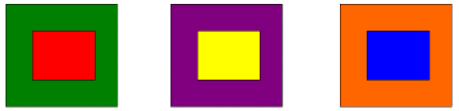
There are hundreds of videos available on-line to view in order to show how to mix colours. View one or more to show you understand.

The Colour Wheel

Complementary colours are opposite each other on the colour wheel



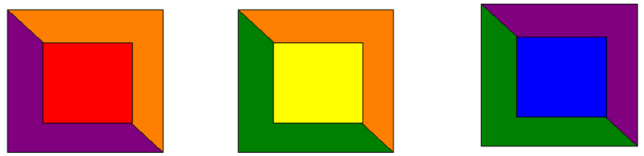
Examples of Complementary Colours



Complementary colours are opposite each other on the colour wheel. When they are put together they make an image appear to 'zing' or become even brighter. Artists use this knowledge in their work. The two photos show this in nature.

Harmonious colours
Harmonious colours are ones next to each other on the colour wheel.

Harmony colour examples



Black and white are not 'colours' – but they allow artists to make tints and shades/lighter and darker colours.
Tints are made by adding white to a colour.
Shades are made by adding black to a colour

Tip to check colour blindness – Do you know how you see colours? Try a colour blindness test on-line?

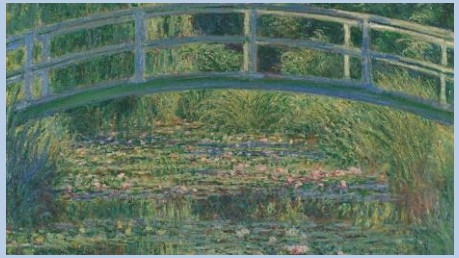
Year 7 – Term 3 and 4

Use of colour and mark - making with paint

Impressionism-

Why is it called impressionism? The thing is, impressionist artists were not trying to paint a reflection of real life, but an 'impression' of what the person, light, atmosphere, object or landscape looked like to them

Claude Monet –
He painted a number of canvases based on his gardens, focussing on flowers and water using paint brushes and palette knife



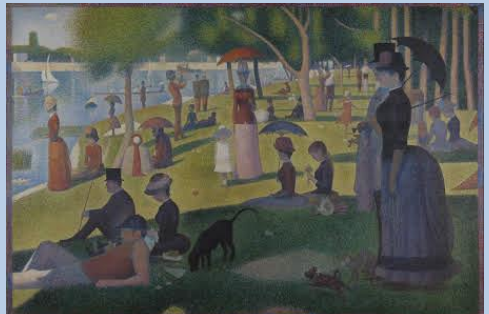
Vincent van Gogh uses oil paint and brushes/ a palette knife to create this painting by layering strokes or lines of colour next to each other in order to get the impression of the wind blowing in the sky of the painting entitled 'Starry Night'.

'Dance at Le moulin de la Galette' by **Pierre-Auguste Renoir**
It creates the atmosphere/ the 'impression' of being in this lively meeting place

Pointillism-

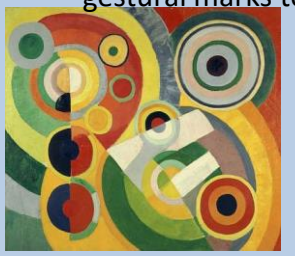
is a technique of painting in which small, distinct dots of colour are applied in patterns to form an image. Georges Seurat and Paul Signac developed the technique in 1886, branching from Impressionism.

'A Sunday Afternoon on the Island of La Grande Jatte' painted from 1884 to 1886, is Georges Seurat's most famous work produced in the pointillist technique



Abstract Art

Abstract art does not attempt to represent an accurate depiction of a visual reality but instead use shapes, colours, forms and gestural marks to achieve its effect.



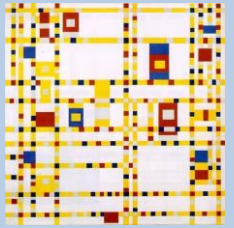
Robert Delaunay
Find out more here-
https://www.tate.org.uk/art/artists/robert-delaunay-992

Wassily Kandisnsky

Russian abstract artist Wassily Kandinsky had an interest in visualising music via Art. Synesthesia is a condition in which stimulation of one sense automatically evokes a perception in an unstimulated sense (e.g. the sound of a bell triggers seeing the colour blue). He even named his art in a similar way to music.

Jackson Pollock –
He used his technique of pouring or splashing liquid household paint onto a horizontal surface

Piet Mondrian –
Take a look at his work
https://www.tate.org.uk/kids/explore/who-is/who-piet-mondrian



Yayoi Kusama

She is a contemporary artist who works with dots.
Yayoi Kusama's Obliteration Room
https://www.youtube.com/watch?v=-xNzr-fJHQw&safe=active
https://www.tate.org.uk/art/artists/yayoi-kusama-8094/obsessed-polka-dots

Well known for her repeated dot patterns, Yayoi Kusama is an artist who systematically mark-makes. She creates paintings, sculptures and installations that immerse the viewer in her obsessive vision of endless dots. For her interactive Obliteration Room an entirely monochrome living room is 'obliterated' with multi-coloured stickers, transformed from a blank canvas into an explosion of colour, with thousands of spots stuck over every surface.

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

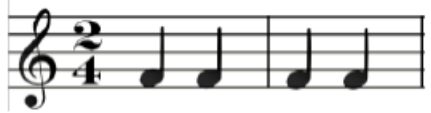
SILENCE – The absence of sound or no sound, shown in music by **RESTS**.

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

B. Time Signatures

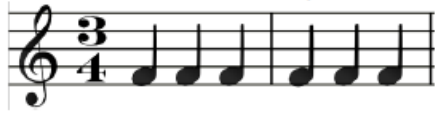
A **TIME SIGNATURE** tells us how many beats (and what type of beats) there are in each **BAR** of music and is made up of two numbers at the beginning of a piece of music.

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



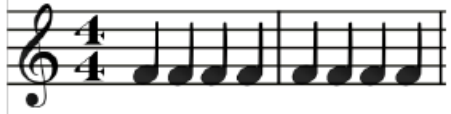
e.g. a ***MARCH***

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



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

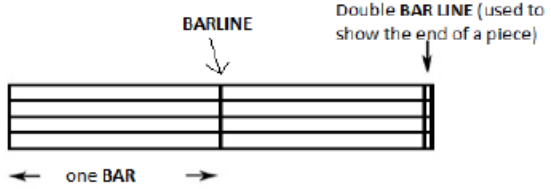
4/4 = **FOUR CROTCHET** beats per **BAR**



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.

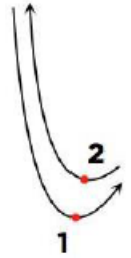
CYCLIC RHYTHM – a rhythm which is repeated over and over again (in a cycle) many times.

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"

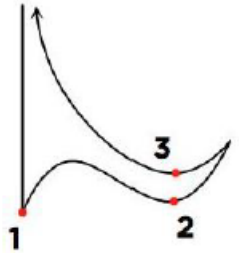
3 beat rhythm	X		X		X		X		X		X	
2 beat rhythm	X			X			X			X		

D. Conducting Pulses and Beats

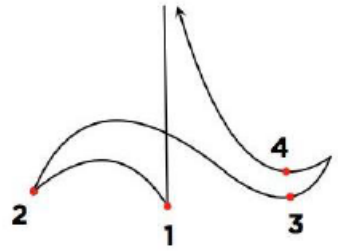
Conducting a 2-beat Pulse/Beat *(e.g. a March)*



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

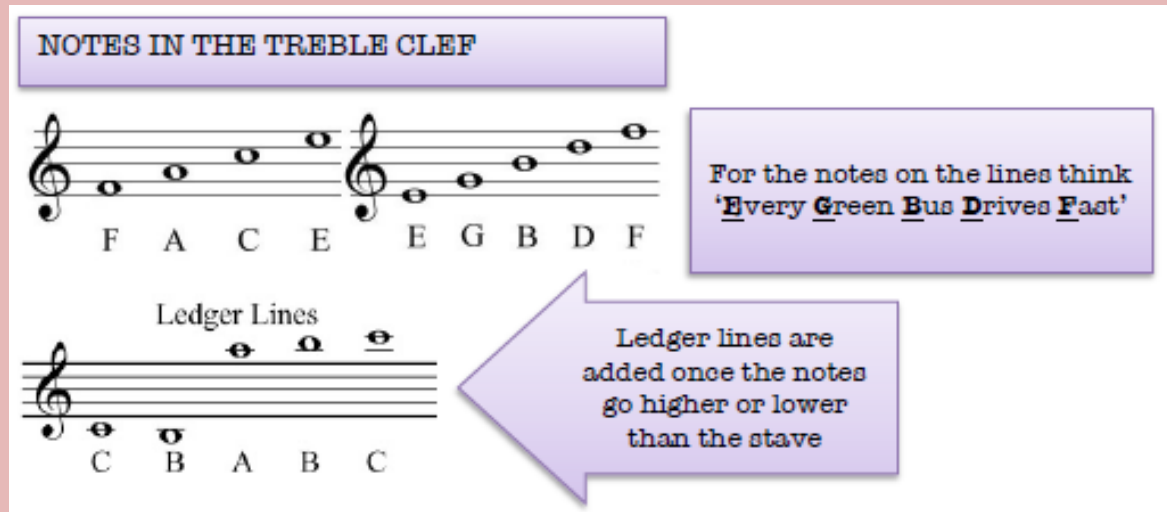
#Learning Objectives

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!!



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.

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.

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

UNTUNED PERCUSSION

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).

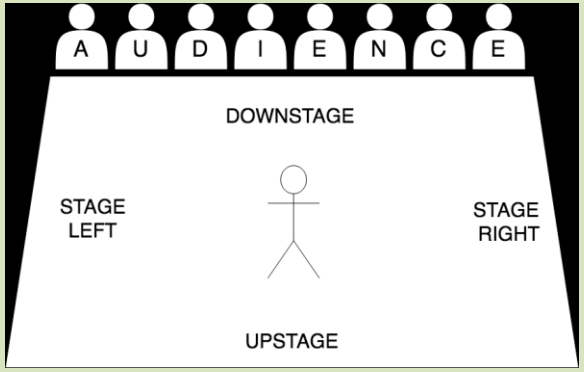
FANFARE – A short, lively, loud piece of music, usually for **BRASS INSTRUMENTS** and sometimes **DRUMS** and other **PERCUSSION**. A Fanfare is usually warlike or victorious in character and can be used to mark the arrival of someone important, give a "signal" e.g. in battles or be used to signal the 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 and Physical Space

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 technique & external 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 one of the bedrocks of our theatre practice. They are an increasingly popular theatre style with many international companies.
- You will learn the techniques of clear and informed communication so that you can give and receive feedback that is effective.



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 eg 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.

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 and psychological 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.
- 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

MIME TECHNIQUES

Internal (psychological) technique

- 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
- *Concentrate* on making the object 'real' for you and therefore the audience.

External (physical) technique

- 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** and **fragility** of
  - The **taste** and **smell** of the object.

Badminton

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

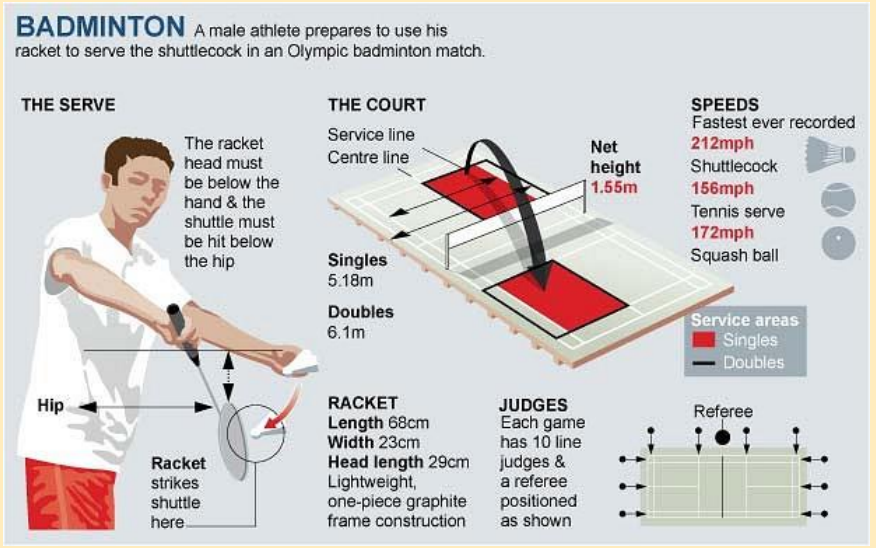
Unit Outcome:
To know how to hold the racket for forehand and backhand.
To stand sideways in order to generate power.
Understand how to score accurately.

Success Criteria:
Students should be able to consistently hit the shuttle with power to the mid court and beyond.

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?

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

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.



What hardwood, softwood and manufactured boards means
Some of the different types of hardwoods, softwoods and manufactured boards

Resistant Materials

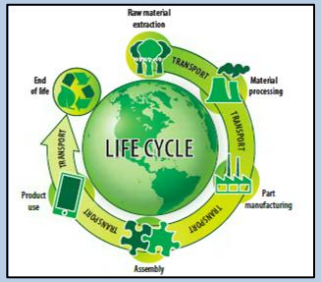
The purpose of a range of hand tools used for working wood
The purpose of some of the machinery that can be used to work wood

Hardwoods	Softwoods
Oak	Pine
Mahogany	Cedar
Beech	Larch
Ash	
Balsa	**Boards**
Jelutong	Plywood
Birch	MDF
	Chipboard

The environmental impact of manufacturing and using products

Life Cycle Assessment
Raw materials – timbers
Timber processing
Manufacture
Distribution
Product in use
Repair and maintenance
Disposal

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



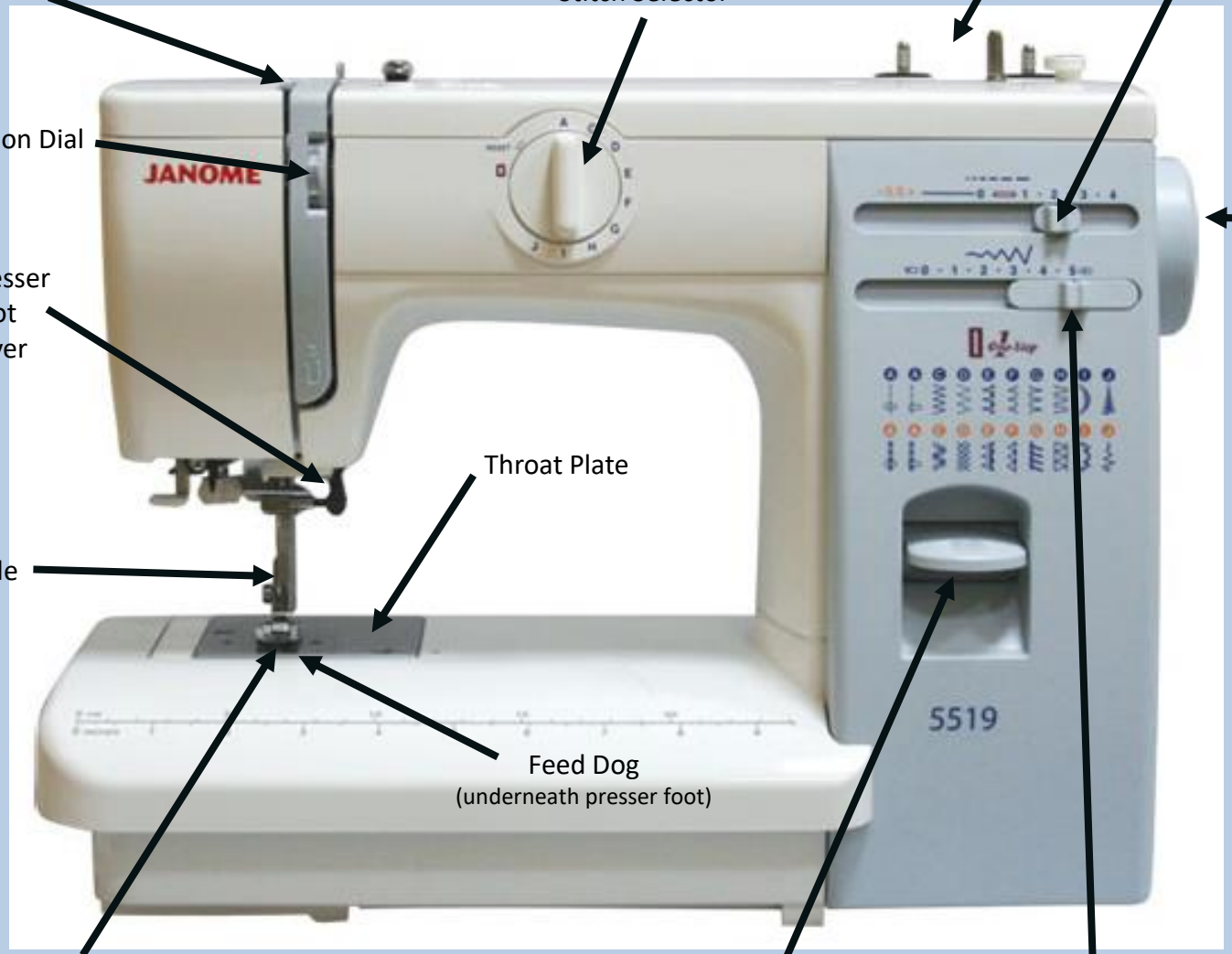
Follow the Safety Rules in the Textiles Technology workroom to stay safe!

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

Stitch Selector

Spool Pins

Stitch Length Selector

Tension Dial

CAM Wheel

Presser Foot Lever

Throat Plate

Needle

Feed Dog
(underneath presser foot)

Presser Foot

Reverse Lever

Stitch Width Selector

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.**

Hand stitches

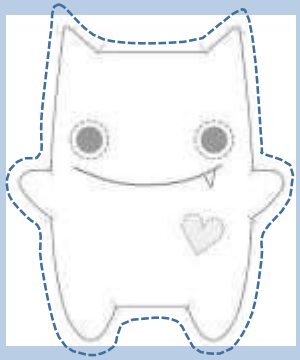
Straight stitch

Threaded running stitch

Back stitch

Cross stitch

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.

Appliquè

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

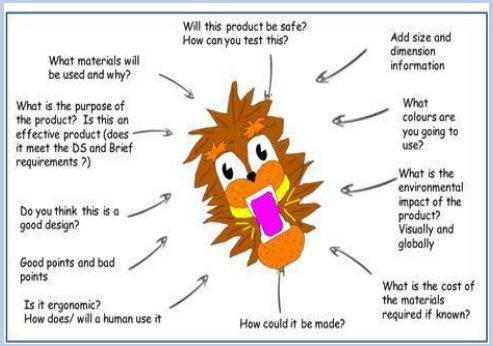
The Design Process

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.

8 tips for eating well

BRITISH Nutritio FOUNDATIO

Enjoy a variety of foods using the Eatwell Guide to help you choose the right amounts from each group

1. Base your meals on starchy carbohydrates
Choose wholegrain high fibre varities where possible

2. Eat at least 5 portions of a variety of fruit and vegetables every day

3. Aim for at least two portions of sustainably sourced fish a week, one of which should be oily

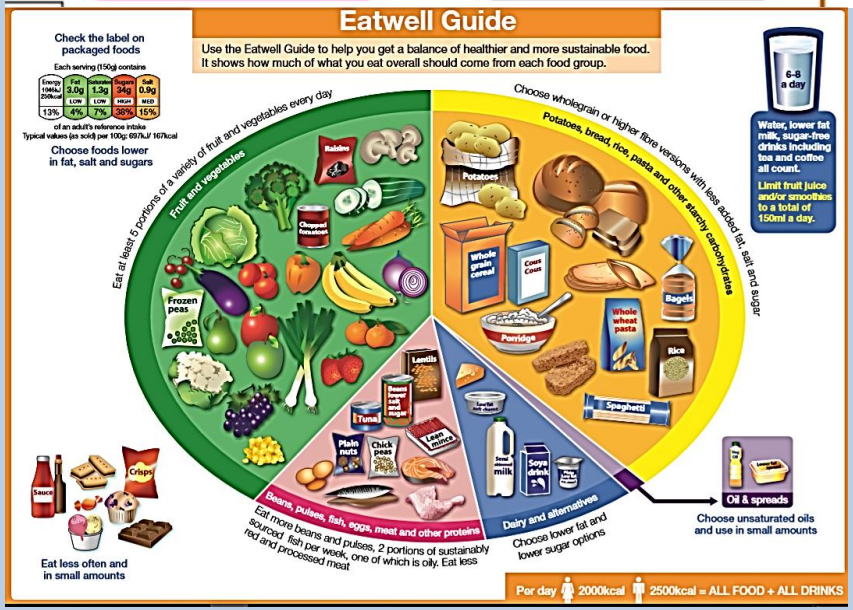
4. Cut down on saturated fat and sugar

5. Eat less than 6g (around 1 teaspoon) of salt each day

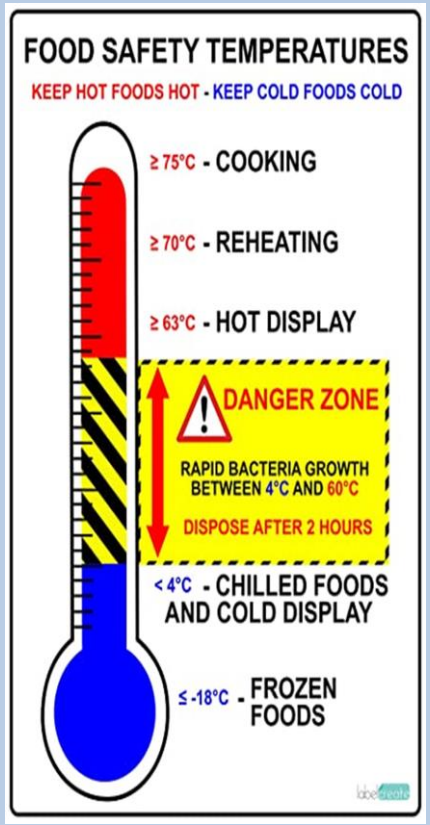
6. Get active and maintain a healthy weight

7. Keep hydrated and aim for 6-8 glasses of fluid each day

8. Don't skip breakfast



Food:
Term 3 and 4



Dairy and alternatives

- Dairy foods are a really important part of a healthy, balanced diet, as these foods are good sources of **protein**, vitamins and iodine and importantly **calcium**, which is needed for strong, healthy bones.
- We should choose lower fat and lower sugar options where possible – use **labels** to help!
- If purchasing **dairy alternatives**, be sure to choose unsweetened versions that are fortified with calcium and other vitamins if possible.
- Butters, creams and dairy ice-creams are not included in this group as they are high in saturated fat.

Choose lower fat and lower sugar options

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What counts?

Dairy	Dairy alternatives (calcium fortified)
• Milk • Cheese • Yogurt • Fromage frais • Quark • Cream cheese	• Soya drinks and soya yogurts • Nut milks (e.g. almond and hazelnut) • Oat, rice, quinoa or potato milk • Any other alternatives to the dairy options

Did you know?

Calcium is found in the liquid part of the milk, and not the fat part. So reduced fat milks, like skimmed, provide just as much calcium as regular milks!

How to make healthier choices:

Instead of cream or ice-cream, try low fat crème fraiche, fromage frais or low fat plain yogurt

Swap to 1% fat, skimmed or semi-skimmed milk, as opposed to whole

Grating cheese can help avoid using more than you need!

Top tip

Incorporating this food group into your diet is easy! You could:

- Try **low fat cream cheese** mixed with herbs or pesto as an accompaniment to dishes;
- Top fruit with **low fat plain yoghurt** and have as a desert or snack;
- Have a glass of **low fat milk** after exercising – you will benefit from rehydration and the protein content in the milk!

Why eat dairy foods?

These foods provide a range of nutrients:

- ✓ **Calcium** – for the development and maintenance of strong, healthy bones
- ✓ **Protein** – for growth and repair function.
- ✓ **Iodine** – important for healthy nerve and brain function, and healthy skin.
- ✓ **Vitamin B12** - for healthy red blood cells and nerve function.
- ✓ **Vitamin B2 (riboflavin)** – to help release energy from carbohydrate and protein.

This resource is designed for consumers who want to find out more about healthy eating. Last reviewed November 2016. Next review due November 2019.

Fruit and Vegetables

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We should be trying to eat at least **5 portions** of a variety of fruits and vegetables every day.

- Fruit and vegetables should make up just over a third of what we eat each day.
- They can provide fibre, and lots of essential vitamins and minerals.
- Eating lots of them may help you maintain a healthy weight – they are naturally low in calories and fat!
- Try and choose lots of different coloured fruits and veg – different kinds contain different combinations of important nutrients our bodies need to stay healthy.

What counts?	Example portion size
Fresh fruit and vegetables	80g
Frozen fruit and vegetables	80g
Canned fruit and vegetables	80g
Dried fruit	30g
100% unsweetened fruit and veg juice	150ml
Smoothies	150ml

Note: Dried fruit can stick to teeth which may lead to tooth decay, so it's best to keep dried fruit to mealtimes and not between meals.

Remember

Unsweetened 100% fruit or veg juice and smoothies, will only count as a maximum of **1 of your 5 A DAY**, no matter how much you have!

TOP TIP

If you don't like chopped vegetables, try grating carrots or courgettes into your food to add flavour and texture or make a tomato sauce with added vegetables and blend.

TOP TIP

Try a new fruit or vegetable each week to increase variety.

Why not pick **seasonal** fruits and vegetables which are often cheaper and taste the best.

Why eat these foods?

Different fruit and vegetables contain:

- ✓ **Vitamin C** - important for maintaining healthy body tissues.
- ✓ **Vitamin A** - important for maintenance of normal vision, skin and the immune system.
- ✓ **Folate** - important for normal and healthy blood formation.
- ✓ **Fibre** – helps to maintain a healthy gut.
- ✓ **Potassium** – helps to maintain a healthy blood pressure and is also important for the normal functioning of the nervous system.

Menu ideas to increase fruit and veg intake:

Breakfast ideas

Add a chopped banana and strawberries to your morning wholegrain cereal or porridge.

Enjoy a 150ml glass of unsweetened 100% fruit juice alongside your breakfast.

Lunch ideas

Sandwiches – add some cucumber, lettuce and tomato

Soup – add extra seasonal veg and blend into your soup

Baked potato – with your filling, why not have a side salad

Dinner ideas

You could try adding peas, carrots or spring onions through your mashed potatoes;

or, sprinkle some extra veg onto your pizza like sweetcorn, pineapple, pepper and/or mushrooms!

This resource is designed for consumers who want to find out more about healthy eating. Last reviewed October 2016. Next review due October 2019.

Oils and spreads

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- A **small amount** of dietary fat is an essential part of the diet, provides us with essential fatty acids (those the body cannot make itself) and helps us to absorb the fat soluble vitamins A, D, E and K.
- Most of us need to cut down on saturated fat, as it can raise our blood cholesterol levels and increases risk of heart disease and stroke.
- Swapping saturated fats with unsaturated fats has been found to lower the levels of cholesterol in the blood and can lower the risk of heart disease and stroke.
- All fat is high in energy (calories) and therefore should be **limited** in the diet, to avoid consuming more calories than we need.

Choose unsaturated oils and use in small amounts

Swap oils high in saturated fat for oils high in polyunsaturated fat

Oils and fats high in **saturated fat**	Oils and fats high in **unsaturated fat**
Goose fat	Vegetable oil
Coconut oil	Rapeseed oil
Palm oil	Olive oil
Ghee	Sunflower oil

Consume these oils, and spreads made from these oils, in **small amounts.**

TOP TIP

Butter

Small amount low fat spread

Why eat these foods?
Unsaturated oils can provide:

✓ **Vitamin E** - contributes to the protection of cells from oxidative stress. Sunflower, olive and rapeseed oil are all high in vitamin E.

Health & care information you can trust

This resource is designed for consumers who want to find out more about healthy eating. Last reviewed December 2016. Next review December 2019.

Beans, pulses, fish, eggs, meat and other proteins

- This food group is a really important part of a healthy, balanced diet, as these foods are good sources of **protein**, and lots of essential **vitamins** and **minerals**.
- We should be trying to eat some more foods from this group, especially those that are plant-based sources of protein (beans and other pulses).

What counts?	
Beans and other pulses (e.g. kidney beans, chickpeas and lentils)	80g or 3 heaped tablespoons will count as a maximum of 1 of your 5 A DAY
Fish (white, oily and shellfish)	Aim for at least 2 portions per week (2 x 140g cooked weight), 1 of which should be oily
Meat, poultry and game	For **red and processed** meat, if eating more than 90g per day, try to cut down to no more than 70g* per day
Eggs and Nuts	
Vegetarian meat alternatives (e.g. tofu or mycoprotein)	

**70g is equivalent to a piece of steak about the size of a pack of cards, 3 average-sized rashers of bacon or slices of ham, or a quarter-pounder beef burger.*

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Did you know?

Oily fish is a good source of omega-3 fatty acids, which can help to keep your heart healthy!

TOP TIP

To cut down on fat intake:

- Go for lean cuts of meat & leaner mince
- Remove the skin from chicken
- Trim off visible white meat fat
- Grill or bake meat and fish, instead of frying
- Have a boiled instead of a fried egg
- Avoid meat and fish in batter, pastry or breadcrumbs

TOP TIP

Beans and other pulses are good alternatives to meat as they are inexpensive, but also naturally lower in fat and higher in protein, fibre, vitamins and minerals. We should be having more of these in our diets!

Why eat these foods?

These foods provide a range of nutrients:

- ✓ **Protein** – for growth and maintenance of normal muscles and maintenance of healthy bones.
- ✓ **Iron** – found in red meat. Contributes to the normal formation of red blood cells and transport of oxygen around the body.
- ✓ **Zinc** – found in meat. For maintenance of normal skin, hair, nails, vision and the immune system.
- ✓ **Vitamin B12** – found in meat and fish. For healthy red blood cells and nerve function.
- ✓ **Vitamin D** – found in oily fish. For healthy teeth, bones and muscles.
- ✓ **Omega-3 fatty acids** – found in oily fish. Helps to maintain normal and healthy heart function.

MEAL IDEAS

To enjoy your favourite red meat recipes and cut back on the saturated fat, why not use half the amount of red meat and bulk up your dishes, like curries, casseroles or stews, with lentils, beans or chickpeas?

Health & care

Potatoes, bread, rice, pasta and other starchy carbohydrates

- These should make up approximately just over one third of your total food intake.
- Base your meals on starchy foods such as bread, pasta, rice or potatoes.
- Choose wholegrain or high fibre varieties, or keep the skins on potatoes, as these contain more **fibre**, **vitamins** and **minerals**.

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What counts?

- Breakfast cereals, oats
- Wholemeal bread
- Potatoes, yams, plantain
- Brown rice, couscous, bulgur wheat, barley, rye, quinoa
- Pasta and noodles
- Pizza base

Why eat these foods?
Starchy foods can provide:

- ✓ **Fibre** – helps to maintain normal bowel function.
- ✓ **B Vitamins** – for example thiamine which helps the body use the energy from the carbohydrates we eat.
- ✓ **Iron** – required by red blood cells which transport oxygen around the body.
- ✓ **Calcium** – to help develop and maintain healthy bones and teeth.
- ✓ **Folate** – needed for the formation of healthy red blood cells and for the nervous system.

Menu ideas to increase starchy food intake:

Breakfast ideas
Wholegrain breakfast cereal, porridge or wholemeal toast with a piece of fruit.

Lunch ideas
Sandwiches made with wholegrain bread, vegetable soup and a brown roll, whole-wheat pasta salads or a baked potato.

Dinner ideas
Spaghetti bolognaise with whole-wheat pasta, stir fry with whole-wheat noodles, curry with brown rice.

Health & care information you can trust
The Information Standard Certified

TOP TIP

Experiment with potatoes – try oven baked wedges with spices, new potatoes with herbs or stuffed potato skins.

TOP TIP **Read food labels**

Use **nutrition labels** to go for breads and cereal options that are lower in fat, salt and sugar.

Look for greens and ambers!

Energy 1046kJ 250kcal	Fat 5g LOW	Saturates 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
12.5%	7%	6.5%	38%	15%

Use the **ingredients label** to identify wholegrain products. Look for the word "whole" e.g. whole-wheat, wholemeal, whole oat.

Ingredients: Durum **whole-wheat** semolina

Foods high in saturated fat, salt and sugar

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- These foods are not needed as part of a healthy, balanced diet.
- If these foods are chosen to be included in the diet, they should only be eaten **infrequently** and in **small amounts**.
- Most people in the UK eat too much saturated fat salt and sugar, and need to cut down.

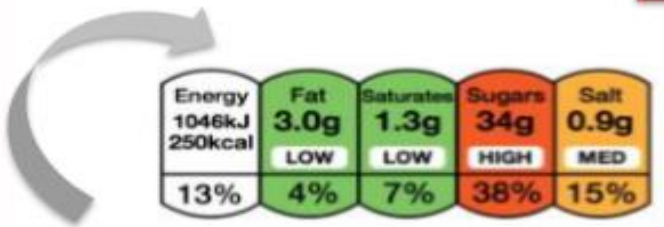
What counts?

- Chocolate
- Sweets
- Cakes and biscuits
- Puddings and pastries
- Jams, table sugar, syrups and honey
- Savoury snacks like crisps and pretzels
- Rich sauces and gravies
- Butter and ghee
- Cream and ice-cream
- Mayonnaise
- Fried foods including fried chips
- Sugar-containing soft drinks

Too much **saturated fat** can… … ***raise blood cholesterol*** *levels and increase risk of* ***heart disease*** *and* ***stroke.***

Too much **salt** can… *…raise your* ***blood pressure****, and increase risk of developing* ***heart disease*** *or having a* ***stroke.***

Too much **sugar** can… *…cause you to eat too many calories, increasing risk of weight gain, plus increase the risk of* ***tooth decay.***



Look at **food labels** – they can help you choose foods that are **lower** in saturated fat, salt and sugar, and avoid those that are **high**!

Recommendations for adults:

SALT *no more than* ***6g*** *each day*

SAT FAT *no more than* ***20g*** *each day*

FREE SUGARS* *no more than* ***30g*** *each day*

SALT *no more than* ***6g*** *each day*

SAT FAT *no more than* ***30g*** *each day*

FREE SUGARS* *no more than* ***30g*** *each day*

Top tips: How do I make healthier choices?

Swap cooking with butter or coconut /palm oil, for rapeseed or olive oil

Swap honey for mashed banana and a sprinkle of cinnamon in porridge

Swap cakes and pastries for fruit loaf/scones or even some fruit

Swap high fat savoury snacks for oatcakes or crackers/melba toast with some cottage cheese or hummus

To add flavour to your meals, try to replace salt with pepper, herbs and spices

*any sugars added to food or drinks, or found naturally in honey, syrups and unsweetened fruit

This resource is designed for consumers who want to find out more about healthy eating. Last reviewed November 2016. Next review due November 2019.

Health & care information you can trust