The Trafalgar School at Downton

Knowledge Organiser

Year 7: Terms 1 and 2

2023/2024

Name……House……..…..

Contents

Using a Knowledge Organiser well

What is a Knowledge Organiser?
A Knowledge Organiser is a document that sets out the key information you need to understand, learn and memorise in each of the subjects you study this term.

Why do I have to carry my Knowledge Organiser around with me?
Your teachers will want you to use your Knowledge Organisers in lessons. They are yours forever and you may want to annotate or highlight on them when your teacher talks about things in them. They will certainly be used in lessons when you have a cover teacher and you can use them whenever you find yourself with some spare time.

How should I use my Knowledge Organiser?
You should use your Knowledge Organiser to learn this key information and commit it to memory. Your teachers will often quiz you on the information on the Knowledge Organiser in your lessons. The best way of using it is to use the look, cover, write, check method which you will have been introduced to in your Knowledge Organiser launch assemblies.

What do I do with my Knowledge Organiser at the end of the term?
You don't have to carry your Knowledge Organiser around with you anymore but you should keep it somewhere safe where you can easily get it out and use it. Remember that the information on the Knowledge Organiser includes things you will need to remember for your GCSE exams, so your teachers will continue to quiz you on it.

Why is a Knowledge Organiser important?
New GCSE specifications mean that students have to memorise more facts, equations, quotations and information than ever before and there are things you will learn right from the start of year 7 that you will need to know in year 11 when you sit your GCSE exams – the Knowledge Organiser helps you to identify the things that you need to try and commit to your long term memory and return to over and over again during your time at secondary school. There are also things that we think it is important you learn about and remember that might not be in a GCSE exam but represent useful knowledge for life.

Being Trafalgar

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

To help yourself you should:

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

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".

Homework Example: Fortnightly Writing Challenge: First Person Narrative

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

Write a short story based on … it to a haunte… m!

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

Methods to include:

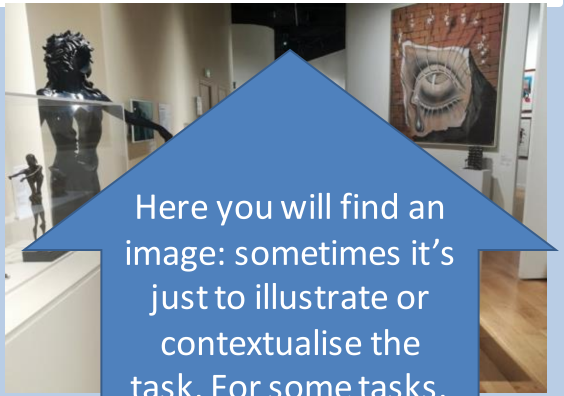
…ensory description: …factory (smell) and audi… sound)

…that …e)

…om

th… …f an

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



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

Don't forget to plan writing!

T… …l Accuracy …ler:

…y:

…tter at …ning …top, …on or question mark at the end.

- Use paragraphs.
- Spell accurately.

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

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

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

- **A** – anecdote: telling your own story to support your point.
- **P** – pronouns: use pronouns that directly address your reader/ audience – we, you, our, us.
- **E** – emotive language: make them feel an emotion.
- **F** / **O** – facts and opinions: include genuine information and your personal point of view.
- **R** – repetition: repeat a key phrase/word.
- **R** – rhetorical questions don't require a response, but trigger internal responses for the reader e.g. empathy, shock, desire to know more etc.
- **E** – experts: use quotes from experts to back you up.
- **S** – statistics: use percentages and other data in favour of your point.
- **T** – triples: use powerful and effective words/phrases in threes.

Fortnightly Writing Challenge Year 7

Language Methods to Practise in your Fortnightly Writing Challenge and Examine in your Reading

alliteration:	the repetition of a consonant sound to begin a series of words.
anecdote:	a short story to prove a point e.g. a dad, talking to his children about the dangers of running in the house, a dad might include an anecdote about falling in his home as a boy and breaking his arm.
antithesis:	putting two opposite ideas together to highlight contrasts.
emotive language:	words and phrases that are used to make the reader feel a particular emotion.
extended metaphor:	a version of metaphor that extends over the course of multiple lines, paragraphs, or stanzas of prose or poetry
foreshadowing:	the writer hints at an event that will happen later in his story/poem/play/writing.
imperative verbs:	instructional/command words that give the action the speaker/writer wants you to do.
metaphor:	like a simile, but instead of using 'like' or 'as' it compares two things by suggesting that something is something else.
modal verbs:	help show the level of possibility, ability, obligation or permission of the main verb/action e.g. might, can, must, may ...
pathetic fallacy:	the projection of human emotions/mood onto non-human objects found in nature e.g. the weather.
sensory description:	employing the five senses in writing to evoke a mental image and/or sensation for the reader.
simile:	a comparison which finds similar characteristics in two objects and compares them, always by using the words 'like' or 'as'.
statistics:	factual data used in a persuasive way.
superlative:	an adjective or adverb that shows the highest or lowest degree of comparison e.g. best, worst, finest, most, etc.
onomatopoeia:	using words that sound like the noise they represent.
personification:	a type of figurative language that gives an object human characteristics (emotions, sensations, speech, physical movements).
rhetorical question:	a question asked for a purpose other than to obtain the information the question asks e.g. create a dramatic effect; emphasise a point; make you think about/eager to learn the answer.

Apostrophe To Show Ownership

1 normal singular noun

the man's idea ✓

add 's

2 normal plural noun

the girls' idea ✓

add '

3 singular noun ending s

Moses' idea ✓

add '

or...

Moses's idea ✓

add 's

4 plural noun not ending s

the children's idea ✓

add 's

Using Apostrophes (Showing Joint Ownership)

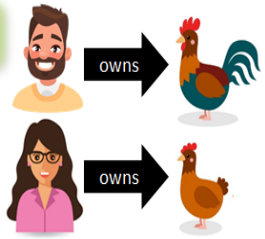
The Rules

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

Individual possession?
Make all parts possessive.

Examples

Janet and John's chickens



Janet's and John's chickens

Use fronted adverbials:

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

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

Use a two and then three word sentence:

It hurt. I was dying!

Snow fell. Flakes floated precariously.

Use anaphora:

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

Use epiphora (epistrophe)

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

Use a range of sentence structures:

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

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

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

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

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

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

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

Use a tricolon (tripartite list):

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

Snap! Crackle! Pop! (Rice Krispies slogan)

Use a conditional sentence:

When people smoke cigarettes, their health suffers.

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

Use paired adjectives to describe a noun:

Take a look at this bright red spider.

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

Use anadiplosis (yoked sentence):

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

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

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

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

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

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

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

Therefore, Consequently, Hence, As a result,

Furthermore, In addition, Additionally, Moreover,

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

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

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

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

PUNCTUATION PIT STOP

Full Stop

Full stops are used to:

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

Carefully, he kicked the ball into the goal.

2) show when a word has been abbreviated.

Saint Peter's Road is on the High Street.

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

COMMAS

Commas are used to separate:

1) items in a list .

Bert, Ernie and Elmo are my three pet rats.

2) dependent clauses and phrases.

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

Quotation Marks

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

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

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

Question Mark

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

What is your favourite food?

How do you feel today?

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

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

Exclamation Mark

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

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

They're also used for most interjections:

'Hi! What's new?' 'Ouch! That hurt.'

'Oh! When are you going?'

Semi-colon

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

It was winter; the snow was falling heavily.

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

Colon

Colons are used to:

1) **begin a list.**

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

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

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

Apostrophe

An apostrophe is used to show:

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

does not → doesn't I am → I'm

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

Dash –

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

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

Brackets

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

Andrew Jacklin (last year's losing finalist) is expected to win this heat.

Tigers are carnivores (meat eaters)!

Ellipsis ...

Ellipsis is used to:

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

I don't know ... I'm not sure.

2) build tension or show that something is unfinished.

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

PUNCTUATION PIT STOP

Writing the text for a Leaflet/Guide

Stay Safe and Sound Online — clear/apt/original title

Manage your online reputation — subtitles

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

Privacy Matters

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.

effectively/fluently sequenced paragraphs

....

Remember:

- make sure you know how to block abusive comments and report worrying content;
- don't arrange to meet people in real life that you've only talked to online;
- use secure and legal sites to download music and games;
- when using the internet for homework, use information appropriately and explain things in your own words rather than copying.

bullet points

Text for a Speech/Talk

'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'.

Writing Forms

Article

Andy Murray's Appliance of Science — clear/apt/original title

By Jim White — by-line

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

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

sub-headings

Sample Check

introductory (overview) paragraph

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

fluently sequenced paragraphs

fluently sequenced paragraphs

Daily Diet

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

Writing to Review

clear, engaging title

Feeling Icy About Frozen?

effective introduction

Last weekend I **was forced to endure** a new DVD that has been added to **my [illegible]tle sister's** ever-growing Disney collection: Frozen 2. For those of you who have been living on a different planet for the last few years, the Frozen franchise is particularly big business for girls under the age of around 7 or 8.

At first, **I have to be honest**, I was pretty reluctant to watch it. The first version of Frozen followed the usual Disney drama of: boy meets girl, dramas occur, friends are made, and annoyingly catchy songs are sung. There were the conventional talking animals too and (**I have to admit it**), a cute little snowman. In hope of reacquainting myself with the humour of this cold, carrot-nosed cutie – **I gave up the fight**, and decided **I'd try to grin and bear it** through the sequel...!

use topic specific language

use your tone to make the reader feel like you are sharing personal information and advice.

Surprisingly, having sat through the whole of the movie, **I'm willing to confess**: it actually wasn't too bad. The music is slightly better than the first one. In Frozen 2, there are some instrumental versions of songs and the riffs are well pitched and engaging. This was a definite **positive for me**, although I was a little annoyed when **I started humming the tune** on the school bus yesterday morning!

...

effectively/fluently linked paragraphs to sequence a range of ideas (no room to produce the other paragraphs/conclusion here).

As for the characters... Elsa and Anna are still the leading ladies, with Sven, Olaf, and the talking reindeer, (whose name I can't actually remember). Elsa is still a little too overly heroic as she constantly runs off to try and fix things with the customary 'we know it's going to end badly' music tinkering away in the background...

Writing a formal letter

writer's address

35 Hibiscus Crescent
Andover
Hants
SP10 3WE

221B Bakers Street
London
NW1 6XE

reader's address

date

20th February, 2020

Dear Sir or Madam

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

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

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

fluently sequenced paragraphs

fluently sequenced paragraphs

Furthermore, ...

Yours faithfully
Boris Johnson

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

Description of Place

spatial discourse markers

adjectives

Green limbs tangled above the decaying shells of long-abandoned vehicles, forming a canopy that barely permitted the harsh rays of the sun to burn through. The stealthy fingers of squat oak trees reached out tenaciously towards them. The vehicles themselves were coated in a thick layer of 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 f[illegible] the clearing. Amongst them, all manner of insects scuttled- manoeuvring themselves between moments of shade, before the unforgiving rays of sun could scorch their exposed bodies.

adjectives

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

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

"Kuno!"

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

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

His image faded.

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

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

Journey Description

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

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

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

Climax (turning point, height of action/problem at its worst):
- use exciting adverbs and verbs;
- accelerate pace and heighten tension using lots of shorter sentences.

Fail to Plan
Plan to Fail!

Rising Action (build towards conflict):
- build on character, setting, plot;
- introduce a complication/problem;
- build tension/ excitement;
- use interesting adjectives, sensory description, figurative language etc.

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

Falling action (turning point, height of action/problem at its worst):
- what events happen to solve the problem?

Exposition (Introduction):
- use an opening hook to grab attention e.g. mysterious atmosphere, in medias res, etc.
- use descriptive vocabulary to set the scene and describe the main character/setting;
- foreshadow what is to come.

Dénouement/Resolution (ending):
- link back to the start (circular);
- what has the character learned?
- how are things different now?
- is there an exciting twist or cliff-hanger ending?

Conclusion: To conclude, repeat RQ, Quite simply, yes!

Yours Sincerely

Intro: My address right hand side, + date, school address left,
Dear Mr Cole
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 reason: old-fashioned tradition, so easier to continue
Argument reason: other traditions - burnt witches, slept on straw, walked barefoot – now discontinued so …
Supporting example: anecdote, use experts

P1

Form: Letter
Audience: Headmaster
Purpose: Argue change uniform

P2

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

P3

Counter reason: cost cheaper as not designer or from shops making huge profit
Argument reason: 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,
Supporting example: emotive language: force poorer families to go without, statistics

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

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

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

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

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

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

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

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

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

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

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

Fail to Plan
Plan to Fail!

Year 7, Terms 1 & 2: Animal Farm

CONTEXT

George Orwell

Context – *Animal Farm* was written by George Orwell in 1945.

George Orwell – George Orwell was the writing name of Eric Blair (1903-1950). He was outspoken in his support of democratic socialism, and spoke out frequently against totalitarianism and social injustice. He wrote a wide range of fiction, poetry, literary criticism and polemical journalism, although without doubt his two most famous works are *Animal Farm* (1945) and *Nineteen Eighty-Four* (1949).

The Russian Revolution – The revolution was the movement that removed the reigning Tsarist autocracy from power and led to the rise of the Soviet Union. The Bolsheviks, led by Vladimir Lenin, were able to overthrow the provisional government and establish their own federal government, creating the world's first socialist republic. Eventually they became reconstituted as the Communist Party.

Nicholas II– Tsar Nicholas II was the last emperor of Russia. Tsar Nicholas was deemed to be a poor ruler – the country lost key battles against Japan and Germany during his reign, costing large military casualties and financial losses. There were also gross inequalities: Nicholas lived in luxury while thousands of unemployed peasants struggled to survive. Tsar Nicholas was eventually overthrown by the Bolsheviks and was executed in July 1917.

Jospeh Stalin –Following the death of Lenin in 1924, Stalin rose to power through discreetly canvassing, manipulating and intimidating others, sidelining other potential leaders such as Victor Trotsky. Under Stalin, the Soviet Union became more autocratic and totalitarian: he oversaw mass repressions, hundreds of thousands of executions and millions of non-combatant deaths. He has hence become known as one of the most significant and vilified figures of the 20th Century.

Karl Marx and Communism– Karl Marx was a German philosopher from the 19th Century, who rejected capitalism. He instead believed in the introduction of a system in which wealth was communal and labour was shared. He believed this would produce a fairer, more stable way of life. Whilst he lived a long time before the Russian Revolution (and in a different country) his theories formed the foundations for what became Communism.

Life in the Communist Soviet Union – The working class in the Soviet Union were supposed to be the country's ruling class under the doctrines from which their socialism was derived, and yet they grew increasingly repressed throughout the progression of the USSR's existence. It is generally accepted that the standard of living decreased, working conditions deteriorated, and personal freedoms were significantly violated.

Year 7, Terms 1 & 2: Animal Farm

CHARACTERS & THEMES

Themes – A theme is an idea or message that runs throughout a text.

The Corruption of Socialist Ideals – *Animal Farm* is famous for being a stinging critique of the development of Soviet communism. Although Orwell strongly believed in the socialist ideals upon which the revolution was built, he abhorred the ways in which these values had been repeatedly manipulated by those who rose to power. The gradual disintegration of the seven commandments visually depicts this.

Class – *Animal Farm* demonstrates through its allegory the means by which human beings seek to maintain and reestablish class structures. The novella shows how the oppressed who are able to stand united in the face of adversity often generate their own class divisions over time after the enemy is eliminated. This is evident in the slow rise of the pigs to fill the void left by Mr Jones.

Naivety – *Animal Farm* is not only told from the viewpoint of those in power, but also from the viewpoint of those who are oppressed. Orwell makes clear that these types of situations are formed not only because of the strategies of the oppressors, but also the naiveté of the people who do not have the education or the position to know better. For example, Boxer believes everything that he is told.

Religion – An idea of heaven (Sugarcandy Mountain) is promised to the animals by Moses (the raven) at some points throughout *Animal Farm*. Moses is derived from the name of the bible character who brought the word of God to the people. The thought of an evergreen, beautiful afterlife awaiting them drives the animals on to work harder, and so the pigs use Moses to their benefit.

Main Characters – Consider what Orwell intended through his characterisation of each of the below...

Napoleon – Napoleon is the pig who emerges as the leader of Animal Farm after the rebellion. Napoleon's character is based on Joseph Stalin – the leader of the communist Soviet Union. Napoleon is cunning, treacherous, lazy and selfish. He uses Squealer (propaganda) and the dogs (military force) to exert power over others. He has no real talents, rather he is a corrupt opportunist.

Napoleon Quote: "To the prosperity of The Manor Farm!" (10.32)

Snowball – Snowball is one of the other leading pigs, who challenges Napoleon for leadership of the farm after the rebellion. He represents Leon Trotsky. He is intelligent and passionate, yet he does not resort to the same levels of cunning and manipulation as Napoleon. Despite largely winning the support of the animals on the farm, Snowball is driven from the farm by Napoleon's forces.

Snowball Quote: "liberty is worth more than ribbons" (2.7)

Boxer– Boxer is a cart-horse, who demonstrates incredible strength, work ethic, and loyalty. He represents those in the working classes who were hugely overworked. Boxer completes the most work on the farm, and is admired by others for his physical accomplishments and mental grit. His downfall is his slow wit, which ensures that he is unable to think for himself and is easily manipulated.

Boxer Quote: "Napoleon is always right" (5.22)

Squealer – Squealer represents the Soviet propaganda machine. He is a pig who is an exceptionally gifted and persuasive speaker, and is utilised to spread positivity about Napoleon, and negativity about Napoleon's competition. He uses false statistics to suggest that the farm thrives under Napoleon, and twists the truth to ensure that the pigs retain political and social control.

Squealer Quote: "It is for YOUR sake that we ... eat those apples." (3.14)

Old Major – Old Major is a prize-winning boar whose vision of a place in which the animals work for themselves serves as the inspiration for the rebellion. He is based on both Karl Marx and Vladimir Lenin, who inspired communism. Old Major is well-respected, articulate, and persuasive. He is a clear leader who the other animals listen to. When he dies, Napoleon and Snowball are left to struggle for control over the animals.

Old Major Quote: "my message to you, comrades: Rebellion!" (1.11)

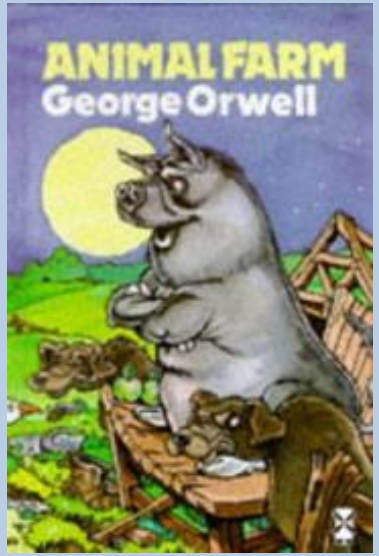
Benjamin – Benjamin is a long-lived donkey who refuses to feel enthused by the rebellion. Some say he represents the aged people of Russia, who remained cynical of the revolution. Benjamin is seen by the other animals as a pessimist, however his prediction that life will remain unpleasant regardless of who is in charge proves correct. He is the only animal who appears able to understand the atrocities that are taking place, yet he refuses to openly oppose the pigs.

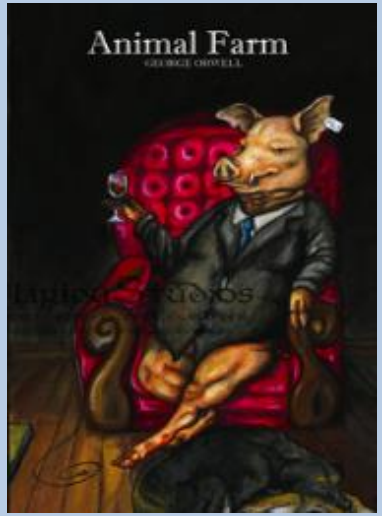
Old Major Quote: "None of you has ever seen a dead donkey"(5.22)

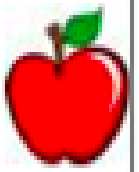
Year 7, Terms 1 & 2: Animal Farm

Plot & Key Quotations 1

George Orwell





Scene-by-Scene Summary – Alongside key quotations from each scene.		
Chapter I	A drunk Mr Jones stumbles to bed, forgetting to lock up his farm buildings. The animals thus convene in the big barn to hear Old Major's speech. He blames their short and miserable lives on man, and incites rebellion. He teaches them a song: Beasts of England.	*Weak or strong, clever or simple, we are all brothers. No animal must ever kill any other animal. All animals are equal.* 
Chapter II	Old Major dies in his sleep, and the other animals prepare for rebellion. The pigs (the cleverest animals) prepare the others, teaching them animalism, which they don't all fully understand. The Rebellion occurs, and Jones is driven from the farm. The farm is renamed 'Animal Farm' and seven commandments are made.	*"Never mind the milk, comrades!" cried Napoleon, placing himself in front of the buckets. "That will be attended to. The harvest is more important.* 
Chapter III	The animals labour in the fields throughout the summer. Boxer works hardest. There is a flag-raising ceremony each Sunday – Snowball and Napoleon often clash. Snowball spends time trying to educate the animals. Napoleon takes a group of puppies to 'educate' in a loft. When it is noted the pigs have been eating the apples and milk, Squealer persuades the animals that it is best.	*Milk and apples (and this has been proved by Science, comrades) contain substances absolutely necessary to the well-being of a pig. We pigs are brain-workers.* 
Chapter IV	The news of Animal Farm has spread to neighbouring farms (through the birds), where animals have begun singing Beasts of England. Jones and other farmers thus launch an attack, however they are easily beaten by the animals. Boxer and Snowball fight heroically and are awarded medals as a result. Only a single sheep is lost, who is given a hero's burial. Snowball tells Boxer not to feel guilt for a human's death.	*"Who will believe that I did not do this on purpose?" "No sentimentality, comrade!" "War is war. The only good human being is a dead one."* 
Chapter V	Mollie is tempted away from the farm by a red-faced man who feeds her. Snowball and Napoleon grow increasingly hostile towards one another. As Snowball announces plans for a new windmill, Napoleon unleashes his dogs, which attack Snowball and chase him off the farm. The animals are anxious about this, but Squealer's passionate defence and the growl of the dogs is enough to assure them that 'Napoleon is always right.'	*"One of them all but closed his jaws on Snowball's tail, but Snowball whisked it free just in time. Then he put on an extra spurt and, with a few inches to spare, slipped through a hole in the hedge and was seen no more."* 

Year 7, Terms 1 & 2: Animal Farm

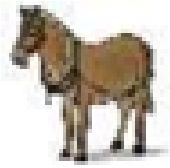
Plot & Key Quotations 2

George Orwell

Key Vocabulary

- Propaganda
- Tyrant
- Dictator
- Allegory
- Symbolism
- Rebellion
- Comrade
- Communism
- Slaughter
- Overthrow
- Commandment
- Equality
- Democracy
- Utopia

Scene-by-Scene Summary – Alongside key quotations from each scene.

Chapter VI	The animals work at a rapid pace to build the windmill, and their rations are cut. It is announced that the farm is now trading with humans, to the shock of the animals. It begins that the pigs have begun amending the commandments to suit their own interests. A storm destroys the windmill, yet Napoleon blames the destruction on the 'traitor Snowball.'	*"Comrades," he said quietly, "do you know who is responsible for this? Do you know the enemy who has come in the night and overthrown our windmill? SNOWBALL!"* 
Chapter VII	Snowball is blamed for more and more failures, which the humans attribute to planning errors. Hens eggs are now sold, which makes the hens rebel. Napoleon holds a meeting in which several animals are murdered by the dogs for their apparent treasons against the farm. It is revealed 'Beasts of England' may no longer be sung.	*One Sunday morning Squealer announced that the hens, who had just come in to lay again, must surrender their eggs. Napoleon had accepted... a contract for four hundred eggs a week."* 
Chapter VIII	More of the commandments appear to change, but the animals are persuaded that this is not the case. Napoleon has now taken the title of 'Leader' and has multiple other honours. Trading with humans intensifies. A further battle with humans takes place, with the windmill destroyed, several animals killed, and Boxer injured. The pigs begin drinking alcohol.	*"He called the animals together and told them that he had a terrible piece of news to impart. Comrade Napoleon was dying!"* 
Chapter IX	Animal Farm is named a republic and Napoleon unanimously named the president. Moses the raven returns and speaks of Sugarcandy Mountain. Boxer grows frailer and one day collapses. The pigs announce that he will be taken to hospital, but Benjamin reads on the van that he is in fact being taken to a slaughterhouse. Squealer announces that he died at the hospital, and that the van had only just been bought by the hospital.	*"Boxer!" cried Clover in a terrible voice. "Boxer! Get out! Get out quickly! They're taking you to your death!"* 
Chapter X	Years pass by. Many animals die and few can remember the rebellion. Only the pigs seem richer, yet all animals remain proud of being on Animal Farm. The pigs begin walking on two legs. Humans come over for a meeting and commend how hard the pigs make the animals work, for so little rations. The name Animal Farm is returned to 'Manor Farm.' The animals can no longer differentiate between people and pigs.	*"Somehow it seemed as though the farm had grown richer without making the animals themselves any richer..."* *"All animals are equal, but some animals are more equal than others."* 

Year 7, Terms 1 & 2: Animal Farm

KEY TERMINOLOGY

George Orwell

STRUCTURAL TERMINOLOGY

KEY TERMINOLOGY	DEFINITION
Contrast	Where something is strikingly different from something else – used by writers for effect.
Juxtaposition	Two contrasting things/ideas being seen or placed close together for impact.
Foreshadowing	An indication of something that will happen in the future, often used as a literary device to hint at future plot developments
Focus Shifts	Where a reader is introduced to different things/ideas by a writer – our attention is moved from one to another e.g. setting to character, outside location to inside location
Zoom	Zoom in – where the writing takes you from something vague, to something very detailed (for example, describing an assembly in general terms to then describing, in detail, the person speaking at the front). Zoom out – the opposite. If in doubt, think of how a camera moves when filming…
Chronological	A record of events starting with the earliest and following the order in which they occurred.
Dialogue	Conversation between two or more people as a feature of a book, play, or movie.

LANGUAGE TERMINOLOGY

KEY TERMINOLOGY	DEFINITION
Noun	The name of a person, place or thing For example: The **teacher…**
Adjective	Describes the noun For example: The **old** teacher…
Verb	An action word – a doing word For example: The old teacher **spoke…**
Adverb	Describes how a verb (an action) is carried out). Often, but not always, end in –ly). For example: The old teacher spoke **loudly**.

RHETORICAL DEVICES APE FOR REST

Anecdote	Pronouns	Emotive Lang
Fact	Opinion	Repetition
Rhetorical Question	Experts	Statistics
Triples		

Year 7 Maths Term 1 & 2

Command Words in Maths questions

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

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

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

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

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

12 X 12 Multiplication Table

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

Squares

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

Square Roots

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

Websites to help you with understanding and revision

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

Year 7 Maths Term 1 Sequences

Keywords

Sequence: items or numbers put in a pre-decided order
Term: a single number or variable
Position: the place something is located
Rule: instructions that relate two variables
Linear: the difference between terms increases or decreases by the same value each time
Non-linear: the difference between terms increases or decreases in different amounts
Difference: the gap between two terms
Arithmetic: a sequence where the difference between the terms is constant
Geometric: a sequence where each term is found by multiplying the previous one by a fixed non zero number

Linear and Non Linear Sequences

Sequences usually follow a pattern and when you discover the pattern you can determine the following things:

- The rule for the sequence – we call this the n^{th} term rule
- The next term in the sequence
- Any term in the sequence, the 100^{th} term or the 511^{th} term
- Whether a term appears in the sequence

Linear Sequences – increase by addition or subtraction and the same amount each time.
Non-linear Sequences – do not increase by a constant amount – quadratic, geometric and Fibonacci.

- Do not plot as straight lines when modelled graphically
- The differences between terms can be found by addition, subtraction, multiplication or division.

Fibonacci Sequence look out for this type of sequence

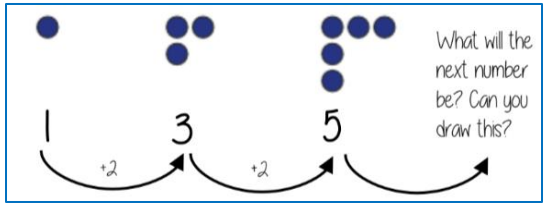
0 1 1 2 3 5 8 ...

Each term is the sum of the previous two terms.

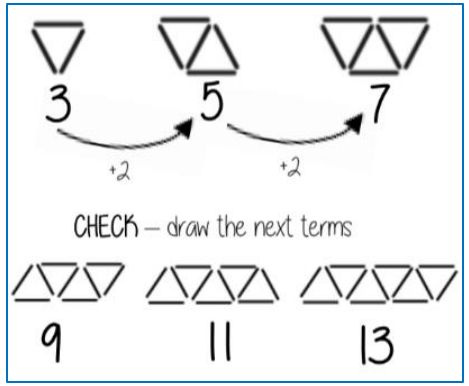
Draw and continue a sequence

Sparx M241

Count the number of circles or lines in each image



This is an infinite sequence – It will go on forever.
The difference between each term is +2, we call this the **term to term rule**.



Predictions:

Look at your pattern and consider how it will increase.
e.g. How many lines in pattern 6?

Prediction 13
If it is increasing by 2 each time...

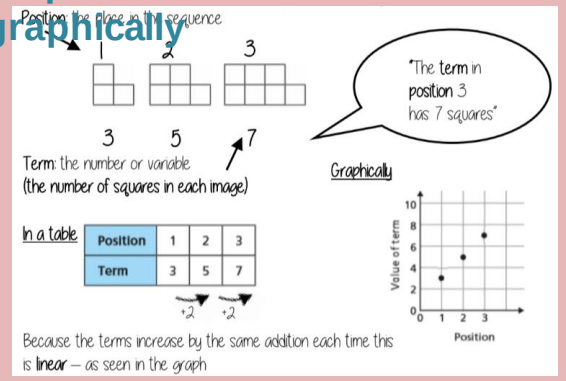
in 3 more patterns
there will be 6 more lines

Explain term-to-term rule

Sparx M381

It is How you get from term to term.
Try to explain this in full sentences not just with mathematical notation.
Use key maths language e.g. doubles, halves, multiply by two, add four to the previous term etc.
To explain a whole sequence you need to include a term to begin at ...

Sequence in a table and graphically



Continue Linear Sequences

7, 11, 15, 19 ...

How do I know this is a linear sequence?

It increases by adding 4 to each term.

How many terms do I need to make this conclusion?

At least 4 terms
Two terms only shows one difference not if this difference is constant. (a common difference).

How do I continue the sequence?

You continue to repeat the same difference through the next positions in the sequence

Continue non-linear Sequences

1, 2, 4, 8, 16...

How do I know this is a non-linear sequence?

It increases by multiplying the previous term by 2.
this is a **geometric** sequence because the constant is multiply by 2

How many terms do I need to make this conclusion?

At least 4 terms–
Two terms only shows one difference not if this difference is constant. (a common difference).

How do I continue the sequence?

You continue to repeat the same difference through the next positions in the sequence.

Year 7 Maths Term 1 - Algebra

What do I need to be able to do?

- **Understanding what is Algebra and how do I use correct notation**
- **Recognise the difference between an expression, equation, formula and identity**
- **Simplifying Expressions**
- **Forming and solving equations**
- **Expanding and Factorising brackets**
- **Substitution into single and two step functions**
- **Form sequences from expressions**
- **Represent functions graphically**

Key words

Data
Algebra
Equation
Expression
Formula
Identity
Variable
Coefficient
Expand
Factorise
Substitution
Factors
Operations
Terms
Sequences
Graphs
Functions
Input
Output
Commutative
Linear

What is Algebra and how do I use correct notation

Algebra – Is the use of letters to represent an unknown, we call this letter a **variable**.

For example, imagine this sum:

□ – 2 = 4

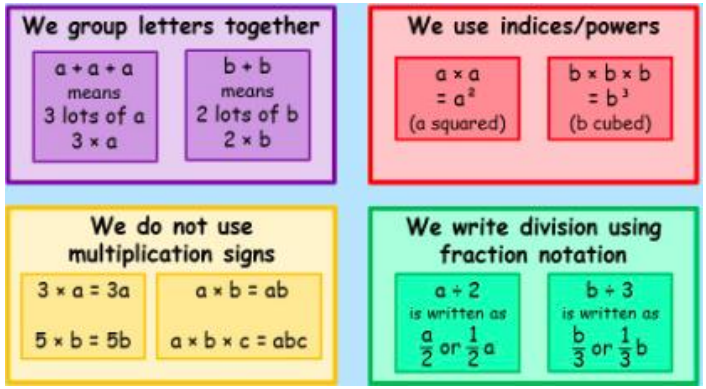
The empty box represents the unknown number in this sum. We replace this box with a letter, a variable. This is helpful when talking about the sum and when the problem contains more than one unknown.

Notation is the way in which we write things and present a sum. Using the correct notation in Algebra is important with multiple variables, it becomes even more important to be organised in the way we lay out the sum.

Sparx M813

Key rules:

- In algebra we don't use the multiplication sign as it is the same as the letter x. We instead remove the times sign and push the variables or **coefficients** and variables together. The **coefficient** is the number in front of the variable.
- The division symbol is also not used and the sum is written as a fraction.
- If there are multiple variables then it is best to organise the variables in alphabetical order and power order. For example: 6zxy is better written as 6xyz.



Expression, Equation, Formula or Identity

Expression – An **expression** is formed of variables and numbers, combined with **operation** signs and brackets. Each part of an expression is called a **term**. In the expression $3n + 5$ the **terms** are $3n$ and 5 and the operation is +. An expression does NOT have an equals sign.

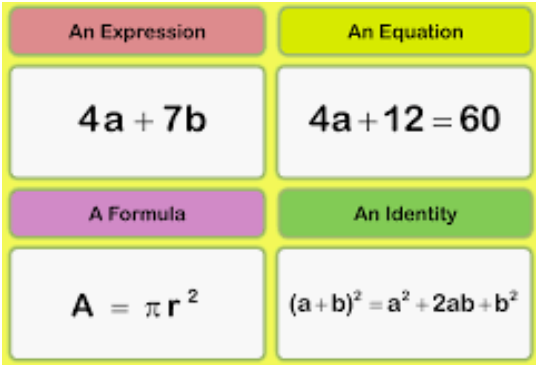
Equation – A mathematical statement showing that two expressions have equal value. The expressions are linked with the equals symbol =. For example, in the equation $5x + 4 = 29$ the = symbol shows that 5x + 4 has the same value as 29 and therefore this equation can be solved to find the value of x.

Formula – An equation linking sets of variables. For example, the formula $v = u + at$, has 4 variables v, u, a and t related by the formula. If the values of three variables are known, the fourth value can be calculated. There are lots of formulas you will learn in Maths and Science and some you already know, eg. S=D/T, A=L x W, A = ½ B x H

Identity – When the expressions are said to be *identically equal.* The expressions are linked with the symbol ≡.

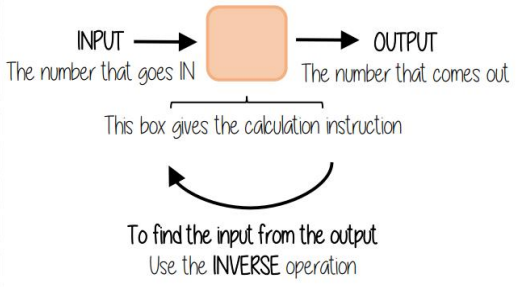
For example, $4(a + 1) \equiv 4a + 4$ is an identity, because the expressions $4(a + 1)$ and $4a + 4$ always have the same value, whatever value a takes and they are the same expression just written in a different way.

Example of each:

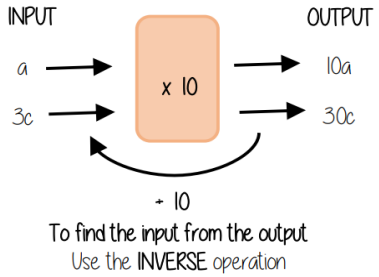


Year 7 Maths Term 1 Algebra

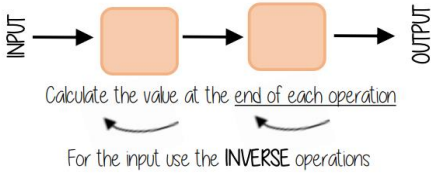
Function Machines



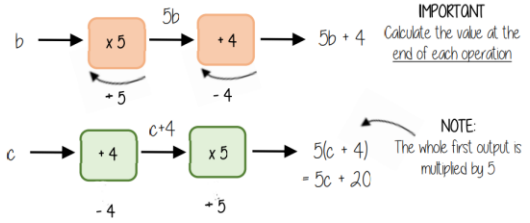
Examples with algebra



2 Step Function Machines



Examples with algebra



Using letters to represent numbers

5 + 5 + 5	y + y + y + y	20 - h
3 x 5	y x 4	$\frac{20}{h}$
5 x 3	4 x y	
	4y	
Addition and multiplication can be done in any order Commutative calculations	4 lots of 'y'	20 shared into 'h' number of groups

Substitution into expressions

4y ← 4 lots of 'y'

If y = 7 this means the expression is asking for 4 'lots of' 7

4 x 7 OR 7 + 7 + 7 + 7 OR 7 x 4 = 28

eg: y − 2
= 7 − 2 = 5

Examples with algebra

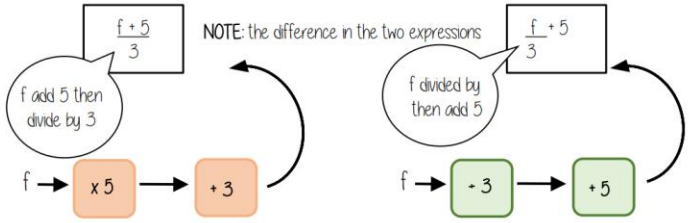
2(x + 3)

Add 3 to the input then times 2

Put the expression into a function machine

If x = 10
10 + 3 = 13... 13 x 2 = 26

Find functions from expressions



Sometimes it helps to try to explain the expression in word – and consider what has happened to the input

Graphs

Sequences and **Graphs** have a lot in common. A **linear graph** is a visual representation of a sequence. We use **substitution** to calculate the coordinates of a graph when we are given the equation of a line.

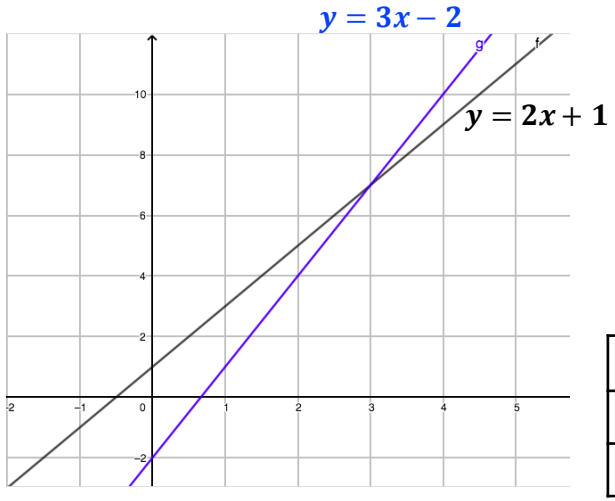
Sparx M618, M932

For example: The sequence 3, 5, 7, 9, 11, ...

If the terms in the sequence are now labelled x instead of n, and the given sequence is labelled y then we can represent this in a table as:

x	1	2	3	4	5
y	3	5	7	9	11
Coordinates	(1, 3)	(2, 5)	(3, 7)	(4, 9)	(5, 11)

The **nth term rule** of this sequence is **2n + 1**, replace n with x and we have the equation of this line. This is the line of $y = 2x + 1$
If we plot these points on a graph we get a straight line.
A **linear sequence** produces a **linear (straight line) graph**.
A **quadratic sequence** produces a **quadratic graph**.



Example: Draw the graph of $y = 3x - 2$

1. Select your values for x, you need a minimum of 3
2. Substitute your x values into the formula to calculate y
3. Plot your coordinates

$y = 3x - 2$ is the same as $y = 3 \times x - 2$

x	1	2	3	4
y	1	4	7	10
Coord	(1, 1)	(2, 4)	(3, 7)	(4, 10)

Year 7 Maths Term 1 Algebra

Simplifying Expressions

When there are multiple variables then it is important to simplify so there are the least number of terms possible.

We simplify by **collecting like terms** together.

Like terms can be defined as '*Terms with the same letter variables raised to the exact same powers*'

For example:

Sparx M795, M531

- 6m and 3m are like terms because they both have the variable m.
- 4xy and 5y are NOT like terms because they do not both have the same variables x and y.
- $3x^2$ and 5x are NOT like terms because they have different powers.

e.g. $3a + 4b + 2a + 5b =$

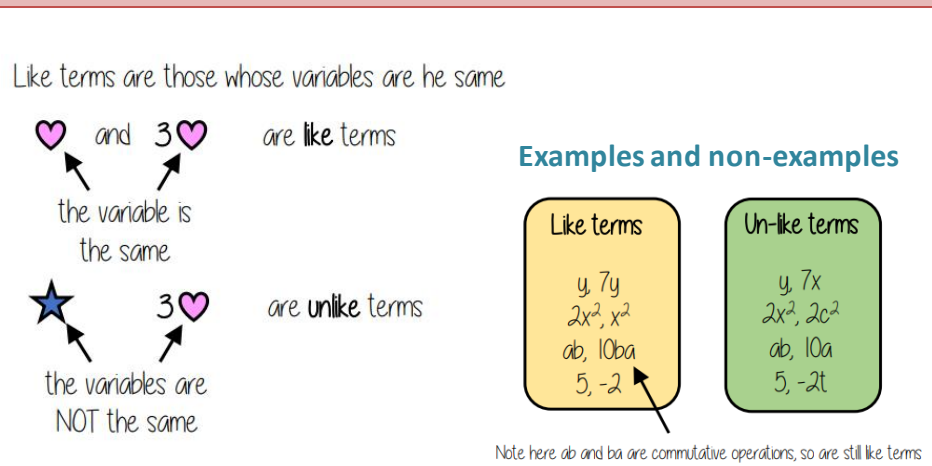
$3a + 2a + 4b + 5b =$

$5a + 9b$

e.g. $3x^2 + 2xy - 5x^2 - 6xy =$

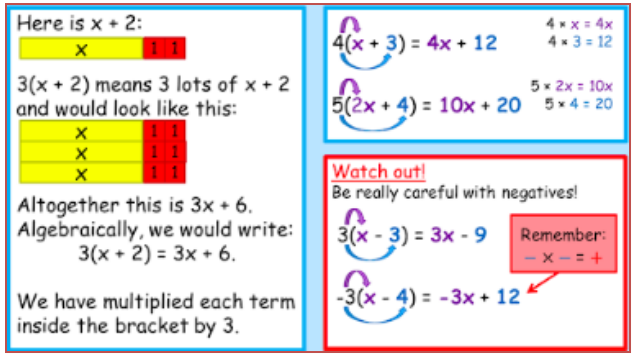
$3x^2 - 5x^2 + 2xy - 6xy =$

$-2x^2 - 4xy$



Expanding

Expanding – Means removing the brackets. We do this by multiplying the term in front of the brackets by each of the terms inside the bracket.

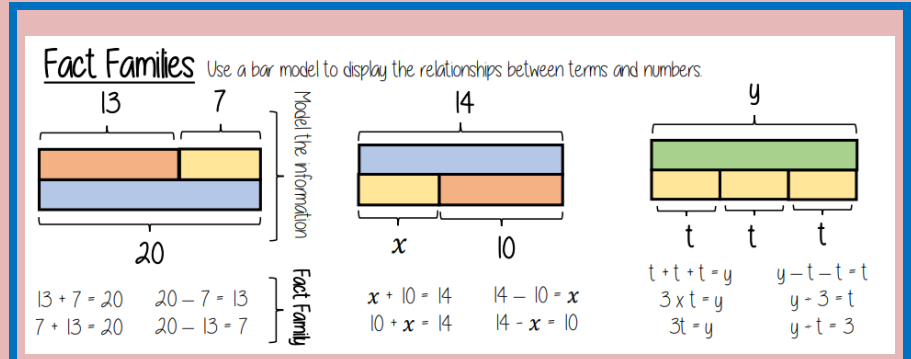


Sometimes there are multiple brackets, so the question will ask you to **Expand & Simplify**:

$5(x+3)+6(x-4)$

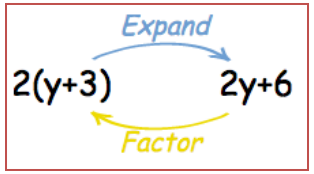
$5x+15+6x-24$

$11x-9$



Factorising

Factorising – Is the direct opposite of expanding, factorising is returning the brackets. With singles brackets we do this by finding the highest common factor and placing it outside of the bracket, the remaining factors go inside the bracket.



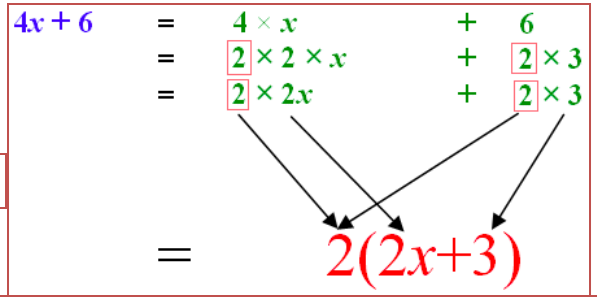
Example:

4x + 16 **Highest common factor of 4 and 16 is 4**

4x is 4 x x

16 is 4 x 4 **Therefore** **4x + 16 = 4(x + 4)**

Example:



Sparx M704

Place Value System

Year 7 Maths Terms 1 & 2 Number

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

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

Rounding to the nearest..

Sparx M111

- Decide which is the last digit to keep, eg if you are rounding to the nearest ten, focus on the number in the tens column.
- Leave it the same if the next digit is less than 5 (rounding down)
- But increase it by 1 if the next digit is 5 or above (rounding up)

Example

Round 293 to the nearest 10

The 9 is in the tens column, the number after it is 3 which is less than 5 so we leave the 9 the same.

Answer: **290**

Example

Round 1 572 to the nearest 100.

The 5 is in the hundreds column, the number after it is 7, which is more than 5, so we increase 5 by 1.

Answer: **1 600**

Inequalities

>	is more than ...
<	is less than ...
≥	is more than or equal to...
≤	is less than or equal to...

Keywords:

Place value
Decimal
Inequality
Round
Significant Figure
Estimate – Round to 1 s.f.
Integer = whole number

Examples

Sparx M705

a) 342 > 339
b) 1091 < 1909
c) -5 > -9
d) -4 < -1
e) 2 < a ≤ 7

"The crocodile always eats the bigger number!"

LEFT HAND ...Less than...

Examples with Decimals

Sparx M522

a) 3.55 > 3.54
b) 0.909 < 0.91
c) 2.135 < 2.3

Although 2.135 has three decimal places, it only has 1 tenth, whereas 2.3 has 3 tenths and is therefore larger.

Rounding to a decimal place (d.p.)

Sparx M431

Decimal places are the digits after the decimal point.

3 . 2 6 4

1st Decimal Place | 2nd Decimal Place | 3rd Decimal Place

3.264 to 1 dp = 3.3

The first decimal place is the first number after the decimal point, in this case the 2. After the 2 is a 6, which is bigger than 5 so we round the 2 up to a 3.

3.264 to 2 dp = 3.26

The second decimal place is 6. Because there is a 4 after, which is less than 5, we keep the 6 the same.

Rounding to significant figures (s.f.)

Sparx M994, M131

This rounds to the most important figure in a number. To round to 'so many' significant figures, we start at the first non-zero number and count from left to right.

7 639 to 1 sf = 8000

The 1st significant figure is 7, there is a 6 after it so we increase the 7 to an 8 to become 8000.

10 240 to 3 sf = 10 200

The 3rd significant figure is 2, there is a 4 after it, which is less than 5 so we keep the 2 the same.

0.0749 to 2 sf = 0.075

The 2nd significant figure is the 4 as the first zeros do not count. After the 4 is a 9 so we round up.

Multiplying by powers of 10

x 10 = move digits 1 place to the left
x 100 = move digits 2 places to the left
x 1000 = move digits 3 places to the left….

Example Sparx M113

54.2 x 10 = 542

100's	10's	1's	1/10	
	5	4	2	
5	4	2		×10

Dividing by powers of 10

÷ 10 = move digits 1 place to the right
÷ 100 = move digits 2 places to the right
÷ 1000 = move digits 3 places to the right….

Example Sparx M113

235 ÷ 10 = 23.5

	100's	10's	1's	1/10
	2	3	5	
÷10		2	3	5

1/10	× 0.1	is the same as	÷ 10
	÷ 0.1	is the same as	× 10
1/100	× 0.01	is the same as	÷ 100
	÷ 0.01	is the same as	× 100
1/1000	× 0.001	is the same as	÷ 1000
	÷ 0.001	is the same as	× 1000

Multiplying doesn't always make a number larger.
$7 \times 0.1 = 7 \times \frac{1}{10} = 7 \div 10 = 0.7$

Dividing doesn't always make a number smaller.
$4 \div 0.01 = 4 \div \frac{1}{100} = 4 \times 100 = 400$

Standard Form

Sparx M719, M678

Standard form is a system of writing numbers which can be particularly useful when working with very large numbers or very small numbers.
Standard from is written in the form

$$a \times 10^n \text{ (where } 1 < a \leq 10\text{)}$$

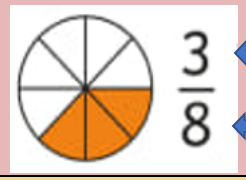
Example
What is 86 000 in standard form?
86 000 can be written 8.6 x 10 000
$10\,000 = 10 \times 10 \times 10 \times 10 = 10^4$
So 86 000 = 8.6 x 10^4
(You would have to move 8.6 four place values larger to get back to 86000)

Example
What is 0.005 in standard form?
0.005 can be written 5 x 0.001
$0.001 = \frac{1}{1000} = 10^{-3}$
So 0.005 = 5 x 10^{-3}
(You would have to move the 5 three place values smaller to get back to 0.005)

10 000	=	10^4
1 000	=	10^3
100	=	10^2
10	=	10^1
1	=	10^0
0.1	=	10^{-1}
0.01	=	10^{-2}
0.001	=	10^{-3}
0.0001	=	10^{-4}

A negative power doesn't mean that the number is negative, it means we have gone from multiplying to dividing.

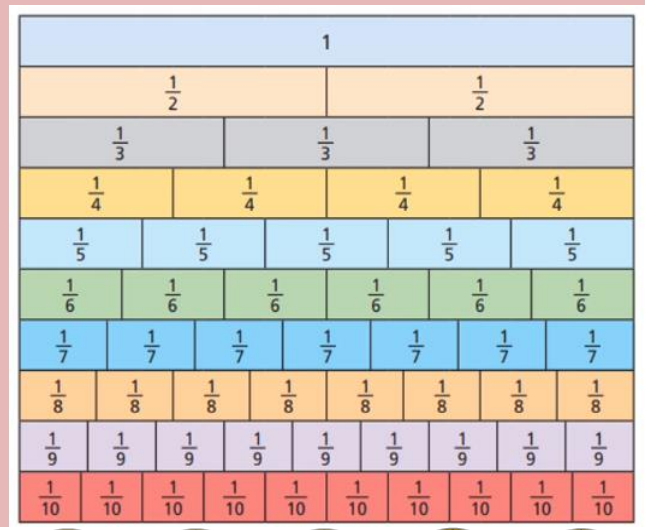
Year 7 Maths Term 2 - Fractions

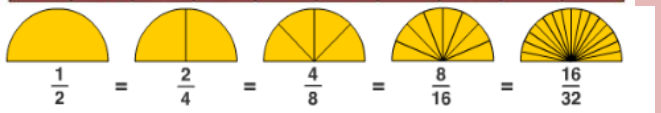


Numerator - how many equal parts are needed

Denominator - how many equal parts are there in the whole

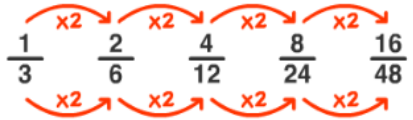
Equivalent Fractions





$\frac{1}{2} = \frac{2}{4} = \frac{4}{8} = \frac{8}{16} = \frac{16}{32}$

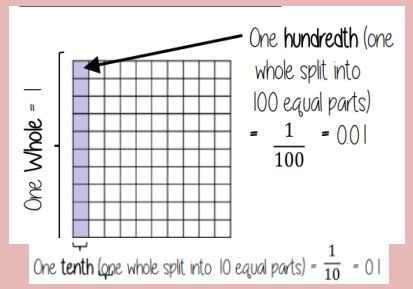
You can make equivalent fractions by multiplying or dividing the numerator and denominator by the same number.



Sparx M410

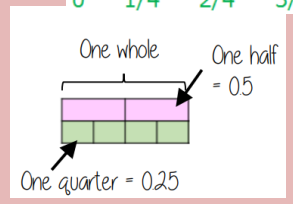
What do I need to be able to do?

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



Different ways fractions can be represented
(all of these are "one quarter")

0.25 $\frac{1}{4}$ $\frac{3}{12}$



25%

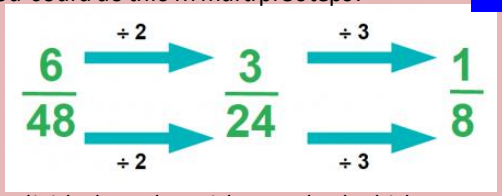
Simplifying Fractions

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

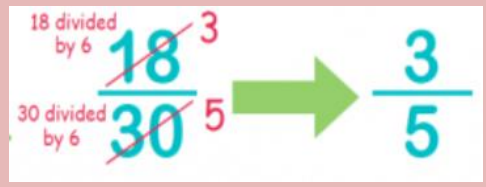
To simplify a fraction, we divide the numerator and denominator by the same number, a common factor.

You could do this in multiple steps:

Sparx M671

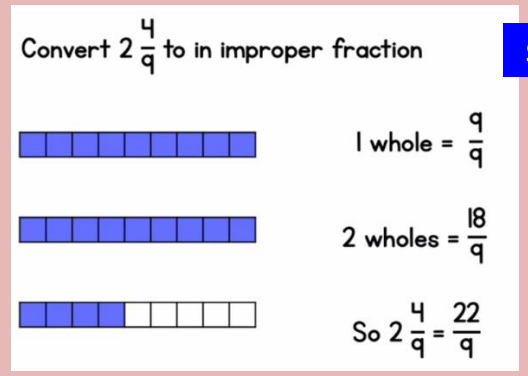


Or divide through straight away by the highest common factor:



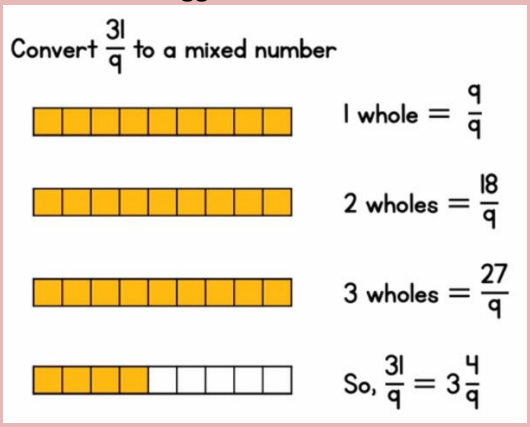
Mixed Numbers and Improper Fractions

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

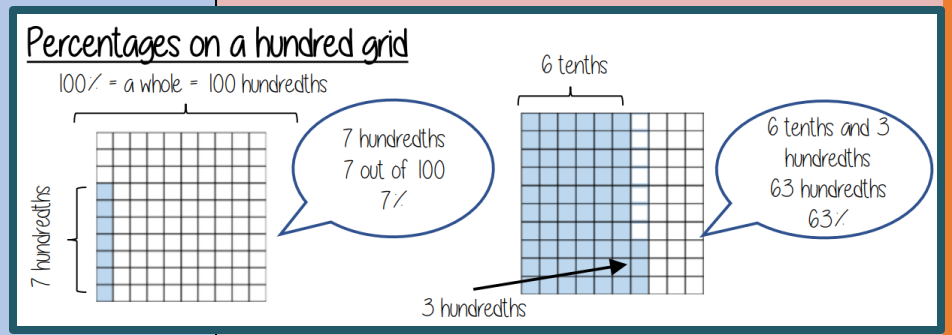


Sparx M601

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



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



Keywords:

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

Year 7 Maths Term 2 Fractions, Decimals, Percentages

You need to be able to:

Convert between simple fractions, decimals and percentages.

Convert between fractions and recurring decimals and percentages.

Compare fractions, decimals and percentages.

Order fractions, decimals and percentages by converting.

Percentage

$45\% = {}^{45}/_{100} = 0.45$

Percentage means out of 100. This will cancel to 9/20

Sparx M264

$6\% = {}^{6}/_{100} = 0.06$

Decimals

$0.35 = 35\%$

$0.07 = 7\%$

There are no tenths so this must be less than 10%

Sparx M264

Fractions

${}^{63}/_{100} = 0.63$

Can you write the fraction over 100?

${}^{11}/_{25} = {}^{44}/_{100} = 0.44$

Sparx M958, M264, M922

${}^{1}/_{2} = 0.5 = 50\%$

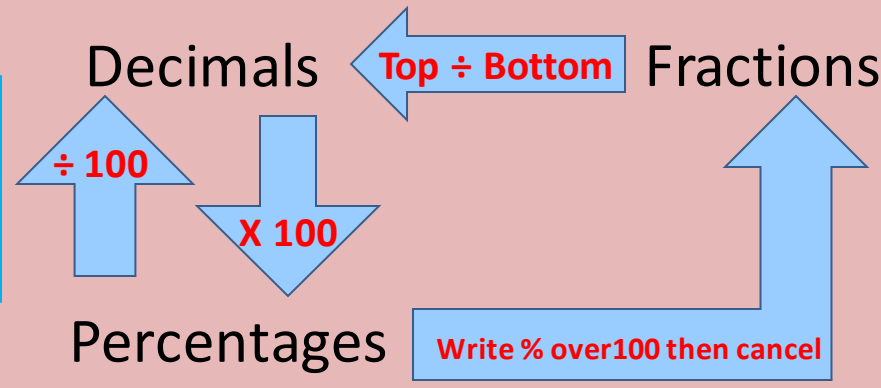
${}^{3}/_{5} = 0.6 = 60\%$

To change a fraction into a decimal divide the numerator by the denominator

Sparx M264

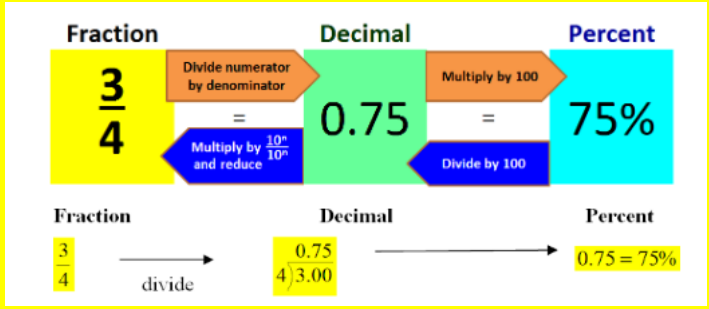
Some FDP to know

F	D	P
${}^{1}/_{100}$	0.01	1%
${}^{1}/_{20}$	0.05	5%
${}^{1}/_{10}$	0.1	10%
${}^{1}/_{8}$	0.125	12.5%
${}^{1}/_{5}$	0.2	20%
${}^{1}/_{4}$	0.25	25%
${}^{1}/_{2}$	0.5	50%



Compare FDP

To compare FDP we need to get them in the same format.



Example: Which is bigger 68% or 0.7?

We can either change the 0.7 into a percentage or the 68% into a decimal.

0.7 = 70%

Make sure you write answer as it was originally written in the question.

Which is bigger 68% or 70%?

70% is bigger so the answer is **0.7**.

Example: Which is bigger $^{13}/_{20}$ or 0.67 ?

Sparx M335

$^{13}/_{20} = {}^{65}/_{100}$ $\quad 0.67 = {}^{67}/_{100}$

0.67 is bigger.

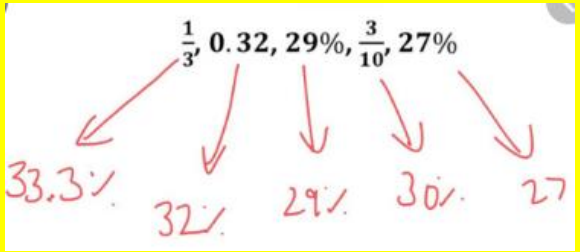
Writing both over 100 makes it easier to compare.

Order fractions, decimals and percentages.

Key fact: convert everything to the same representation.

We can convert them all into fractions, decimals or percentages as long as you convert them all into the same.

Example



Sparx M264, M922, M958

Another Example: $^{1}/_{2}$, 0.19, $^{1}/_{3}$ 0.3, 28%

Changing them to percentages:

$^{1}/_{2} = 50\%$, $0.19 = 19\%$, $^{1}/_{3} = 0.333\ldots = 33.3\ldots\%$, $0.3 = 30\%$

50%, 19%, 28%, 33.33...%, 30%

From smallest to largest:

19%, 28%, 30%, 33.33%, 50%

Sparx M264

Answer:

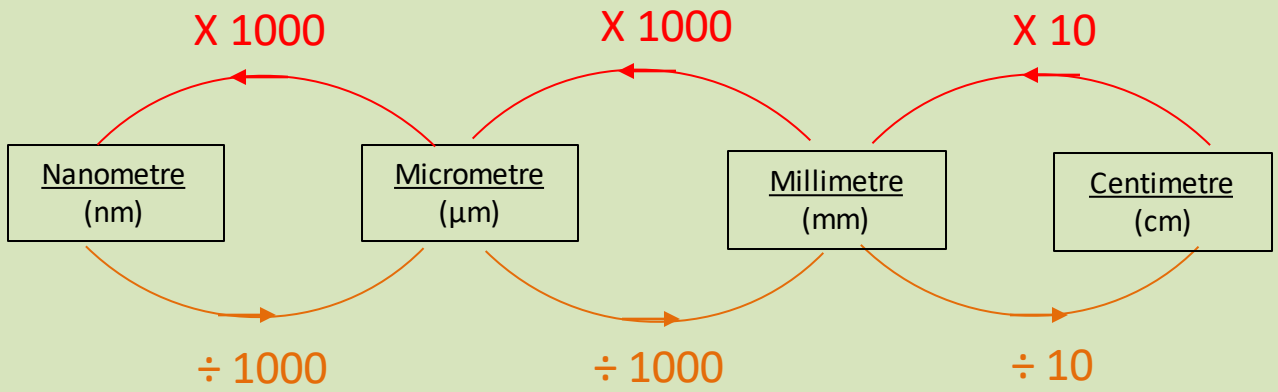
0.19, 28%, 0.3, $^{1}/_{3}$, $^{1}/_{2}$

Science: Useful Information

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

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

Converting units of measure:



Variables:

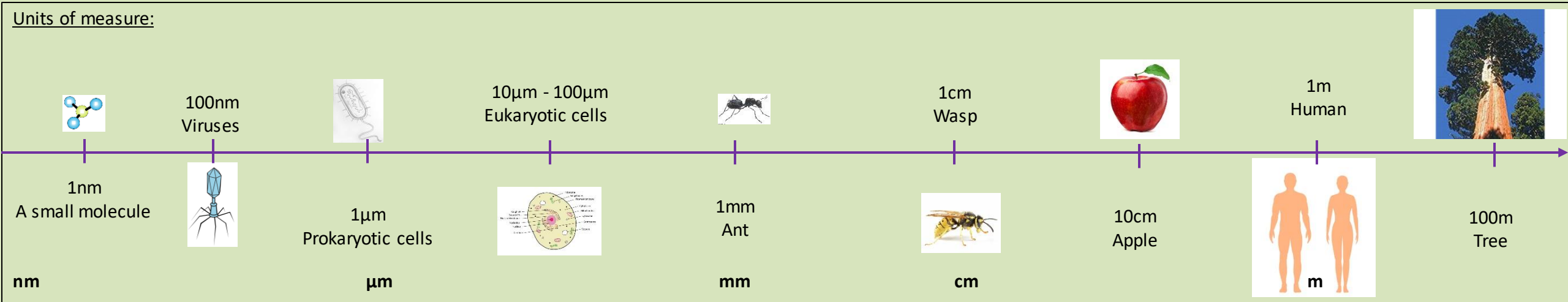
Independent: the variable that is being changed during the experiment

Dependent: the variable being tested or measured during the experiment

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

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

Units of measure:



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

The Periodic Table of Elements

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

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

KS3 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

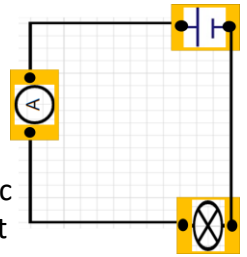
	Name
	Bulb
	Cell
	Battery
	Wire
M	Motor
	Switch
	Buzzer
V	Voltmeter
A	Ammeter

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

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

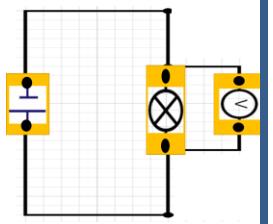
Electric Current Amps

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



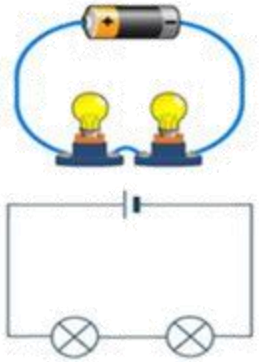
Potential Difference Volts

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



Series and parallel circuits

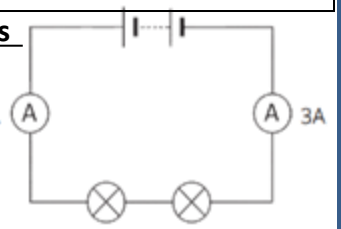
Series circuits



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

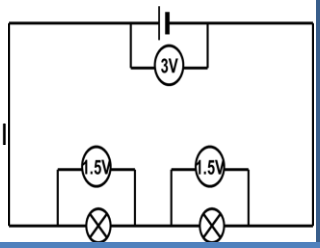
Electric Current in series circuits

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

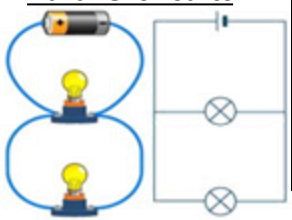


Potential difference in series circuits

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



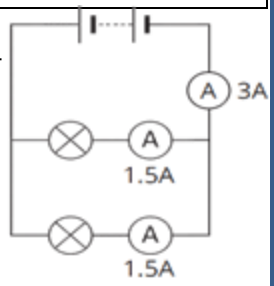
Parallel circuits

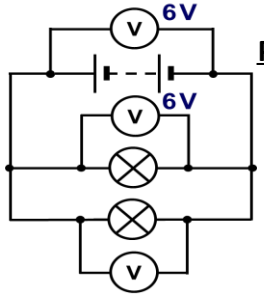


In a parallel circuit, the components are connected on separate branches. This gives the current several different paths to flow down. If one bulb stops working, the other bulbs will remain lit as the circuit is still complete

Electric Current in parallel circuits

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



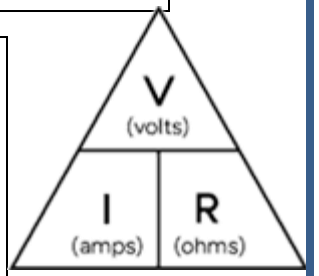


Potential difference in parallel circuits

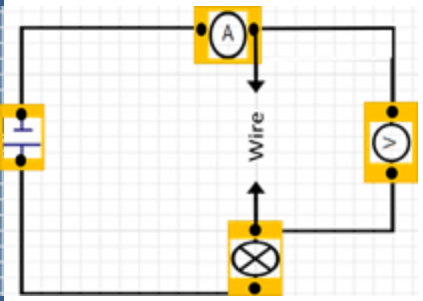
In a parallel circuit, the potential difference across each bulb is the same as the potential difference across the battery. This means that all the bulbs have the same brightness, and they are brighter than the same number of bulbs in a series circuit.

Resistance

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



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



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

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

Conductor

low resistance

Insulator

High resistance

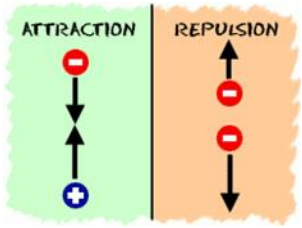
As the width of the wire increases, resistance decreases. This is because there is more space for the electrons to flow.

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

Static Electricity

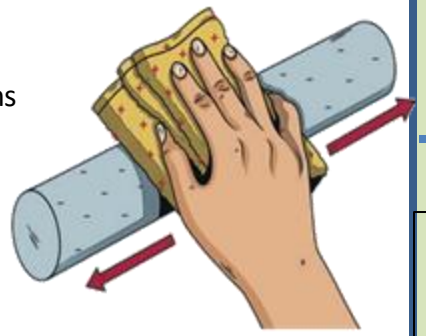
Static charge can build up when two insulating materials are rubbed together. Friction between the materials causes electrons to be transferred from one material to the other.

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



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

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



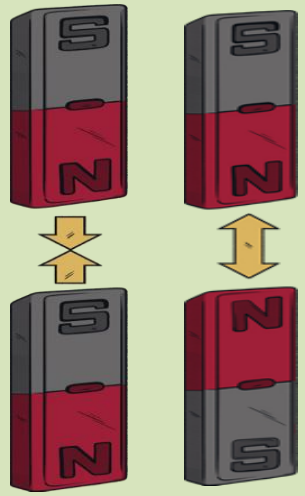
When you rub a balloon against your hair, electrons are transferred from your hair to the balloon. The balloon and your hair have opposite charges so your hair is attracted to the balloon, making it stand on end.

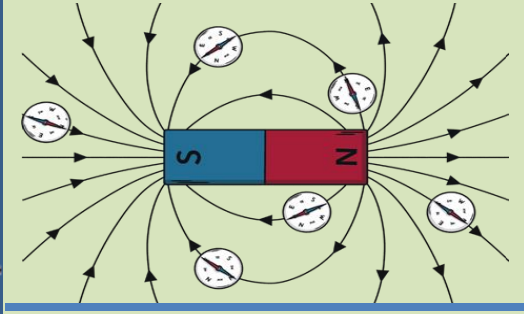
Magnetism

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

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

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

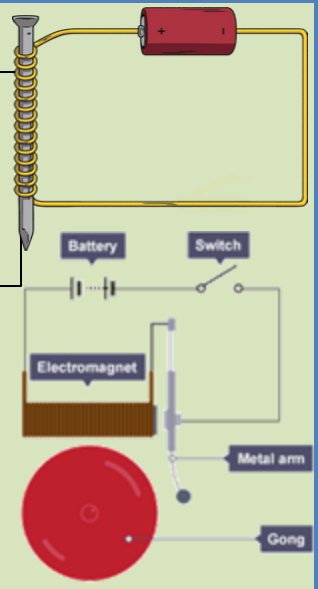




All magnets exert a magnetic field- this is the area where the magnet has an influence on currents and other magnets. It can be shown by placing compasses around the magnet and plotting where it points

Electromagnets

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



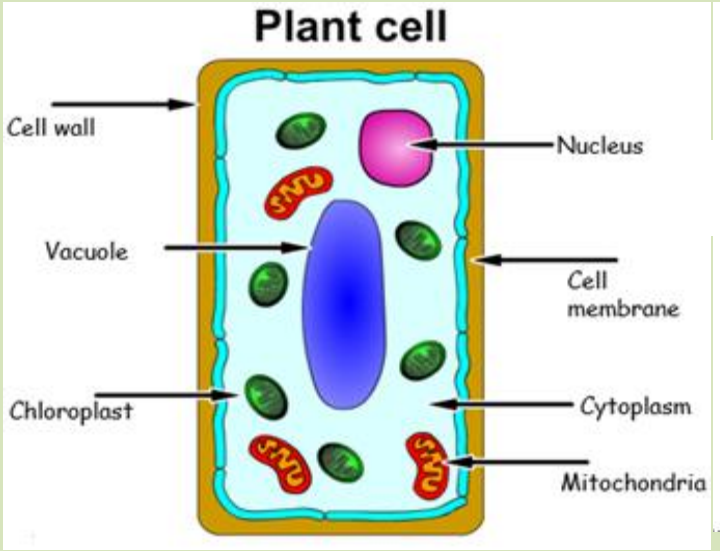
Electromagnets can be made even stronger by:
- adding more coils
- increasing the current or voltage
- winding the coils closer together

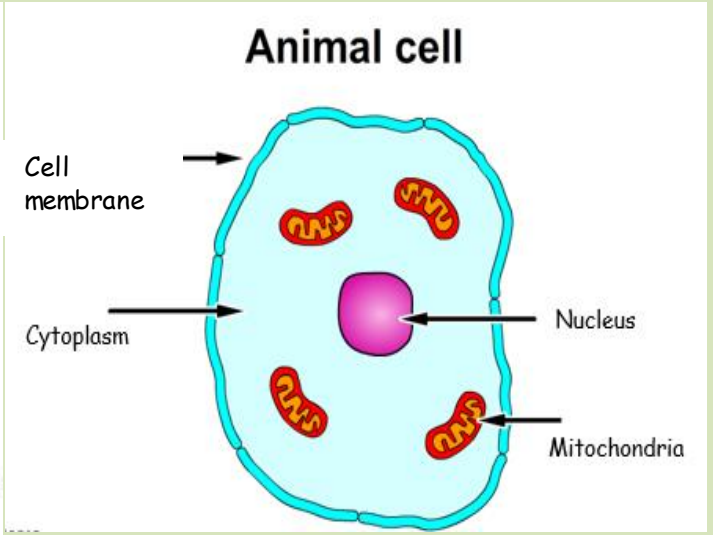
<u>Uses of electromagnets</u>

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

Year 7 Biology - Cells and systems

Term	Definition
Antagonistic muscles	Pairs of muscles that contract and relax in opposition to each other allowing movement
Cardiac	Relating to the heart
Diffusion	The passive movement of particles from an area of high concentration to an area of low concentration
Joint	Structure at which two parts of the skeleton are fitted together
Ligament	A short band of tough, flexible fibrous connective tissue which connects bone to bone
Magnification	The enlargement of an object by an optical instrument such as a microscope
Multicellular	An organism that is made up of different types of cells
Organ	Tissues grouped together to perform a particular function
Organelle	The small parts that make up a cell
Organism	An individual living thing such as a dog, human, oak tree
Respiration	The process of breaking down glucose to release energy
Tendon	A flexible but inelastic cord of strong fibrous collagen tissue connecting muscle to bone
Tissue	Group of similar cells working together to perform a particular function
Unicellular	A living thing that is made of one cell only e.g. bacteria, yeast



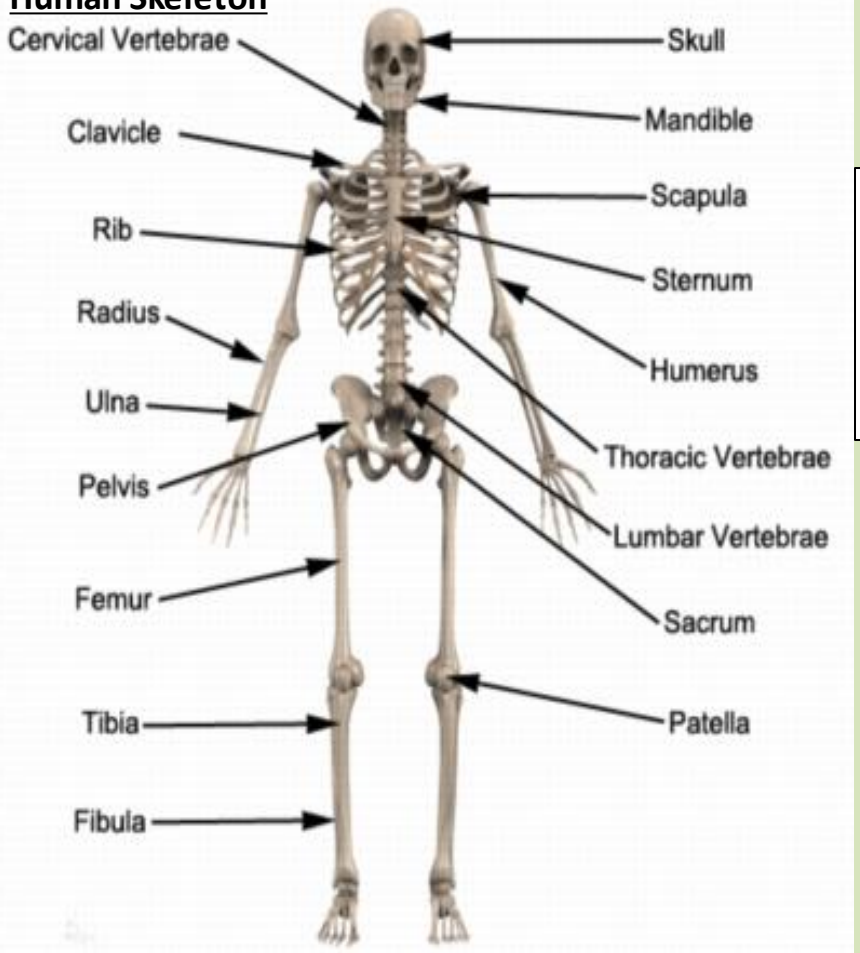


Cell organelle	Function	
Cell membrane	Controls what substances can get into and out of the cell.	Plant and animal cells
Cytoplasm	Jelly-like substance, where chemical reactions happen. In plant cells there's a thin lining, whereas in animal cells most of the cell is cytoplasm.	Plant and animal cells
Nucleus	Controls what happens inside the cell. Carries genetic information. In exams don't call the nucleus the 'brain' of the cell. That is not a good description and will not get you marks.	Plant and animal cells
Mitochondria	Where respiration happens – energy is released	Plant and animal cells
Chloroplast	Where photosynthesis happens – chloroplasts contain a green substance called chlorophyll.	Plant cells only
Vacuole	Contains a liquid called cell sap, which keeps the cell firm.	Plant cells only
Cell wall	Made of a tough substance called cellulose, which supports the cell.	Plant cells only

Year 7 Biology - Cells and systems

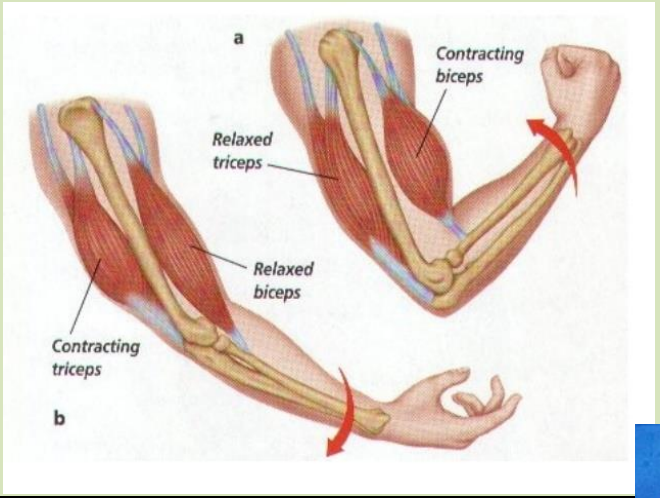
1. 4 main roles of the skeleton are: movement, support, protection and production of blood cells.
2. Muscles contract and relax antagonistically (opposite each other)
3. Tendons connect <u>muscle to bone</u>
4. Ligaments connect <u>bone to bone</u>

Human Skeleton



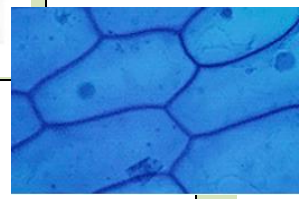
Antagonistic muscles

Muscles can only contract and relax (NOT push).
To move they must work antagonistically in pairs



Method for creating onion cell microscope slide

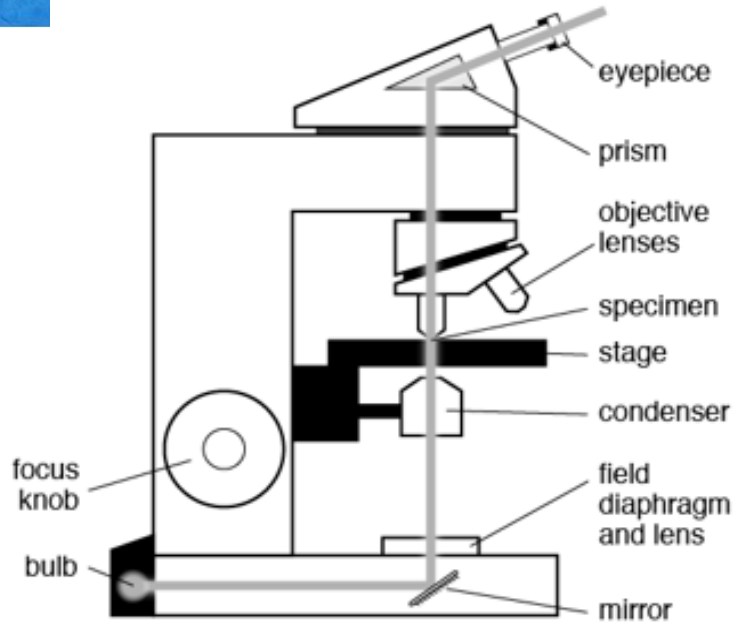
1. Collect a piece of onion and remove one of the onion layers.
3. Using forceps, carefully peel off the inner skin of the onion layer.
4. Place the onion skin onto a clean glass slide. Use your forceps to keep the onion skin flat on the glass slide.
5. Using a pipette, add one or two drops of dilute iodine solution on top of the onion skin.
6. Place a coverslip on top of the skin.
7. Place the slide on the microscope for observation using 4 x objective to find the cells
8. Once the cells have been found, they can then be viewed at higher magnification



Hazard
A hazard is something that can cause harm
Risk
A chance that the hazard will cause someone harm
Precaution
Rules put in place to reduce the risk of harm

In multicellular organisms, different cells are organised to perform different functions.
Cells are organised into **tissues**
Tissues are organised into **organs**
Organs are organised into **organ systems** such as respiratory system and digestive system

The microscope

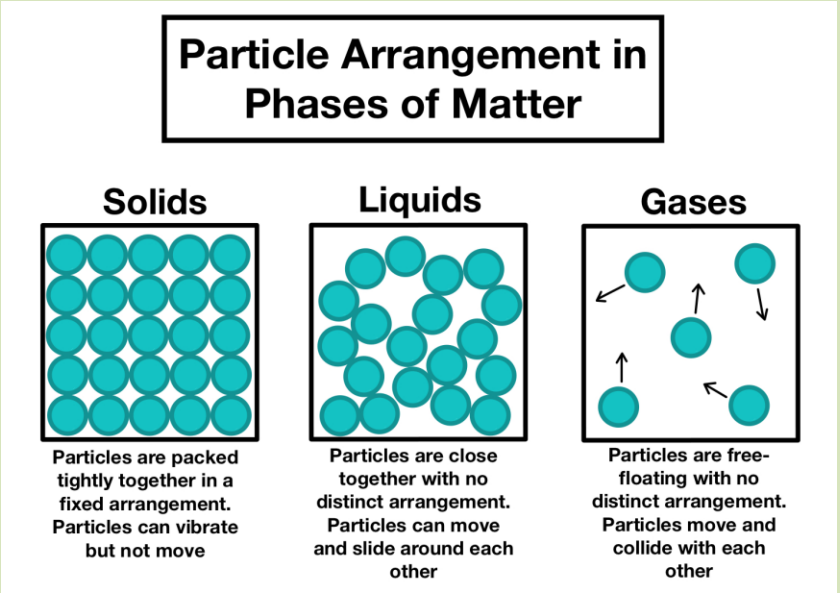


Magnification

Total magnification = magnification of eye piece lens x magnification of objective lens

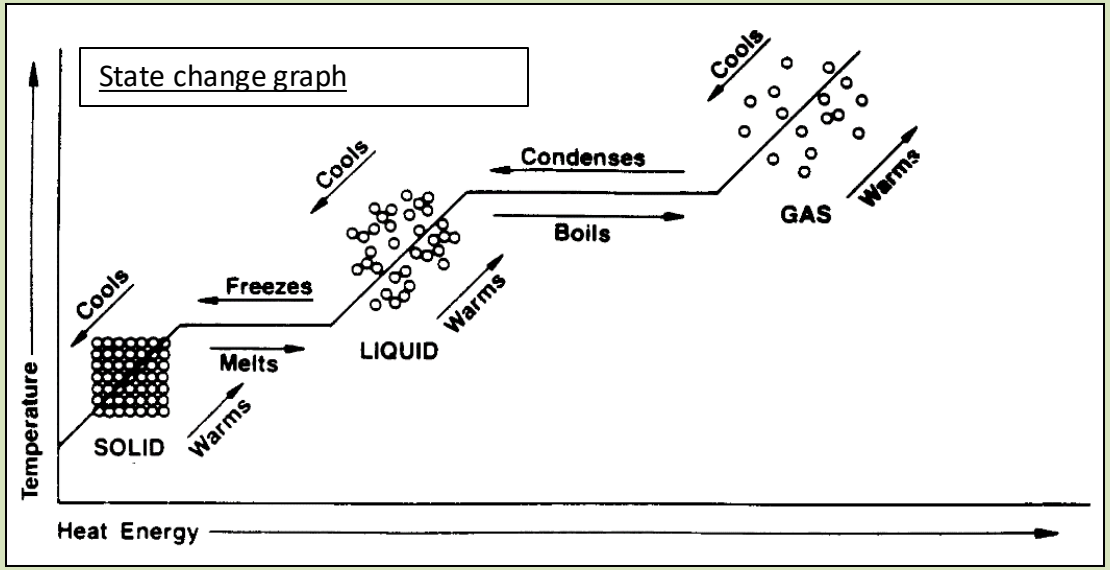
KS3 Chemistry Unit 1 – Matter, atoms and elements

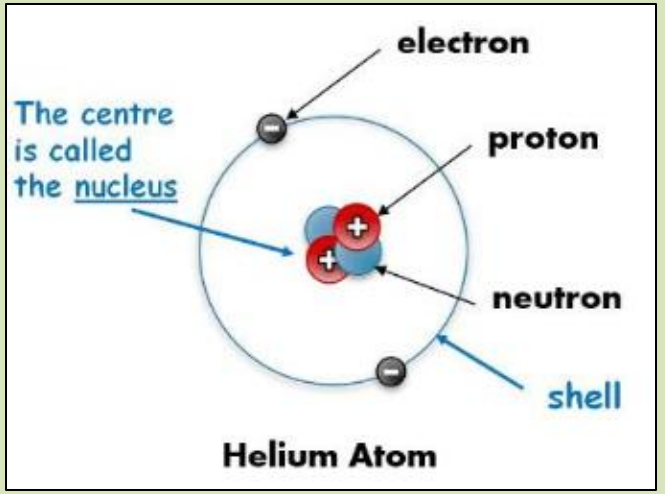
What are the three main states of matter?	Solid, liquid, gas
What is melting?	When a solid turns into a liquid.
What is freezing?	When a liquid turns into a solid.
What is evaporation?	When a liquid turns into a gas at its surface.
What is boiling?	When a liquid turns into a gas throughout the substance.
What is condensation?	When a gas turns into a liquid.
What is sublimation?	When a solid turns into a gas without becoming a liquid first.
What is deposition?	When a gas turns into a solid without becoming a liquid first.
What is a melting point?	The temperature that a solid turns into a liquid.
What is a freezing point?	The temperature that a liquid turns into a solid.
What is a boiling point?	The temperature that a liquid turns into a gas throughout the substance.
What is a condensing point?	The temperature that a gas turns into a liquid.
What is a reactant?	The chemicals that react in a chemical reaction.

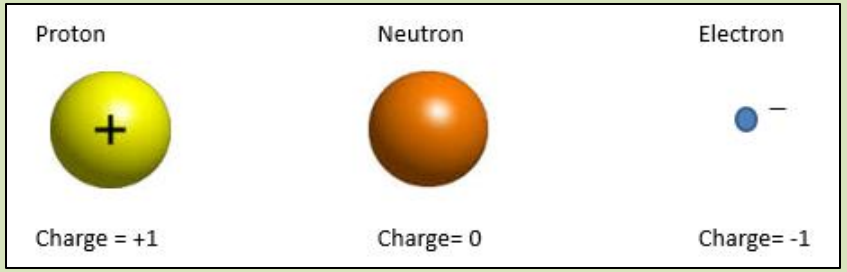


What are the arrangements of particles in the three states of matter?	Solid: particles in contact and in a regular arrangement. Liquid: particles in contact and in a random arrangement. Gas: particles not in contact and in a random arrangement.
What is the movement of the particles in the three states of matter?	Solid: particles vibrate on the spot. Liquid: particles flow past each other. Gas: particles move around the container very fast.
What is the compressibility of the particles in the three states of matter?	Solid and liquid: cannot be compressed easily. Gas: can be compressed easily.
How do the three states of matter behave in a container?	Solids: maintain their shape at the bottom of the container. Liquids: flows to fill the bottom of the container. Gas: fills the whole container.

Atom - The smallest particle that can be chemically broken down.
Molecule - Two or more atoms bonded together
Elements - Made from only one type of atom. All elements can be found on the periodic table.
Mixture - Two or more atoms and/or compounds not bonded but mixed together.
Compound - Made from two or more different types of atom.







Ice melts at 0°C
Water boils at 100°C
Water will be in a solid state (ice) -3°C
Water will be in a gas state (steam) at 103°C

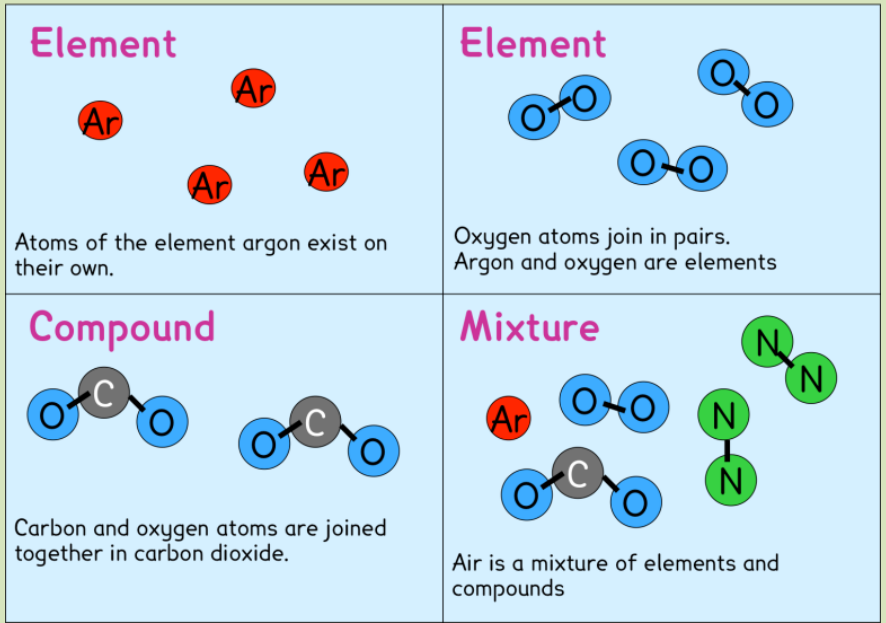
When three or more different elements combine, and one of them is oxygen, the ending will usually be something "–ate"

E.g. 1 calcium atom, 1 carbon atom and 3 oxygen atoms
calcium + carbon + oxygen → calcium carbonate

When two different elements combine the ending is usually something "–ide"
E.g. Magnesium + oxygen → magnesium oxide
E.g. Copper + oxygen → copper oxide

What is a product?	The new substances that are formed in a chemical reaction.
What is a word equation?	An equation showing the reactants and the products of a reaction: reactants → products

Blob diagrams to show different types of substance:



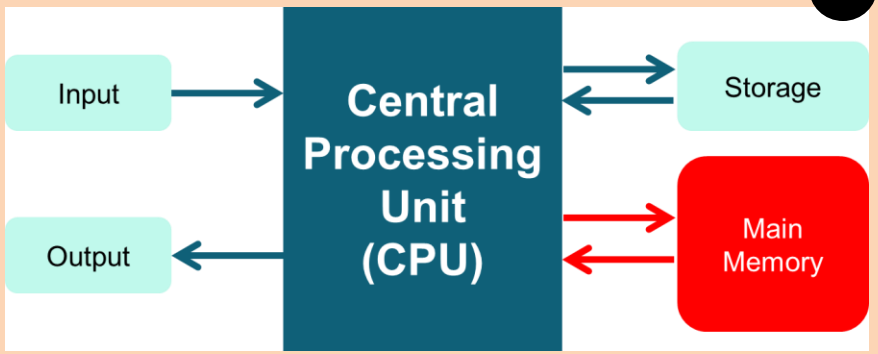
1.1

What is Hardware?	What is Software?
Objects that you can touch, like a Music CD. For example: **Disks, disk drives, display screens, keyboards, printers, boards, and chips**.	You cannot 'touch' software. Software refers to the programs that run on a computer, rather like the music playing on a CD. Examples of software: **Windows, MS Word, MS Excel, Kodu and Logo**.

1.2

What is an output device?	What is an input device?	What is a Storage device?
An output device is a piece of computer hardware used to display or output data which has been processed or stored in a computer **Printer, Speaker**	An input device is anything can be used to enter data into a computer **Keyboard, Mouse**	A storage device is used to permanently record or store data **CD, Hard Drive**

1.3



RAM vs ROM

1.4

- **RAM** stands for **R**andom **A**ccess **M**emory
- **ROM** stands for **R**ead **O**nly **M**emory
- Some data needs to be permanently held in memory, even when the machine is switched off

Processor speed

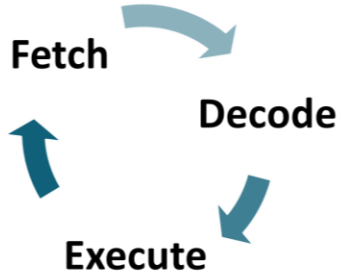
1.5

- One cycle per second = 1 Hertz (Hz) = 1 instruction carried out each second
- 1 Kilohertz (kHz) = 1000 cycles per second
- 1 Megahertz (MHz) = 1,000,000 cycles per second
- 1 Gigahertz (GHz) = 1,000,000,000 (1 Billion) cycles per second

Fetch – Decode – Execute cycle

1.6

- Computer has a list of instructions in memory to carry out
- CPU **Fetches** top instruction from the list
- Instructions is passed to **Decoder** to interpret
- **Decoder** passes on the instruction
- Instruction is **Executed** or carried out
- CPU **Fetches** top instruction from the list…



1. UNDERSTANDING COMPUTERS

Year 7 Computer Science – Autumn Term

Decimal number system (Sometimes called the Denary system) 1.7

Binary representation 1.11

Number of Switches	Possible combinations or states
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256

Binary to denary conversion 1.15

12	64	32	16	8	4	2	1
OFF	ON	OFF	ON	OFF	OFF	OFF	ON
0	1	0	1	0	0	0	1

= 64 + 16 + 1

= 81

Identifying odd or even patterns 1.18

- Only the right hand Bit represents an **Odd** number – **1**. The rest represent even numbers – **2**, **4**, **8**, **16** and so on
- A **1** in the right hand bit means the pattern is an **Odd** number. A **0** says it is **Even**
- Which of the following are Odd or Even?
  - 1001011
  - 0011010
  - 0110111

Computer use millions of electronic circuits and switches which can either be **On** or **Off**

On is represented by **1** and **Off** is represented by **0**

1.8

Decimal to Binary 1.12

- Convert 28 to Binary
- Method
- Working right to left write out the numbers 1, 2, 4, 8 and so on doubling each time to 128

28 has a 16 in it, leaving 12. 12 is 8 + 4

ASCII Table 1.16

Decimal	Binary	Character	Decimal	Binary	Character	Decimal	Binary	Character
32	00100000	space	64	01000000	@	96	01100000	`
33	00100001	!	65	01000001	A	97	01100001	a
34	00100010	"	66	01000010	B	98	01100010	b
35	00100011	£	67	01000011	C	99	01100011	c
36	00100100	$	68	01000100	D	100	01100100	d
37	00100101	%	69	01000101	E	101	01100101	e
38	00100110	&	70	01000110	F	102	01100110	f
39	00100111	'	71	01000111	G	103	01100111	g
40	00101000	(	72	01001000	H	104	01101000	h
41	00101001	)	73	01001001	I	105	01101001	i
42	00101010	*	74	01001010	J	106	01101010	j
43	00101011	+	75	01001011	K	107	01101011	k
44	00101100	,	76	01001100	L	108	01101100	l

Adding an extra zero 1.19

- In the Denary system, an extra **0** multiplies everything by 10
  - 5 becomes 50, 17 becomes 170
- What happens in the Binary system?
  - 1011 becomes 10110
  - 1011 (= 11) becomes 10110 (= 22)

Bits and Bytes 1.9

0 or a 1	=	1 Bit (Binary Digit)
8 Bits	=	1 Byte
1000 Bytes	=	1 Kilobyte (Kb)
1000 Kb	=	1 Megabyte (Mb)
1000 Mb	=	1 Gigabyte (Gb)
1 Byte	=	1 Character of text

Binary representation 1.13

- One switch can only represent 2 possible states
  - On or Off.
- Two switches can represent 4 states
  - On & On
  - On & Off
  - Off & On
  - Off & Off

ASCII 1.10

American Standard Code for Information Interchange

- Numerous different codes for representing data have been invented, but ASCII is used nowadays on nearly all computers
- Originally only 7 bits were used but now the eighth bit is used to give extra characters such as ©, ® etc
- How many different characters can be encoded using seven bits? Eight bits?

ASCII 1.14

- It is a character-encoding scheme originally based on the English alphabet
- ASCII codes represent text in computers, communications equipment, and other devices that use text
- For example: small letter '**f**' is represented by the following combination of bits in the ASCII table

  f = 1100110 or in 8 Bits, 01100110
- 8 bits is called a Byte

1.17

Decimal	Binary
0	00000000
1	00000001
2	00000010
3	00000011
4	00000100
5	00000101
6	00000110
7	00000111
8	00001000
9	00001001
10	00001010

The rules of binary addition 1.20

Work Right to Left and apply these simple rules:

1. 0 + 0 = 0
2. 0 + 1 = 1
3. 1 + 0 = 1
4. 1 + 1 = 0 *Carry 1*
5. 1 + 1 + 1 = 1 *Carry 1*

```
  1 1
    1 1 1 0   14
+   1 1 0 0   12
= 1 1 0 1 0   26
```

Carry Bit · Rule 5 · Rule 4 · Rule 2 or 3 · Rule 1

Data units

1.21

Name	Equal to	Size in Bytes
Bit	1 bit	1/8
Byte	8 bits	1
Kilobyte	1,000 bytes	1,000
Megabyte	1,000 kilobytes	1,000,000
Gigabyte	1,000 megabytes	1,000,000,000
Terrabyte	1,000 gigabytes	1,000,000,000,000

Storage units

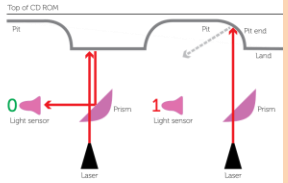
1.22

Name	What can it store?
Byte	A single letter, like "A"
Kilobyte	A 14-line e-mail. A pretty lengthy paragraph of text
Megabyte	A good sized novel
Gigabyte	Roughly 300 MP3s or 40 minutes of video at DVD quality. A CD holds about three quarters of a gigabyte
Terrabyte	1,000 copies of the Encyclopedia Britannica Statistically, the average person has spoken about this much by age 25!

Reading and writing to a CD-ROM

1.23

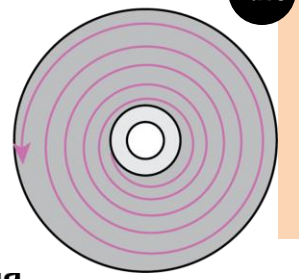
- Powerful laser 'burns' disk surface
- Laser 'burns' pits into surface
- Weak laser reads surface
- Detector measures reflected light



Tracks on a CD

1.24

- A CD has one long track on it full of Pits and Lands
- This tracks begins at the centre of the disk and work outwards in a tight spiral



Optical media

1.25

- CDs, DVDs, Blu Ray Disks
- Some are read only
- Some you can burn new data onto
- Some you can re-use over and over again with new data

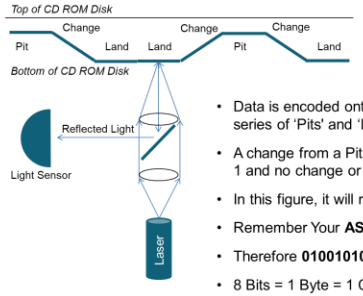
Pits and lands

1.26

- All Optical media (CD, DVD, Blu-Ray etc.) have pits and lands
- These are microscopic and represent the binary information of the data stored on the disc
- A CD is reflective and reflects the laser into a sensor to register it as a 0, but when the light hits the beginning or end of a pit, it scatters with little reflection, and a 1 is registered

How a CD-ROM is read

1.27



- Data is encoded onto the CD using a series of 'Pits' and 'Lands'
- A change from a Pit to a Land is read as a 1 and no change or a Land is read as a 0
- In this figure, it will read as: **01001010**
- Remember Your **ASCII**!
- Therefore **01001010** = **74** = Letter **J**
- 8 Bits = 1 Byte = 1 Character of Text

'Burning' a CD-ROM

1.28

- Pits and lands are used to represent binary 1s and 0s
- Lasers shine light at the silver surface of the disk and light is reflected – except where a pit begins or ends. Here the reflection is scattered and a 1 is read
  - Good reflection / Poor reflection
  - On / Off
  - 1 / 0

A pattern of 1s and 0s can make a word using ASCII, therefore you can store a word using a series of Pits and Lands 'burnt' into the disk

1.9

Timeline of Communication Methods

1.29

1. UNDERSTANDING COMPUTERS

The effect of changing technologies 1.30

- Connectivity
- Convenience
- Creativity & Design
- Globalisation & Collaboration
- Potential & Innovation
- Research & Discovery


Gordon Moore in 1965

Moore's law 1.31

Moore's Law says that the number of transistors in integrated circuit boards doubles every two years

The capabilities of many digital electronic devices are strongly linked to Moore's law: processing speed, memory capacity, sensors and even the number and size of pixels in digital cameras

This means that a 32Gb memory chip now could be 1Tb memory chip in only 10 years if it doubles in capacity every two years

Future and emerging technologies 1.32

- Wireless charging
- Driverless cars
- Domestic robots
- 3D printers
- RFID – Radio Frequency ID

The possibilities of RFID? 1.33

1. Your mobile phone might have a RFID Chip inside it
2. Supermarket products may get RFID chips
3. Your trolley may be automatically and instantly 'read' at an RFID checkout
4. Your mobile phone will pay for the goods remotely using existing RFID touch technology
5. Your fridge and cupboards could have RFID chips and will recognise everything in them offering you suitable recipes
6. Your bin could recognise when you have thrown away a product and automatically re-order another for you!

2. COMPUTATIONAL THINKING

Two states 2.3

- Lights can be turned on and off
  - This gives two states, on and off
  - **On** is represented by **1** or **TRUE**
  - **Off** is represented by **0** or **FALSE**


1, TRUE


0, FALSE

Logical deduction 2.4

- Deduction is the process of working out if something is TRUE or FALSE
- Computer scientists need to use logical thinking to work out how to solve problems
  - They will do this before they write any code
  - They will often consider similar problems that have been solved – for instance, doubling and halving is often used in Computing

Y7 Computer Science – Aut Term

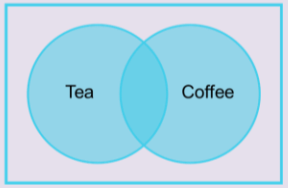
Computational Thinking 2.1

Computational Thinking is how Computer Scientists think about problems

- There are certain techniques which they use to help them solve problems including:
  - Logical thinking
  - Algorithmic thinking
  - Decomposition
  - Abstraction

Venn diagrams 2.2

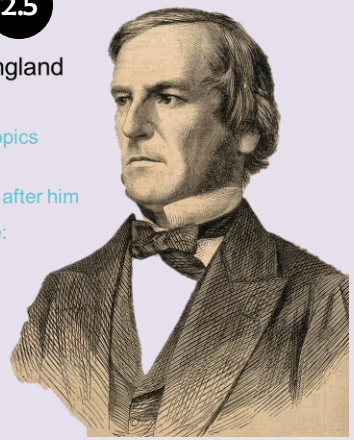
- We can use Venn diagrams to show Boolean expressions
- Look at the following:
  - All people need oxygen to live
  - Jack is a person
  - What conclusion can we deduce from this?
- What does this Venn diagram represent?



George Boole 2.5

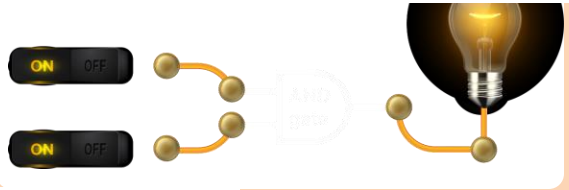
- George Boole lived in England in the 19th century
  - He worked on the Maths topics called algebraic logic
  - Boolean algebra is named after him
  - The Boolean operators are:

    AND
    OR
    NOT



AND gates

- Computers use logic gates, but they use electricity instead of water
  - An AND gate requires the electricity to be ON for both inputs
  - What happens if either of the switches is turned off?
  - What happens if both switches are turned off?



AND TRACE TABLE

A	B	Output
OFF	OFF	OFF
ON	OFF	OFF
OFF	ON	OFF
ON	ON	ON

OR gates

- An OR gate needs just one switch to be ON
  - What happens if both switches are OFF?
  - What happens if both switches are ON?

OR TRACE TABLE

A	B	Output
OFF	OFF	OFF
ON	OFF	ON
OFF	ON	ON
ON	ON	ON

NOT gates

- A NOT gate will change the input into the opposite
  - A ON will turn into an OFF
  - An OFF will turn into an ON

NOT TRACE TABLE

A	Output
OFF	ON
ON	OFF

Algorithms

- An algorithm is a sequence of steps which solve a problem
  - It is like the method in a recipe
- If we have an algorithm to solve a problem, then programmers can make a program so that a computer can solve the problem
  - The computer will run each of the instructions in order

Compression

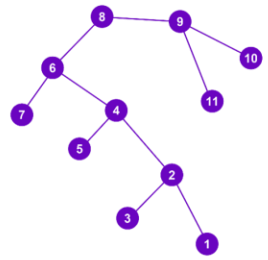
- Compression means reducing the amount of data needed to store or transmit something
  - Lossy compression means that some of the original data will be lost
  - Lossless compression means that none of the original data will be lost

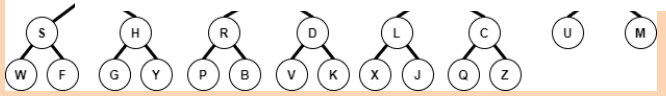
Abstraction

- Abstraction is where unnecessary details are removed or hidden
- This allows the most important details to be considered

Network terms

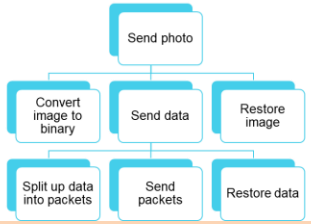
- The diagram shows a **network** or a **graph**
  - The circles are known as **nodes** or **vertices**
  - The lines that join the nodes are known as **edges** or **arcs**





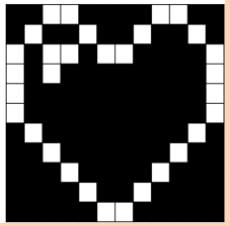
Decomposition

- Sending a photo might be easy for a user, but there are many problems that need to be solved by the computer
  - Decomposition is breaking down a problem into smaller parts that are more manageable



Converting the image

- To convert a black and white image to binary we first split the image into boxes called pixels
  - Black is represented by 0
  - White is represented by 1
- What is the binary that would represent the first row of pixels?

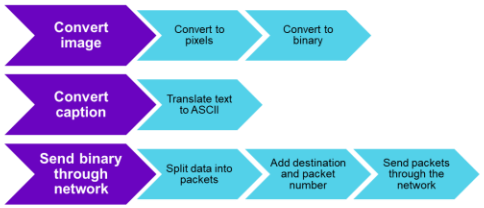


Transmitting data

- When sending data through a network, the computer will split it down into smaller amounts that are put into packets
- Packets can be sent through different routes through the network
  - How could packets get from AVA to RAJ?

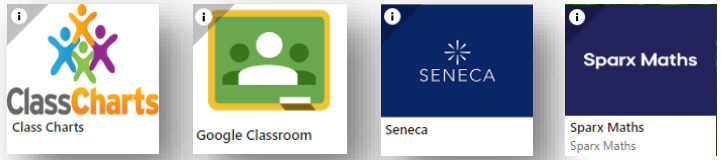
Putting it all together

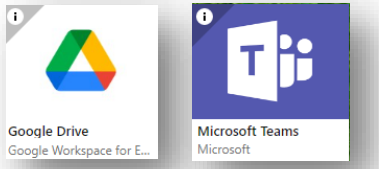
- To send a photo and caption from one phone to another we use the following process:



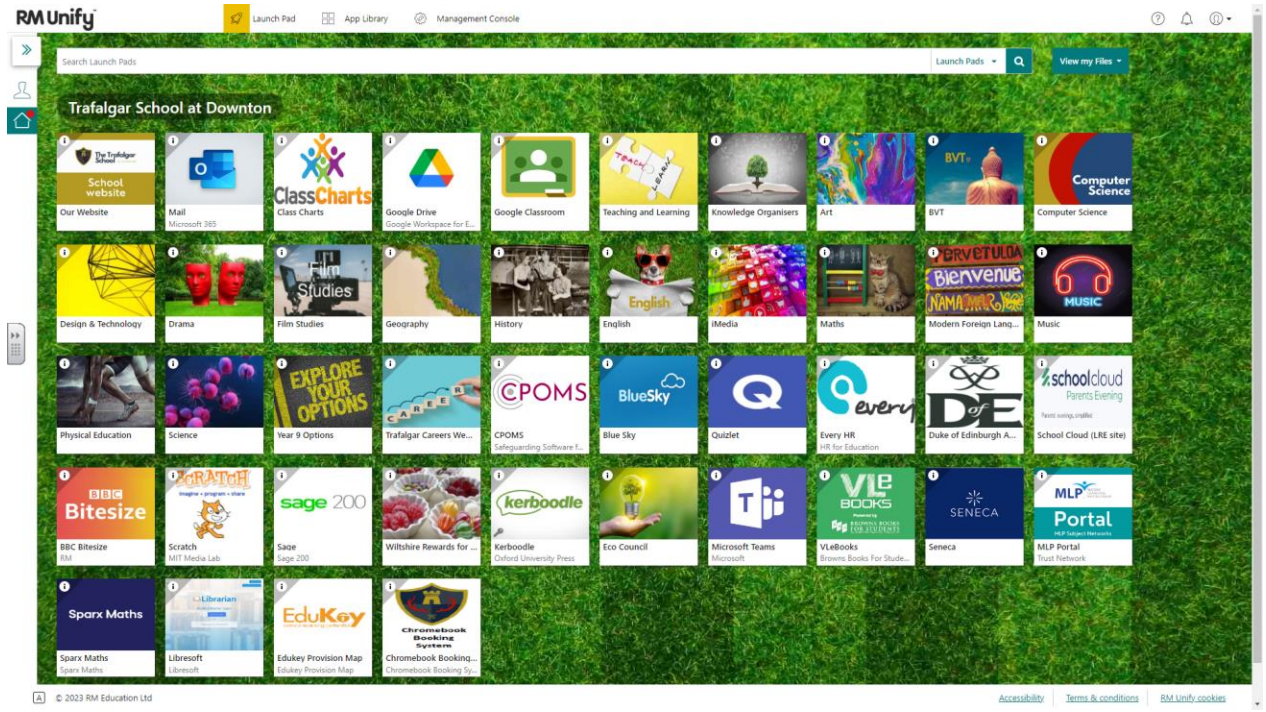
- How do we rebuild the image and caption at the other end?

SCHOOL SYSTEMS (Accessible from RMUnify)





These tiles are likely to be used frequently



History Terms 1 & 2: Anglo-Saxon England & 1066

Timeline

410AD – Roman army abandons Britain
597AD – Augustine arrives in England
600AD – The Angles and Saxons arrive in England
793AD – Vikings attack the monastery on Lindisfarne
871AD – Alfred the Great is crowned King of Wessex
878AD – Alfred the Great wins the Battle of Edington
899AD – Alfred the Great dies
937AD – Athelstan wins the Battle of Brunanburh
1016 – the Viking ruler, Canute, becomes King of England
5th January 1066 – King Edward the Confessor dies with no heir
6th January 1066 - Harold Godwinson crowns himself King of England
20 September 1066 - Harald Hardrada, a Viking claiming the English throne invades England with more than 10,000 men in 200 longships
25 September 1066 Harold Godwinson, defeats and kills Harald Hardrada at the Battle of Stamford Bridge
27th September 1066 - The William the Duke of Normandy (France), invades the south of England from France. His Normans pillage and burn the south
14 October 1066 – The Battle of Hastings. Harold marches south to meet William, where they battle at Hastings. William defeats Harold, who is killed.

Key Words

Anglo Saxon	The Anglo-Saxon age in Britain was from around 410AD to 1066. They were a mix of tribes from Germany, Denmark and the Netherlands. The three biggest were the Angles, the Saxons and the Jutes. The land they settled in was 'Angle-land', or England.
Monastery	The building where monks live.
Vikings	People from Scandinavia who were fighters, sea-travellers, traders and farmers.
Witan	The name given to the collection of Anglo-Saxon noblemen who advised the king.
Longboat	A Viking ship with a sail and oars.
Dark Ages	The term used to describe the years that followed the fall of the Roman Empire
Archaeologist	Someone who examines objects and locations from the past, through diggings and excavation.
Invaders	People who attack and try to take over land from other people.
Pagan	A person who worships many different gods.
Celts	People in Britain before the Romans invaded in 43AD.
Pope	Head of the Roman Catholic Church.
Runes	The letters of the Anglo-Saxon alphabet.
Thane	An Anglo-Saxon nobleman who owned land.
Slave	A person who is not free but is owned and made to work by another.
Conquer	To beat an enemy and control them and their land, using force.

Mapping Anglo Saxon England

When studying Anglo Saxon England, it is essential to get a sense of place. By the 1060s, England had changed considerably in the six centuries under Anglo Saxon control and the geography of the country will help us understand the big picture of this topic.

Key
The Danelaw — Countries
Welsh Marches — Earldoms
Marshlands — Mountains

Scotland
Anglo Saxon England had an uneasy relationship with Scotland. There were common raids into the North, most recently in by Scottish King Malcom III in 1061.

The Earldoms
England was split into 5 earldoms:
- Mercia
- Wessex
- Kent
- East Anglia
- Northumbria

Each was run by an Earl, who were militarily and financially powerful whilst owing their land and position to the King who had granted them it.

The Welsh Marches
Wales, like Scotland, was hostile to Anglo Saxon England. Welsh King Gruffudd ap Llywelyn attacked England in both 1052 and 1055.

The population
Anglo Saxon England had a population of roughly 2 million, with 90% of those living in villages in the countryside.

The few towns, contained the rest of the population and were spread across the England. They provided protection in the face of invasion and were trading centres.

Key Cities
London was the largest city, followed by York, it had good international trading links.

Winchester was the capital as it held the treasury and official documents, such as laws, it was where the King was seated..

Canterbury was the home of the Archbishop, head of the Catholic Church of England

The Danelaw
In the 9th Century, Danish Vikings had conquered parts of Northern and Eastern England, known as the *Danelaw*, with York as the capital. Whilst Viking rule did not last long, its impact was felt for generations

The Anglo Danish ancestors in the Danelaw spoke a different language and had their own traditions and culture. Although they accepted the rule of the King of England, they wanted the Danelaw to be ruled by their own men and had many of their own laws, even paying lower taxes.

Scandinavia
Between 1014 and 1042 the kings of England were Viking invaders, such as Cnut. They had encouraged trade with Scandinavia (Denmark, Norway & Sweden) and the Danelaw continued to have close political and trading links with it.

Normandy
Normandy traded with England and was tied to the royal family, with Emma of Normandy being the mother of King Edward the Confessor. Edward even had Norman advisors when he ruled.

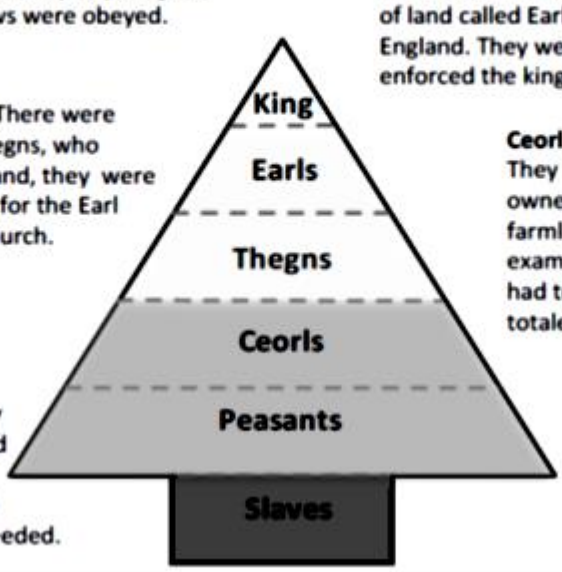
How was society organised?

Key
Aristocracy — Peasants

King
The most important person in the country, chosen by God, proving his power over of all the country. His tasks were to defend his country to pass good laws and to make sure the laws were obeyed.

Thegns
Thegns were the local lords. There were between 4,000 and 5,000 thegns, who ruled the small areas of England, they were the warrior class who fought for the Earl Some were bishops of the Church.

Peasants
80% of Anglo-Saxons were peasant farmers, who rented small farms that they worked for their families and also their lord. They owe their land to their Lord, and must also join the army if needed.



Earls
The most important lords, ruling huge areas of land called Earldoms. There were 5 earls in England. They were the king's advisers, enforced the king's laws and raised the army.

Ceorls (Freemen)
They were free peasants who owned their own small area of farmland. Some were skilled, for example blacksmiths. All ceorls had to serve in the army. They totaled 10% of the population

Slaves
10% of the Anglo-Saxon population were slaves, they were not free and had to work for their lord. It was a normal practice.

The Norman Invasion

Term 2

The Norman Conquest – a period between 1066-88, where William of Normandy and his Normans invade, conquer and rule England.

Key Events

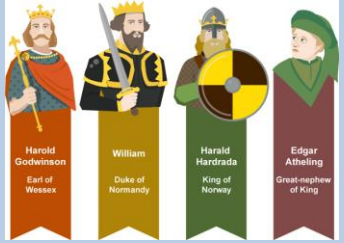
25th December 1066 - William is crowned king of England at Westminster Abbey.
1068 – William begins the building of his first castles. A Motte and Bailey castle is built in Warwick to keep control of the Midlands.
1069-70 – Rebellions in the North of England leads to the Harrying of the North where William devastates the north to stop the rebellions. He burns fields, cattle and destroyed villages leading to the death of 100,000 people die.
1085 – William orders the Domesday Book, a survey of England
1087 – William I of England dies

Key People

Harold Godwinson	Anglo Saxon, Earl of Wessex, a powerful leader of England. His sister was married to Edward the Confessor.
William of Normandy	A Norman and Duke of Normandy in France, cousin of Edward the Confessor. An experienced leader and fighter.
Harald Hardrada	A Viking, King of Norway. Most feared warrior in Europe, claims he was promised the throne.
Edgar the Atheling	Leader of the 1069-70 rebellion against King William

Bayeux Tapestry	An embroidered cloth created in the 1070s to tell the story of the Norman Conquest from the Norman point of view.
Fyrd	Part time army used by the Anglo Saxon army
Housecarls	Full time and well trained soldiers in the Anglo Saxon army,
Cavalry	A soldier mounted on a horse
Shield Wall	A formation when soldiers stand together and link shields in a wall
Archbishop of Canterbury	In charge of running the Catholic Church in England. Swore in the new
Motte and Bailey	The first castle created by William. It was made out of wood and had a higher Motte part and a low Bailey part.
Stone Keep	Castle made out of stone with towers for defence
Homage or Oath	To promise to give allegiance to someone (e.g. King) publically.
Feudal System	The social structure of Medieval England that William used to keep control and loyalty of his people.
Villein	Peasants at the bottom of the Feudal System
Noble	Barons, Earls or other rich land owners who pledge their loyalty to William in the Feudal System
Knight	A soldier who serves a noble, they usually ride horses and wear armour. Ruled over the villeins
Pillage	To steal from a place during war.
Rebellion	An act of resistance to the government or King
Domesday Book	'The Great Survey' of 1085 which told William the value of English land, who owned it and what was there e.g. cattle It allowed him to calculate how much taxes he could charge.
Tax	Compulsory money paid to the king or government.

When Edward the Confessor died in 1066, the Witan, England's high council, met and decided who should be the next King of England. They chose Harold Godwinson, a leading member of the council. However, there were three other claimants to the throne.



Overview of the claimants:

SCAN ME

Edgar Aetheling.

He was the closest relative to Edward as his grandfather had been Edward's half-brother. However he was only 14, had no army, no military experience, no money and no experience of running a country.

Harald Hardrada

Harald Hardrada's father had been promised the throne by the pervious king, Harthacanute. When Hardrada's father died Harald Hardrada thought that he should be entitled to the English throne, as it had been promised to his family.

He was an experienced ruler, he had been the King of Norway for 20 years, he was the leader of a strong and powerful Viking army.

William, Duke of Normandy

He was a distant cousin of Edward as he was the illegitimate son of Edward' uncle.

William had strong ties to Harold Godwin as the earl of Wessex, they had been trading for years and they had helped each other fight of the threat of the Vikings.

Edward had been brought up in Normandy and when Harold Godwin rebelled against him in 1051, it was William of Normandy that had send in troops to help Edward. In return, Edward had promised William the throne.

William was a capable ruler of Normandy – he had proved that he was able to rule successfully.

He also claimed that Harold Godwinson, the most powerful earl in England had promised to support Williams claim.

Harold Godwinson

Harold was Edward's brother-in-law as his sister was Edith, the Kings wife.
Harold Godwinson was Harold Godwin's son – the son of the person that had tried to rebel against Edward in 1051.
The family had controlled Wessex, the most powerful earldom. He had been acting as the Sub-Regulus therefore had experience of running a country, he was a skilled military leader and had proven himself when he defended England against as Welsh invasion.
It is believed that on his deathbed, Edward asked Harold to look after the county, 'I commend all the kingdom to your protection'.

Harold said that he had only promised to support William's claim to the throne because he was being threatened.

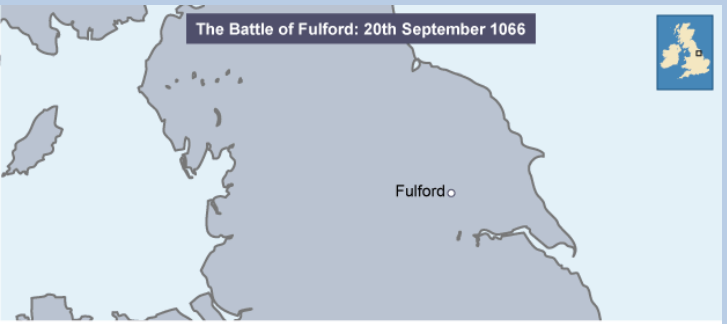
Summary of England in the 11thCentury

- England had rich mineral resources and fertile farming land.
- England was a Christian (Catholic) country.
- Viking influence: In 1013 the Vikings invaded England and Canute became the first Viking king of England. The North of England kept close links with Norway. Danegeld payments were made to Vikings to get them to leave.
- England was divided into four Earldoms: Wessex, Northumbria, Mercia and East Anglia.
- The Earls became the most powerful men in England after the king.
- Edward was able to become king because the Vikings were losing interest in England.
- Edward was crowned king on 3rdApril 1043.
- Norman influence: Edward had been sent to Normandy by his mother Emma when she married King Cnut. When he became king he appointed Normans to important posts in his court as he felt he could trust them more than the English Earls. However, he did marry Earl Godwin's daughter Edith.
- The Witan did not like the Norman influence and encouraged the Godwin family to return to England (after their exile).
- Edward was a weak ruler. He focused more on religion (he built Westminster Abbey. In the late 1050s Edward

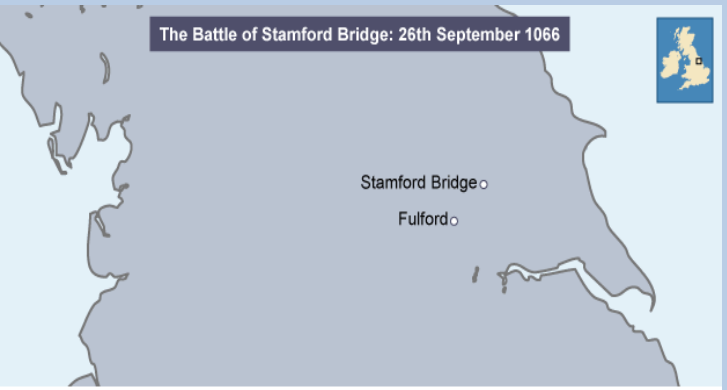
Topic Summary

1. England had a troubled History in the 50 years leading up to the succession crisis of 1066.
2. There were no clear rules in place for succession to the English throne.
3. Edward the Confessor had been a weak ruler. He increased Norman influence at court, which frustrated the English Earls, and allowed the Godwins to increase their power. In 1051 the Godwins rebelled against Edward. Although Edward survived the rebellion, the Godwins kept their powerful position. By 1057, the Godwins controlled earldoms in every part of England except Mercia.
4. Of the four claimants to the throne in 1066 Harold had the strongest position –being sub-regulus(deputy king) and having the support of the Witan. However, he faced competition from others who thought they had the right to be king –in particular William, Duke of Normandy.
5. Harold was hurriedly crowned just one day after Edward's death. The haste reflected how insecure he felt. He knew he would face challenges from other claimants.

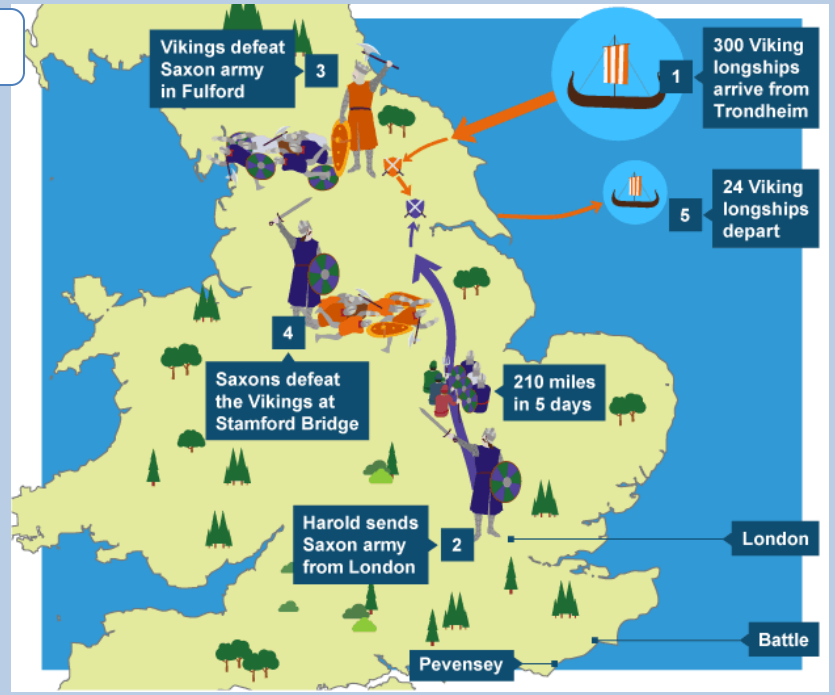
The battles of 1066

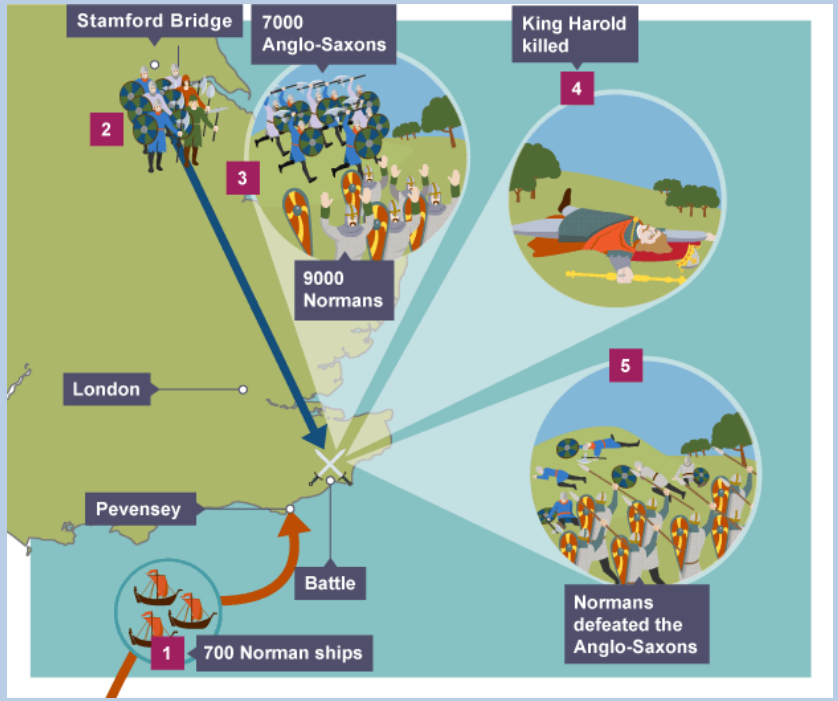


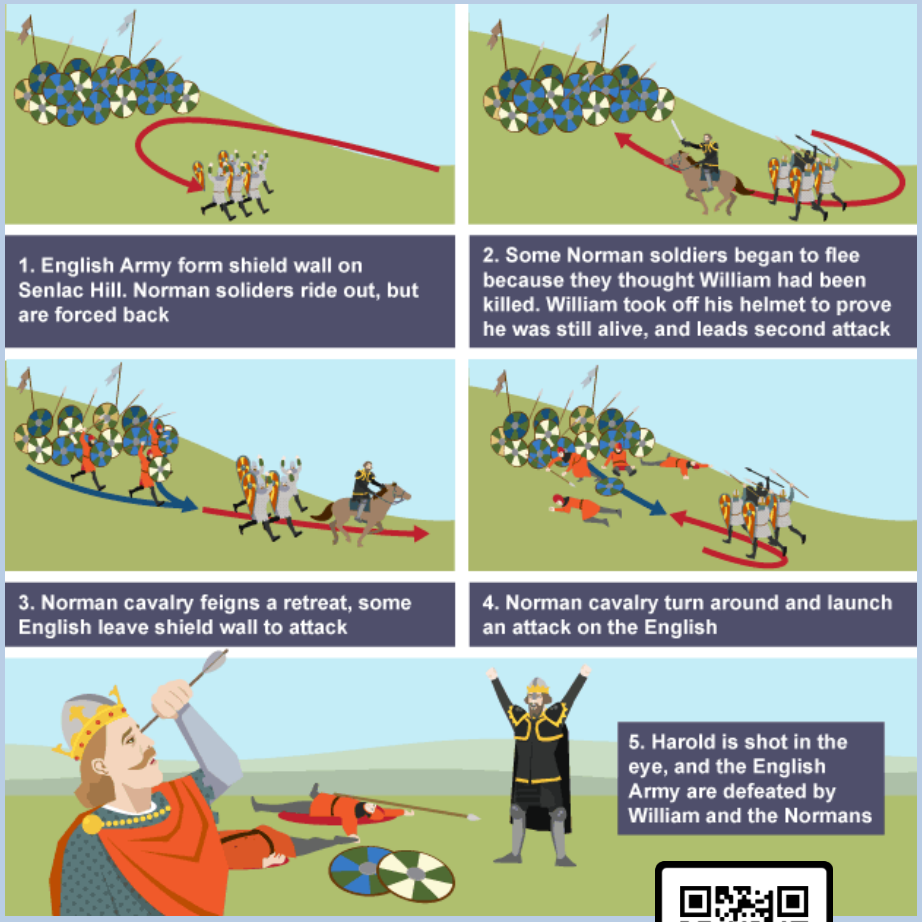
Earl Edwin and Earl Morcar		Harald Hardrada
x 5,000	Deployed soldiers	x 6,000
x 0	Reserve soldiers	x 4,000
x 1,000	Casualties	x 600



King Harold II		Harald Hardrada
x 15,000	Deployed soldiers	x 9,000
x 5,000	Casualties	x 4,000







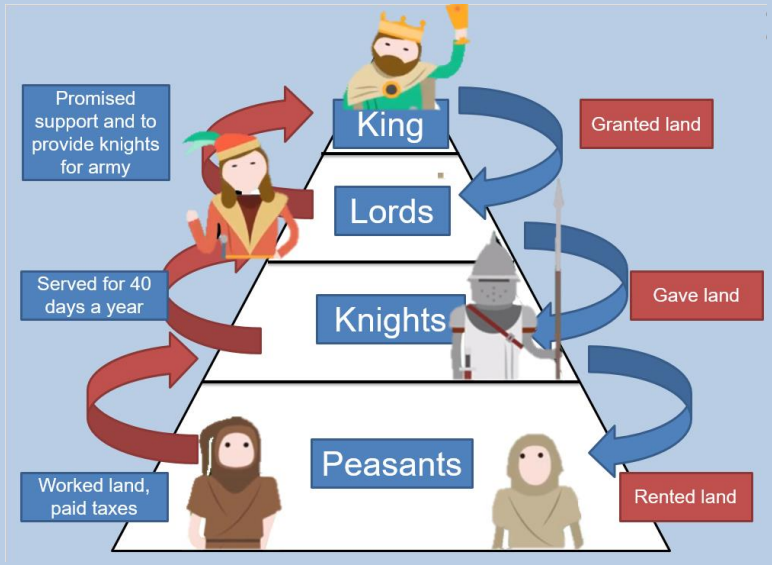
YouTube

Overview of the Battle of Hastings

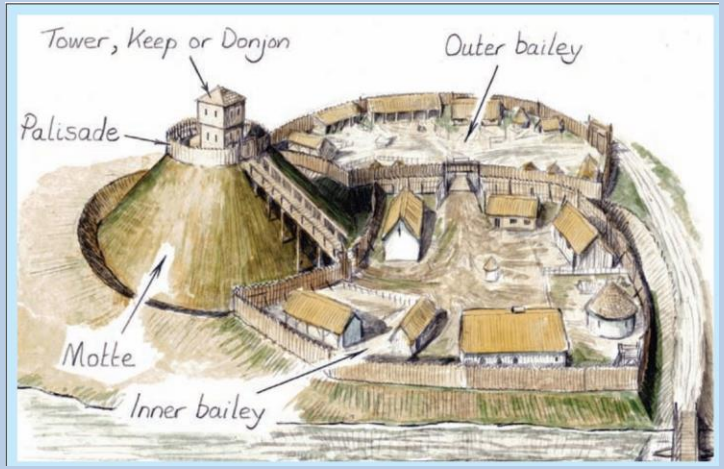
SCAN ME

After the Battle of Hastings, William had to assert his power over the rest of England. When he was crowned King of England on 25th December 1066 he still faced challenges.

There were three main ways he consolidated his control of the country: the building of castles, the establishment of the feudal system, and the creation of the Domesday book.



- The king owned all the land but gave some to the barons.
- The barons had to fight for the king and train knights for him. The knights then received some land from the barons.
- The **villeins** worked on the land for the knights and barons. They paid them taxes and gave them some of their crops, as well as fines if they broke the law.



Norman castles were often built in locations that were considered of strategic value. The first Norman castle in England was built a few miles from where William landed and was used as a base for soldiers to terrorise the local population and gather supplies.

Between 1085-86 the Domesday Book was created, it recorded who owned what land in England so that William knew what tax he could collect. It assessed the wealth and assets of his subjects throughout the land. This survey was also needed to asses the state of the country's economy in the aftermath of the Conquest and the unrest that followed it.

The Harrying of the North

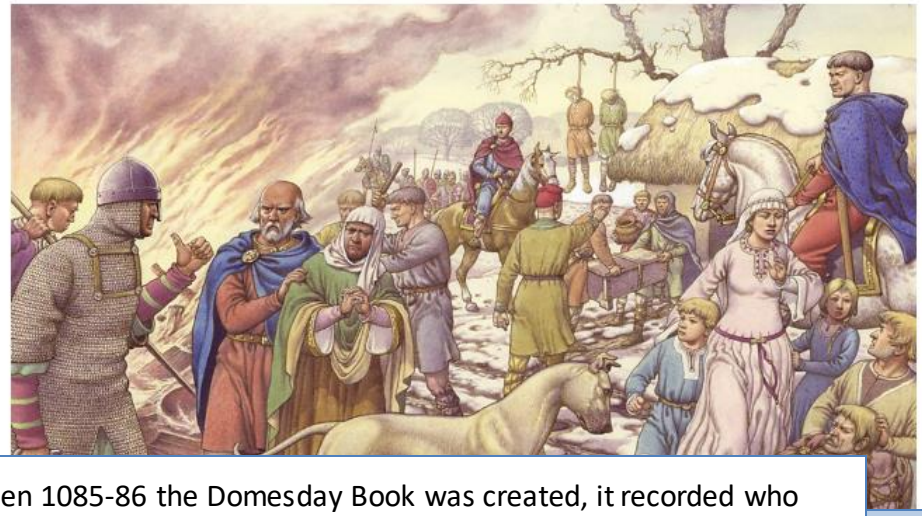
The winter of 1069 - 1070 is remembered in England as the most notorious period in the whole of King William's reign.

Faced with local rebellions in northern England that were encouraged by the Scots and the Danes, William set about systematically destroying large parts of the north.

According to **chronicler**, Orderic Vitalis:

> *'he made no effort to restrain his fury and punished the innocent with the guilty. In his anger he commanded that all crops, herds and food of any kind be brought together and burned to ashes so that the whole region north of the [river] Humber be deprived of any source of sustenance'.*

William's 'scorched earth' policy came to be known as the 'Harrying of the North'.



YouTube

How William secured England:

SCAN ME

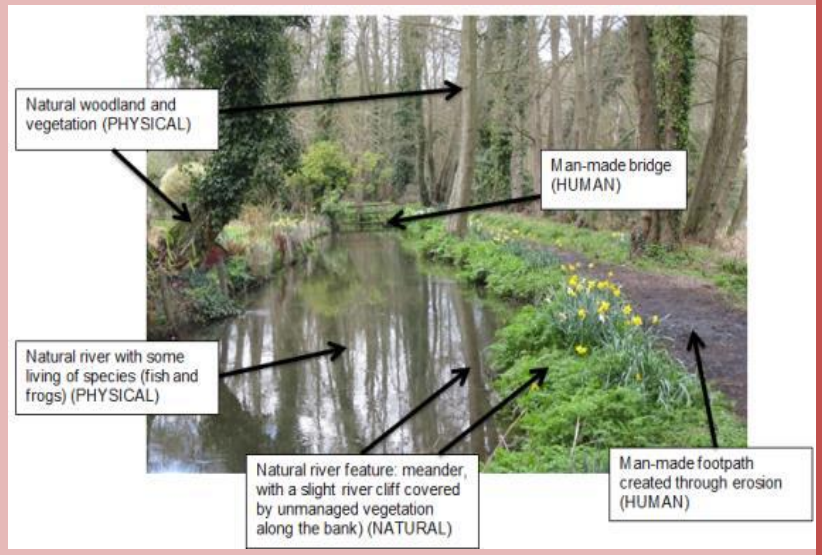
Scale 1:25000
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 km
DOWNTON CP
REDLYNCH CP
BREAMORE CP
Downton
Redlynch
Wick
Woodfalls
Morgan's Vale
North Charford
Hatchet Green
Lover
Bohemia
Hale
Clearbury Down
Charlton All Saints
Barford Park
Trafalgar Park
Wick Down
Breamore Down
Breamore Wood
Loosehanger Copse
Tinney's Firs
New Court Down
North Charford Down Farm
Whitsbury Castle Ditches
Standlynch Farm
Barford Down Farm
Templeman's Old Farmhouse
Newhouse
River Avon
A338
B3080

Field Sketches

Field sketches can be drawn by anyone - fantastic artistic skills are not required.

1.Identify the landscape that needs to be sketched.
2.Write a title that will help to locate the sketch, eg 'Site One'.
3.Draw an outline of the main features of the landscape with a pencil, e.g. hills and valleys or buildings and roads.
4.Add detail to the sketch to record more information.
5.Annotate or label the field sketch to give more information about the landscape and conditions, e.g. what was the weather like?
6.Consider taking a photograph to support the field sketch.

Annotating photographs



1. Write a title that will help to locate the photograph.
   e.g photo 1.
2. Annotate and label the photograph to give more information about the landscape and conditions.

Compass Directions

The four main points of the compass are North, East, South and West. Half way between each of these there are four other points: North-East, South-East, South-West and North-West. This makes an eight-point compass. There are a further eight points between these - remember the names of these are a mix of the two closest compass points but they always start with the main compass point, i.e North, East, South or West.

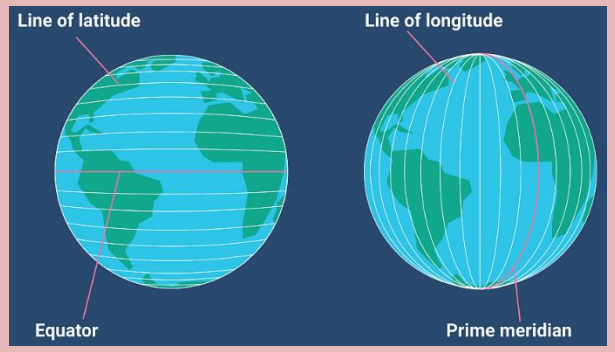
Ordnance Survey maps are always printed so that North is at the top of the map.

Latitude

Latitude (horizontal line) is measured in degrees north or degrees south of the equator, which is the line around the exact middle of the world.

Longitude

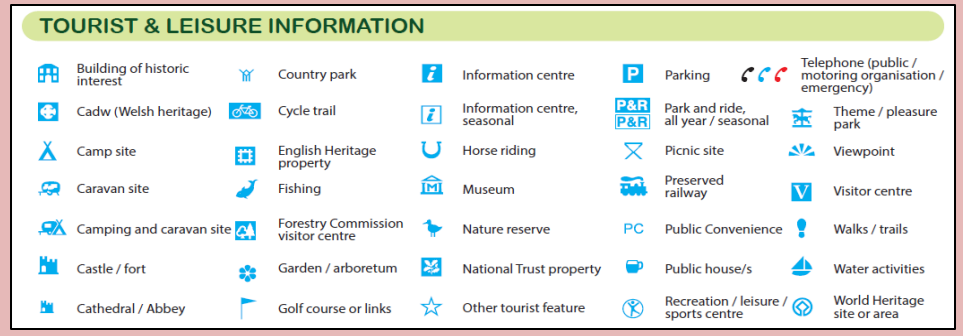
Longitude (vertical line) is measured in degrees east or west of something called the Prime Meridian. This is the line going from the North Pole to the South Pole and runs through the middle of the Greenwich Observatory in London.



Map Key

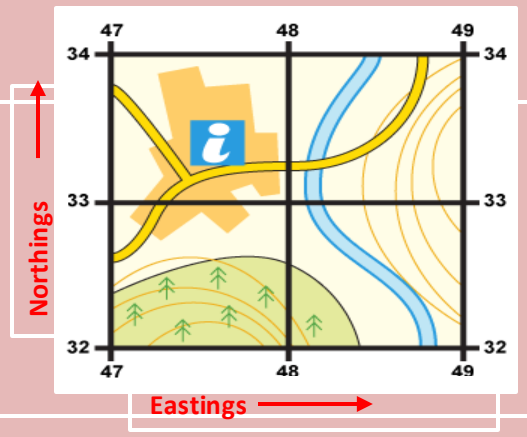
Features on a map are represented by a symbol. On each map the KEY tells you what each symbol means.

For example, this key shows Tourist and Information symbols on the map.



4 Figure Grid references

A grid of squares helps the map-reader to locate a place. The vertical lines are called **eastings**. They are numbered - the numbers increase to the east. The horizontal lines are called **northings** as the numbers increase in an northerly direction.



Four-figure grid references can be used to pinpoint a location to within a square. To find the number of the square:

1.Make a capital 'L' with your left hand – thumb and forefinger.

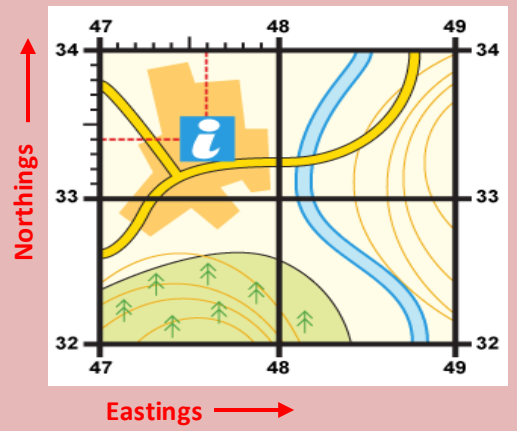
2.Start at the left-hand side of the map and go east until your forefinger is on the line immediately to the left of the feature you want. Write this number down.

3.Move north until your thumb gets to the bottom of the square you want. The feature you want should now be 'framed by an 'L'. Look at the number of this horizontal grid line and add it to the two-digit number you already have. This is your four-figure grid reference.

In the example above, the tourist information office is in grid square 4733.

6 Figure Grid references

Sometimes it is necessary to be even more accurate. In this case you can imagine that each grid is divided into 100 tiny squares. The distance between one grid line and the next is divided into tenths.



1. find the four-figure grid reference but leave a space after the first two digits.

2. Estimate or measure how many tenths across the grid square your symbol lies. Write this number after the first two digits.

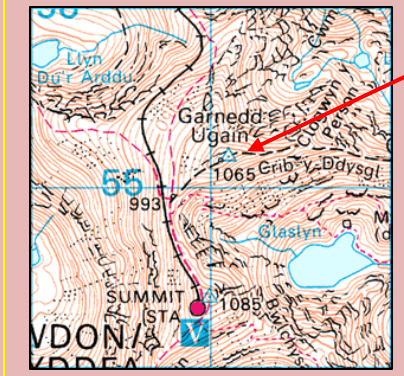
3. Estimate how many tenths up the grid square your symbol lies. Write this number after the last two digits. You now have a six figure grid reference. In this instance, the tourist information office is located at 476334.

Height on maps

Maps show height in a number of different ways:

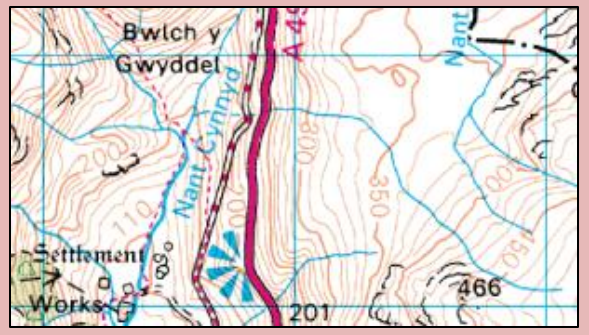
Spot heights and triangulation pillars

This map extract shows exact heights by a black dot with a number next to it.



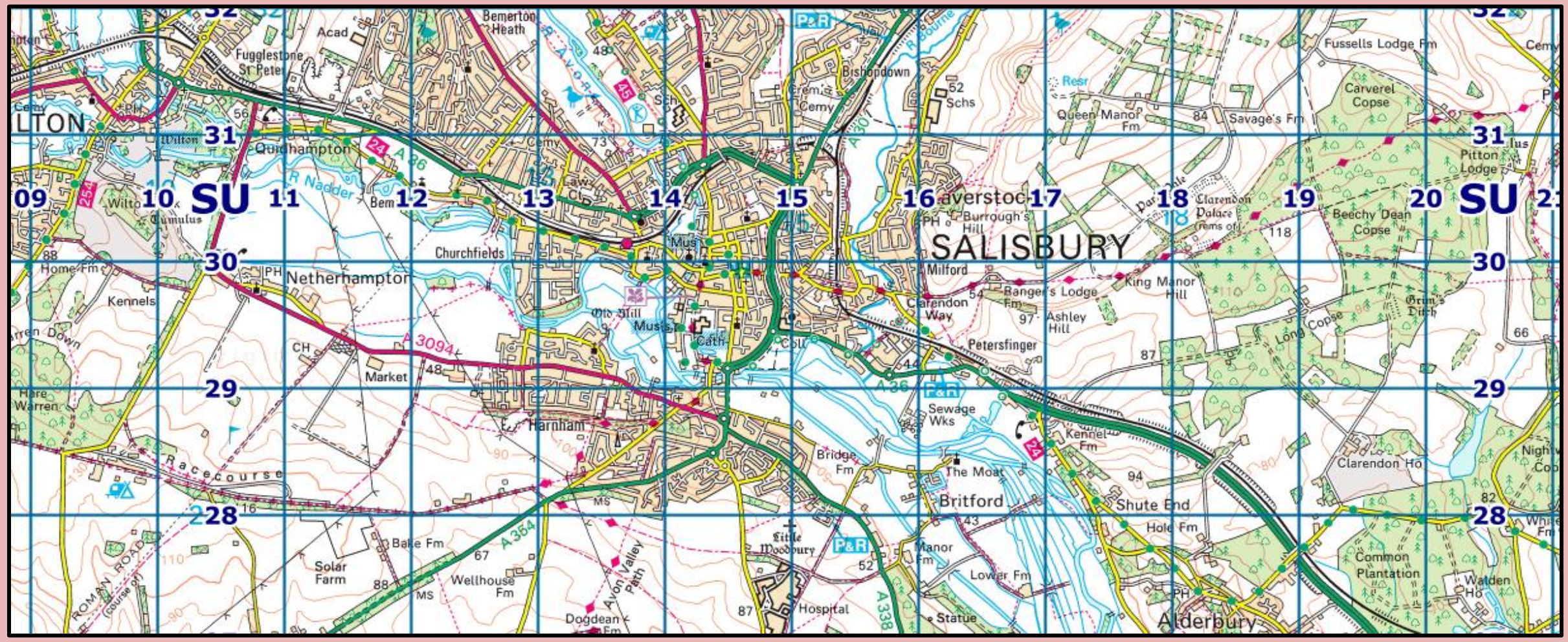
The number is the height above sea level in metres. The blue triangle represents a **triangulation pillar**; the networks of concrete pillars found in the UK that were used to make maps.

Contours



These are brown lines drawn on maps that join places of the same height. They are usually an orange or brown colour. Some contour lines have their height above or below sea level written on them. It is possible to use them to see the shape of the land - if contour lines are close together the slope is steep, if they are far apart the slope is gentle.

Ordnance Survey Map of Salisbury



Key Words

Latitude	Prime Meridian	Grid reference	Annotation
Longitude	Contour	North	Sketch
Eastings	Scale	South	Compass
Northings	Key	East	
Equator	Symbol	West	


Political
National capital
Major City
International boundary
© Nations Online Project
Mediterranean Sea
Tropic of Cancer
Equator
Tropic of Capricorn
Gulf of Guinea
SOUTH ATLANTIC OCEAN
Indian Ocean
Red Sea
Gulf of Aden
Mozambique Channel
MOROCCO
ALGERIA
TUNISIA
LIBYA
EGYPT
Western Sahara
MAURITANIA
MALI
NIGER
CHAD
SUDAN
SOUTH SUDAN
ERITREA
DJIBOUTI
ETHIOPIA
SOMALIA
SENEGAL
THE GAMBIA
GUINEA-BISSAU
GUINEA
SIERRA LEONE
LIBERIA
CÔTE D'IVOIRE
BURKINA FASO
GHANA
TOGO
BENIN
NIGERIA
CAMEROON
CENTRAL AFRICAN REPUBLIC
EQUATORIAL GUINEA
SAO TOME AND PRINCIPE
GABON
REP. OF THE CONGO
DEMOCRATIC REPUBLIC OF THE CONGO
UGANDA
KENYA
RWANDA
BURUNDI
TANZANIA
ANGOLA
ZAMBIA
MALAWI
MOZAMBIQUE
ZIMBABWE
NAMIBIA
BOTSWANA
SOUTH AFRICA
ESWATINI
LESOTHO
MADAGASCAR
COMOROS
SEYCHELLES
MADEIRA ISLANDS (Portugal)
CANARY ISLANDS (Spain)
Ascension (St. Helena)
St. Helena
Annobon (EQUA. GUI.)
Mayotte
0 400 800 1200 km
0 400 800 mi


Physical
EUROPE
ASIA
NORTH ATLANTIC OCEAN
SOUTH ATLANTIC OCEAN
INDIAN OCEAN
Mediterranean Sea
Black Sea
Caspian Sea
Persian Gulf
Red Sea
Gulf of Aden
Gulf of Guinea
Guinea Basin
Angola Basin
ATLAS MOUNTAINS
SAHARA
SAHEL
TADEMAIT PLATEAU
Iguidi Desert
Chech Desert
Hoggar
Tibesti
Air Plateau
Libyan Desert
Eastern Desert
Nubian Desert
Darfur
Jos Plateau
Adamawa Highland
CONGO BASIN
ETHIOPIAN HIGHLANDS
Horn of Africa
Ogaden Desert
Great Rift Valley
KATANGA PLATEAU
BIE PLATEAU
Kalahari Desert
Namib Desert
DRAKENSBERG
Great Karoo
Madagascar
Mozambique Channel
Continent boundary
River
Lake
Mountain peak
Lowest point
0 500 1,000 Miles
0 500 1,000 Kilometers
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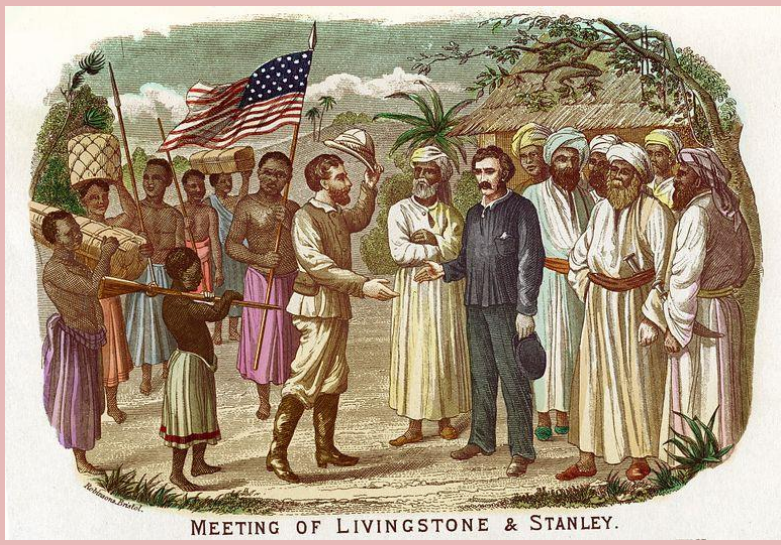
There are **54 countries** in the continent of Africa today, according to the United Nations. They are very diverse in terms of their physical landscapes, ranging from **hot deserts** to **tropical rainforests**, flat to mountainous, coastal to land-locked. We study the following countries and features in this topic, so you should know the location of: Ethiopia; Mali; Kenya; Egypt; Sudan; Uganda; Somalia; Morocco; River Nile; and Mt. Kilimanjaro, as well as where to find the Mediterranean and Red Seas, and the Indian and Atlantic Oceans.

Africa is second-largest continent and is:

- bounded by the Mediterranean Sea, the Red Sea, the Indian Ocean and the Atlantic Ocean.
- It is divided in half almost equally by the Equator.
- It's highest point is Mt. Kilimanjaro (5895m), while the Danakil Depression is actually 125m below sea level, but is protected from the sea by higher land around it.

The legacy of colonialism haunts Africa even today. **Colonialism** forced environmental, political, social, and religious change to Africa. **Natural resources, including diamonds and gold, were over-exploited.** European business owners benefitted from trade in these natural resources, while Africans laboured in poor conditions without adequate pay.

European powers drew **new political borders** that divided established governments and cultural groups. These new boundaries also forced different cultural groups to live together. This restructuring process brought out **cultural tensions**, causing deep ethnic **conflict** that continues today.



Africa has a unique place in human history. Widely believed to be the "**cradle of humankind**," Africa is the only continent with fossil evidence of human beings and their ancestors through each key stage of their **evolution**. These ancestors were the first to develop stone tools, to move out of trees and walk upright, and, most importantly, to explore and migrate. This human movement, or migration, plays a key role in the cultural landscape of Africa. Geographers are especially interested in **migration** as it relates to the way goods, services, social and cultural practices, and knowledge are spread throughout the world. Two other migration patterns, the **Bantu Migration** and the **African slave trade**, help define the cultural geography of the continent. The Bantu migration involved people moving from the Niger region, Southeast, and a great exchange of skills, ideas and tools occurred, helping to give Africa it's diverse cultural landscape we see today.

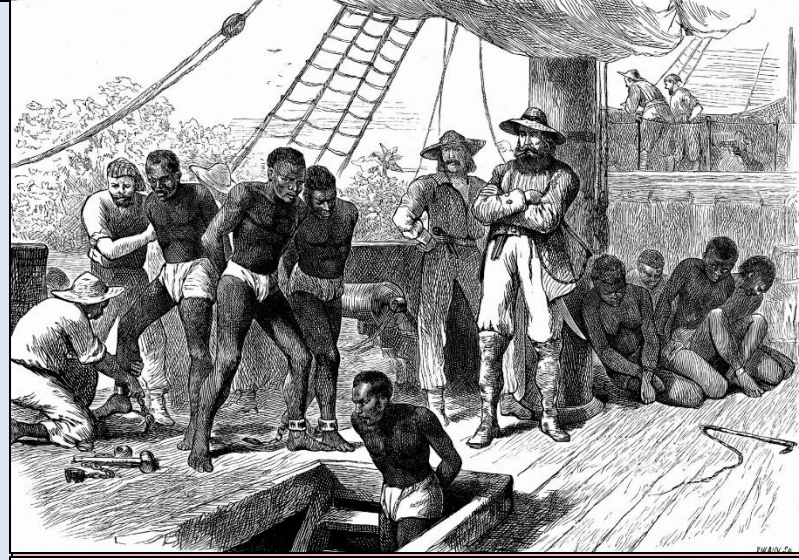
AMAZING AFRICA

Between the **15th and 19th centuries**, more than **15 million Africans were transported across the Atlantic Ocean** to be sold as **slaves** in North and South America. Millions of slaves were also transported within the continent, usually from Central Africa and Madagascar to North Africa and the European colony of South Africa.

Millions of Africans died in the slave trade. Most slaves were taken from the isolated interior of the continent. They were sold in the urban areas on the West African coast. Thousands died in the brutal process of their capture, and thousands more died on the forced migration to trading centres. Even more **lost their lives** on the treacherous voyage across the Atlantic Ocean.

The **impacts** of slavery on Africa are widespread and diverse. Calculations have projected that if there had been no slave trade, the population of Africa would have been 50 million instead of 25 million in 1850. Evidence also suggests that the slave trade contributed to the long-term colonisation and exploitation of Africa. Communities and infrastructure were so damaged by the slave trade that they could not be rebuilt and strengthened before the arrival of European colonisers in the 19th century.

While Africans suffered greatly during the slave trade, their influence on the rest of the world expanded. Slave populations in North and South America made tremendous economic, political, and cultural contributions to the societies that enslaved them. The standard of living in North and South America—built on agriculture, industry, communication, and transportation—would be much lower if it weren't for the hard, forced labour of African slaves. Furthermore, many of the Western Hemisphere's cultural practices, especially in music, food, and religion, are a hybrid of African and local customs.



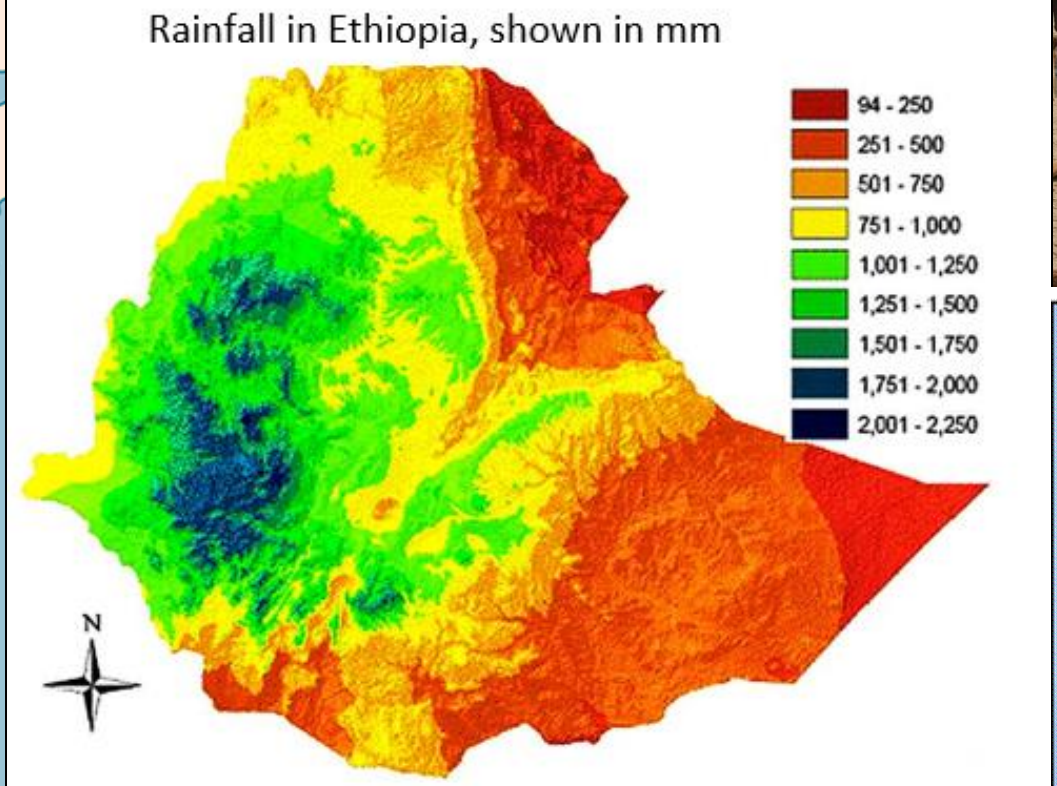
FAIRTRADE

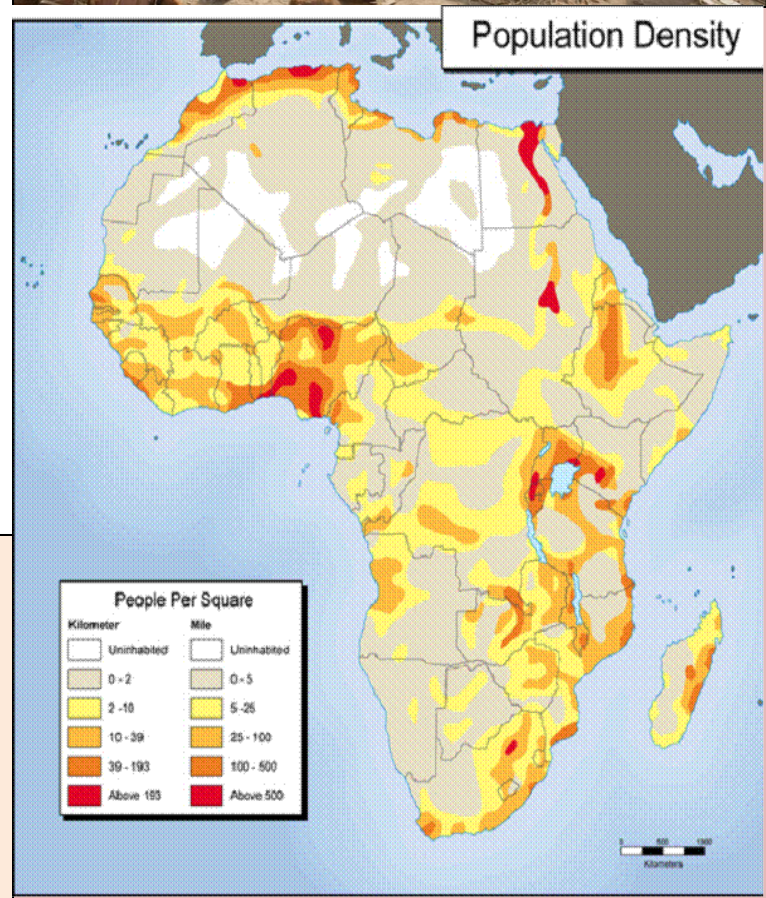
Fairtrade changes the way trade works through getting better prices for farmers, helping create **decent working conditions** and achieve a fairer, **more sustainable** deal for farmers and workers in **developing countries** such as Ethiopia and Cameroon.

Coffee and cotton are two important crops grown in a variety of countries in Africa. Around **15 million Ethiopians** rely on coffee for a living and it is the country's top export! Almost all of Ethiopia's coffee is grown on small family farms on the hillsides of the Ethiopian Highlands, where it has been grown for over 1000 years! In Cameroon, the cotton is picked by hand. After harvesting, the cotton is taken to a factory and is cleaned of any twigs or stones. The fibres are separated and remove any seeds or smaller particles of dirt. The fluffy cotton is then dried and pressed into bales, ready for selling, to make into cloth for clothes.

Northern Ethiopia's **Danakil Depression** is one of the hottest places on Earth. Parts of the region are **125m below sea level**, forming a cauldron where temperatures reach above 120°F in the summer and active volcanoes roil.

The area is also home to a **valuable commodity: salt**. For centuries the Afar people have mined rich salt deposits left behind from Red Sea floods in the region—most recently, 30,000 years ago. Today, workers cut slabs of salt from the earth and pack them on to camels for a days-long journey across the desert to a market town where the slabs are sold to merchants and loaded on to trucks. Working conditions are extremely tough, using hand tools to mine the salt, in extreme temperatures. It is very **labour intensive.**



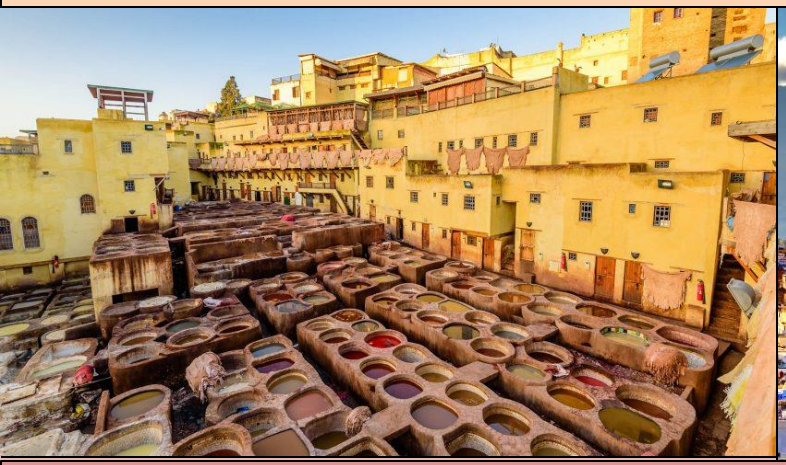


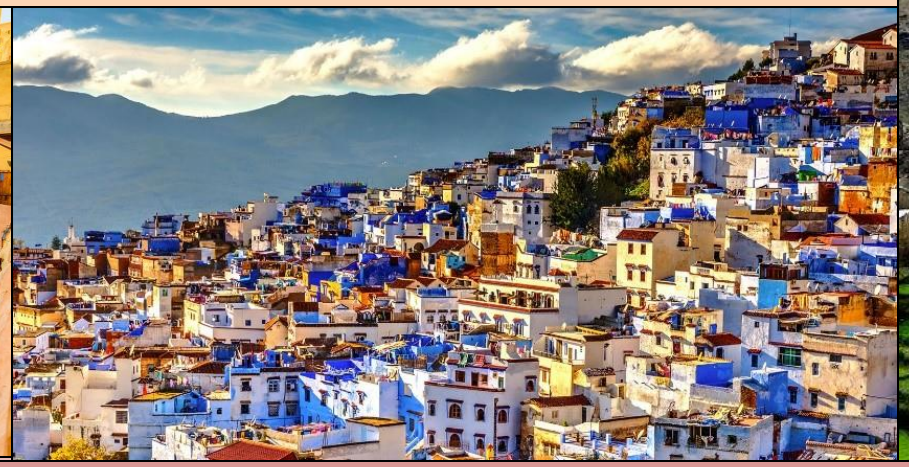
Being able to identify patterns on maps, and consider relationships between them, is an important skill in Geography. Looking at the map of Africa above, there is a far greater **abundance of water in the east**, and equatorial regions, than in the **Sahara** and Southwest. This helps to explain the location of forests, shown in green, but also (looking at the population density map (right) why there is a much greater **population density** in the Northeast (River Nile) and Niger delta areas, where it exceeds 193 people per km^2, than in the areas occupied by the Kalahari and Sahara deserts, where the population density is usually less than 2 people per km^2 – it is very hard to live without water.

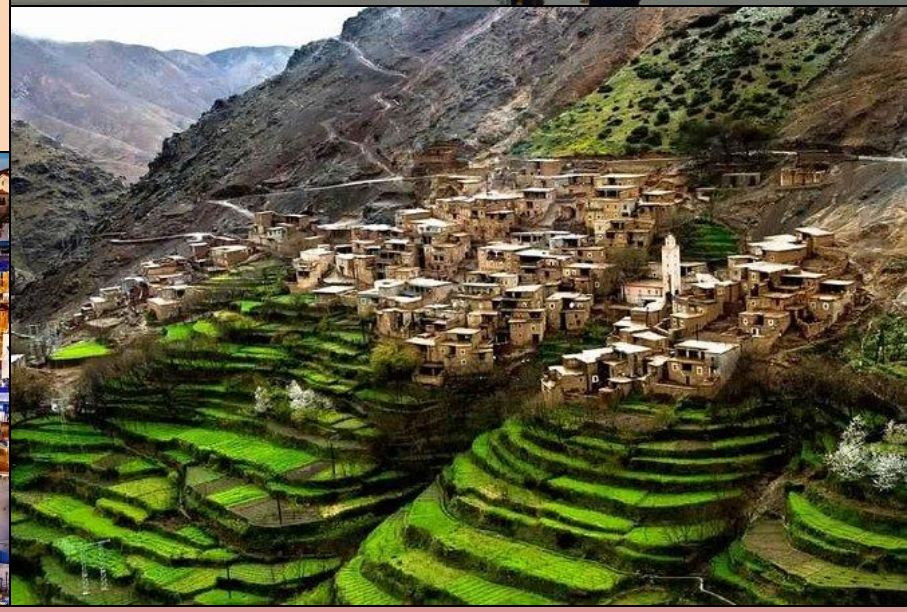
The map showing rainfall in Ethiopia shows us that even within a single country, **climates can alter dramatically**. In the far east, there is less than 500mm per year, while in the Ethiopian Highlands in the west, large areas get at least 1,751mm of rain a year – more than 3 times as much! This will have a massive impact on **drought/ flooding**, what can be grown, and how people can earn money.

Most of **Egypt** is a **vast desert** with almost no rainfall. The **River Nile** is one of the longest rivers in the world and it flows northwards from the mountains of Tanzania for over **6,600km** on its way to the Mediterranean Sea. It has **two main tributaries** – the Blue Nile and White Nile – and flows through several countries along it's course. For more than 6,000 years **the river has enabled people to live in Egypt**. Today, **50 million people live within a few miles of the river** and completely **depend on its water**. The river is home to many fish and provides a valuable source of food. The ancient Egyptians invented a number of different ways to bring water from the Nile up onto dry land. The shaduf and wooden water wheels were designed thousands of years ago to **enable farmers to water their crops**, and such methods are still used by farmers today. The Romans introduced the sakia 2,300 years ago and they are still used today to raise water from underground wells. Some farmers now use electrical pumps to take water from the Nile onto farmland. Farmers in Egypt have traditionally relied on the Nile bursting it's banks as the annual snowfall in the Ethiopian Highlands melts and the rains come, to fertilise their lands, but **climate change**, and **management of water** upstream in other countries with the **installation of dams to generate electricity**, has stopped this.

Crops grown along the Nile and fish caught in the river **provide food** for the people of Egypt, but are also **exported** to other countries to generate money. With a growing population there is an **increasing pressure** on these resources, both within Egypt but also between neighbouring countries who share the Nile as a precious resource. Who owns the water and who has the right to do what – such as building dams and extracting water for farming – is a matter of **fierce debate and tensions** between them. The problem is likely to increase as demand for water in the face of a rising global population grows.







Morocco is a **vibrant** and **diverse** country, and many tourists first contact with this is the rich and energetic culture of **Marrakech**, complete with it's famous sights such as the snake charmers and markets as well as it's infamous smells from the tanning of leather in large pots such as those seen above. **Casablanca** is the largest city in Morocco. Located in the central-western part of Morocco, bordering the Atlantic Ocean, it is Morocco's chief port and **one of the largest financial centres in Africa.** It is well known for it's architecture (above). The less well known aspect of Morocco is the **Atlas Mountains**, the lower slopes of which have been terraced to enable farming (above right), but are also very popular with summer **tourists** for walking, climbing and mountain biking, and in winter for skiing! Morocco depends heavily on tourism for income, especially in the rural mountainous areas and in Marrakech.

Yr7 BVT

Life of Jesus

Chronology of Jesus' Life

Jesus was born in **Bethlehem** to Mary and Joseph. He was visited by the wise men and shepherds as the **Messiah** (King and Saviour to the Jewish people). At this time the area where Jesus lived (**Judea**) was ruled by King Herod. King Herod had ordered men to come and find Jesus as he was threatened by this baby, said to be the king of the Jews. Mary, Joseph and Jesus fled to **Egypt** to live.

When Jesus was **12**, the family went back to Judea **to Nazareth**, where Jesus grew up. Between the age of **12 and 30** little is known about Jesus but he worked as a **carpenter** in Nazareth.

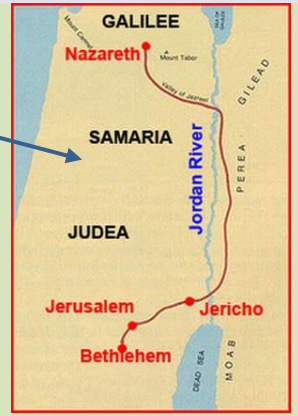
At **age 30** Jesus was **baptised by John the Baptist in the River Jordan**. After his baptism Jesus spent **40 days** and nights in the wilderness where he was tempted by the Devil. This same year Jesus performed his **first miracle** of turning water into wine.

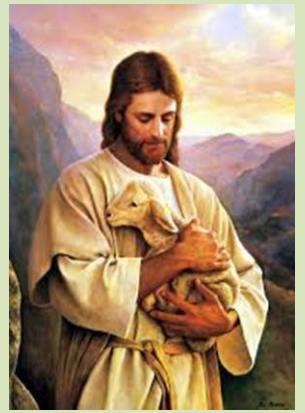
By the **age of 31** Jesus has called all **12 disciples** to follow him. At 31 Jesus heard that John the Baptist had been imprisoned so he moved to Galilee. He started **teaching about God.**

At the age of **32** Jesus performed the **miracles** of Loaves and Fishes and walking on water.

Just before Jesus was **33** he travelled to **Jerusalem.** Jesus arrived in Jerusalem for the Jewish festival of Passover. He arrived on a donkey fulfilling a Jewish prophecy about the arrival of the Messiah.

The Jews and Romans saw Jesus as a threat and had him arrested and sentenced to death. Jesus is **crucified** on the cross. After the death of Jesus , he is re-born or **resurrected**. He lived on for 40 days on earth talking with the disciples, after which Jesus died and **ascended to heaven**.





Key vocabulary

Bethlehem
Nazareth
Judea
Jerusalem
Disciples
Crucified
Resurrected
Ascension
Messiah
Miracle

Ascension	When Jesus ascended (went up) to Heaven after 40 days of rebirth
Atonement	When Jesus make up for the sins of mankind; his sacrifice
Incarnation	God lives through Jesus; Jesus is in part God
Messiah	Saviour – Jesus was called this as he saved everyone's sins when he died.
Resurrection	When Jesus came back to life for 40 days
Salvation	Being accepted into Heaven
Trinity	That God is 3 parts; the Father, the Son and the Holy Spirit (the presence and power of God).

Life of Jesus

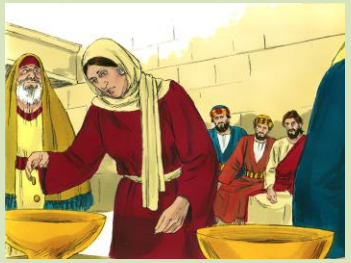
Parables

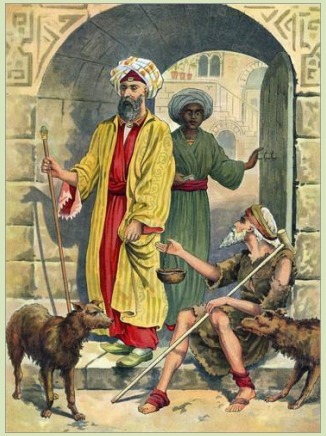
Parables are **stories that Jesus told that had messages for people to learn and live by**. Here are a few examples:

The Widow's Offering: At collection for the poor at the religious temple a rich man puts a fair amount of money in and an old widow puts 1-2 coins in. The disciples say to Jesus how little the woman has put him. But Jesus tells them that the Widow has put everything she has, whereas the rich man has only put some of his wealth in, even though it was more in value.

The Prodigal Son: A farmer gives his inheritance to his two sons early. One son leaves his father's farm and goes and spends and wastes the money on luxury's and enjoying himself. The other son saves his and remains with his father working on his farm. The first son returns and apologises to his father begging him that he can stay and have a job on the farm. The second son is very angry at this, but the father welcomes home the first son with open arms.

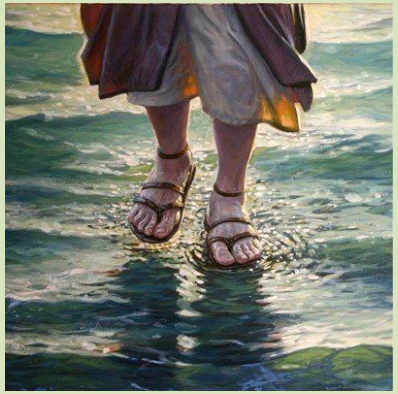
Lazarus and the Rich Man: Lazarus is a beggar who is very poor. Everyday a rich man walks past him on his way to work and everyday Lazarus asks him for help. The rich man ignores him each time. When both men die, Lazarus goes to Heaven but the rich man is sent to Hell. The rich man pleads with God to come to Heaven, however God tells him that he has shown his true self and should have thought about this during his life.





Key vocabulary

Disciples
Parable
Miracle



Miracles

Jesus miracles are **important** because of these reasons:

1) They helped people and showed kindness at the time
2) They show people then and today that Jesus was the Son of God. This is called the **incarnation of God** – that God lives through Jesus. ***"The word became flesh and lived among us for a while" Bible***
3) They show Christians today that God is prepared to help them, which gives them hope if they have problems.

The Calming of the Storm: Jesus and his disciples were out in the Galilee Sea fishing on a boat. A huge storm started and the disciples feared for their lives. Jesus stood up in the boat and raised his arms and called out "Be still". The storm died down.

The Curing of the blind man: Jesus saw a blind man. He went to him and mixed his saliva and dust from the ground in his fingers and rubbed this over the blind mans eyelids. He told the man to wash his eyes. When the man went to wash his eyes, he found he could see! Watch this clip

Others include:
Feeding of the 5,000
Healing the leper
Saving Jairus' daughter from dying
Walking on water

SCAN ME

Holy Week

Palm Sunday – Jesus arrives in Jerusalem for the Jewish festival of Passover on a donkey, fulfilling the **prophecy** of the **Messiah** (saviour) arriving. People wave and lay palm branches to welcome him.

Monday / Tuesday – Jesus goes to the temple. He challenges the high priests that God's temple is being used as a marketplace, selling and trading rather than for prayer. He also challenges the priests for making people pay to be able to worship and pray to God, making money from this.

Wednesday – **Judas** is paid 30 pieces of sliver to **betray** and locate Jesus for the Romans.

Thursday – the **Last Supper**. Jesus confronts Judas and tells him he knows he has betrayed him, but he forgives him. Jesus knows he will die. He asks the disciples to remember him by breaking bread, as his body, and drinking wine, as his blood. In the evening Jesus is **arrested in the Garden of Gethsemane** by the High Priest Caiaphas' guards.

Good Friday - Jesus is taken to **Pontius Pilate** the Roman Governor, the only one able to issue a death sentence. He is charged with rebellion and also **blasphemy.** This is taking the Lord's name in vain. This is because he said he was the Son of God, which if you didn't believe was a huge insult to the Jews at this time. After the trial, Jesus is **crucified**. It would have taken Jesus 6 hours of suffering before he died. Jesus' body was placed in a tomb and a stone rolled in front.

Easter Sunday – Mary Magdalene and 2 other women come to attend Jesus' body but the stone has been rolled away. Jesus' body has also disappeared. An angel told them Jesus had been **resurrected** (reborn) and would meet them in Galilee.

Jesus lived for 40 days after his resurrection showing himself and preaching about God with his disciples. He told his disciples to **baptise** all people in the name of the father, the Son and the Holy Spirit. After which he died and **ascended** to heaven.

Life of Jesus

Key vocabulary

Palm Sunday
Maundy Thursday
Last Supper
Messiah
Good Friday
Easter Sunday
Resurrected
Crucified
Atonement
Salvation
Ascension

SCAN ME

Why did Jesus have to die?

Many people ask why did Jesus have to die? Why did God kill him? If Jesus was the Son of God why did he not save himself?

God decided to kill Jesus to save our souls. You may have heard his expression before – but what does it mean??

God saw that **mankind was sinning** and turning away from him. God needed to **punish** these people because God is just and fair. But there were so many people to punish and **God was all loving** and didn't want to punish them all, so God sent Jesus down to save them.

A Bible quote to show this is "God loved the world so much he gave his only Son"

Jesus lived with everyone and taught them about how to follow God and gain **salvation** (**eternity in heaven**). But not everyone listened to Jesus.

So God decided to **allow Jesus to die for mankind's sins**. This is called **Atonement.** By Jesus dying it allowed people to be re-born into Christianity which started at this time. It allowed people to be with God again and gain **salvation – a place in God's Heaven** when they died.

Year 7 – BVT

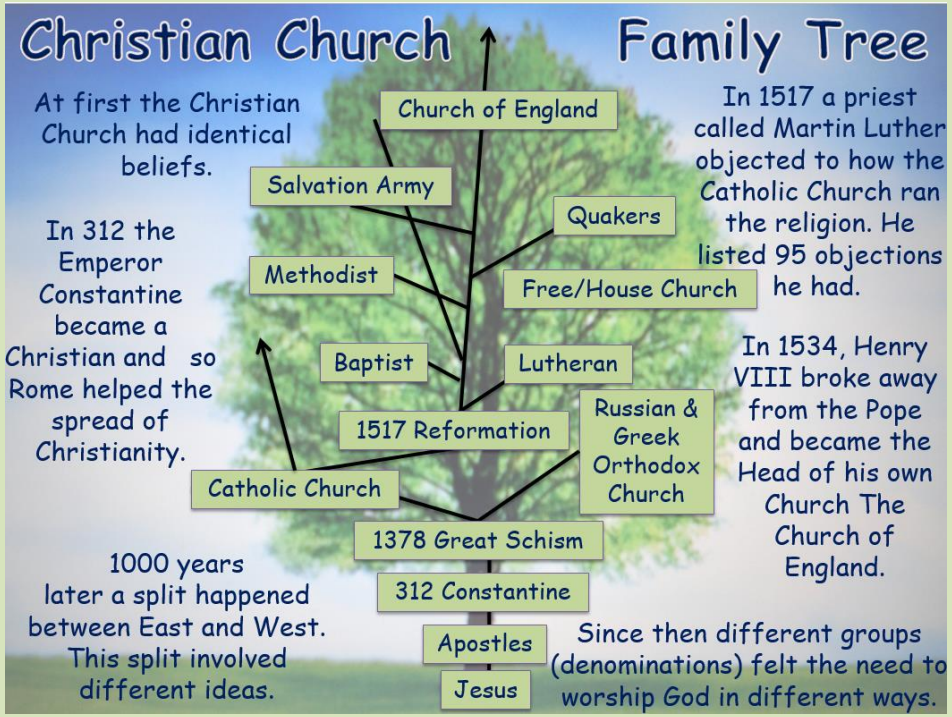
Christianity

Different types of Christians

There are **many different types of Christians** because when Christianity began, Christians changed little things to do with their beliefs or practices and they developed into different **denominations** of Christianity. So, some Christians have slight differences.

This could be their practices such as the church they attend and how they worship. It could be their beliefs about how to live as a Christian for example their beliefs about marriages and relationships.

However they all believe in the Trinity. The belief in God, Jesus – as his Son and the Holy Spirit. They all believe in the life and teachings of Jesus.



Key vocabulary

Denomination
Catholic
Anglican
Baptists
Quakers
Liturgical
Non-Liturgical
Set prayer

Why do Christians worship… Let's look at the 5 reasons on this hand opposite

Types of Christian Worship

Most Christians worship God by going to church and taking part in hymns and prayers and listening to services or sermons. This is an important time in the week as Christians come together as a community.

Some Christians prefer to worship God in a formal or structured way. This is called **LITURGICAL** WORSHIP. Liturgical worship involves following a set pattern of rituals called a LITURGY. Most churches have these written down in a book. It may be set prayers (e.g. Lords prayer) or hymns.

Other Christians choose to worship God in a less formal and unstructured way. This is called **NON-LITURGICAL**. In non–liturgical worship the emphasis is on the WRITTEN or SPOKEN WORD. For example BIBLE READINGS or **SERMONS** which are chosen by the preacher. This form of worship is more personal as the preacher can choose a THEME e.g. forgiveness or could relate a bible passage / parable or to a problem within their community.

Christians can also use PRIVATE worship. This is important because worship can take place when and where a Christian would like. It also means that they can choose how they worship. This could be reading a passage or parable from the bible, lighting a candle or reading a set prayer like the Lord's prayer… but it would always be up them .

THE LORD'S PRAYER

**Our Father, who art in heaven,
hallowed be Thy name.
Thy kingdom come.
Thy will be done on earth as it is in heaven.
Give us this day our daily bread and forgive us our trespasses as we forgive those who trespass against us.
And lead us not into temptation, but deliver us from evil.
Amen.**

Christianity

Eucharist

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

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

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

Key vocabulary
Eucharist
Holy Communion
Holy mass
Atonement
Salvation
Pilgrimage

Why do Christians go on pilgrimage?

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

The Shell emblem of the Santiago de Compostela pilgrimage

Example of a Pilgrimage: Santiago de Compostela.

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

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

Churches

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

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:

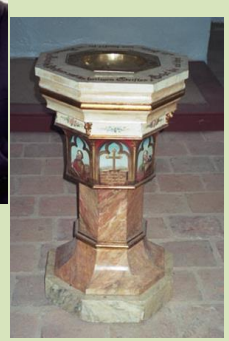
- The table at the front of the church.
- Holds the bread and wine for Eucharist

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

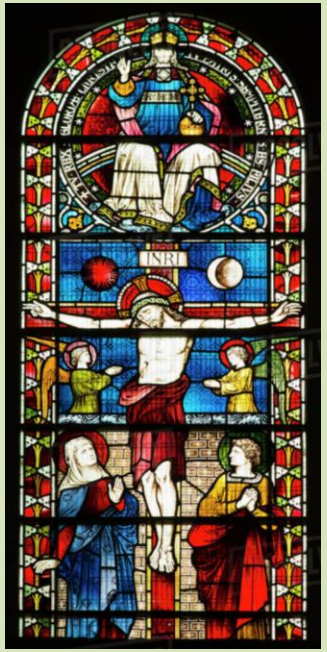
The Font:

- 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



SCAN ME

The work of Christians 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" Jesus
- "Let's not love with words but with actions" Bible
- "Blessed are the peacemakers" Jesus
- "For I was hungry and you gave me something to eat. I was thirsty and you gave me something to drink". Bible
- "Neither Jew nor Greek, make nor female you are all one in Jesus Christ" Bible
- The parable of the Widows Offering and The Good Samaritan.

Helping against discrimination

Martin Luther King was a black Christian preacher. Black Americans were being **discriminated** against so King led the **Civil Rights movement**. This started when a black lady called **Rosa Parks** refused to move seats on a bus.

King was special because all his protests were peaceful, as he was a peaceful Christian who promoted Jesus' idea of equality. He led and encouraged people to take part in **marches,** he gave **speeches** and many people followed him. He managed to change some important laws to help black American including the right for them to **vote.**

Christianity

Key vocabulary

Charity
Peace
Discrimination
Persecution
Apartheid

Christian Charities

Christian Aid

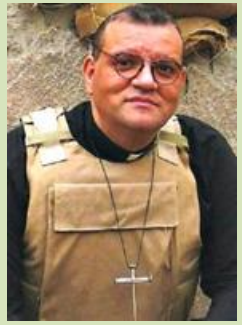
Christian Aid works by helping **poorer countries** and countries when they face **natural disasters** like floods or earthquakes.

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.

Church Army

- The Church Army provide support and help to the vulnerable people in the UK.
- They work with the elderly, prisoners, people in hospitals and drug addicts.
- They use the teachings of Jesus to spread love and kindness, helping others and giving them comfort and hope using their faith.



Working for peace

The Vicar of Baghdad

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

YEAR 7 FRENCH – PRONUNCIATION AND THE ALPHABET

We need to make some new sounds when we speak French. You might feel as if your mouth and nose have had a bit of a workout when you try to sound 'really French', because you're making different shapes with your mouth, tongue – you even use your nose more!

L'alphabet

A ah	H ash	O oh	V vay
B bay	I ee	P pay	W doobla-vay
C say	J shee	Q coo	X ix
D day	K car	R air	Y ee-grek
E er	L ell	S ess	Z zed
F eff	M emm	T tay	
G shay	N enn	U ooo	

THINGS TO SAY IN THE CLASSROOM

Salut ***(hi)***
Bonjour monsieur / madame ***(hello Sir / Miss, good day)***
Je suis là ***(I'm here)***
Je suis present (e) ***(I'm present Sir / Miss)***
Ça va? ***(How are you?)***
Bien merci – et toi? ***(Well thanks – and you?)***
Il / Elle est absent(e) ***(He / She is not here)***
Je pense que ***(I think that)***
il / elle est malade ***(he / she is ill)***
Désolé(e) ***(I'm sorry)***
Je ne comprends pas ***(I don't understand)***
Merci ***(Thanks)***
De rien ***(Don't mention it)***
Répétez s'il vous plait ***(Can you repeat that please?)***
Comment dit-on … en français? ***(How do you say … in French?)***
Il me faut… ***(I need…)***
Un stylo ***(a pen)***
Du papier ***(paper)***

FRENCH YEAR 7: DESCRIBING A PICTURE

Qu'est-ce qu' il y a sur la photo ? *(What's in the photo ?)*	**un** *(a)*	**petit** (small) **grand** (big) **joli** (pretty)	**chien** *(dog)* **chat** *(cat)* **homme** *(man)*	**noir** *(black)* **blanc** *(white)* **brun** *(brown)*
	une *(a)*	**petite** *(small)* **grande** *(big)* **jolie** *(pretty)*	**voiture** *(car)* **femme** *(woman)* **maison** *(house)*	**noire** *(black)* **blanche** *(white)* **brune** *(brown)*
Sur la photo il y a... *(In the photo there is / there are...)*	**deux** *(two)* **trois** *(three)* **quatre** *(four)* **des** *(some)*	**petits** *(small)* **grands** *(big)* **jolis** *(pretty)*	**chiens** *(dog)* **chats** *(cat)* **hommes** *(man)*	**noirs** *(black)* **blancs** *(white)* **bruns** *(brown)*

Sur la photo il y a un chien noir et un chat blanc

Sur la photo il y a une grande maison brune

Sur la photo il y a deux chiens bruns et noirs

Sur la photo il y a... *(In the photo there is / there are...)*	**deux** *(two)* **trois** *(three)* **quatre** *(four)* **des** *(some)*	**petites** (small) **grandes** *(big)* **jolies** *(pretty)*	**voitures** *(car)* **femmes** *(woman)* **maisons** *(house)*	**noires** *(black)* **blanches** *(white)* **brunes** *(brown)*
Il n'y a pas de... *(there isn't / aren't...)*			**chien** *(dog)* **chat** *(cat)* **homme** *(man)* **voiture** *(car)* **femme** *(woman)* **maison** *(house)*	
Le chien *(The dog)* **La voiture** *(The car)* **Les fleurs** *(The flowers)*	**est** *(is)* **sont** *(are)*		**noir** *(black)* **verte** *(green)* **blanches** *(white)*	

Sur la photo il y a quatre voitures rouges. Il n'y a pas de chien!

Sur la photo il y a trois jolies femmes. Il n'y a pas d'homme!

Les fleurs sont rouges et blanches

Key grammar

These two verbs – the verbs to be and to have – are very important. You need to learn them off by heart! Use the QR code to find a song to help you.

avoir	to have
(je ai) / j'ai	I have
tu as	you have
il a / elle a	he has / she has
nous avons	we have
vous avez	you have
ils ont / elles ont	they have

être	to be
je suis	I am
tu es	you are
il est / elle est	he is / she is
nous sommes	we are
vous êtes	you are
ils sont / elles sont	they are

Nouns

Nouns in French are divided into two groups, '**masculine**' and '**feminine**'.

When you learn a noun, you need to learn whether it is **masculine** or **feminine**.

The best way to do this is to learn it with the word for **'a'** or **'the'.**

There are two words for **'a':**
un / une
There are 3 words for **'the':**
le / la / les
We have also met the word for 'some':
des

Adjectives

Adjectives, or describing words, have to match - or '**agree**' with the word they are describing.
This can mean that their spelling can change:

un camion noir – a black lorry
une voiture noire – a black car
des voitures noires – some black cars

Examples:

Sur la photo, il y a <u>un</u> camion.
(In the photo, there is a lorry)
<u>Le</u> camion est noir
(The lorry is black)

Sur la photo , il y a <u>une</u> voiture
(In the photo, there is a car)
<u>La</u> voiture est noire
(The car is black)

Key grammar

	Masc (blue)	Masc plural	Fem (red)	Fem plural
red	rouge	rouges	rouge	rouges
blue	bleu	bleus	bleue	bleues
black	noir	noirs	noire	noires
white	blanc	blancs	blanche	blanches
big	grand	grands	grande	grandes
small	petit	petits	petite	petites
pretty	joli	jolis	jolie	jolies
beautiful	beau	beaux	belle	belles

Most adjectives (describing words) – eg colours - come ***AFTER*** the words you are describing.

Some adjectives (describing words) – eg those describing size and beauty! - come ***BEFORE*** the words you are describing.

FRENCH YEAR 7: DESCRIBING A PERSON / FAMILY MEMBER

Il / elle est comment ? *(What's s/he like ?)*	**il /elle est** *(he / she is)*	**petit (e)** *(small)* **grand (e)** *(big)* **joli (e)** *(pretty)* **gros (se)** *(fat)* **mince** *(thin)*	**il / elle a** *(he / she has)*	**les cheveux noirs** *(black hair)* **les cheveux bruns** *(brown hair)* **les yeux bleus** *(blue eyes)* **les yeux verts** (*green eyes*) **dix ans** *(ten years)* **quinze ans** *(fifteen years)*
As-tu des soeurs et frères? **Comment est ta famille?** *(Do you have sisters and brothers? What's your family like?)*	**j'ai** *(I have)* **un frère** *(one brother)* **une soeur** *(one sister)* **un demi-frère** *(a step/half brother)* **une demie –soeur** *(a step/half sister)* **une belle-mère** *(a step-mother)* **un beau-père** *(a step-father)*	**qui s'appelle** *(**who** is called)* **qui s'appellent** *(**who** are called)*	**mon père** *(my dad)* **ma mère** *(my mum)*	**s'appelle** *(is called)*

J'ai un frère qui s'appelle Josh. Il a dix ans. Il a les cheveux roux et les yeux bruns.

Mon père est grand et il est intelligent. Il s'appelle Sam.

Spanish: Term 1

KEY QUESTIONS

KEY GRAMMAR

STARTING TO COMMUNICATE IN SPANISH

KEY #LEARNING:

Understand basic sounds in Spanish

Use the alphabet to spell words

To describe what is in a photo

Key questions for TERM 1:

¿ Cómo se escribe = How do you spell it?

¿ Qué hay en la foto? = What is in the photo?

¿ Por qué aprendemos el español? = Why do we study Spanish?

Top Tips for pronouncing Spanish:

Vowels: *Each of the five vowels has its own clear sharp sound:* **a as in hat; e as in pet; i as in feet; o as in clock; u as in drew.**

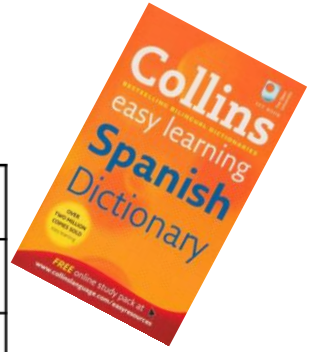
C's and Z's: **c + e = th** (cero, once); **c + i = th** (cinco, gracias); **z + a, o, u = th** (zapatos, azúl); **c + a = ka** (casa, catorce); **c + o = ko** (cómo, color); **c + u = ku** (Cuba, cubano).

LL's: *The double ll, as in* ***calle****, is another characteristic Spanish sound. In most parts of Spain it's like the 'lli' in the English* ***million.***

H's: The h is silent in Spanish. Imagine it's not there: **hablo, helado, ¡hola!**

J's and G's + E or I: *J is a harder, stronger version of the English 'h'. G, when followed by e and i, sounds exactly the same as j.*

When using the dictionary, these abbreviations will help you find the correct work:



N	*Noun*
V	*Verb*
Adj	*Adjective*
M / Ms / Msc	*Masculine*
F / Fm / Fmn	*Feminine*
Adv	*Adverb*

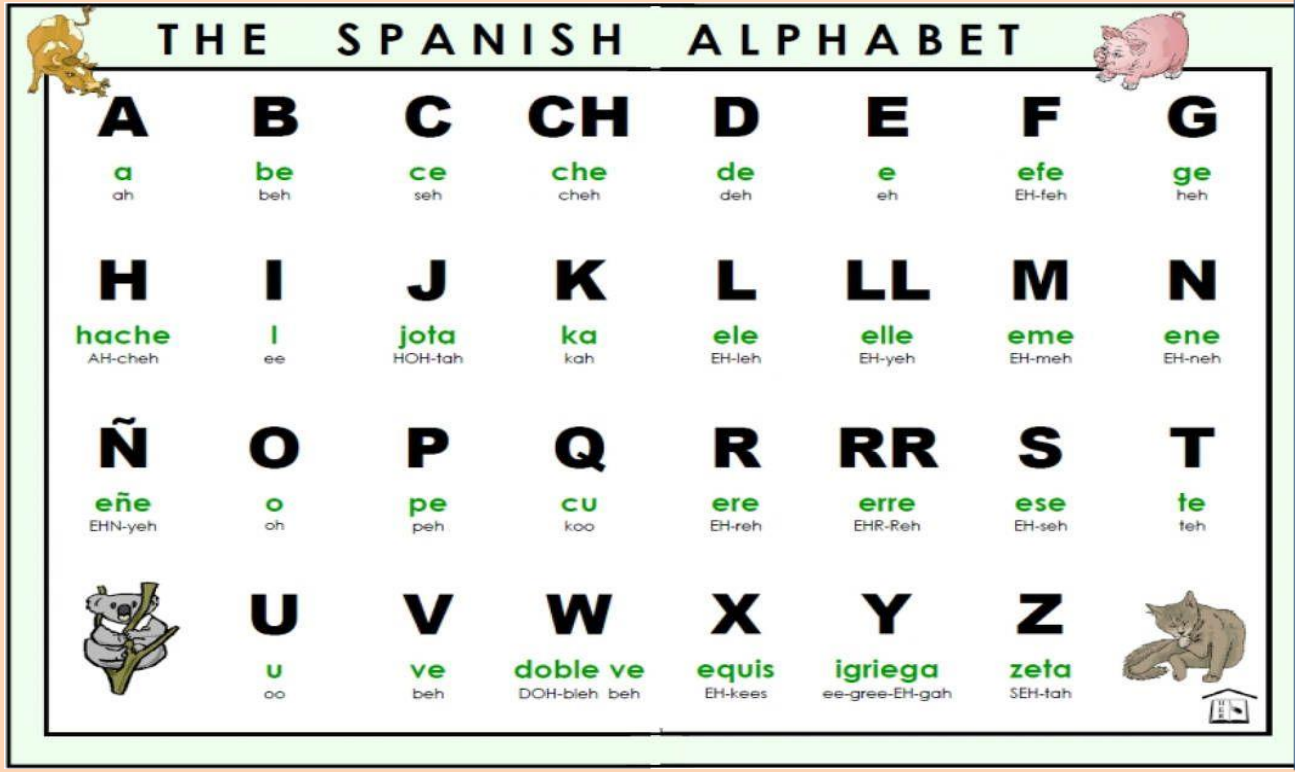
THINGS TO SAY IN THE CLASSROOM

KEY PHRASES

Hola ***(hi)***
Buenos días ***(hello / good day)***
Estoy aquí ***(I'm here)***
Estoy presente Señor/a ***(I'm present Sir / Miss)***
¿Cómo estás? ***(How are you?)***
Bien gracias – ¿y tu? ***(Well thanks – and you?)***
No está aquí ***(He / She is not here)***
Pienso que ***(I think that)***
está enfermo/a ***(he / she is ill)***
Lo siento ***(I'm sorry)***
No entiendo ***(I don't understand)***
Gracias ***(Thanks)***
De nada ***(Don't mention it)***
Puede repetir por favor ***(Can you repeat that please?)***
¿Cómo se dice … en Español por favor? ***(How do you say … in Spanish?)***
Necesito… ***(I need…)***
Un boli ***(a pen)***
Papel ***(paper)***

¿Cómo se escribe? (How is is spelt?)

¿Se escribe? (It is spelt…..)



KEY GRAMMAR

BUILDING PHRASES – TERM 1

En la foto *(In the photo)*	hay *(there is)* *no hay (there is not)*			un lago (a lake) un río (a river) flores (flowers) árboles (trees) un serpiente *(a snake)* un ratón *(a mouse)* un perro *(a dog)* un gato *(a cat)* un burro *(a donkey)* un caballo *(a horse)*
Veo *(I see)* No veo *(I don't see)*	*un niño (a boy)* *una niña (a girl)* *un hombre (a man)* *una mujer (a woman)* *una familia (a family)* *amigos (friends)*	en *(in)*		las montañas *(the mountains)* el campo *(the countryside)* la costa *(the coast)* una casa *(a house)* un coche *(a car)* el colegio *(in school)*
Tiene *(he/she has)*	el pelo *(hair)*	corto *(short)* largo *(long)* ondulado *(wavy)* rizado *(curly)* de punta *(spiky)*	y *(and)*	castaño – *(light brown hair)* negro – *(black hair)* pelirrojo – *(red hair)* rubio – *(blond hair)*
	los ojos *(eyes)*	azules *(blue)* marrones *(brown)* verdes *(green)*		

Words for ‘a’ , ‘the’ and ‘some’

All **nouns** in Spanish (things, people, places) fall into **one** of **two** groups.

Masculine
For example: el coche (the car); el mundo (the world); el gato (the cat); el lago (the lake); los camiónes (the lorries); los árboles (the trees)

Feminine
la mesa (the table); la espalda (the back); la bici (the bike); la mano (the hand) ; las niñas (the girls); las paredes (the walls)

So, the word for **the** can be **el** or **los** for masculine words (singular or plural) OR **la** or **las** for feminine words.

The words for **‘a’** and **‘some’?**

un / unos - un hombre (a man); un edificio (a building); unos caramelos (some sweets)
una / unas – una mujer (a woman); una flor (a flower); unas lapices (some pencils)

YOUR FAMILY AND WHERE YOU LIVE

KEY #LEARNING:

Describe who is in your family

To say who you get on with and don't get on with

To describe where you live

Spanish: Term 2

Key questions for TERM 2:

Describe tu familia= Describe your family?

¿Te llevas bien con tu familia? Do you get on with your family?

¿Dónde vives? Where do you live?

¿ Qué hay en tu barrio? = What is in your area?

KEY QUESTIONS

KEY GRAMMAR

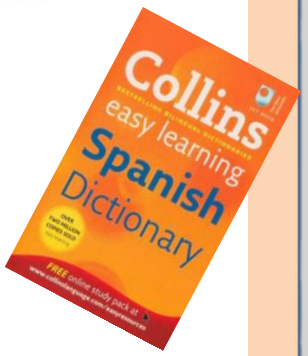
How to form 'Ser' (to be) and 'Tener' (to have)

Ser = to be

(I am)	**yo**	soy	(We are)	**nosotros(as)**	somos
(You are)	**tú**	eres	(You all are - SPAIN)	**vosotros(as)**	sois
(You are) (He/she is)	**usted** **él/ella**	es	(You all are) (They are)	**ustedes** **ellos/ellas**	son

Tener = to have

(I have)	**yo**	tengo	(We have)	**nosotros(as)**	tenemos
(You have)	**tú**	tienes	(You all have - SPAIN)	**vosotros(as)**	tenéis
(You have) (He/she has)	**usted** **él/ella**	tiene	(You all have) (They have)	**ustedes** **ellos/ellas**	tienen



BUILDING PHRASES – TERM 2

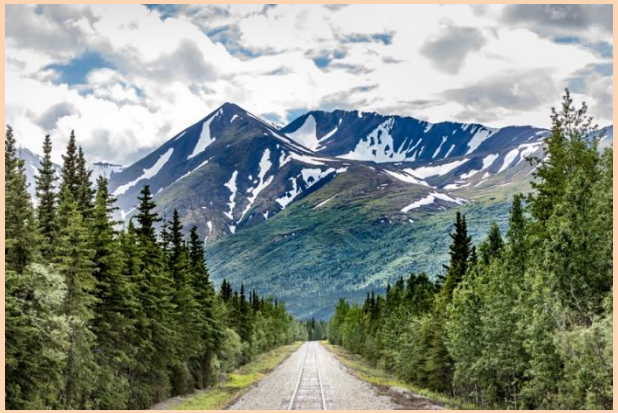
En mi familia *(in my family)*	hay (there are)	uno (1) dos (2) tres (3) cuarto (4) cinco (5) seis (6) ocho (8) nueve (9) diez (10)	personas *(people)*		
		mi madre *(my mum)* mi madrastra *(my step-mum)* mi padre *my dad)* mi padrastro *(my step-dad)* mi hermano *(my brother)* mi hermanastro *(my step-brother)* mi hermana *(my sister)* mi hermanastra *(my step-sister)* mi tío *(my uncle)* mi tía *(my aunt)* mi primo *(my cousin) - (male)* mi prima *(my cousin) – (female)* mi abuelo *(my grandfather)* mi abuela *(my grandmother)*	es *(he/she is)* son *(they are)*	muy *(very)* bastante *(quite)* un poco *(a bit)*	alto/a *(tall)* bajo/a *(short)* mediano/mediana *(medium)* serio/a *(serious)* gracioso/a *(funny)* tonto/a *(silly)* inteligente *(intelligent)* pesado/a *(annoying)* Add an ‘s’ to the adjectives above to make it plural

<table>
<tr><td rowspan="2">Me llevo (I get on)</td><td rowspan="2">muy (very)

bastante (quite)</td><td>bien (well)</td><td rowspan="2">con (with)</td><td rowspan="2">Mi padre (my dad)
Mi madre (my mum)
Mis padres (my parents
Mi hermano (my brother)
Mi hermana (my sister)
Mis hermanos (my bothers and sisters)</td></tr>
<tr><td>mal (badly)</td></tr>
<tr><td colspan="2" rowspan="2">Vivo en

Vivimos en (we live in)</td><td>un piso (a flat)</td><td>grande (big)
Pequeño (small)
moderno (modern)
antiguo (old)</td><td rowspan="2">en la costa (on the coast)
en las montañas (in the mountains)
en el campo (in the countryside)
en la ciudad (in the city)
en un pueblo (un a village)</td></tr>
<tr><td>una casa (a house)

una granja (a farm)</td><td>grande (big)
pequeña (small)
moderna (modern)
antigua (old)</td></tr>
</table>



BUILDING PHRASES – TERM 2

Hay *(there is)* No hay *(there is not)* Tenemos *(we have)* No tenemos *(we don't have)*	un castillo *(a castle)* un museo *(a museum)* un palacio *(a palace)* un parque *(a park)* un puerto *(a port)* un aeropuerto *(an airport)* un centro commercial *(a shopping centre)* un cine *(a cinema)* un estadio *(a stadium)*	un poco *(a bit)* muy *(very)* bastante *(quite)*	pequeño/a *(small)* tranquilo/a *(quiet)* bonito/a *(pretty / nice)* antiguo/a *(old)* feo/a *(ugly)* aburrido/a *(boring)* ruidoso/a *(noisy)* turístico/a *(touristy)* moderno/a *(modern)* grande *(big)* industrial *(industrial)* interesante *(interesting)*
	una iglesia *(a church)* una Universidad *(a university)*		

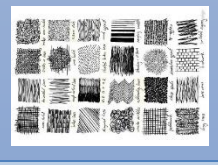
BUILDING PHRASES – TERM 2

THE FORMAL ELEMENTS

TERM 1 and 2

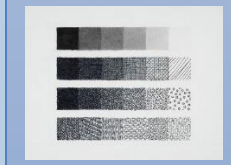
LINE

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




TONE

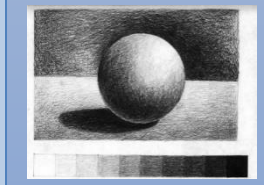
TONE means the lightness or darkness of something. This could be a shade or how dark or light a colour appears.



SHAPE/FORM

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

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




TEXTURE

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



COLOUR

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

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


PATTERN

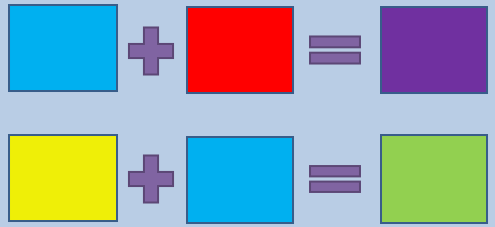
PATTERN is a design that is created by repeating **LINES**, **SHAPES**, **TONES** or **COLOURS.**

Patterns can be manmade or natural.


SENTENCE STARTERS

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

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




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

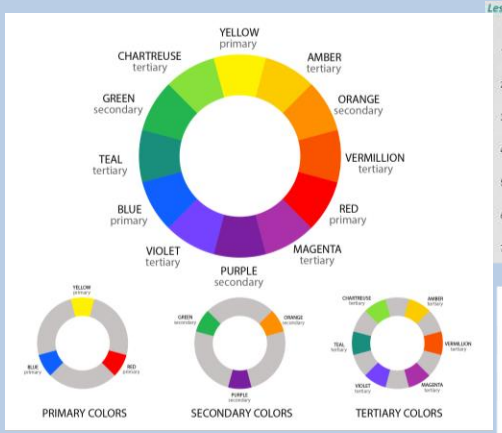
The Fundamentals of Art

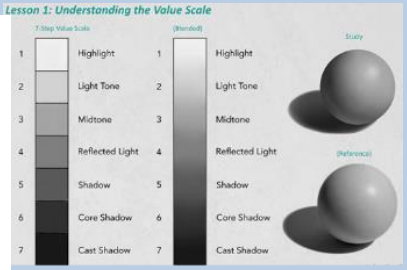
ESSENTIAL EQUIPMENT:

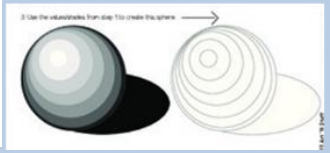
- PENCIL PACK (2B, 4B, 6B ETC)
- ERASER
- SHARPENER
- SKETCHBOOK

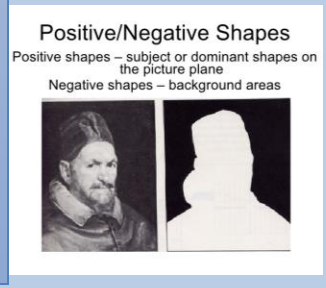
OPTIONAL EQUIPMENT:

- DRAWING PENS
- WATERCOLOUR SET
- WATERCOLOUR PENCILS
- PAINTBRUSHES



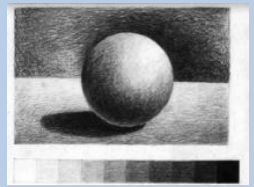


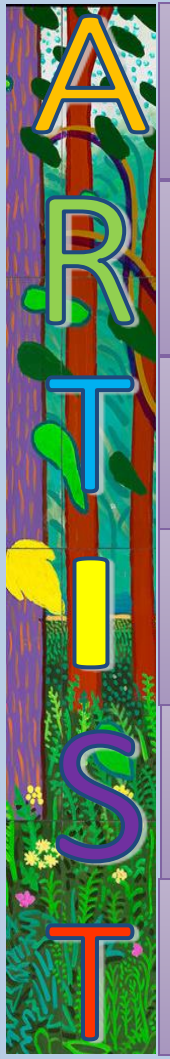




TALKING ABOUT ART:

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





ATTITUDE

Be positive and try your best!

RESPECT

Respect others, work and the room

THINK

Understand and demonstrate.

IMAGIINE

Be creative, use you imagination!

SPOTLESS

Tidy up after yourself.

TARGET

Follow directions.

Techniques you will explore:

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

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

THE FORMAL ELEMENTS

TERM 1 and 2

Giorgio Morandi

Morandi was an Italian painter and printmaker. The focus of much of his work was still life. His work is known for it's simplicity, often using vases, bowls, flowers and other objects. Within his drawing and print work, he used a range of strong, directional mark making to create a sense of space, form and texture.


Sonia Delaunay

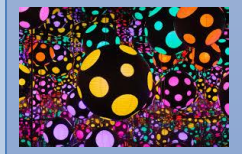
Delaunay was a French artist, printmaker and textile artist. She spent most of her working life in Paris but during WW2 moved with her young family to the south of France. Her work was largely focused on bright, bold, sometimes weaving and overlapping shapes and patterns.


Vincent Van Gogh

Vincent Van Gogh was a Dutch Post-Impressionist painter. His paintings are know for their mark making, often creating the illusion of movement within the image. His landscapes create pattern and all paintings have layered colours which add to the feeling of movement within the image.


Yayoi Kusama

Kusama is a Japanese contemporary artist, working with sculpture, installation and paint. Her work is heavily patterned and her work often takes up whole rooms, sometimes accompanied with film and photography of the artist working.



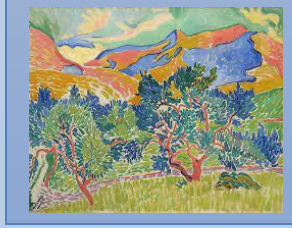



Henry Moore

Moore was a British artist and printmaker. His work includes abstract observations of human form, sheep, bones and found natural forms as well as capturing the cramped conditions of the underground in London during the Blitz of WW2.


Henri Matisse

Matisse was a French painter and paper cut artist. His paintings often included; still life, portraiture and landscapes of the French hills around his home. Later in his life he focused on more abstract shapes and colours through paper cut due to poor eyesight and ill health.




Angie Lewin

Lewin in a British artist and printmaker. Her work is inspired by the natural world around her. Often using found objects like feathers, stones and shells within her images. Her work is abstract through simplification and use of bold colour and pattern.


ARTIST RESEARCH SENTENCE STARTERS

- My chosen artist works with the materials:…
- I like/don't like the work of my chosen artist because…
- The mark making in the image creates…
- In my own work I will try to create…in the style of my chosen artist.
- I would describe the pattern/tone/detail in this image as…

Year 7 Art Graphics

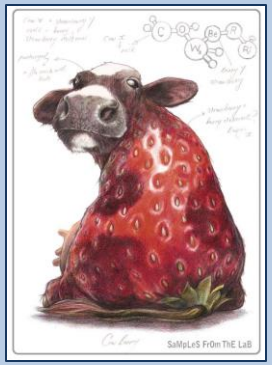
Graphic design is a craft where professionals create visual content to communicate messages.

What does a graphic designer do?

Graphic Designers create visual concepts to communicate information. They create everything from posters and billboards to packaging, logos and marketing materials. Graphic Designers use elements such as shapes, colours, typography, images and more to convey ideas to an audience.

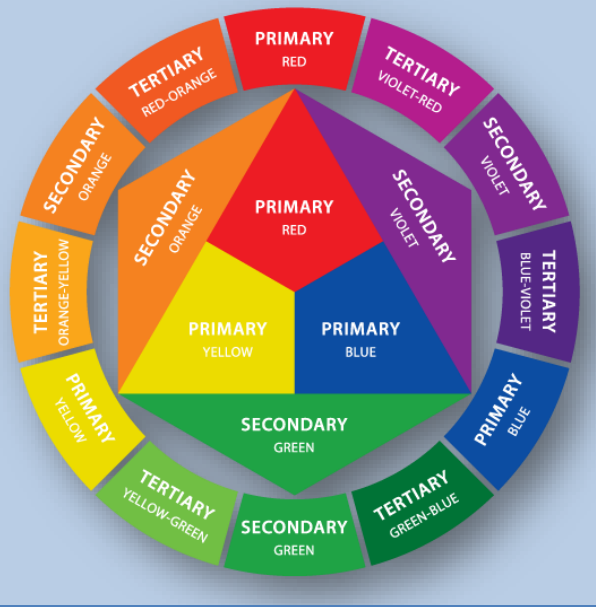
Graphic Designers:

- Alex Trochut
- David Carson
- Marta Veludo
- Jon Burgerman
- Rob Foote
- Milton Glaser
- Alan Fletcher



COLOUR THEORY

Colours can convey a message that give us an idea of how the product or company wants to be perceived. They can entice a certain type of customer and can make us think of different things.



CATERPILLAR OPTIMISM, CLARITY, WARMTH

Fanta FRIENDLY, CHEERFUL, CONFIDENCE

Coca-Cola EXCITEMENT, YOUTHFUL, BOLD

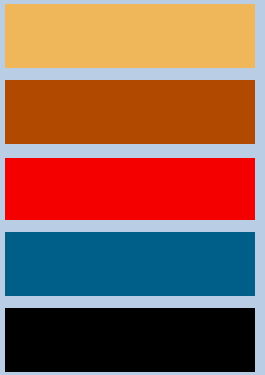
CREATIVE, IMAGINATIVE, WISE, EXPENSIVE, Cadbury ROYAL

facebook TRUST, DEPENDABLE, STRENGTH

JOHN DEERE PEACEFUL, GROWTH, HEALTH, NATURE, ENVIRONMENT

BALANCE, NEUTRAL, CALM

Complimentary colours are colours which are opposite to each other on the colour wheel. Examples of complementary colour combinations are: Red and green; yellow and purple; orange and blue; green and magenta. Complementary colour combos tend to be bold, which is why sports teams often use this formula for their colours.



What is stencil art? …

The method of repeating a design through a cut-out shape is called stencilling. In the visual arts, this technique involves the use of ink or paint over
cut-outs or holes in cardboard or metal onto a surface, therefore reproducing or transferring the design on it.

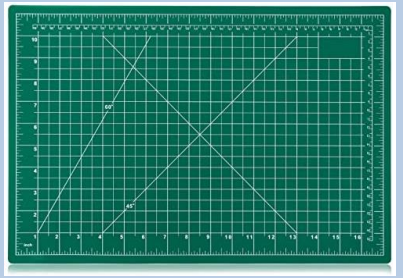
Safety Instructions using stencil cutting equipment …

- Always use a safety mat when cutting.
- When not using a craft knife the blade should always be tucked away inside the handle.
- A metal safety ruler must be used to cut along, not a plastic one!
- When cutting using the metal ruler fingers must be placed in the groove not along the edge of the ruler near the cutting blade.

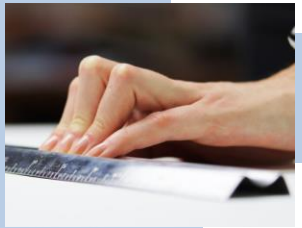
Heath Kane

Banksy

Cutting mat



Craft Knife



Safety ruler

Martin Whatson

Keith Haring

Andy Warhol

SHAPE

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FORM is a three dimensional shape such as a sphere, cube or a cone.

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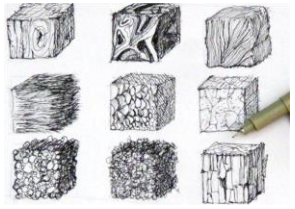

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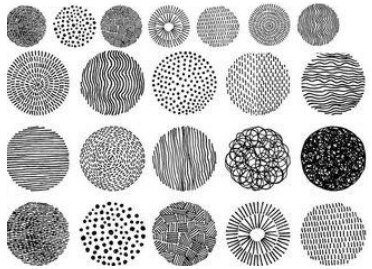
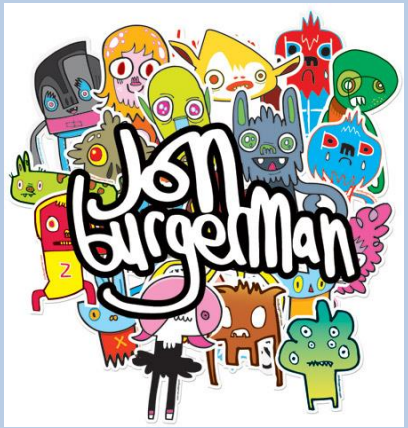


PATTERN

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

Patterns can be manmade or natural

What is Photoshop Art? Photoshop art is a style where photography and digital drawing overlap.
Photoshop artists combine their photos with digital elements, creating a unique look.



These images often tell a story and fit into a new, imaginary universe. They are stacked with effects and digital alterations.

Welcome to

 # Module Learning Objectives

Understand and recognise various Elements of Music including **Dynamics, Rhythm & Tempo, Pitch, Structure, Melody, Instrumentation (Sonority), Texture & Tonality, Harmony**

Draw on various Elements of Music as a resource when composing, creating and improvising and use various Elements of Music effectively when performing and singing.

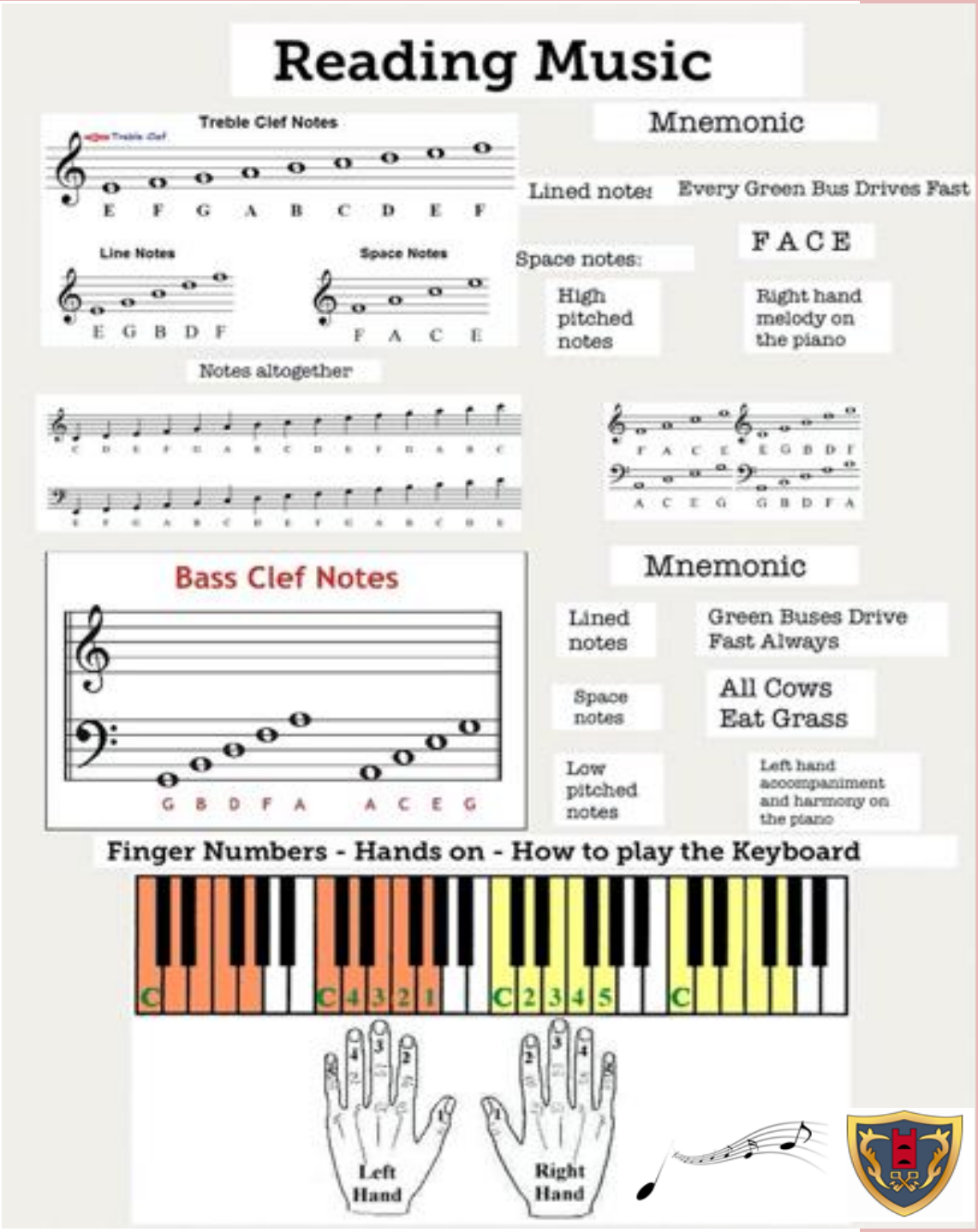
Recognise various Elements of Music when listening to and appraising music from different times and different places.

Language for Learning/Music Theory

Italian terms relating to Tempo:
Allegro-fast, Vivace-lively, Presto-very fast, Andante-walking pace, Adagio-slow, Largo-very slow, Accelerando (accel.)-to get faster, Ritardando (rit.) and Rallentando (rall.)- to get slower

Italian terms and musical symbols relating to Dynamics:
Fortissimo (ff)-very loud, Forte (f)-loud, Mezzo Forte (mf)-medium loud, Mezzo Piano (mp)-medium soft, Piano (p)-soft, Pianissimo (pp)-very soft, Crescendo (cresc.)-to get louder, Diminuendo (dim.)-to get quiter

Italian terms and musical symbols relating to Articulation:
Legato – smooth; Staccato – short and detached



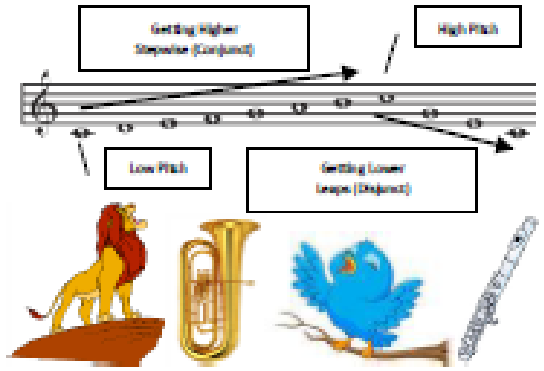
FOUNDATIONS Exploring the Elements of Music

FOUNDATIONS

Exploring the Elements of Music

A. Pitch

The highness or lowness of a sound.



B. Tempo

The speed of a sound or piece of music.

FAST: *Allegro, Vivace, Presto*

SLOW: *Andante, Adagio, Lento*

GETTING FASTER – *Accelerando (accel.)*

GETTING SLOWER – *Ritardando (rit.) or Rallentando (rall.)*

C. Dynamics

The volume of a sound or piece of music.

VERY LOUD: *Fortissimo (ff)*

LOUD: *Forte (f)*

QUITE LOUD: *Mezzo Forte (mf)*

QUITE SOFT: *Mezzo Piano (mp)*

SOFT: *Piano (p)*

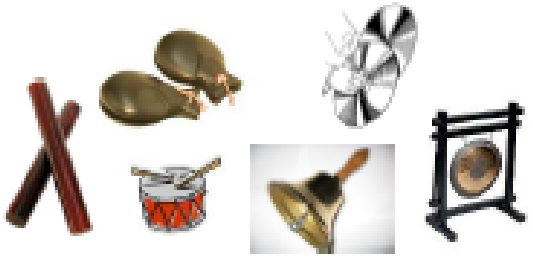
VERY SOFT: *Pianissimo (pp)*

GETTING LOUDER: *Crescendo (cresc.)*

GETTING SOFTER: *Diminuendo (dim.)*

D. Duration

The length of a sound.



SHORT → LONG

E. Texture

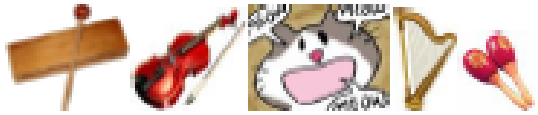
How much sound we hear.

THIN TEXTURE: *(sparse/solo)* – small amount of instruments or melodies.

THICK TEXTURE: *(dense/layered)* – lots of instruments or melodies.

F. Timbre or Sonority

Describes the unique sound or tone quality of different instruments voices or sounds.



Velvety, Screechy, Throaty, Rattling, Mellow, Chirpy, Brassy, Sharp, Heavy, Buzzing, Crisp, Metallic, Wooden etc.

G. Articulation

How individual notes or sounds are played/techniques.

LEGATO – playing notes in a long, smooth way shown by a **SLUR**.

STACCATO – playing notes in a short, detached, spiky way shown by a **DOT**.

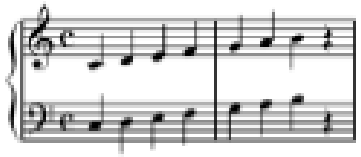
H. Silence

The opposite or absence of sound, no sound. In music these are RESTS.

I. Notation

How music is written down.

STAFF NOTATION – music written on a **STAVE** (5 lines and spaces)



GRAPHIC NOTATION/SCORE – music written down using shapes and symbols to represent sounds.

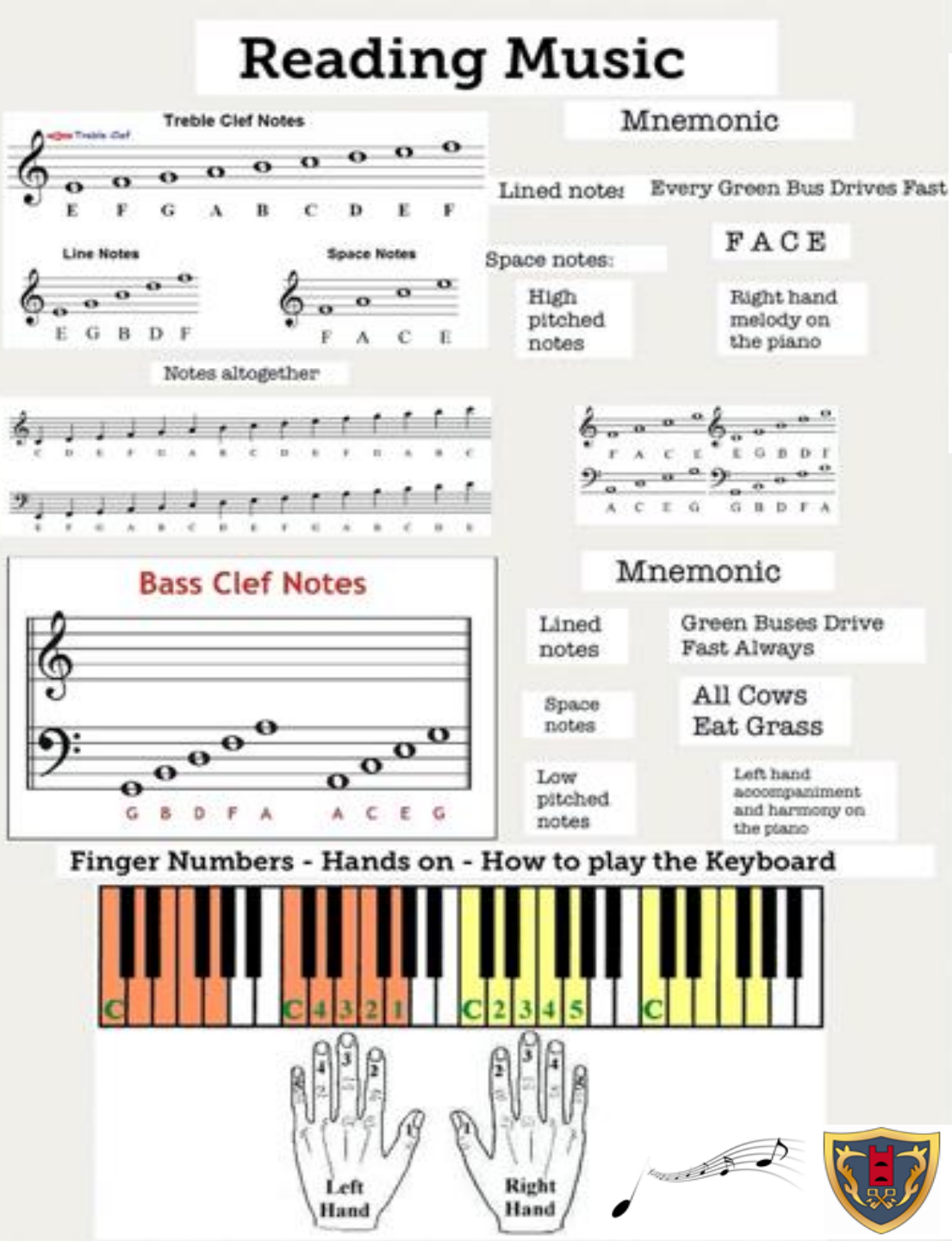
FOUNDATIONS Exploring the Elements of Music

Module Learning Objectives

Understand how the classroom keyboard is used and played
Practicing pieces of keyboard music to build skills and understanding of reading music and playing an instrument using correct posture, fingering and accuracy of pitch and rhythm
Understand the importance of "warming-up" before playing a keyboard or piano and the concept of piano fingering
Explore different keyboard instruments from different times and places.

Language for Learning/Music Theory

Sounds:
SCALE – The highness or lowness of a sound or musical note.
MELODY/THEME – The main "tune" of a song or piece of music. **KEYBOARD CHORDS** –Triads, broken chords, arpeggios, or Alberti bass.
OCTAVE – Notes with the same letter name but at differing frequencies
PIANO/KEYBOARD – The way in which the keys are laid out
TREBLE CLEF – A symbol found at the beginning of a stave to show high-pitched notes and is usually used for the right hand on a piano or keyboard.
TREBLE CLEF STAFF NOTATION – Music which is written down on a stave or staff using, notes clefs and other musical signs and symbols.
STAVE/STAFF – The five lines where musical notes are written.
BLACK KEYS/SHARPS/FLATS – Arranged in groups of twos and threes going up a piano or keyboard.
"MIDDLE C" – The white note to the left of two black notes normally found in the centre of a piano or keyboard.



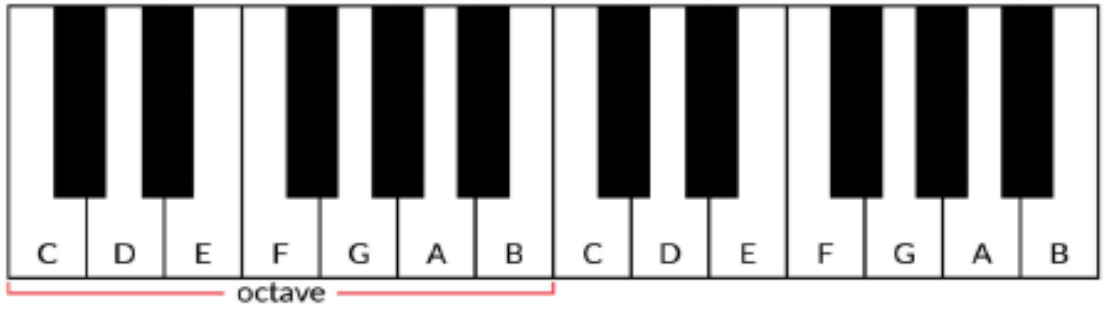
KEYBOARD SKILLS

Exploring Treble Clef Reading and Notation

KEYBOARD SKILLS

Exploring Treble Clef Reading and Notation

A. Layout of a Keyboard/Piano

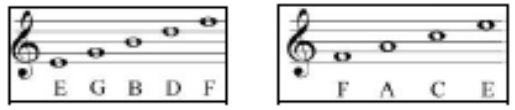


A piano or keyboard is laid out with **WHITE KEYS** and Black Keys (see section G). C is to the left of the two Black Keys and the notes continue to G then they go back to A again. Notes with the same letter name/pitch are said to be an **OCTAVE** apart. **MIDDLE C** is normally in the centre of a piano keyboard.

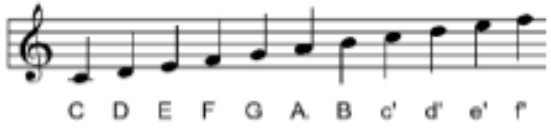
B. Treble Clef & Treble Clef Notation

A **STAVE** or **STAFF** is the name given to the five lines where musical notes are written. The position of notes on the stave or staff shows their **PITCH** (how high or low a note is). The **TREBLE CLEF** is a symbol used to show high-pitched notes on the stave and is *usually* ised for the right hand on a piano or keyboard to play the **MELODY** and also used by high pitched instruments such as the flute and violin. The stave or staff is made up of 5 **LINES** and 4 **SPACES**.

Every Green Bus Drives Fast. Notes in the SPACES spell "FACE"



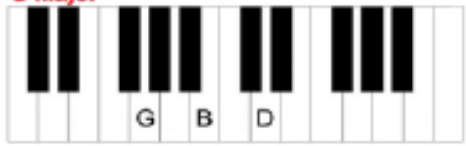
Notes from **MIDDLE C** going up in pitch (all of the white notes) are called a **SCALE**.



C. Keyboard Chords

C Major

G Major

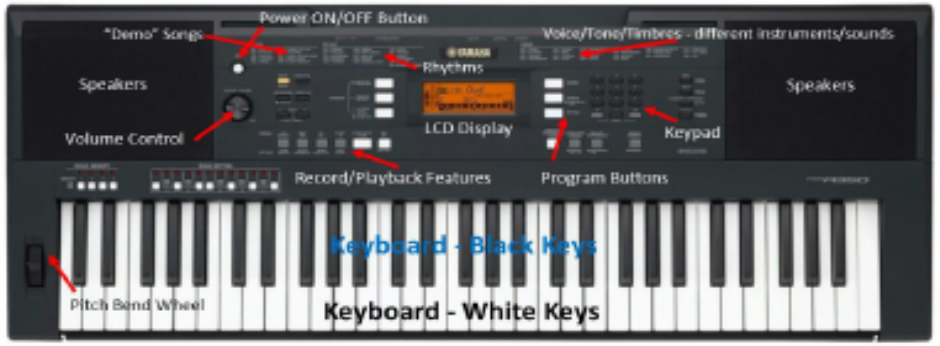


F Major

A Minor

Play one – Miss one – play one – miss one – play one

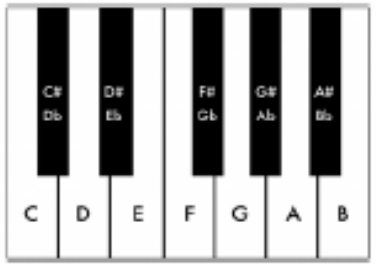
D. Keyboard Functions



E. Left Hand/Right Hand (1-5)

F. Black Keys and Sharps and Flats

There are five different black notes or keys on a piano or keyboard. They occur in groups of two and three right up the keyboard in different pitches. Each one can be a **SHARP** or a **FLAT**. The # symbol means a **SHARP** which raises the pitch by a semitone *(e.g. C# is higher in pitch (to the right) than C)*. The *b* symbol means a **FLAT** which lowers the pitch by a semitone *(e.g. Bb is lower in pitch (to the left) than B)*. Each black key has 2 names – C# is the same as D*b* – there's just two different ways of looking at it! Remember, black notes or keys that are to the RIGHT of a white note are called SHARPS and black notes to the LEFT of a white note are called FLATS.



KEYBOARD SKILLS
Exploring Treble Clef Reading and Notation

"The Trials & Tribulations - Joys & Jubilations of starting at new school"

An Introduction to Drama & Theatre Studies

Drama & Theatre Studies is a three year course of study. The aim is for you to become informed, responsible and effective communicators of meaning through the disciplines of **theatre art**.

Study Focus

A key focus of this term's work is the challenges and opportunities that you each face in moving from a primary school to a secondary school. We explore these in a variety of short **scenarios** that you **devise** and fit together in a **montage.** We call these collections of mini scenes, ***"The Trials & Tribulations – The Joy & Jubilations of Changing School".*** You will be introduced to and use all of the drama skills and ideas that are listed here.

Early on we investigate some key questions such as: ***where do we belong*** and ***are we different or the same?*** We explore these ideas in fun, practical, whole class activities. You reflect upon them some more in a written homework task.

Essential things to learn & Practise.

- What is the, **first person singular,** how to use it and why we use it?
- Why we have a, '**Hands – Free**' policy in drama lessons
- What does **devising** mean in drama?
- What are the ***Ingredients of a Play*** and how you can use them?
- What **montage** is and how to use it to express your ideas?
- What a ***freeze frame*** is and the things to consider when making one.
- How to work **constructively** with others in a group.

1) Devise/ Devising-

This means, **'to *plan & make.'*** It is one of the key disciplines in all drama lessons. You will always use the ***ingredients of a play*** when devising. You will plan and make your own plays in groups of different sizes- sometimes on your own (we call this solo work). Later, you will learn to use your **Personal & Interpersonal Skills** (PIPS) when devising in groups.

It is important to remember that it is **devising** not **dividing.** You are more likely to do dividing in mathematics … although we sometimes divide ourselves into different groups during lessons.

Devising means…

'Planning & Making'

Key drama & theatre theory to learn and use

The Ingredients of a Play- (IOP)

- **Characters**- the **people** in the play.
- **Plot**- The **storyline** - .
- **Setting- Where & when** the scene is set. The **time & place.**
- **Speech** – The **words** that the characters say
- **Theme** – What the play **is about - its meaning-** its message
- **Genre** – The **style** of the play. You are using, **montage** in this SOW

Montage means…

A collection of short scenes or plays based on the an idea. we base our montage on the idea of transition- of changing from one school to another

Transition means …

change- you make a **transition** when you move from one **freeze frame** to another

Freeze Frame

This is a ***still image*** like a photograph. We use them a lot in lessons. You must be perfectly still- even your eyes. This can be difficult. It helps for you to choose one thing to focus your gaze on. Until you have more experience, it is better not to focus on another student. As there is no moving or speaking in a freeze frame, other ways of communicating become very important to consider. These are your **facial expression, posture, body language, spacing** and **levels**. Sitting, standing on a block and laying down are all **different levels**. All of these things help the audience understand what the freeze frame is about and make the stage picture more interesting. You will learn lots more about making the stage picture interesting in your third and sixth scheme of work.

Things to consider when making and studying a **freeze frame**

There is no movement or speaking in a freeze frame, so the only way that the spectators understand what is happening is through the things that they can see. We call them the visual elements. There are six and they are:

Facial Expressions
Body Language
Gesture
Posture
Space (between characters)
levels

Two guidelines for effective learning in Drama

1) Speaking in the first person singular

You will be encouraged to speak in the 1st person singular – that's: **I, me, my & mine**, when speaking about your own experience in lessons. **This allows you to 'own' your ideas, opinions, judgements and begin to take responsibility for what you are saying**. This is the most important step in your journey to becoming conscious, responsible communicators of meaning. You will be reminded and have lots of time to practise so that it becomes a habit for you in drama.

Personal Pronouns

Singular	1st Person --	**I/ me**
	2nd Person –	**You**
	3rd Person –	**S/he**
Plural	1st Person –	**We /Us**
	2nd Person –	**You**
	3rd Person –	**They / Them**

Remember use; I, me, my when speaking about your own ideas and experience

2) The Hands Free Zone

Students do not generally put their hands up in class unless they want to ask a specific question or have a request or emergency.

Most class activities and discussions take place without raising hands. The teacher will invite different students to contribute at different times so that everyone participates in lessons.

The teacher will always, either;

Give you an opportunity to discuss and prepare a response first with other students or,

Frame the question in such a way as you cannot be wrong…

We are not interested in being right, or wrong- we are interested in learning. **So, no hands!** (unless there is an emergency of course).

You will be reminded and have lots of time to practise so that it becomes a habit for you in drama.

Key drama & theatre ideas

Scenario

We use this word to mean the outline of a story, a situation or an idea for a role play.

Montage

We use this word to mean a collection of short plays all based around the same **idea** or **theme.** Your theme will be the opportunities and challenges that people face when changing their situation, like changing from primary school to secondary school, for example.

Multi role play

Playing more than one character. You will be required to play different characters in different situations in your montage work on ***Trials & Tribulations…***

Contrast

This means, different. You will be encouraged to play contrasting characters in each of your short scenes. You will also need to contrast your **settings** and the **moods** of your chosen scenes.

Key new skills

Personal & Interpersonal Skills (PIPS)

Working with others can be difficult. They may have different ideas to you, they may not have any ideas, they might not listen to you etc. It can be tricky…PIPS are the skills and qualities that you need to work effectively in a group, they include: **tolerance, courage, kindness, honesty** and many more. You will have opportunity to think of others that should be included when you design your PIPS poster for home work.

Assessment

You will be assessed the quality of your ideas when devising your group plays. You will also be assessed on how skilfully you construct your plays and perform your roles. You will be assessed on your understanding and practical mastery of the 6 ingredients of a Play, the 6 things to consider in a freeze frame and your facility with using PIPS in group work

Tasks that you may do in this topic

You will do a whole range of activities including role plays, freeze frames, completing scene capture sheets, devising and discussion.

You will do a series of tasks designed so that you can find out some things about your classmates, and yourself.

You will learn to devise a series of short scenes around the theme of changing school and you will learn how to play a character in your plays.

You will learn how to edit your scenes and fit them together in a collection that we call montage.

You will use the freeze frame techniques that you learned to punctuate and separate your different scenes

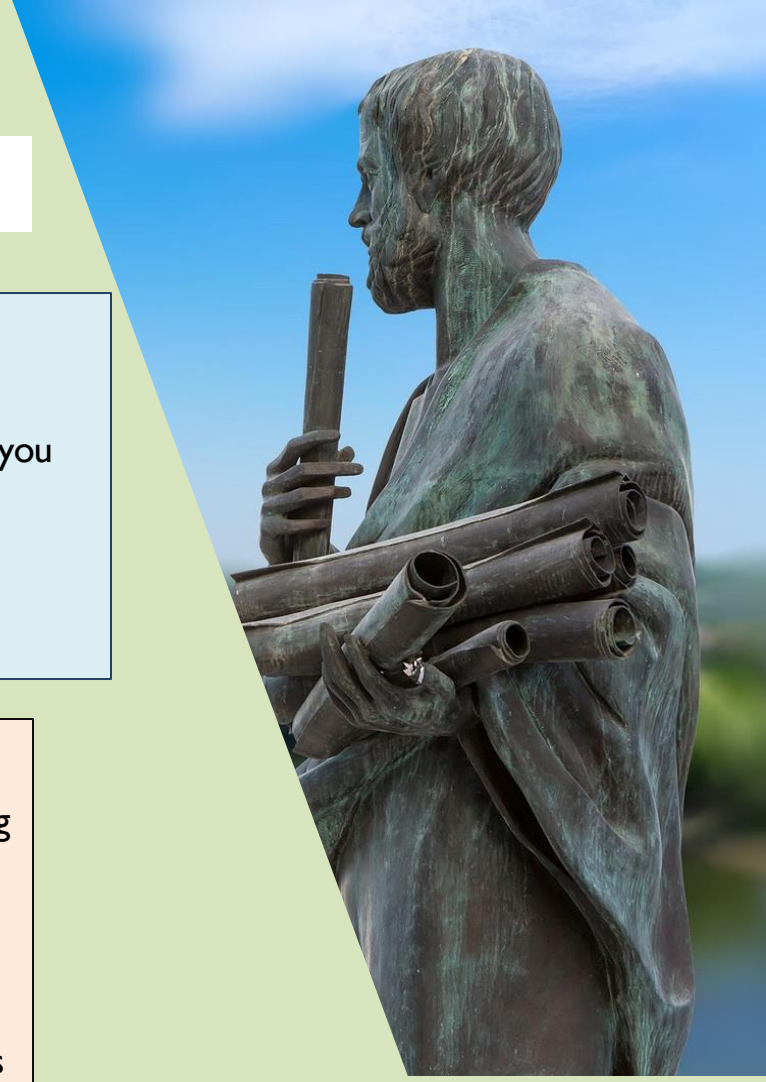
You will do these alone and in groups. You will be busy!

Key Questions – key themes – to consider.

- Are we the **same**, or are we **different?**
- **Where** do I belong?
- What **challenges** do we encounter when our life situation changes – what are the **opportunities?**
- What are the skills and qualities I need to work effectively with others?

Term 2

Classic Play Structure & the *Well Made* Play



Things that you will learn in this scheme

You will learn how to **develop** and **structure** the plays that you **devise.**

In the first scheme of work you learned how to devise several short plays around a theme. In this scheme of work you learn how to extend a play using Aristotle's ideas on dividing a play into a Beginning, Middle & End.

You will learn some techniques on how to use your voice and body to communicate effectively.

You will, also learn how to analyse & evaluate a piece of drama work using key adjectives that we call, Evaluative Vocabulary.

Aristotle 385 BC – 323 BC

An Ancient Greek philosopher living almost 2500 years ago. **Aristotle** was one of the first people in the West to have serious ideas about drama and the theatre. The idea of ***The Ingredients of a Play*** that we use in most lessons here at Trafalgar are developed from his ideas of drama. The idea of thinking about a play in three parts; beginning, middle and end was originally one of **Aristotle's** ideas. **Aristotle** had very definite ideas about what each section of a play should communicate to its audience. You will learn some of these as you make your own play and study an extant text.

Study Focus

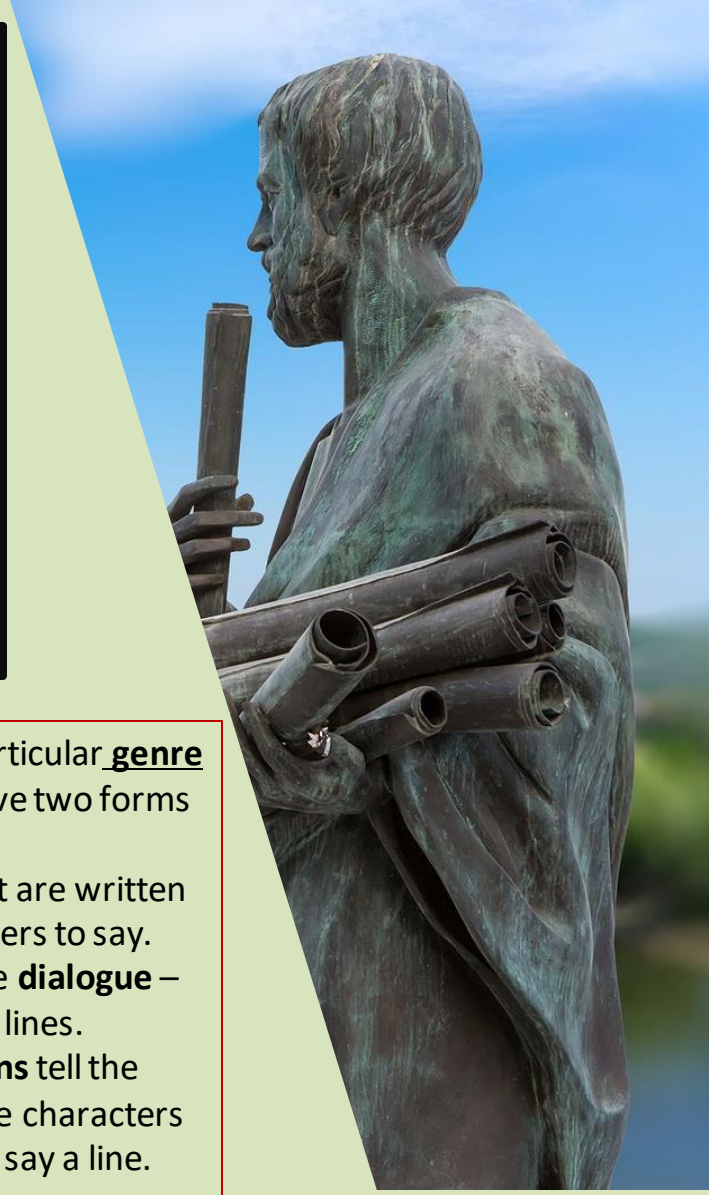
In this scheme of work you will practise your devising skills using the ***Ingredients of a Play (IOP)*** that you first met in the **Devising** scheme of work. You will work in a small group once more and use your new knowledge of **Classic Play Structure**, to plan and make a more substantial play of about 5 – 10 minutes duration. You will learn and practise using **PIPS** so you can work **effectively** and **constructively** with others in a close knit and supportive group. You will find out more about assessment in drama and learn some of the **Evaluative vocabulary** so that you can **analyse** and **evaluate** a class performance effectively while speaking in class and in writing for homework.

A statue of Aristotle – can you find out who made it and when they made it?
What has he got in his arms?

Classic Play Structure.

Aristotle's ideas are deceptively simplistic: plays have a **Beginning, Middle** & **End**. This is his idea of the classic play structure. Each of the 3 sections has a particular job to do in terms of the whole play and its impact on an audience:

- **Beginning scenes-** introduce the characters, show what they are like and their relationships. They begin the story (the plot). They show the setting (where and when the play/scene is set) and they give us any back story that we need.
- **Middle scenes** – These develop the story and move it on. The main character(s) encounter a problem, a difficulty, something that changes their plans, their journey and makes them change tack. It is a pivotal point in the play.
- **End scenes-** The problems and difficulties are all resolved. In a comedy there is a happy ending often contained in a wedding or a celebration party.



Actors/ characters- what's the difference?

Drama students often confuse these two things, so let us be clear from the beginning. Actors 'play' characters. In drama lessons you will often work, 'as an actor' and you will play a character. This may be a character that you make up in your devising or a character in a written play script. You will get to look at this difference very clearly in our next scheme of work.

Actors 'play' characters

***La Piece Bien Faite* - The Well Made Play.**

A French playwright built on Aristotle's ideas and came up with some very strict rules about how plays should be set out and ordered (structured). Each section of a play had a specific part to play in the workings of the plot and the effect it has on the audience. There are quite a few parts and they have grand and exotic names (for an English speaker) like, ***peripeteia*** and ***denouement.*** Our simple use of the ideas of; **Introductions, Developments** and **Resolutions**, come from these ideas.

Play writing is a particular **genre** of writing. Plays have two forms of writing:

1) **The words** that are written for the characters to say. We call this the **dialogue** – the characters lines.
2) **Stage directions** tell the actors what the characters do and how to say a line. (**stage directions are written inside brackets**)

You will practise structuring your play in the ***Classic Style***

How actors communicate and show the …

… audience what their character is like …

In this scheme of work…

We take a closer look at the ways that you, as an actor, can communicate your characters to your audience.
An actor can show what their character is like through their movements and actions. We call this, through their, 'body'. An actor can also show what their character is like and what they are feeling through the way that they use their voice.

Remember to say, **I, me** and **my** when talking about your own experience. Remember that the Studio is a **hands free zone.**

How we talk about things in drama

Actors show what their character is like through the way they speak (voice) and through the way they use their body. We say that these are the two ways that an actor COMMUNICATES their character, thoughts and feelings. So, when I ask how you communicate your character, I am asking how you showed what they are like by the way that you use your voice and body

The actor's use of voice

Tone- The tone of the actor's voice can show what the character is like (their character &
personality) it can show their attitude, mood, thoughts and feelings.
Pitch – This is how high or low the voice is. A high pitch can show that the character is excited, for example.
Accent- A character's accent depends on which part of the country, or which part of the world they are from. Accent can also show their background; if they are from a wealthy or underprivileged family, for example.
Volume- This is how loud or quiet the voice is. A loud voice can show confidence. A quiet voice can show that the character is timid, or considerate.

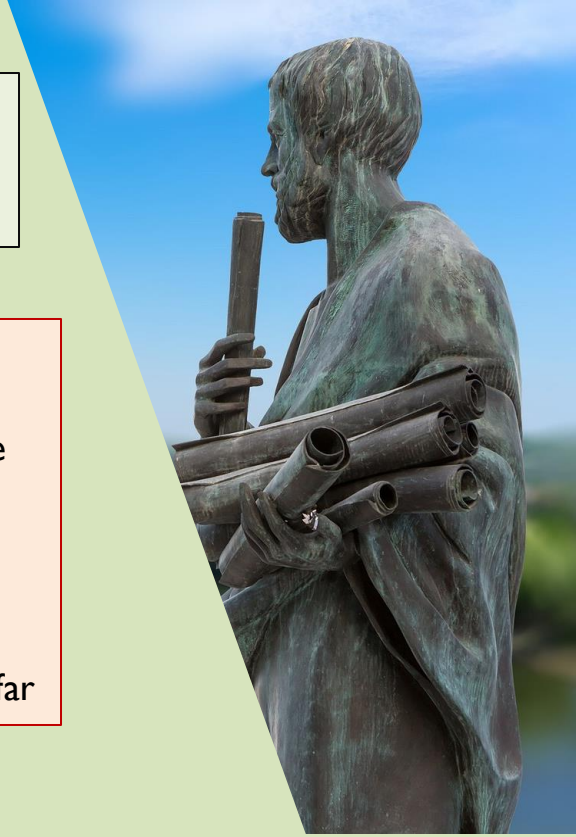
The actor's use of body

Facial Expression (FE) - This can show a character's thoughts, feelings and mood.
Posture- This is a word to describe the way we sit or stand. A poor posture could show laziness or
'attitude'. An upright posture can show the character is interested & engaged.
Gesture- We make gestures with our hands and head mostly. Gestures can 'say,' 'everything is okay' or, a pointed index finger at someone can show that the character is telling that person off.
Body Language (BL) - In life, we are often unaware of the way our body is 'talking'. For example, we may not be aware that our fidgeting shows we are nervous or our folded arms show that we are feeling a bit defensive. Drama students have to be aware of what their body is saying to make sure it is showing what their character is like and what they are feeling at the time.

Intellectual skills: no 1: **Evaluating**

Evaluating is the skill that involves saying how good or bad you think something is. In drama we use our **Evaluative vocabulary** instead of writing, *'good'* or '*bad*'.
You will have the opportunity to **evaluate** one of your classmates' plays in discussion and in a written task. You will need to use some of the **Evaluative Vocabulary** words in the box below

Can you see the **value** in **evaluate** ?? When we evaluate, we are giving a piece of work a value – we are saying, how much it is worth.



Evaluative Vocabulary (EV)

These are words that enable you to evaluate drama work specifically instead of saying something is, 'good' or 'bad' which doesn't mean very much in drama.

Intelligent **Imaginative** Creative skilfull Exciting **Informative** Dull
Inspiring Clear Unclear **Muddled** Confused **Misguided** Shallow
Compelling Moving **Heart - Wrenching** **Emotionally - Draining**
Spirited **Believable** Credible **Convincing** Powerful **Entertaining** Riveting
Gripping Captivating **Engaging** **Harrowing**

Homework Tasks

These may include;

1) An evaluation of a class performance using EV.
2) A full colour poster of ***Personal & Interpersonal Skills (PIPS)***
3) Some scripting of a scene.
4) A quiz that checks your learning so far

Using the things that you learn

You will use the theatre skills and social skills that you learn here in all of the drama work that you do from now on in all the your years studying drama at Trafalgar. You will use the IOP in all devising tasks. You will use PIPS whenever you are working with others. We will refer to classic play structure in several future schemes of work, including Melodrama in terms 5 & 6.

Key things to take from terms 1 and 2

Speak in the **1st person singular**, remember the **hands free zone,** be kind and useful when working with others and a play is made from its **ingredients**

Assessment in Drama

By assessment we mean the thoughts that we have about how you are doing at any given time. We use two different types of assessment and they have quite posh names: **formative assessment** and **summative assessment. Formative assessment** is where we look at your work and suggest things that you can do or stop doing which would improve your rate of progress. In **summative assessments**, we simply make a judgement about the quality of your work and usually give it a grade or level.
Formative assessment of your practical and written work is given often. Sometimes you may receive lots in one lesson, particularly if you are at a place where you are ready to make lots of progress. It is a good idea to write down the **formative assessment comments** that you receive in your book. You should certainly **remember** them and **work** on them. **Summative assessments** are given once a term.

Expectations and Routines

Football

Effort and Engagement

Physical Ability and Technique

What constitutes a Warm-up in Football?

1. Pulse Raiser
2. Dynamic stretches
3. Skill practice/ Drills

Can you plan a warm-up for Football?

Basic Rules:

1. Game is started by kicking the ball from the centre spot.
2. The U12 game has 9 players – goalkeepers, defender, midfielders and attackers.
3. Referee and two assistants will officiate the game.
4. If a ball goes over a touch line a throw in is taken. If an attacker kicks over the goal line it is goal kick and if a defender kicks it over the goal line it is a corner.
5. To score the ball must cross the opposition's goal line.
6. The offside rule also applies where an attacker is in front of all opposing defenders when the ball is kicked.
7. Handball- It is forbidden to touch the ball from your finger tips to shoulder. Unless you are the goal keeper.

Game Understanding:

- How do you keep the ball low when passing and shooting?
- What technique would you use to tackle a player?
- Why is jockeying important?
- Research the different types of formations and positions.

Implementation of the Academic Standards to the PE Environment:

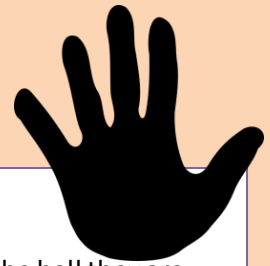
- Arrive promptly and change within the allocated time.
- Always have the correct PE kit.
- Fully engaged throughout the lesson, striving to improve performance of skills and techniques at every opportunity.
- Motivated and contributes 100% effort.
- Can work independently to complete a warm-up, drills and competitive situations.
- Perseveres and doesn't give up, demonstrates resilience when practicing and applying skills to different situations/ game scenarios.

Dribbling: Dribbling allows you to move the ball quickly around the pitch using the inside and outside of your feet and keeping the ball close to your feet and your head up.
Turning with the ball and outwitting a defender: Turning with the ball allows you to change direction using different techniques, such as dragging the ball back with the sole of your boot. Outwitting and opponent allows you to beat a defender using different techniques such as a step over.
Controlling the ball: Using different parts of the body – this could be the feet or thigh. Remember to cushion the ball.
Passing: There are 3 types of passes. Side foot pass, driven pass with the laces and a lofted pass. Using the side of the foot allows you to pass accurately over a short distance, a driven pass allows you to pass the ball on the floor, but a greater distance. Finally, a lofted pass allows you to lift the ball in the air over players. Remember to keep your standing foot next to the ball when you make the pass.
Shooting: There are different types of shots that allows you to score goals. Your instep can be used to control and place the ball into the goal. If you use your laces then this allows more power to be produced.
Attacking – keeping possession: Making a number of passes allows your team to keep possession and advance up the field.
Tackling: Techniques – tackling, jockeying and forcing the player onto their weaker foot.

Expectations and Routines

Netball

Physical Ability and Technique



What constitutes a Warm-up in Netball?

1. Pulse Raiser
2. Dynamic stretches
3. Skill practice/ Drills

Can you complete an appropriate warm-up independently?

The basic rules of Netball:

1. You cannot travel with the ball.
2. There are only 7 players on court from each team.
3. You cannot snatch or hit the ball out of a players hands (*Contact Rule*).
4. When defending the ball, you must stand 3 feet away from the person with the ball (*Obstruction Rule*).
5. Players cannot hold the ball for more than 3 seconds, throw it to yourself (*Held Ball and Handling Rules*)
6. Players are not allowed to move into the areas that they are not designated to (*Offside Rule*).

Game understanding:

- Which rule do you think is the most important?
- Where does each of the positions start on the court and where are they allowed to go?
- How do you create space to receive a pass?
- How can you stop your opponent getting the ball?
- When is it the best time to make a move to receive a pass?

Effort and Engagement

Implementation of the Academic Standards to the PE Environment:

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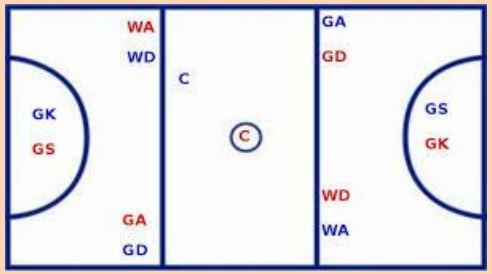


Footwork: Pivoting

When a person lands on one foot when receiving the ball they are allowed to use the other foot to move themselves around the spot to see where your team mates are.

1. Leap into the air to catch the ball and land on one foot.
2. As you land on one foot you use your second foot to move your body around looking for more options of players to pass.

Passing:

Chest pass

1. Thumbs and index fingers form a W shape. The remaining fingers should be spread behind the ball to push it away.
2. Elbows should be kept low and close to the body. Feet should be shoulder width apart.
3. Keep the ball close to your chest.
4. Fingers facing forward, push the ball towards to the chest of the receiver to create a flat, strong pass.
5. As you push the ball forward, step forward with one foot.

Dodging:

- Wide stance so you are balanced and can move off in either direction quickly.
- Drop a shoulder to make it easier to move.
- Run, stop and change direction as needed to lose opponent.

Shooting

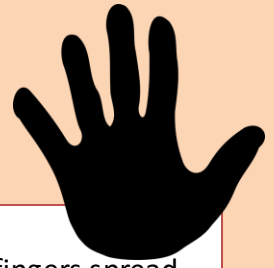
1. Rest the ball on your preferred shooting hand with the other hand supporting on the side.
2. Feet should be shoulder width apart.
3. Look at the back of the ring.
4. Bend your knees, lift your heels off the floor and push the ball up and over the top of the ring to loop into the net.

Expectations and Routines

Rugby

Effort and Engagement

Physical Ability and Technique



What constitutes a Warm-up in Rugby?

1. Pulse Raiser
2. Dynamic stretches
3. Skill practice/ Drills

Can you complete a team warm-up ready for the game?

Basic Rules

1. Game is started by kicking the ball from the centre spot forwards.
2. The U12 game has 12 players and 20 min half.
3. Referee and two assistants will officiate the game.
4. The ball must be passed backwards.
5. If a ball goes over a touch line an uncontested lineout is taken. 6. To score the ball must cross the opposition's goal line.
7. Tackling – Must be below the shoulder.
8. 5 player scrum –strike, no push.
9. Ruck and maul – unlimited.
10. Fend-off below armpits.

<u>Game understanding:</u>

- How do you keep the ball flat when passing?
- Explain what scoring is in Rugby?
- What technique would you use to tackle a player?
- Why is keeping shape important?
- Research the different reasons that scrum may be used.

Implementation of the Academic Standards to the PE Environment:

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- Perseveres and doesn't give up, demonstrates resilience when practicing and applying skills to different situations/ game scenarios.

<u>Passing</u>: Hold the ball in two hands with your fingers spread across the seam, with your chest facing forward. Draw the ball back across one hip, keeping your elbows slightly bent, as you turn your chest away from the target.
Sweep the ball off your hip as you swing your hands through an arc, keeping your elbows close to your body. Release the ball with a flick of the wrists and fingers.
Follow through with your fingers pointing to the target - chest high in front of the receiver. **The pass must go backwards.**

<u>Tackling</u>: Tower of power, cheek to cheek, ring of steel.

<u>Defending</u>: A defensive line is a flat line to minimise gaps between players.

<u>Scrum</u>: The scrum is a means of restarting play. The ball is thrown into the middle of the tunnel between the two front rows, at which point the two hookers can compete for the ball, attempting to hook the ball back in the direction of their team-mates, they can bring the ball to the hindmost foot of the scrum, where the ball is then passed into the back line and open play resumes again.

<u>Ruck:</u> A ruck is formed if the ball is on the ground and one or more players from each team who are on their feet close around it. Players must not handle the ball in the ruck, and must use their feet to move the ball or drive over it so that it emerges at the team's hindmost foot, at which point it can be picked up.

Expectations and Routines

Skills and Fitness

Physical Ability and Technique

Effort and Engagement

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

Skill-Related Components of Fitness:	
Agility	The ability to move and change direction quickly, at speed, whilst maintaining control.
Balance	The ability to keep the body stable by maintaining the centre of mass over the base of support. There are two types of balance – Static and Dynamic
Co-ordination	The ability to use two or more different parts of the body together, smoothly and efficiently
Power	Strength X Speed
Reaction time	The time taken to start responding to a stimulus.
Speed	Distance ÷ time

Implementation of the Academic Standards to the PE Environment:

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- Can work independently to complete a warm-up, drills and competitive situations.
- Perseveres and doesn't give up, demonstrates resilience when practicing and applying skills to different situations/ game scenarios.

What components of fitness are important to perform the following skills?:

- Dodge in netball
- Score a goal in football
- Throw or run with a ball
- Serve in Tennis
- Maintain a rally in Badminton

Can you add your own examples:

Self Assessment of knowledge

- What is it to be healthy?
- What is the recommended amount of physical activity you should do on a daily basis?
- Can you carry out an appropriate warm-up?

Technology Terms 1 & 2

3D drawing

3D drawings allow designers to be able to represent their designs more realistically and encourage designers to think about every angle of their design. Design development naturally occurs when designers move from 2D drawings to 3D drawings, as they often find the opportunity to add parts or features and consider in greater depth how the product would actually be used. Think about the sides of your mobile phone and the buttons, sockets and charging points that you find on it, alongside feedback from users (user-centred design). 3D drawing will have helped the designers to think about where each of these is placed.

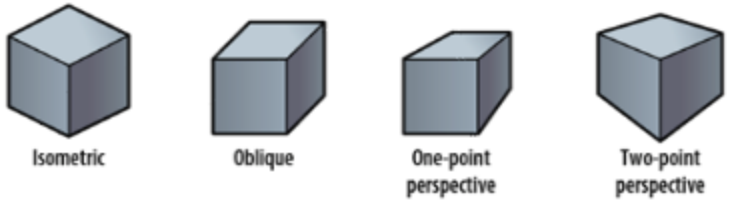
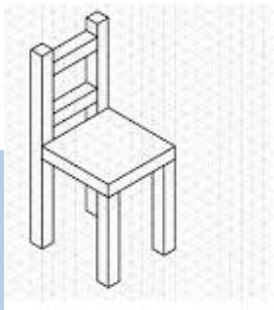


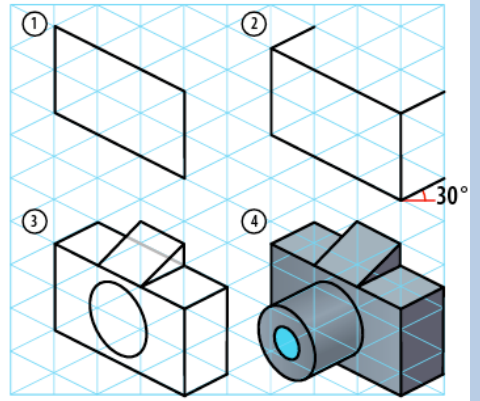
Figure 1.17.2 There are a range of 3D techniques that you could use: have a go at all four and decide which one feels most comfortable for you

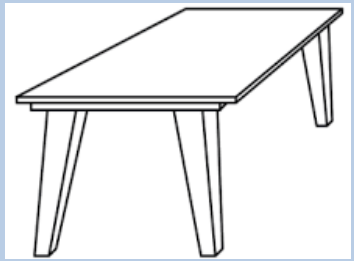
Isometric

Isometric drawings look more realistic than oblique ones and are based on 30-degree lines. For support, use isometric grid paper to guide your angles:

1. Instead of drawing the 2D front view in oblique, you begin with an edge of the product – draw this as a vertical straight line.
2. From this line, create **construction lines** going off at 30 degrees.
3. Fill in the next vertical lines.
4. From these vertical lines, draw your next construction lines going off at 30 degrees (repeat steps 3 and 4 depending on the complexity of your drawing).
5. Within these construction lines, draw your product.



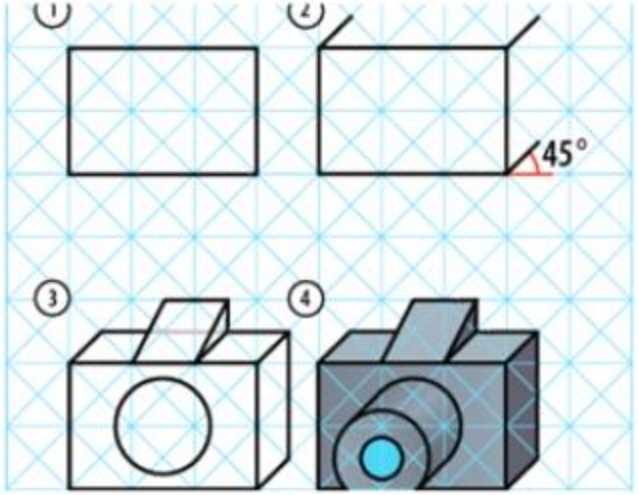




Oblique

Oblique projection is the simplest method of creating 3D designs based on 45-degree lines. For support, use oblique grid paper to guide your angles:

1. Draw the front view in 2D.
2. From each corner, draw construction lines projecting out at 45 degrees.
3. On the construction lines, measure half the true length.
4. Draw the back of the product to complete the product.

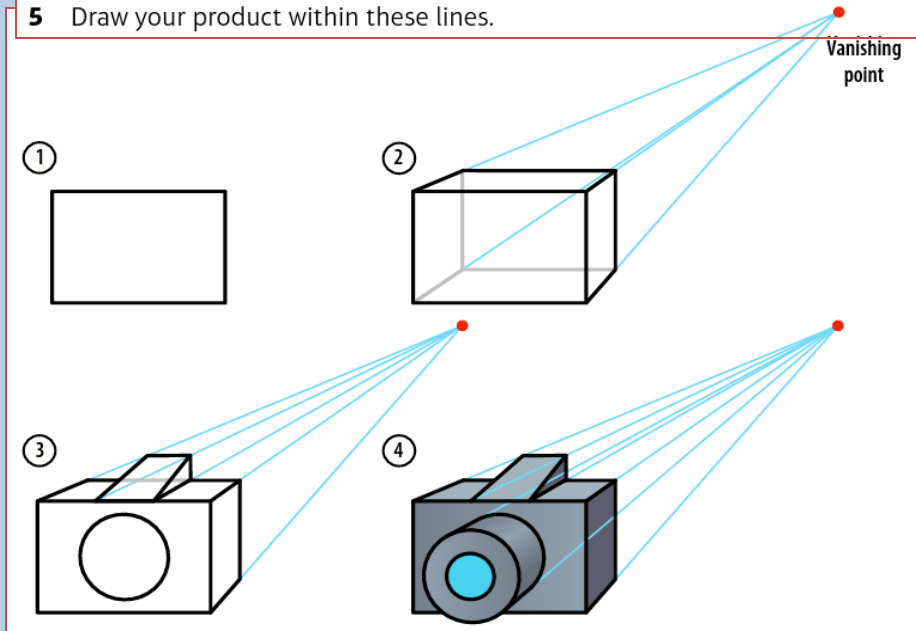


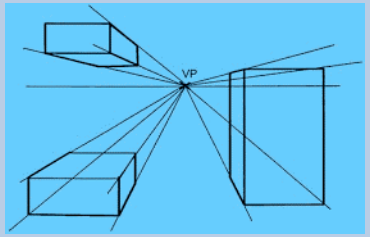
One-point perspective

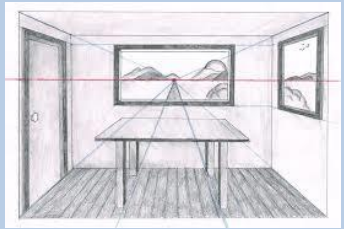
One-point perspective is often used in interior design, as it quickly creates an image with a good sense of depth that enables the customer to rapidly visualise the designer's idea. This then allows the designer and customer to work together to develop and adjust the idea to suit the customer's requirements.

One-point perspective is the easier type of perspective drawing.

1. Just like oblique drawing, start by drawing the front view in 2D.
2. From each corner, create construction lines to a point in the distance called a single **vanishing point**.
3. Draw your next vertical lines between your construction lines.
4. Join up your vertical lines with horizontal lines (keep these faint).
5. Draw your product within these lines.







Orthographic views

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

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

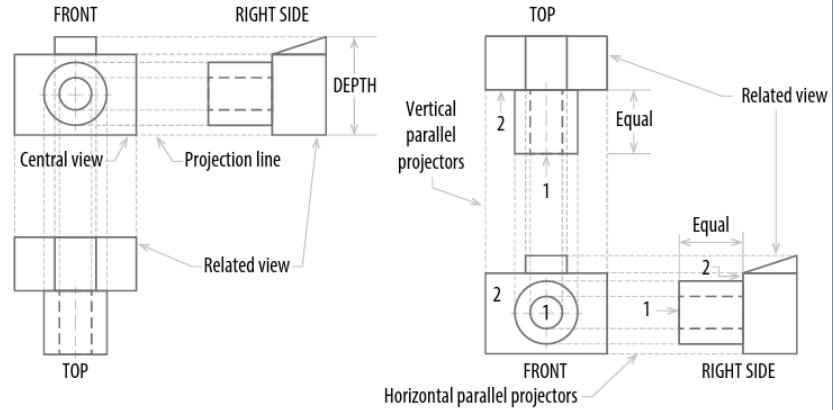
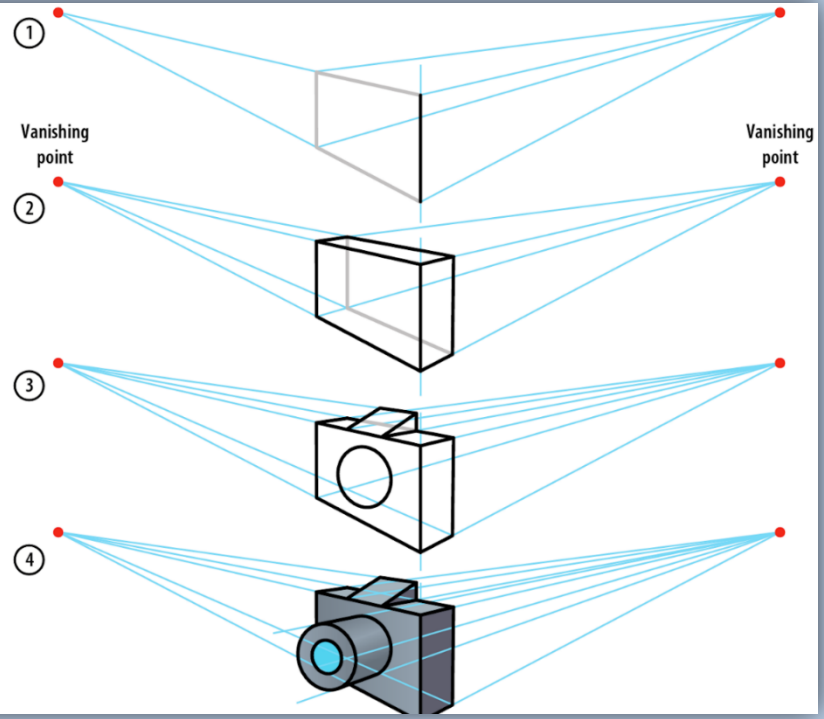
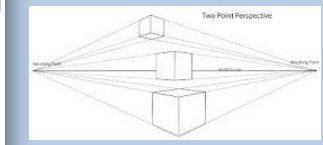


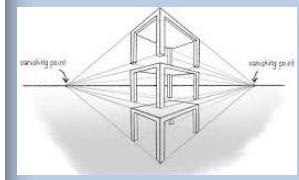
Figure 1.17.7 First and third angle projections for orthographic projection showing all sides of the product

Two-point perspective uses two vanishing points either side of the object to produce a more realistic representation of the product.

1. Just like isometric drawing, you begin with an edge of the product – draw this as a vertical straight line.
2. From each corner, create construction lines to two vanishing points.
3. Draw in your next vertical lines between the construction lines.
4. From these vertical lines, draw construction lines going off to the vanishing points.
5. Draw in your product between your construction lines.







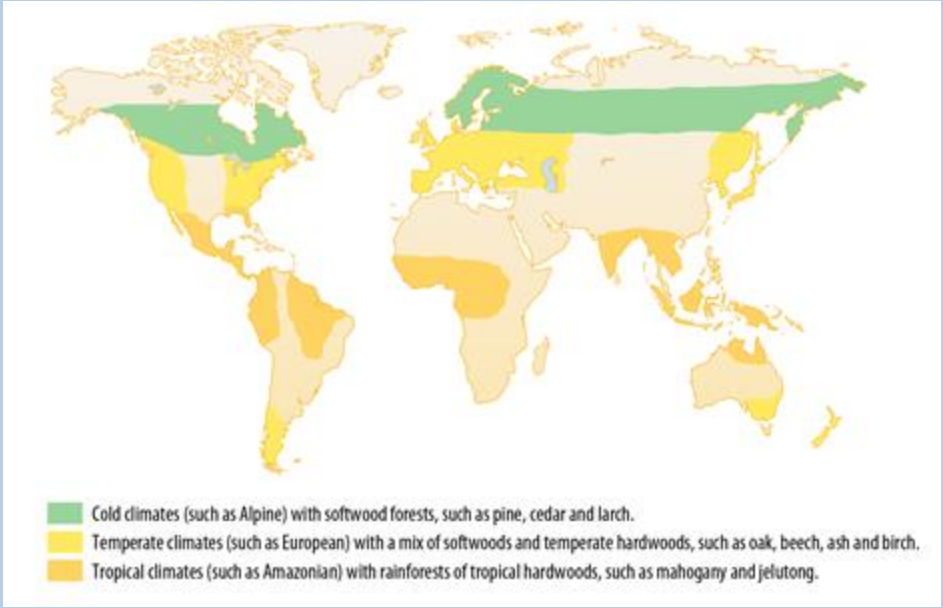
Timber is wood that has come from tree trunks and has been dried and cut into planks. Timber has been used as a building material for thousands of years to make homes, furniture and tools. Timber is still used a lot as trees grow naturally, their wood is easy to work with and it is relatively strong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

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

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

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

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



MDF

Plywood

Chipboard

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

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

Properties

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

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

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

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

Elasticity is the ability to stretch and return to its original length or shape. Timber is not generally elastic, but some are more than others, yew is used to make archery bows for example.

Tensile strength is the ability to withstand pulling force, timbers tend to have a good tensile strength, often 3 or 4 times better than compressive strength.

Compressive strength is the ability to withstand a crushing force, the denser the timber the better its compressive strength.

Orthographic views

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

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

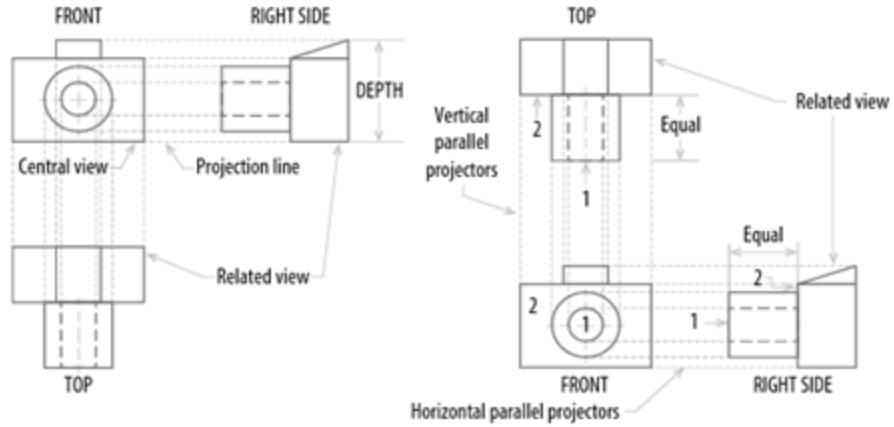
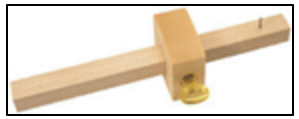
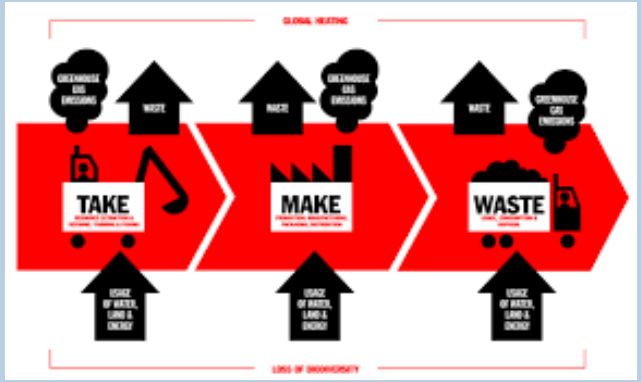


Figure 1.17.7 First and third angle projections for orthographic projection showing all sides of the product

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



The environmental impact of manufacturing and using products

Life Cycle Assessment	
Raw materials	Where have your materials originated from? What is the environmental impacts of using them? Timber comes from trees, which are cut down.
Timber processing	How were your raw materials made into the actual material that you used? Trees are processed in a sawmill to turn them into timber, this has an impact on the environment
Manufacture	How did you shape/join/finish/ embellish your raw materials? Using tools, equipment and machinery all have an impact on the environment, some greater than others.
Distribution	If you were to make this product on a larger scale, how would you distribute it to the retailers? Shipping raw materials and products around the planet uses a great amount of energy.
Product in use	Having observed your user interacting with your product, what impact could it have? Is the product simple to use, does it require power?
Repair and maintenance	Is the product durable, does it require frequent servicing to keep it working? Will the product damage easily in normal use?
Disposal	Thinking ahead, what would happen to your product at the end of its life? Could it be easily disassembled and sorted for recycling? Have you include recycling symbols to make this process easier for your user? Are there any treatments that make disposal more difficult? Could the materials be upcycled?

Knowledge Organiser – Year 7 Food

Macro & Micro Nutrients

Carbs Protein Fats

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

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

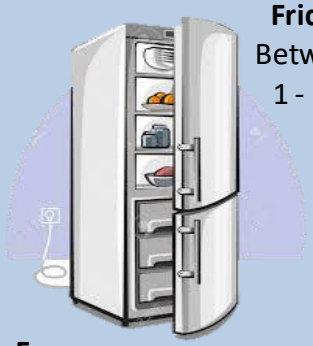
Vitamin	Role in the body	Food examples
A	Helps to keep the eyes healthy and strengthen the immune system.	Dark green leafy vegetables, carrots, liver
B	Helps to release the energy from the food we eat.	Bread, milk, cereals, fish, meat
C	Help with skin healing and healthy skin. Help with the absorption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

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

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

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

Key Temperatures



Fridge
Between 1 - 5◦C

Freezer
Below -18◦C

Danger Zone
Bacteria multiply quickest between 5 - 63◦C

Cooking
Food should be cooked above 75◦C

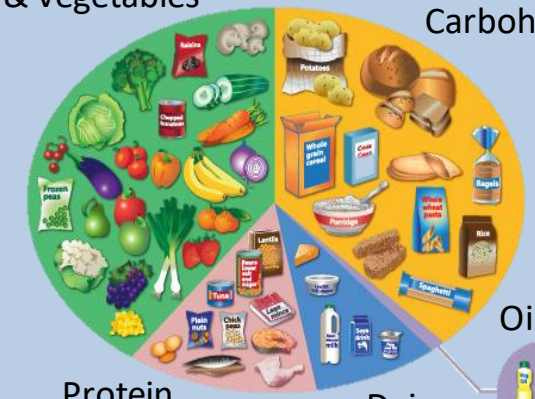
Knife Skills

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

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

Knowledge Organiser – Year 7 Food

Eatwell Guide



The Cooker

8 Tips for healthy eating

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

Weighing and Measuring

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





Equipment

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


Hygiene


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


Food – Understanding the 4 C's Concept
Cooking – thorough cooking kills bacteria so ensure food is cooked to 75°c to make sure all bacteria are killed – check this by using a food probe.
Cleaning – effective cleaning removes harmful bacteria and stops them spreading so ensure all work tops, utensils and equipment are cleaned thoroughly with hot soapy water.
Cooling – effective chilling prevents harmful bacteria multiplying so ensure all food is stored at the correct temperatures, ensure cooked food is cooled within 90 minutes.
Cross contamination – Good hygiene practice prevents Cross contamination so when raw food comes into contact with ready to eat food. For example raw meat juices spilling onto salad.



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

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

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

Key Terms

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

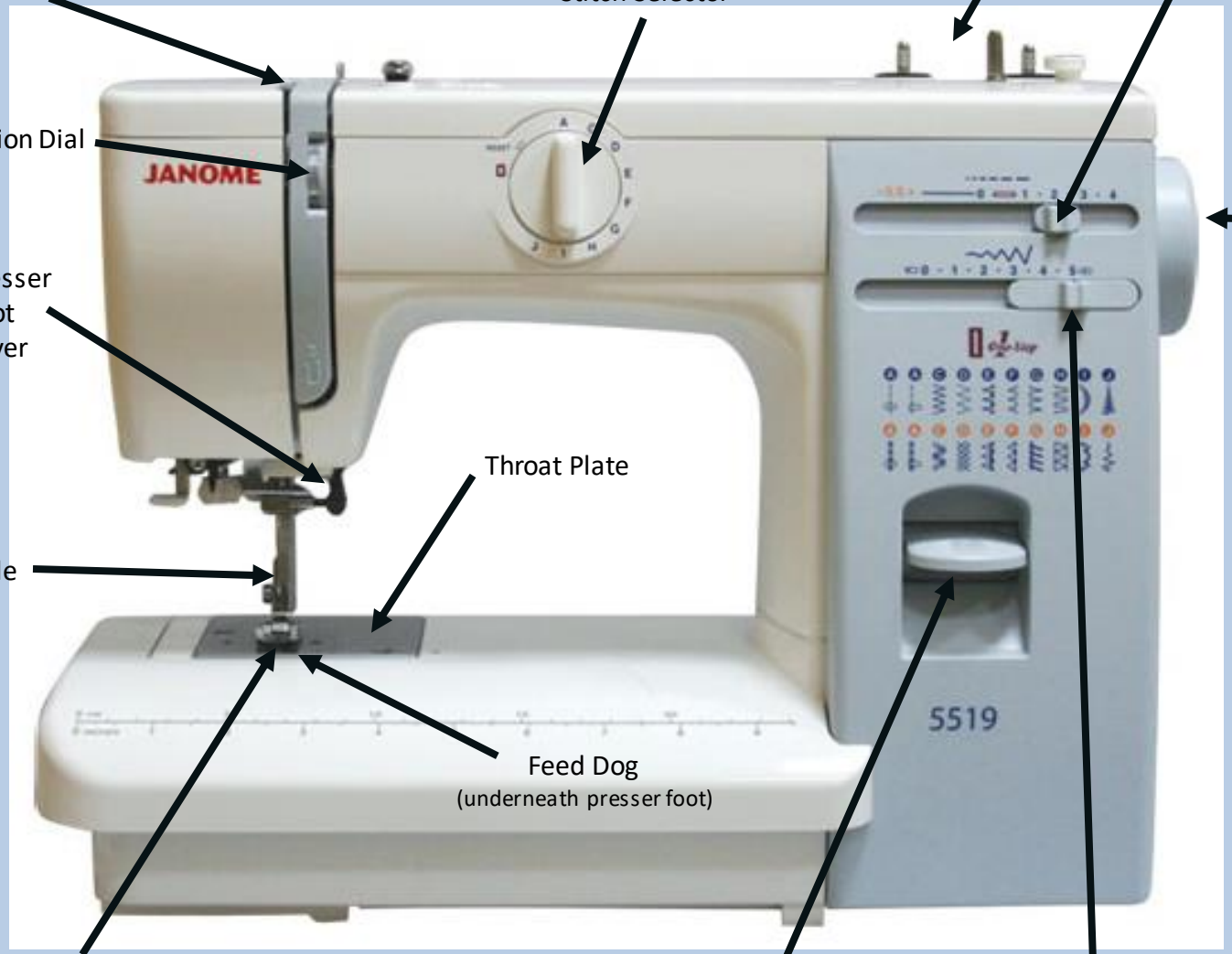
Hazard: any feature of a situation which may cause harm or injury.

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

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

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

SEWING MACHINE- the main parts.



Bobbin Compartment

Bobbin

Bobbin Case

Foot Pedal and Lead

Hand sewing Needle		Hand sewing needles are used with thread for sewing by hand. They have a point at one end - this is very ***sharp*** - and a hole at the other which is called an 'eye'; this is where the thread goes. Needles are ***sharp*** so you need to be careful when using them so you don't prick yourself!
Pins		They are also known as ***Dressmaker Pins***. They are used for holding fabrics together ***temporarily*** while sewing. They are also used for holding pattern templates onto fabric while you cut out. Pins are ***sharp*** so you need to be careful when using them so you don't prick yourself!
Pin Magnet		This might also be known as a ***Magnetic Pincushion***. This keeps the pins in one place. Pins should be put onto a pin magnet and not left on the table or near the sewing machine as they will get damaged.
Fabric Scissors		Sometimes called ***Fabric Shears***. We use these for cutting fabric. ***Only fabric***. They cut fabric accurately and they allow you to cut for longer periods of time without getting hand fatigue. Notice that the blades are longer and they have one large for 3 -4 fingers and a small hole just for your thumb.
Embroidery Scissors		We use these for cutting threads. They have short blades and can cut right to the tip. We use them by the sewing machine but they are also useful for cutting detail in fabric such as button holes. Not for use with paper!
Pinking Shears		These scissors feature a characteristic zig-zag edge. We use them to create a ravel-resistant edge on fabric; this means it will help prevent the fabric from ***fraying***. These scissors can also be used to give a decorative edge on craft projects.
Paper Scissors		We use these for cutting paper. ***Only paper and cardboard.*** Notice that the two holes are small and the blades are short.

Tape Measure		It is **long** and **flexible** and made from durable plastic or fabric. Most tape measures are marked with centimetres on one side and inches on the other. We use it to measure obviously but because it is long and flexible you can take body and other measurements easily.
Quick Unpick		Also known as a ***Seam Ripper*** and this really handy tool removes unwanted stitches quick and easily. It has a ***sharp point*** and ***cutting blade*** o be careful when using it. ***NEVER*** be afraid to make a mistake.
Aqua Pen		This is another tool used for marking fabric. It is also known as a ***Water Erasble Pen***. It's useful if you want to mark fine lines or trace a design or transfer complex pattern markings onto fabric. This pen makes bright blue marks which are easily removed with ***water***.
Tailors Chalk		This is used for ***marking fabric*** so you know where to cut out or alter a garment. It is often found in the shape of a triangle - the edge can mark fabric with precision. Tailor's chalk is easily removed.
Machining Thread		These are fine ***yarns*** of ***cotton***, ***nylon*** or ***polyester*** and are used for ***sewing by hand*** or ***by machine***. Threads come in different sized spools and in lots of colours to match the fabric you are sewing together.
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.**
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.**

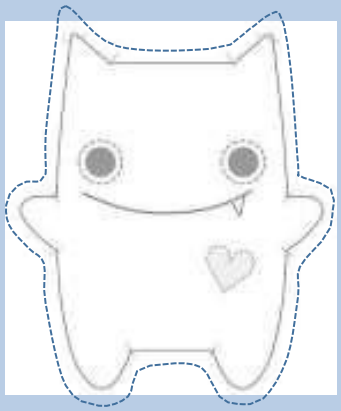
A **seam allowance** is the space between a stitching line and the edge of the fabric.

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.

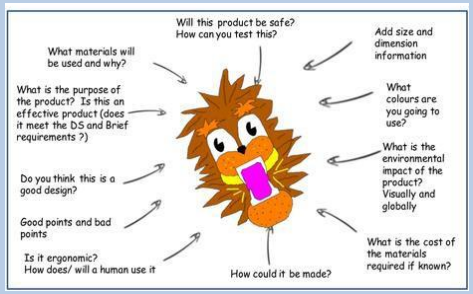
Seam Allowance



Designing

Communicating your ideas with others.

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



Annotation

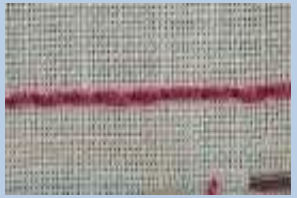
Adding short explanations to your design ideas to help explain your designs further.

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.**

Hand stitches

Straight stitch

Blanket stitch



Back stitch

Cross stitch

Appliquè

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

Reduce

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

Refuse

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

Repair

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

Rethink

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

Recycle

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

Reuse

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

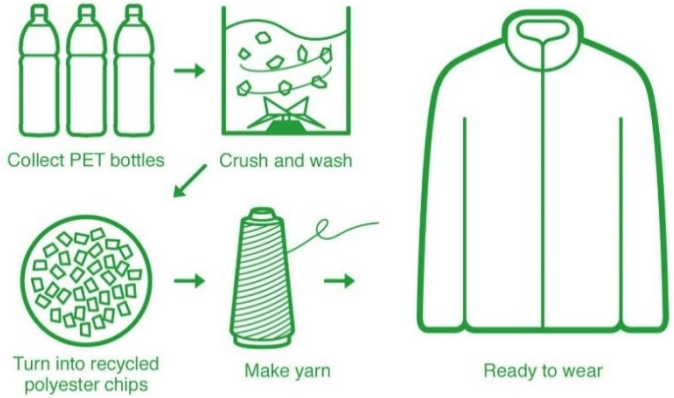
This symbol is called the **MOBIUS LOOP** or 'recycling symbol' and indicates that a product **can** be **recycled**, but not necessarily that it **has** been itself produced from **recycled** materials.

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

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

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

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



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

Year 7 PSHCE Term 1 Transition to Trafalgar School

What is PSHCE?

Personal
Social
Health
Citizenship
Education

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

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

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

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

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

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

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

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

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

CLASSROOM RULES IN PSHCE

No Question is silly or stupid

Everyone will have differing opinions and that is ok

We must always listen and not judge

Give each other a chance to talk

PSHE classrooms are a safe place

If you find it hard to ask a question out loud then you can ask it quietly to your teacher, or you can put a question in the question box.

This is our classroom and we as teachers will learn just as much from you as you do from us.

This is OUR classroom

Great People
The school has many different people who are here to help you become great people and that isn't just in your lessons.

The Pastoral team:

Year 7 Tutors

7C _____
7B _____
7L _____
7P _____
7R _____
7W _____

The House System:
- **What is this and how does it work?**
- **Who do you speak to if you are a little worried or have questions?**
- **What does the Head of House do?**

These are all questions we will be answering through our lessons looking at The pastoral system.

We have Tutors, Heads of House, The staff in Student Services, Mr Williams and our class teachers that can help us but who are sometimes the best people to speak to and put things into perspective?

House System
MRS FAULKNER

CLARENDON _____

BREAMORE _____

LONGFORD _____

PEMBROKE _____

RADNOR _____

WICK _____

Members of your own tutor group can be a great source of support and you can be a great source of support to others.

When we talk about our ups and downs it can help us to make sense of it all. To know we are not alone and a chance to put some logic to our thoughts.

What responsibilities do you have as a member of the Tutor Group?

- To be **KIND**
- To be **HONEST**
- To **DO YOUR BEST**
- To **LISTEN**
- To **ASK FOR HELP**
- To **JOIN IN**

Notes:

In a second colour explain what help they can give.

NOTES:

When we feel overwhelmed in a classroom, What can we do?

Remember

- Its Ok to have a bad day
- It's Ok to make mistakes, it is often where learning begins.
- Set back is not failure. Nothing is perfect.

Some steps to manage your anxiety

Routine

Create a good morning routine. Creating a good routine helps you arrive at school calm and focussed.

Rationalise

Is this a true picture or am I overthinking this? Anxious thoughts often go to worst case scenarios. Repeat to yourself it is not going to be as bad as you imagine.

Recognise the signs you are becoming anxious, what is happening in your body? If you notice your anxiety is rising take steps to calm yourself, find what works for you.

Talk Don't be afraid to talk about your anxious thoughts, we all experience anxiety on some level. Find friends or adults that will talk it through with you. It is ok to ask for help

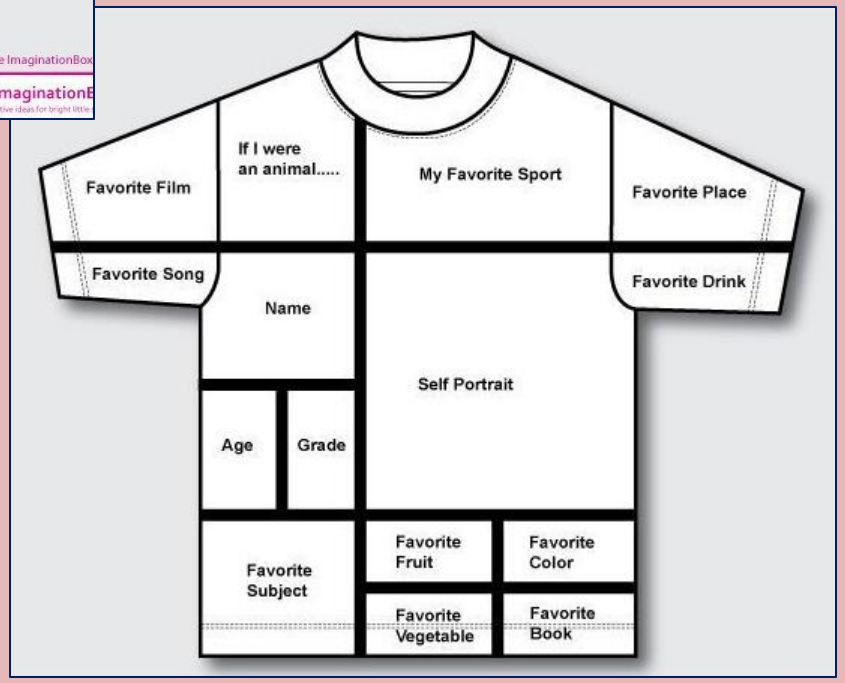
Some Anxiety Coping Statements

- This feeling is a signal to take a deep breath
- My anxiety does not define me
- I am stronger than I think.
- This is a normal human emotion
- It is ok to take a break

Things that can increase anxiety

Isolating yourself
Irregular sleep
Caffeine
Too much social media
Reading a lot of negative news
Skipping meals

What makes you, you and what do you bring to your Tutor group?



You will be creating a T-shirt that expresses you. This will be used as part of a display for your Tutor room.
Here is an example to help you.

Desert Island Quiz:

If you were stranded on a desert Island what would you take with you. Answer the following:

- **Which 3 Music Artists?**
- **Which 3 Movies or TV Series?**
- **Which 3 celebrities?**
- **Which 3 foods?**
- **Which 3 electrical appliances? (You can't take your phone!)**
- **Which 3 books?**
- **Which 3 items of clothing?**
- **One cuddly toy?**
- **One famous person who is no longer alive.**
- **Which 3 ornaments from your home?**
- **Which 3 photos?**
- **Which 3 computer games?**
- **One member of your family? (This can be a pet if you don't want to offend anyone).**
- **Which two friends?**
- **One piece of jewellery.**
- **One type of sweet/chocolate.**

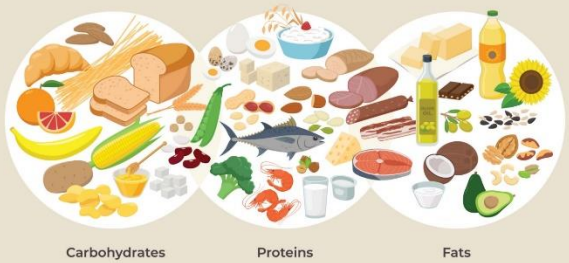
Year 7 PSHCE Term 2 Healthy Lifestyle

Our bodies need nutrients to help grow, develop and give them energy. So these nutrients are separated into two groups: **Macro Nutrients** and **Micro nutrients.**

Some of you will recognise this from your Food Technology lessons.
This is called the Eatwell guide. It was designed to help people make good choices about their diet.
The word DIET is often thought of when you want to loose weight but really the word describes what you as an individual eat. That is your diet.
There are many different diets that people follow.

The Eatwell guide was designed to not only look like a plate but also a pie chart so that it is easy to see what percentage of different food help to make up a healthy diet.
You can also see guidelines around the outside which also support healthy food choices such as the traffic light system used to show nutrition on food and how much water should be drunk throughout a day.

MACRONUTRIENTS
FATS
PROTEINS
CARBOHYDRATES



PROTEIN
Helps with muscle growth and healing

Micro means "small"
We need **micro nutrients** in **small** amounts

Macro means "large"
We need **macro nutrients** in **large** amounts

FATS
Help with insulation and brain development

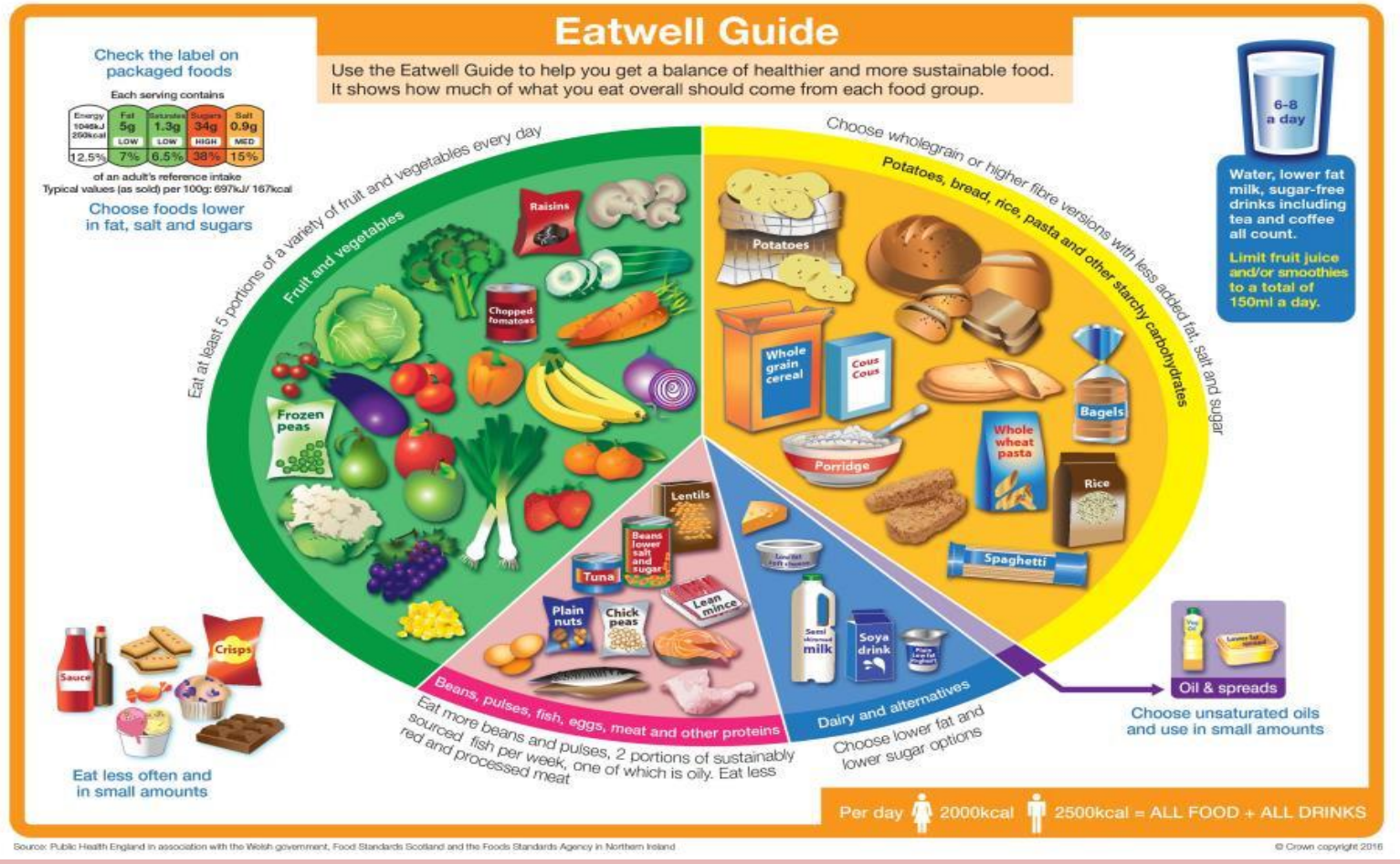
CARBOHYDRATES

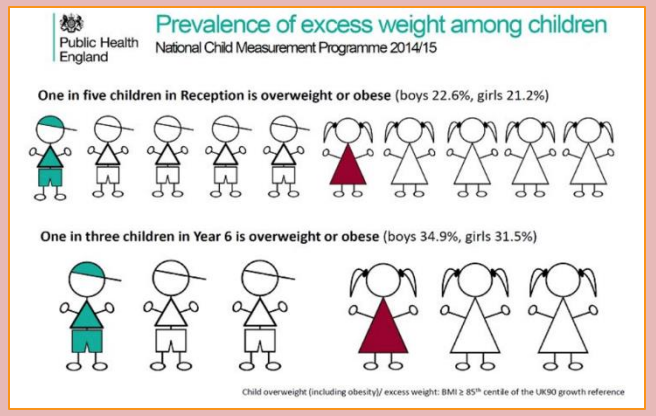
STARCH

Slow release energy

SUGAR

Fast release energy





National Child Measurement programme

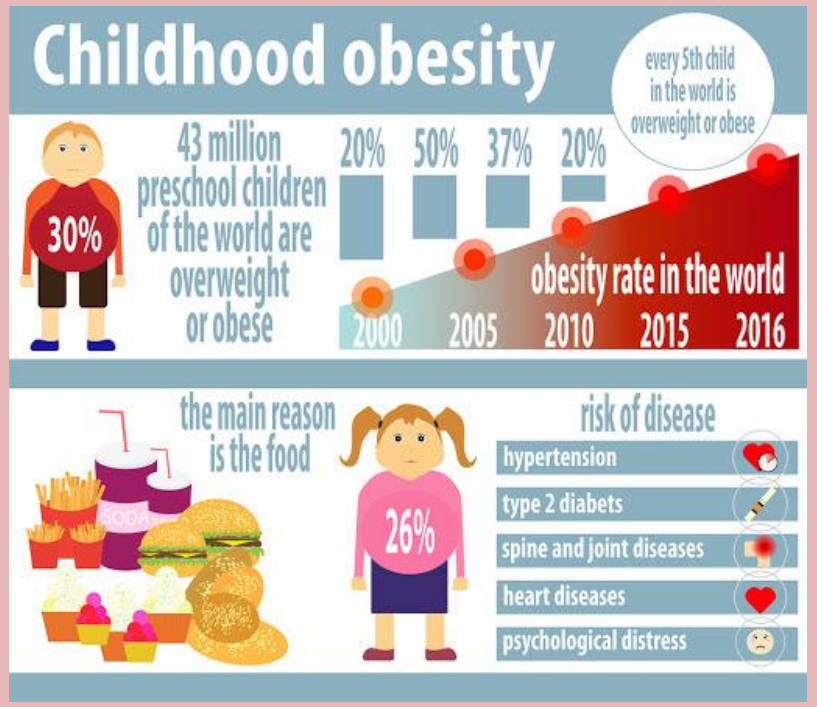
When children join school in Reception (Age 4-5yrs) and during Year 6 (Age 10-11yrs) they can be part of a National child measurement programme. Their Age, Gender, Weight and height are recorded and the results are then sent home to their parents.

The results are looked at against the BMI Healthy weight calculator and then parents will be told if the results show that a child is one of four categories.

- Under weight
- Healthy weight
- Over weight
- Very over weight

They will then be told how to support their child to maintain a healthy weight or where to get support with their child's diet. Whether they take part in these assessments or take up the support once the results are sent to them is entirely up to the parents

About 1 in 5 children in reception are over weight or very over weight, rising to 1 in 3 in year 6.



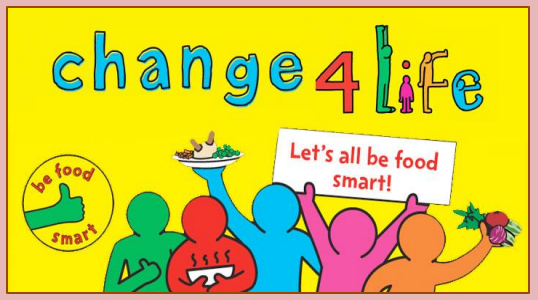
How has modern lifestyles contributed to the increase in Obesity In Britain?
Consider:
How we eat as a family.
Who in the household works.
How we shop.
What varieties of food are available.

Good choices link to good physical Health

To reduce the number of children who are over weight for their age, we need to consider many factors.
We cannot blindly believe that it is all the parents fault or that it is everyone else's fault. In the clip we watched as a class we could see that as a family they were making good food choices for her son. He had a variety of foods including Carbs, Protein, Fats, Vitamins and minerals.
Often we focus on what we eat and how much exercise we have but how often do we consider how much we consume?

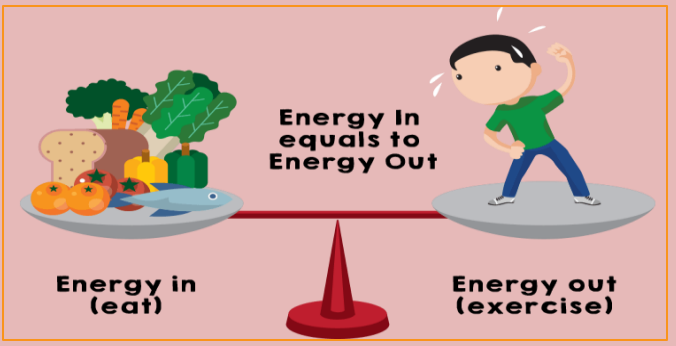
We have learnt through the past few lessons that all food is important in supporting a healthy diet and that all food can be consumed as long as it is in moderation and that your body is receiving the correct amount of nutrients for it to function and grow.

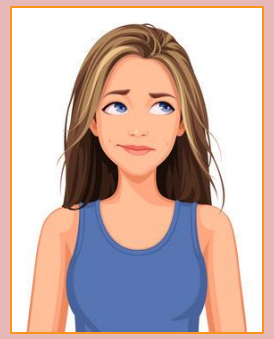
It is not just one person that can change this. We need to take responsibility as individuals, however we also need the shops, restaurants and food production to also support these changes.



We have been looking at a balanced diet as part of a healthy lifestyle. But it doesn't just stop there. A healthy lifestyle also includes being active.

The fuel that we take in by eating also needs to be used up. Otherwise this fuel will be stored as fat. Calorie needs vary depending on age, sex, height and activity level. Calorie needs are often higher during the teenage years than any other time of life. During this period of rapid growth and development, boys require an average of 2,800 calories a day, while girls require an average of 2,200 calories a day.





On average Teenage girls require 2, 200 calories a day.

On average teenage boys require 2,800 calories a day.

These calories are to support the developing teenage body and the amount of physical activity that the average teenager undertakes in a day.

Physical activity is the best way to work alongside a healthy diet to keep your bodies working and growing. Exercise increases endorphins which support good mental health and help the body to reduce the risk of a variety of illnesses that can occur later in life.

We can all find fitting in physical activity a bit of a chore at times especially when the evenings are darker and it's cold and wet. But you'll be surprised by how much physical activity you do without eve knowing.

Children and young people aged 5 to 18 should:
aim for an average of at least 60 minutes of moderate intensity physical activity a day across the week. take part in a variety of types and intensities of physical activity across the week to develop movement skills, muscles and bones.

We can all have days when we eat over, or under the recommended amount and this is not really an issue. But if we continually eat over what does our body do with the excess energy?

All the physical activities you may do:

- Your PE lessons
- After school clubs
- Lunchtime clubs
- Inter house competitions
- Walks with your family
- Walking to and from school/ Bus stop
- Walking from lesson to lesson
- Bike rides
- Swimming
- Horse riding
- Walking the family pet
- Helping in the garden
- Household chores
- Helping with grocery shopping

What other activities can you think of?

So how much exercise do you do and how much do you need to do?

Brisk walking at a pace of 4 MPH for 90 minutes will burn 500 calories.

Places that you can get support should you need it for any of the issues we are covering.

Talk to your Parents/ Family

Lead Child protection teachers are Mrs Faulkner and Mrs Dawson

shout 85258 here for you 24/7

www.giveusashout.org

A coach, Leader of your uniformed organisation or community you belong to.

YOUNGMiNDS fighting for young people's mental health

www.youngminds.org.uk

Whatever you're facing We're here to listen

Call free day or night on 116 123

Email jo@samaritans.org

SAMARITANS

www.Samaritans.org

Phil Roades Local Baptist Minister

We're supporting mind for better mental health

www.mind.org.uk

CEOP A National Crime Agency command

www.ceop.police.uk

Anna the School Nurse on Monday Lunchtimes

THINK U KNOW .co.uk

www.thinkuknow.co.uk

ChildLine 0800 1111

www.childline.org.uk

Talk to your Tutor or HOH

Makayla and Carmen in Student Wellbeing

Emma Lawson the School Counsellor

CAMHS Child & Adolescent Mental Health Services

www.oxfordhealth.nhs.uk/camhs/wilts

Stonewall Youth

www.stonewall.org.uk

THE RISE TRUST †REGISTERED CHARITY NO. 1114446

www.therisetrust.org

Lewis the school Chaplin

NSPCC HELPLINE 0808 800 5000 help@nspcc.org.uk

THE MIX Essential support for under 25s

www.themix.org.uk

A member of school staff you find it easy to talk to

Always know that you are not alone. We are all here for you and it is always best to TALK!