



The Trafalgar School at Downton

# Knowledge Organiser

Year 8: Terms 1 and 2

2022/2023



# Contents

Name.....House.....

Subject	Pages
Using your Knowledge Organiser	2 - 3
Learning and remembering	4
English	5 - 15
Mathematics	16 - 22
Sciences	23 - 28
CT	29 - 31
History	32 - 37
Geography	38 - 50

Subject	Pages
BVT	51 - 56
MFL – Spanish / French	57 - 72
Art	73 - 75
Music	76 - 79
Drama	80 - 88
Physical Education	89 - 93
Design and Technology	94 - 109
PSHCE	110 -

## 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.





## WHAT WE EXPECT FROM YOU

BE ON **TIME** ●

BE **EQUIPPED** ●

*PEN, PENCIL, RULER, KNOWLEDGE ORGANISER & EXERCISE BOOK (AS A MINIMUM)*

LISTEN TO STAFF AND **ALWAYS**  
COOPERATE ●

DO NOT INTERRUPT **LEARNING** TIME ●

COMPLETE **ALL WORK** SET  
*BEST WORK, FIRST TIME* ●

SHOW **RESPECT** ●

WEAR UNIFORM **PROPERLY** AND  
WITH **PRIDE** ●

MOBILE DEVICES/SMART  
WATCHES TO BE IN **YONDR** CASE ●

## Being Trafalgar

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

<b>Look</b>	Read the information 3 or more times 
<b>Cover</b>	Now cover what you have just read up
<b>Write</b>	Now try and write down the information you have just read 
<b>Check</b>	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”.



- alliteration:
- anecdote:
- antithesis:
- chiasmus:
- emotive language:
- experts:
- extended metaphor:
- foreshadowing:
- imperative verbs:
- metaphor:
- modal verb:
- pathetic fallacy:
- sensory description:
- simile:
- statistics:
- superlative:
- onomatopoeia:
- personification:
- repetition:

You'll never put a better bit of butter on your knife



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.



That's one small step for man, but a giant leap for mankind.

'Let us never negotiate out of fear, but let us never fear to negotiate.'

Think about the poor, defenceless animals that suffer due to our rubbish!



'Group chat can often be a source of upset,' warned psychologist Dr Linda Pappadopolis.

*The Road Not Taken*, by Robert Frost, is one of the most famous examples of extended metaphor; in the poem, he compares life's journey to a forest path.

The witches in Macbeth are used to foreshadow that Macbeth is not innocent: 'Fair is foul and foul is fair', a line he echoes in his first appearance when he says 'so foul and fair a day I have not seen'.



Chill out! Do as I say! Don't eat the daisies! Please be quiet! Be quiet!



'The sun in the west was a drop of burning gold that slid near and nearer the sill of the world.'

You must be home by midnight. You could be tired if you're any later. E.g. mustn't, can, might, shouldn't, may, will etc.

In *Macbeth*, the night the King is murdered 'has been unruly ... in th' air, strange screams of death .... Some say the Earth was feverous and did shake.'



Wind swirled around the beach house, whistling loudly. He felt the snowflakes melting on his skin, their liquid trickling down his neck, cold, wet, seeping into his clothes.

Without warning, Lionel gave one of his tight little sneezes: it sounded like a bullet fired through a silencer.

You only have a 20% chance of surviving a 60mph crash if you don't wear a seatbelt!

This is the worst day of my life but at least we're in the finest café in London.

The dog knocked over the vase with a crash!

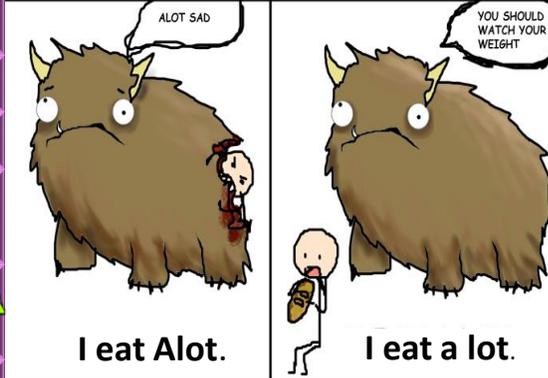


Dancing on the water, the sun shone endlessly.

'As my grandfather went, arm over arm, his heart making sour little shudders against his ribs, he kept listening for a sound, the sound of the tiger, the sound of anything but his own feet and lungs.'



# PROPER GRAMMAR



# IT SAVES LIVES.

<p>with the apostrophe</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; font-size: 2em; font-weight: bold;">it's</div> <p>Contraction of "it+is" or "it+has"</p> <p>It's great to see you. It's been fun. It's clear to see.</p>	<p>without the apostrophe</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; font-size: 2em; font-weight: bold;">its</div> <p>Possessive form of "it"</p> <p>The tree dropped its leaves. The pencil lost its point. A robot recharged its battery.</p>
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**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,

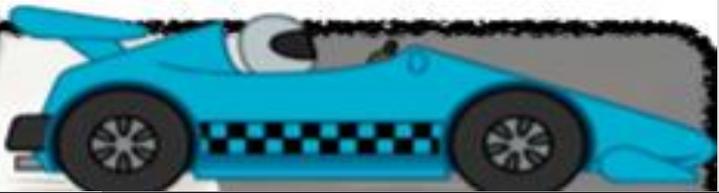
Meanwhile, Later that day, Seconds later, Subsequently, That afternoon,

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

Stay Safe and Sound Online

clear/apt/original title

subtitles

## Manage your online reputation

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

effectively/fluently sequenced paragraphs

## Privacy Matters

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

Writing Forms

bullet points

## 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;

# Text for a Speech 'Address to Nation on the Challenger' by Ronald Regan (28<sup>th</sup> 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.'

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

Thank you.

# Article

## Andy Murray's Appliance of Science

clear/apt/original title

By Jim White

by-line

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

strapline

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

## Sample Check

sub-headings

Today, before he even steps out on to the Centre Court for his Wimbledon semi-final, the 27-year-old, huge-hitting Pole Jerzy Janowicz, Murray will have been subject to several of these. He does a urine test every time he pops to the lavatory. The osmolarity check is conducted by one of his staff, its purpose to gauge the percentage of water and minerals in his urine, to show whether his body is correctly hydrated. The fact is, if Murray wins today, it will only be thanks to the bloke who inspects his wee.

introductory (overview) paragraph

fluently sequenced paragraphs

## Daily Diet

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

# Writing in the Essay Form

clear title

## Zoos Should be Banned

effective introduction

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

effectively/fluently linked paragraphs to sequence a range of ideas

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

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

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

convincing conclusion

## Writing a formal letter

221B Bakers Street  
London  
NW1 6XE

reader's  
address

Writing  
Forms

writer's  
address

35 Hibiscus Crescent  
Andover  
Hants  
SP10 3WE

date

20<sup>th</sup> 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, there is another side to this case: uniforms breed uniformity. We are a culturally diverse nation and all dress the same, this encourages us to be the same. At Brinsley High, we are encouraged to express our 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)

## 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.

## 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 and copper – and were battered and bruised through years of exposure to the elements.

Metaphor, simile, personification

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

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, striking the upholstery of the rotting seat as it passed.

spatial discourse markers

sensory description

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

adjectives

### Climax (problem at its worst)

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

Fail to Plan  
Plan to Fail!

### Rising Action (build up/conflict)

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

### Falling Action (fix problem)

- Character/s solving conflict/dilemma/ problem.

### Exposition (introduction)

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

### Resolution/Dénouement (ending)

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

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

**Conclusion:**  
To conclude,  
repeat RQ,  
Yes.

Yours  
Sincerely

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

**Counter:** old-  
fashioned tradition,  
so easier to continue  
**Argument:** other  
traditions - burnt  
witches, slept on  
straw, walked  
barefoot – now  
discontinued so ...

**Reasons to:**  
anecdote, use  
experts

P1

Form: Letter  
Audience:  
Headmaster  
Purpose:  
Argue change  
uniform

P2

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

P3

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

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

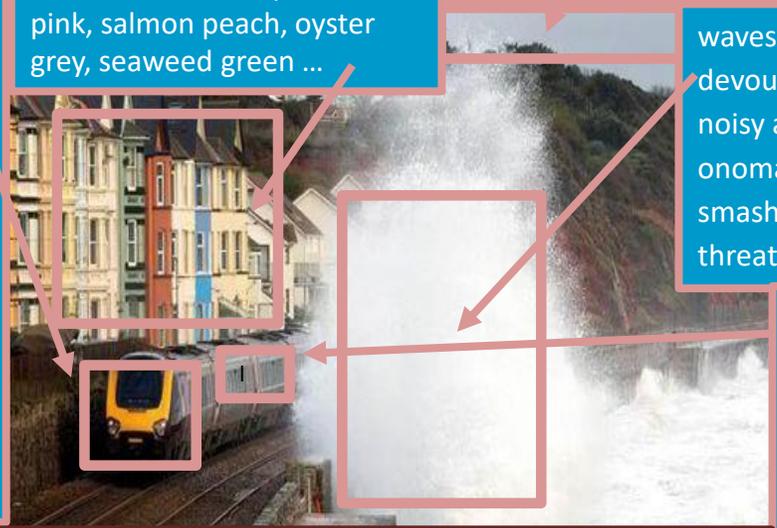
Personify train - a victim moving along railway line, past houses, towards destination - metaphor: caterpillar train sways and pitches precariously along the track to its daily destination. Snatching bites, the sea salt nips at its metal skin as it passes, gnawing at it, killing it. Rattles. Will it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

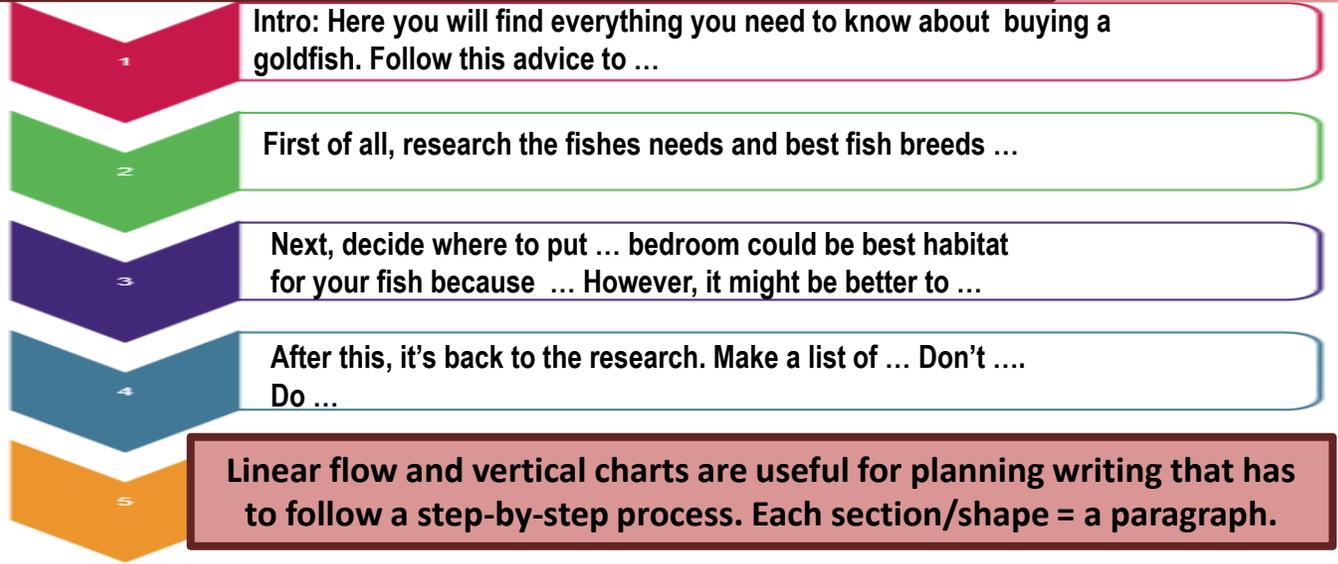


**The Grid Plan is good for making sure you include lots of different methods, or to compare two/more things side-by-side. Each row/column = a paragraph.**

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!**

**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.**



## Writing Purposes

## Key Language/Structural methods

## Chocolate Model!



Most often

Mis spelled  
words

- argument
- parallel
- because
- really
- completely
- religious
- conscience
- remember
- conscious
- ridiculous
- disappear
- sense
- existence
- separate
- fourth
- surprise
- friend
- tomorrow
- height
- tongue
- intelligence
- truly
- knowledge
- until
- lightning
- weird
- occasion
- wherever
- occur
- whenever

**Inform:** tell the reader what they want/need to know.

- Use interesting facts details;
- use brackets to explain technical terms.

**Interestingly, chocolate** is actually made from the seeds of a cacao tree. After fermentation, the beans are dried, cleaned, and roasted. The shell is then removed to produce cacao nibs (**unadulterated chocolate in rough form**).

**Explain:** tell the reader how and why.

- Use connectives: 'as a result', 'because', 'so that', when;
- use sequence discourse markers: Eventually, Another, Furthermore.

**Often, when** in need of comfort or reassurance, or in stressful situations, people crave chocolate. Primarily, this is **because** dopamine is released into your brain **when** you eat chocolate, and **as a result** it can lower levels of anxiety ...

**Describe:** help the reader to picture it and imagine the experience.

- Use similes, metaphors, personification, interesting adjectives/verbs, sensory description.

**Enticingly, the dome of dark chocolate, flecked sporadically with lime slivers, remained encased** in its **fluted carapace**. **Around** the outside of it **cleaved** the **diminutive remains** of its **neighbour**: a **praline** long ago eaten! **Velvety smooth**, this **solitary bead of ganache glistened, revelling** in its **escape, yet mourning its rejection**.

**Narrate:** tell the reader a tale that will have them hanging on your every word.

- Use the mountain/pyramid structure;
- use some description;
- use a few lines of direct speech.



**Suddenly**, she was aware she had arrived at her destination! On the door in front of her, a **scarlet square of shiny plastic printed** with the words 'Chocolate Laboratory' stood out on its **splintering wood**. **Why she was standing on this doorstep, though, and what, or who, had led her here in the first place?**

**Persuade:** try to get the reader to do as you ask/agree with you.

- Use APE FOR REST: anecdote, personal pronouns, emotive language, fact, opinion, rhetorical questions, repetition, experts, statistics, triples.

**One of the world's greatest comfort** foods, Chocolate, is the **unrivalled 'go-to'** when **life takes a bad turn**, an **easy gift to thrill** just about **everyone**, and a **tasty treat** that will **uplift even the most melancholy of moods**.

**Argue:** present two sides, but ensure your side appears strongest so reader agrees with you.

- Use sequence discourse markers;
- use 'Some believe ..', 'However, most people would agree that';
- use APE FOR REST (above).

**First of all, some believe that as chocolate** is high in calories, it is bad for you. **However, scientific experts have proven** that chocolate, as it contains high levels of antioxidants, could **lower cholesterol levels, improve mood and prevent memory decline!**

**Advise:** help warn and guide reader, but reassure with carefully considered advice.

- Use imperative verbs (stop, do, don't, wait etc.), and modal verbs (if, could, might, should).
- use second person (you, your).

**Most importantly, if you** are feeling bored and craving chocolate, **don't** give in to your yearning. Instead, **you could go** for a walk, **run** errands, **call** a friend or **read** a book. **If you** can take your mind off food for a short time, the craving **may** pass.

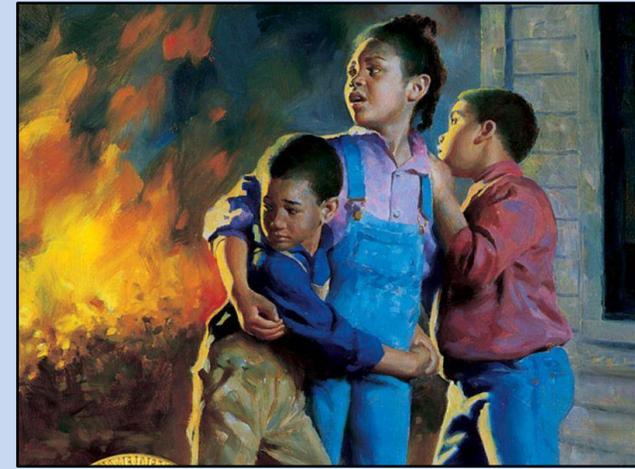
## Year 8, Term 5: *Roll of Thunder, Hear My Cry*

### Plot Summary

The Logan family works hard to keep the small piece of farmland they own. They endure many racial injustices. The children are harassed by a school bus full of white children, so they dig out a ditch in the road, trapping the bus and breaking the axle. Cassie, one of the Logan daughters, takes a trip to the nearby town of Strawberry and is shocked by the disrespect she is greeted with. Meanwhile, more serious problems are developing. The Wallace boys burn some local black men, killing one, and so the Logan family begins a boycott of their store. When Stacey, their oldest boy, gets in a fight with his best friend T. J. at the Wallace store, Mama decides to take a tour of the local community and urge people not to let their children go there and not to purchase goods there. However, many families have nowhere else to shop. The Logans offer to buy goods for them in Vicksburg, and Mr. Jamison backs their credit.

Meanwhile, Christmas comes, and both Uncle Hammer and Papa come home to join the family. Uncle Hammer drives a shiny new car. When Harlan Granger comes to try to convince the Logans to stop the boycott, Hammer and Papa are both defiant. However, Mama soon loses her teaching job, and other pressure is put on the Logan family. Other families who sharecrop Granger land are forced to return to the Wallace store. And finally, Papa's leg is broken during a violent attack he suffers while trying to make a trip to Vicksburg. Only the brute strength of Mr Morrison, a man Papa brings home to help work and defend the farm, drives away the attackers.

Soon, Granger forces the Logans to pay up on a loan they once took out from the bank. Uncle Hammer has to sell his car in order to make the payment. Meanwhile, T. J. has become a rogue, a known thief, and he hangs out with two trouble-making white teenagers, Melvin and R. W. One day, they bring him along to rob a store and the white teenagers end up murdering the owner, managing to frame T.J. for the crime. Papa and Mr Morrison go to stop the lynching that follows. Almost as soon as they leave, however, the cotton field catches fire, as if it was struck by lightning. The lynch mob and the local black farmers must band together in order to stop the fire. It turns out that Papa started the fire in order to stop the lynching. T.J. is taken away to be tried for his supposed crimes.



### Themes

- The importance of family
- The importance of community
- The importance of land
- Self-respect and the respect of others
- Racism and prejudice
- Independence
- Injustice and dignity
- Revenge

## Characters

**Cassie Logan** – Protagonist and narrator of the novel. She is 9 years old and naïve about the issues of racism and prejudice.

**Stacey Logan** – Oldest of the Logan siblings at 12 years old. He is protective of his siblings and understands the issues of racism and prejudice.

**Christopher-John Logan** – He is 7 years old. His character is timid and therefore the opposite of his siblings.

**Clayton ‘Little Man’ Logan** – Youngest of the Logan siblings at 6 years old. He does not understand racism or prejudice but he knows he does not like it.

**David Logan, ‘Papa’** – He values his independence and works on the railroad.

**Mary Logan, ‘Mama’** – Mother of the family. Worked at the elementary school until T.J. gets her fired.

**Caroline Logan, ‘Big Ma’** – Grandmother of the Logan children. Main caretaker of the house.

**Uncle Hammer** – Uncle of the Logan children. He does not like racism. He is hot tempered and has a lot of money.

**T.J. Avery** – The Logan children’s friend at the start until he gets Mama fired from the school. He is at the same school as the Logan children but has been held back a year and likes to attempt to cheat on tests.

**Mr Morrison** – Papa brings him home to help work on the land and protect the family. He is a massive and strong character who appears quite intimidating.

**Mr Jamison** – A white lawyer who genuinely wants to help the black farmers.

## About the Author

*“By the time I entered high school, I had a driving compulsion to paint a truer picture of Black people... I wanted to show a Black family united in love and pride, of which the reader would like to be a part.”* – Mildred D. Taylor.



Mildred D. Taylor was born on September 13, 1943, in Jackson, Mississippi. Like the Logan family, the Taylor family had lived in Mississippi since the days of slavery, long before 1865! However, when Mildred was just a tiny baby, her parents decided to make a new life in the North. The Taylors moved to Toledo, Ohio. The family was large, close and loving.

When she was 10, Taylor was the only black child in her class. She was upset about the one-sided stories about black Americans in her history books. There was no pride in these stories. When she shared her own facts about black history with the class, they thought she was making things up – so she turned to writing stories for herself.

## Context to the Novel

### **The Reconstruction Era (1865-1877)**

A turbulent era in America following the Civil War in which Southern states were brought back into full political participation in the Union, guaranteeing rights to former slaves and defining new relationships between African Americans and white people.

### **The American Dream**

The American Dream is the belief that anyone, regardless of where they were born or what class they were born into, can attain their own version of success in a society in which upward mobility is possible for everyone.

### **The Night Men (e.g. KKK)**

Following the Civil War, groups emerged to suppress and victimise newly freed slaves. The groups took violent steps to maintain black economic instability in an effort to ensure white racial and economic superiority in the South.

### **The Great Depression**

The worst economic downturn in the history of the USA, lasting from 1929 – 1939. It began after the stock market crash of October 1929.

### **Sharecropping**

A type of farming in which families rent small plots of land from a landowner in return for a portion of their crop, to be given to the landowner at the end of each year.

### **The 'Jim Crow' Laws**

These began in 1877 and were enforced until 1965. The 'Jim Crow' laws mandated racial segregation in all public facilities in the South.

## Key Vocabulary

### **Prejudice**

Preconceived opinion that is not based on reason or actual experience; an irrational attitude of hostility towards an individual, group or race.

### **Discrimination**

The prejudicial treatment of different categories of people, especially on the grounds of race, age, sex, or disability.

### **Segregation**

The action or state of setting someone or something apart from others.

### **Justice**

Fairness in the way people are dealt with.

### **Injustice**

A situation in which there is no fairness and justice.

### **Civil Rights**

A class of rights that protect an individual's freedom from violation by governments, social organisations, and anybody else.

### **Intolerance**

Refusing to accept ideas, beliefs, or behaviours that are different from your own.

**Ratio** - is used to compare two or more amounts.

Jack has £160 and Gill has £240

These amounts can be written as a ratio,

$$J : G \text{ or } G : J$$

$$160 : 240 \quad 240 : 160$$

**Simplifying a Ratio** - you can simplify a ratio by eventually dividing the numbers by the HCF

$$J : G \text{ or } G : J$$

$$\begin{array}{l} \div 10 \\ \div 80 \\ \div 8 \end{array} \begin{array}{l} 160 : 240 \\ 16 : 24 \\ 2 : 3 \end{array} \quad \begin{array}{l} 240 : 160 \\ 24 : 16 \\ 3 : 2 \end{array}$$



Hegarty Clip 329 Corbett Maths Video 269

**Sharing an Amount in a Ratio**

Hegarty clip 332 Corbett video 270

Jack and Gill had £400 in total which they shared in the ratio 2:3

There are five parts (2+3 = 5)

To split this money evenly  $400 \div 5 = 80$

Jack receives  $2 \times 80 = £160$   
 Gill receives  $3 \times 80 = £240$   
 $£160 + £240 = £400$

**Best Buys - using (the unit) ratio**

Which is the best deal;

Hegarty clip 763,764,340 Corbett video 270

Five packets of sweets costing £2.45,

Six packets of sweets costing £3.00

Hint - Find the cost of one packet

or Seven packets of sweets costing £3.57?

Packets : Cost	
5	: 2.45
( $\div 5$ )	1 : 0.49
49p a box	

Packets : Cost	
6	: 3.00
( $\div 5$ )	1 : 0.50
50p a box	

Packets : Cost	
7	: 3.57
( $\div 5$ )	1 : 0.49
51p a box	

The five packets option is the better deal at 49p per packet

**Writing in the ratio 1 : n or n : 1**

You need to divide both sides by the same number in order to get the correct side down to 1.

$$\begin{array}{l} \div 2 \\ \div 3 \end{array} \begin{array}{l} J : G \\ 2 : 3 \\ 1 : 1.5 \end{array} \quad \Bigg| \quad \begin{array}{l} G : J \\ 3 : 2 \\ 1 : 2/3 \end{array}$$

Gill gets £1.50 for every £1 that Jack gets

Jack gets  $\approx 67p$  for every £1 that Gill gets

Hegarty Clip 331

**Keywords**

**Proportion:** a statement that links two ratios

**Variable:** a part that the value can be changed

**Axes:** horizontal and vertical lines that a graph is plotted around

**Approximation:** an estimate for a value

**Scale Factor:** the multiple that increases/ decreases a shape in size

**Currency:** the system of money used in a particular country

**Conversion:** the process of changing one variable to another

**Scale:** the comparison of something drawn to its actual size.

Conversion between currencies



£1 = 90 Rupees ← Currency is directly proportional

For every £1 I have 90 Rupees

£1 = 90 Rupees

£10 = 900 Rupees

Convert 630 Rupees into Pounds

630 ÷ 90 = 7

£7 = 630 Rupees

Rupees 900

10 Pounds

Currency can be converted using a conversion graph

Ratio between similar shapes

Angles in similar shapes do not change. e.g. if a triangle gets bigger the angles can not go above 180°

The two rectangles are similar.

3 m 8 m

45 m ? m

Corresponding sides

3m : 45m

8m : 12m

1m : 15m

Note: Simplify to the same ratio

Understand Scale Factor

The two rectangles are similar.

3 m 8 m

45 m ? m

3 x 15 = 45

This is a multiplicative change

Missing length

8 x 15 = 12m

Use corresponding sides to calculate a scale factor

Scale factor can also be calculated by:

Bigger corresponding side

Smaller corresponding side

Small corresponding side x SF = Big corresponding side

Big corresponding side ÷ SF = Small corresponding side

Draw and interpret scale diagrams

A picture of a car is drawn with a scale of 1:30

For every 1cm on my image is 30cm in real life

The car image is 10cm

Image : Real life

1cm : 30cm

10cm : 300cm

The car in real life is 210cm

Image : Real life

1cm : 30cm

7cm : 210cm

Interpret maps with scale factors

- 10 mm → - 100 cm → - 1000 m → km

x 10

x 100

x 1000

1 cm : 250 m

Ratios need to be in the same units

1 cm : 250m

1 cm : 25000cm

250 x 100 = 25000

For every 1cm on my map is 25000cm in real life.

Conversion Graphs Compare two variables

80 kilometres

50 miles

This is always a straight line because as one variable increases so does the other at the same rate

To make conversions between units you need to find the point to compare — then find the associated point by using your graph

Using a ruler helps for accuracy

Showing your conversion lines help as a "check" for solutions

Labelling of both axes is vital

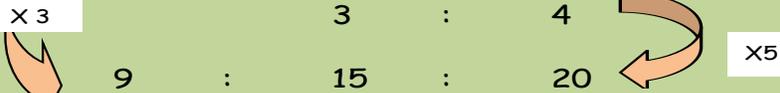
**Combining Ratios**

Hegarty Clip 329

The ratio of apples :bananas is 3:5, the ratio of bananas:carrots is 3:4. What is the ratio of apples to carrots?

A	:	B	:	C
3	:	5	:	4
9	:	15	:	20

Hint:  
Use  
common  
multiples



So A:B:C is 9:15:20 and **A : C = 9 : 20**

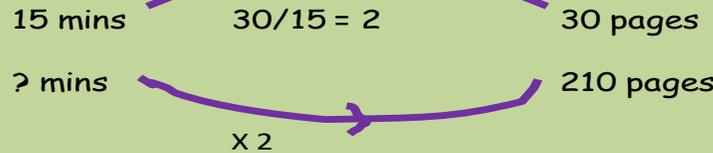
**Proportion** can compare the size of one part to the size of the whole.

Hegarty Clip 330

If a tutor group has 13 boys and 16 girls.

The proportion of boys is 13/29      The proportion of girls will 16/29

**Multiplicative Reasoning** is a way of comparing two things and applying this to a new situation.



Find a Multiplicative link and use it to find missing quantities.

How many pages can this person read in 1 hour?

The symbol  $\propto$  means "is proportional to"

P  
R  
O  
P  
O  
R  
T  
I  
O  
N

**Direct Proportion** A and B are directly proportional when as one gets larger the other gets proportionally larger.

The ratio between these two quantities is a constant.  
As a rule of thumb you could apply two tests:

- If one quantity is zero, the other will be zero
- If one quantity doubles the other will also double ect

If the graph of the two quantities is drawn it will always be a straight line passing through the origin.

**Inverse proportion** A is inversely proportional to B when one quantity increases the other will decrease proportionally.

In Maths "inverse" means the opposite of an operation. The inverse operation of multiply is divide , and vice/versa  
The inverse of A will be 1/A because  $x \text{ by } A = \div 1/A$   
Another way of describing "A is inversely proportional to B" is to say "A is directly proportional to 1/B"

**Direct Proportion**  
Relation between quantities whose ratio is constant

b directly proportional to a  
When  $a = 4, b = 20$  (b is 5 times a)  
 $20 \div 4 = 5$   
So  $b = 5a$  (for any values a and b)

Hegarty Clip 343

Alternatively  
 $b \propto a$  "b is directly proportional to a"  
 $b = ka$  "k is a constant"  
 $20 = 4k$   
 $k = 5$   
 $b = 5a$

Find b when  $a = 0.5$   
 $b = 5a$   
 $b = 5 \times 0.5$   
 $b = 2.5$

Find a when  $b = 150$   
 $b = 5a$   
 $150 = 5a$   
 $150/5 = a$   
 $a = 30$

**Inverse Proportion**  
Relation between quantities such that as one increases in proportion the other decreases

a and b are inversely proportional  
When  $a = 4, b = 5$   
 $4 \times 5 = 20$   
So  $a = 20/b$  or  $b = 20/a$

"a is inversely proportional to b"  
 $a \propto 1/b$   
 $a = k/b$   
 $4 = k/5$   
 $20 = k$   
 $a = 20/b$

Hegarty Clip 346

Find a when  $b = 0.1$   
 $a = 20/b$   
 $a = 20/0.1$   
 $a = 200$

**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
- Sequences
- Graphs

**Key words**

**Data**

- |              |            |
|--------------|------------|
| Algebra      | Factors    |
| Equation     | Operations |
| Expression   | Terms      |
| Formula      | Sequences  |
| Identity     | Graphs     |
| Variable     |            |
| Coefficient  |            |
| Expand       |            |
| Factorise    |            |
| Substitution |            |

**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:

$$\square - 2 = 4$$

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.

**Hegarty clip 151**

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.

<p><b>We group letters together</b></p> <table border="0"> <tr> <td style="background-color: #d8bfd8;"> <math>a + a + a</math> means 3 lots of a <math>3 \times a</math> </td> <td style="background-color: #d8bfd8;"> <math>b + b</math> means 2 lots of b <math>2 \times b</math> </td> </tr> </table>	$a + a + a$ means 3 lots of a $3 \times a$	$b + b$ means 2 lots of b $2 \times b$	<p><b>We use indices/powers</b></p> <table border="0"> <tr> <td style="background-color: #f08080;"> <math>a \times a</math> <math>= a^2</math> (a squared)                 </td> <td style="background-color: #f08080;"> <math>b \times b \times b</math> <math>= b^3</math> (b cubed)                 </td> </tr> </table>	$a \times a$ $= a^2$ (a squared)	$b \times b \times b$ $= b^3$ (b cubed)		
$a + a + a$ means 3 lots of a $3 \times a$	$b + b$ means 2 lots of b $2 \times b$						
$a \times a$ $= a^2$ (a squared)	$b \times b \times b$ $= b^3$ (b cubed)						
<p><b>We do not use multiplication signs</b></p> <table border="0"> <tr> <td style="background-color: #fff2cc;"> <math>3 \times a = 3a</math> </td> <td style="background-color: #fff2cc;"> <math>a \times b = ab</math> </td> </tr> <tr> <td style="background-color: #fff2cc;"> <math>5 \times b = 5b</math> </td> <td style="background-color: #fff2cc;"> <math>a \times b \times c = abc</math> </td> </tr> </table>	$3 \times a = 3a$	$a \times b = ab$	$5 \times b = 5b$	$a \times b \times c = abc$	<p><b>We write division using fraction notation</b></p> <table border="0"> <tr> <td style="background-color: #90ee90;"> <math>a + 2</math> is written as <math>\frac{a}{2}</math> or <math>\frac{1}{2}a</math> </td> <td style="background-color: #90ee90;"> <math>b + 3</math> is written as <math>\frac{b}{3}</math> or <math>\frac{1}{3}b</math> </td> </tr> </table>	$a + 2$ is written as $\frac{a}{2}$ or $\frac{1}{2}a$	$b + 3$ is written as $\frac{b}{3}$ or $\frac{1}{3}b$
$3 \times a = 3a$	$a \times b = ab$						
$5 \times b = 5b$	$a \times b \times c = abc$						
$a + 2$ is written as $\frac{a}{2}$ or $\frac{1}{2}a$	$b + 3$ is written as $\frac{b}{3}$ or $\frac{1}{3}b$						

**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.  $S = D/T$ ,  $A = L \times W$ ,  $A = \frac{1}{2} B \times H$

**Identity** – When the expressions are said to be *identically equal*. The expressions are linked with the symbol  $\equiv$ . 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:

An Expression	An Equation
$4a + 7b$	$4a + 12 = 60$
A Formula	An Identity
$A = \pi r^2$	$(a + b)^2 = a^2 + 2ab + b^2$

**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.

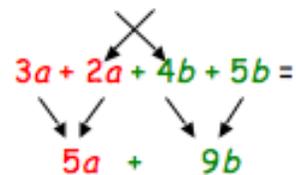
**Like terms** can be defined as 'Terms with the same letter variables raised to the exact same powers'

For example:

**Hegarty clip 156**

- 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<sup>2</sup> and 5x are NOT like terms because they have different powers.

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



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

$3x^2 - 5x^2 + 2xy - 6xy =$   
 $-2x^2 - 4xy$

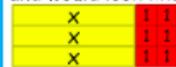
**Expanding**

**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.

Here is  $x + 2$ :



$3(x + 2)$  means 3 lots of  $x + 2$  and would look like this:



Altogether this is  $3x + 6$ . Algebraically, we would write:  $3(x + 2) = 3x + 6$ .

We have multiplied each term inside the bracket by 3.

$4(x + 3) = 4x + 12$        $4 \times x = 4x$   
 $4 \times 3 = 12$

$5(2x + 4) = 10x + 20$        $5 \times 2x = 10x$   
 $5 \times 4 = 20$

**Watch out!**

Be really careful with negatives!

$3(x - 3) = 3x - 9$

Remember:  $- \times - = +$

$-3(x - 4) = -3x + 12$

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

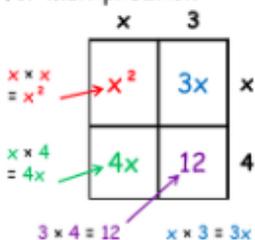
**Hegarty clip 160**

$5(x + 3) + 6(x - 4)$   
 $5x + 15 + 6x - 24$   
 $11x - 9$

Sometimes there are 2 or more brackets next to each other. This is called **expanding quadratics**. There are lots of different ways to do this, here are 3 methods using the example  $(x + 3)(x + 4)$

**The grid method**

Set this out exactly like the grid method for multiplication:



Add up:  $x^2 + 3x + 4x + 12$   
 Simplify:  $x^2 + 7x + 12$

**FOIL**

This reminds you to multiply all of the terms.

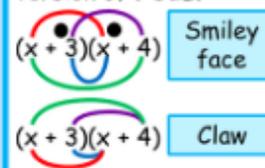
$(x + 3)(x + 4)$

First:  $x \times x = x^2$   
 Outside:  $x \times 4 = 4x$   
 Inside:  $3 \times x = 3x$   
 Last:  $3 \times 4 = 12$

Add up:  $x^2 + 3x + 4x + 12$   
 Simplify:  $x^2 + 7x + 12$

**Smiley face (or claw)**

This is a more visual version of FOIL.

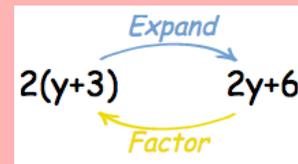


$x \times x = x^2$      $x \times 4 = 4x$   
 $3 \times x = 3x$      $3 \times 4 = 12$

Add up:  $x^2 + 3x + 4x + 12$   
 Simplify:  $x^2 + 7x + 12$

**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  $4 \times x$

$16$  is  $4 \times 4$       Therefore       $4x + 16 = 4(x + 4)$

Example:  $4x + 6 = 4 \times x + 6$   
 $= 2 \times 2 \times x + 2 \times 3$   
 $= 2 \times 2x + 2 \times 3$   
 $= 2(2x + 3)$

**Hegarty clip 223**

**Factorising quadratics** means factorising into double brackets.

We do this by finding 2 numbers that add (sum) to make the middle term and multiply (product) to make the last term.

Example:

$x^2 + 7x + 12$

It is best to find the factors of 12 first, then the pair that adds to make positive 7.

Factors of 12:

- 1 x 12
- 2 x 6
- 3 x 4

Only one pair adds to also make 7.

Answer:

$(x + 3)(x + 4)$

**Forming and Solving Equations**

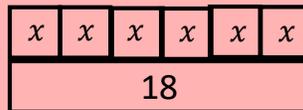
"I'm thinking of a number, I times it by 6 and get the answer 18. What number am I thinking of?"

A problem like this can be represented using algebra. Let the variable (our unknown number) be  $x$

"times it by 6" is the same as  $6 \times x$ , which using correct notation we write as  $6x$

"get the answer 18" is the same as  $= 18$ , which we write as  $6x = 18$

$6x = 18$  can now be solved.



To calculate the value of  $x$  we do the inverse. The opposite of multiplying by  $x$  is to divide by  $x$

$$6 \times x = 18$$

$$x = 18 \div 6$$

$$x = 3$$

**Hegarty clip 178**

Doing the 'inverse' is a way of removing terms until  $x$  is left on its own as  $x =$

The key thing to remember is we must always **"keep the balance"** and **what you do to one side of the equals must be done to the other**

	Add 2 to Left Side 	Add 2 to Right Side Also 	
In Balance	Out of Balance!	In Balance Again	
We want to remove the "-2"	To remove it, do the opposite, in this case add 2	Do it to both sides	Which is ...
$x - 2 = 4$	$x - 2 = 4$ $\frac{+2}{0}$	$x - 2 = 4$ $\frac{+2}{0} \quad \frac{+2}{6}$	$x + 0 = 6$
<b>Solved!</b> $x = 6$			

- The inverse of addition is subtraction
- The inverse of subtraction is addition
- The inverse of multiplication is division
- The inverse of division is multiplication

eg solve the equation $4x = 12.5$ 	eg solve the equation $n + 8 = 3$ 
The solution is $x = 3.125$	The solution is $n = -5$
eg solve the equation $\frac{a}{3} = 7$ 	eg solve the equation $x - 4.7 = 0$ 
The solution is $a = 21$	The solution is $x = 4.7$

**Substitution**

**Substitution** – To replace or 'substitute' the variable with a number and complete the sum. There have been many times you may have substituted before and not even realised this is what you were doing.

For example, to calculate the area of a rectangle you multiply the length with the width.

5cm	3cm	Area = Length x Width
		$A = L \times W$
		Length (L) = 5cm
		Width (W) = 3cm
		$A = 5 \times 3$
		$A = 15\text{cm}^2$

Real life substitution examples and formula's

Example 1: The formula to change degrees Celsius ( $^{\circ}\text{C}$ ) to degrees Farenheit ( $^{\circ}\text{F}$ ) is

**Hegarty clip 155**

$$F = \frac{9C}{5} + 32$$

If the temperature is  $21^{\circ}\text{C}$  then we can calculate the temperature in  $^{\circ}\text{F}$  by substituting  $C = 21$  into the formula

$$F = \frac{9 \times 21}{5} + 32 \quad F = \frac{189}{5} + 32 = 69.8^{\circ}\text{F} \quad F = 69.8^{\circ}\text{F}$$

Example 2: Cooking time for a turkey is 35 minutes per Kilogram plus an extra 20 minutes. We can create a formula for this:  
Cooking Time (C) = 35 x Weight (W) + 20  
 $C = 35W + 20$

The cooking time for a turkey weighing 5kg would be:

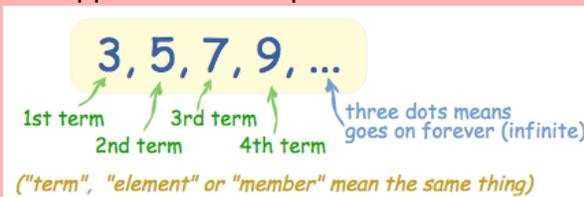
$C = 35W + 20$	$C = 35 \times 5 + 20$
$W = 5$	$C = 195 \text{ minutes}$ or 3hours 15minutes

**Sequences**

**Sequences** – A particular order in which related things follow each other. 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  $n^{\text{th}}$  term rule
- The next term in the sequence
- Any term in the sequence, the 100<sup>th</sup> term or the 511<sup>th</sup> term
- Whether a term appears in the sequence

For example:



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**.



We can use the term to term rule to calculate the next few terms in the sequence

3, 5, 7, 9, 11, 13, 15, .....

**Hegarty clip 198**

Steps to calculate the  $n^{\text{th}}$  term rule:

1. Work out the difference between each term
2. What do you know that goes up in that difference? - the difference times table
3. Work out the difference between the times table and the original sequence and you have your  $n^{\text{th}}$  term rule

$n$  (term in the sequence) – 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, .....

Our given sequence 3, 5, 7, 9, 11, ..... A difference of +2

2 times table (the sequence of  $2n$ ) 2, 4, 6, 8, 10, .....

The difference between the sequence of  $2n$  and our given sequence is +1

**$n^{\text{th}}$  term rule** for this sequence is  $2n + 1$

Using **Substitution** and the  **$n^{\text{th}}$  term rule** we can now calculate **ANY** term in this sequence.

**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.

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:

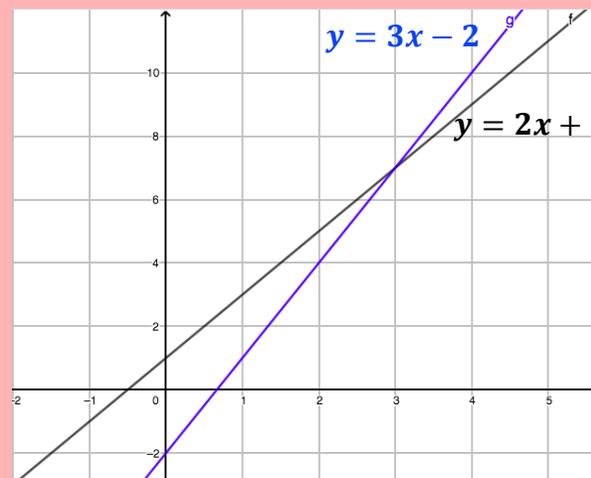
$x$	1	2	3	4	5
$y$	3	5	7	9	11
<b>Coordinates</b>	<b>(1, 3)</b>	<b>(2, 5)</b>	<b>(3, 7)</b>	<b>(4, 9)</b>	<b>(5, 11)</b>

The  $n^{\text{th}}$  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

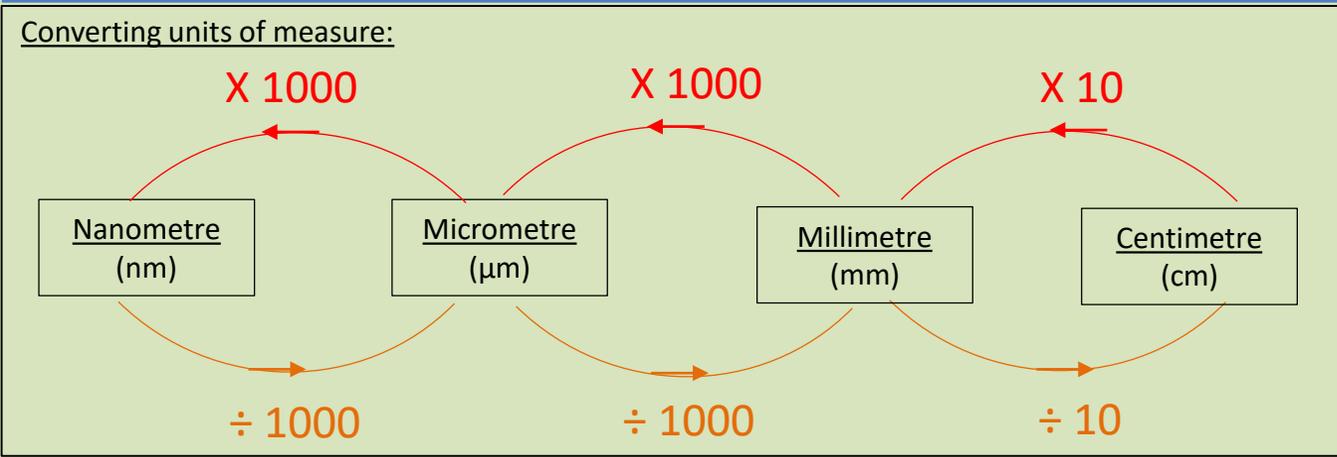
$y = 3x - 2$  is the same as  $y = 3 \times x - 2$

$x$	1	2	3	4
$y$	1	4	7	10
<b>Coord</b>	<b>(1, 1)</b>	<b>(2, 4)</b>	<b>(3, 7)</b>	<b>(4, 10)</b>

# 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	$1 \times 10^9$	Gm
Mega	1,000,000	$1 \times 10^6$	Mm
kilo	1,000	$1 \times 10^3$	km
-----	1	1	m
milli	0.001	$1 \times 10^{-3}$	mm
micro	0.000001	$1 \times 10^{-6}$	$\mu\text{m}$
nano	0.000000001	$1 \times 10^{-9}$	nm



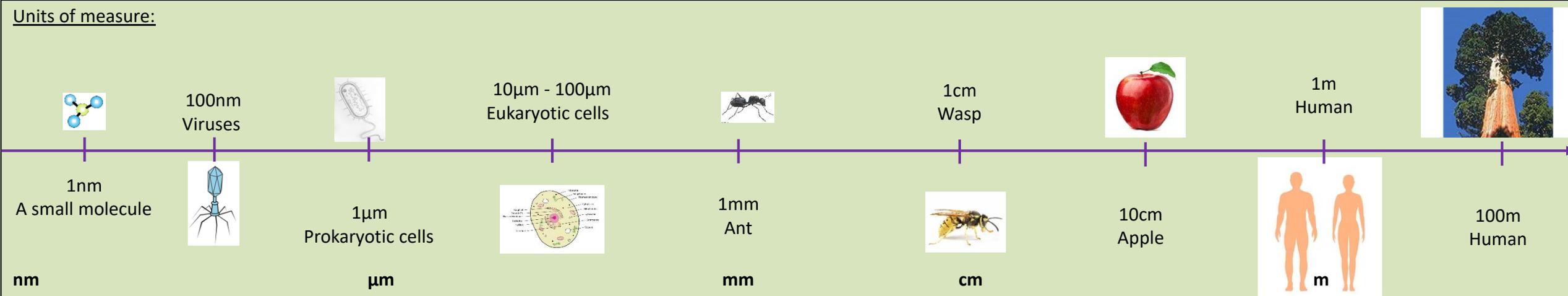
Variables:

**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



KEY:

RELATIVE ATOMIC MASS  
Atomic Symbol  
name  
ATOMIC (PROTON) NUMBER

## The Periodic Table of Elements



1	2											3	4	5	6	7	0	
																		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 fluorine 9	20 Ne neon 10	
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulfur 16	35.5 Cl 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 tennessine 117	[294] Og oganesson 118	

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

## KS3 Science: Nutrition and digestion

Food group	Found in...	Function
Carbohydrate	Potatoes, pasta, rice, bread	Source of energy
Protein	Meat, fish, eggs, dairy, seeds, nuts	Builds and repairs tissues
Fats (lipids)	Cheese, nuts, oily fish, chips, cakes	Stores energy, insulate us, protects organs
Fibre	Fruit, veg, wholegrain cereals	Prevents constipation, improves health
Minerals	Dairy, veg, fish, meat, nuts	Enables body to work & stay healthy
Vitamins	Fruit, veg, milk, eggs	Same as minerals
Water	Cucumber, drinks	Needed in cells, tissues & organs

### Enzymes are at work in the digestive system:

- **Carbohydrates** are broken down into sugars.
- **Proteins** are broken down into amino acids
- **Lipids** are broken down into fatty acids.

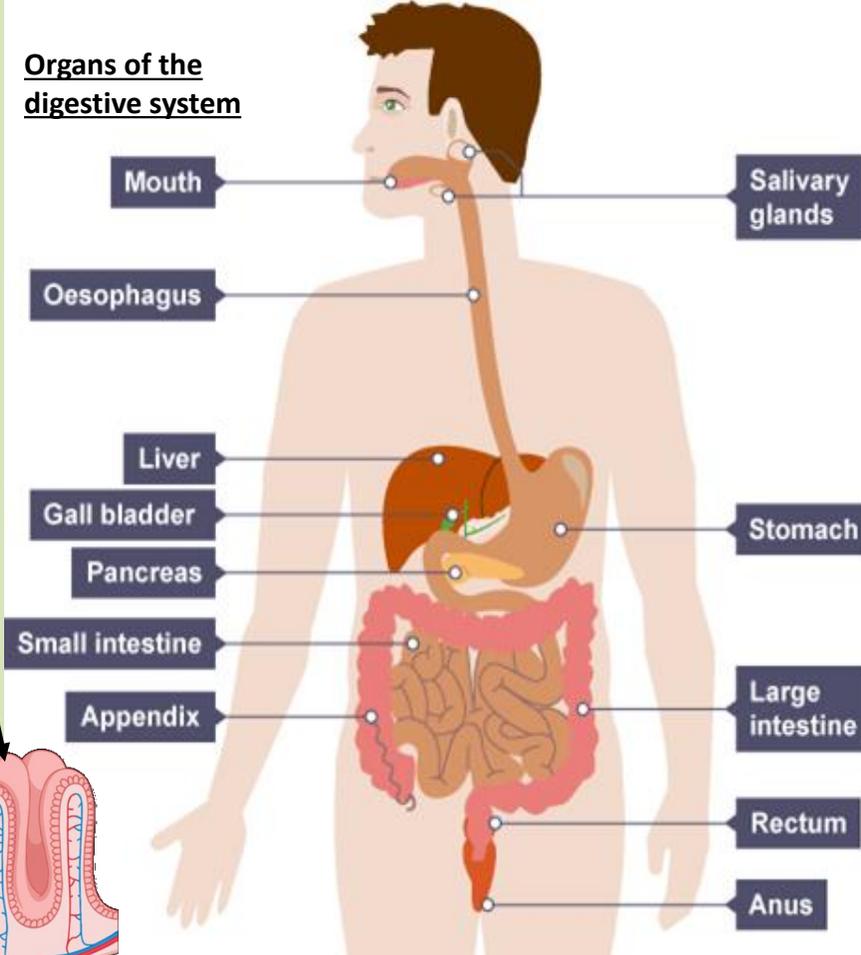
### Bacteria play an important role in the human digestive system.

**Imbalances** in humans diet can lead to **obesity, starvation** and other **dietary deficiencies**

Your **small intestine** absorbs all of the required nutrients from your food. The inside of the small intestines is folded into **villi**. These **increase the surface area** enabling more nutrients to be absorbed.

**Plants** make **carbohydrates** in their leaves by photosynthesis and absorb **mineral nutrients and water** from the soil via their roots

### Organs of the digestive system



### Food tests

- **Starch:** Add **iodine**, if starch is present it changes from red/brown to dark **blue/black**.
- **Protein:** Add **Biuret** reagents. If proteins are present, colour changes from blue to lilac.
- **Sugars:** Add **Benedict's** reagent and **heat**. If sugars are present, colour changes from blue, through colours to brick red.

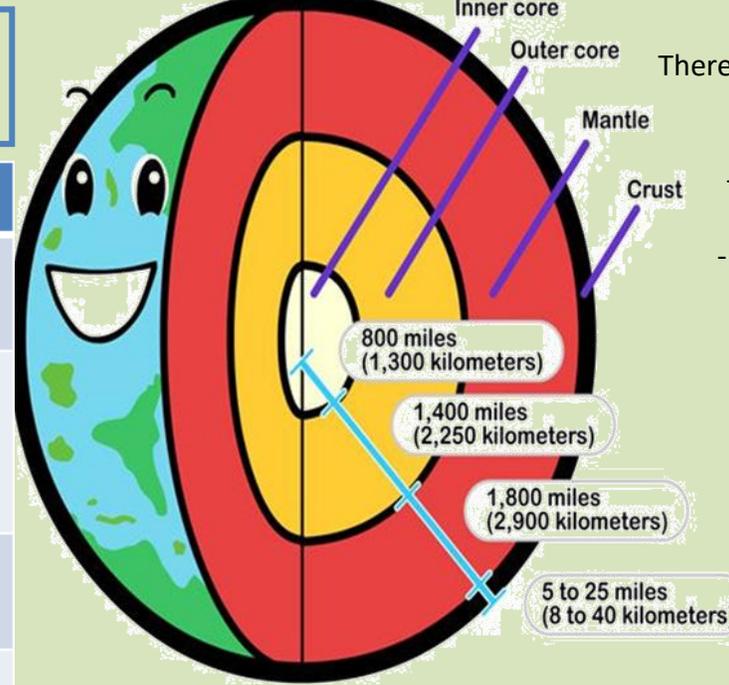
Keyword	Meaning
Nutrient	A substance that that is essential for the maintenance of life and for growth.
Carbohydrates	Group of molecules including sugars and starch.
Protein	Building block of cells, made of a long chain of amino acids.
Lipids	Another name for fats.
Enzyme	Biological catalysts, which means that they speed up chemical reactions.

<https://www.bbc.co.uk/bitesize/topics/zf339j6/articles/zmwvgdm>

<https://www.bbc.co.uk/bitesize/topics/zf339j6/articles/z7gpcfw>

# KS3 Chemistry : The Earth and atmosphere

Keyword	Definition
Core	Inner most layer of the earth- made up of iron/nickel
Mantle	The largest part of the earth's layers – heat convects through this to contribute to tectonic movement
Crust	The outer most layer of the planet- it is where the tectonic plates are found
Atmosphere	A mixture of gases that surround the planet- these gases help support life (such as oxygen and carbon dioxide)
Subduction	Movement of tectonic plates over each other
Convection	Heat transfer in fluids resulting in a change of density
igneous	Rocks that have been formed from solidified magma
sedimentary	Rock that has formed from tiny particles being deposited over time by water
Metamorphic	Rock such granite that is formed under high temperatures and pressure

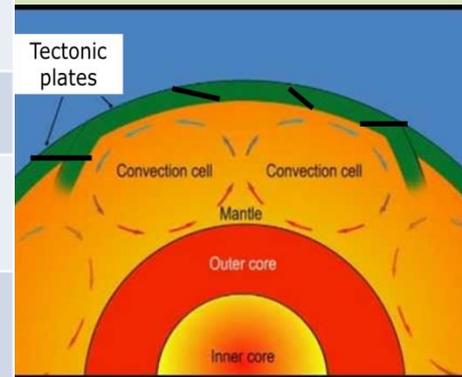


There are 3 main parts to the Earth's structure

- the inner core
- the mantle
- the outer crust

There are three main types of rocks- sedimentary, igneous and metamorphic depending on the conditions which are required to form them- the cycle that includes the processes of these rock formations is called the rock cycle

Rock Type	How it is formed	Examples
Sedimentary	Deposits at the bottom of lakes/oceans	Limestone Sandstone mudstone
Igneous	From lava or magma	Basalt Granite
Metamorphic	By heat & pressure	Marble Gneiss

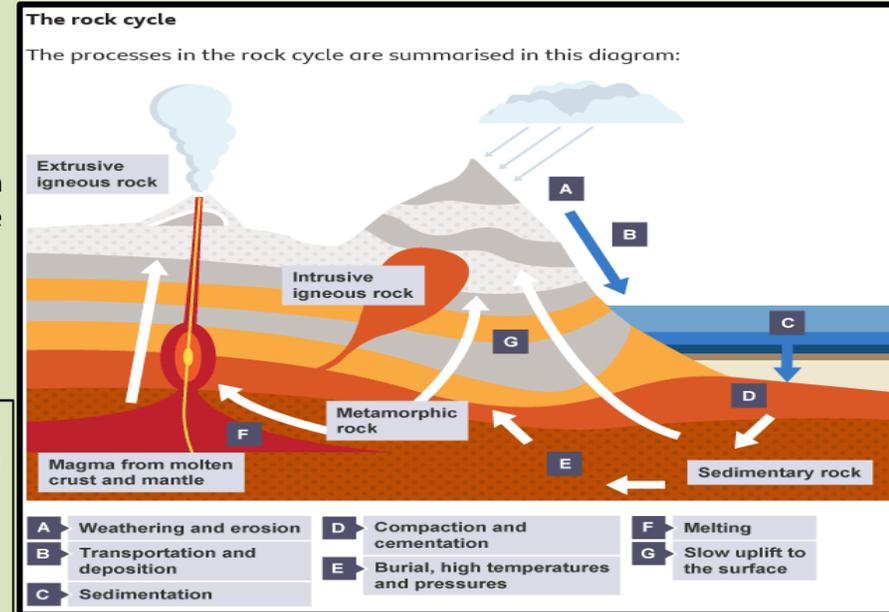


The inner core generates heat through three methods (below) which causes the tectonic plates on the crust to move (via subduction)

Dense material molten in the mantle produces friction causing extreme heat

Heat has been "left over" from the formation of the earth and is being emitted slowly outwards

Radioactive elements in the mantle decay and release heat to the surface



Keyword	Definition
Renewable	A resource that is not depleted when used (or is not used faster than it can be produced)
Finite	A resource that there is only a limited amount of (or is made slower than it is being used)
The carbon cycle	A series of processes where carbon is recycled around the environment
Polymer	A chemical that is made up of repeating units (called monomers) bonded together- many plastics are polymers
Ceramic	Materials that are made from clay and fired in a furnace to increase the bonding/strength of the clay
Composite	When two or more materials with different properties are combined to produce a material with different properties- for instance MDF wood made of multiple layers of wood means that the MDF board will not split

Since the industrial revolution the levels of greenhouse gases in the atmosphere have increased – leading to the retention of long wavelength radiation (such as infrared) as heat. This has contributed to a global increase in temperature called global warming

Global climate change is a follow on from this as the earth's climate changes due to the global warming. Consequences of this are

- Sea levels rising, causing flooding in coastal areas
- Changes in weather patterns (increased droughts in some areas with increased rain in others) this affects wildlife and farming
- Increase in number and strength of storms

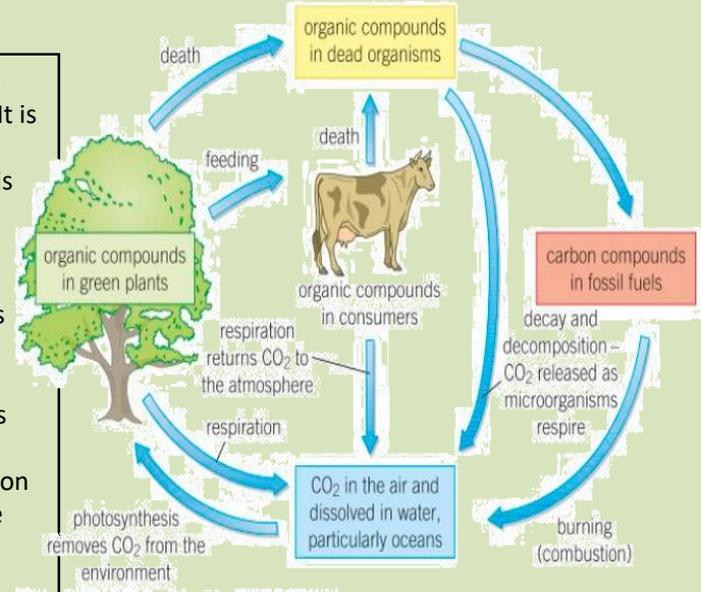
**Ceramics** are typically made with clay and baked at high temperatures in a kiln to strengthen them. An example of a ceramic are bricks- they are hard and can be compressed downwards However- they are brittle and will break with a hard sharp blow



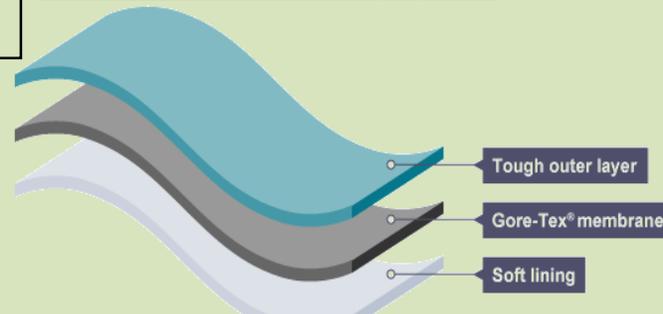
## The carbon cycle

Ecosystems need to materials to maintain its organisms. One of these materials is carbon. It is obtained from plants from CO<sub>2</sub> via photosynthesis. It is stored as glucose which is then transferred to animals that feed on the plants.

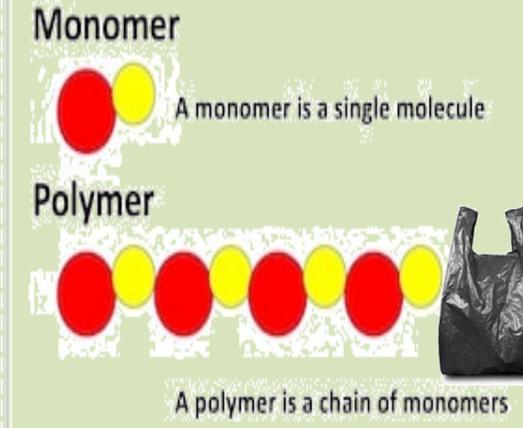
This is then stored in the animal's tissues or is exhaled as CO<sub>2</sub> from respiration. Once these organisms die the carbon in their remains (over thousands of years) is stored as fossil fuel which can be used for combustion. Burning of these fossil fuels releases the carbon as CO<sub>2</sub> which is taken in by plants as the cycle repeats itself



## Different materials and their properties



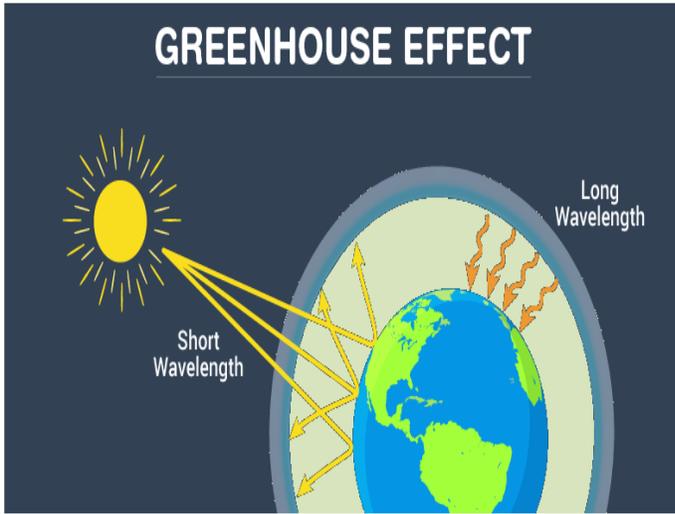
**Polymers** are made by bonding between repeating "units" (lots of the same monomer bonded together) polymers make up most plastics and depending on how the polymer is formed – they can be made to be heat resistant



**Composites** use multiple materials and combines their properties to make a product with improve properties for a specific use.

For example waterproof jackets combine a tough outer layer, with a gore-tex membrane and a soft lining.

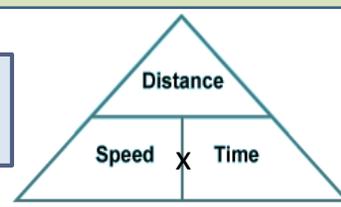
Combining these materials makes the jacket rip resistant, waterproof/breathable as well as soft to wear- it would not have these properties without using all three materials



## GREENHOUSE EFFECT

# KS3 Physics: Speed and Motion

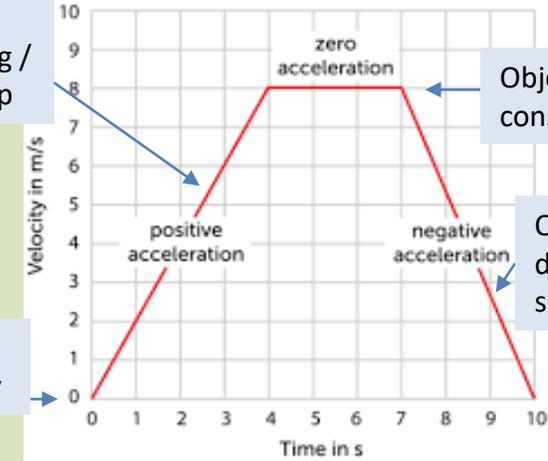
$$\text{speed (m/s)} = \frac{\text{distance (m)}}{\text{time (s)}}$$



We can plot velocity time or distance time graphs to interpret the motion of a vehicle/object/person!

## Velocity time graphs

Object accelerating / speeding up



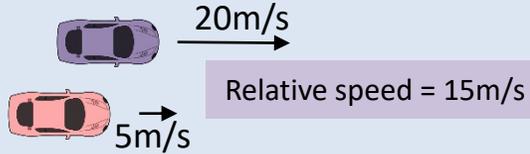
Object at a constant speed

Object decelerating / slowing down

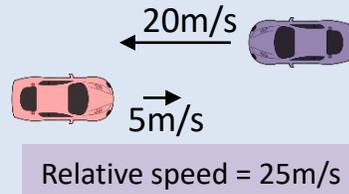
Object stationary

## Relative motion

For two objects moving in the same direction, the relative motion is the **difference** between their speeds.



For two objects moving towards each other, the relative motion (sometimes called the approach speed) is the two speeds **added** together.



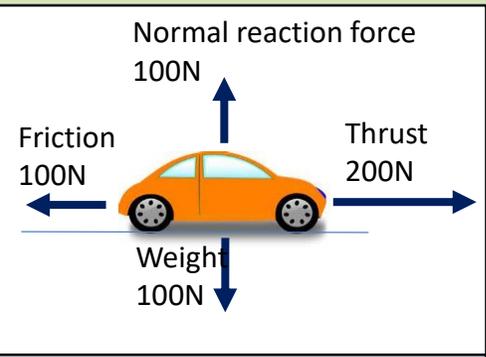
## Stopping distance

A car's **Stopping distance** is made up of **Thinking distance** (reaction time) and **braking distance** (the distance you travel once you have applied the brakes)

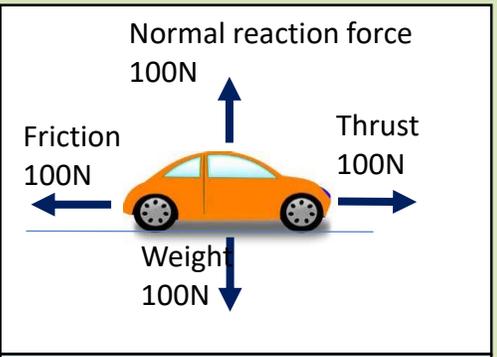


## Rules for forces and motion

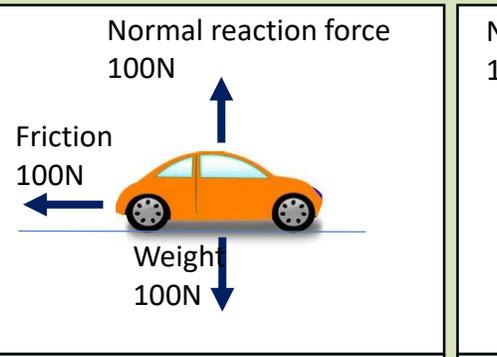
**Balanced forces =** The object is stationary or object moving at a constant speed  
**Unbalanced forces =** The object is changing speed or changing direction or changing shape (Accelerating or decelerating)



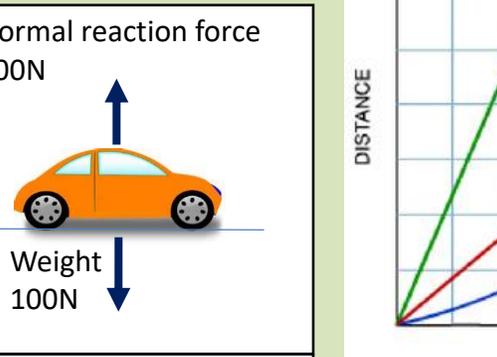
This car is accelerating as it has a larger thrust force than friction force (The resultant force is 100N →)



This car is travelling at a constant speed as it has an equal thrust force and friction force (The resultant force is zero)

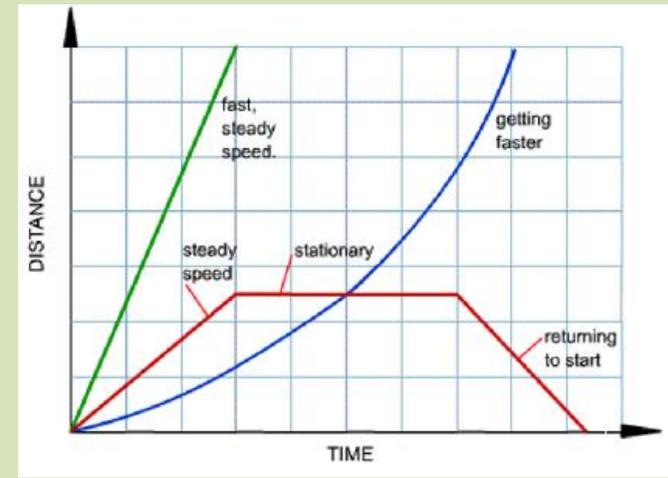


This car is decelerating as it has a larger friction force than thrust force (The resultant force is 100N ←)



This car is stationary as there is no friction or thrust forces (the resultant force is zero)

## Distance time graphs



**Straight line =** constant speed  
**Horizontal straight line =** stationary  
**Curved line =** accelerating or decelerating

# Computer Science – Python – Term 1

## Python – Programming Language

Python is a programming language that is a major step up from [Scratch](#).

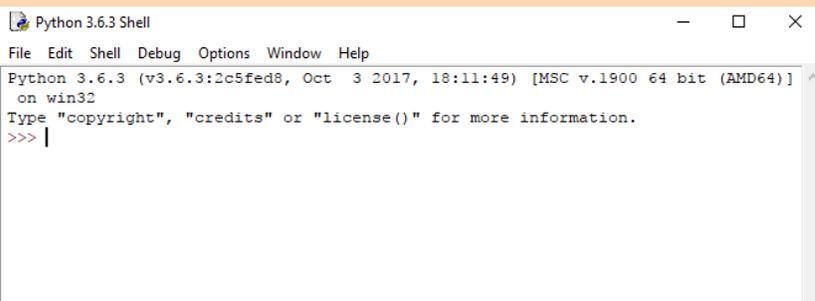
Unlike [Scratch](#) Python is a text based language where you have to type up code and remember different pieces of syntax.

On the next page you will see the Python Cheat sheet which you can use to create different programs.

## IDLE

IDLE is the programming environment we will be using to create our programs.

Unlike other environments IDLE is very simple to look at and use. Make sure you always save your work often when creating your programs to ensure you don't lose any code you have created.



```
Python 3.6.3 Shell
File Edit Shell Debug Options Window Help
Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 18:11:49) [MSC v.1900 64 bit (AMD64)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>> |
```

## 4 X Principles of Coding

There are 4 core fundamental principles of coding you will need to learn to make sure you are a pro coder!

- **Variables:** Sometimes we need computers to remember the information we give it and that it calculates during programs. A variable can be thought of as a box that the computer can use to store a value. The value held in that box can change or 'vary' (Hence, Variable!). A program can use as many variables as it needs it to.
- **Input / Output:** Programs require data to be input. This data is used by the program, and data is then outputted to the screen as a result.
- **Loops:** Another name for this principle is [Iteration](#). [Iteration](#) is used in computer programs to repeat a set of instructions.
- **Decision making:** Another name for this principle is [Selection](#). [Selection](#) is implemented using [IF](#) statements. Using [IF](#) and [ELSE](#) gives two possible choices (paths) that a program can follow. However, sometimes more than two choices are wanted. To do this, the statement [ELSE IF](#) is used.

## The 4X Pro-Coder Rules

To make sure you have created pro code you need to learn to follow the pro coder rules. These rules are:

- [Use descriptive names for all variables, sprites and subroutines.](#)  
You will learn how to use Variables, Sprites and Subroutines during your lesson but you need to make sure they have descriptive names. So if you have a Sprite of a ball make sure its called Ball
- [Convert repeated code into loops](#)  
Repeated code can start to become an issue the more it repeats. You can fix this by converting your code into loops. Your code will now loop through the code as many times as you want without you having to keep writing it!

- [Convert repeated functionality in to subroutines](#)  
If your program is really long it starts to become more and more difficult to read through it and if there are errors even longer to fix it.

To help fix this issue create a subroutine which you can call when you need to use it instead of writing the whole section again!

- [Comment your code](#)  
When you're writing your code you will want to comment on what your code is doing.

*For example if your code is to say hello your comment may look like this:*

```
print("Hello my name is Jane") #Code section to say hello
```

This helps you understand what each section is doing!

## Interact with the user (*input* and *output*)

Print a message

```
print('Hello, world!')
```

Print multiple values (of different types)

```
ndays = 365  
print('There are', ndays, 'in a year')
```

Asking the user for a string

```
name = input('What is your name? ')
```

Asking the user for a whole number (an integer)

```
num = int(input('Enter a number: '))
```

## Variables

Creating a variable

```
celsius = 25
```

Using a variable

```
celsius*9/5 + 32
```

## PYTHON CHEAT SHEET!

## Decide between options

Decide to run a block (or not)

```
x = 3  
if x == 3:  
    print('x is 3')
```

Decide between two blocks

```
mark = 80  
if mark >= 50:  
    print('pass')  
else:  
    print('fail')
```

Decide between many blocks

```
mark = 80  
if mark >= 65:  
    print('credit')  
elif mark >= 50:  
    print('pass')  
else:  
    print('fail')
```

- ▶ `elif` can be used without `else`
- ▶ `elif` can be used many times

Are two values equal?

```
x == 3
```

△ two equals signs, not one

Are two values not equal?

```
x != 3
```

Less than another?

```
x < 3
```

Greater than another?

```
x > 3
```

Less than or equal to?

```
x <= 3
```

Greater than or equal to?

```
x >= 3
```

The answer is a *Boolean*:

```
True
```

or

```
False
```

## Text (*strings*)

Single quoted

```
'perfect'
```

Double quoted

```
"credit"
```

Multi-line

```
'''Hello,  
World!'''
```

Add (*concatenate*) strings

```
'Hello' + 'World'
```

Multiply string by integer

```
'Echo...'*4
```

Length of a string

```
len('Hello')
```

Convert string to integer

```
int('365')
```

The screenshot shows two windows from the Python IDLE environment. The left window is the IDLE Shell 3.9.6, displaying the startup message: "Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32. Type 'help', 'copyright', 'credits' or 'license()' for more information." followed by a restart message and the output "Hello everyone, This is a IDLE, its known a python environment!". The right window is a Python script named "Python 1.py" with the code `print("Hello everyone, This is a IDLE, its known a python environment!")` and the same output.

# Computer Science – Errors and Algorithms – Term 2

## Programming Errors

When programs are written, it is likely that at least some errors will creep in. Errors in programs are often referred to as bugs.

It is vital that programs are as free of errors as possible. Errors can cause a program to produce unexpected results, or crash.

There are two types of error that need to be considered:

- **syntax error**
- **logic error**

## Syntax Errors

Syntax is the spelling and grammar of a programming language. Programming languages have rules for spelling, punctuation and grammar, just like the English language.

In programming, a syntax error occurs when:

- **There is a spelling mistake**
- **There is a grammatical mistake**

## Logic errors

Logic errors occur when there is a fault in the logic or structure of the problem.

Logic errors do not usually cause a program to crash. However, logic errors can cause a program to produce unexpected results.

## Algorithms - recap

Algorithms are one of the four principles of Computer Science.

An algorithm is a plan, a set of step-by-step instructions to solve a problem.

If you can tie shoelaces, make a cup of tea, get dressed or prepare a meal then you already know how to follow an algorithm.

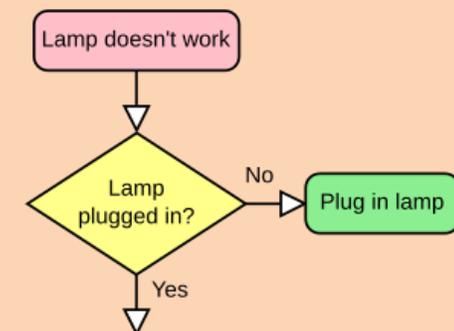
## Representing an Algorithm - Flowcharts

A flowchart is a diagram that represents a set of instructions.

Flowcharts normally use standard symbols to represent the different instructions.

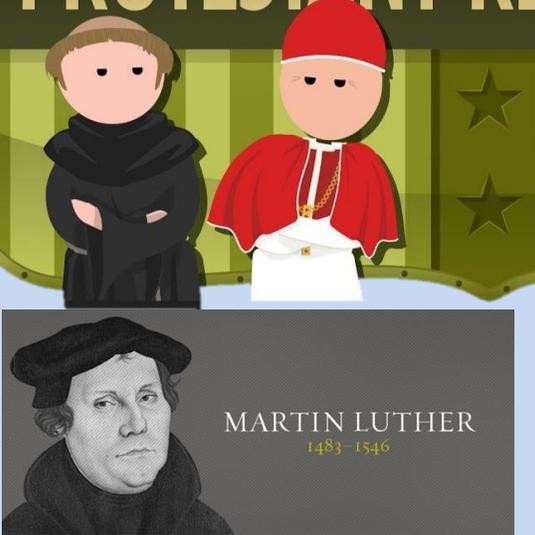
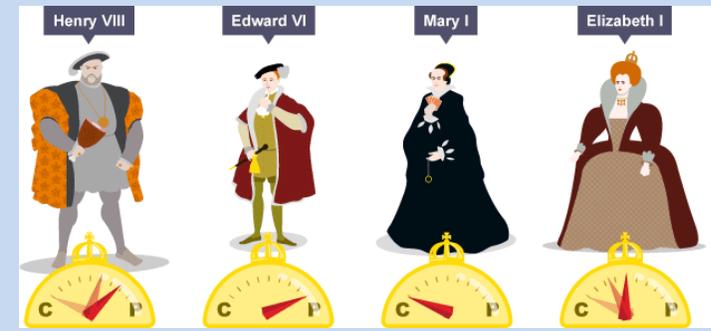
There are few real rules about the level of detail needed in a flowchart. Sometimes flowcharts are broken down into many steps to provide a lot of detail about exactly what is happening. Sometimes they are simplified so that a number of steps occur in just one step.

Name	Symbol	Usage
Start or Stop		The beginning and end points in the sequence.
Process		An instruction or a command.
Decision		A decision, either yes or no.
Input or Output		An input is data received by a computer. An output is a signal or data sent from a computer.
Connector		A jump from one point in the sequence to another.
Direction of flow		Connects the symbols. The arrow shows the direction of flow of instructions.



# PROTESTANT REFORMATION

## Year 8 History Knowledge Organiser Term 1



### Summary

Attempts to reform (change and improve) the Catholic Church and the development of Protestant Churches in Western Europe are known as the Reformation.

The Reformation began in 1517 when a German monk called Martin Luther protested about the Catholic Church. His followers became known as Protestants.

Many people and governments adopted the new Protestant ideas, while others remained faithful to the Catholic Church. This led to a split in the Church.

Who	Religion	Actions
Henry VIII	Catholic	Split the English Church away from the Pope, but this was an argument about the heir to the throne and power and not a move towards Protestantism. Henry remained a Catholic to the end of his life.
Edward VI	Protestant	He extended some of the changes Henry VIII had begun.
Mary I	Catholic	Tried to restore the Catholic Church to what it had been like at the beginning of Henry VIII's reign.
Elizabeth I	Protestant	She first tried to promote a 'middle way' in religion. She wanted to create an inclusive Protestant church that allowed her to be in authority whilst enabling former Catholics to feel that they could follow Protestant forms of worship. She later began to persecute Catholics and by the end of her reign England was a fully Protestant country.

Martin Luther was a German monk. He thought that the Catholic Church had too much power and was corrupt. In 1517 he wrote a document called the Ninety-five theses and nailed it on to the door of his local church. Luther set up a new, Protestant Church – the Lutheran Church. One of the differences between Protestants and Catholics is the way they view bread and wine during religious services. Catholics believe that the bread and wine actually turns into the body and blood of Christ. Protestants believe it stays bread and wine and only represents Christ.

Luther also translated the Bible into German so more people could read and understand it. Luther's ideas spread and were developed further. The Reformation in Europe led to revolution, war and persecution.

### Features of a Protestant church

- + Stone flag floor
- + Clear glass windows
- + Minister wearing plain black and white vestments
- + Wooden candlesticks and crucifix
- + Plain wooden pews
- + Simple wooden table as an altar.



### Features of a Catholic church

- + Gold candlesticks and crucifix
- + Stained-glass windows
- + Carved wooden pews
- + Statues of saints
- + Altar covered with a gold embroidered cloth
- + Walls covered with ornate motifs
- + Painted ceiling
- + Carved wooden rood screen
- + Priest wearing colourful vestments.



Overview of the Protestant Reformation here:



The Tudor reign is the period between **1485 -1603**. Henry VIII ruled from 1509-1547

### Key Events

1485	Henry VII defeats Richard III at the Battle of Bosworth, to become the next King of England.
1509	Henry VII dies and his son Henry VIII becomes King.
1516	Mary I (Henry's first child) born
1531	Henry VIII became 'head of the Church in England and Wales as far as the word of God allows.'
1533	25 <sup>th</sup> January - Henry secretly married Anne Boleyn
<b>1533</b>	Elizabeth I (Henry's second child) born
<b>1534</b>	Act of Supremacy made the king head of the English church instead of the pope.
<b>1536</b>	Start of the dissolution of the monasteries and Anne Boleyn is executed
1537	Edward VI (Henry's first son and heir) born
1547	28 <sup>th</sup> January - Henry VIII died aged 57. His reign had lasted 37 years and 8 months.

### Key Concepts

Church of England	Sometimes known as the Break with Rome, Henry VIII created the Church of England so he could divorce Catharine of Aragon and marry Anne Boleyn. He became head of the Church, with the power of the Pope in England. Henry also gained money and power from the break.
Dissolution of the monasteries	The destruction or sale of buildings and land belonging to religious communities in England by King Henry VIII after he became head of the Church of England. Henry wanted to make the Church less powerful and he needed money. Many people in England at the time felt that the Church was too rich and wasted its great wealth.
Tudor	The family name of Welsh nobleman Owen Tudor. His grandson became King Henry VII. He and his descendants, Henry VIII, Edward VI, Mary I and Elizabeth I were all Tudor monarchs. The word is also used to describe the time when the Tudor family reigned, from 1485-1603.



Overview of Henry VIII here:



### Key Words

Annulment	Where a marriage is cancelled or made invalid. Henry annulled his marriage to Anne of Cleves
Pope	The Head of the Catholic Church in Rome.
Roman Catholic	A branch of the Christian religion headed by the Pope in Rome.
Protestant	A branch of the Christian religion, founded during the Reformation.
Monarch	The king or queen
Monk	Man who have dedicated their life to the service of God
Monasteries	A house, usually for monks
Reformation	A Christian movement to reform the Roman Catholic Church that led to the founding of the Protestant religion
Religious persecution	Punishing someone because of their religious beliefs.
Traitor	Someone who has betrayed the monarch or her or his country
Treason	The act of betraying your monarch or country
Heresy	Going against the established religion of the country.
Indulgence	A special pardon that can be purchased to gain entry to heaven.
Tower of London	The famous prison in London. Henry VIII sent many of his political enemies to the Tower of London
Heir	The person who is next in line for the throne. Prince Edward was Henry VIII's heir
Illegitimate	The term used when a child is born out of wedlock/marriage
Archbishop	Highest ranking official in the Catholic Church in England. They advised the King on matters of religion

# Edward VI

King of England (1547 to 1553)

At nine, Edward was too young to rule by himself, so he had protectors to help him. Edward had been born after his father had created his own Church in England, and he was brought up and educated by Protestant tutors. His mother had been protestant too.

While he was still a young boy, England was ruled by Protestant ministers and many people in England became Protestant. Edward brought in the 'Book of Common Prayer' to ensure everyone prayed in the same, Protestant way. Priests were allowed to marry and expensive Catholic decorations in churches were removed. Instead, he ordered plain glass windows, scripture of the Bible to be displayed instead of images of saints, and a simple wooden table instead of an altar. Even priests had to wear plain robes (called 'vestments') to show he was not 'above' others.

Sadly, Edward died aged just 15 and Lady Jane Grey was named as heir.

# Mary I

Queen of England (1553 to 1558)

Edward's much older sister Mary was the daughter of Catherine of Aragon and was a firm Catholic. She refused to accept Jane Grey as queen, so she raised forces and executed Jane Grey at the age of 16.

Mary wanted England to become Catholic again, and the Pope became head of the Church once more. She stopped priests marrying (and forced married ones to divorce!). She brought back Catholic decorations in church – lots of gold crosses, painted walls and rich statues. She even returned the Latin Bible and Latin services. To ensure this happened smoothly, she made an unpopular decision in 1554 to marry the powerful Catholic king of Spain, Philip II. This angered many Protestants who were fed up of religion changing. Many rebelled and went against Mary.

Mary was angry at those who refused to return to Catholicism, so she had many Protestants executed by burning them alive, 300 in total! She gained the nickname 'Blood Mary'. But Mary was not well, she had stomach problems. Mary died without any children aged 42.

## Edward's Changes

- Edward VI was only a child when Henry died. He was brought up a Protestant, but most people in England were still Catholics.
- The Latin Mass was no longer used.
- A Book of Common Prayer was introduced. It was written in English.
- Priests were allowed to marry.
- Statues of the saints were removed, and pictures on church walls were whitewashed.
- Stone altars were taken out of churches and replaced by wooden communion tables.
- Ornaments such as candles and goblets were sold and stained glass windows were smashed.
- Catholics bishops were imprisoned in the Tower of London.
- Protestant missionaries were sent out round the country to tell people about the new beliefs. They gave people Bibles written in English.



# Elizabeth I

## Queen of England (1558 to 1603)

Elizabeth was the daughter of Ann Boleyn and was brought up as a Protestant. When Mary had been queen, Elizabeth had pretended to be a Catholic so as to not be executed! When Mary died and Elizabeth became queen, she decided to go back to Protestantism and created her own Church of England, but she wanted to find a 'middle-way': to please all Christians.

She named herself the Supreme Governor of the Church (instead of 'head' to not annoy Catholics). She kept Bishops to please Catholics, but all services had to be in English again. Once more, priests were allowed to marry and the Catholic decorations in churches were removed, but she kept music and singing to please Catholics. A new English prayer book replacing the one Catholics hated from Edward's reign, was introduced. She also wasn't strict with Catholics who wanted to pray in private so long as they showed their obedience outwardly. Many Catholics were happy with this 'middle-way' and the Protestants were happy too.

She ruled for many years and by the time she died, England had become a mostly protestant nation. Elizabeth never married or had children.



Protestant	Middle Way
Church services and Bible in English	Called herself 'Supreme Governor'
Act of Uniformity (1559)	Many elements of the Catholic services were allowed
Punished those who refused to go to Church of England services (recusants)	English and Latin prayer book
Executed Catholic plot leader	Changes to Communion service
Catholic priests conducting secret services were executed	

Elizabeth I was brought up a Protestant. She realised that religion had caused a lot of problems for England. She tried to find a 'middle way' that both Catholics and Protestants could accept:

- She called herself 'Supreme Governor', not 'head' of the Church of England.
- Church services and the Bible were in English.
- Many elements of Catholic services were allowed, including bishops, ordained priests, church decorations, music and colourful robes.
- The English prayer book was brought back, but a Latin edition was also printed.
- The new prayer book said that Christ was 'really present' in the bread and the wine in the Communion service. This was halfway between Catholic and Protestant beliefs.
- There was no question, however, that people could believe what they wanted. The Act of Uniformity (1559) stated that everybody had to attend the Church of England and use the Book of Common Prayer.
- She punished the Puritans and any Catholics who refused to go to Church of England services.
- Catholic priests who conducted secret services for Catholics were tortured and executed. Elizabeth executed as many Catholics as Mary burned Protestants



Elizabeth came to power in 1558, inheriting problems with religion, poverty and foreign policy. Historians in the 1970s thought that, when Elizabeth came to the throne, the country was about to collapse. Elizabeth restored the stability and the status of the monarchy:

- She solved the religious tensions by following a 'middle way' which allowed Catholics and Puritans to keep their private beliefs as long as they went to the Church of England in public. However, she hunted, tortured and executed Catholic priests who came into England to undermine her power.
- She survived plots and rebellions, and executed Mary Queen of Scots in 1587 because she saw her as a threat to her throne.
- At the time women were seen as weak and inappropriate leaders of a nation. To combat this perception she tried to use her unmarried status as a way of strengthening her political control in England and abroad.
- Elizabeth encouraged the 'Gloriana' myth, and commissioned portraits which presented her as pure and powerful. Her reign was a time of art, music and literature.
- She defeated the Spanish Armada - a vast fleet of warships from the then world super power. By defeating Spain, England was on the way to being a world power by her death and one which had set up its first colony.

#### The darker side of Elizabeth I

- Elizabeth I is regarded by many as one of England's greatest monarchs, whose reign laid the foundations of England's greatness. But is this true?
- She could be as 'bloody' as Mary and executed many more people for religion than her father, Henry VIII. She established a network of spies and informers to ensure her safety.
- Far from encouraging Parliament, she bullied and controlled it, ran the government as she wished and even arrested an MP when he complained.
- The King of Spain raised a huge fleet of ships to invade England. It was known as the Armada. That the Armada was largely destroyed and failed to invade England was a triumph for Elizabeth – but it was also a very lucky escape.

## Elizabeth's Problems

Religion

Mary Queen of Scots

Marriage

Succession

Money



The Spanish Armada



Overview of Elizabeth's reign here:



SCAN ME



# Political Map of the World



# Map of UK



## What is a tourist?

A tourist is a person who travels to a place that is not their normal place from 1 day up to a year.

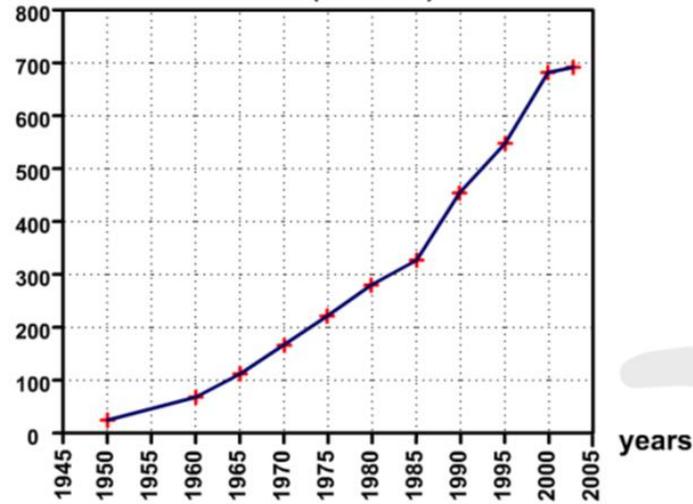
Most tourists are people on holiday but those that travel for business, leisure or other reasons are still tourists.

## What is the tourist industry?

The tourist industry means all the activities that tourists take part in and the services that support them.

Tourists, hotels, airports, taxi drivers and ice cream sellers are all part of the tourism industry.

international tourist arrivals (millions)



Source: World Tourism Organisation (WTO)

## How much has tourism grown?

Before 1950, tourist levels were relatively low. However, in the 1950s, it suddenly started to increase. If you look at the graph to the left which shows the number of international tourists every year, you can see that there are less than 100 million tourists in 1950, but by 2005, this number was almost at 700 million. As of 2015, more than 1 billion tourists travel every single year.

Continent/Region	%
Africa	4
North America	10
Asia & Pacific	25
Europe	50
Middle East	4
South America	7

## Where do people visit?

This table shows what percentage of all tourists each area of the world gets. Europe is by far the most popular place to visit (with 50% of all visits) compared to Africa and the Middle East (both with only 4% of visitors). Europe receives the most tourists because it is very easy for people to travel between European countries. Also many European countries are considered HICs (high income countries) and are considered to be safer to travel. In contrast, many countries within some other regions have a smaller tourism industry, so it is harder for tourists to visit.

## Why has tourism grown?

Tourism has grown so rapidly for variety of different reasons:

1. People have more time.
  - a. In many countries, people have paid annual holiday (normally around 4 weeks) where they are allowed to go on holiday and are paid for it.
  - b. As people are now living longer, we they have more time when they retire to explore.
2. People have more money.
  - a. Many people in the UK have well paid jobs and therefore have more money. They now have a higher disposable income (money left over from paying bills) to spend on going on holiday.
3. Better Transport.
  - a. Nowadays, with improved air travel and road networks it doesn't take too long to travel to different countries with desired environments.
  - b. Many people have cars and can just travel whenever they want with very little planning
4. Better technology.
  - a. People can now use the internet to search for and book holidays which saves time. Whereas, in the past people would have to go to a travel agents and they would have to organise it all for them.
5. Better tourism products.
  - a. People want to visit places were all their needs can be met. The introduction of places like Disneyland and all-inclusive holidays allowed for dream holidays to become reality.

## Tourism Environments

Different characteristics can greatly influence the image of a tourist destination. People may decide to visit a place based on 2 main features:

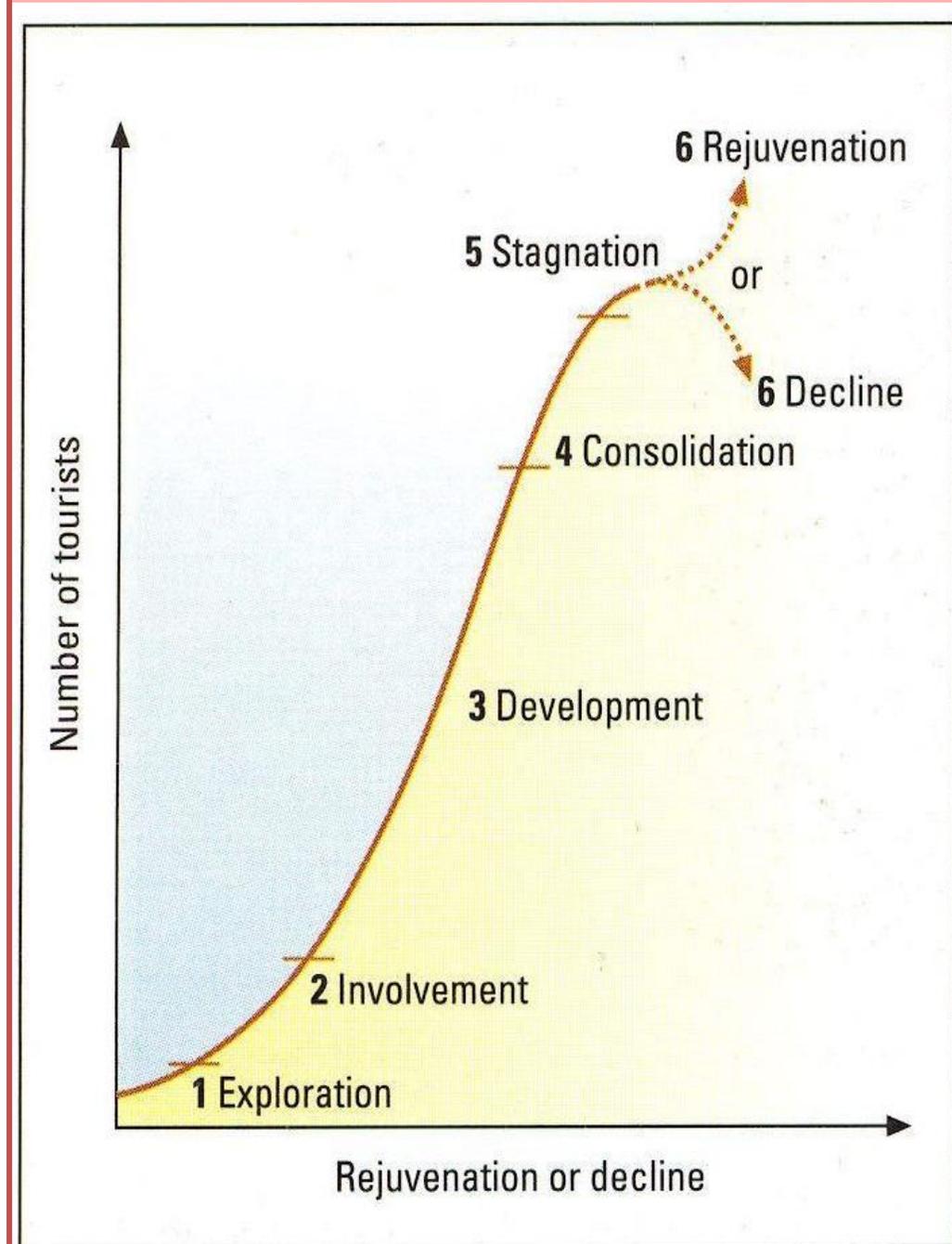
1. Human (man-made) characteristics
  - a. These are features where people have built particular services which would have not naturally been there to encourage visitors. Think of big cities like New York or Las Vegas.
2. Physical (natural) characteristics
  - a. These are features which have naturally occurred and are normally big and distinctive. Examples of this could be the Grand Canyon or a big mountain.



## Butler's Tourism Life Cycle Model

Butler proposed that most tourist resorts go through a six stage model and he called this the tourism life cycle model. It states that most tourist resorts start on a very small scale and get bigger and bigger until stagnation occurs. Within the 6 stages the following happens.

1. **EXPLORATION** - a few hardy and adventurous people looking for something that is special in terms of its culture or natural beauty. There may be no tourist services available and local people will not be involved in the tourist industry.
2. **INVOLVEMENT** - local people start to notice that there are increasing numbers of tourists visiting. They start businesses to provide accommodation, food, guides, and transport.
3. **DEVELOPMENT** - Big companies start to see the area as a tourist resort and therefore start to invest money in the region. They build large hotel complexes and sell package holidays. This makes the numbers of tourists increase and massively expands the number of job opportunities for locals.
4. **CONSOLIDATION** - The local economy is dominated by tourism and many local people will have jobs in tourism. The resort will still grow, but some of the older buildings will start to become unattractive and attract a lower quality client base.
5. **STAGNATION** - competition from other resorts, rowdiness and a loss of the original features (e.g. if it had a great beach but that is now crowded and full of rubbish) can cause the resort to stop growing. The number of people going levels off then starts to decline, threatening local businesses and services.
6. **DECLINE OR REJUVENATION?** - From the stagnation point onwards there are 2 basic possibilities: Decline can be slow or rapid, and regular visitors are replaced by people seeking a cheap break or day trippers. Rejuvenation involves a cash injection from either a private company or the government, to create a new attraction within the original resort to boost its popularity - such as the Surf Reef at Bournemouth.



## Mass Tourism in paradise -Seychelles



Seychelles is a tropical island located to the east of Africa. It is north east of Madagascar and lies in the Indian Ocean. It is home to some of the most beautiful beaches, tropical rainforests and rare animals. Until recently, the people lived a subsistence lifestyle. However, as tourists started to arrive, their whole lifestyle and environment began to change.

Mass tourism is when large numbers of tourists visit the same destination. Holiday companies arrange charter flights to transport tourists. Many holidays include everything you will need from flights to food. These are called all-inclusive package holidays.

### Positives of tourism

Locals are able to use the profits of tourism to build better infrastructure such as a hospital.

The islanders now have enough money to buy some of their food rather than growing it themselves.

The scope for economic diversification and growth is limited on small islands: tourism could help reduce the countries debts.

As the locals now receive more money, they can spend it on improving their own quality of life.

### Negatives of tourism

Those people who have become much richer because of the tourism are now building the first super-hotel which can be seen for miles and required the deforestation of 3 hectares.

With the recession, less people from Europe are travelling abroad.

Pleasure boats mean not all the tourists are on the islands at once... but they pollute the water and their anchors damage coral.

Tourism has become the main source of income in the region with many traditional skills and ways of life disappearing.

Many tourists do not respect what is around them and are selfish in their attitude towards the Seychelles, having high expectations of westernised facilities and hotels.



## Extreme Tourism

### What is extreme tourism?

- Often involves physically challenging activities often with an element of risk
- locations with dangerous landscapes (like mountains or deserts)
- often with a difficult climate and limited accessibility (extreme heat or cold).

### Case Study – Antarctica

Antarctica is becoming increasingly popular for tourists to visit, especially as climate change is changing it – people want to visit it before its too late.

### Why do people choose extreme holidays?

- Feel closer to a more natural world
- Creates an adrenaline rush because it has a perception of danger
- People enjoy taking a risk
- Provides a memorable experience
- People are looking for something different.
- Modern day transport makes it easier to get to
- Last chance before the environment changes.



#### **Positives of tourism in Antarctica**

Guidelines are in place to reduce environmental impact

Helps scientists to discover vital information about wildlife and climate change.

Preservation can be helped by increasing awareness of the unique environment

#### **Negatives of tourism in Antarctica**

Tourists need services to be provided for them such as toilets, equipment hire and shops, changing the natural environment.

Cruise ships have struck icebergs causing oil spills which damages the environment and poisons the wildlife

Too many vehicles on the ice may cause it to change shape and leave dents in the ice

Animals become stressed because of the crowds of people causing them to abandon eggs or their young

### What is being done to preserve Antarctica?

- The IAATO have been set up to only allow a small number of tourists on land at one time.
- Ships are not allowed to use heavy oil so it is not too damaging if a spill occurs
- Tour companies and tourists can be fined for polluting the environment
- The treaty of Antarctica has been set up and agreed by many countries to stop anyone building on Antarctica, preserving its natural environment

## Key words

**Tourist** - A tourist is a person who travels to a place that is not their normal place from 1 day up to a year.

**Tourist industry** - The tourist industry means all the activities that tourists take part in and the services that support them.

**HIC** – High Income Countries

**LIC** – Low income countries

**Disposable income** - income remaining after deduction of taxes and social security charges, available to be spent or saved as one wishes.

**Human (man-made) characteristics** - features where people have built particular services which would have not naturally been there to encourage visitors.

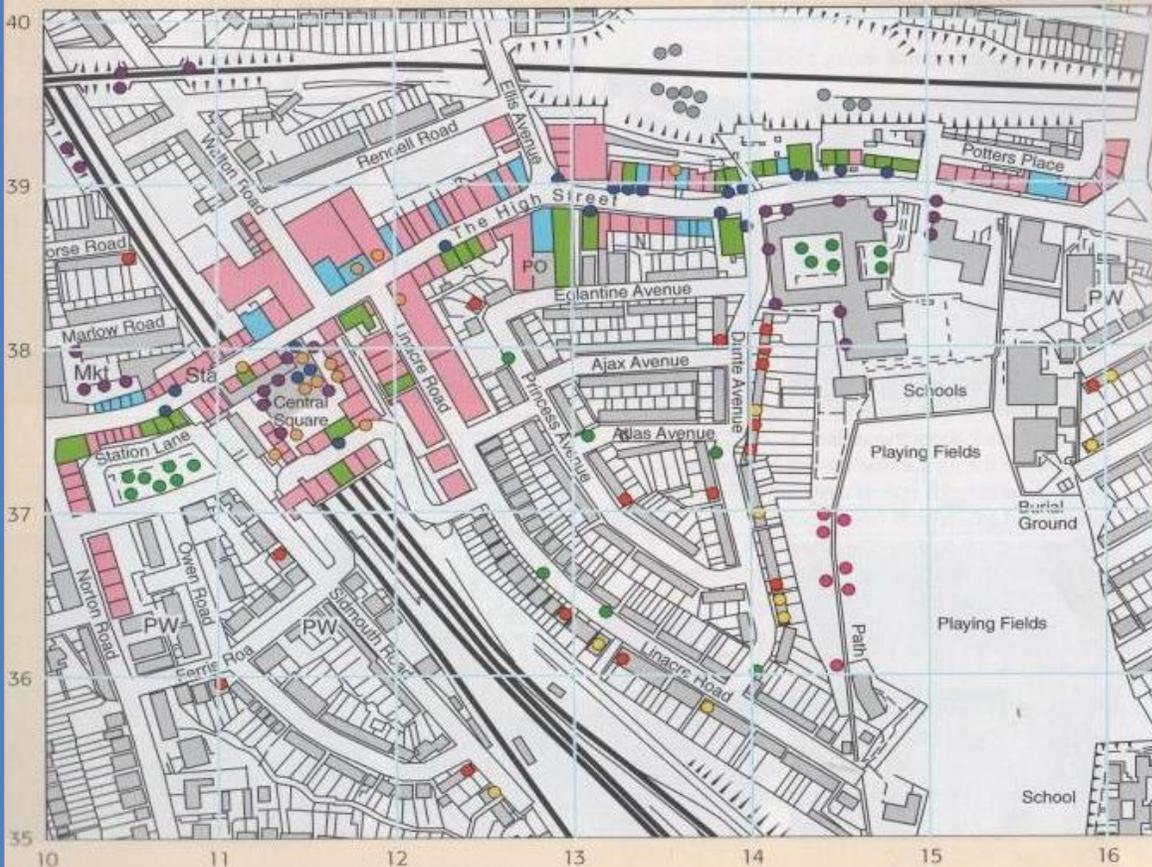
**Physical (natural) characteristics** - features which have naturally occurred and are normally big and distinctive.

**Mass tourism** - when large numbers of tourists visit the same destination. Holiday companies arrange charter flights to transport tourists. Many holidays include everything you will need from flights to food. These are called all-inclusive package holidays

**Extreme tourism** – a niche type of tourism which normally involves visiting dangerous (environmentally or human) areas and taking part in often dangerous activities

## Mapping Crime

Police use maps and aerial photographs to help them track crime



## Who are the criminals and who are the victims?

When people think of criminals and victims, they tend to think of certain stereotypes. For example, if you think of a criminal, many people might think someone wearing black and white stripes with a bag of stolen goods; potentially carrying a weapon. Whereas, when someone thinks of a victim, they might think of an older person who they perceive as being more older and therefore more vulnerable. However, anyone can be a criminal and anyone can be a victim! Crime isn't based on looks, instead there are many different geographical reasons (such as location, situation and demographics) that actually influences crime.

## Crime in different areas

Think of your local city and then think of your closest rural area. Many crimes that occur in these places are completely different partly because of the different opportunities available to commit crimes. In many urban areas, you might be likely to find more fraud and assault. Whereas, in a rural area, you might be more likely to find environmental crimes happening such as fly tipping where no one is around to see. Can you think any more crimes that are more likely to happen in your area?

## Different types of crime

There are many different crimes that can be committed. Take a look at the list below. Later on, we will find out about where each of these crimes are likely to take place.

**Murder** - the unlawful premeditated killing of one human being by another.

**Forgery** - imitation of a document, signature, banknote, or work of art.

**Vandalism** - deliberate destruction of or damage to property

**Burglary** - illegal entry of a building with intent to commit a crime, especially theft

**Armed Robbery** - form of theft that involves using a weapon to perpetrate violence or intimidate a victim.

**Domestic Violence** - violent or aggressive behaviour at home

**Fraud** – Deceiving victims with the intention of personal or financial gain

**Handling stolen goods** – receiving or handling goods known to be from stolen sources

**traffic offence** - a violation of traffic regulations, such as breaking the speed limit

**environmental crime** - causing significant harm or risk to the environment and human health

**Terrorism** - the unlawful use of violence and intimidation, especially against civilians, in the pursuit of political aims

**common assault** - a person who causes another person to use unlawful violence on someone else

**car theft** – attempting to steal a motor vehicle

**Mugging** - an act of attacking and robbing someone in a public place

## The demographics of burglary

Many people think that burglary is more likely to occur by what the house looks like and what you can see. However, burglary can be more closely linked to the demographics of an area (the general make up of a population). Take a look at the table the different factors which affect your chances of being burgled.

In contrast to popular belief, you are more at risk of your house being burgled if you are between the ages of 16-24 and not if you are older. This is because younger adults are more likely to be out during the day working and even more likely to be out socialising at night time. This means there is more chance of a burglar not getting caught. Whereas, older people above the age of 65 are more likely to be staying indoors, meaning if someone was to break in, there would be more chance of them being caught!

## **The risk of household burglary**

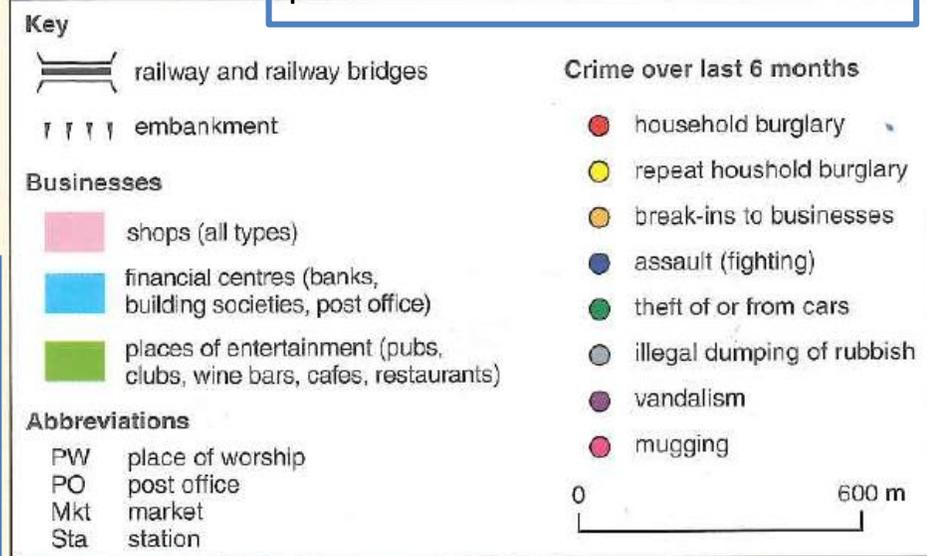
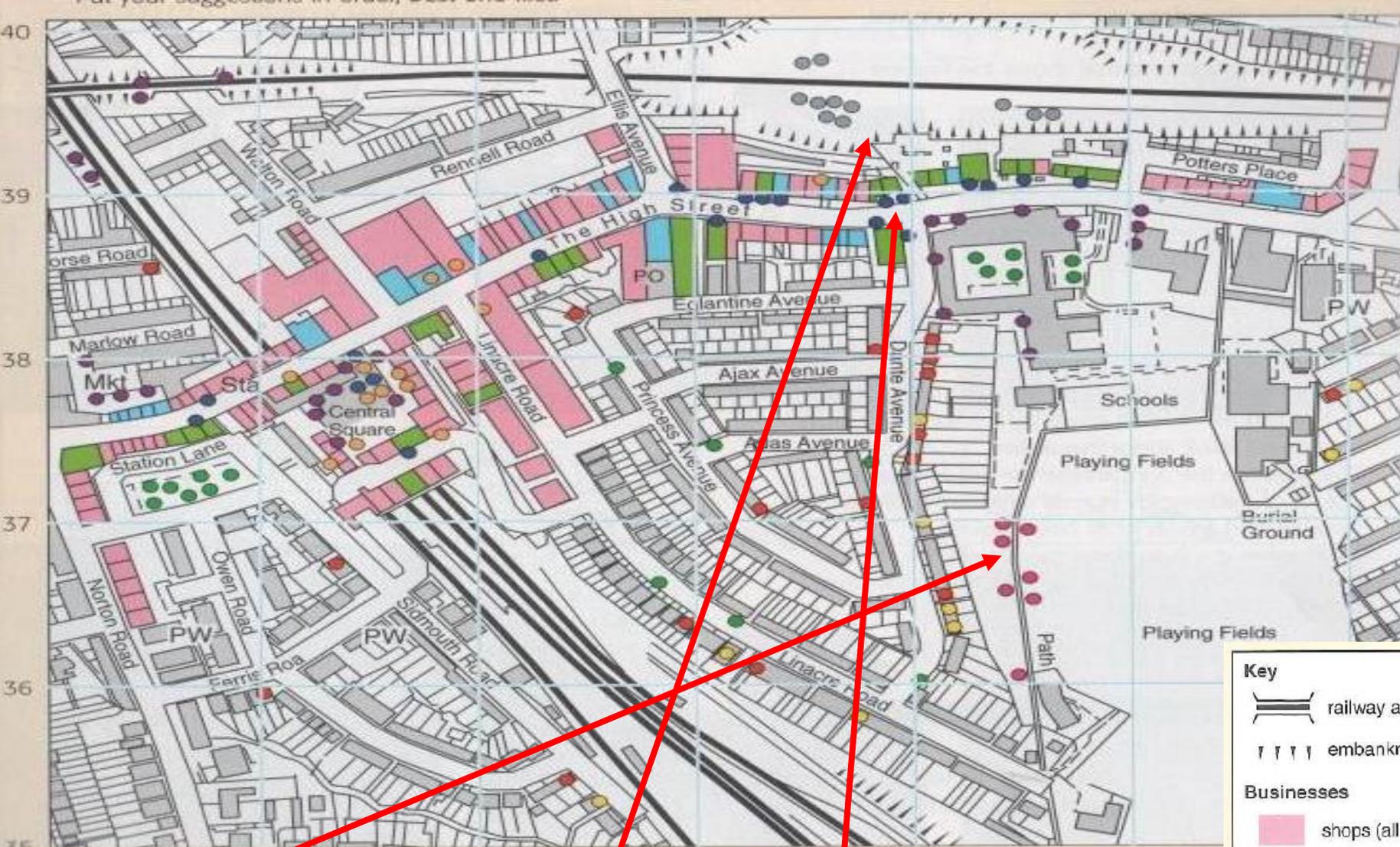
	<b>%</b>
Head of household aged 16–24	15.2
Living in an area of high physical disorder	12.0
Living in rented property	9.7
Living in the inner city	8.5
Living in a council estate	8.1
Living in a flat	7.2
On a main road	6.6
<b>Average risk of being burgled</b>	<b>5.6</b>
Earning more than £30 000 a year	5.0
Living in property they own	4.2
Living in a detached house	4.1
Head of household 65 or older	3.8
Living in rural areas	3.4

## Geography and the use of GIS

In Geography, we use regularly use GIS to plot and analyse crime trends. GIS stands for Geographical Information Systems and is a way of showing virtually any data- as a form of map. More often than not, it involves lots of layers, each showing a different set of information. Quite simply, it means we can look at overall patterns and connections between all the factors. The Police use GIS to do this quite frequently to highlight certain crimes which happen in certain places. They have created a website we can see what crimes are happening at certain times of year (<https://www.police.uk/>). Why don't you check out the crime that happens in your home area or different areas of the UK.

## Where is crime more likely to occur?

As well as the demographics of an area, crime can also be influenced by certain locations. Take a look at the map to the left and at the key below. Each coloured dot represents a different type of crime and each coloured square represents a different type of business, ranging from shops to places of entertainment. By looking at the map, we can see the groups of similar coloured dots tend to occur at very similar places.



For example, mugging (pink dot) is concentrated on the path alongside the playing fields. This is because it is a quiet location where the offender is less likely to be seen whilst committing the crime and can therefore escape. Also, assault (blue dot) is more likely to occur near places of entertainment (e.g. pubs) as they're most likely under the influence of alcohol. Further, illegal dumping of rubbish (grey dot) happens in the north by the railway where there are less people to see you.

## Ways to reduce crime?

When people think of ways to reduce, they tend to think of extreme protection methods such as building massive walls and installing alarm systems. Of course, these can help reduce crime, but they can cost a lot of money and can often make the area look worse. However, there are other methods which might have more positive results in reducing crime and maintain a positive community.



## Education and community support

One strategy that could be effective in reducing crime is by education of the public. This will help notify the public on what to do if there is a crime as well as increasing community support by encouraging neighbourhood to look out for one another through neighbourhood watch schemes.

Further, another method is increasing the interaction between community liaisons and the public so that crime can be reported faster and people feel safer.



Shown with Detector (sold separately)

## Improving living standards in an area

Two of the biggest causes of crime are poverty (linked to unemployment) and boredom (lack of activities). By improving these methods we can prevent crimes from ever taking place.

If people do not have jobs, they cannot afford to live a decent standard of life and therefore crimes such as robbery, mugging and drug abuse increase. One strategy might involve reducing unemployment so that people can afford essentials.

If an area does not have access to many facilities, people will get bored. If they are bored, crimes such as shop lifting and vandalism will increase. By improving access to green spaces (parks, forests, open areas) and facilities, people's quality of life can be improved meaning they might not even think of committing crimes in the first place.

## Protecting against crime

Another strategy that can be used to reduce crime is putting in protection measures. Some of examples of protection are installing cameras, adding alarms or improving locks. These methods can put potential criminals off from committing crimes, but also help in catching them after the crime has been committed. However, they can also be expensive and actually make the area not look as nice.

## Key Words

**Crime** - an action or omission which constitutes an offence and is punishable by law

**Criminal** - a person who has committed a crime.

**Victim** - a person harmed, injured, or killed as a result of a crime, accident, or other event or action.

**Rural** - characteristics of the countryside rather than the town.

**Urban** - characteristics of a town or city.

**Demographics** - statistical data relating to the population and particular groups within it.

**Vulnerable** - exposed to the possibility of being attacked or harmed, either physically or emotionally.

**GIS** – Geographic Information System

**Prevention** - the action of stopping something from happening or arising.

**Protection** - the action of protecting, or the state of being protected.

**Unemployment** – The state of being without a job.

**Green spaces** - an area of grass, trees, or other vegetation set apart for recreational or aesthetic purposes in an urban area.

**Quality of life** - the standard of health, comfort, and happiness experienced by an individual or group.

**Standard of living** - the degree of wealth and material comfort available to a person or community.

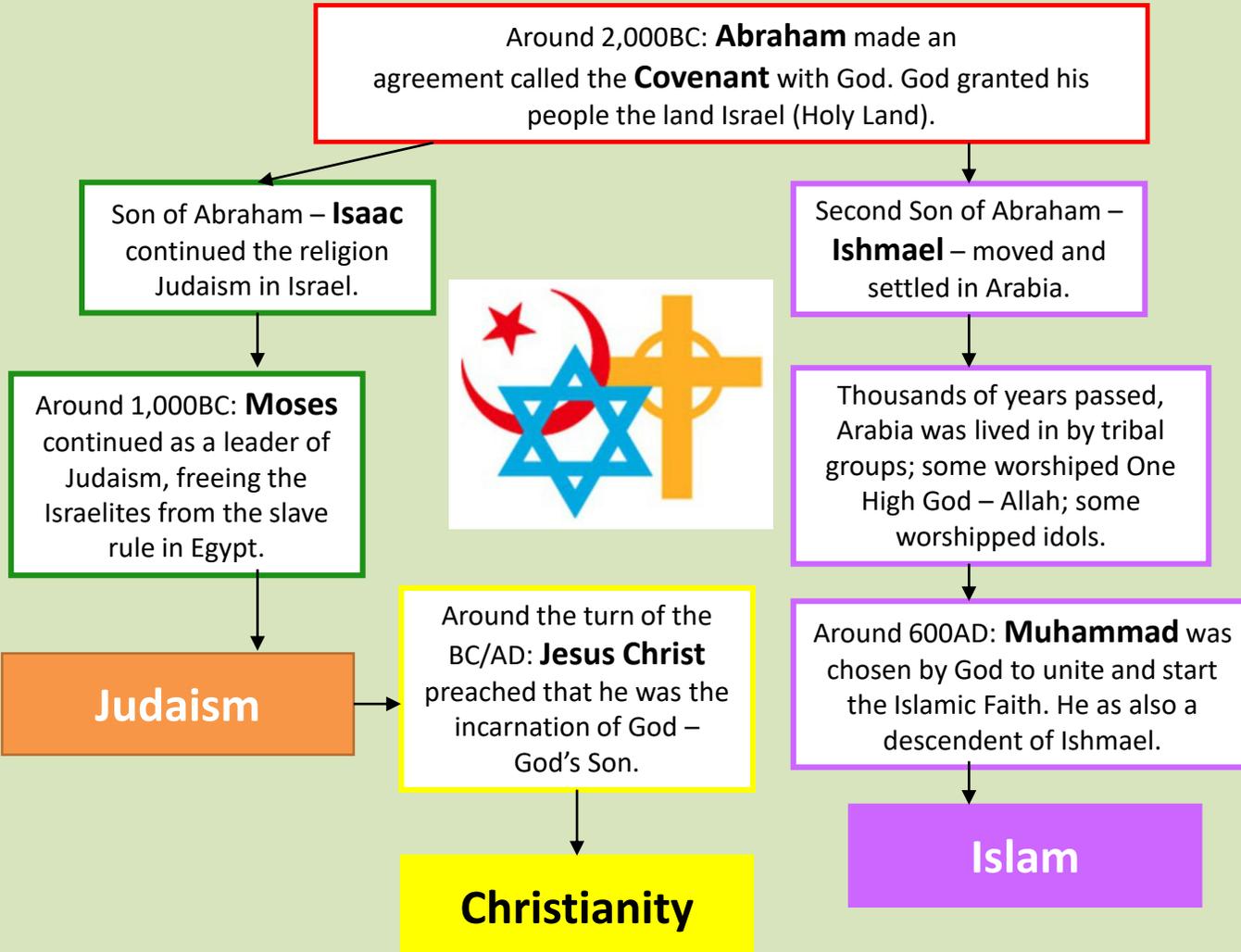
**Monotheism** is the belief in **ONE** God.

There are 3 religions that believe in One God that all connect by to one man called Abraham.

This is why these religions are also called the **Abrahamic religions**.

# BVT

## Who is God?



## How do the Monotheist Religions compare?

Judaism	Christianity	Islam
<i>All 3 religions have spiritual leaders called prophets to teach their religion. Each religion can use prophets of previous religions.</i>		
Prophets of <b>Abraham</b> and <b>Moses</b> are most important	<b>Jesus</b> , the Son of God, is a their teacher	<b>Muhammad</b> is the most important prophet
<i>All 3 religions have sacred texts. Each religion can use books previous to their religion.</i>		
The <b>Torah</b> . Written by Moses followers after Moses died.	The <b>New Testament Bible</b> . Written by the disciples after Jesus died.	The <b>Qur’an</b> . God’s words spoken to Muhammad were dictated and written down.
<i>All 3 religions was have a set of teachings that include ideas about God and how to follow their religion</i>		
The <b>10 Commandments</b>	Jesus <b>parables</b>	The <b>6 Articles of Faith</b>
<i>All 3 religions have very special festivals in celebration of their prophets and teachers.</i>		
Festival of <b>Passover</b> ; recognising Moses freeing the Israelites	Festival of <b>Christmas / Easter</b> ; recognising Jesus birth and death	Festival of <b>Eid</b> ; recognising when Muhammad spoke to Allah (God) and wrote the Qur’an
<i>All 3 religions have a special place to worship God; so they feel connected and close to Him.</i>		
<b>Synagogue</b>	<b>Church</b>	<b>Mosque</b>

## God is All Powerful (Omnipotent)

This means God is all powerful

Examples of this include

- God creating the world in 7 days – “**In the beginning was the Word and the Word was God**” Bible
- God working through Moses and Jesus to perform **miracles** e.g. calming of the storm / 10 plagues
- “**No vision can grasp him... He is above all comprehension**” Qur’an



# BVT

## Who is God?



## God is Just

This is the belief that God is fair and brings justice: He can reward those that serve him and punish those that commit sin. This is because God is all knowing (**Omniscient**).

Examples of God being just include:

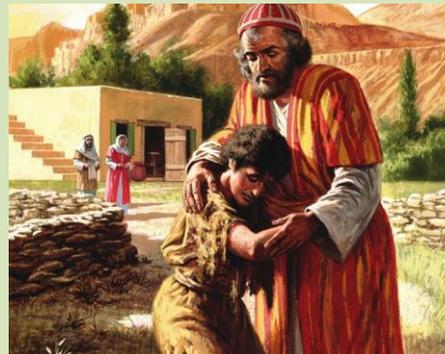
- **Judgement day**. When religious believers die they believe if they are good their souls will go to Heaven, if not they will go to Hell. In the Qur’an it talks about judgement day “**We will show you the truth of what you did**”
- The **parable** of Lazarus and the Rich man.
- The story of the **Original Sin** in where Adam and Eve are punished for eating the forbidden fruit.

## God is all loving (Omnibenevolent)

This means that God is caring and merciful (forgiving) to religious believers.

Examples of God being all loving include

- The **incarnation** of Jesus. This is where God lives through Jesus on earth – showing that God sent down his son to earth to guide us – “**The word became flesh and lived among us for a while**” Bible
- The parable of the Prodigal Son.
- “**He will be with you wherever you maybe be**” a quote Muslims read in the Qur'an.
- **Lords' prayer** “**Forgive us our trespasses (sins)**”



### Parable of Lazarus and the Rich man

A beggar called Lazarus is begging on the street. Each day a rich man walks past and does not give him any money or food. When the rich man dies God sends him to hell.

This teaches God is almighty and can punish those that sin

### Parable of the Prodigal Son

A farmer leaves his inheritance for his 2 sons. One son saves his inheritance and stays to work on the farm, the other son leaves and spends all his inheritance. He returns home with no money and no place to go. The farmer welcomes his son back and forgives him.

This parable story teaches to be loving to one another and forgiving of mistakes

## Suffering – Is there a God?

Some people question whether there is a God....

One compelling argument why people question this is that people suffer in the world – if God is really all loving how can there be suffering?

### **Religious people explain suffering by these arguments:**

- Suffering is caused by evil in the world, Satan has made individuals to act in evil ways
- Suffering is a test from God to strengthen your faith, to allow us to grow stronger
- Suffering is God balancing out the world, it can't always be all good!
- God is too powerful and divine to understand what he does
- Suffering is God's way Suffering is a punishment for sin"



What makes someone religious?



# BVT

## Who is God?



## Glossary of key words

Abraham	Founder, created and leader of Monotheist religions. Founder of Judaism. Prophet of religion.
Covenant	Religious agreement between Abraham and God.
Eid	Islamic Festival, which celebrates God choosing the Prophet Muhammad.
Incarnation	Belief that God lives through Jesus.
Monotheist religions	Religions that believe in One God: Judaism, Islam and Christianity.
Moses	Prophet for religion. Freed the Israelites from Egypt.
Mosque	Place of worship for Muslims.
Omnibenevolent	God is All Loving
Omnipotent	God is All - Powerful
Omniscient	God is all knowing
Parable	Stories that Jesus told, which had teaching messages.
Passover	Jewish Festival, which celebrates the Prophet Moses.
Qur'an	Religious book / scripture for Muslims.
Six Articles of Faith	Set of beliefs that Muslims follow, which includes the belief about God and other authorities like prophets and angels.
Synagogue	Place of worship for Jews.
Torah	Religious book / scripture for Jews, it includes the 10 Commandments.

## Early challenges to Religion

In **Medieval England** people had secure beliefs about religion: **Religion played an important part in peoples lives** because they believed God watched over them and things that happened to them – good or bad – was often a result of God. They believed that when they died God judged them on whether they would be sent to Heaven or Hell.

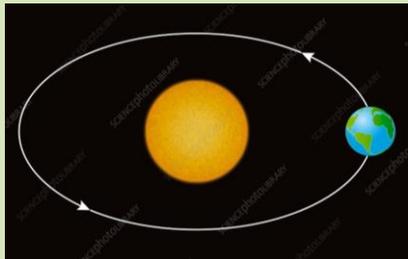
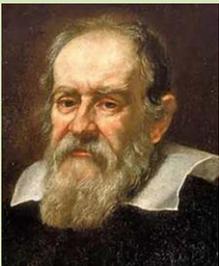
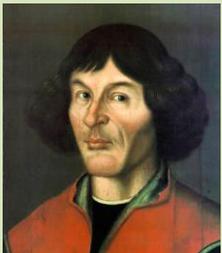
Religion created **huge power** for the Medieval Church. They were influential in everyone's daily lives. They also had huge influence in education and medicine. **No one dare challenge the Church**, otherwise you would be punished – by the King and also God!

### Things changed though...

In the **1500's Nicolaus Copernicus** wrote a book explaining his theory that the Earth goes round the sun. The church had been telling people that the earth was God's centre and therefore the sun and moon circled around the earth.

In the **1600's** a man called **Galileo Galilei** used the invention of the telescope to prove Copernicus's theory. From his observations he wrote and published a book.

The church did not like challenges to what they had been telling people – it threatened their power and influence. Many people would argued if the church was wrong about this ... they could be wrong about other things. Both men were silenced by being arrested and their books banned. The church did soften to new scientific theories into the 1800's and re-published the work of Galilei.



# BVT

## Our World

### Key vocabulary

Charles Darwin

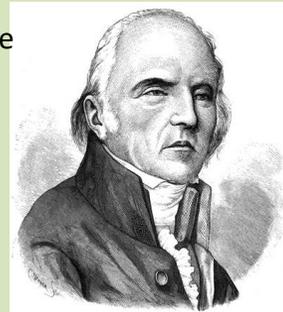
Theory of Evolution

Theory of Intellectual Design

In the **1800's we entered an age of science and technology and scientists** started to look at other ideas which had **previously been linked to religion...**

The most famous of these was **Charles Darwin** who looked into our human development

Jean-Baptiste Lamarck



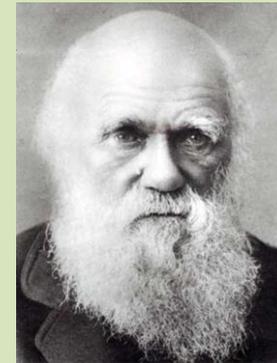
## Evolution

Before the theory of evolution, it was believed that our existence came from creation by God.  
*"God created man in his image"* (Genesis)

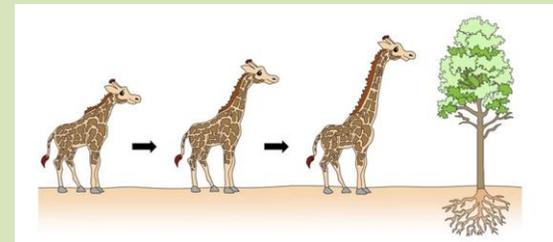
Scientists in the 1800's came up with **Theories of Evolution**: **Jean-Baptiste Lamarck's** theory was that animals adapted due to their **behaviour**. E.g. a giraffe's neck has increased in length over centuries so it could reach for food higher up. **Charles Darwin's** theory was that animals adapted due to their changing **environment**. E.g. an animal where its climate becomes colder, will adapt and develop thick fur.

Darwin's theory looked at adaption and evolution within ONE specie group, not the evolution of all life.

Darwin was a Christian, so did believe that God created life and animals. Darwin believed that God created animals – but **with the ability to adapt** themselves. He called this the **Theory of Intellectual Design**.



Charles Darwin



## Creation Theories

# Our World

It is important to know that all ideas about creation are theories. Some have more evidence to back them up, but non are 100% proven.

### Religious – God created the world

This is the religious belief held by Christians, Muslims and Jews. They believe God created the world because he is omnipotent and all-Loving. God created the world for his love of mankind.

There are 2 different types of **religious believers** when it comes to creation:

#### Literalists:

- These religious people believe that God created the world in 6 days and rested on the seventh.
- They believe that each day God created a different aspect (see picture right). *“In the beginning was the Word and the Word was God”*
- They believe things literally as the bible tells us.

#### Non –literalists:

- They believe that God created the world, but are unsure how. They **DO NOT believe literally word for word in the bible.**
- They may believe that God did not take 6 days – but created the universe in **6 stages**. This is very important and comes from the idea that when the bible was translated to English, the word day was used, when actually what had been originally written was **“period of time”**. **This means that each stage – could have taken thousands... Millions of years.**
- They believe that it was the power of God that started the universe ... maybe they believe that God created the explosion at the start??
- What is important to Non-Literalists is **WHY** God created the world - for them because he **loves them**, NOT how he created it.

## Key vocabulary

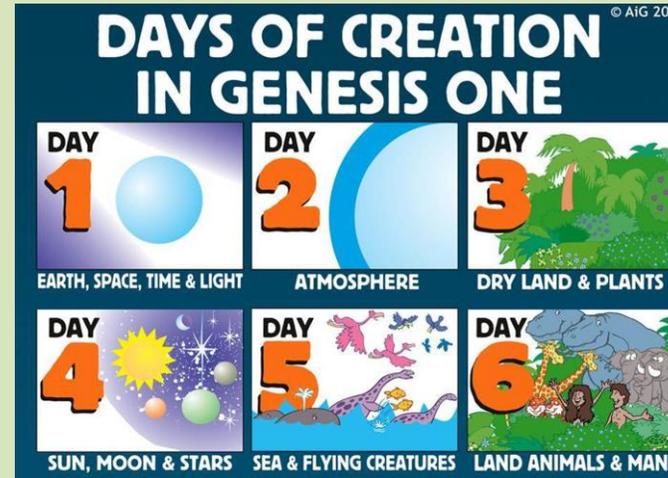
Creation

Literalist

Non-Literalist

Big Bang Theory

**Buddhists** believe there was no beginning and that the universe has always been in existence. This is similar to their belief of Samsara where life cycles around and around (reincarnation).



Can there be a cross over between religion and science?



## Big bang Theory

About **14 billion years ago**, an incredibly powerful explosion occurred, called a Big Bang. Scientists theorise that energy created this explosion, however where did the energy come from? There is always the unknown question – what came before this?

Within a millionth of a second after the explosion, neutrons and electrons were created. In the explosion, enormous heat was generated, but as the universe cooler down a little, elements like helium and hydrogen were created. From these elements, stars, galaxies, planets and solar systems were formed. As the universe continued to cool, on at least one planet (which we call earth) about 3 billion years ago, life began to develop.

Today scientists have found **background radiation**. Scientists believe that this radiation has existed since the big bang.



## Environment and Animals

There are many ways that Our World has changed over the last 100 years, in particular how our environment has changed.

### Is mankind killing our planet?



There are **reasons** why how our planet has problems:

- Consumption and lifestyle mean that we are using harmful resources like fossil fuels and plastics at an alarming rate.
- Some countries like China are increasing their CO2 emissions
- Deforestation – harming our trees and oxygen levels
- Running out of resources – using up resources too quickly e.g. coal and oil



Do humans mistreat animals?



## Our World

### Key vocabulary

Global Warming  
Deforestation  
Stewardship  
Dominion  
Ummah  
Sewa

## Animal Testing

There are many appalling things about animal testing:

- Animals will endure pain when tested on
- Some testing is for worthless gain e.g. cosmetic testing
- Some testing for cosmetics could be done of human tissue samples rather than animals.

However some people believe that animals testing has benefits too:

- Terminal disease drugs like cancer, can be tested on animals to preserve life for humans with life threatening diseases.
- Procedures for transplants, e.g. heart, can be done by trainee doctors on animals in preparation for humans.

## Religious Beliefs about Environment / Animals

Protecting environment and animals rights

- “The earth is the Lord’s and everything in it” Bible
- “The world is green and beautiful and Allah appointed us stewards over it” Qur’an
- Muslims believe in **Ummah** – which means community.
- God appointed humans with **dominion** (responsibility) to look after the world
- Religious believers believe in **Stewardship** – they should protect the environment and animals.
- Animal testing is cruel and does not show stewardship
- Pope John Paul wrote “We must abandon these factories of death” talking about animal testing labs
- Many religions are vegetarian

Humans are more important than animals

- God gave humans **dominion** (power) over animals.
- God created animals for humans to eat
- Animal experimentation can be used to help humans such as advances in medical procedure or cures for diseases.
- Sikhs believing **Sewa** – meaning service to other humans. For this reason they are pro animal testing for medical reasons to help other humans
- Humans life is sacred and should be preserved at whatever cost – therefore testing to preserve human life is acceptable.

# TERM 1 FRENCH – USING THE PAST TENSE TO DESCRIBE A HOLIDAY

## KEY #LEARNING:

How to talk about where **you went** on holiday

How to talk about what **you did** on holiday

How to talk about what the **weather was like** on holiday

How to describe where **you stayed** on holiday



## Key questions for this term:

**Où es-tu allé en vacances?** = Where did you go on holiday?

**Qu'est-ce que tu as fait en vacances?** = What did you do on holiday?

**Quel temps a-t-il fait en vacances?** = What was the weather like on holiday? *[What did the weather do on holiday?]*

**Où as-tu logé en vacances?** = Where did you stay on holiday?



# Key grammar

## The Perfect Tense

### **Passé composé**

To make a past tense in **English**, you can start by saying ‘**I have, you have, he has, we have**’ etc and then add a past tense word (called a *past participle*)

Eg – I have cooked, we have eaten, she has played, they have listened.

Notice in English, that last word often , but not always, ends in **-ed**.

In French, it is very similar – but a *little* more tricky!

### **There are 3 bits – the first 2 bits are...**

Most of the time you are going to start with the verb ‘**to have**’ (‘avoir’). These are the first 2 bits you need.

**j’ai** = I have

**tu as** = you have

**il, elle, on a** = he / she / one has

**nous avons** = we have

**vous avez** = you (plural) have

**ils, elles ont** = they have

### **The third bit**

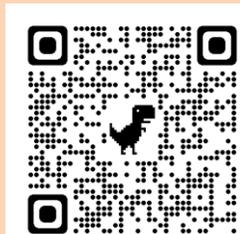
This is the **past participle**. It will very often end in **é**, but not always!

**écouté** (listened), **joué** (played), **parlé** (spoken), **dansé** (danced), **acheté** (bought), **regardé** (watched), **visité** (visited), **mangé** (eaten)

### **The third bit**

Sometimes, past participles end in different letters:

**bu** (drunk), **lu** (read), **connu** (known), **attendu** (waited), **fini** (finished), **choisi** (chosen), **fait** (done)



<p>Je suis allé/e (<i>I went</i>)  Nous sommes allé(e)s (<i>We went</i>)</p> <p>J'ai passé (<i>I spent</i>)  Nous avons passé (<i>We spent</i>)  trois jours (<i>3 days</i>)  une semaine (<i>a week</i>)  un mois (<i>a month</i>)</p>	<p>en France (<i>to France</i>)  en Espagne (<i>to Spain</i>)  en Allemagne (<i>to Germany</i>)  en Irlande (<i>to Ireland</i>)  au Portugal (<i>to Portugal</i>)  aux Etats-Unis (<i>to the USA</i>)</p>	<p>J'ai voyagé (<i>I travelled</i>)  Nous avons voyagé (<i>we travelled</i>)</p> <p>J'<b>y</b> suis allé(e) (<i>I went <b>there</b></i>)  Nous <b>y</b> sommes allé[e]s (<i>we went <b>there</b></i>)</p>	<p>en avion (<i>by plane</i>)  en bateau (<i>by boat</i>)  en ferry (<i>by ferry</i>)  en voiture (<i>by car</i>)  en train (<i>by train</i>)  à vélo (<i>by bike</i>)</p>
<p>Il a fait chaud / froid / beau / mauvais  (<i>the weather [it] was hot / cold / lovely / bad</i>)</p> <p>Il a plu (<i>it rained</i>)</p> <p>Il a neigé (<i>it snowed</i>)</p>	<p>J'ai logé (<i>I stayed</i>)  Nous avons logé (<i>we stayed</i>)</p> <p>Je suis resté(e) (<i>I stayed</i>)  Nous sommes resté(e)(s) (<i>we stayed</i>)</p>	<p>dans un hotel / un gîte / un camping  (<i>in a hotel / guest-house / on a campsite</i>)</p>	<p>au bord de la mer (<i>by the sea</i>)  à la campagne (<i>in the countryside</i>)  à la montagne (<i>in the mountains</i>)  près d'un lac (<i>by a lake</i>)  dans le nord / sud / est / ouest de...  (<i>in the north, south, east, west of...</i>)</p>
<p>C'était (it was)</p>	<p>super / génial / fantastique / OK / barbant / nul  (<i>super / great / fantastic / OK / boring / rubbish</i>)</p>		

<p>lundi, mardi, mercredi... (on Monday, Tuesday, Wednesday...)</p> <p>le premier jour (on the first day)</p> <p>le matin (in the morning)</p> <p>l'après-midi (in the afternoon)</p> <p>le soir (in the evening)</p> <p>d'abord (first of all)</p> <p>et puis (and then)</p> <p>après (afterwards)</p>	<p>j'ai / <b>nous avons</b> visité (I / <b>we</b> visited)</p> <p>j'ai acheté (I bought)</p> <p>j'ai mangé (I ate)</p> <p>j'ai regardé (I watched)</p> <p>j'ai joué ( I played)</p> <p>j'ai écouté (I listened)</p> <p>j'ai fait (I did)</p> <p>j'ai vu (I saw)</p> <p>j'ai bu (I drank)</p> <p>j'ai lu (I read)</p> <p>j'ai fini (I finished)</p> <p>j'ai choisi (I chose)</p> <p>je suis allé(e) / nous sommes allé(e)s (I went / we went)</p>	<p>le centre-ville (the town centre)</p> <p>les monuments (the sights)</p> <p>les musées (the museums)</p> <p>des souvenirs (some souvenirs)</p> <p>des jouets (some toys)</p> <p>des vêtements (some clothes)</p> <p>des pâtes (some pasta)</p> <p>un film (a film)</p> <p>un livre (a book)</p> <p>un match de foot (a football match)</p> <p>de la natation (some swimming)</p> <p>du shopping (some shopping)</p> <p>des animaux (some animals)</p> <p>au golf ([at] golf)</p> <p>de la guitare ([of] the guitar)</p> <p>avec ma famille (with my family)</p>	<p>à / au / à la / aux (to with a place, eg swimming pool, restaurant...)</p> <p>en (to with a country, eg France, Germany)</p>
<p>Il y a eu / il y avait (there was, were)</p> <p>J'ai eu (I had)</p> <p>Nous avons eu (we had)</p>	<p>une piscine (a swimming pool)</p> <p>un cours de tennis (a tennis court)</p> <p>une grande chambre (a big room)</p> <p>avec balcon (with a balcony)</p> <p>avec vue de la mer (with a view of the sea)</p>	<p>je me suis bien amusé(e) (I had a good time)</p> <p>nous nous sommes bien amusé(e)s (we had a good time)</p>	

# TERM 2 FRENCH – TALKING ABOUT FOOD!

## KEY #LEARNING:

How to talk about what **you like to eat and drink**

How to talk about **different meal times**

How to talk **politely ask for food** in a café

How to **politely buy something** at a shop / market

## Key questions for this term:

**Qu'est-ce que tu aimes manger / boire?**

= **What do you like to eat / drink?**

**Que prends-tu normalement au petit déj / à midi...? =**

**What do you normally have for breakfast / dinner...? Vous désirez? = What would you like ?**

## Key grammar

### Partitive article

When we talk about food, we need to use the word for 'some' or 'any'. This is called the 'partitive article'. In English, we sometimes don't bother with it.

Look at the following sentences:

*For my lunch, I normally have fish and chips*

*For my lunch, I normally have **some** fish and chips*

Both of these make sense.

In French, we use the following words:

Masculine – **du**

Feminine – **de la**

Plural – **des**

Words starting with a vowel – **de l'**

### Examples:

**Nous mangeons du pain** = we eat bread

**J'aime boire de la limonade** = I like to drink lemonade

**Quelquefois, je prends des croissants au petit déj** =

Sometimes I have croissants for breakfast

**Ma soeur boit de l' eau** = my sister drinks water

### Quantities

If we want to give the quantity of something, we use the word 'de'. It simply means 'of'.

**Je voudrais un kilo de pommes**

*(I would like a kilo OF apples)*

**Je voudrais beaucoup de fleurs**

*(I would like lots OF flowers)*

### ***Being polite!***

We need to be careful when we use the word 'you' – are we talking to someone we know, someone we're familiar with (friends, family...)?

**OR**

Are we talking in a **formal** situation? Are we talking to an adult / a work colleague / someone we don't know?

We don't notice this in English – we simply use the word 'you'.

Look at these examples:

John, are **you** coming to the cinema tonight? (*Informal, talking to a friend*)

Excuse me, can **you** tell me the way to the cinema? (*Formal, talking to someone you haven't met before – being polite!*)

We have already met the word '**tu**'. We use this to talk to friends, family etc.

**But** if we are talking to adults, people who are older or people in **formal** situations (shops, work etc) we use '**vous**'. We will also use 'vous' if we are talking to more than one person (plural)

- Comment allez- **vous**? (How are you? – formal)
- Avez- **vous** des croissants? (Do you have any croissants? – formal)
- Pouvez- **vous** m'aider? (Can you help me? – formal)
- Est-ce que **vous** venez avec moi ce soir? (Are you coming with me this evening? – plural, talking to friends)
- Qu'est-ce que **vous** allez prendre? (What are you going to have? – plural, talking to friends in a restaurant)

*Notice that the spelling of the verb is different. In the present tense, it will usually end in '-ez'*

### *Different spellings for verbs*

Here are some examples of how the verb **changes its spelling** when using 'you':

*Tu aimes / vous aimez = you like*

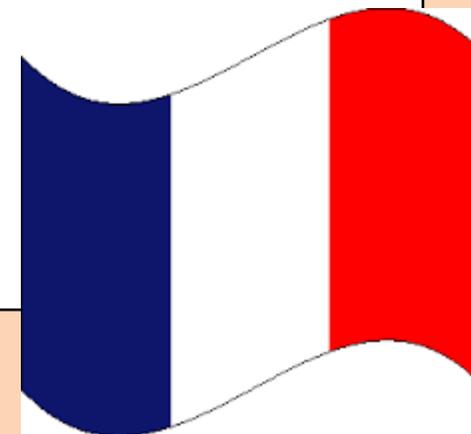
*Tu as / vous avez = you have*

*Tu vas / vous allez = you go*

*Tu manges / vous mangez = you eat*

*Tu bois / vous buvez = you drink*

<p>Normalement (<i>normally</i>)  Pendant la semaine (<i>during the week</i>)  Le weekend (<i>at the weekend</i>)  Le matin (<i>in the morning</i>)  L'après-midi (<i>in the afternoon</i>)  Le soir (<i>in the evening</i>)  Avant d'aller au collège (<i>before going to school</i>)</p>	<p>Je mange (<i>I eat</i>)  Je bois (<i>I drink</i>)  J'aime manger (<i>I like to eat</i>)  J'aime boire (<i>I like to drink</i>)  Je prends (<i>I take / I have</i>)  J'aime prendre (<i>I like to take / have</i>)    Nous mangeons (<i>we eat</i>)  Nous buvons (<i>we drink</i>)</p>	<p>Du toast / du pain grillé (<i>toast</i>)  Du fromage (<i>cheese</i>)  Du jambon (<i>ham</i>)  Du pain (<i>bread</i>)  Du beurre (<i>butter</i>)  Du lait (<i>milk</i>)  Du café (<i>coffee</i>)  Du thé (<i>tea</i>)  Du chocolat chaud (<i>hot chocolate</i>)  De la confiture (<i>jam</i>)  De la limonade (<i>lemonade</i>)  De la pizza (<i>pizza</i>)  Des pâtes (<i>pasta</i>)  Des légumes (<i>vegetables</i>)  Des céréales (<i>cereal</i>)  De l'eau (<i>water</i>)  Avec (<i>with</i>)  Sans (<i>without</i>)</p>	<p>Je ne mange rien (<i>I eat nothing / I don't have anything</i>)  Je ne bois rien (<i>I drink nothing / I don't drink anything</i>)</p>
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<p>C'est... (<i>it is / they are</i>)</p> <p>Délicieux (<i>delicious</i>)</p> <p>Génial (<i>great</i>)</p> <p>Fantastique (<i>fantastic</i>)</p> <p>Super (<i>super</i>)</p> <p>Horrible (<i>horrible</i>)</p> <p>Dégoûtant (<i>disgusting</i>)</p> <p>Très (<i>very</i>)</p> <p>Trop (<i>too</i>)</p> <p>Un peu (<i>a little bit</i>)</p> <p>Sucré (<i>sweet</i>)</p> <p>Salé (<i>salty</i>)</p>	<p>Dans (<i>in</i>)...</p> <p>La salle à manger (<i>the dining room</i>)</p> <p>La cuisine (<i>the kitchen</i>)</p> <p>Le jardin (<i>the garden</i>)</p> <p>La cantine (<i>the school canteen</i>)</p> <p>Avec (<i>with</i>)</p> <p>Ma famille (<i>my family</i>)</p> <p>Mes amis (<i>my friends</i>)</p>		
<p>Vous désirez? (<i>What would you like?</i>)</p> <p>Je voudrais (<i>I would like</i>)</p> <p>J'aimerais (<i>I would like</i>)</p> <p>Donnez-moi (<i>give me</i>)</p>	<p>Un kilo (<i>a kilo</i>)</p> <p>Un demi-kilo (<i>half a kilo</i>)</p> <p>Un litre (<i>a liter</i>)</p> <p>Un pot (<i>a jar</i>)</p> <p>Un paquet (<i>a packet</i>)</p> <p>Une bouteille (<i>a bottle</i>)</p> <p>Une livre (<i>a pound</i>)</p> <p>Une tranche (<i>a slice</i>)</p> <p>Cinq cent grammes (<i>500 grams</i>)</p>		<p>De (<i>of</i>) ...</p> <p>Pommes de terre (<i>potatoes</i>)</p> <p>Carottes (<i>carrots</i>)</p> <p>Pommes (<i>apples</i>)</p> <p>Oranges (<i>oranges</i>)</p> <p>bananes (<i>bananas</i>)</p> <p>Poisson (<i>fish</i>)</p> <p>Vin rouge (<i>red wine</i>)</p>

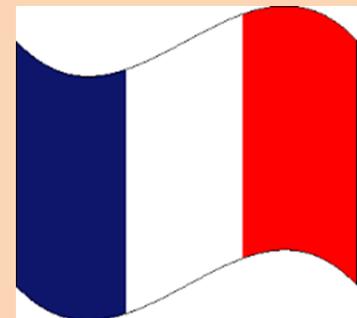
*As-tu faim!?*  
*(Are you hungry!?)*

*Tu aimes cuire?*  
*(Do you like to cook?)*

<p>Vous désirez autre chose? (<i>Would you like anything else</i>)</p> <p>Et avec ça? (<i>And with that?</i>)</p> <p>C'est tout? (<i>Is that all?</i>)</p>	<p>Ça fait combien? (<i>How much is that?</i>)</p>	<p>Ça fait... (<i>that is / comes to</i>)</p>	<p>Deux euros (<i>two euros</i>)</p> <p>Trois euros cinquante (<i>three euros fifty</i>)</p> <p>Voilà (<i>there you are</i>)</p> <p>Merci (<i>thanks</i>)</p> <p>Au revoir (<i>good bye</i>)</p>
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Watch this video. You can see and hear people ordering something to eat in Paris. Might make you hungry, though...!



# TERM 1 SPANISH – USING THE PAST TENSE TO DESCRIBE A HOLIDAY

## KEY #LEARNING:

- How to talk about where **you went** on holiday
- How to talk about what **you did** on holiday
- How to talk about what the **weather was like** on holiday
- How to describe where **you stayed** on holiday

## Key questions for this term:

- ¿Adónde fuiste en vacaciones?**= Where did you go on holiday?
- ¿Qué hiciste en las vacaciones?**= What did you do on holiday?
- ¿Qué tiempo hizo en vacaciones?**= What was the weather like on holiday? [What did the weather do on holiday?]
- ¿Dónde te quedaste de vacaciones?**= Where did you stay on holiday?

# Key grammar



## The Preterite Tense

### ¿Cómo se conjuga?

1. Take your infinitive verb (with its -ar, -er or -ir ending)
2. Remove the the infinitive ending, leaving the 'stem'
3. Add the correct **preterite ending** to the verb stem  
E.g. bailar → bail —bailé

### ¿Cómo se conjuga?

The preterite endings are ...

Person	-ar verbs	-er / -ir verbs
yo	é	í
tú	aste	iste
él/ ella/ Ud	ó	ió
nosotros/as	amos	imos
vosotros/as	asteis	isteis
ellos/ellas/ Uds	aron	ieron

### Los irregulares clave

Some verbs are only *slightly* irregular, and only in one of their conjugations

Sacar (c-qu) - to remove		Jugar (g-gu) - to play		empezar(z-c) - to start	
saqué	sacamos	jugué	jugamos	empecé	empezamos
sacaste	sacasteis	jugaste	jugasteis	empezaste	empezasteis
sacó	sacaron	jugó	jugaron	empezó	empezaron

Other verbs are only *completely* irregular, in all of their conjugations

Hacer - to do		Tener - to have		Ser - to be	
hice	hicimos	tuve	tuvimos	fui	fuimos
hiciste	hicisteis	tuviste	tuvisteis	fuiste	fuisteis
hizo	hicieron	tuvo	tuvieron	fue	fueron

Estar - to be		Ir - to go		Poder - to be able to	
estuve	estuvimos	fui	fuimos	pude	podimos
estuviste	estuvisteis	fuiste	fuisteis	podiste	podisteis
estuvo	estuvieron	fue	fueron	pudo	podieron

Fui( <i>I went</i> ) Fuimos( <i>We went</i> )  pasé ( <i>I spent</i> ) pasamos ( <i>We spent</i> ) tres días ( <i>3 days</i> ) una semana ( <i>a week</i> ) un mes ( <i>a month</i> )	a Francia( <i>to France</i> ) a España ( <i>to Spain</i> ) a Alemania( <i>to Germany</i> ) a Irlanda ( <i>to Ireland</i> ) a Portugal ( <i>to Portugal</i> ) a los Estados Unidos( <i>to the USA</i> )	Viajé( <i>I travelled</i> ) Viajamos( <i>we travelled</i> )  Fui allí ( <i>i went there</i> ) Fuimos allí ( <i>we went there</i> )	en avión ( <i>by plane</i> ) en barco ( <i>by boat</i> ) en ferry ( <i>by ferry</i> ) en coche ( <i>by car</i> ) en tren ( <i>by train</i> ) en bici ( <i>by bike</i> )
Hizo calor / frío / buen tiempo / mal tiempo <i>(the weather [it] was hot / cold / lovely / bad)</i>	Me alojé( <i>I stayed</i> ) Nos alojamos( <i>we stayed</i> )  Me quedo( <i>I stayed</i> ) Nos quedamos( <i>we stayed</i> )	en un hotel / un chalet / un camping <i>(in a hotel / guest-house / on a campsite)</i>	por el mar( <i>by the sea</i> ) en el campo ( <i>in the countryside</i> ) en las montañas ( <i>in the mountains</i> ) cerca de un lago ( <i>NEAR a lake</i> ) en el norte/ sur / este / oeste de... <i>(in the north, south, east, west of...)</i>
fue (it was)	estupendo / guay/ fantástico / regular / aburrido / terrible <i>(super / great / fantastic / OK / boring / rubbish)</i>		



<p>lunes, martes, miércoles... <i>(on Monday, Tuesday, Wednesday...)</i>  el primer día <i>(on the first day)</i>  por la mañana <i>(in the morning)</i>  por la tarde <i>(in the afternoon)</i>  por la noche <i>(in the evening)</i>  primero <i>(first of all)</i>  entonces <i>(and then)</i>  después <i>(afterwards)</i></p>	<p>visité/ visitamos <i>(I / we visited)</i>  compré <i>(I bought)</i>  comí <i>(I ate)</i>  ví <i>(I watched)</i>  jugué <i>(I played)</i>  escuché <i>(I listened)</i>  hice <i>(I did)</i>  miré <i>(I saw)</i>  bebí <i>(I drank)</i>  leí <i>(I read)</i>  terminé <i>(I finished)</i>  elegí <i>(I chose)</i>  nadé <i>(I swam)</i>   fui / fuimos <i>(I went / we went)</i></p>	<p>la ciudad <i>(the town centre)</i>  los monumentos <i>(the sights)</i>  los museos <i>(the museums)</i>  recuerdos <i>(some souvenirs)</i>  juguetes <i>(some toys)</i>  ropa <i>(some clothes)</i>  pasta <i>(some pasta)</i>  una película <i>(a film)</i>  un libro <i>(a book)</i>  un partido de fútbol <i>(a football match)</i>  de compras <i>(some shopping)</i>  animales <i>(some animals)</i>  el golf <i>([at] golf)</i>  la guitarra <i>([of] the guitar)</i>  con mi familia <i>(with my family)</i></p>	<p>al / a la / a los / a las <i>(to with a place, eg swimming pool, restaurant...depending on the gender of the noun)</i>   en <i>(to with a country, eg France, Germany)</i></p>
<p>había <i>(there was, were)</i>  tenía <i>(I had)</i>  teníamos <i>(we had)</i></p>	<p>una piscina <i>(a swimming pool)</i>  una pista de tenis <i>(a tennis court)</i>  una habitación grande <i>(a big room)</i>  con balcón <i>(with a balcony)</i>  con vista del mar <i>(with a view of the sea)</i></p>	<p>me divertí <i>(I had a good time)</i>  nos divertimos <i>(we had a good time)</i></p>	

# TERM 2 SPANISH – TALKING ABOUT FOOD!

## KEY #LEARNING:

How to talk about what **you like to eat and drink**

How to talk about **different meal times**

How to talk **politely ask for food** in a café

How to **politely buy something** at a shop / market

## Key questions for this term:

**¿Qué te gusta comer / beber?**

**= What do you like to eat / drink?**

**¿Qué tomas normalmente para el desayuno / almuerzo ...? =**

**What do you normally have for breakfast / dinner...? =**

**¿Qué desea? = What would you like ?**

## Key grammar



### Partitive article

When we talk about food, we need to use the word for 'some' or 'any'. This is called the 'partitive article'. In English, we sometimes don't bother with it.

Look at the following sentences:

*For my lunch, I normally have fish and chips*

*For my lunch, I normally have **some** fish and chips*

Both of these make sense.

In Spanish, we use the following words:

Masculine Plural – **unos**

Feminine Plural – **unas**

### Examples:

**Me gustaría unos legumbres**

**Me gustaría unas zanahorias**

### Quantities

If we want to give the quantity of something, we use the word 'de'.

It simply means 'of'.

**Me gustaría un kilo de manzanas**

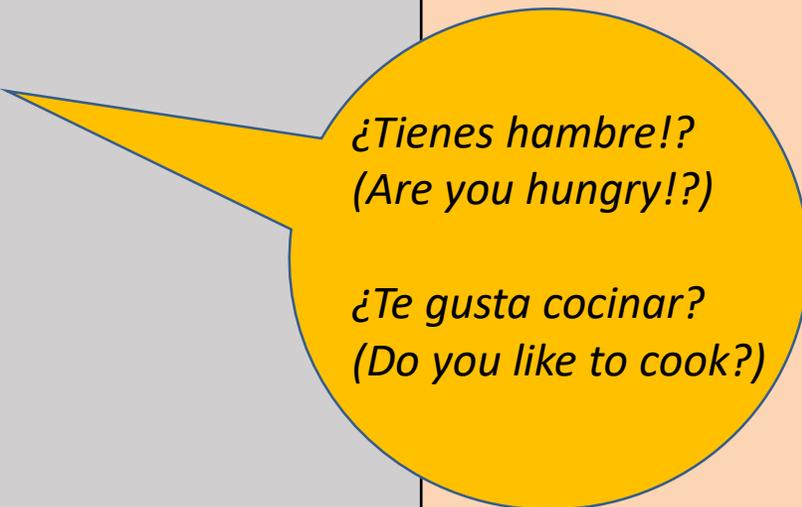
*(I would like a kilo OF apples)*

**Me gustaría un litro de agua**

*(I would like a litre OF water)*

<p>Normalmente (<i>normally</i>)</p> <p>Durante la semana (<i>during the week</i>)</p> <p>El fin de semana (<i>at the weekend</i>)</p> <p>Por la mañana (<i>in the morning</i>)</p> <p>Por la tarde (<i>in the afternoon</i>)</p> <p>Por la noche (<i>in the evening</i>)</p> <p>Antes de ir al colegio (<i>before going to school</i>)</p>	<p>como(<i>I eat</i>)</p> <p>bebo (<i>I drink</i>)</p> <p>me gusta comer (<i>I like to eat</i>)</p> <p>me gusta beber (<i>I like to drink</i>)</p> <p>tomo (<i>I take / I have</i>)</p> <p>me gusta tomar (<i>I like to take / have</i>)</p> <p>comemos (<i>we eat</i>)</p> <p>bebemos(<i>we drink</i>)</p>	<p>pan tostada (<i>toast</i>)</p> <p>queso(<i>cheese</i>)</p> <p>jamón (<i>ham</i>)</p> <p>pan (<i>bread</i>)</p> <p>mantequilla (<i>butter</i>)</p> <p>leche (<i>milk</i>)</p> <p>café (<i>coffee</i>)</p> <p>té (<i>tea</i>)</p> <p>chocolate caliente (<i>hot chocolate</i>)</p> <p>mermelada (<i>jam</i>)</p> <p>limonada (<i>lemonade</i>)</p> <p>pizza (<i>pizza</i>)</p> <p>pasta (<i>pasta</i>)</p> <p>legumbres(<i>vegetables</i>)</p> <p>cereales (<i>cereal</i>)</p> <p>agua (<i>water</i>)</p> <p>con (<i>with</i>)</p> <p>sin (<i>without</i>)</p>	<p>No como nada (<i>I eat nothing / I don't have anything</i>)</p> <p>No bebo nada (<i>I drink nothing / I don't drink anything</i>)</p>
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<p>Es/son (<i>it is / they are</i>)</p> <p>delicioso/a (<i>delicious</i>)</p> <p>guay (<i>great</i>)</p> <p>fantástico (<i>fantastic</i>)</p> <p>estupendo (<i>super</i>)</p> <p>horrible (<i>horrible</i>)</p> <p>asco (<i>disgusting</i>)</p> <p>muy (<i>very</i>)</p> <p>demasiado (<i>too</i>)</p> <p>un poco (<i>a little bit</i>)</p> <p>dulce (<i>sweet</i>)</p> <p>salado (<i>salty</i>)</p>	<p>en (<i>in</i>)...</p> <p>el comedor (<i>the dining room</i>)</p> <p>la cocina (<i>the kitchen</i>)</p> <p>le jardín (<i>the garden</i>)</p> <p>la cantina (<i>the school canteen</i>)</p> <p>con (<i>with</i>)</p> <p>mi familia (<i>my family</i>)</p> <p>mis amigos (<i>my friends</i>)</p>		
<p>¿Qué desea? (<i>What would you like?</i>)</p> <p>Me gustaría (<i>I would like</i>)</p> <p>Quisiera (<i>I would like</i>)</p> <p>dame (<i>give me</i>)</p>	<p>Un kilo (<i>a kilo</i>)</p> <p>Un medio-kilo (<i>half a kilo</i>)</p> <p>Un litro (<i>a liter</i>)</p> <p>Un frasco (<i>a jar</i>)</p> <p>Un paquete (<i>a packet</i>)</p> <p>Una botella (<i>a bottle</i>)</p> <p>Una libra (<i>a pound</i>)</p> <p>Una rebanada (<i>a slice</i>)</p> <p>Quinientos gramos (<i>500 grams</i>)</p>	<p>de (<i>of</i>) ...</p> <p>patatas (<i>potatoes</i>)</p> <p>zanahorias (<i>carrots</i>)</p> <p>manzanas (<i>apples</i>)</p> <p>naranjas (<i>oranges</i>)</p> <p>plátanos (<i>bananas</i>)</p> <p>pescado (<i>fish</i>)</p> <p>Vino tinto (<i>red wine</i>)</p>	<p>Por favor (<i>please</i>)</p> 



<p>¿Algo más? (<i>Would you like anything else</i>)</p> <p>¿Con esto/esta? (<i>And with that?</i>)</p> <p>¿Es todo? (<i>Is that all?</i>)</p>	<p>¿Cuánto cuesta? (<i>How much is that?</i>)</p>	<p>Cuesta...(that is / comes to)</p>	<p>Dos euros (<i>two euros</i>)</p> <p>Tres euros cincuenta (<i>three euros fifty</i>)</p> <p>Toma (<i>there you are</i>)</p> <p>Gracias (<i>thanks</i>)</p> <p>Au revoir (<i>good bye</i>)</p>
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Watch this video of people ordering food in a Mexico City. How much can you understand! Don't worry if you don't get too much – enjoy looking at all the lovely food!

# The Fundamentals of Art

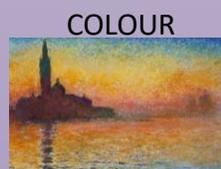
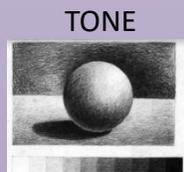
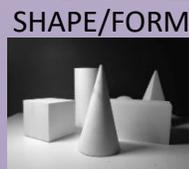
## ESSENTIAL EQUIPMENT:

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

## OPTIONAL EQUIPMENT:

- DRAWING PENS
- WATERCOLOUR SET
- WATERCOLOUR PENCILS
- PAINTBRUSHES

## THE FORMAL ELEMENTS:



## SENTENCE STARTERS

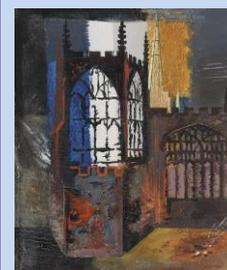
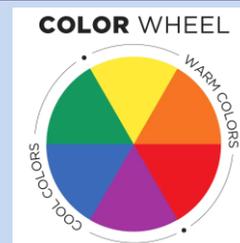
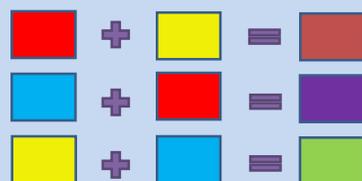
I can vary tone by...

- 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...



A  
R  
T  
I  
S  
T

## ATTITUDE

Be positive and try your best!

## RESPECT

Respect others, work and the room

## THINK

Understand and demonstrate.

## IMAGINE

Be creative, use your imagination!

## SPOTLESS

Tidy up after yourself.

## TARGET

Follow directions.

### MARK MAKING AND ARCHITECTURE

PERSPECTIVE  
TWO POINT PERSPECTIVE  
ONE POINT PERSPECTIVE  
PARALLEL HORIZONTAL VANISHING POINT  
DISTANCE SPACE  
DIRECTION MOVEMENT  
LINEAR OVERLAPPING LAYERING

### COLOUR

BRIGHT BOLD VIBRANT  
PRIMARY SECONDARY TERTIARY  
RADIANT VIVID DULL  
CONTRASTING COMPLIMENTARY  
HARMONIOUS MONOCHROME  
NATURAL SATURATED PASTEL  
COOL WARM

### LINE

FLUENT CONTINUOUS CONTROLLED  
LOOSE POWERFUL STRONG  
ANGULAR FLOWING LIGHT  
DELICATE SIMPLE THICK  
THIN BROKEN OVERLAPPING  
LAYERED MARK MAKING

### SHAPE/Form/SPACE

CLOSED OPEN DISTORTED  
FLAT ORGANIC POSITIVE  
NEGATIVE FOREGROUND BACKGROUND  
COMPOSITION ELONGATED  
LARGE SMALL 2D 3D  
TWISTED JAGGED

### PATTERN AND TEXTURE

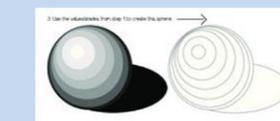
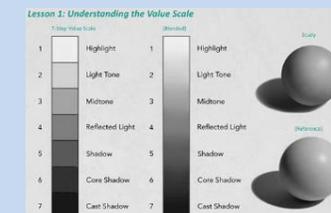
REPEATED UNIFORM GEOMETRIC  
RANDOM SYMMETRICAL SOFT  
IRREGULAR UNEVEN ROUGH  
BROKEN GRID FLAT  
WOVEN ORGANIC SMOOTH  
ABSTRACTED

### TONE

BRIGHT DARK FADED  
SMOOTH HARSH CONTRASTING  
INTENSE SOMBRE STRONG  
POWERFUL LIGHT MEDIUM  
DARK LAYERED DEPTH  
DEVELOPED SOFT

### TAKING ABOUT ART:

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



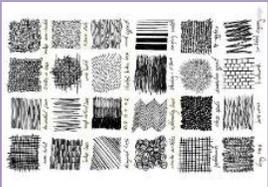
# PERSPECTIVE AND ARCHITECTURE

## KEY FORMAL ELEMENTS LINKED TO ARCHITECTURE

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.

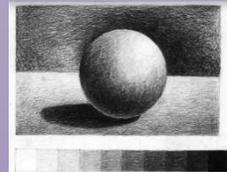
A **LINE** can be used to show contours, movements, feelings and expressions.



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.

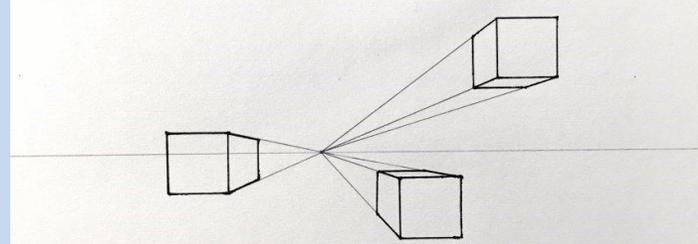
Sculpture and 3D design are about creating **FORMS**



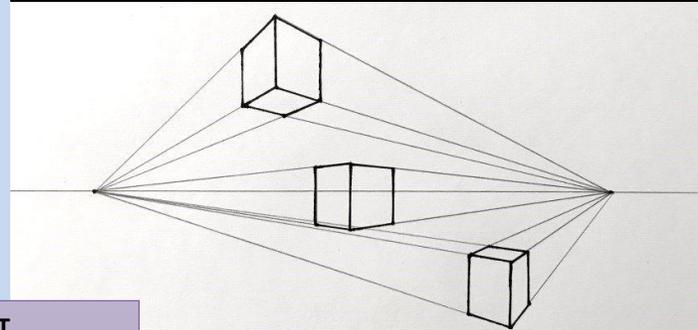
## TERM 1 and 2



## 1-Point Perspective



## 2-Point Perspective

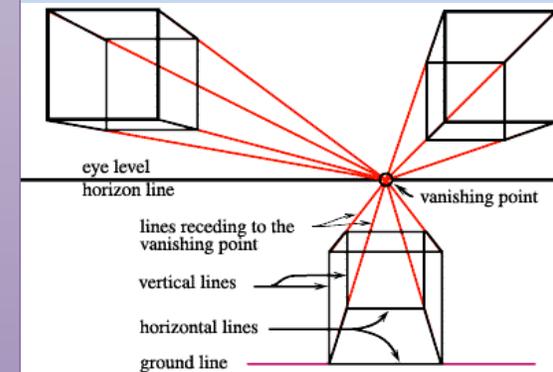


### Jon Measures:

- British mixed media artist based in Los Angeles.
- Measures is a graphic designer, illustrator and teacher.
- Measure's work often combines lots of view points of cities and urban landscapes.
- He creates mixed media work, using; paint, photography, digital editing, spray paint and collage.
- His work layers images together which in turn is a metaphor for the many layers and elements of city living.
- Measures includes buildings, roads, signs, lights, all manner of objects found in cities within his work.
- A lot of Measure's work focuses on the themes of; belonging, home, community.

### ONE POINT PERSPECTIVE:

A drawing that uses **one point perspective** contains only one **vanishing point** on the **horizon line**. Using this type of **perspective** you could create a drawing of a road, railway, hallways, or building.



### TWO POINT PERSPECTIVE:

**Two point perspective** allows you to view the object or images so that you are looking at one corner with two sets of **parallel lines** moving away from you. Every set of **parallel line** has its own **vanishing point**, hence **two point perspective**.

### Artists you could research:

- Jon Measures
- Ptolemy Dean
- Zaha Hadid
- Denise Scott Brown
- John Piper

# PERSPECTIVE AND ARCHITECTURE



## MANUAL MANIPULATION

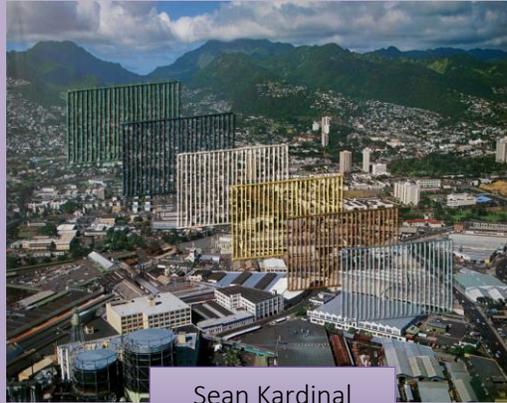
Manual manipulation is when you use various techniques and media by hand to alter or edit photos and art work .

WEAVING

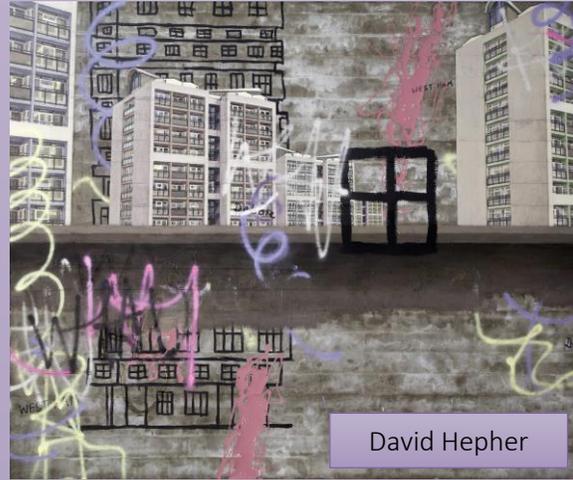


Jean Faucheur

STITCH



Sean Kardinal



David Hepher

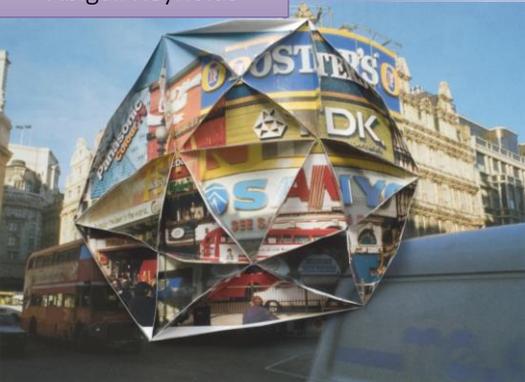
DRAWING

Lucas Simoes



3D RELIEF

Abigail Reynolds



Alexey Bogolepov

Mark making is an important element to building depth of detail, tone and texture.



Turning your Jon Measures inspired designs into 3D outcomes.



- Layering mark making
- Layering textures
- Mixed media
- Paint, ink, pencil, pen, photography
- Manual manipulation

# # Module Learning Objectives

Hooks and Riffs explores music based on repeated musical patterns through the genres of Popular Music (Hooks and Riffs) and Music from the Western Classical Tradition (Ostinatos).

- # Understand how music is based on Repeated Musical Patterns.
- # Understand and distinguish between Hooks, Riffs and Ostinatos.
- # Perform, create and listen to and appraise a range of music from different times and places based on Repeated Musical Patterns.

## 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 quieter

### Italian terms and musical symbols relating to Articulation:

Legato – smooth; Staccato – short and detached

Year 8 Music

# Reading Music

**Treble Clef Notes**

E F G A B C D E F

## Mnemonic

Lined notes: Every Green Bus Drives Fast

FACE

**Line Notes**      **Space Notes**

E G B D F      F A C E

Space notes:

High pitched notes

Right hand melody on the piano

## Notes altogether

C D E F G A B C D E F G A B C  
F G A B C D E F G A B C D E F G A B C

F A C E G B D F  
A C E G G B D F A

## Bass Clef Notes

G B D F A C E G

## Mnemonic

Lined notes

Green Buses Drive Fast Always

Space notes

All Cows Eat Grass

Low pitched notes

Left hand accompaniment and harmony on the piano

## Finger Numbers - Hands on - How to play the Keyboard



# Hooks and Riffs



## A. Key Words

**HOOK** – A ‘musical hook’ is usually the ‘catchy bit’ of the song that you will remember. It is often short and used and repeated in different places throughout the piece. HOOKS can either be a:

**MELODIC HOOK** – a HOOK based on the instruments and the singers

**RHYTHMIC HOOK** – a HOOK based on the patterns in the drums and bass parts or a

**VERBAL/LYRICAL HOOK** – a HOOK based on the rhyming and/or repeated words of the chorus.

**RIFF** – A repeated musical pattern often used in the introduction and instrumental breaks in a song or piece of music. RIFFS can be rhythmic, melodic or lyrical, short and repeated.

**OSTINATO** – A repeated musical pattern. The same meaning as the word RIFF but used when describing repeated musical patterns in “classical” and some “World” music.

**BASS LINE** – The lowest pitched part of the music often played on bass instruments such as the bass guitar or double bass. RIFFS are often used in BASS LINES.

**MELODY** – The main “tune” of a song or piece of music, played higher in pitch than the BASS LINE and it may also contain RIFFS or HOOKS. In “Classical Music”, the melody line is often performed “with” an OSTINATO pattern below.

## B. Famous Hooks, Riffs and Ostinatos

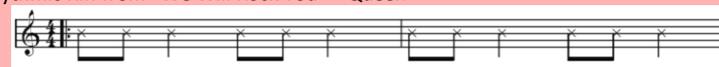
Bass Line Riff from “Sweet Dreams” – The Eurythmics



Riff from “Word Up” – Cameo



Rhythmic Riff from “We Will Rock You” – Queen



Vocal and Melodic Hook from “We Will Rock You” – Queen



Rhythmic Ostinato from “Bolero” - Ravel



Bass Line Ostinato from “Habanera” from ‘Carmen’ - Bizet

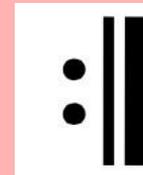


Ostinato from 2<sup>nd</sup> Movement of Symphony No.101 (The Clock) - Haydn



## C. Music Theory

**REPEAT SYMBOL** – A musical symbol used in staff notation consisting of two vertical dots followed by double bar lines



showing the performer should go back to either the start of the piece or to the corresponding sign facing the other way and repeat that section of music.

**TREBLE CLEF** – A musical symbol showing that notes are to be performed at a higher pitch. Also called the G clef since it indicates that the second line up is the note G.



**BASS CLEF** – A musical symbol showing that notes are to be performed at a lower pitch. The BASS LINE part is



often written using the BASS CLEF. Also called the F clef since it indicates that the fourth line up is the note F.

# # Module Learning Objectives

- #To recognise the stylistic conventions of reggae music
- #How chords contribute to the texture of a song
- #To recognise the key features of a reggae bass line
- #To understand syncopation and how it is used in reggae music
- #To identify the different layers that make up reggae music
- #To Understand the key themes and style of reggae lyrics

## Language for Learning/Music Theory

- BAR** – A division of music.
- BASS LINE** – The lowest texture in reggae
- CALYPSO** – A style of Afro-Caribbean music
- CHORD** – Group of two or more pitched notes.
- OFF BEATS** – A term applied to rhythms that emphasise the weak beats of a bar.
- REGGAE** – National music of Jamaica
- RESTS** – A space of silence played between notes
- SYNCOPIATION** – A way of changing a rhythm
- TEXTURE**- Layers of sound combined to make music.

Year 8 Music

# Reading Music

**Treble Clef Notes**

**Mnemonic**  
Lined notes: Every Green Bus Drives Fast  
Space notes: FACE

**Line Notes** (E G B D F)      **Space Notes** (F A C E)

High pitched notes      Right hand melody on the piano

**Notes altogether**

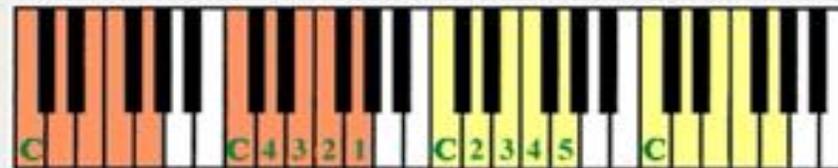
FACE EG BDF      ACEG GBDFA

**Bass Clef Notes**

**Mnemonic**  
Lined notes: Green Buses Drive Fast Always  
Space notes: All Cows Eat Grass

Low pitched notes      Left hand accompaniment and harmony on the piano

### Finger Numbers - Hands on - How to play the Keyboard



Offbeat!

Exploring Reggae and Syncopation



Offbeat!

### A. How did Reggae develop?

REGGAE is one of the traditional musical styles from JAMAICA. It developed from :



Reggae was first heard in the UK in the 1950's when immigrants began to settle. During the 1960's, people began importing singles from Jamaica to sell in UK shops. Now, Reggae is known as the national music of Jamaica.

### B. Where is Jamaica?



### C. What are Reggae Songs About?

Reggae is closely associated with **RASTAFARIANISM** (a religious movement worshipping Haile Selassie as the Messiah and that black people are the chosen people and will eventually return to their African homeland). The **LYRICS** of Reggae songs are strongly influenced by Rastafarianism and are often political including themes such as **LOVE, BROTHERHOOD, PEACE, POVERTY, ANTI-RACISM, OPTIMISM** and **FREEDOM**.

### D. Offbeat Rhythms & Syncopation

**OFFBEAT RHYTHMS** – Rhythms that emphasise or stress the **WEAK BEATS OF A BAR**. In music that is in 4/4 time, the first beat of the bar is the strongest, the third the next strongest and the second and fourth are weaker. Emphasising the second and fourth beats of the bar gives a "missing beat feel" to the rhythm and makes the music sound **OFFBEAT**, often emphasised by the **BASS DRUM** or a **RIM SHOT** (hitting the edge of a **SNARE DRUM**) in much Reggae music.

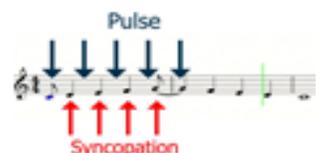
#### ONBEAT RHYTHM GRID

Pulse Beat	1	2	3	4	1	2	3	4
"Onbeat" rhythms (strong beats)	♩	♩	♩	♩	♩	♩	♩	♩

#### OFFBEAT RHYTHM GRID

Pulse Beat	1	2	3	4	1	2	3	4
"Offbeat" rhythms (weak beats)	♩	♩	♩	♩	♩	♩	♩	♩

**SYNCOPATION** – A way of changing a rhythm by making some notes a bit early, often so they cross over the main beat of the music giving the music a further **OFFBEAT** feel – another common feature of Reggae music.



### E. Musical Features of Reggae

**OFFBEAT RHYTHMS AND CHORDS** (see D)  
**SYNCOPATED RHYTHMS AND MELODIES** (see D)  
**SUNG LYRICS** (see C)  
**LEAD SINGER** often with **BACKING SINGERS** sometimes singing in **CALL AND RESPONSE** (see F3) accompanied by a Reggae band which often features: **BRASS INSTRUMENTS** and **SAXOPHONES, ELECTRIC GUITARS, BASS GUITAR, KEYBOARDS, DRUMS AND PERCUSSION INSTRUMENTS. VOCAL AND INSTRUMENTAL IMPROVISATIONS** (see F2)  
**MELODIC RIFFS** (see F5)  
**SLOW, RELAXED** ('chilled!') **TEMPO**  
**4/4 METRE/TIME SIGNATURE**  
 Most Reggae songs are structured in **VERSE AND CHORUS/POPULAR SONG FORM**.  
**SIMPLE HARMONIES** (see F4)



- LYRICS (MELODY)
- SYNCOPATED RHYTHMS
- RIFFS
- OFFBEAT CHORDS
- BASS LINE RIFFS

**THICK TEXTURAL LAYERS** (see F9)  
 "The Reggae Trifle" is an example of how many Reggae songs are 'layered'.

### F. Reggae Key Words

- MELODY** – The main 'tune' of a piece of music, often sung by the **LEAD SINGER**.
  - IMPROVISATION** – Previously unprepared performance.
  - CALL AND RESPONSE** – Similar to a "Question and Answer" often the call sung by the lead singer and answered by the backing singers or instruments (the response) – musical dialogue.
  - SIMPLE HARMONIES** – using a limited number of **CHORDS**, mainly **PRIMARY TRIADS** such as the **TONIC, DOMINANT** and **SUBDOMINANT** chords.
- Key of C major

Chord I    Chord IV    Chord V
- RIFF** – A repeated musical pattern. Often the **BASS GUITAR** plays repeated **MELODIC BASS RIFFS** in Reggae songs.
  - BASS/BASS LINE** – The lowest pitched part of a piece of music often played by the **BASS GUITAR** in Reggae which plays an important role.
  - CHORD** – 2 or more notes played together in **HARMONY**.
  - RHYTHM** – A series of long and short sounds.
  - TEXTURE** – Layers of sound combined to make music.

### G. Who was Bob Marley?

**BOB MARLEY** was a famous reggae singer, **SONGWRITER**, and musician who first became famous in his band The Wailers, and later as a **SOLO ARTIST**. He was born Nesta Robert Marley on February 6th, 1945 in Nine Mile, Saint Ann, Jamaica. Although he grew up in poverty, he surrounded himself with music and met some of the future members of The Wailers. Bob Marley became involved in the Rastafarian movement and this influenced his music style greatly. Bob Marley and The Wailers worked with several famous musicians before becoming famous on their own. His career flourished and he became a cultural icon. He was the first international superstar to have been born in poverty in a Third-World country.



# Appreciating & Interpreting a written Play

## *An Adventure Underground*

### Things that you will learn in this topic

- What we mean by **character interpretation** and how to interpret characters in a play text.
- How to apply your understanding of ***The Ingredients of a Play*** (Y7 T1) to your study and practical exploration of a play text.
- How to **identify** key **themes** and meaning in a play text.
- How to **summarise plot**.
- How to answer examination type questions in writing.
- How to use vocal skills to **communicate character**.
- How to play exaggerated and fantasy characters.
- How to extend your vocal & physical range.
- What we mean by **blocking** as a rehearsal technique.
- What is **Traverse Staging**
- How to block and act out (stage) a play in **the traverse**
- How to **sustain a role**.
- What we mean by, **analysis & evaluation**.

### *An Adventure Underground*

This short play runs about 40 minutes in performance

### *An Adventure Underground*

**Five very different children chase a wicked sweet shop keeper who has stolen one of their teddy bears and disappeared down an old well. The children discover a whole hidden underground world and encounter some truly fabulous and magical creatures in their pursuit of justice. A pursuit that leads them to some very important lessons and some very useful changes.**

#### First read through

This is when the cast of a play get together for the first time to explore the play and try out their interpretation of their characters

#### The Two Truths in Drama

For most people one truth, the **Truth of our Everyday Reality** is enough. For artists, including theatre artists there is a second truth, the **Truth of the Imagination**. As children we are expert and familiar with this truth of make – believe. As we get older we can lose this ability or find it difficult to make-believe. Many plays explore this dilemma- Peter Pan is perhaps the most famous.

## Themes

If you think, you will remember that, THEME is one of the Ingredients of a Play. You may recall that the theme of a play is what the play is about- its meaning, message, the issues that it explores. Well, An Adventure Underground, explores a great many issues that concern us today.

**Goodworm** speaks in detail about the ways in which the Topplings (that's us, people, homo sapiens) are ruining the Earth. He laments the way that we are taking so much from the planet and giving almost nothing useful back in return.

The play also explores the idea of change. What we might want to change in ourselves and indeed whether it is possible to change. The five children all discover ways to add to their character so that they become more complete, fully rounded and happy young people.

## Things that you will learn in this topic

- What we mean by **character interpretation** and how to interpret characters in a play text.
- How to apply your understanding of **The Ingredients of a Play** (Y7 T1) to your study and practical exploration of a play text.
- How to **identify** key **themes** and meaning in a play text.
- How to **summarise plot**.
- How to answer examination type questions in writing.
- How to use a range of vocal skills to **interpret** and **communicate character**.
- How to play exaggerated and fantasy characters.
- Extend your vocal & physical range.
- What we mean by **blocking** in rehearsal and other **rehearsal techniques**.
- How to **sustain a role**.

## The Characters

### 5 Children:

Ellie  
Bella  
Scarlet  
Simon  
Charlie  
The Sweet Shop Keeper  
Goodworm  
Spell Beetle

## The Setting

It is not made clear which part of the country the play is set in. The year is hard to work out too. In some ways it is slightly old fashioned – in others it is very modern. We could say that it is, 'timeless' in this sense. The majority of the action takes place far underground in a vast and strange subterranean kingdom partly dug out by the Sweet Shop Keeper.

## Genre

Adventure and magical. Almost fairytale

## Speech

The play has two writing styles; **dialogue** and **narration**. Some of the language in the narrative passages is rich and theatrical.

## Plot

A wicked Sweet Shopkeeper emerges from an old well and steals Charlie's Teddy Bear, Edward. The children decide that they must go after her to retrieve Edward. At the bottom of the well they discover a secret underground kingdom. In their pursuit they discover just how powerful and wicked the sweet shopkeeper has become. Fortunately they meet some kind and wonderful creatures who do their best to help the children in their quest.

## Rehearsal techniques and ways of staging a play: Two new ideas to consider

### Rehearsal techniques

The creative team – actors, directors, designers work out their plan for a play in the rehearsal process. It is where they make the play ready for performance. It involves working out the moves, ways to say lines and character relationships. There are technical rehearsals where the focus is on getting the lighting changes and sound cues worked out and cued and learned. Directors use a variety of rehearsal techniques to assist their actors. Blocking is a typical rehearsal technique. We will learn and practise others in future topics.

### **Blocking in rehearsal**

In theatre we use this word for at least three things. In year 7 you saw how it could mean not blocking your partner's ideas while improvising. You will also have heard me tell students to not stand in front of another actor on stage and block them from being seen by the audience. Here we will use it to mean, the way we position and move actors (and set) on the stage when we are rehearsing scenes from the play. When blocking a play it is important to consider 2 things

- i) Why does the actor/character make the move.
- ii) li) how does it look is it aesthetically pleasing – remember aesthetics from Year 7?

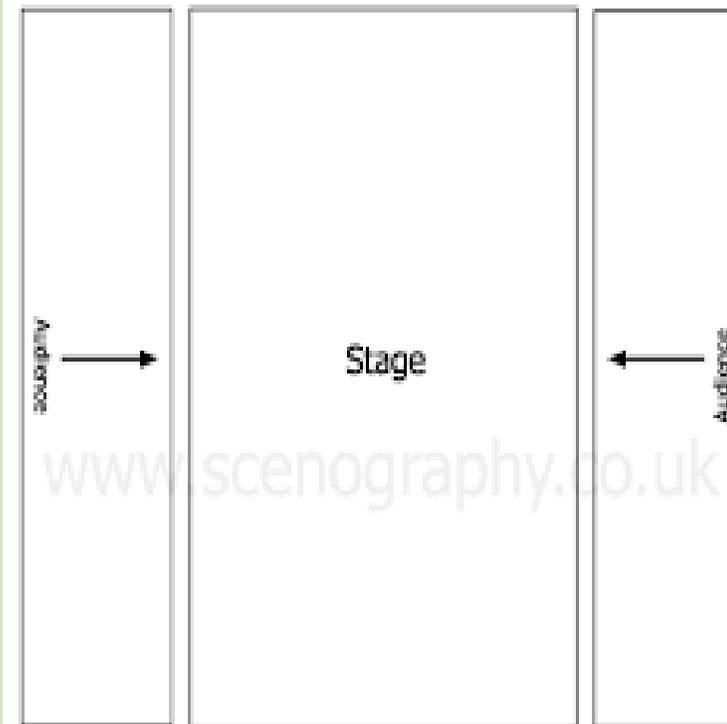
**Blocking can include the actors gestures etc. too.**

### Ground Plans

These are the different ways that a stage and auditorium can be laid out. Up till now you have naturally had the audience on one end when you have performed your drama work. In fact, this is called, End – On staging. There are several other ways of arranging the audience in relation to the stage and they have a significant impact on the actor audience relationship and present different challenges to actors and directors

### Traverse Staging – Audience on 2 sides

You will find out some of the challenges that Traverse staging presents when you get the chance to stage the opening introductory scene of, **An Adventure Underground**



### Traverse

Experienced directors and many actors enjoy the challenge of staging & performing a play with the **audience on two sides**. Audiences too can enjoy being able to see themselves across the stage. It gives me the sense that we are all in it together- the actors and audience all collaborating in the performance

## Things to assist your study in this scheme

### Four key intellectual skills to learn and practise

#### Analysis

This is the skill of breaking things down into the things that they are made from so that you can see how they work and fit together. Analysing a script will look at the character and dialogue and plot etc. because that is what it is made from (The Ingredients of a Play- remember?). Analysing a performance of a play will also include looking at voice, actions, costume, set etc. There is no judgement in analysis.

#### Evaluation

This is always a judgement. Evaluation is the skill of **identifying what is effective** in a script or performance and what **might be improved**. You have an **Evaluative Vocabulary** list so you can choose more useful and specific words than, 'good' and 'bad'.

#### Interpretation

The ways that we **work out** what a character or someone is like. We base many of our ideas on what a character says and the way that they say it (the dialogue), and on what they do and the way that they do it (stage directions).

#### Communication

The various ways that you make your thoughts, ideas or your character's thoughts, feelings and personality clear to others- your audience or reader. We communicate through speaking, acting and writing in drama.

Remember to use **Evaluative Vocabulary (EV)** when you are evaluating in class and when you are doing written evaluations at home.

Here's the list again with a few additions now that you are more experienced.

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

# Using your voice and body to show the fantastic characters in, *An Adventure Underground*

## New ideas in voice and body

### Tempo rhythm in voice & movement

This is the speed and manner in which a character speaks and moves. A fast, erratic voice and movement can show someone is flustered or over excited. A slow, measured voice and movement can show a character is confident, assured and reassuring to the audience. It is an important idea when interpreting and communicating a character. Goodworm speaks in a very slow, measured voice with extended pauses.

#### Four key Disciplines to remember ...

**Devising**  
**Characterisation**  
**Improvisation**  
**Mime**

### The actor's use of body (Physical Skills)

**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.

### The actor's use of voice (vocal skills)

**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.

# Storytelling: Part I

Things that you will study in this scheme

## Study Focus

Term 2 & Term 3

These terms we have an in depth study of one particular **genre** of performance. (You may remember from Y7 that, **genre** is one of the **Ingredients of a play**.) The **genre** that we will study and practise is, **Storytelling**. It is a fashionable style of performance with both screen writers and playwrights. It is a style greatly appreciated by the leading examination boards so, we take time now, in year 8 to explore the theory behind it and develop the practical skills for you to perform effectively in this genre.

You will see how this particular style of performance consists of a combination of two separate genres; **Narrative** and **Dramatic** (see below). You will explore the ways in which you can improve the quality of the stories that you write by including a range of **Literary Devices** (see below). You will then work to combine this new knowledge with the vocal skills that you practised in our last scheme (**An Adventure Underground**) and the extensive work that you did on **mime** in terms 3 and 6 of year 7. You will develop a story from one of your typical mornings, making use of the **Literary Devices** to devise and perform a solo piece / monologue. You will further develop your storytelling skills in a fictional duologue that you devise collaboratively.

Some of you will notice that I have used the word spectator as well as, audience on the diagram opposite.

## Ground Plan of stage positions. **End – On staging.**

You may remember in our last work we experimented with having the audience on two sides of our stage. We called it, **Traverse staging**. At this moment in our studies, It is useful for us to take a little more thoughtful look at the way we usually stage plays because we are going to be dividing the stage into separate parts so that each part can represent a different time and place with the audience on one end- You may remember, I called this, **End – On staging** .

Up stage Right (**USR**)

Up Stage (**US**)

Up Stage Left (**USL**)

Stage Right (**SR**)

Stage (**CS**)

Stage Left (**SL**)

(**DSR**)

Down Stage (**DS**)

Down stage left (**DSL**)

Audience

Auditorium

Spectators

**Stage left** and **right** are from **the point of view of the actor looking out at the audience**. Once upon a time the stage went up at the back so that the audience could see the actors who were 'higher up'-so the back was called 'Up stage'. What do you think DSR stands for?

## Split stage- composite staging

This is where the stage is divided into different parts and each part represents a different setting (time & place). We use the idea quite a bit at GCSE. You will use the idea of split staging when you prepare and perform, *An Accidental Death*. The actor stage left will be in one time and place eg Coventry Road, Birmingham, 4.02 am. And the actor stage right will be in a different time and place eg Weaver's cottage, Nottingham 7.09 am

## Split focus

This is never a good thing. It is where more than one important thing is going on, on- stage and the audience doesn't know what to look at and listen to- their focus is split.

## Four key processes and the Learning cycle

### Devising

Planning and making.

### Rehearse.

Going over things- a scene, a speech, an entrance so that everyone knows it off by heart. We rehearse a play to try out ideas, see if they work, learn and remember what we are doing until we are ready to perform it for an audience. We will begin to use different rehearsal techniques in Year 8. You will notice that we used the idea of, 'blocking a scene in our earlier work on *'An Adventure..'*

### Perform.

Sharing our work with an audience.

### Evaluate

After a performance of our own work or a play we have watched, we reflect on what worked, what didn't work, were our ideas understood, did our intentions come across a thorough evaluation informs us and others how to improve the drama work next time in the next devising process. You will get to evaluate a class performance in this Scheme of Work.

## The idea of the 4<sup>th</sup> wall in theatre

The 4<sup>th</sup> wall in drama is an invisible wall that separates the actors from the audience.

## What it means to keep, or observe, the 4<sup>th</sup> wall

In most performances the actors pretend that the audience is not there and instead they concentrate on picturing the scene that the character is in. This is called keeping the 4<sup>th</sup> wall.

## What it means to break the 4<sup>th</sup> wall

Breaking the 4<sup>th</sup> wall is when an actor speaks directly to the audience and acknowledges that they are there.

## Monologue

From mono, meaning one- a speech for one person.

## Duologue

From duo, meaning two – a speech for two actors/ characters.

## Cue

This is the word we use to mean when it is an actor's turn to speak or move. There are **visual cues** and **verbal cues**. Verbal cues are essential when actors cannot see each other or are looking away from each other.

## 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.

### Tempo rhythm in movement

This is the speed and manner in which a character acts and moves. A fast, erratic movement can show someone is flustered or over excited. A slow, measured gesture or movement can show a character is confident, assured and reassuring to the audience. It is an important idea when interpreting and communicating a character.

What do all of these different facial expressions 'say'?



## Internal & External Mime Technique

### Internal technique

Picturing

Seeing

Imaging

Focusing

Concentrating

### External technique

Shape

Size

weight

Texture

Temperature

Function

Taste

Smell

Value

Fragility

## Internal & External Character

### Internal character

Personality

Feelings

Thoughts

Background

Attitude

Motivation

### External character

Accent

Tone

Pitch

Volume

Facial Expression

Gesture

Posture

Body Language

Costume

Make up

**Characters** don't really exist in two parts, any more than we do in everyday life. It is simply a way of looking at things and gives a good framework for analysing and evaluating drama work.

**Mime** is the technique of creating an **illusion**, of making something appear to be there when it is not. To do this successfully, the actor needs to **picture** the object clearly in their mind's eye and then **show** its shape etc. the spectators can also 'see' the object in their imagination

Actors are trained in the same way at most serious drama schools. There are classes in voice and movement to improve actors **external technique** and ability to communicate their characters effectively. There are also **internal technique** acting classes where actors develop their **imagination, concentration** and other aspects of their **Internal technique**

# Key knowledge & Previous Learning

Character, **Plot**, Setting, **Theme**, Speech & **Genre**. See Y7 KOI for definitions

## Devise/ Devising-

Meaning, 'to plan & make' – Devising is one of the 4 key acting disciplines that we study and use.

## Freeze Frame

A still image like a photograph. The actors must be perfectly still- even their eyes. This can be difficult. It helps to choose one thing to focus your gaze on. Until you have more experience, it is better not to focus on another student.

You made a poster of all the other things that you need to consider when making a freeze frame. Can you remember them?

## Personal & Interpersonal Skills (PIPS)

Working with others can be difficult as you have probably realised by year 8. They may have different ideas to you, they may not have any ideas, they might not listen to you etc. It can be tricky. In this scheme of work you may need to be **patient** whilst other students are reading parts that you want to read. You may also need to be **courageous** and volunteer to read a part, or risk reading one of the parts that are outside your usual range or might allow you to extend your vocal and physical range- **Goodworm and Spellbeetle** are excellent choices for those wishing to seriously take a leap, as **Spellbeetle** would say!!

PIPS are the skills and qualities that you need to work effectively in a group, they include; **tolerance, courage, kindness, honesty** and many more.

Do you remember when you designed your PIPS poster for home work in year 7? What skills and qualities are you bringing to your group work? What skills and qualities are you still working on?

## The Hands Free Zone

After the summer holidays, you may have forgotten about this idea. I will do my best to remind you. I have put the guidelines and reasoning from Y7 below.

Students do not generally put their hands up in class unless they want to ask a specific question or have a request. 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, otherwise, no hands. You will be reminded and have lots of time to practise so that it becomes a habit for you in drama.

## Speaking in the first person singular

You will be encouraged to speak in the 1st person singular – that's; **I, me, my & mine**, in lessons when speaking about your own experience. This avoids confusion and allows you to begin to take responsibility for your ideas and what you are saying. Again, you don't have to worry because you will be reminded and have lots of time to practise so that it becomes a habit for you in drama.



Expectations and Routines

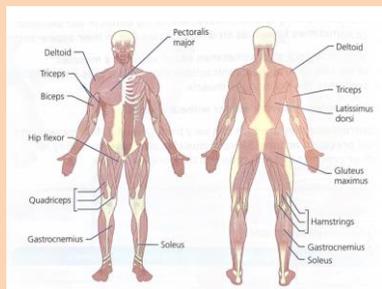
# Health and Fitness

Physical Ability and Technique



## Principles of Training:

Specificity – matching the training to the individual, sport and specific muscles and fitness components.



Effort and Engagement

## 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.
- Participates in co-curricular opportunities at lunch and after school.



## Types of Training:

Circuit Training	Involves completing a series of exercise, called stations, which are completed one after another, with a brief period of rest in-between	Press ups Skipping Step ups Shuttle runs Astride jumps Abdominal curls
Strength and Conditioning	Involves a variety of activities that will build muscle and tone	Kettle Bells Battle rope Medicine ball
Interval Training (HIIT)	Involves alternating between periods of work and periods of rest	30m sprint Walking recovery Squats/ Lunges – 20, rest, 30 rest 100m Sprint x 3

## Adapted Couch to 5k

Download App

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



Muscle	Movement	Sporting example
Biceps	Flexion at the elbow	Upward phase of a bicep curl
Triceps	Extension at the elbow	During a jump shot in basketball
Hip flexors	Flexion of the leg at the hip	Lifting the knee when sprinting
Gluteals	Extension, rotation and abduction of the leg at the hip	Pushing the body forward when running
Hamstrings	Flexion at the knee	Bringing the foot back before kicking a football
Quadriceps	Extension at the knee	When performing a drop kick in rugby
Gastrocnemius	Plantar flexion at the ankle	Standing on your toes in ballet pointe work
Tibialis anterior	Dorsiflexion at the ankle	Bringing the toes up towards the shin when extending the legs in the long jump



## Expectations and Routines

### What muscles do we need to Warm-up in Football and how would you do this?

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

### Basic Rules

1. Game is started by kicking the ball from the centre spot.
2. The game is played by 11 players made up of goalkeepers, defenders, 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 or goalkeeper 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:

1. What are the advantages of using man to man marking when defending?
2. Research the different types of formations (pictured) and positions.
3. Why is it important to use width in a game.



# Football



## Physical Ability and Technique



## Effort and Engagement

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**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.

**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.

**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.

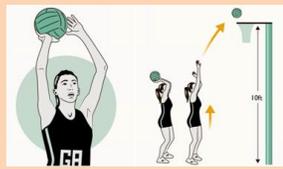
**Tackling:** Techniques – tackling, jockeying and forcing the player onto their weaker foot.

### Coaching Points – create space

- Provide quick support angles to receive the ball in space.
- Create space for other players by moving the defender.
- Can you play passes wide areas and move opposition defenders out of position?
- Creating space in attacking areas can lead to goal scoring opportunities.



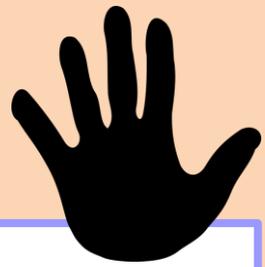
Expectations and Routines



# Netball



Physical Ability and Technique



## Can you lead a Netball Team warm-up?

- What activities would you include?
- How clear are your instructions and can your team follow them?
- Can you control a team drill and ensure skills are performed with the correct technique?

## The basic rules of Netball:

1. You cannot travel with the ball (*Footwork Rule*)
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*).

Throw In:

When the ball goes out of play, the throw in is taken from behind the line, where the ball went out of play.

## Game understanding:

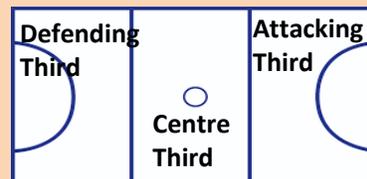
- Which rules result in a free pass or a penalty pass?
- How many different ways can you create space to receive a pass?
- How many different ways can you lose your defender?
- What set patterns of play can you create?



Effort and Engagement

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## Passing:

Shoulder Pass

1. Control the ball with both hands, placing it above your shoulder, then remove the supporting hand.
2. Fingers should be spread behind the ball.
3. Feet should be shoulder width apart.
4. Bring the ball back, bending your elbow.
5. Bring the arm forward, following the ball through until your arm and fingers are in front of you, in the direction you want the ball to travel.
6. As you bring your arm forward, step forward with the opposite foot to the arm you are holding the ball in.

## 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.

## Defending:

The purpose of defending is to try to get the ball off the other team and gain possession.

- Stage One Defending: Mark your player
- Stage Two Defending: Mark the ball
- Stage Three Defending: Mark the space



## Expectations and Routines

### Warm-up for injury prevention:

What injuries could occur in Rugby if you did not complete an appropriate warm-up?

Does the warm-up you complete vary depending on the position you play?

### Basic Rules

1. Game is started by kicking the ball from the centre spot forwards.
2. The U13 game has 13 players and 25 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. They **try** is worth five points, a **conversion** is worth two points, and a **goal kick** is worth three points this could be a penalty kick or drop goal.
7. Tackling – Must be below the shoulder.
8. 6 player scrum –strike and push.
9. Ruck and maul – unlimited.
10. Fend-off below armpits.

### Game understanding:

- Are there different ways to pass the ball?
- What types of tackle are there?
- Why is body position so important in the scrum?



# Rugby



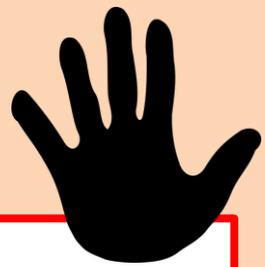
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## Physical Ability and Technique



**Passing:** 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.**

**Tackling:** Tower of power, cheek to cheek, ring of steel.

**Fly hack:** A kick at the ball on ground made by a running player.

**Scrum:** Crouch, bind, set will be instructed by the referee and players can only push when the ball has entered the scrum. Players must maintain their tower of power, they must also maintain their bind.

### **Kicking at goal:**

**Conversions:** Lean the ball forwards slightly to expose the "sweet spot". Before pacing out your run-up, stand over the ball in the kicking position to make sure it is in the right place to strike. Run up to the ball in an arc with your body turned 45 degrees. Swing through the strike zone, making contact with the instep of your foot.

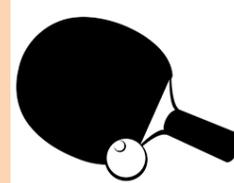
**Drop kick:** Hold the ball in two hands, pointing downwards. As you step forward with your non-kicking foot, raise the ball to waist level. As you drop the ball onto the ground, simultaneously bring your knee up ready to strike the ball on the bounce. Just as the ball touches the ground, bring your kicking foot through and strike the ball with the lower part of your instep.



## Expectations and Routines



# Table Tennis



## Physical Ability and Technique



How important is hand-eye coordination as a fitness component and what would you include as part of your warm-up to maximise this when performing?

### Basic Rules of Table Tennis

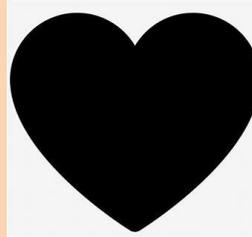
1. To start a point, the server must stand at the back of the table and can serve either forehand or backhand.
2. A serve must hit both your side of the table and your opponent's side to be seen as a 'good' serve.
3. There are no second serves.
4. Service must can be straight or diagonal in singles but can only travel diagonal in doubles.
5. Players are allowed to hit the ball around the side of the net.
6. The ball must bounce on a player's side of the table before playing their shot.
7. During play, competitors are not allowed to touch the table.

### Scoring System

1. A game consists of 11 points
2. There must be a gap of at least two points between opponents.
3. The point goes to the player who successfully ends the rally.

### Game understanding:

1. Can you start to add spin to your shots to make it harder for your opponent to return?
2. Can you play a variety of shots during a game?
3. Can you effectively umpire a game of table tennis following the correct rules and scoring system?
4. Can you serve using your backhand?



## Effort and Engagement

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### **Forehand and Backhand Drive:**

1. Stand on the balls of your feet, knees slightly flexed and sideways. Arm rotates back and downwards at the elbow.
2. Point your free arm towards the ball. At impact rotate your body quickly to face forward. Aim to hit the ball at the highest point. Transfer body weight from back to front foot.
3. Follow through with the bat pointing towards the intended target.

### **Topspin**

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

Bacteria are living organisms.



This means they need certain things to survive or like certain conditions to grow and multiply in, but what?

5 things bacteria NEED to grow

Oxygen

Warmth

Moisture

Food

Time



## Food Standards

Some of the ethical issues surrounding food production and understanding where your food comes from.



## Carbon Footprint

**Carbon footprint means:** The amount of carbon we as individuals produce as a result of actions we do – such as driving, shopping, using electricity etc.



Carbon dioxide in large amounts contributes to global warming and has a negative effect on our planet.

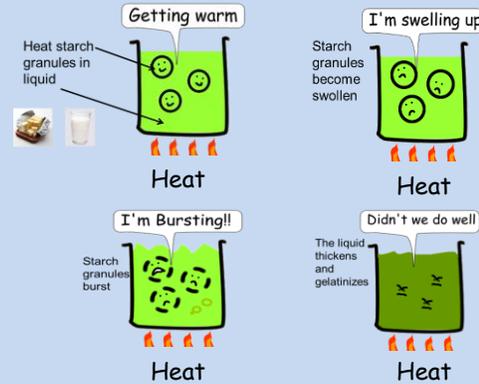
## Fair Trade

There are also rules and initiatives to help the people who are involved in food production to ensure they too are treated ethically.



## Gelatinisation

The thickening of a liquid using starch.



When heated at 60°C, the starch granules begin to absorb the liquid and swell up.

At 80°C the particles will have absorbed about five times their volume of water until they burst open and release starch, thickening the liquid.

**This process is Gelatinisation**

## Seasonality

We can help reduce our carbon footprint by eating foods **grown locally** and foods that are in **season** in our own country.

## 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.

# Knowledge Organiser – Year 8 Food

## Key Processes

### Kneading-

to work dough, to develop the gluten that is found in flour, this gives baked goods their structure and texture. When making dough, the flour and other dry ingredients are combined with the wet ingredients, usually warm water, along with yeast.



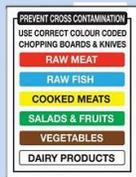
### Handling Raw Meat -

Always wash hands with warm water and soap for 20 seconds before and after handling raw *meat*.



### Don't cross-contaminate!

Keep *raw meat*, poultry, fish, and their juices away from other food. Wash cutting board, utensils, and countertops with hot, soapy water after use.



**Reducing** – heating up a sauce based product to evaporate the water and making the sauce thicker in consistency.



## Cooking Skills

- Chop
- Fold
- Roll
- Knead
- Shape
- Simmer
- Boil
- Bake
- Fry

## Multicultural Foods

Fajitas - Mexico



Macaroni Cheese & Pizza - Italy

Sweet & Sour - China



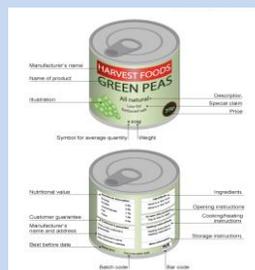
1. Protein
2. Fat
3. Carbohydrate
4. Vitamins
5. Minerals

PLUS Water and Fibre (neither are nutrients but are required for a healthy diet).

## Farm to Fork Process



## Food Labelling



The Government ensures that food manufacturers must include certain information to protect the consumer.

## Sources of Food

Ingredients can be grown, gathered, caught, reared or made / manufactured.



This aspect of food is known as **FOOD PROVENANCE**

### Why do we need to know this?

How food is produced has an impact on it's quality, its nutritional properties, the environment, as well as its cost.

The general rule is **'the closer to its original form, the better the food is for us'**.



## Packaging

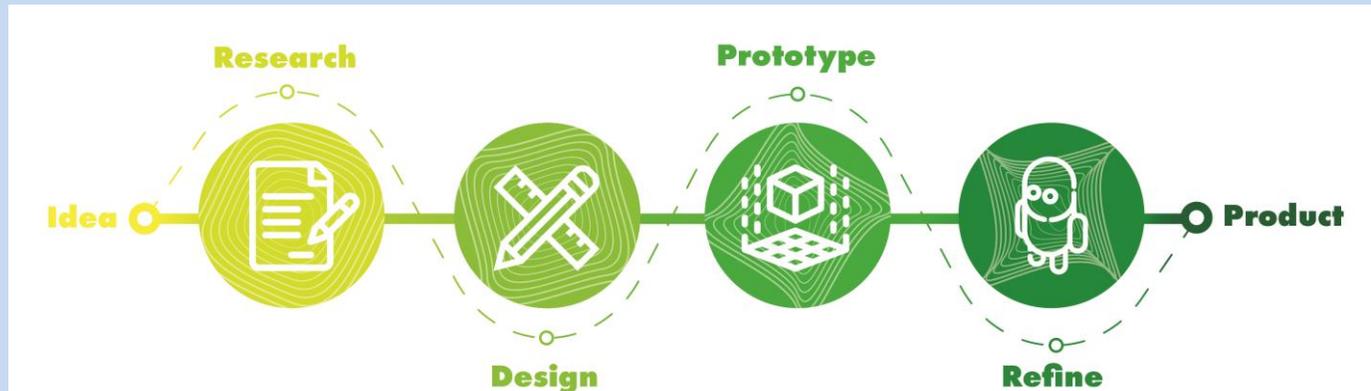
TYPE OF PACKAGING	EXAMPLE USES	ADVANTAGES	DISADVANTAGES
Glass	Jam, pasta sauces,	Strong, see product through, sense of quality leakproof	Heavy, breaks easily
Aluminium Foil	Takeaway meals, pies,	Can hold heat, can be heated, can be shaped, rigid, leakproof, portion control	Cheap, not very strong
Cardboard & oven proof paperboard.	Ready meals, sandwiches, dry cereals	Can be printed onto, greaseproof, lightweight, can be recycled, leakproof	Does keep fresh
Paper	Sugar, flour,	Cheap, lightweight, can be printed onto	Not water resistant or leakproof,
Cling film	Meat onto of plastic trays	Easy to shape, cheap	Not strong
Plastics	Milk bottles, yoghurt pots, margarine tubs,	Can be moulded into shapes, can be see through, cheap, can be recycled, can be see through	Not always easy to recycle, hygienic
Polystyrene	Takeaway meals, hot drinks	Keeps food hot	Can't be printed onto, difficult to recycle
Tin cans	Baked beans, meat sauces, fruit, vegetables	Strong, leakproof, portion control, product sealed so extends shelf life	Heavy, cannot be printed onto

## Year 8 Design Technology Knowledge Organiser – Product Design: Memphis Table Lamps

What does a 'Product Designer do'?

- **A Product Designer, at it's core, is a problem solver.**
- A Product Designer is someone who uses the different facets and tools of design to create and execute a solution that solves for a user's experience deficiencies.

### Product Design Process



### DESIGN BRIEF

You are the owner of a small product design agency, you have been asked to create a small showcase piece to go on display at a design festival over the summer.

You have been asked to design and make an eye-catching table top lamp. This must be constructed using recyclable and sustainable materials.

The design festival this year focuses on the work of the designers associated with the design movement "Memphis". Your designs should reflect the movement and be interesting and engaging.

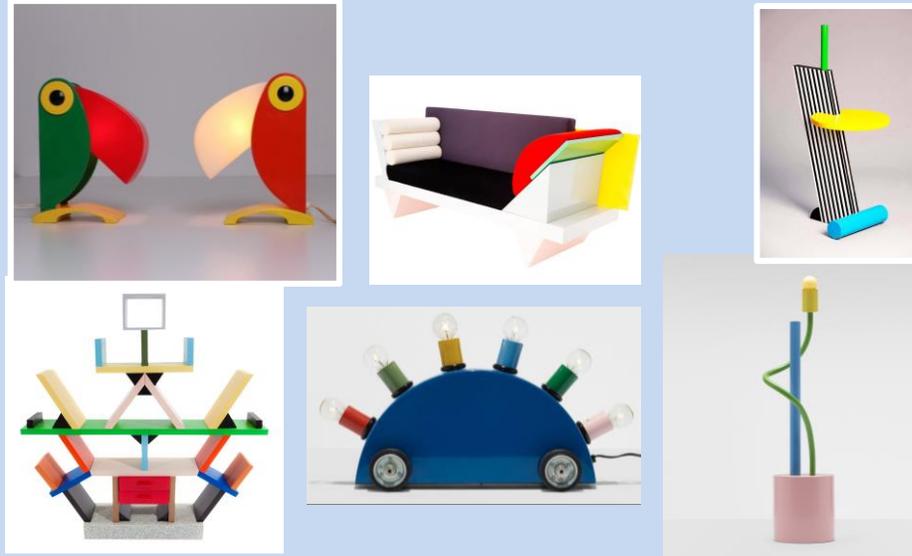
KEY TERMS	DEFINITION
<b>Graphic Design</b>	The art or skill of combining text and pictures in advertisements, magazines, or books.
<b>Design Process</b>	An approach for breaking down a large project into manageable chunks.
<b>Target Audience</b>	A particular group at which a product is aimed towards.
<b>Design Brief</b>	Outlines the specifics of a design project which can include the design project overview, timelines, target audience information, and budget.
<b>Research</b>	A collection of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts and understandings.
<b>Colour Theory</b>	The collection of rules and guidelines which designers use to communicate with users through appealing colour schemes in visual interfaces.
<b>Typography</b>	The art or practice of setting and arranging type.
<b>Mood board</b>	An arrangement of images, materials, pieces of text, etc. intended to present a particular style or concept.
<b>Evaluation</b>	Is a process that critically examines a design.
<b>Modelling</b>	Making a model allows designers to visualise and test how a product looks and performs in 3D and is a great way of checking a product's viability .

## Existing Product Research: Table Lamps



**EXISTING PRODUCT ANALYSIS:** Product analysis means studying how well a product does its job. It is a form of primary research and involves looking at existing products, working out how they were made and seeing what features might be useful to any possible new design.

Designers start by exploring and evaluating the work of others through technical analysis of products. They can then design products that are an improvement upon a current product, or design something that takes the best features and combines them.



## ETTORE SOTTASS



- The Memphis Design movement emerged in the 1980's.
- They started as a group of Italian architects that challenged the idea that products had to follow conventional colours, shapes and patterns.
- It's known for its use of bright neon, primary and pastel colours, geometric shapes, and bold, repetitive patterns.
- A key designer of the movement was Ettore Sottsass.
- The design movement focused on putting personality back into simple products by making them look unique.
- Memphis design has been used as inspiration for product and interior design.
- Their style was inspired by Art Deco and Pop Art styles.

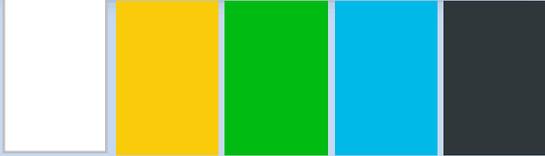
COLOURFUL  
GEOMETRIC  
PLAYFUL  
SHAPES  
ITALIAN  
BRIGHT  
BOLD  
1981



Ettore Sottsass was an Italian architect and designer during the 20th century. His body of work included furniture, jewellery, glass, lighting, home objects and office machine design, as well as many buildings and interiors. His style was defined by bright colour choices, statement pieces and decoration. Ettore Sottsass was an iconic figure in design history as one of the founders of Memphis Design.

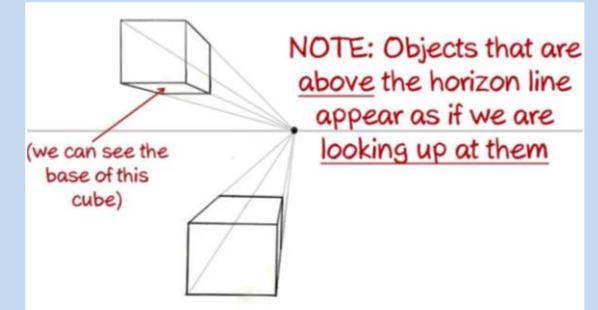
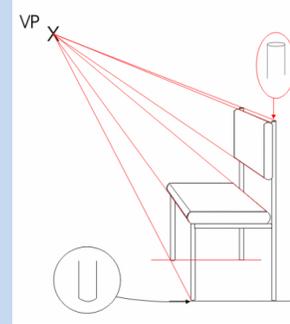
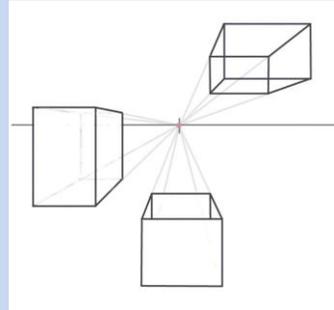
## COLOUR PALLETS

Memphis design combines colours and patterns which clash making the designed pieces eye catching and original.



## ONE POINT PERSPECTIVE

One point perspective is a drawing method that shows how things appear to get smaller as they get further away, converging towards a single 'vanishing point' on the horizon line. It is a way of drawing objects upon a flat piece of paper (or other drawing surface) so that they look three-dimensional and realistic.



**Here's a list of useful vocabulary that is frequently used when describing a one point perspective drawing.**

- **Parallel** – Parallel lines are lines that never touch, even if they are extended indefinitely.
- **Horizontal Lines** – Lines drawn from side to side level with the horizon. Horizontal lines will be parallel the top and bottom edges of your paper.
- **Vertical Lines** – Lines drawn up and down and perpendicular (right-angled) to the horizon. Vertical lines should be parallel to the sides of your paper.
- Make sure all the vertical lines are upright and parallel to each other. Make sure each horizontal line is sideways and parallel to each other.
- **Slanted Lines** – Lines that are neither vertical nor horizontal; [slanted](#) lines are diagonal.
- **Horizon Line** – The horizon line is a special horizontal line that represents eye level to the viewer.
- Most of the time the horizon line will be imaginary so while you should include it you should draw it lightly so it can be erased or drawn over later on.
- **Vanishing Point** – A point on the horizon line where all perspective lines meet.
- The vanishing point exists on the horizon line. Note: it doesn't have to be in the middle of the paper.
- **Perspective Lines (orthogonal lines)** – The lines that meet at the vanishing point. Perspective lines are parallel in real life but converge in a one point perspective drawing.
- **Plane** – A [plane](#) is a flat, two-dimensional surface with no thickness. A cube, for instance, has 6 planes.
- **Form** – A form is a 3-D object, it contains volume and three dimensions.

# Design and Technology

## Cams



	Pear-shaped	Eccentric/circular	Drop (Snail)
<b>Effect of shape</b>	<ul style="list-style-type: none"> <li>Motionless (dwells) for about half the cycle</li> <li>During the second half it rises and falls</li> </ul>	<ul style="list-style-type: none"> <li>Circular to give a smooth continuous movement as the follower rises or falls</li> </ul>	<ul style="list-style-type: none"> <li>Gives a slow rise with a spiral cross-section and then a sudden fall</li> </ul>
<b>Example</b>	<ul style="list-style-type: none"> <li>Opens and closes valves in a car engine</li> </ul>	<ul style="list-style-type: none"> <li>In a fuel pump or in steam engines</li> </ul>	<ul style="list-style-type: none"> <li>Used in hammers/punches or machines needing a sudden drop</li> </ul>
<b>Cams</b>			

Roller	Knife edge	S	Flat
<ul style="list-style-type: none"> <li>Used when higher speeds are required, such as in engines</li> <li>Rolling motion reduces friction so it will wear better</li> <li>Has separate parts in the roller mechanism and contends with forces pushing them to the side</li> </ul>	<ul style="list-style-type: none"> <li>Used when accuracy is required, such as in an embroidery machine, as the cam's profile is followed closely</li> <li>Suffers from a rapid rate of wear and contends with forces pushing them to the side</li> </ul>		<ul style="list-style-type: none"> <li>Used when higher load bearing capabilities are required, such as in a steam engine</li> <li>Has reduced forces pushing it, but suffers from increased friction</li> <li>The larger surface area means it could rotate, but has larger load carrying abilities</li> </ul>

	<b>Linear Motion</b> Motion in a straight line indefinitely.		<b>Reciprocal Motion</b> Back and forth motion.
	<b>Rotation Motion</b> Motion in a circle.		<b>Oscillating Motion</b> Oscillation is a back and forth motion about a pivot point

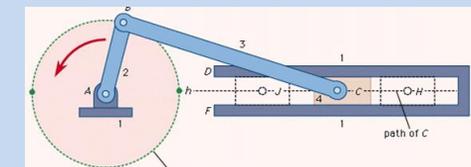
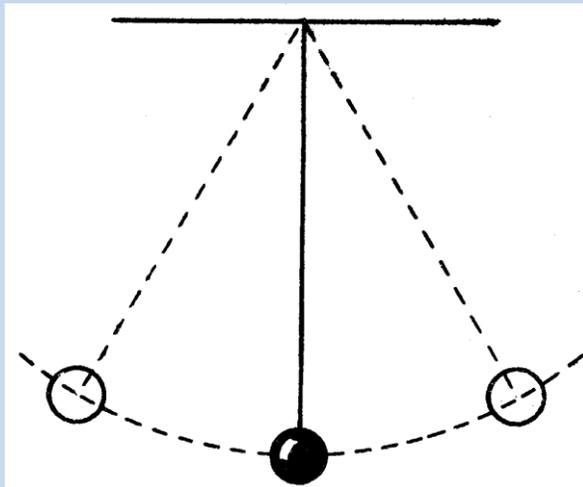
### 4 Types of movement

**Rotary** – Motion around a central point Example: a fan or a bike wheel

**Oscillating** - Motion that swings backwards and forwards in an arc from a central point Example: child on a swing or a pendulum

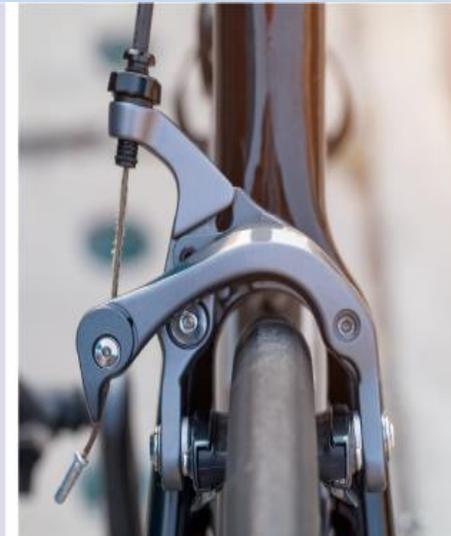
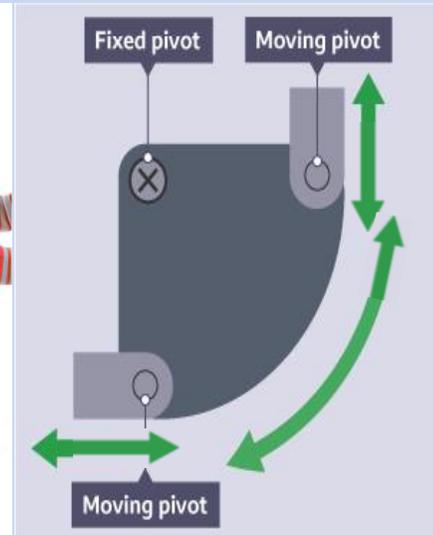
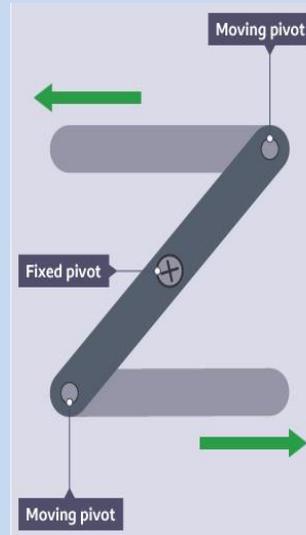
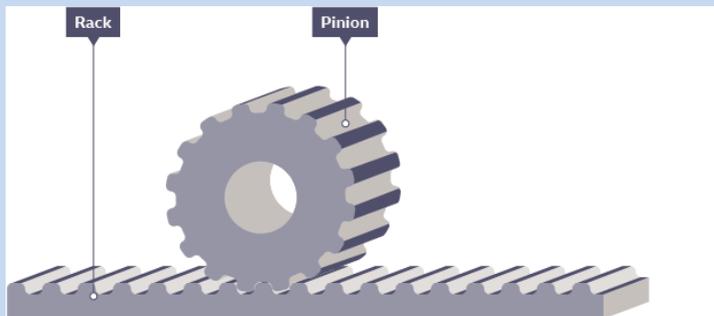
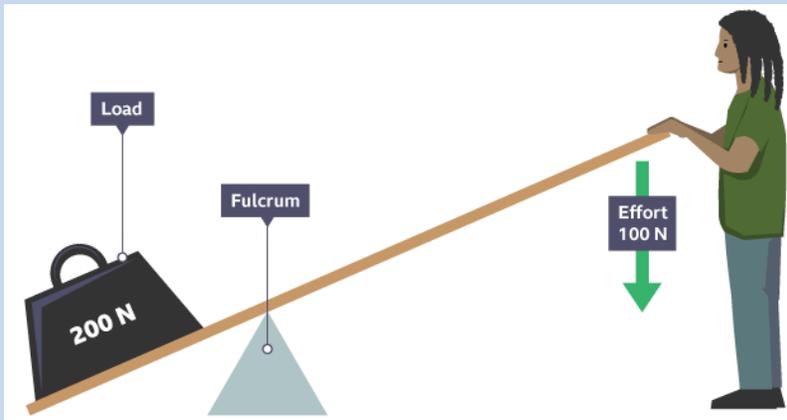
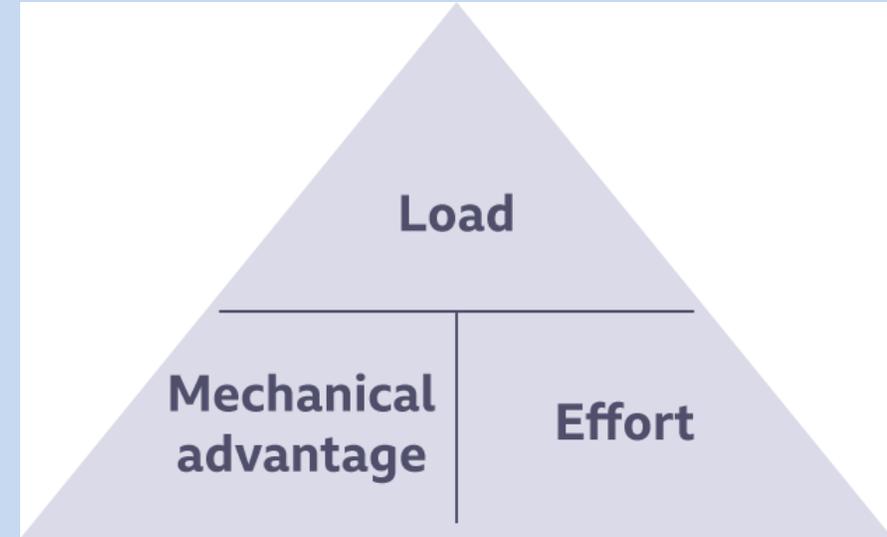
**Linear** - Moving in a straight line in one direction Example: train travelling along a track or a conveyor belt

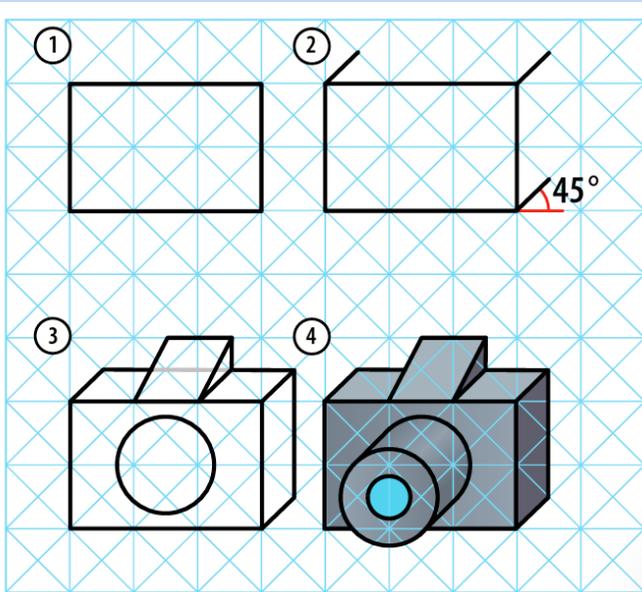
**Reciprocating** - Moving backwards and forwards in a straight line Example: sewing machine needle or car piston



mechanical advantage = load (N) ÷ effort (N)

	Class 1	Class 2	Class 3
<b>Reason for mechanical advantage</b>	A large input movement can produce a small output movement but with greater force	A large input movement can produce a smaller output movement with greater force, but the fulcrum is at one end	Limited; the force applied by the user is greater than the output force
<b>Example</b>	Pliers or crowbar	Wheelbarrow or nutcracker	Tweezers or spade



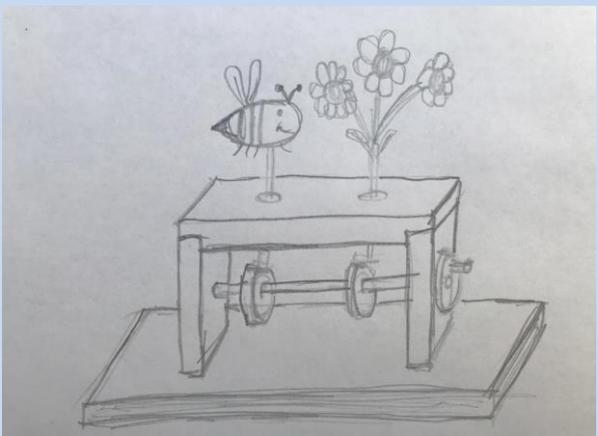


Specification Point to Include	Questions to Answer
Form	Why is the product shaped or styled as it is? What shape / style should it be?
Function	What does it do?
Client and user	How does it meet the needs? How is the product designed for the user?
Performance	How does it work? How does it do the job it was designed to do? How will it work? What other factors / issues does it need to take into consideration?
Materials and Components	What materials should it be made from? What properties / characteristics should the materials / components have? What materials/components / parts have they used and why
Scale of Production and Cost	What scale of production has been used? How does this affect the overall cost?
Sustainability	How has sustainability been taken into consideration?
Aesthetics	How is it made to be aesthetically pleasing?
Marketability	What makes this product different from anything else on the market?
Consideration of Innovation	What elements of the product are innovative or move the product forward compared to other versions available on the market?

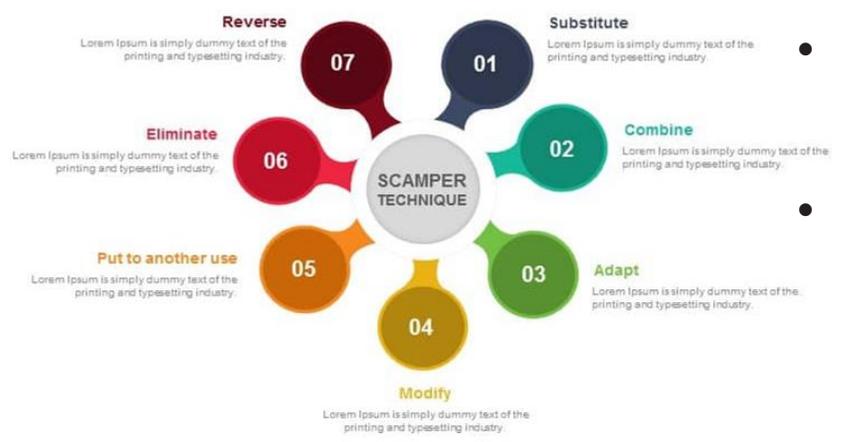
### Oblique

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.



### SCAMPER TECHNIQUE



- **jigs** - used to guide a drill or saw to cut in exactly the same place each time on every piece of timber - reduces marking out time thus increasing the efficiency of the manufacturing process
- **fixtures** - holds the piece of timber in place whilst it is being worked on
- **templates** - made out of paper, card, thin metal or wood, these are drawn around to mark out the same shape repetitively, with the aim of speeding up the marking-out process and decreasing the chance of an error occurring
- **patterns** - a collection of templates that go together to make a part, or all, of a product

# YR8 Textiles Knowledge Organiser

Textiles are highly adaptable and can be constructed to maximise different properties including a very high strength and weight ratio, which means less materials can be used to make strong and robust products.

Textiles are available in many different forms including rolls, yarns, and fibres. Some textiles can be very cheaply produced and some are extremely expensive, especially when using rare fibres and labour intensive techniques.

The categories of textile are:

- Natural Fibres
- Synthetic Fibres
- Woven Textiles
- Non-woven Textiles
- Knitted Textiles

Natural Fabrics		
Plant-based natural fibres	Characteristics	Uses
<b>Cotton</b> 	Soft and strong, absorbent, cool to wear and easily washable. Cotton fabrics can be given a brushed finish to increase their properties.	Most clothing, especially shirts, underwear and denim can be made from cotton. Also used for towels and bedsheets.
Animal-based natural fibres	Characteristics	Uses
<b>Wool</b> 	From fine and soft to thick and coarse, it is warm and naturally crease resistant. Can shrink. Often blended to add functionality.	Jumpers, coats, suits and accessories worn for warmth. Specialist wools are very soft and expensive. Felt products and carpets.
<b>Silk</b> 	Very soft and fine finish, gentle on skin, can feel cool in summer yet warm in winter, drapes well, absorbent, strong when dry (weaker when wet), tricky to wash, can crease easily and is usually expensive.	Luxury clothing including nightwear and underwear, soft furnishings, bed sheets, silk paintings and wall hangings.
Synthetic Fibres		
	Characteristics	Uses
<b>Polyester</b> 	Tough, strong, hard wearing, very versatile, holds colour well, non-absorbent so quick drying, machine washes well. Often blended with other fibres. Easily coloured.	Clothing, fleece garments, bedsheets, carpets, wadding, rope, threads, backpacks, umbrellas and sportswear.
<b>Polyamide (Nylon)</b> 	Good strength, hard wearing, non-absorbent, machine washes well, easily and frequently blended.	Clothing, ropes and webbings, parachutes and sports material. Used as a tough thread on garments.
<b>Elastane (LYCRA)</b>	Added to fabric to enhance working properties, particularly to add stretch. Allows freedom of movement, quick drying, holds colour well, machine washable.	Sportswear, exercise clothing, swimsuits, hosiery, general clothing, surgical and muscular supports.
Blended and Mixed Fibres		
<b>Poly- Cotton</b>	More durable than pure cotton but not as breathable. Can be produced more cheaply than cotton alone. Many blends are available; 65% cotton 35% polyester to 50/50 are common.	General clothing, sheets and bedding. Can be used as an alternative to most cotton products.

# Where In The World Does Cotton Grow?

Cotton is a plant. It grows in warm climates – especially.....



**USA** especially –  
Texas  
Arizona  
New Mexico  
Georgia  
Alabama  
California

**BRAZIL**

**AFRICA** especially –  
Mali  
Benin  
Burkina Faso  
Uganda

**WESTERN ASIA –**  
Turkey  
Uzbekistan

**CHINA**

**SOUTHERN ASIA –**  
India  
Pakistan

## The Cotton Plant - *Gossypium hirsutum*



The ripening Cotton Boll.

A Cotton flower.

The Cotton Boll ready to harvest.



Cotton is grown in large fields.

Cotton is the most recognised and widely used natural fibre used in the world today.

Cotton, used in its pure form or blended with other fibres, makes much of the world's clothing and textile products.



The cotton is harvested either by machine or by hand.



The cotton bolls are collected and taken to a factory.



This machine – a Cotton Gin - separates the seeds from the cotton fibres.



The cleaned fibres are spun into a yarn.



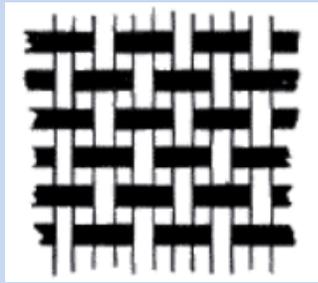
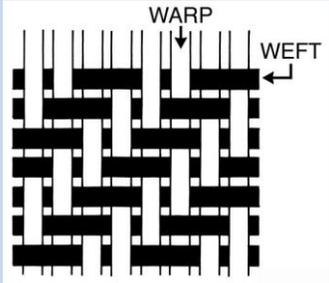
These yarns are woven or knitted into material.

## Woven Textiles

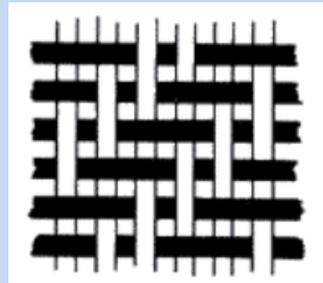
Weaving is the most common way to produce cloth from yarn. The cloth is made up of two sets of yarns which are threaded at 90 ° to each other. The warp threads are fixed in the loom and run the length of the fabric. The weft threads run across the width of the fabric from selvedge to selvedge.

There are many different types of weave, the most common of which is plain weave.

Plain weave is a very simple but tight weave. The weft yarn goes alternatively under and over the warp yarns. It is the most basic pattern and hence tends to be the cheapest to produce. The finished fabric is identical on both sides.



Plain Weave



Twill Weave

## Non-Woven Textiles

Non-Woven fabrics are made directly from fibres without being spun into yarns. The most commonly available non-woven fabrics are bonded fabrics made from a web of fibres held together with heat or adhesive. Common uses of non-woven fabrics include disposable products such as garments worn by surgeons and crime scene investigators, dishcloths and interfacings. Non-woven fabrics can be given special treatments such as flame resistance to make head rest covers on trains and aircrafts.

### Felting

This is a mechanical process which has traditionally been done by hand, but is now mainly machine produced. It involves matting together wool or synthetic fibres using a combination of heat, pressure, moisture and movement to mesh fibres together in a random way. Felt can be formed into shapes when wet, but it does not have any elasticity and will drape well when dry. It is not strong and can pull apart under tension, but will not fray like woven fabrics.

	Characteristics	Uses
<b>Knitted fabric</b>	Warm to wear, different knits have different properties such as stretch and shape retention. Weft knits ladder and unravel more easily than warp.	Jumpers, cardigans, sportswear and underwear fabrics, socks, tights and leggings craft items such as soft toys.

## Knitted Textiles

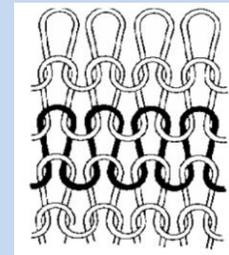
Knitting is a traditional technique of interlocking yarn loops together to produce a fabric and has been used well over 2000 years. There are two types of knitted fabric called weft knit and warp knit. With all knitted fabric, if a yarn breaks then it can come apart or ladder. Knitting can be done by hand or machine.

### Weft Knitting

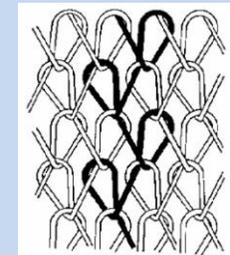
Weft knit fabrics are made by hand or by machine using a single yarn that forms interlocking loops across the width of the fabric. They tend to be quite stretchy due to the method of interlocking and therefore can lose their shape quite easily.

### Warp Knitting

The loops in warp knit fabrics interlock vertically and are less prone to unravelling and laddering, which makes them easier to cut into sections and sew together for the construction of complex garments. They are less stretchy than weft knits and tend to hold their shape more effectively.



Weft Knit



Warp Knit

	Characteristics	Uses
<b>Bonded fabric</b>	Fabrics lack strength, they have no grain so can be cut in any direction and do not fray.	Disposable products such as protective clothing worn for hygiene purposes, tea bags, dish cloths and dusters.
<b>Felted fabric</b>	Can be formed with moisture and heat; once dry it has no elasticity or drape, and can pull apart easily. Wool varieties can be expensive.	Hats, handicraft, pads under furniture to prevent scratching, soundproofing and insulation.

## Design Strategies

You can use design strategies to come up with initial design ideas without getting you on a bad one. Designing is a really complex process and there are several different ways of doing it:

**Systems approach:** This means breaking down the process into a number of different strategies and doing each in turn.

**User-Centred design:** The wants and needs of the client are prioritised - their thoughts are given a lot of attention at every stage of design and manufacture

**Iterative design:** Centred around the design process of evaluation and improvement at each stage of designing.

When you are designing a product it is easy to get stuck on a particular idea. This is called design fixation and it can stop you thinking creatively and coming up with innovative ideas.

Following the design strategy can help you avoid design fixation and encourage you to look at your design in a critical way to make improvements. Other ways to avoid are-

- Collaboration
- Honest feedback
- Focusing on new solutions
- Using fresh approaches

## Key Words

**PRODUCT ANALYSIS:** investigating the design of existing products.

**FUNCTION:** the task that the product is designed to do.

**AESTHETICS:** relating to the beauty of a product; how something looks.

**Product Analysis:** involves investigating **existing products**. It's not just about describing them, it's about understanding why they are designed in the way they are too! If you can identify the good features of the product you may be able to use these in your own design.

<b>Aesthetics</b>	Describe - Appearance? Use of Colour? Lettering? Images? Style? Decoration method?
<b>Cost</b>	Is the product value for money? Do you think it was expensive or cheap to make? How much would it sell for?
<b>Customer</b>	Who's the customer? Who is it aimed at and why? How well does it suit the customer. What makes it suitable for them?
<b>Environment</b>	Is the product environmentally friendly? Is it recyclable? Can it be re-used? Does it use organic cotton? Will it last a long time?
<b>Safety</b>	Is the product safe to use? Are there any sharp edges or loose parts? What regulations has it passed? What does the care/flammability label say?
<b>Size</b>	What size is it? What shape is it? Are the measurements equal?
<b>Function</b>	What is the product's job? What has it been designed to do? How well does the product do its job?
<b>Materials</b>	Is it made from suitable materials? What is the fabric content? What are the wash/ care instructions

### Existing Products

#### An example

**Aesthetics** – This is a square removable cushion cover with heart applique on the front. It has piping around the edge. The colour scheme is light beige with accents of blue. It has been made from linen and is soft. There are some buttons on the front which have been hand stitched on.

**Materials & Manufacture** – This cushion has been made from linen and the hearts from cotton. A sewing machine has been used to make the cushion. The buttons have been sewn on by hand.

**Function** – This cushion is for **comfort** and for **decorative** purposes for use on a sofa or chair. It is made from linen so it is **easy to wash** and is comfortable.

**Size** – This cushion is **40cm x 40cm**. It is a good size and very usable.

**Cost** – This cushion is **machine** constructed although it has **hand stitched** embellishments and piping around the edge. Although made using a machine, the hand embellishments will make it more **expensive**.

**Customer** – I think that this cushion is for use by **men and women** however it has hearts on the front which may appeal more to women. It has buttons on the front which could be dangerous for young children.

**Environment** – This cushion has been made from linen which comes from a plant. This is a good material to use because it is natural and is a **RENEWABLE RESOURCE**. It should last a long time because it has been well made and this also means that it can be **PASSED ON** to someone else, given to a **CHARITY SHOP** when the user no longer wants it.

**Safety** Because the cushion has been made by machine training would be required to use it. The cushion is safe to use however the buttons could be a **choking hazard** to young children.



**ACCESS FM:** is a way of remembering what you should investigate when analysing a product. Each letter stands for a different thing you should analyse.

A **SPECIFICATION** can come from analysing existing products. ACCESS FM can be used to check that you have covered all the different types of need in your specification.

# Tie - Dye

A **resist technique**. The process of **tie-dye** typically consists of folding, twisting, pleating, or crumpling fabric or a garment and binding with string or rubber bands, followed by application of **dye/s**.

Natural Fabrics are best for tie-dye.

Pre washed cotton is more absorbent. New cotton fabric has a waxy finish applied to stop it creasing too much.



Chemical Fabric Dyes



Elastic bands



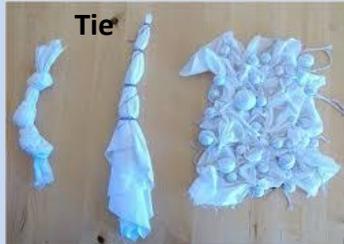
Dye Bath/Vat



Apron



Gloves



You must always follow the health and safety rules when using dyes. An apron and gloves should be worn when working with dyes. In industry eye protection would be worn as well. All equipment should be used correctly.

## TIE-DYE PATTERNS AND TECHNIQUES

<p><b>THE CIRCLE</b></p> <p>Step 1: Pinch fabric at the centre of where your bulls-eye will be. Pull upward into a cone shape, guiding the fabric with other hand.</p> <p>Step 2: Wrap a rubber band 1 to 2 inches below tip of fabric, then continue binding fabric with desired amount of rubber bands.</p>	<p><b>THE SPIRAL</b></p> <p>Step 1: Pinch fabric at the center of where your spiral will start. Twist until all fabric is in a spiral shape.</p> <p>Step 2: Bind spiral with 3 to 4 rubber bands, overlapping rubber bands to create 6 to 8 wedge shapes.</p>	<p><b>THE SUNBURSTS</b></p> <p>Step 1: Pinch fabric and pull upward about 1 to 2 inches. Secure with rubber band and repeat for desired number of sunbursts.</p> <p>Step 2: Cover your fabric with the desired amount of elastic bands.</p>
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<p><b>THE CRACKLED</b></p> <p>Step 1: Scrunch fabric into a crumpled mound.</p> <p>Step 2: Randomly wrap elastic bands around your fabric.</p>	<p><b>THE STRIPED</b></p> <p>Step 1: Pleat and fold fabric either vertically or horizontally.</p> <p>Step 2: Use rubber bands to secure pleated fabric, evenly spacing rubber bands and adding as many as desired.</p>	<p><b>THE MARBLE</b></p> <p>Step 1: Place marbles on your fabric and then pull the fabric around them.</p> <p>Step 2: Wrap an elastic band around the marble. Repeat until you have as many as you wish on your work.</p>
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# Patchwork

**PATCHWORK** is a form of needlework or craft that involves sewing together small pieces of fabric and stitching them together into a larger design.

Patchwork is traditionally 'pieced' by hand, but modern quilt makers often use a sewing machine instead. The size of the finished piece is determined by the maker

## Construction Key Words

**RIGHT SIDE** = the side of the fabric is the side that is meant to be seen. It usually looks nicer.

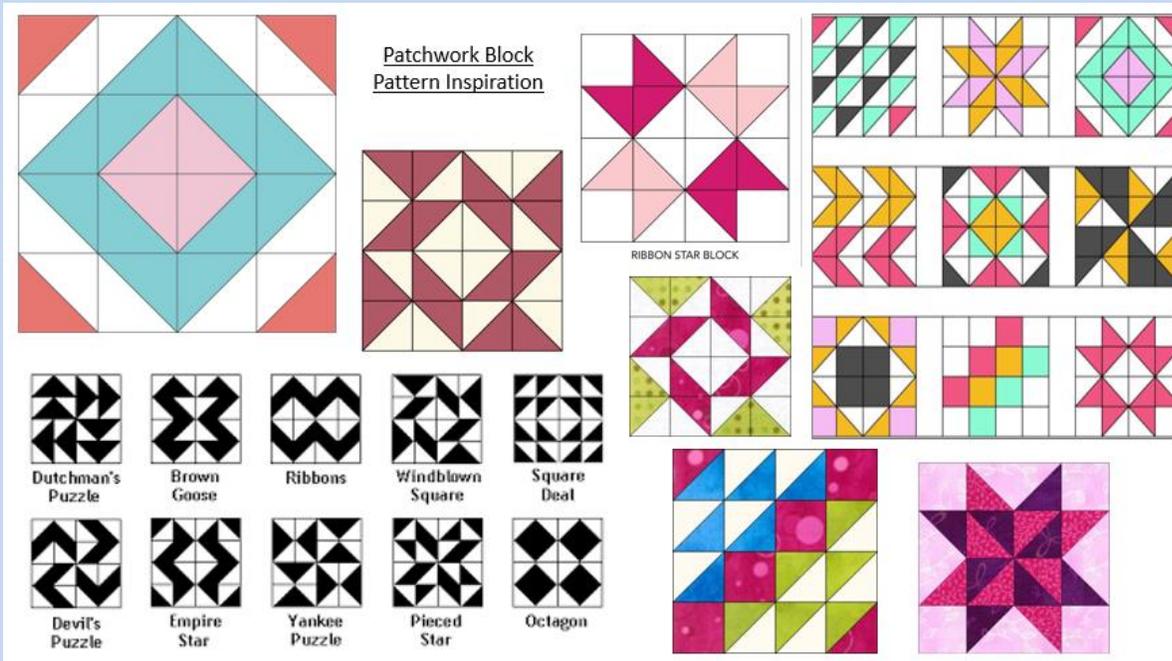
**PRESS** = Iron the fabric/seam. This must be done after every stitched seam.



Use tailors chalk to mark around your templates onto the fabric. Cut them out using fabric scissors.



Lay out your fabric pieces so that they follow your design.



Patchwork Block  
Pattern Inspiration

RIBBON STAR BLOCK

Dutchman's  
Puzzle

Brown  
Goose

Ribbons

Windblown  
Square

Square  
Deal

Devil's  
Puzzle

Empire  
Star

Yankee  
Puzzle

Pieced  
Star

Octagon

**CROSS PIN** = placing pins in fabric horizontally to keep the two pieces together temporarily whilst stitching.

**'10 LINE'** = the 1cm distance from the machine needle to the line on the throat plate.

**SEAM ALLOWANCE** = the area between the fabric edge and the stitching line on two pieces of material being sewn together.

**QC CHECKS** = checking for quality and accuracy of your stitching and construction



Flip 'right side' of fabric pieces together and 'cross pin' in place along the edge you are going to stitch. Machine straight stitch "10" line. Remember to use the reverse stitch at the beginning and the end.



Iron the patchwork on the reverse. Do this every time you stitch a seam.

The tradition of the patchwork we know today was taken to America by the Pilgrims.

They took at least one piece of "bed furniture" i.e. blankets, with them. Times were hard, they had no money so, as things wore out, so they would be repaired and reused.

Patchwork is a great way to consider the **6 Rs** and **RECYCLE** materials and fabrics – a good form of **SUSTAINABILITY**.

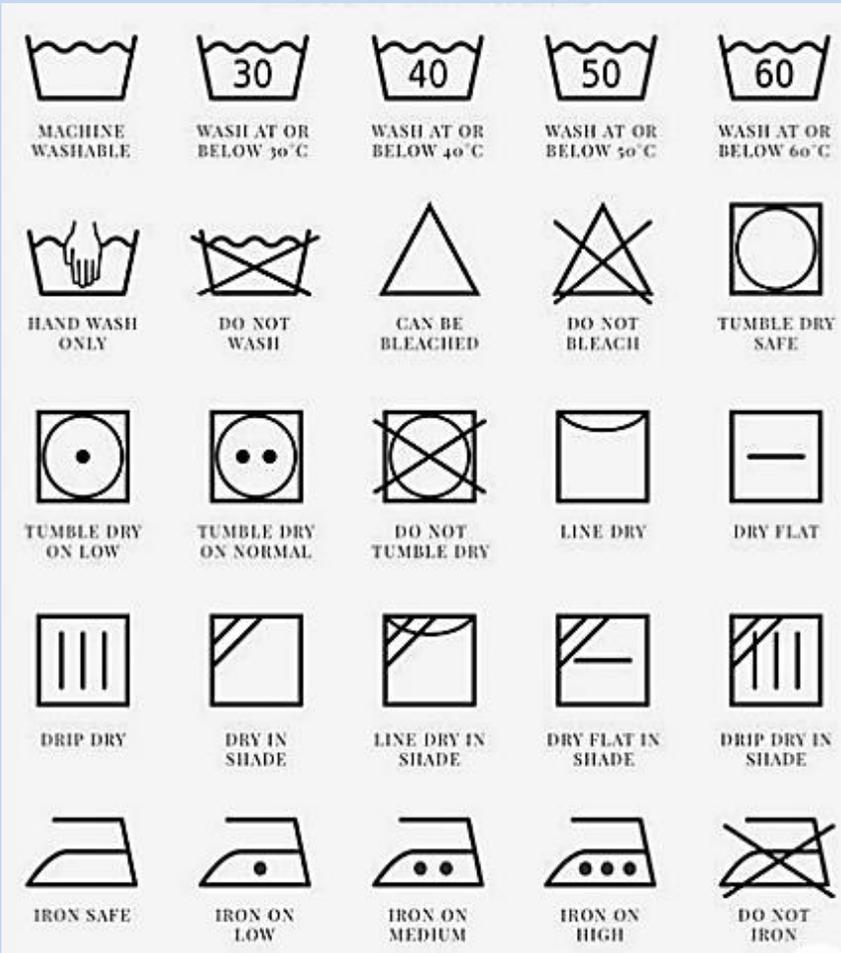
## CARE INSTRUCTION LABELS

The world of care labels can be confusing. There are many **symbols**, all with slightly different meanings.

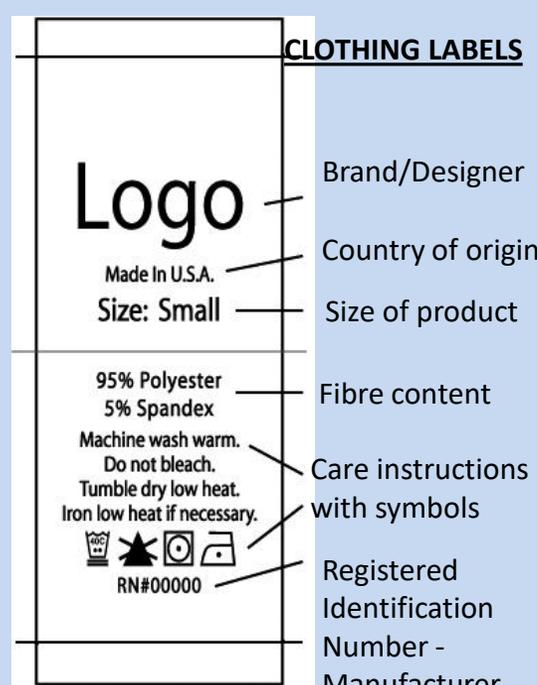


### Reasons to have care labels:

- To make sure that the garments we buy stay in the condition we buy them and do not shrink or stretch.
- Symbols provide the same information to everyone without language barriers.
- Using symbols allows for smaller, more comfortable care labels.
- Smaller labels also cost less to produce which could translate into consumer savings.



## CLOTHING LABELS



Designers need to be aware of the issues related to products that they design. The regulations detailed below need to be incorporated into their design specifications to ensure that the product created meets the demands of regulations and the end user.



There are four areas of information that are required to be displayed by **LAW**:

- Garment care symbols
- Country of origin
- Fibre content
- Manufacturer (Registered Identification Number)

And on children's clothing/toys **SAFETY** e.g. flammability.

Key Act/Regulation	Which area of the textiles/fashion industry is it related to?
Children's Clothing (hoods/cords) Regulations 1976	Children's wear
Nightwear (safety) Regulations 1985 Nightwear (Amendment) Regulation 1987	Nightwear for adults and children
Furniture and Furnishings (Fire) (Safety) Regulations 1988 1989 1993	Any furniture, furnishings including chairs and cushions.
Toys (safety) Regulations 1995	All toys
Textile Products (indication of fibre content) Regulations 1986, 1988, 1998	All textile products, usually shown on the care label.
Footwear (indication of Composition) labelling Regulations 1995	All footwear needs to clearly show the key details of fibre content/fabric composition.

# The Electric Iron. Think safe- Act safe – Be safe

## Temperature Dial

This adjusts the TEMPERATURE.

## Power Lead

Don't allow the cable to trail on the floor.

## Temperature Indicator

It switches off when the iron reaches the set temperature.

You need to know how to keep yourself and others safe in the Textiles Workshop.



As there might not be a super hero to rescue you!

This is the PLUG.

When you are finished with an iron TURN IT OFF at the mains.

Ensure the iron is placed on a secure surface, out of the way.

Most fabrics are prone to creasing. To work with fabrics you need them to be flat and as crease-free as possible. The best way to achieve this is to use an iron.

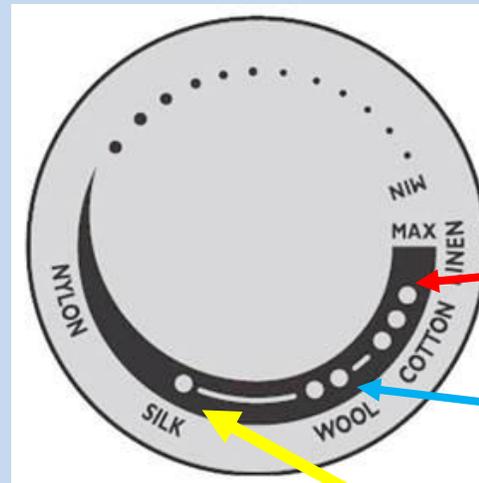
Ironing helps to remove creases. Irons are used for pressing too. Pressing is when you want a crease to stay in a fabric; on a collar for example or a pleat down the front of a pair of trousers.

In industry, ironing is done by hand using large steam irons.

Another use for irons is to apply the interfacing material Bondaweb which can be used for the decorative technique – Applique. Bondaweb requires heat to activate the adhesive within it.

## What do the 'dots' mean?

The dots on the iron relate to the dots found on the iron symbol found on the care label. They show the temperature you should iron the garment on, so one dot = cool, two dots = medium, three dots = hot. The cross through the iron means – you guessed it – do not iron.



Do not iron



Iron on a HIGH heat



Iron on a medium heat



Iron on a LOW heat



If the plug and/or power lead are damaged in any way DO NOT USE it (any electric item).

## Sole Plate

It is METAL. It gets HOT. DO NOT TOUCH.

Make sure that the iron is switched off and always placed securely on the board when not in use.