



Westhoughton High School

Year 8 – Summer Term - Knowledge Organisers

Name: Form Tutor: Form Group

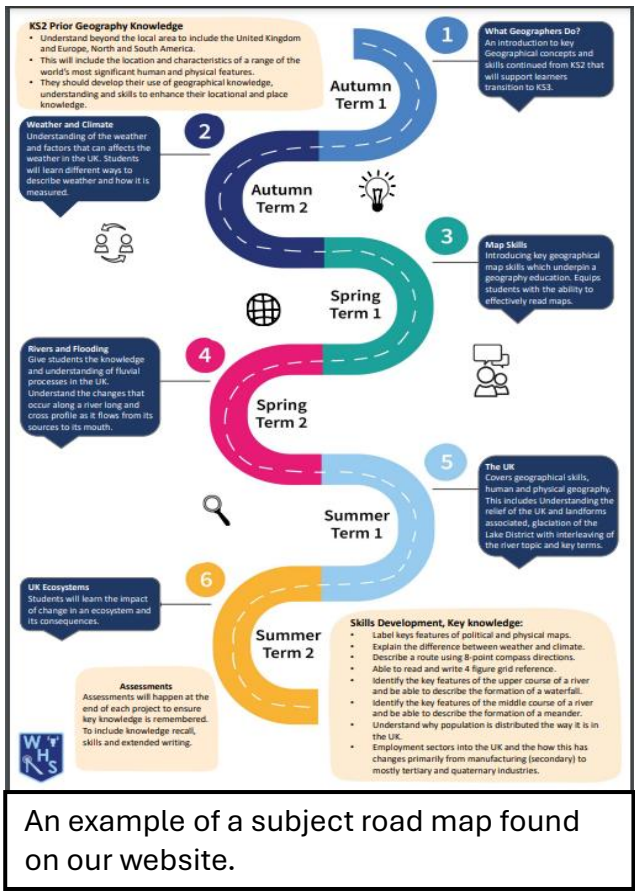


Introduction

The curriculum in each of your subjects at WHS has been carefully planned to help you learn new things, building upon what you know and preparing you for learning in the future. This is mapped out as a learning journey which each teacher will share with you, so you understand how your learning fits together as a whole. Each subject's roadmap is here:

<https://www.westhoughton-high.org/subjects/>.

Topic	Page
Introduction to Knowledge Organisers (KOs)	2
Learning Techniques to use with KOs	3
Art	4 - 5
Computing	6 - 9
Design and Technology	12 - 16
Drama (Performing Arts)	17
English	18 - 21
Food Technology	22 - 26
French	27 - 30
Geography	31 - 34
History	35 - 38
Maths	39 - 54
Music	55
PE	56 - 64
RS	66 - 69
Science	70 - 73
Spanish	74 - 77
Textiles	78 - 82














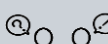



An example of a subject road map found on our website.

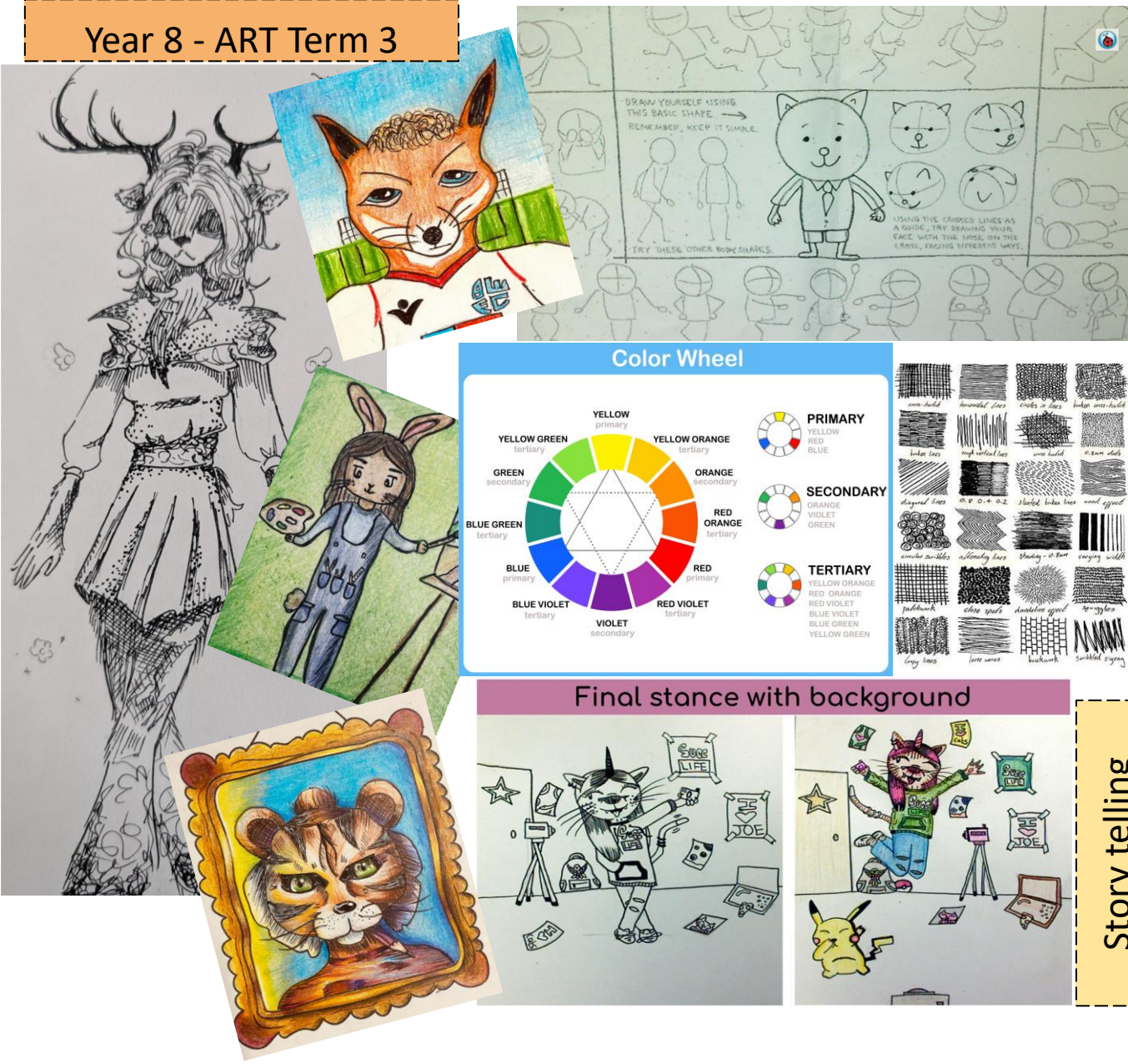
This booklet contains knowledge organisers for all the topics you will study in each subject this term. These give an overview of the essential knowledge that you **MUST** remember to be as successful as possible in Year 7 and as you move through each year of school. **You must bring your booklet to school every day and keep it safe at the end of each term as you will continue to use it to support ongoing revision.**

Learning Techniques to use with KOs

using them regularly is vital to make knowledge stick in your long-term memory (remember you need to revisit information at least 10 times before it is embedded in your memory). Try using these ideas, choose different techniques to learn small sections of knowledge each day.

	Look, Say, Cover, Write, Check	Key Word Definitions	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
STEP 1	<p>Look at and read aloud a specific area of your KO.</p> 	<p>Write down the key words and definitions in two columns.</p>	<p>Use your KO to condense and write down key facts or information onto flash cards.</p> 	<p>Use your KO to create a mini quiz. Write down your questions relating to the information.</p> 	<p>Create a mind map with the information on your KO.</p> 	<p>Ask a partner, friend or family to use the KO or your flash cards.</p> 
STEP 2	<p>Cover or flip the KO over and write down everything you remember.</p> 	<p>Repeat the above but don't look at your KO</p> 	<p>Add pictures that might help you remember. Then self-quiz using the flash-cards.</p> 	<p>Answer the questions, remember to use full sentences.</p> 	<p>Check your KO to make sure there are no mistakes on your mind map.</p> 	<p>Make sure they test you on different sections of the KO and also on previous topics.</p>
STEP 3	<p>Check what you have written down. Correct any mistakes and add anything you missed in green pen.</p> 	<p>Use a green pen to check and correct your work</p> 	<p>Ask a friend or family member to quiz you on your knowledge.</p> 	<p>Ask a friend or family member to quiz you using the questions.</p> 	<p>Try to make more connections, link the information together where you can.</p>	<p>Repeat this regularly so that you are frequently looking at KOs past and present.</p> 

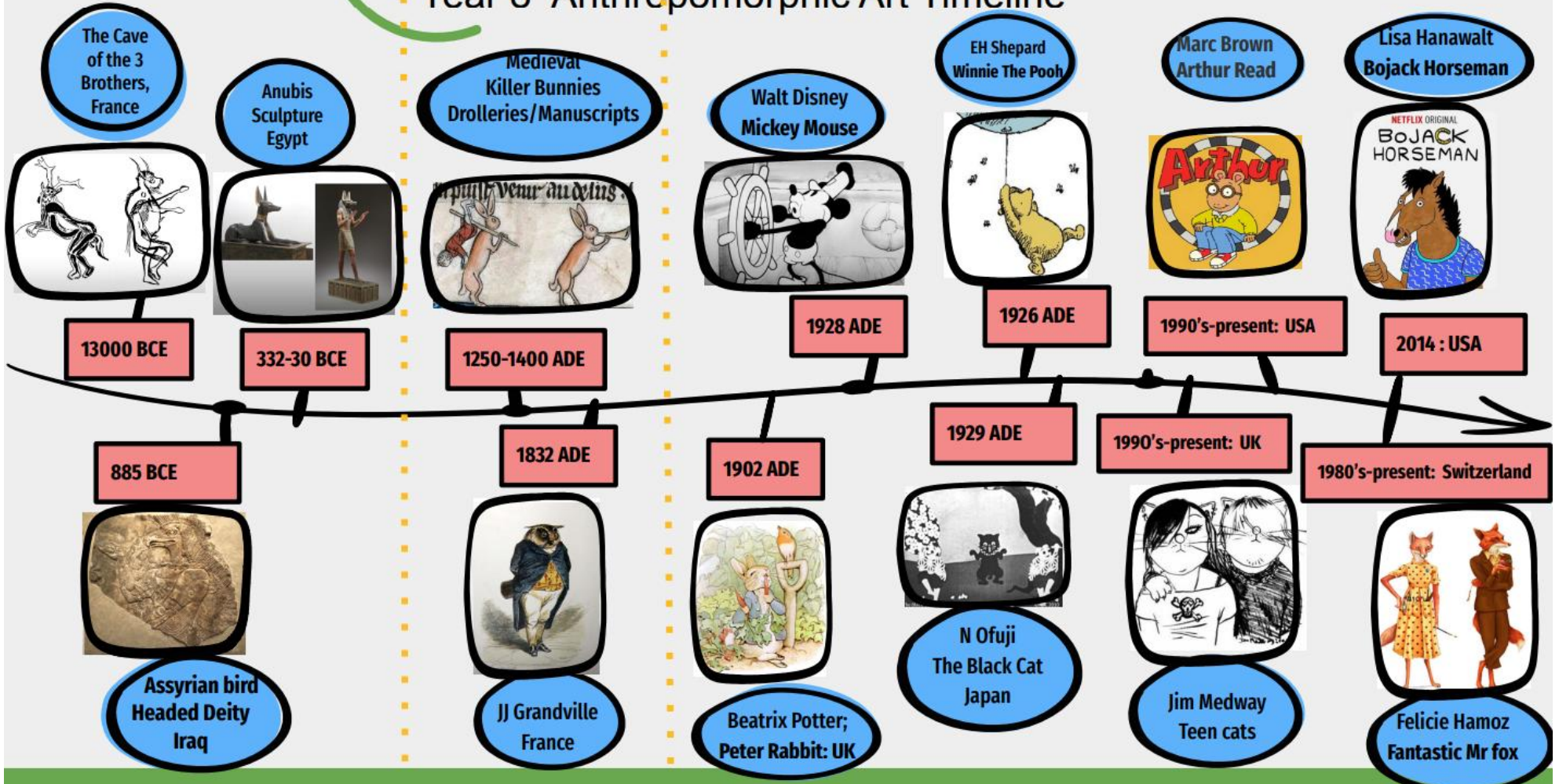
Year 8 - ART Term 3



Year 8 key words	
Imaginative drawing	Imaginative drawing is the act of drawing images that you think of in your head.
Mark making	Mark making describes the different lines, dots, marks, patterns, and textures we create in an artwork.
Expressions	a look on someone's face that conveys a particular emotion. "a sad expression"
Characterisation	the creation or construction of a fictional character.
Stance	the way in which someone stands, especially when deliberately adopted (as in cricket, golf, and other sports); a person's posture.
Story telling	Artists can present narrative in many ways—by using a series of images representing moments in a story, or by selecting a central moment to stand for the whole story. Narrative works often illustrate well-known historical, religious, legendary, or mythic stories.

Story telling

Year 8 Anthropomorphic Art Timeline



Prehistoric - Egyptian - Medieval - Victorian illustration - 20th Century animation - 21st Century illustration - Contemporary Animation

Computing: Podcasts

Key Terms:

Podcast: A digital audio file made available on the Internet for downloading to a computer or mobile device, typically available as a series, new instalments of which can be received by subscribers automatically.

Audio: Sound

Voiceover: A piece of narration

Special effects: A sound that is created to represent something real (such as an explosion) or imaginary (such as a monster)

Purpose: The reason for which something is done or created or for which something exists. e.g. "...the purpose of the interview is to appoint a new Manager"

Download: the transmission of a file or data from one computer to another over a network

Audience Examples:

- Young children (4-10)
- Children (8-12)
- Teenagers (13-19)
- Young Adults (19-25)
- Adults (25-65)
- Retired People (65+)
- Non-english speakers
- People with additional needs

Different purposes of podcasts

Re-assure



Entertain



Inspire

Warn

Persuade

Educate

Instruct

Associate



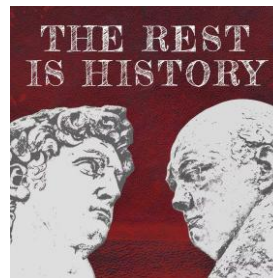
What is the main purpose of a business?

Make money (profit)

How would a podcasting business make money?

Through followers, sponsorship, popularity & advertising

Some podcasts have more than one purpose



Computing - EduBlocks

Coding

<https://edublocks.org/>

Program: A human instructing the computer what to do.
 – computers require clear instructions to work correctly.

EduBlocks	A visual block-based programming tool that helps to introduce text-based programming languages.
Python	A text-based programming language.
Programming Code	The process of writing computer programs. The instructions that you write to program a computer.
Algorithm	A set of rules/instructions.

Logical Thinking – Comparative Operators

==	Equal to (compare 2 values)
!=	Not equal to
<	Left value is less than the right value.
>	Left value is greater than the right value.
>=	Left value is greater than or equal to right value.
<=	Left value is less than or equal to right value.



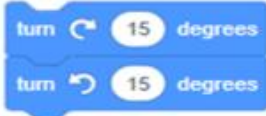

Arithmetic Operators

+	Addition	//	Integer division
-	Subtraction	%	Remainder
*	Multiplication	**	Exponent
/	Division		

Execute	When you carry out the program.
Condition	When something must happen for the program to work.
Sequence	Parts of the code that run in order and the instructions for our code.
Selection	Using logical tests to change the flow of the sequence .
Iteration	Using loops to repeat sequences of code Code is repeated (looped) while something is true or for a number of times
Variable	A value that can be changed e.g. speed, lives, score.
Constant	Something that's stays the same in a program.
Data Type: String	A sequence of characters that can include letters, numbers, symbols.
Data Type: Integer	Whole numbers with no decimal point.
Data Type: Float	Decimal Numbers
Input	Something that is entered into the program.
Output	Something that comes out of a program.
Loop	A way of repeating code (iteration). They are limited to certain data types..
While Loop	A "While" Loop is used to repeat a specific block of code an unknown number of times, until a condition is met.
For Loop	For loop is a programming language conditional iterative statement, which is used to check for certain conditions and then repeatedly execute a block of code as long as those conditions are met.
IF, Else, Elif	The if/else statement executes a block of code if a specified condition is true. If the condition is false, another block of code can be executed.

Computing-Scratch

KEY TERMS

Word	Definition	Image
Sprite	The name of a character in Scratch	
Scratch	The name of the programming language we are learning	
Turn # # degrees	How far to the left or right you want to move your sprite. # is replaced with the number	
Block	A single instruction in our algorithm	

Algorithms

- An **algorithm** is a **sequence** of step-by-step **instructions** to solve a problem.
- Algorithms can be written in code, or be a **sequence** of BLOCKS

We can use algorithmic prediction to guess what will happen. My Sprite is going to get bigger!

The repeat loop in this example, will move ten times. This is more efficient than writing out ten commands.

The turn # degrees block will turn my sprite. This algorithm will turn my sprite.



	Variables	Motion	Looks	Sound	Events	Control	Sensing	Operators
Instructions	Detailed information about how something should be done or operated.							
Execute	When you create a program for a computer, you give it a set of commands to execute.							
Sequence	The order the instructions need to be in .							
Selection	Making choices.							
Iteration	Doing the same thing more than once Iteration in computing is the process of repeatedly executing instructions.							
Repeat	The block that makes and instruction happen more than once.							
Variables	A variable is a name that refers to data being stored by the computer, which can change.							
Subroutines	In computer programming , a subroutine is a sequence of program instructions that performs a specific task,							
If block	Allows us to check a condition and perform an operation if the condition evaluates to 'true'.							
Debugging	Finding errors in our code.							
Abstraction	Taking away all the information that isn't needed.							
Decomposition	Breaking down a problem.							
count-controlled	Count-controlled iteration will execute the commands a set number of times .							
condition-controlled	Condition-controlled will execute the commands until the condition you set is no longer being met .							

Year 8 Technology : Product Design

Key Terminology

- Aesthetics:** Appearance of a product including, shape, colour and texture
- Function:** What something is intended to do
- Sustainability:** Something causes little to no impact to the environment
- Smart Material:** A material that changes its properties in response to changes in its environment.
- Modern Material:** A material that has recently been developed for specific applications.
- CAD:** Computer Aided Design, the use of specialized computer software to create, modify, analyse, or optimize design representations in 2D or 3D
- CAM:** Computer Aided Manufacture, is software and technology that automate the manufacturing process by controlling machine tools and equipment
- Tolerance:** an allowable amount of variation of a specified quantity, especially in the dimensions of a machine or part.
- QA:** Quality Assurance, the maintenance of a desired level of quality in a product,
- Soldering:** Soldering is a metal-joining process that uses a heated filler metal (solder)
- Modifications:** Making a change to improve something.

Advantages of CAD

It helps designers model and change their designs quickly. It's easy to experiment with alternative colours and forms. You can often spot problems before making anything. Less space needed for making prototypes.

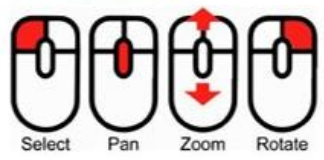
These are some of the tools used for Tinker CAD which is the Cad program we use with the 3D printer. – You can access this at home



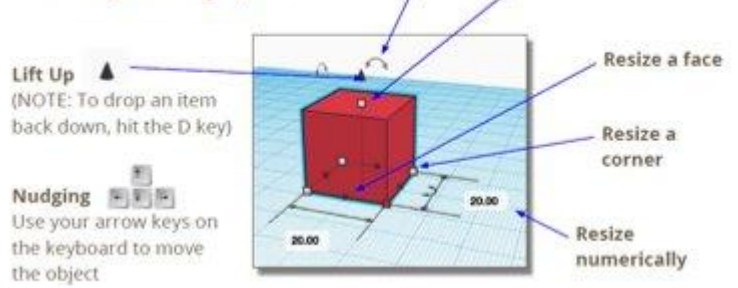
Group and Ungroup



Navigation



Resize, Reshape, Move



Use to select objects

Drawing circles (click and hold for more options)

Shape tool (click and hold for more options)

Double line tool.

Text. Click on the page to place, then type in. Click options for fonts, etc.

Makes construction points.

Click and hold for options. Contains mirror, rotate, scale, etc.

Vectorise. Turns a Bitmap image into a vector image.

Clip path. Draw a path to clip (crop) an object to.

Zoom

Line tool. Click and hold for more options.

Arc. Click and hold for more options.

Draws curvy lines. Click and hold for more options.

Fill tool.

Ruler.

Contour. Draws an outline(s) a set distance from an object.

Allows you to align objects.

Turns a 2d shape into a 3D drawing.

Use with the clip path to clip (crop) an image.

Delete. Click and hold to delete part of a line.

These are the tools used for Tech soft which is the Cad program we use with the laser cutter.

Select to turn on the grid.		Refresh the screen
Double-click to change the grid.		Turns on the step lock
Turn on the grid lock		Radial lock: allows you to rotate in 45 steps.
Attach a new line to the end of the old one.		Zoom out
Zoom in		Zoom to the size of the page
Goes to last zoom setting		Zoom to your selection
Zooms to fit all objects in		Delete last object
Undo		

Year 8 Technology : Product Design

Hardwood is from a **deciduous** tree, usually a broad-leafed variety that drops its leaves in the winter



More expensive



Natural weather resistance



Darker in colour



Tougher

Ash

Properties: Flexible, tough and shock resistant, laminates well. Pale brown
Uses: Sports equipment and tool handles

Properties: Tough, hard and durable, high quality finish possible. Light brown
Uses: Flooring, furniture, railway sleepers, veneer's

Oak

Mahogany

Properties Easily worked, durable and finishes well.
Uses: High end furniture and joinery, veneers.

Softwood is from a **coniferous** tree, one that usually bears needles and has cones



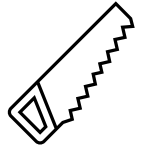
More sustainable



The Grain is spread apart



Fast growing



Easy to work with

Pine

Properties: Lightweight, easy to work, can split and be resinous near knots. Pale yellowish brown
Uses: Interior construction, furniture

Properties: Durable, tough, good water resistance, good surface finish. Pale reddish brown.
Uses: Exterior cladding, decking, flooring, furniture , joinery and veneer's

Larch

Spruce

Properties: Easy to work, high stiffness to weight ratio. Creamy white
Uses: Construction, furniture and musical instruments

Manufactured boards are usually sheets of processed natural timber waste products or veneers combined with adhesives. They are made from waste wood, low-grade timber and recycled timber.

Chipboard



Properties: Good compressive strength, not water resistant unless treated, good value but prone to chipping on edges and corners
Uses: Flooring, low-end furniture, kitchen units and worktops

Chipboard

MDF

Properties: Rigid and stable, with a smooth, easy to finish surface. Very absorbent so not good in high humidity or damp areas.
Uses: Good value, flat pack furniture, toy's, kitchen units and internal construction

MDF (Medium density Fiberboard)



Plywood



Properties: Very stable in all directions due to alternate Layering at 90,
Uses: Furniture, shelving, toys and construction, interior, exterior and marine grades available for greater water resistance.

Plywood

Year 8 Technology : Product Design

A is for **Aesthetics**



Aesthetics means **what does the product look like?**
What is the: Colour? Shape? Texture? Pattern? Appearance? Feel?
Weight? Style?

C is for **Cost**



Cost means **how much does the product cost to buy?**
How much does it: Cost to buy? Cost to make?
How much do the different materials cost? Is it good value?

C is for **Customer**



Customer means **who will buy or use your product?**
Who will buy your product? Who will use your product?
What is their: Age? Gender?
What are their: Likes? Dislikes? Needs? Preferences?

E is for **Environment**



Environment means **will the product affect the environment?**
Is the product: Recyclable? Reuseable? Repairable? Sustainable?
Environmentally friendly? Bad for the environment?
6R's of Design: Recycle / Reuse / Repair / Rethink / Reduce / Refuse

S is for **Size**



Size means **how big or small is the product?**
What is the size of the product in millimeters (mm)? Is this the same
size as similar products? Is it comfortable to use? Does it fit?
Would it be improved if it was bigger or smaller?

S is for **Safety**



Safety means **how safe is the product when it is used?**
Will it be safe for the customer to use? Could they hurt themselves?
What's the correct and safest way to use the product? What are the risks?

F is for **Function**



Function means **how does the product work?**
What is the products job and role? What is it needed for? How well
does it work? How could it be improved? Why is it used this way?

M is for **Material**

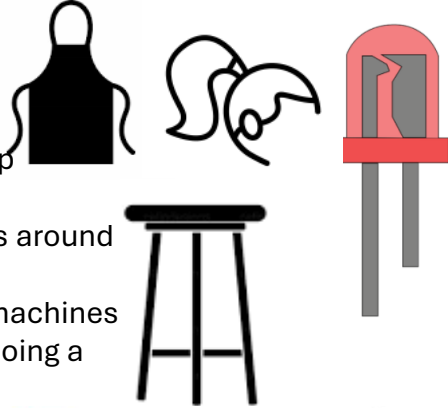


Material means **what is the product made out of?**
What materials is the product made from? Why were these materials
used? Would a different material be better? How was the product
made? What manufacturing techniques were used?

Year 8 Technology : Product Design

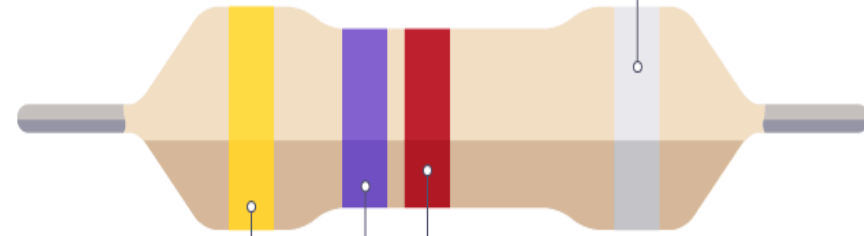
Workshop safety

- Long hair tied back
- Always wear an apron
- Bags and blazers hung up
- Stools stacked away
- Never run or throw things around the workshop
- Never crowd round the machines
- Always stand up when doing a practical



A **LED** has a positive and a negative lead. Each leg represents either an **anode** or a **cathode**.

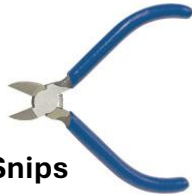
It is important that this component is fitted the correct way around.



Cable Cutters



Wire Snips



De-Soldering Pump



Solder



Soldering Iron Stand



Circuit boards

Circuit boards are used in most electronic systems as they ensure reliable connections between components.

First colour band		Second colour band		Third colour band	
Black	0	Black	0	Silver multiply by 0.01	
Brown	1	Brown	1	Gold multiply by 0.1	
Red	2	Red	2	Black multiply by 1	
Orange	3	Orange	3	Brown multiply by 10	
Yellow	4	Yellow	4	Red multiply by 100	
Green	5	Green	5	Orange multiply by 1,000	
Blue	6	Blue	6	Yellow multiply by 10,000	
Violet	7	Violet	7	Green multiply by 100,000	
Grey	8	Grey	8	Blue multiply by 1,000,000	
White	9	White	9		

Input

Process

Output

Most Electronic Systems require a system. Systems typically include an Input, a Process and an Output.

The **input block** detects a signal from outside the system. For example, it could be a switch that detects movement or a sensor that detects lights.

The **process block** receives the signal from the input block and determines what the system will do. There are many different types of process block.

The **output block** is turned on or off by the process block. Common output blocks produce light, movement or sound.

Resistors are used for regulating current and they resist the current flow and the extent to which they do this is measured in ohms (Ω). Resistors are found in almost every electronic circuit.

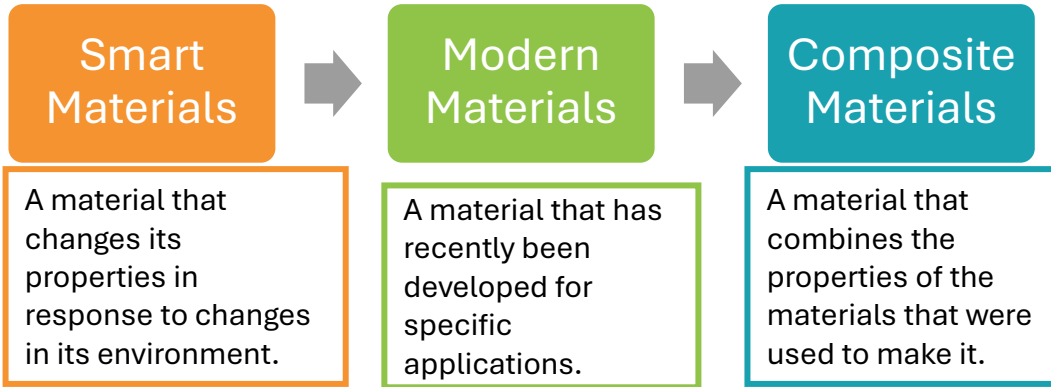
The most common type of resistor consists of a small ceramic (clay) tube covered partially by a conducting carbon film.

Resistors are too small to have numbers printed on them and so they are marked with a number of coloured bands.

Each colour stands for a number. Three colour bands shows the resistors value in ohms and the fourth shows tolerance as a percentage.

Year 8 Technology : Product Design

Throughout time we have developed the technology to design and manufacture using newer materials, that have the properties we want them to have. This includes Smart Materials, Modern Materials And Composite Materials.



Smart Materials Examples	Modern Materials Examples	Composite Materials Examples
<ul style="list-style-type: none"> • Thermochromic pigments • Photochromic pigments • Photochromic particles • Shape memory alloys • Polymorph • Quantum tunnelling composite • Piezoelectric material • Litmus paper 	<ul style="list-style-type: none"> • Corn starch polymers • Flexible MDF • Titanium • Fibre optics • Graphene • Liquid crystal display (LCD) • Nanomaterials • Metal foams 	<ul style="list-style-type: none"> • Glass reinforced plastic • Carbon fibre reinforced plastic • Gore-Tex® • Kevlar® • Conductive fabrics • Microfibres & microencapsulation • Fire resistant fabrics



Polymorph is an example of a Smart Material

Gore-Tex is a waterproof, breathable fabric membrane and registered trademark of W. L. Gore and Associates.

Corn Starch Polymers - Corn plastic is made from polylactic acid (PLA), which is a plastic substitute, made from fermented plant starch. It is becoming a popular alternative to traditional plastic, which is resulting from petroleum (oil) based chemicals. The different uses of polylactic acid could be a way of how to reduce a carbon footprint that is left by fossil fuel plastics.



Drama: Pitching

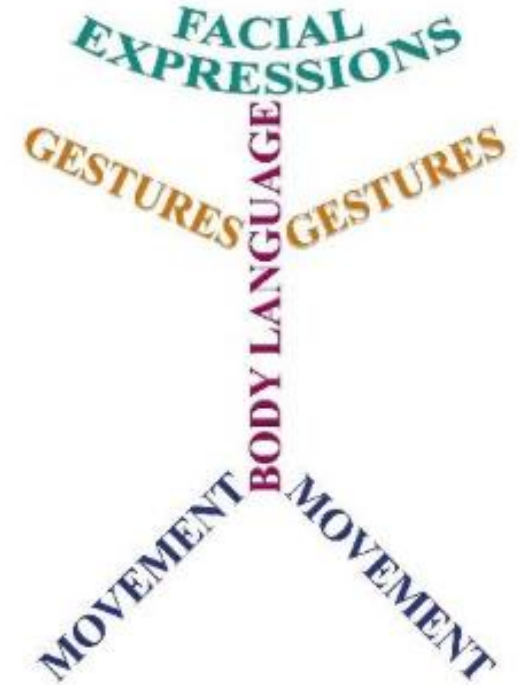
You will be creating a company from scratch, exploring the importance of logos and design. From this work, you will pitch for investment in your company and create an advert to promote your product.

Tasks for this topic:

- Create a new company
- Design a logo and new product.
- Create a pitch for investment using persuasive techniques
- Create an advert to promote your product

Persuasive speech	A speech to convince an audience to act
Pitch speech	A speech to market opportunity
Logo	A mark, symbol or emblem to promote identification or recognition
Advertisement	A notice to promote a product

PERFORMANCE SKILLS



YEAR 8 SUMMER TERM KNOWLEDGE ORGANISER: WAYWARD SOULS

ROMEO AND JULIET BY WILLIAM SHAKESPEARE

Plot Overview: Written in 1595, Shakespeare's *Romeo and Juliet* is set in Verona, Italy. An age-old vendetta between two families, which tragically erupts into bloodshed, leading to the untimely deaths of two star-crossed lovers.

- Act 1**
- The play opens with a fight between the Capulets and the Montagues. The fight is stopped by the Prince who warns both families that any more fighting will be punishable by death.
 - Romeo reveals to Benvolio that he is in love with Rosaline, but she doesn't love him in return.
 - Mercutio encourages Romeo to gatecrash the Capulet Ball to cheer him up.
 - Tybalt, Juliet's cousin, spots Romeo and is outraged that a Montague has turned up. He threatens to fight him but is stopped by Lord Capulet.
 - Romeo meets Juliet for the first time and they kiss. They both find out who the other is and are separated.

- Act 2**
- Later that night, Romeo climbs over the orchard wall into the Capulets' garden to see Juliet at her window.
 - They tell each other that they love each other and decide to meet the next day to get married.
 - Friar Laurence agrees to perform the marriage ceremony, believing it might help end the feud.
 - The Nurse agrees to be present at their secret wedding.
 - Romeo and Juliet meet in secret at Friar Lawrence's cell, and they get married.

- Act 3**
- Tybalt, still angry with Romeo for gatecrashing the Capulet Ball, challenges Romeo to a duel which ends with Mercutio being stabbed after Romeo gets in the way.
 - In a fit of rage, Romeo kills Tybalt.
 - The Nurse tells Juliet that Tybalt has been killed. At first, Juliet is upset but quickly realises she needs to stand beside her husband. She tells the Nurse agrees to get a message to Romeo.
 - Romeo is given the news he has been banished. Romeo says that being banished is worse than being killed because he won't be able to see Juliet.
 - Lord Capulet arranges for Juliet to marry Paris in three days time. Juliet refuses and Lord Capulet threatens to disown her if she doesn't agree.
 - The Nurse tries to convince Juliet to forget Romeo and marry Paris. Juliet decides to visit Friar Lawrence.

- Act 4**
- The Friar devises a plan where Juliet will take a potion that will make her appear dead.
 - Friar Lawrence plans to let Romeo know the truth via a message.
 - Juliet returns home and agrees to marry Paris. She takes the potion, immediately appearing dead. Her body is taken to the Capulet tomb.

- Act 5**
- Romeo learns of Juliet's 'death' and is devastated. He buys poison from an apothecary and returns to Verona to visit Juliet's tomb.
 - Friar Lawrence realises Romeo did not receive his original message detailing the plan.
 - When Romeo gets to the tomb, he sees Paris and kills him.
 - Romeo sees Juliet's body and believing she is really dead, takes the poison and dies.
 - When Juliet wakes up, she takes Romeo's dagger and stabs herself.
 - The Prince arrives and discovers the dead bodies in the tomb. The Capulets and Montagues agree to end the feud.

Key Symbols

Poison



Dagger



Light/Dark



Big Ideas

Love

An intense feeling of deep affection.



Violence

Behaviour involving physical force intended to hurt, damage, or kill someone or something.



Honour

Having or showing a high respect for something or someone.



Rebellion

The action or process of resisting authority, control, or convention.



Patriarchy

A society controlled by men, often excluding women.



Fate













Events outside of a person's control, regarded as predetermined by a supernatural power.



YEAR 8 SUMMER TERM KNOWLEDGE ORGANISER: WAYWARD SOULS

ROMEO AND JULIET BY WILLIAM SHAKESPEARE

Key Characters

	Juliet Capulet Protagonist / tragic hero / Lord Capulet's only daughter/ decisive / passionate / headstrong	Romeo Montague Protagonist / tragic hero / Lord Montague's only son/ sensitive / impulsive / passionate	
	Lord Capulet Head of the Capulet household / dominant / aggressive	Lord Montague Head of the Montague household / devoted	
	Lady Capulet Juliet's mother/ timid/ selfish	Lady Montague Romeo's mother/ caring / compassionate	
	Tybalt Juliet's cousin/ strong-willed/ passionate/ loyal/ argumentative	Benvolio Romeo's cousin/ sensible/ peacekeeper	
	The Nurse Juliet's nurse/ kind/ loving/ mother figure to Juliet	Mercutio Romeo's best friend/ loyal/ funny/ devoted	
	The Prince Prince of Verona/ imposing/ formal/ moral	Friar Lawrence A priest/ religious man in Verona /moral/ kind/	

Context – We must understand the influences of the world we live in when examining texts.

Femininity

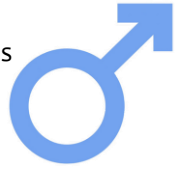
Femininity refers to the qualities or attributes regarded as characteristics of women or girls. It was expected that females displayed 'traditional' feminine qualities such as subservience, obedience and sensitivity.



Shakespeare supports and challenges these expectations with Juliet, who is both emotional yet rebellious, and Lady Capulet, who allows her daughter to be mistreated rather than standing up to Lord Capulet.

Masculinity

Masculinity refers to the qualities or attributes regarded as characteristics of men or boys. It was expected that males displayed 'traditional' masculine qualities such as strength, aggression and stoicism (hiding emotions).



Shakespeare supports and challenges these expectations through Romeo, who is sensitive but violent, and Tybalt who is passionate and volatile.

Power of the Patriarchy

During Shakespearean times, women were seen as objects or possessions. Once a female was married, her ownership transferred from her father to her husband.

Women were expected to obey their father and/or husband, as it was believed that men were logical and made better choices than women. In the play, Juliet is seen as a rebel when she refuses her father's order to marry Paris.



Star-Crossed Lovers

The term "star-crossed lovers" refers to two people who are not able to be together for some reason e.g. Romeo and Juliet.

Lovers, whose relationship is doomed to fail, are said to be "star-crossed" (frustrated by the stars) because it was claimed that the stars controlled human destiny.



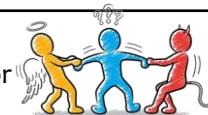
Social Expectations

In 16th Century England, society was expected to follow rigid rules and norms e.g. upholding family honour was of the greatest importance to a man. The long-standing feud between the Montagues and Capulets strengthens family loyalty and justifies violence.







Morality

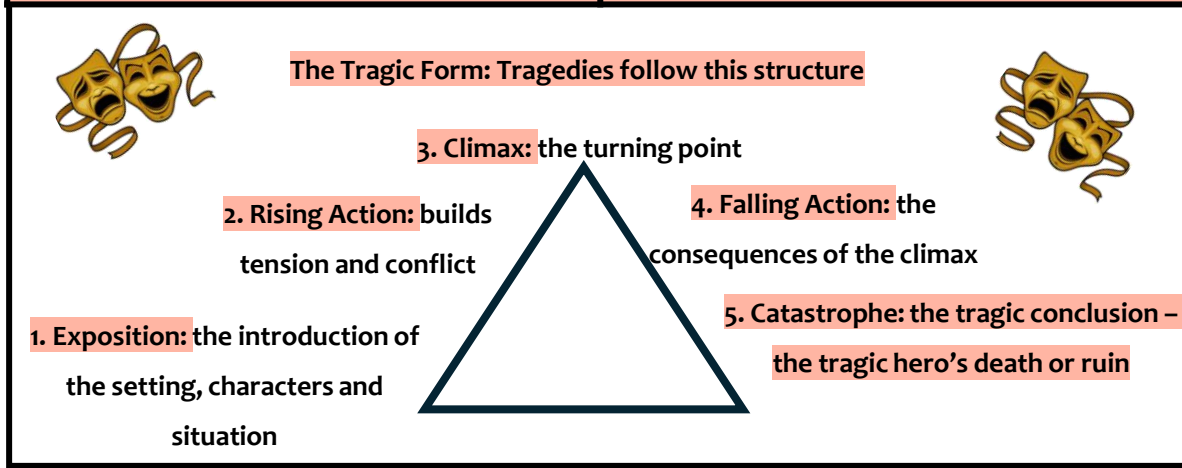
The social standards of good or bad behaviour. 16th Century England was a Christian country and most of Shakespeare's characters attempt to uphold Christian values. Romeo and Juliet's death is such a shocking event, as it was considered a sin and immoral to take human life.







YEAR 8 SUMMER TERM KNOWLEDGE ORGANISER: WAYWARD SOULS







TECHNICAL ACCURACY & KEY DEVICES

Definition:		Examples of tragedies:		Device / Feature	
A play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character.		Romeo and Juliet / The Crucible / Macbeth			
Tragedy		<i>Romeo and Juliet</i>			
Generic conventions: <ul style="list-style-type: none"> Tragic hero Hamartia (the tragic hero's fatal flaw that leads to their downfall) A heartbreaking / tragic ending 		<ul style="list-style-type: none"> Romeo and Juliet are the tragic heroes of the play. Romeo and Juliet's hamartias are their impulsiveness. Romeo and Juliet both die by suicide as a result of their reckless and impulsive actions. 		Metaphor Describing something by stating it is something else 	
				Simile Comparing something to something else: 'as', 'like' 	
				Symbolism Objects, colours, sounds, places 	
				Personification Giving living qualities to something non-human 	



Juxtaposition Contrasting ideas / images 		Oxymoron Words next to each other that directly contrast 	
Dramatic Irony When the audience knows something that the character does not 		Foreshadowing A warning or clue about a future event 	

Word Classes

Adjective Describes a noun or pronoun. Blue / young / powerful 	Adverb How, when or where something happens. Furiously / yesterday / here 	Preposition Where something is; the time, direction or cause of something. On / under / above 	Pronoun Words that replace nouns or noun phrases. She / he / they 	Noun Person, place, thing, idea or state of being. Manchester / cat / love 	Verb An action or state of being. Jump / write / be 
---	---	---	---	--	---

TECHNICAL ACCURACY & KEY DEVICES

Sentences are created by using different types of clauses

Main clause

A main clause contains one subject and one verb. It has one main idea and it forms a complete sentence (it makes sense on its own).




Subordinate clause

A subordinate clause adds extra information to a sentence and does not function as a complete sentence (it does not make sense on its own). It depends on the main clause to make sense and is usually separated by a comma.





Sentence Structure



Example

Simple sentence: one main clause 

The prisoner escaped.

Compound sentence: two main clauses linked with a connective / conjunction  


The prisoner escaped and he never returned.

Complex sentence: one or two main clauses with embedded dependent / subordinate clauses  


The prisoner escaped despite the elaborate security system.

2V/3V: use two or three verbs

The prisoner anxiously sprinted, jumped and climbed over any barrier.

2A/3A: use two or three adjectives 

The road was long, empty and bewildering.

Fronted adverbial: begin your sentence with an adverb 

Quickly, he leapt over the wall.

As / When / Although: use any of these words at the beginning of your sentence to introduce a subordinate clause

Although sweat trickled down her face, she continued to climb.

Punctuation

Capital Letters

- Start of a sentence
- Proper nouns: names of places, people or things
- The pronoun 'I'
- Months and days of the week



Commas

- Separate three or more items in a list
- After a fronted adverbial
- Before and after a subordinate clause (like brackets)
- After subordinate clauses and phrases that begin a sentence
- Separate question tags
- Separate direct speech from non-speech



Apostrophes

- To show that letters are missing in a word
- To show possession



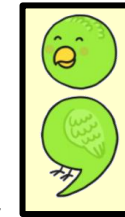
Full Stops

- To end a sentence



Semicolons

- Separate two main clauses that are closely connected to each other but could stand alone as two separate sentences
- To replace a coordinating conjunction
- To break up a list using longer phrases to signal which items are together



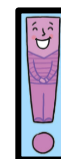
Colons

- At the end of a clause to elaborate / give more details
- At the end of a clause to give an explanation
- At the end of a clause to show an answer



Exclamation Mark

- To show strong feelings
- To show a raised voice



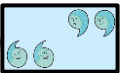
Question Mark

- After a direct question



Speech Marks

- Around direct speech (after the punctuation)



Year 8 Technology : Food & Nutrition

A balanced diet

A balanced diet is based on the Eatwell Guide. An unbalanced diet can lead to dietary related disease.

Diet and health

There is a link between a poor diet, and the risk of developing some diseases.

This includes the risk of:

- cancer;
- coronary heart disease (CHD);
- bone health;
- anaemia.

There are two different types of nutrients:

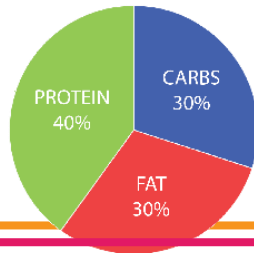
- macronutrients;
- micronutrients.

There are three **macronutrients** that are essential for health:

- carbohydrate;
- protein;
- fat.

There are two types of **micronutrients**:

- vitamins;
- minerals.



Gluten formation

Two proteins, gliadin and glutenin, found in wheat flour, form gluten when mixed with water. Gluten is strong, elastic and forms a 3D network in dough.

In the production of bread, kneading helps untangle the gluten strands and align them. Gluten helps give structure to the bread and keeps in the gases that expand during cooking.

Moderate activity



Vigorous activity



Muscle strengthening activities



Obesity

People who are obese are more likely to suffer from CHD, type 2 diabetes, gall stones, arthritis, high blood pressure and some types of cancers, i.e. colon, breast, kidney and stomach.

Inactivity

It is also important that the amount of time being sedentary is reduced. Over time, sedentary behavior can lead to weight gain and obesity, which can increase the risk of developing chronic diseases in adulthood.

Raising agents

Raising agents include anything that causes rising within foods, and are usually used in baked goods. Raising agents can be:

- biological, e.g. yeast;
- chemical, e.g. baking powder;
- mechanical, e.g. adding air through beating or folding.

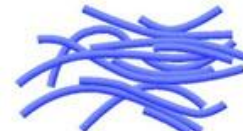


	Example	What happens?
Aerate	Cake	Baking powder makes the cake light
	Meringue	Egg white is whisked to form a foam
	Scone	Self-raising flour helps the dough rise
	Bread	Yeast makes the dough rise



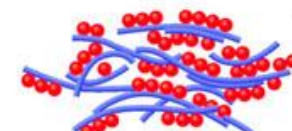
Gliadin

+



Glutenin

=



GLUTEN



Year 8 Technology : Food & Nutrition

Personal Hygiene is the practice of good personal hygiene to help prevent cross-contamination and food-borne illness



Wear an apron



Do not eat during a practical.



Hair must be tied back



Remove watches and jewellery during a practical



Wash hand thoroughly with antibacterial soap.

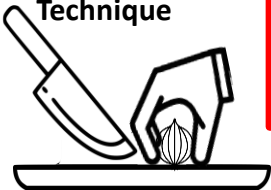


Blue plasters should be worn.

Claw Technique



Bridge Technique



Knife skills

- When using a knife, we expect that you are sensible at all times and that there are no injuries or causes for concern.
- When collecting your knife from the teacher, you must walk slowly and hold the knife at your side with the blade facing the floor.
- When at your place, the knife should be clearly visible on the table at all times unless you are using it to chop.
- When cutting, you must use the 2 methods you will be taught; the **bridge** method and the **claw** method.
- Remember, any issues of unsafe behaviour will result in you being removed from practical lessons.

Chopping board codes

White = Dairy Products
 Blue = Fish and Shellfish
 Brown = Vegetables
 Red = Raw/Uncooked Meat
 Yellow = Cooked Meat
 Green = Fruit and Salad

The rubbing-in method involves using only fingertips to blend cold, cubed fat (butter, lard) into flour, lifting it high to aerate, until the mixture resembles breadcrumbs. This technique creates tender pastry, scones, and crumbles by preventing gluten development.



Food safety is the practice of properly handling, preparing and storing food in ways that prevent food-borne illness



Cook food to the correct temperatures



Use the correct chopping boards



Don't mix or prepare raw and cooked foods together

Health & Safety in the kitchen

is the practice of being able to work in the kitchen area safely, preventing harm or injury to anyone and keeping the space clean & tidy



Ensure food isn't left unattended



All cupboard and draws are closed.



Any spills are cleaned and/or mopped.

Wear oven gloves when adding and removing items from the oven



Knives must be stored safely and returned to the teacher

Year 8 Technology : Food & Nutrition

Food is sourced, processed and sold in different ways. Geography, seasonality, weather and climate influence the availability of food and drink.

Seasonality

Fruit and vegetables naturally grow in cycles and ripen during a certain season each year. Some meat and fish can also be seasonal.

Advantages of buying food in season include:

- it is fresh;
- best flavour, colour and texture;
- optimal nutritional value;
- supports local growers;
- lower cost;
- reduced energy needed to transport.

Food provenance

Food provenance is about where food is grown, caught or reared, and how it was produced. Food certification and assurance schemes guarantee defined standards of food safety or animal welfare. There are many in the UK, including:



Food security

Food security exists when everyone has access to enough affordable, safe and nutritious food to keep them healthy, in ways the planet can sustain in the future.

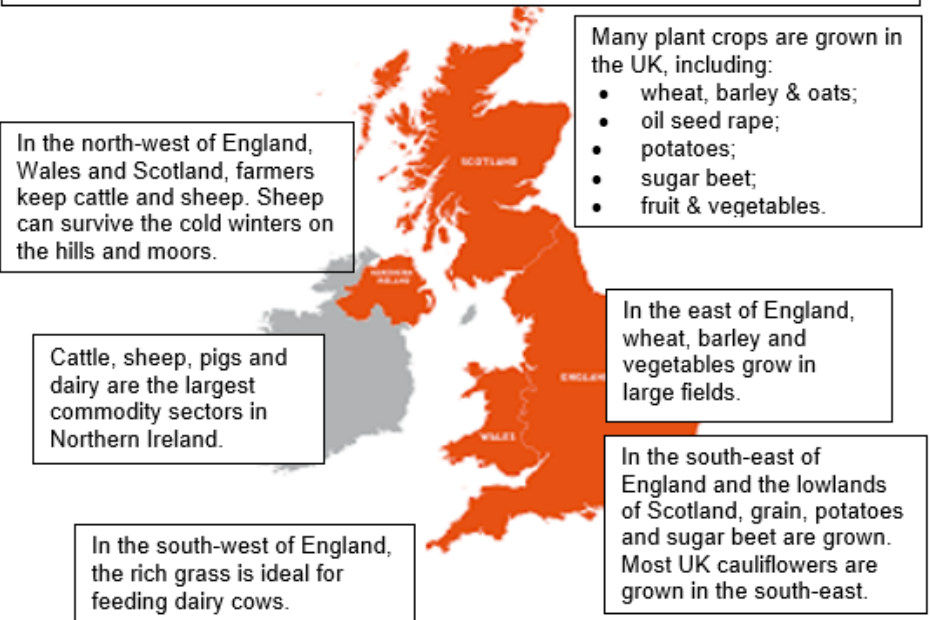
All food must be grown, reared or caught

In the past food was grown, prepared and cooked at home or sold by small-scale producers or merchants.

Some people still grow food at home or on allotments. Food can also be bought from a wide range of sources, including:

- cafes/coffee shops
- convenience stores
- farmers markets
- farm shops
- markets

Map showing key growing areas in the UK – some parts of the UK have excellent soil for crops, while others are used for cattle, sheep, pigs and poultry.



Year 8 Technology : Food & Nutrition

Farming systems

Agriculture in the UK can be grouped into the following:

- **Intensive** – a system of production using large amounts of labour and capital relative to land use (high input/high output)
- **Organic** – a system where artificial fertilisers are not allowed to be used, soil fertility is built through crop rotation, and inorganic pesticide use is severely restricted. It is a form of extensive farming
- **Free-range** – a system where animals, for at least part of the day, can roam freely outdoors. This may be done within a conventional or an organic system

Religion

Christianity – no strict food laws. Good Friday & Fridays in Lent - no meat.

Judaism - KOSHER meat (painless slaughtering with blood drained from the animal). Only 'split hoof' animals to be eaten (cows, goats, sheep). NO pork & fish without scales. NO meat with dairy (seen as mother & child)

Islam/Muslim - HALAL meat (blessed during slaughtering) NO pork & fish without scales. No alcohol. Ramadan = fast from sunset to sunrise.

Hindu – Most are vegetarian.

Sikhism – NO beef or alcohol. Most are vegetarian.

Buddha – Most are vegetarian as they are against killing.

Rastafarian - no pork. Most vegetarian.

Vegetarian- chooses not to eat any meat and sometimes products deriving from animals Why? Religious or personal reasons (i.e. ethical, environmental, cost or not enjoying the taste/texture)

Pesco-vegetarian: Eats fish, products derived from animals & dairy. NO meat.

Vegan: NO meat, fish, products derived from animals or dairy. *Product derived from animal – eggs **Dairy – milk, cheese, yogurt

Lactose intolerant

Lactose – sugar in milk. Sufferers are intolerant to this. (causes adverse effects). Must substitute milk for alternatives (i.e. soya, almond) & dairy products

Nut allergy

Fatal reactions if nuts are eaten so must be careful. Adapt recipes i.e. for cake & biscuit. Labels MUST state if they contain nuts

Coeliac

Gluten (in wheat, barley, rye) which produces bread, biscuit, cake, pasta, sauces. Substitute– coconut, rice, corn turn into flour. Check label

Diabetic

Glucose isn't used up by body for energy so it stays in the body. Regular meals, include carbohydrates, cut down the 3 S's



Sensory analysis is a scientific discipline that uses human senses—sight, smell, taste, touch, and hearing—to objectively measure, analyse, and interpret reactions to products. It is essential for food quality control, new product development, and understanding consumer preferences.



Year 8 Topic 2 Part 1: Où habites-tu? – Where do you live?

At the weekend

Tu vas où le week-end?

- Where do you go on the weekend?

Je vais... - I go...

...au café - ...to the café

...au centre commercial - ... to the shopping centre

...au centre de loisirs - ...to the leisure centre

...au château - ...to the castle

...au cinéma - ...to the cinema

...au marché - ...to the market

...au parc - ...to the park

...au restaurant - ...to the restaurant

...au stade - ...to the stadium

...à l'hôtel - ...to the hotel

...à la piscine - ...to the swimming pool

...aux magasins - ...to the shops

...aux musées - ...to the museums

pour voir un match – see a match

pour regarder un film – to watch a film

pour faire du patin à glace – to do ice-skating

pour nager – to swim

pour voir les choses historique

– to see historic things

Avant d'aller (au cinéma), je vais...

– Before going to the cinema, I go...

D'accord - OK

Oui, je veux (bien) - Yes, I (really) want to

Oui, bonne idée – Yes, good idea

Non, je n'ai pas envie - No, I don't want to

Si tu veux - If you want

Non merci - No thank you

Where we live

J'habite à... – I live in...

C'est un grand / petit village

– It's a big / small village

C'est une grande / petite ville

– It's a big / small town

J'y habite depuis (deux) ans

– I've lived there for (two) years

J'y habite depuis toujours

- I've always lived there

J'aime habiter ici – I like to live here

J'aime y habiter – I like living there

J'aime habiter là-bas – I like living there

Je suis très content(e) d'habiter ici

- I am very happy to live here

Je voudrais habiter à... I would like to live in...



Key ideas

In my town

At the weekend

Making plans

Making plans

Tu veux...(aller au stade)?

Do you want... (to go to the stadium)?

...aller au concert - ...to go to the concert

...aller au cinéma - ...to go to the cinema

...aller au parc - ...to go to the park

...aller au centre de loisirs - ...to go to the leisure centre

...aller à la piscine - ...to go to the pool

...aller à la plage - ...to go to the beach

...aller aux magasins - ...to go to the shops

...manger au restaurant / café - ...to eat at a restaurant / cafe

...visiter les jardins / les musées - ...to visit gardens / museums

In town

Qu'est-ce qu'il y a dans ta ville?

- What is there in your town/city?

Dans ma ville... - In my town...

Ici... - Here...

Là-bas... - Over there...

il y a... - there is...

...un café - ...a café

...un centre commercial - ...a shopping centre

...un centre de loisirs - ...a leisure centre

...un château - ...a castle

...un cinéma - ...a cinema

...un hôtel - ...a hotel

...un marché - ...a market

...un parc - ...a park

...un restaurant - ...a restaurant

...un stade - ...a stadium

...une piscine - ...a swimming pool

...des magasins - ...some shops

...des musées - ... museums

Il n'y pas de (café) - There isn't a café

Il n'y a pas d' (hôtel) - There isn't a hotel

Year 8 Topic 2 Part 1: Transferable language

Habiter – to live

J'habite – I live

Tu habites – You live (singular / informal)

Il habite – he lives

Elle habite – she lives

On habite – we live

Nous habitons – we live

Vous habitez – you live (plural / polite)

Ils habitent – they live (m / m+f)

Elles habitent – they live (f)

Aller – to go

Je vais – I go

Tu vas – you go (singular / informal)

Il va – he goes

Elle va – she goes

On va – we go

Nous allons – we go

Vous allez – you go (plural / polite)

Ils vont – they go (m / m+f)

Elles vont – they go (f)

Vouloir – to want

Je veux – I want

Tu veux – you want (singular / informal)

Il veut – he wants

Elle veut – she wants

On veut – we want

Nous voulons – we want

Vous voulez – you want (plural / polite)

Ils veulent – they want (m / m+f)

Elles veulent – they want (f)

To The

à = to

au – to the (masc. = à + le = au)

à la – to the (fem. = à + la = à la)

à l' – to the (vowel sound = à + l' = à l')

aux – to the (plural = à + les = aux)

Key verbs in the present tense

Time expressions

Quelquefois – Sometimes

Normalement – Normally

D'habitude – Usually

Tous les week-ends – Every weekend

En ce moment – At the moment

Souvent – Often

Tous les jours – Every day

Tous les soirs – Every evening

Tout le temps – All the time

De temps en temps – From time to time

Une fois par mois – Once a month

Deux fois par semaine – Twice a week

Ce matin / Cet après-midi / Ce soir

This morning / afternoon / evening

Ce week-end – This weekend

Aujourd'hui – Today

Using a range of language improves the quality of our speaking and writing and allows us to access more challenging texts!

Definite Article – The

Le – masculine

La – feminine

Les – plural

L' – starts with a vowel sound

Indefinite Article – A / An /

Some

Un – a / an (masculine)

Une – a / an (feminine)

Des – some (plural)

Je pense que – I think that
Je crois que – I believe that
Je dirais que – I would say that

À mon avis – In my opinion
c'est – it is
ce n'est pas – it isn't
Je trouve ça – I find that

important(e) - important
génial(e) – great
agréable – pleasant
joli(e) – pretty
moche – ugly

Intensifiers

très – very
assez – quite
vraiment – truly
réellement – really

un peu – a bit
peu – little
trop – too
extrêmement – extremely
tellement – so

Connectives

et – and
mais – but
aussi – also
parce que – because
car – because
puisque – since
cependant – however
malheureusement – unfortunately



Year 8 Topic 2 Part 2: Où habites-tu? – Where do you live?

Comparatives

Mon appart est plus *grand* que ton appart. – My apartment is more *big* than your house.

Ma maison est plus *intéressante* que ta maison. – My house is more interesting than your house.

Qu'est-ce qu'on peut faire dans ta ville?

- What can you do in your town?

Dans ma ville, on peut...

- In my town, you can...

À Bolton, on peut...

- In Bolton, you can...

Ici, on peut...

- Here, you can...

Là-bas, on peut...

- There, you can...

visiter les musées - visit museums

visiter les jardins - visit the gardens/parks

visiter les monuments - visit monuments

aller au concert - go to a concert

manger au restaurant - eat at a restaurant

faire du roller ou du skate - to do rollerblading or skating

faire du vélo - to go on a bike ride / do cycling

faire du bowling – to do bowling

jouer au babyfoot au café - to play table football at the cafe

jouer au flipper au café - to play pinball at the cafe

faire une promenade en barque

- to do a boat trip

Adjectival sentences

J'habite dans un *petit* village *propre*

J'habite dans une *belle* maison

confortable

My house

C'est comment chez toi?

- What is your house like?

Dans ma maison, il y a (huit) pièces

- In my house, there are (eight) rooms

Chez moi, il y a... – At mine, there is

Voici...- Here is...

la chambre de mes parents...

- my parents' bedroom

la chambre de ma sœur...

- my sister's bedroom

ma chambre - my room

la cuisine - the kitchen

le jardin - the garden

la salle à manger

- the dining room

la salle de bain - the bathroom

le salon - the living room

les toilettes - the toilet

le bureau - the desk / office

la fenêtre - the window

la porte – the door

le lit - the bed

la table – the table

Opinions of where we live

Tu aimes ta ville/ton village?

Do you like your town/village?

J'adore ça - I love it

Je déteste ça - I hate it

J'aime habiter à...

- I like to live in...

J'aime habiter ici – I like to live here

J'aime y habiter – I like living there

J'aime habiter là-bas – I like living there

Je suis très content(e) d'habiter ici

- I am very happy to live here

Je voudrais habiter à... I would like to live in...

Key ideas

What you can do in town, Where we live

In my home

Adjectives agree with the noun they describe!

Adjectives before the noun

petit/petite –

small

grand/grande – big

gros/grosse –

big/fat

joli/jolie – pretty

beau/belle –

beautiful

vieux/vieille – old

nouveau/nouvelle

– new

moche - ugly

Adjectives after the noun

moderne – modern

confortable –

confortable

tranquille – quiet

animé/animée – lively

cool – cool

propre – clean

sale – dirty

agréable - pleasant



Year 8 Topic 2 Part 2: Transferable language

Of + the

de + le = du (masc.)

de + la = de la (fem.)

de + les = des (plural)

de + l' = de l' (starts with a vowel sound)

Habiter – to live

J'habite – I live

Tu habites – You live (singular / informal)

Il habite – he lives

Elle habite – she lives

On habite – we live

Nous habitons – we live

Vous habitez – you live (plural / polite)

Ils habitent – they live (m / m+f)

Elles habitent – they live (f)

Pouvoir – to be able to

Je peux – I can

Tu peux – you can (singular / informal)

Il peut – he can

Elle peut – she can

On peut – we can

Nous pouvons – we can

Vous pouvez – you can (plural / polite)

Ils peuvent – they can (m / m+f)

Elles peuvent – they can (f)

Prepositions

dans - in

devant - in front of

derrière - behind

entre - in between

sous - under

sur - on

à côté de - next to

à droite de - on the right of

à gauche de - on the left of

en face de - opposite

Using a range of language improves the quality of our speaking and writing and allows us to access more challenging texts!

Key verbs in the present tense

Je pense que – I think that

Je crois que – I believe that

Je dirais que – I would say that

À mon avis – In my opinion

c'est – it is

ce n'est pas – it isn't

Je trouve ça – I find that

Time expressions

Quelquefois – Sometimes

Normalement – Normally

D'habitude – Usually

Tous les week-ends – Every weekend

En ce moment – At the moment

Souvent – Often

Tous les jours – Every day

Tous les soirs – Every evening

Tout le temps – All the time

De temps en temps – From time to time

Une fois par mois – Once a month

Deux fois par semaine – Twice a week

Ce matin / Cet après-midi / Ce soir

This morning / afternoon / evening

Ce week-end – This weekend

Aujourd'hui – Today

Intensifiers

très – very

assez – quite

vraiment – truly

réellement – really

un peu – a bit

peu – little

trop – too

extrêmement –

extremely

tellement – so

Connectives

et – and

mais – but

aussi – also

parce que – because

car – because

puisque – since

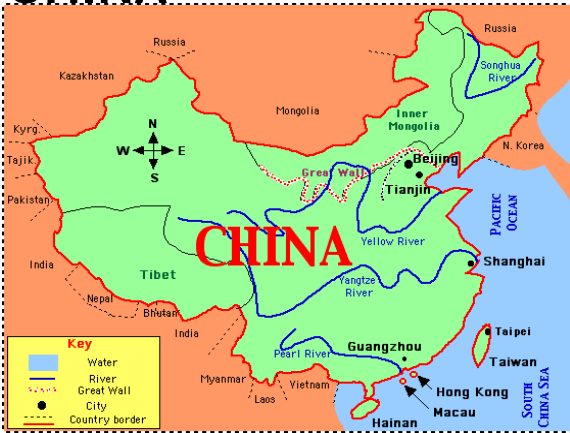
cependant – however

malheureusement –

unfortunately



CHINA



China is located in the continent of **Asia**. North east to China is the Pacific Ocean and south east is the South China sea. China has major cities including Beijing in the north and Guangzhou in the south. China is also home to a variety of different physical features including the **Gobi desert** and **Mt Everest** in the Himalayas mountain range.

Where do 1.4 billion people live?

The population in China is not the same number in every region. Some will have a higher population than others. We refer to **where people live (spread out) in geography as population distribution.**

Densely populated – A lot of people living in an area, making it compact and crowded

Sparsely populated – Not as many people living in area.

How is development measured?

Gross Domestic Product (GDP) £.

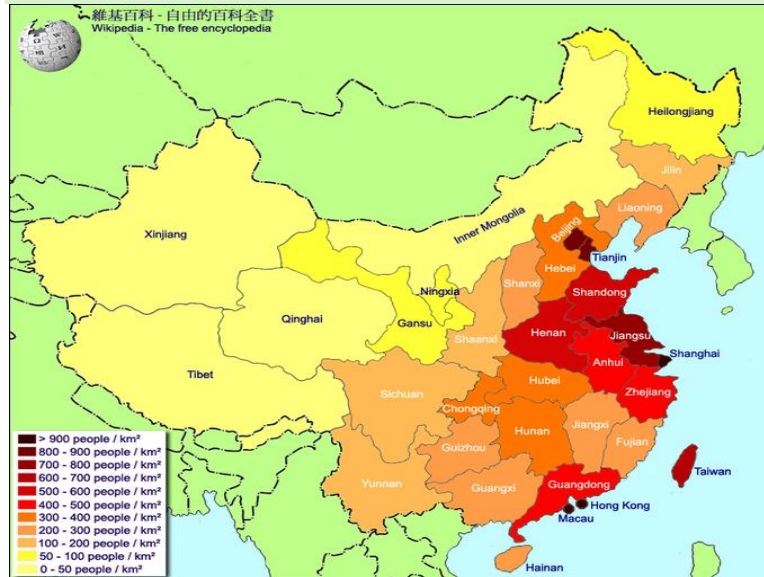
The value of **all the goods and services produced by a nation in any one year.**

Human Development Index (HDI) £+😊

Measures development by combining measures of life expectancy, education and income. It is **different from GDP as it measures wealth, health and happiness.**

So is China actually that rich?

Despite having a **high GDP** mainly due to manufacturing, China has a high population (the world's largest) and a **large proportion do not share the wealth...**



China's One Child Policy

China's one-child policy was a mandatory family planning policy implemented from 1979/1980 to 2015, restricting many families to one child to control rapid population growth.

Parents in China receive the cost of child care and medical expenses for their one child.	Abortion rate has gone up as women are pressured if pregnant for a 2 nd time
There is now 60 million more men than women.	There will be nobody to look after the elderly
Couples who break the policy are often forced into sterilisation- which is against their human rights	Babies are being abandoned, particularly baby girls as women are less superior in Chinese society



Foxconn Factory TNC in China

Foxconn is a major manufacturer that serves high-profile consumer electronics firms such as Dell, Motorola, Nintendo, Nokia, Apple, and Sony.

FOR	AGAINST
<p>Foxconn employs 1.3 million people in China.</p> <p>Foxconn makes products for Amazon, Apple, Google, and Nintendo</p>	<p>Many employees work up to twelve hours a day for 6 days each week.</p> <p>Between January and May 2018, 18 workers committed suicide.</p> <p>Foxconn assembly-line workers will make as approximately £330 a month. That's for 160 working hours a month, so the hourly pay is about £2.</p>

China's pollution problem

Scientists estimate that China's pollution problems claim 4,000 lives per day.

China has a lot of coal power plants which emit lots of pollutants. These coal mines and car exhausts are responsible for the smog surrounding the major cities.

Road rationing – different licence plates on different days allowed
 Traffic Straddling buses
 Kyoto agreement – international agreement which sets targets globally

Great Wall of China



Jobs are often seasonal and poorly paid and tourism pushes up local houses prices and costs of goods and services for the locals.

Tourists can be seen as being disrespectful for Chinese culture by breaking the brick out of the Great Wall for a souvenir.

Attracts more tourists each year therefore generating money to the government and the economy and brings new opportunities for people seeking jobs

What is a superpower?

A very powerful and influential nation (e.g. the USA). They are able to project their influence anywhere in the world. They are a dominant global force.

Emerging superpower – a country which may become a dominant global force in the future

China's place in the world is it a superpower?

It's rare to pick up something without seeing the words "Made in China" written on it. That's because China is the world's biggest exporting and trading country, having exported £500 billion worth of goods into Europe in 2018. Also up to 20% of all the products China makes end up in the USA.

BUT...

many people believe China is not yet made of superpower 'stuff'. This is because the government interferes with its economy a lot! Financially many people still live in poverty. The government also favour some companies over others so it is not a fair system! AND to be THE global superpower China needs global support which it currently lacks, many countries as suspicious of China's spying and have claimed that Huawei are trying to steal trade secrets from other companies.

Year 8 Coasts

Term	Definition
Coast	Where the land meets the sea
Island	A piece of land completely surrounded by sea
Erosion	When the sea wears away the land
Weathering	When the weather or plants cause rock to breakdown
Transport	How the sea transports material
Deposition	When the sea drops material due to a lack of energy
Landform	A natural feature of the earth e.g. beach
Wave	A disturbance on the surface of the water usually by the wind. They look like ridges.
Swash	When a wave moves up the beach
Backwash	When a wave goes back down the beach



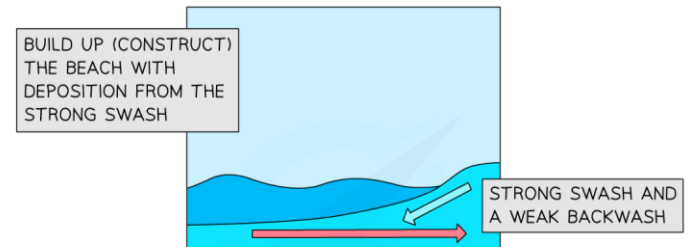
Great Britain (Therefore, and) is an **island** surrounded by sea. Therefore you are never far from the **coast**. The **landforms** on our **coast** have all been created by the sea through the processes of **erosion, transport** and **deposition**.

Types of wave

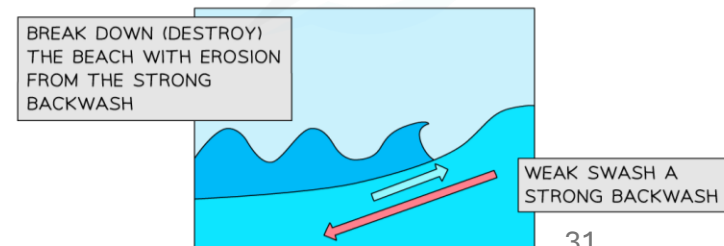
There are two different types of wave. Constructive waves which are low energy and deposit material on the shore. These build beaches.

Destructive waves are high energy and usually occur during storms when there is lots of wind. Over time they destroy beaches and cliffs.

CONSTRUCTIVE WAVES HAVE A LOWER WAVE HEIGHT



DESTRUCTIVE WAVES HAVE A HIGHER WAVE HEIGHT



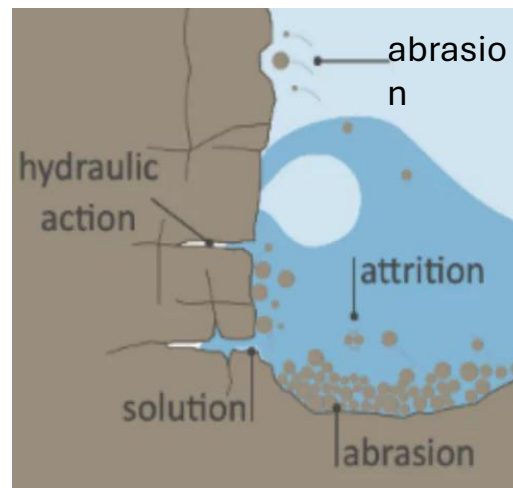
Erosion: When the sea wears away the land. There are four different processes of erosion.

Hydraulic Action: Is the force of the waves hitting the cliffs. Air bubbles are forced into cracks Weakening the rock until it breaks off.

Abrasion: small rocks and pebbles hitting the cliff repeatedly wears the cliff away.

Attrition: rocks bashing into each other and becoming smaller and smoother.

Solution: Chemicals in the water can slowly dissolve Certain types of rock.

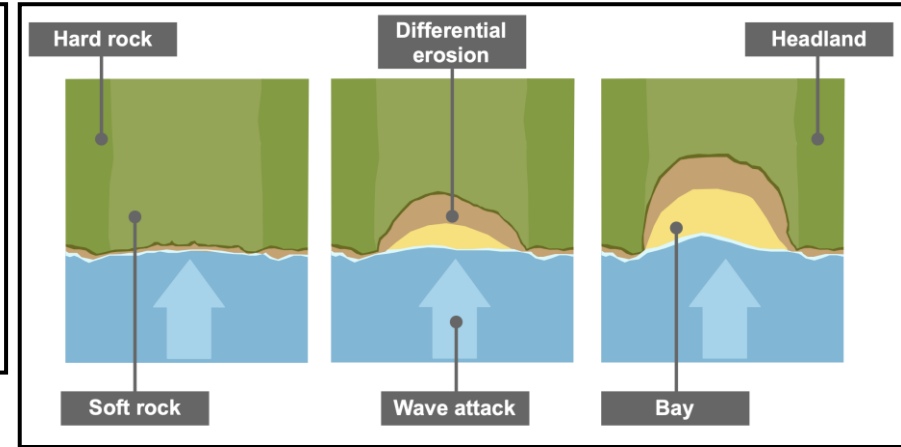


Types of Weathering:

1. Biological: plant roots can weaken or break rock apart
2. Chemical: chemicals in the rain can slowly dissolve certain types of rock
3. Mechanical (free-thaw) water that gets into cracks in rocks will expand as it freezes and compress as it melts. Over time this can cause rocks to break apart.

A coastal landform created by erosion: HEADLANDS AND BAYS

1. Headlands and bays form where there are alternating bands of hard and soft rock perpendicular to the oncoming waves (see the labels on the first diagram)
2. At first, the softer rock (e.g. clay) is eroded backward by differential erosion (hydraulic action and abrasion), forming an inlet
3. As the inlet continues to erode it curves inwards, and a bay is formed, usually with a beach.
4. The harder rock (e.g. limestone) is left sticking out to sea as a headland



Coastal Transportation and Deposition can form: A COASTAL SPIT



The prevailing (most common) wind direction can create waves that hit a beach at an angle. This has the potential for material to be transported down the coast (see picture labelled longshore drift)

At times the wind can change direction which makes the material get deposited and form a hook. See land in front of salt marsh. Eventually enough sand builds up, sand dunes form and the sea behind the spit will start to dry out creating a salty marsh.

Deposition and change in wind direction over many years can create coastal spits.

Y8 - Knowledge Organiser - The First World War

What do I need to know?

- What were the long term causes of the First World War?
- How did the assassination of Franz Ferdinand lead to the outbreak of the First World War?

What were the long term causes of the First World War

- **Militarism - Building up armed forces (army and navy), getting ready for war.** Many European countries had industrialised during the late 1800s and early 1900s. This allowed many European countries build massive armies with the most up to date technology. Britain led the charge at sea, creating dreadnought battleships.
- **Alliances - Agreements or promises to defend and help another country.** Many countries at the time agreed to work together and protect each other in case of war.
- **Imperialism - Trying to build up an Empire.** Many European countries believed they should have an Empire. . This caused a lot of tension between countries.
- **Nationalism - Having pride in your country, groups wanting to have a country of their own.** People felt that their country was superior to others. This was fuelled by government propaganda that sought to portray the war

How did the events in Sarajevo lead to war?

Archduke Franz Ferdinand of Austria-Hungary was assassinated on June 28, 1914, in Sarajevo, Bosnia, by Gavrilo Princip, a member of the Serbian nationalist group the Black Hand Gang. Austria-Hungary blamed Serbia. This led to many countries becoming involved because of the growing alliance system and putting pressure on the already strained relationships that ultimately triggered the start of World War I.



Key vocabulary

Empire	A collection of areas of land that are ruled over and controlled by one leading country.
Assassination	The murder of a well known person usually for political reasons.
Cause	A reason why something happens. These can be long term (happening for a long time) or short term (happen just before an event).

What was the Alliance system?



Triple Entente



Britain, France, Russia

Triple Alliance

Austria-Hungary, Germany, Italy

How did the Alliance system lead to WWI?

28th June	Archduke Franz Ferdinand is assassinated in Sarajevo, Bosnia
6th July	Germany offers a 'blank cheque' to find the killers and punish them. It says it will support the punishment
23rd July	Austria – Hungary give Serbia an ultimatum – Give them anyone who was involved in the assassination or face war
28th July	Serbia refuses to co-operate with Austria-Hungary. Austria-Hungary declares war on Serbia
31st July	Russia, supporting Serbia starts to move troops and prepare for war.
1st August	Germany asks Russia to hold off its defence of Serbia. Germany also sends troops towards France
2nd August	Germany demands safe passage through Belgium or threatens invasion – Belgium refuse
4th August	Germany invades Belgium and Britain declares war on Germany because of a treaty from 1839 that Germany broke by invading Belgium.
6th August	Austria-Hungary declare war on Russia. WW1 had begun.

What do I need to know?

- Why did men volunteer to fight in the First World War?
- Conscientious objectors: brave men or cowards?
- What was the contribution of Empire troops to the First World War?

Why did men volunteer to fight in the First World War?

- **Patriotism and Duty** – Many British men felt a strong sense of patriotism and duty to their country. Propaganda, national pride, and loyalty to the British Empire encouraged them to enlist, believing they were defending Britain.
- **Social Pressure and Expectations** – White feathers were given to men who didn't volunteer, and posters depicted soldiers as heroes, making it difficult for men to refuse without being labelled as cowards.
- **Adventure and Travel** – For many young men, the promise of adventure, travel to foreign lands, and the belief that the war would be short encouraged them to sign up willingly.
- **Economic Hardship** – Many working-class men faced unemployment and poverty. The army provided stable pay, food, and shelter,
- **Pals Battalions and Community Bonds** – The British Army encouraged men to enlist together in "Pals Battalions," meaning they could fight alongside friends, relatives, and colleagues. This sense of camaraderie and loyalty to their communities played a huge role in recruitment.
- **Propaganda** – The British Government set up a large-scale campaign using posters to convince men to join the war. The posters usually targeted men's 'moral duty' to the service their country and protect their family. Sometimes the posters even targeted women to get them to apply pressure to men to join up.

Key vocabulary

Volunteer	When someone freely offers to do something
Conscientious Objector	Men who were opposed to the war and did not want to fight.
Recruitment	Enlisting new people into the armed forces
Conscription	When every man aged between 18 and 41 had to join the army.

What was the contribution of Empire troops to the First World War?

- **Manpower from India** – Over 1.3 million Indian soldiers served, fighting in major battles like Ypres and the Somme, with around 74,000 losing their lives for Britain.
- **Canadian Forces at Vimy Ridge** – Canadian troops played a crucial role in the 1917 Battle of Vimy Ridge, securing a key victory that boosted Allied morale and national pride.
- **African Soldiers and Laborers** – Thousands from British Africa, including the King's African Rifles, served in the East African campaign, while many more worked as porters and laborers.
- **West Indian Regiment** – Caribbean soldiers served in the British West Indies Regiment, fighting in the Middle East and supporting European campaigns despite facing discrimination and poor conditions.

Conscientious objectors: brave men or cowards?

- Those who refused to fight were called conscientious objectors (COs). Objecting on moral or religious grounds led to non-combatant roles in civilian work of national importance: labouring on farms or in aid posts. Some volunteered to drive field ambulances, but failure to serve in any capacity meant imprisonment.
- Around 1500 men refused to contribute to the war in any way. Many of these were imprisoned serving repeated sentences under hard labour. Conditions were harsh and 73 absolutists died of the treatment they received.
- One notable objector was William Chadwick from Westhoughton. He was a communist and did not believe in going to war. He was a fireman and lived at 15 Market Street. He was arrested and court-martialled on 12 May and was sentenced to hard labour. After the war, William found it difficult to get work, as many employers discriminated against COs.



What do I need to know?

- How did women campaign for the vote?
- Did Emily Davison aim to die for the vote?
- Was the First World War a turning point for women?

Was the First World War a turning point for women?

World War I was a turning point for women, as they took on roles in factories, transport, and nursing, proving their capability beyond traditional domestic work. Their contributions challenged gender norms and strengthened arguments for suffrage, leading to women over 30 gaining the vote in Britain in 1918.

It was not a turning point as while World War I gave women more opportunities, many lost their jobs once men returned. Traditional gender roles persisted, and full suffrage wasn't granted until 1928. Women's rights were already advancing before the war, suggesting it was a catalyst rather than a true turning point for long-term equality.

Did Emily Davison aim to die for the vote?

Emily Davison intended to die for the vote, as she had a history of extreme suffragette activism, including hunger strikes and force-feeding. She carried a suffragette flag and positioned herself dangerously in front of the king's horse, suggesting a deliberate act of martyrdom to draw attention to women's suffrage.

Davison likely did not intend to die, as she had a return train ticket and a ticket for a suffragette event later. She may have aimed to attach a suffragette scarf to the king's horse to gain publicity. Her actions were reckless but may not have been a deliberate suicide mission.

How did women campaign for the vote?

• **Militant Tactics (Suffragettes?)**- They belonged to the Women's Social and Political Union (WSPU). Engaged in more disruptive tactics, such as window smashing, arson, and chaining themselves to public places, refused to pay taxes or other civic obligations to protest the lack of voting rights, went on hunger strikes in prison to protest their treatment and gain attention to the cause.

• **Peaceful and Persuasive Tactics (Suffragists) - Formed organizations like the National Union of Women's Suffrage Societies (NUWSS)** to coordinate efforts and raise awareness, collected signatures on petitions and lobbied politicians to support women's suffrage, delivered speeches, wrote articles, and organized public events to educate the public about the importance of women's suffrage, organized peaceful marches, demonstrations, and pickets to raise awareness and pressure the government.

Impact

Emily Davison's death brought massive **attention to the suffragette movement**. Her funeral became a powerful feminist demonstration, inspiring further activism. Though controversial, her sacrifice highlighted the struggles women faced. Her actions contributed to the growing pressure for change, helping pave the way for women's suffrage in Britain.

Key vocabulary

Suffragettes

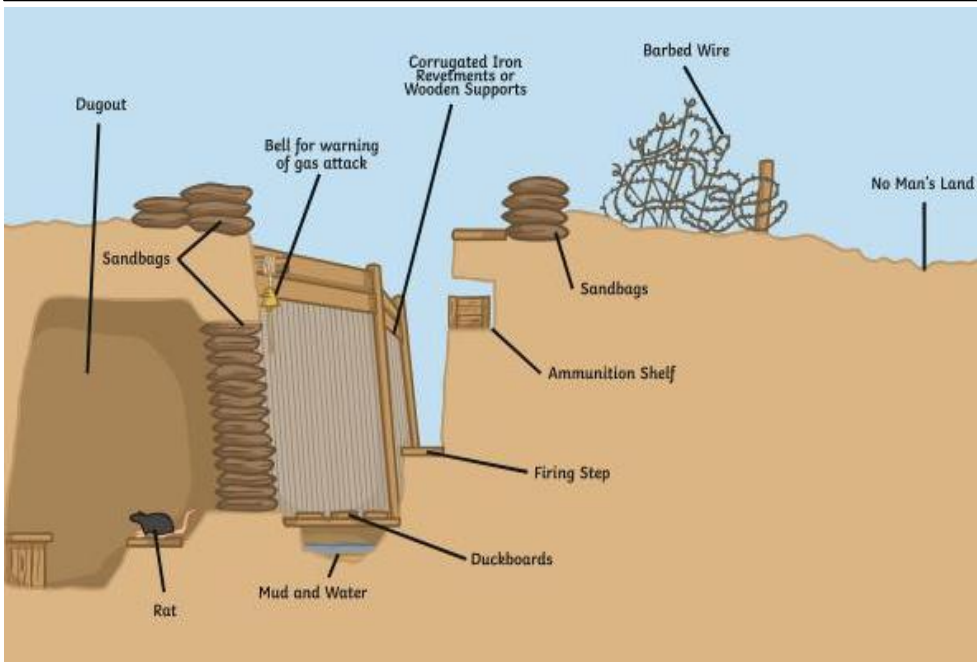
People who advocated for women's right to vote through militant and direct action tactics, often including civil disobedience.

Suffragists

People who advocated for women's right to vote through peaceful, legal means.

What do I need to know?

- How was trench warfare fought? What happened during the Battle of the Somme? What medical problems did they cause?



What happened during the Battle of the Somme?

The battle of the Somme, from July-November 1916, was one of WWI's **deadliest battles**. It was fought between British and French allied forces and Germany. It aimed to break the stalemate that had developed. Soldiers would leave their trench and **'go over the top'** running across no man's land. The first day saw 57,000 British casualties.

What medical problems were there in the trenches?

Trench Foot

Men would stand in waterlogged trenches for hours or even days. Their feet would eventually turn numb, and the blood would stop circulating to their feet. If left untreated their feet would be amputated. A known prevention was changing socks and applying whale oil to your toes!

Shellshock

Soldiers experienced dangerous encounters almost every day. They were constantly being fuelled by adrenaline. This caused many soldiers to develop PTSD (Post-traumatic stress disorder). Not much was known at the time and some soldiers were arrested for it!

Trench Fever

Soldiers would become very dirty in the trenches, and this would attract lice and rats. The lice would get in to the soldier's heavy wool clothing and bit the soldiers. This would then give the soldiers trench fever. They would experience hallucinations, high fevers and sweating. 'De-lousing' stations would be set up to give the soldiers clean clothes, haircuts and showers.

Battle injuries and gas attacks

Soldiers faced many horrific injuries on the Western Front with many suffering from bullet and shrapnel wounds. Gas attacks were also common with many gases being first used in WWI. Gases like chlorine and mustard gas were widely used. Soldiers were then issued with gas masks to prevent injury. Before that, some men used handkerchiefs soaked in urine!

How was trench warfare fought?

Trench systems were built in zigzag patterns for defense, with front-line, support, and reserve trenches. No man's land separated opposing trenches, preventing easy advances.

Key vocabulary

Trenches	Ditches that were dug into the ground and connected that were separated by an area of land called no man's land
Butcher	Someone who has no regard for human life
Bungler	Someone who makes a lot of mistakes

Pie charts



Component Knowledge

- Calculate angles in a pie chart
- Draw a pie chart from a table
- Interpret pie charts using fractions
- Interpret pie charts using angles

Key Vocabulary

Angle	The amount of turn between 2 lines.
Pie chart	A chart that displays data proportionally.
Protractor	Equipment used to measure and draw angles

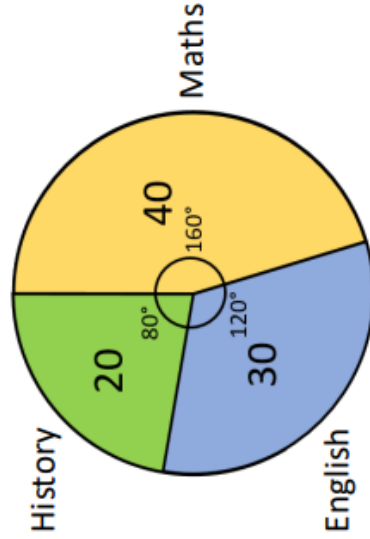
Drawing pie charts

How many degrees for one person? $\frac{360}{90} = 4^\circ$

$360 \div \text{total} = \text{degrees for one person}$. In this example one person is 4° .

Subject	Number of Students	Calculation	Angle
Maths	40	$40 \times 4^\circ$	160°
English	30	$30 \times 4^\circ$	120°
History	20	$20 \times 4^\circ$	80°
Total	90		360°

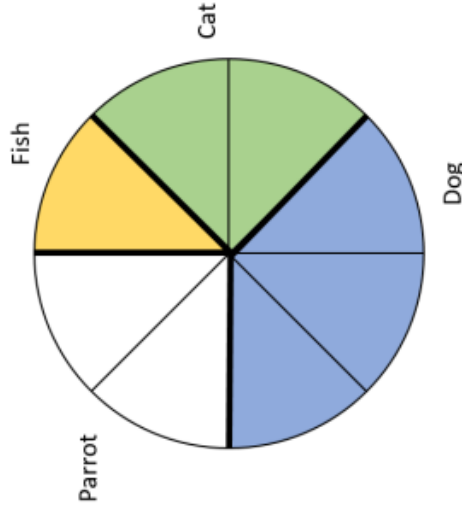
Multiply number of students by 4° to get the angle.



Draw the angles onto the pie chart. Label each part with what it is (subject in this example) and how many it represents (40 for Maths in this example).

Interpret pie charts (fractions)

A class of **32 students** were surveyed to find their **favourite pet**.
The **pie chart** shows the total answers. How popular was each animal?



The pie chart is split into 8 pieces,
so each sector is worth $\frac{1}{8}$ of $32 = 4$

$$\text{Fish: } \frac{1}{8} \text{ of } 32 = 4$$

$$\text{Cat: } \frac{2}{8} \text{ of } 32 = 8$$

$$\text{Dog: } \frac{3}{8} \text{ of } 32 = 12$$

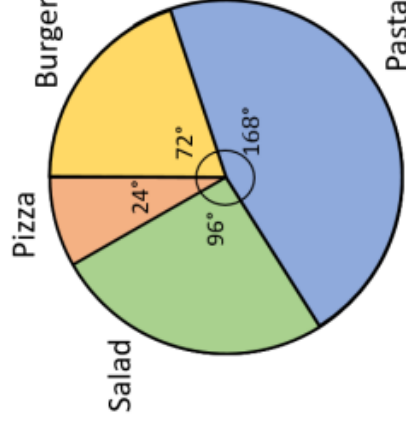
$$\text{Parrot: } \frac{2}{8} \text{ of } 32 = 8$$

Check that the totals add up to the original total in the question.
(4 + 8 + 12 + 8 = 32)

Interpret pie charts (angles)

150 students were surveyed about their favourite food.

Favourite Food	Angle	Calculation	Frequency
Burger	72°	$\frac{72}{360} \times 150$	30
Pasta	168°	$\frac{168}{360} \times 150$	70
Salad	96°	$\frac{96}{360} \times 150$	40
Pizza	24°	$\frac{24}{360} \times 150$	10



To calculate the frequency from a pie chart when you are given the angle,
you do the opposite of what you do to calculate the angle.

$$\text{Angle} \div 360 \times \text{total frequency}$$

Online clips

M574, M165

Systematic listing and Product rule



Component Knowledge

- To be able to list the possible outcomes of different events.
- To be able to use the product rule to determine the number of outcomes for different events.

Key Vocabulary

Outcome	The possible result of an experiment
Product	The answer when two or more numbers are multiplied together.

Systematic listing

Systematic listing is the method of listing all the possible outcomes of an event.

Worked example

At the ice cream kiosk, you can choose...**one flavour of ice cream and one topping.**

Flavour	Toppings
Vanilla	Flake
Chocolate	Sprinkles
Banana	Nuts

There are 9 possible combinations:

Vanilla and Flake, **Vanilla and Sprinkles**, **Vanilla and Nuts**
Chocolate and Flake, **Chocolate and Sprinkles**, **Chocolate and Nuts**
Banana and Flake, **Banana and Sprinkles**, **Banana and Nuts**

Product rule for counting

Product rule uses multiplication to determine the number of possible outcomes of an event rather than listing them all.

Worked example.

A safe has a 4-digit combination for example 4 5 7 8

Use the product rule to find the number of 4-digit combinations you can have on this safe.

Each digit has a possible 10 possibilities (0, 1, 2, 3, 4, 5, 6, 7, 8 and 9)

Number of combinations = 10 (1st digit) $\times 10$ (2nd digit) $\times 10$ (3rd digit) $\times 10$ (4th digit) = 10,000

Online clip

Probability



Component Knowledge

- Understand what probability shows
- Understand probability notation
- Write a probability of a single event

Key Vocabulary

Probability	The mathematical chance, likelihood, of an outcome happening
Event	The "thing" that is being completed/done/observed/counted
(Event) Outcome	What happens when the event is performed
Probability scale	A numerical scale from 0 to 1, with 0 being an impossible outcome and 1 being an outcome certain to happen
Mutually exclusive (event) outcomes	When outcomes cannot happen at the same time eg being an adult and being a child, you cannot be both
Exhaustive (event) outcomes	When a set of outcome cover all possibility with no gaps eg it snowing and it not raining

Probability:

The probability of an (event) outcome A, happening is

$$P(\text{outcome } A) = \frac{\text{number of ways outcome } A \text{ can happen}}{\text{number of ways any outcome can happen}}$$

e.g. the probability of rolling a number 4 on a regular 6 sided dice

Outcome "4": **4**, so **1 option**

$$P(\text{roll a } 4) = \frac{1}{6}$$

All possible outcomes: **1, 2, 3, 4, 5 or 6**, so **6 possibilities altogether**

e.g. the probability of rolling a number greater than 4 on a regular 6 sided dice

Outcomes "greater than 4": **5 or 6**, so **2 options**

$$P(\text{roll a number greater than } 4) = \frac{2}{6}$$

All possible outcomes: **1, 2, 3, 4, 5 or 6**, so **6 possibilities altogether**

Online clips

M655, M941, M938, M755

Frequency trees



Component Knowledge

- Complete a frequency tree from given information.
- Calculate probabilities from a frequency tree

Key Vocabulary

Frequency	The number of times an event occurs.
Probability	The chance that something will happen.
Frequency tree	Used to record and organise the frequency of events occurring.

Frequency trees are a way of organising information. They can be used to solve probability problems.

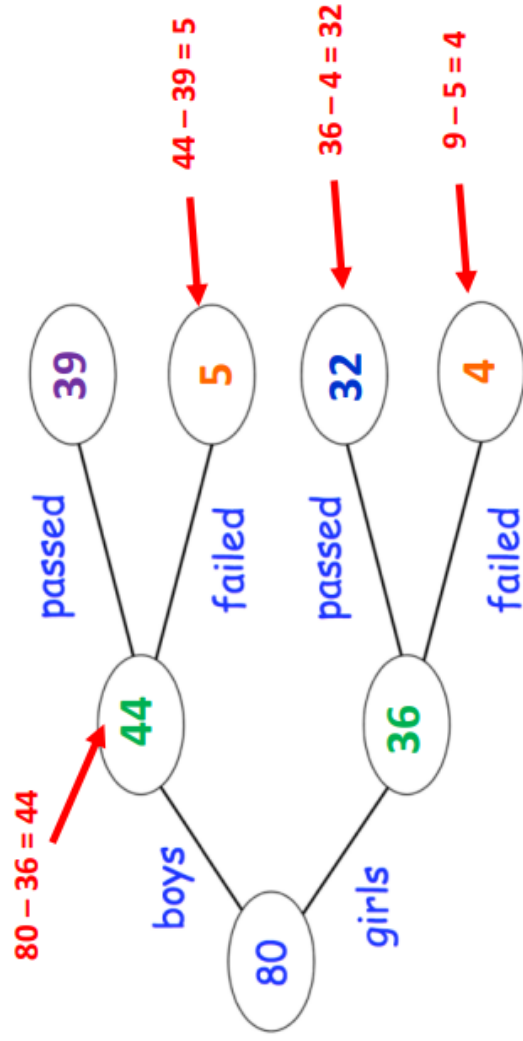
We start with the total number of items and then divide these items into two or more categories, writing down the frequency of items in each category.

A group of 80 boys and girls sat a test.

36 of the children are girls.

9 of the 80 children failed the test.

39 of the boys passed the test.



One of the boys is chosen at random.

Work out the probability that the boy failed the test. $\frac{5}{44}$

Online clip

U280

Relative Frequency



Component Knowledge

- Understand what relative frequency is
- Calculate experimental probability
- Use relative frequencies or experimental probabilities to estimate expected outcomes

Key Vocabulary

Probability	The mathematical chance, likelihood, of an outcome happening
Event	The “thing” that is being completed/done/observed/counted
(Event) Outcome	What happens when the event is performed
Probability scale	A numerical scale from 0 to 1, with 0 being an impossible outcome and 1 being an outcome certain to happen
Theoretical probability	Probability based on reasoning
Experimental Probability	Probability estimated from the results of conducting an experiment (set of observations)
Frequency	The number of times something happens
Relative frequency	The number of times an event outcome happens relative to the number of times the event takes place (number of times experiment is conducted)
Number of Trials	The number of times an experiment is conducted
Expected outcomes (Expectation)	The number of times you would expect a particular (event) outcome to happen for a specified number of trials

Experimental Probability:

An **estimate** of the probability of an (event) outcome **A**, happening when an experimental is conducted

$$Exp(\text{outcome } A) = \frac{\text{number times outcome } A \text{ happened}}{\text{number of times event takes place (total number of trials)}}$$

e.g. If a biased coin is flipped 20 times and lands on tails 7 times

$$Exp(\text{lands on tails}) = \frac{7}{20}$$

Relative Frequency:

The number of times (frequency) an (event) outcome **A** happens, in relation to the number of times the event is performed

$$Rf(\text{outcome } A) = \frac{\text{number times outcome } A \text{ happened}}{\text{number of times event takes place (total number of trials)}}$$

e.g. If a biased coin is flipped 20 times and lands on tails 7 times

$$Rf(\text{lands on tails}) = \frac{7}{20}$$

Relative frequencies are commonly written as decimal $Rf(\text{lands on tails}) = 0.35$

Relative Frequency v Experimental Probability:

Can be thought of as inter-changeable, relative frequency is used as an experimental probability.

Expectation:

Relative frequency can be used to estimate the probability of an (event) outcome A happening, and hence the expected number of times (event) outcome A would happen over a given number of observations (experiments)

Expectation of outcome $A = Rf(A) \times \text{number of trials}$

Eg The results of rolling a biased 6-sided dice 30 times are recorded in the table

Score	1	2	3	4	5	6
Frequency	4	5	2	8	4	7

The relative frequencies can be calculated by $\frac{\text{frequency}}{\text{total number of trials (rolls of dice)}}$

Rel Freq	$\frac{4}{30}$	$\frac{5}{30}$	$\frac{2}{30}$	$\frac{8}{30}$	$\frac{4}{30}$	$\frac{7}{30}$
----------	----------------	----------------	----------------	----------------	----------------	----------------

i. **Estimate** the number of times the dice would land on 4, if rolled 120 times

Expectation of "lands on 4" = $Rf(\text{lands on 4}) \times \text{number of trials}$

$$\begin{aligned}\text{Expectation of "lands on 4"} &= \frac{8}{30} \times 120 \\ &= \frac{8 \times 120}{30} \\ &= 32\end{aligned}$$

When rolled 120 times we would expect the dice to land on a 4, 32 times.

Note: Like Probabilities, relative frequencies should always sum to 1.

Online clips

M332, M206



Sample Spaces

Component Knowledge

- Complete a sample space diagram to show possible outcomes
- Calculate probabilities from a sample space diagram

Key Vocabulary

Outcome	The way something turns out
Sample space	Records the possible outcomes of two different events happening
Event	A thing that happens or takes place
Probability	The chance of an event happening
Independent	Events which do not have an effect on each other
Dependent	Has an effect on something else – eg Not replacing a counter when taking multiple out of a bag

Creating a sample space diagram

- 1 Use information provided to decide whether to write a list or create a table to find all possible outcomes.
- 2 Systematically write the list or fill in the table by either listing outcomes or performing operations with values.
- 3 Use the information from the list or table to find any probabilities required.

This is what a sample space would look like for spinning a spinner and flipping a coin

	Spinner	
$\frac{1}{2}$	Red	Green
	Blue	Blue
$\frac{1}{2}$	Heads	H,G
	Tails	T,G

Finding a probability from a sample space

Two dice are thrown and the possible outcomes are shown in the sample space diagram below:

	1	2	3	4	5	6
1	(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)
2	(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
3	(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
4	(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
5	(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
6	(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)

- 1) What is the probability that 2 numbers which are the same are rolled?

$$\frac{6}{36} = \frac{\text{outcomes where numbers are the same}}{\text{total number of outcomes}}$$

- 2) What is the probability that two even numbers are rolled?

$$\frac{9}{36} = \frac{\text{outcomes where numbers are both even}}{\text{total number of outcomes}}$$

Creating a table helps to organise the information you have and ensures that no outcomes are missed or repeated.

You might also be asked to do a calculation to fill in the sample space instead of just putting the outcomes straight in.

This sample space shows the difference between the outcomes when 2 dice are rolled.

	1	2	3	4	5	6
1	0	1	2	3	4	5
2	1	0	1	2	3	4
3	2	1	0	1	2	3
4	3	2	1	0	1	2
5	4	3	2	1	0	1
6	5	4	3	2	1	0

Online clip

M718



Two-way Tables

Component Knowledge

- Construct two-way tables.
- Read and interpret two-way tables.
- Find probabilities using two-way tables.

Key Vocabulary

Two-way table	A table which shows two variables at the same time- we can read them vertically and horizontally.
Horizontal	Reading from left to right or right to left
Vertical	Reading the table top to bottom or bottom to top
Variable	A way of organising data according to a shared characteristic e.g eye colour, age

We use two-way tables to compare 2 variables

To construct a two-way table, we need two variables. One variable is featured as the top row within the two-way table (read horizontally), and the other variable features on the first column of the table (read vertically).

Example

This two way table shows a data set about what students eat for lunch.

	Boys	Girls	Total
Cooked food	18	22	40
Packed lunch	17	33	50
Total	35	55	90

The first column shows the type of food chosen.

The top row shows boy or girl.

17 boys had a packed lunch

90 students were asked in total
(40+50=90 and 35+55=90)

Example: 80 children went on a school trip.

They went to London or to York.

23 boys and 19 girls went to London.

14 boys went to York.

(a) Use this information to complete the two-way table.

	London	York	Total
Boys	23	14	
Girls	19		
Total			80

Step 1- fill in all known values from the question.

Total = 80

Boys in London = 23

Girls in London = 19

Boys in York = 14

Example: 80 children went on a school trip.

They went to London or to York.

23 boys and 19 girls went to London.

14 boys went to York.

(a) Use this information to complete the two-way table.

	London	York	Total
Boys	23	14	37
Girls	19	24	43
Total	42	38	80

Annotations:

- 23 + 19 = 42
London total
- 23 + 19 = 42
Boys total
- 80 - 42 = 38
York total
- 80 - 37 = 43
Girls total
- 38 - 14 = 24
Girls in York

Interpreting two-way tables

We can now use the fully completed two-way table to interpret the data.

	London	York	Total
Boys	23	14	37
Girls	19	24	43
Total	42	38	80

Questions could look like this:

a) How many students went to London?

We can read from the table vertically and see there **were 42 students who visited**

b) One of these 80 students is chosen at random.

What is the probability that this student visited London?

We can read from the table vertically and see there **were 42 students who visited London.**

So, the $P(\text{a student visits London}) = \frac{42}{80}$

c) A student is picked at random.

Given they are a girl, what is the probability they went to York?

We can read the table to find the **total girls = 43** and the **girls who visited York = 24**

So, the $P(\text{given the student is a girl, they visit York}) = \frac{24}{43}$

Venn

Diagrams



Component Knowledge

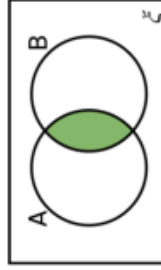
- Complete a Venn Diagram when given a set of data
- Fill in missing values in a Venn Diagram
- Interpret a Venn diagram
- Find probabilities from a Venn Diagram
- Use simple set notation

Key Vocabulary

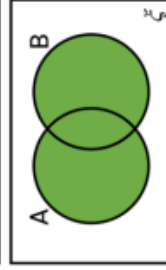
Set	A collection of "things" (objects or numbers)
Union	The set made by combining the elements of two sets
Intersection	The intersection of two sets has only elements common to both sets
Probability	The change that something happens
Venn Diagram	A diagram that shows sets which elements belong to which set by drawing regions around them. It is used to represent data that has an overlap.

Key Concepts

Venn diagrams show all possible relationships between different sets of data.



$A \cap B$
The **intersect** of A and B.
The set of elements in **both A and B.**



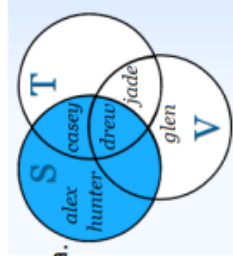
$A \cup B$
The **union** of A and B.
The set of elements in **A or B or both.**



B'
The **complement** of B.
The set of elements **not in B.**

Venn Diagrams with 3 sets

Diagrams can be drawn to show more than 2 sets of data. This is an example of a Venn Diagram containing 3 sets.



$S = \{\text{Alex, Hunter, Casey and Drew}\}$

$T = \{\text{Jade, Casey and Drew}\}$

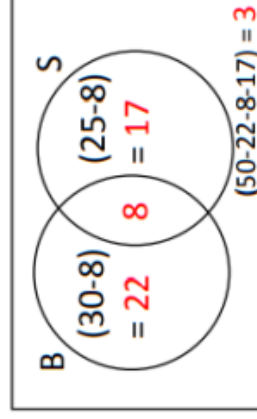
$V = \{\text{Drew, Jade and Glen}\}$

Example

Out of 50 people surveyed:

- 30 have a brother
- 25 have a sister
- 8 have both a brother and a sister

This is what the Venn Diagram for this information would look like



Remember – the people in the intersection are also included in the whole circle so we don't duplicate data.

From the Venn Diagram, we can see that the probability of someone from this group just having a brother is $22/50$.

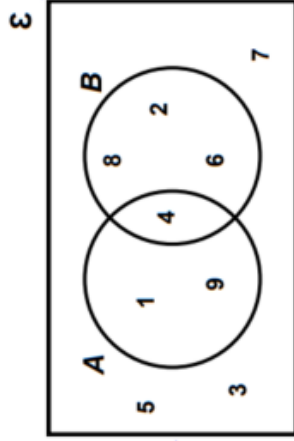
The probability of someone from this group having neither a brother or a sister is $3/50$.

The probability of having a brother and a sister,

$$P(A \cap B) = \frac{8}{50}$$

Example: Given a set of numbers

$\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$
 $A = \{\text{square numbers}\}$
 $B = \{\text{even numbers}\}$



\mathcal{E} - denotes the universal set.
This is the set containing all of the elements being considered.

In set A 'the square numbers' are 1, 4 and 9.

In set B the 'even numbers' are 2, 4, 6, 8.

4 is in both groups so would go in the centre (the intersection)

Outside of the circles are any numbers remaining in \mathcal{E}

Online clips

M829, M419, M834

Set

Notation



Component Knowledge

- Complete a Venn Diagram when given a set of data
- Fill in missing values in a Venn Diagram
- Find probabilities from a Venn Diagram

Key Vocabulary

Set	A collection of "things" (objects or numbers)
Union	The set made by combining the elements of two sets
Intersection	The intersection of two sets has only elements common to both sets
Complement	All elements from a universal set not in our set
Element	Things contained in a set

Key Concepts

A set can be a list of items known as elements

A subset would be a selection of these elements.

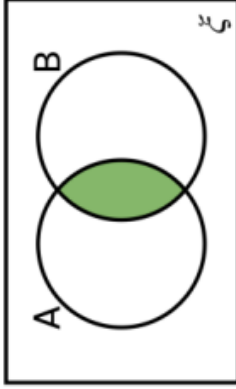
When we list elements within a set, we use these curly brackets { } and separate each elements in the list with commas.

The universal set, ξ , is the list of every element that there is available to choose from.

The complement of a set is denoted with an apostrophe and would be the remaining elements in the universal set that are not part of that set.

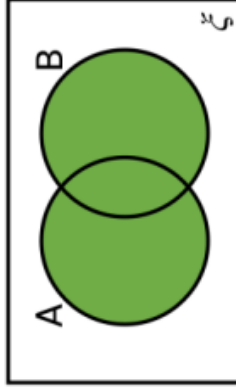
Symbol	Description
{ }	Curly brackets - contain all items in a set
,	Comma - separates items in a set
'	Complement - the items not in a set
ξ	The Universal Set - contains all items in every set and subset required
ϕ	The Empty Set - contains no items
A	Set A
A'	Not Set A (the complement of Set A)
B	Set B
B'	Not Set B (the complement of Set B)
$A \cap B$	A and B (A intersection B)
$(A \cap B)'$	Not A and B (the complement of A intersection B)
$A \cup B$	A or B (A union B)
$(A \cup B)'$	Not A or B (the complement of A union B)
$n(A)$	The number of elements in A. The cardinality of A

These are the different symbols you may see when working with set notation



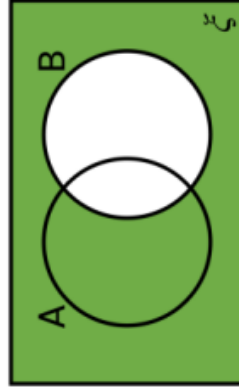
$$A \cap B$$

The **intersect** of A and B.
The set of elements in **both A and B.**



$$A \cup B$$

The **union** of A and B.
The set of elements in **A or B or both.**



$$B'$$

The **complement** of B.
The set of elements **not in B.**

The shaded sections of the Venn Diagrams show which elements would be included for an intersection, a union or a complement

Example

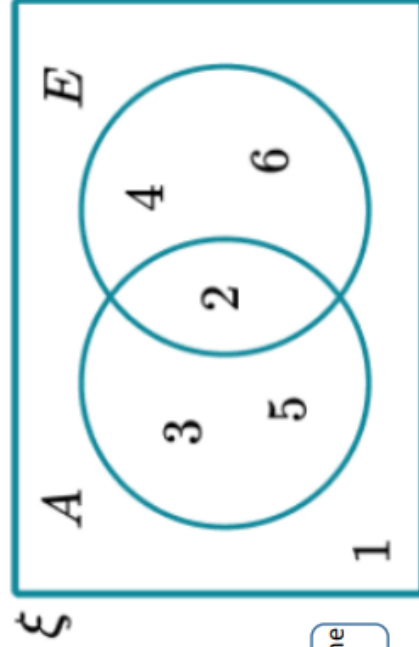
$$\xi = \{1, 2, 3, 4, 5, 6\}$$

The universal set shows us all the elements in the set

$$A = \{2, 3, 5\}$$

$$E = \{2, 4, 5\}$$

Sets A and E are subsets of the universal set



The **complement** of A (not A) is $A' = \{1, 4, 6\}$

The **union** of A and E (A or E) is $A \cup E = \{2, 3, 4, 5, 6\}$

The **intersection** of A and E (A and E) is $A \cap E = \{2\}$

Online clips

Averages



Component Knowledge

- To understand and calculate the mode from a list.
- To understand and calculate the median from a list.
- To understand and calculate the mean from a list
- To calculate the range and understand it is **not** an average.

Key Vocabulary

Data set	Collection of values that share a common relationship. This could be answers to a set question or information for a set objective.
Average	Is a value (or values) that is used to represent a whole data set
Mode	The most frequent value in a data set. It is a type of average. Modal is another word used more mode.
Median	The middle value of a data set, when ordered. It is a type of average.
Mean	A measure of the size of the data when shared out equally. It is a type of average.
Range	A value to show spread out a data set is. It can be used to describe how representative of the whole data set the average used is. IT IS NOT AN AVERAGE.

Averages

We use averages to summarise a whole data set in a single value/few values. We do this so we can interpret large data sets and also compare data sets more easily.

Mode- the most frequent value/ few values in a data set. There can also be no mode in a set of data.

Ex 1, find the mode:

blue red blue green blue blue

pink green blue blue yellow

Blue is the mode.

Ex 2, find the mode:

9, 4, 3, 6, 9, 5, 2, 1, 8, 7

To make it easier, we can re-write these values in ascending(increasing) order.

1, 2, 3, 4, 5, 6, 7, 8, 9, 9. We can now see clearly **9 is the mode.**

Ex 3, find the mode:

9, 4, 3, 6, 9, 5, 2, 1, 8, 7, 3

Re-written 1, 2, 3, 3, 4, 5, 6, 7, 8, 9, 9 We can see 3 and 9 are the modal values.

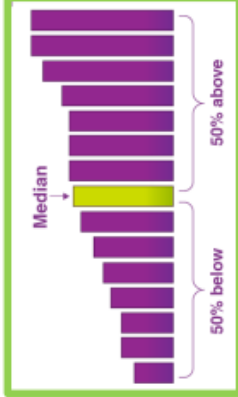
**** We usually only have 1, 2 or 3 modal values****

Ex 4, find the mode:

4, 3, 6, 9, 5, 2, 1, 8, 7

Re-written 1, 2, 3, 4, 5, 6, 7, 8, 9 We can see there are **NO** modal values.

Median - the middle value in a data set, when in order. If there are 2 middle values, we find the midpoint between them.

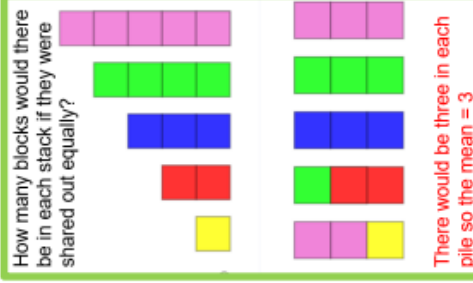


Find the median of: 1, 3, 3, 6, 7, 8, 9
Median = 6
Find the median of: 1, 2, 3, 4, 5, 6, 8, 9
Median is the midpoint of 4 and 5 = 4.5

Find the median of the following set of numbers.

40 -2 10 40 -31 3 -34 -13 -10 1 30 16 -16
-34 -31 -16 -13 -10 -2 1 3 10 16 30 40 40

Mean - The mean is the size of each part when a quantity is shared equally. We can do this by adding all the values in the data set together and then dividing it equally between the number of values.



Example 1.
Find the mean of the following set of numbers.

19, 6, 17, 6

Solution.
To find the mean divide the sum of the numbers by the number of numbers.

$$\begin{aligned} \text{Sum of numbers} &= \frac{19 + 6 + 17 + 6}{4} \\ \text{Number of numbers} &= \frac{48}{4} \\ &= 12 \end{aligned}$$

There are 4 values in the data set so we are dividing by 4.

Range - the range shows how spread out the data is. It is useful to order the data when finding the range. The smaller the range, the more consistent the data.

E.g. Find the range of the following numbers

43 36 10 -8 -3 -6 -4 -22
-22 -8 -6 -4 -3 10 36 43



Online Clips

M841, M934,
M940, M328

Year 8 – Song Arrangements

ELEMENTS OF MUSIC:

MELODY - The tune, whether the PITCH goes up or down.

ARTICULATION - How a note is articulated - short and spiky or smooth

DYNAMICS - The VOLUME of the music.

TEXTURE - How many layers of sound – thick/thin.

STRUCTURE - How the music is organised.

HARMONY - When more than one pitch is heard at once.

INSTRUMENTATION - The type of sound heard (also called TIMBRE)

RHYTHM - A pattern of long and short notes.

TIME SIGNATURE - The amount, and type, of beats in each bar.

MUSICAL VOCABULARY:

RIFF – a catchy repeated musical phrase.

HOOK – the ‘catchy’ bit of the song.

INTRO – The opening of the song – sets the scene.

VERSE – same melody but different lyrics each time.

CHORUS – occurs several times in a song and usually contains the main hook or riff.

BRIDGE – an extra section to link the chorus back to the verse.

DAW – Digital Audio Workstation.

LOOPS – recurring musical ideas, melodies or rhythms.

SFX (sound effects) – manipulate the original sound to create new effects.

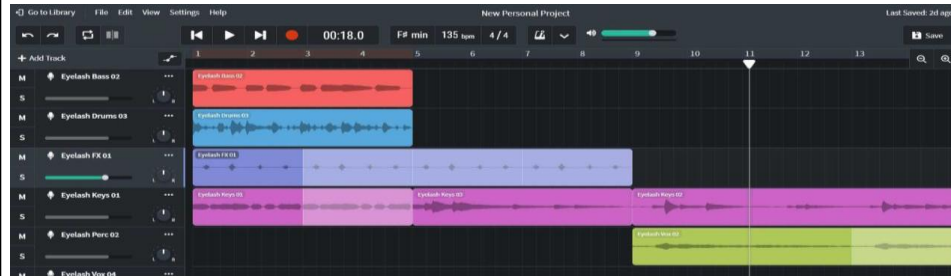
AUTOMATION – constantly adjusting the volume and stereo sound of the music.

ARRANGEMENT – A new version of an existing song.

Pop music usually features a chordal instrument like **keyboard** or **guitar**, a **bass guitar**, **vocals** and **drum kit**. Many songs will often use a **brass** or **string section** too. All of these can be replicated in a DAW.



A **DAW** (digital audio workstation) allows you to import, input or record sounds which can then be manipulated to create a new version of an existing song.



An arrangement is a cover version, remake or revival of an existing song by a new performer. In order to create a unique **arrangement** of an existing song on **Bandlab**, you can import existing **midi-stems** which can then be **manipulated** using the features of the Digital Audio Workstation.

Emphasis should be placed on the main **melody**, **harmony** and **rhythm** of the original song. These can then be embellished by adding additional percussion, **riffs** and counter melodies to create more variety and contrast.

Looping tracks, or parts of tracks, adds to the sound **texture**. **Sound samples** can be created by **slicing** existing parts to create extra loops. Additional parts can also be recorded in via a midi keyboard or entered via the note input tool.

The **automation** function in Bandlab allows parts to be faded in and out or made louder or softer at different points. The **special effects** (sfx) enable sounds to be manipulated in keeping with their particular style.

Javelin:

- Sideways stance
- Weight in back leg
- Arm holding javelin outstretched behind you
- Bend arm at elbow, to pull the javelin forwards
- Transfer weight onto front leg
- Aim to release the Javelin at a 45degree angle
- Advanced: carry out three step run up into the throw



Discus:

- Sideways stance
- Weight in the back leg
- Discus held with very ends of finger tips
- Non discus hand outstretched at 45 degree angle
- Swing discus (palm towards the ground) up to reach non discus hand several times
- As discus reaches 45 degree angle straight back leg
- After 3-4 wind up swings release the discus forwards off your index finger



Shot Putt:

- Sideways stance
- Weight on back leg- toe, knee and chin all in alignment
- Shot held in fingers, not touching palm, and pushed into neck with elbow raised
- Transfer weight from back leg to front, twisting torso
- Push shot up and out at a 45 degree angle.



Long Jump:

- Measure run up-start with dominant foot on the board, run 7, 9 or 11 steps at a sprint
- Take off- plant foot on (but not over the board), eyes up, hips up and focus on driving up into the air
- Flight-stretch both legs forwards, and reach towards your feet with hands
- Landing- aim to land feet together, and body forwards or sideways (not backwards)



Sprint Start Technique

On Your Marks



- Rear knee should be level with front foot
- Form a 'V' behind the line with your hands
- Arms shoulder width apart, slightly ahead of hands

Get Set



- ❖ Raise hips higher than shoulders
- ❖ Lift legs at the knees
- ❖ Body weight on hands and feet equally

Go!



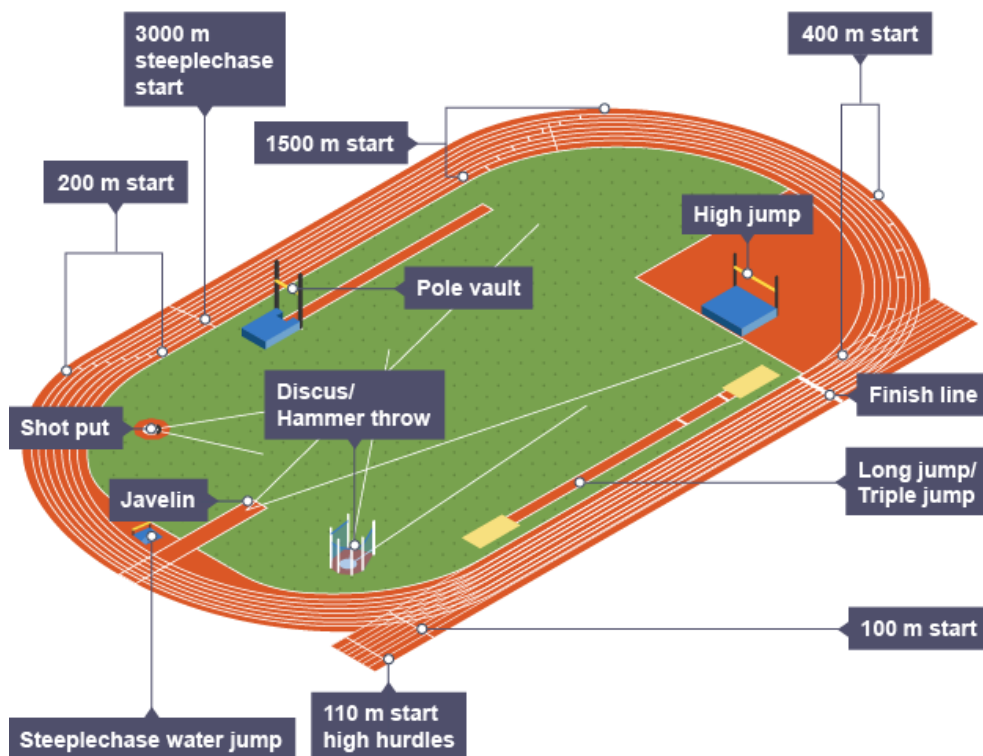
- ✓ Drive knee of rear leg forwards
- ✓ Extend front leg out
- ✓ Lean forwards
- ✓ Don't become upright too early

Sprint- Knee Drive:

- When sprinting drive knees high
- Keep eyes close to the body and move them hip to lip
- Look forwards with chest up and shoulders relaxed.
- When finishing dip chest forwards slightly as you cross the line

Distance running:

- Remember to breathe in through your nose and out through your mouth.
- Run in a relaxed fashion, with shoulders relaxed, taking nice long strides to cover more ground
- Build up distances to try and run continuously



Batting: Basic Straight Drive

- Stand with feet shoulder width apart and parallel to the batting crease.
- Slightly flex knees and keep weight evenly distributed.
- Rest the hand and top of bat gently against the inside thigh of your front leg with the bat resting on the floor at a 45° angle.
- Keep your head over the front foot and face the bowler.
- As the bowler approaches, the bat should remain close to the body but brought upward, bending both elbows, until the bat is parallel to the shoulders.
- As the ball is released, move the front foot behind the front knee and chest and keep the back leg straight and foot planted.
- The head should be level with the front knee, with the back foot raised up to the toes.
- On contact, the bat accelerates vertically through a straight path, keeping elbows bent and locked, until the face of the bat is pointing to the sky.



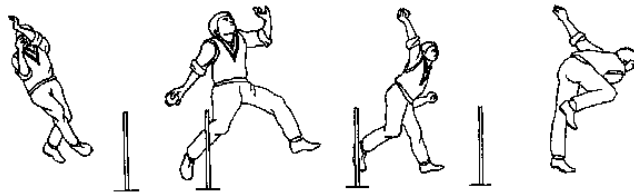
Bowling: Basic

Grip

- Place your thumb on the seam of the ball.
- Place your index finger on the seam, opposite your thumb.
- Hold the ball so that the seam is parallel to your index finger.
- Place your middle finger to the right of the seam, approximately a quarter of the way down the ball.
- Wrap your ring finger and pinky into a loose fit.

Release

- Carry the ball close to your chin. Coil your body and lean back.
- Drop your elbow and pant your leg bowling leg.
- Straighten your elbow and arm.
- Shift your weight to the lead leg.
- Thrust your bowling shoulder forward.
- Swing your arm like a windmill.
- Snap your wrist forward just before you release the ball.
- Release the ball.
- Follow through properly.
- Bend your elbow.



Fielding:

Catching

- **English (orthodox catch)**- Aim to catch at the base of your fingers. Bring the ball into your body
- **Australian (reverse cup)**- Attempt to catch at eye-level and keep your hand high. Watch the ball the whole time until it hits your hands.

Throwing

- **Overarm**- bring arm behind head, and transfer power from back foot to front foot. Used over longer distances
- **Underarm**- swing arm from back to front, release ball when hand pointing at target.

Long Barrier

- Long barrier: Kneel side on with foot next bent leg, pick ball up side on.

Short Barrier

- Short barrier- face on approach ball, foot behind and pick up ball.

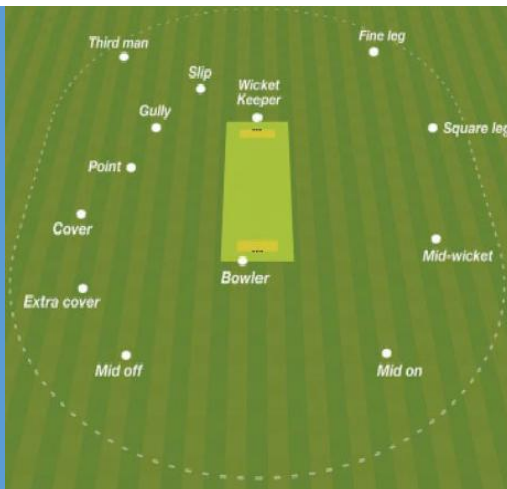


Rules:

- Two teams, play an innings of batting and bowling.
- When one team is batting, try and score as many runs as they can by hitting the ball around a set boundary.
- The bowling team can get the batsmen out by hitting the stumps or catching the ball.
- Once the batting team is all out, the teams swap over and they then become the bowling side.

Scoring System:

- One run is scored each time the batsmen cross and reach the set of stumps at the other end of the pitch.
- Four runs can be scored if the ball reaches the perimeter of the field.
- Six runs if it crosses the perimeter without bouncing.



Key Words:

Wicket Keeper
Batsman
Bowler
Long Barrier
Hand eye co-ordination
Catch
Stumps
Seam
Leg before wicket
Over
Spin
Umpire

Positions:

- **Wicketkeeper:** The wicket keeper stands behind the batsman, and is responsible for catching the ball in their gloves if the batsman edges, misses or leaves the ball.
- **Point:** Fielding position square of the wicket on the off side of the batsman.
- **Mid-off:** Fielder should be positioned just a bit wider than straight on the off side of the field.
- **Mid-on** is the same position as mid-off on the on side.
- **Cover:** Fielding position is just in front of square on the off side.
- **Square leg:** The fielder is located square of the wicket on the leg side of the field.
- **Mid-wicket** is a position in front of square on the leg side of the batsman

Tactics:



















- **Fielding:** Place players in positions where the batsman may give a catch, to a fielder and to save runs or to block the path of the ball from the batsman's scoring strokes Backing up the ball from a fielders throw.
- **Bowling:** The location varies with the pace of the bowler, the state of the pitch, and the reach and technique of the batsman. The second is the direction. On this foundation a bowler may elaborate with variations of spin bowling
- **Batting:** A forward stroke in which the batsman advances his front leg to the pitch of the ball and plays it in front of the wicket. This is the best way to score runs with control.

Skills and Techniques:

→ **Directions:** 4 key compass directions: North, South, East, West
 More complex compass directions: North East, North West, South East and South West
 → **Map Reading:** Recognise symbols on a map. Understand that maps and aerial view pictures are not the same. Recognise these features on aerial photographs
 → **Human features:** Know that a human feature, is influenced by man (Road, cities, churches). Recognise these on a map
 → **Physical Features:** Know that a physical feature, is natural (Forest, rivers, beaches, hills) Recognise these on a map
 → **Directional language:** To describe the physical and human features in a location or a route.

Diagrams and Symbols:

Map Symbols:

	Open Grass
	Rough Open
	Grass Garden
	Undergrowth
	Sandpit
	Tarmac
	Buildin
	g
	All weather pitch
	Canopy
	Steep Bank
	Lamp
	Post Flag
	Pole Tree
	Goal Post
	Netball Post
	Orienteering
	Point Outer

Positions:

→ The main aim of orienteering is to complete the set course by finding control markers in the correct order in the shortest time.
 → Although it is based on accurate map reading it is also a test of physical fitness.
 → You must find all the controls you are told to visit and record them on your score sheet.
 → You have to consider the terrain you are moving over ensuring your safety and the safety of any team members at all times, taking into account the varying fitness level of all your team members.
 → In order to be given a finish time for finding controls the whole team has to finish together

Key Features:

→ Orienteering control



→ Orienteering Map



Key Words:

- Location,
- Speed
- Cardiovascular Fitness
- Setting a Map
- Navigation
- Adventurous
- Diverse Direction
- Key
- Catchment features
- Terrain
- Map
- Compass
- Control point
- Thumbing
- Attack points
- Pacing

Key components:

→ **Map**

A diagrammatic representation of an area showing physical features

→ **Key**

Explains the meanings of symbols

→ **Route**

A way from getting from a starting point to a destination

→ **Location**

The place where something is

→ **Orienteer**

To find your way across areas using a map.

→ **Grid reference**

map reference indicating a location in terms of a series of vertical and horizontal grid lines

→ **Latitude**

Imaginary lines north and south of the equator

→ **Longitude**

Imaginary lines from East to West around the globe

Fielding: Catching

- Eyes focused on the ball.
- Feet move to place body in line with ball.
- Hands move to meet the object.
- Hands and fingers relaxed and slightly cupped to catch the ball.
- Catches and controls the ball with hands only (well-timed closure)
- Elbows bend to absorb the force of the ball.



Fielding: Throwing Underarm throw used in a short distance.

- Stands face on to direction of throw.
- Eyes focused on target area..
- Steps forward with opposite foot to throwing arm.
- Well timed release.
- Follows through with straight arm.

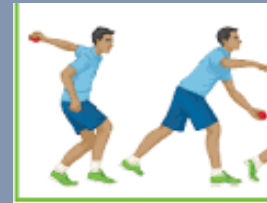


Overarm throw used in a long distance.



Bowling

- Grip the ball between three fingers
- Step into the bowling action
- Release the ball at weight height
- Variation in speed and height will enable you to outwit the opponent
- To add spin, twist your wrist as you release the ball



Batting

Batting: One hand on the bat, have the fat side facing the bowler and with a slight tilt. Bend your knee and transfer your weight from the front to the back.



Barriers

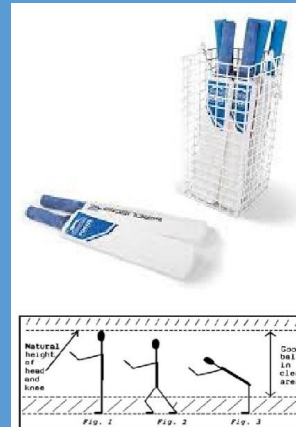
Long barrier: On a bumpy outfield, or if the ball is travelling at speed



Short barrier: Used to pick the ball up at pace

Key Words:

- Batting
- Bowling
- Deep
- Fielding
- Obstruction
- Power
- Accuracy
- Throwing
- Catching
- Umpire
- Stumping
- No ball
- Hit out
- Running Out
- Rounder
- Barrier
- Variation
- Reaction time
- Spatial awareness
- Momentum



WESTHOUGHTON HIGH SCHOOL KS3 PE KNOWLEDGE ORGANISER – ACTIVITY: BOLTON ROUNDERS (FLATBAT)

Tactics:

- Batters run round the **inside of the posts**
- fielders have a field in 'the slips' to the right of the batter
- Adapt fielding positions according to strengths and weakness of the batters
- Move your fielding position once you have established how each batter hits the ball is a sign of good fielding
- Always focus on the batter that has just hit the ball as they are scoring.
- Batters should think about how they hit ball according to the positioning of the fielders and also an understanding of how many points they need to win a point.

Rules:

- Each team can have a minimum of 6 players on the pitch at any one time. 11 players are on a team.
- Bowler must bowl the ball in the bowlers pitch
- Lawn tennis balls must be used
- The ball must be bowled above the knee of the batter, below the top of their head. Batter can only hold the bat with one hand
- The batters foot must be on the edge of the batters square and stay planted when hitting the ball.
- The ball can be hit forwards or backwards
- A batter will be out if, after making a scoring shot from a good ball, the ball is caught by a fielder without it touching the ground.
- The batter, while running to a base, is out if she is touched by the fielder ball from one of the fielding side.
- A batter is out if first base is stumped before she reaches it.

Positions:

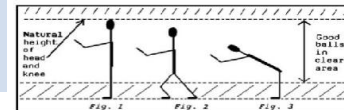
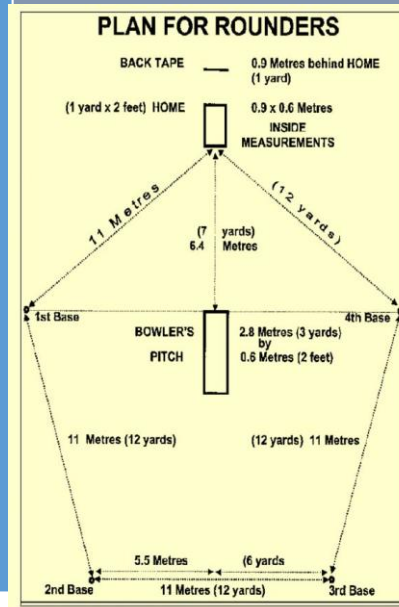
- **First base** this is the only base you can stump and player out.
- **Baller** must bowl the ball in the bowlers pitch
- **Fielders** spread out around the pitch
- **Backstop** must stand on the line behind the batting square

Scoring System:

- The batter will receive **1** point for every base they reach.
- If the touch all four base without being caught out they receive **6** points.
- If the batter is out they keep the points reward until that point. E.g. if the batter is touched by the all between 3rd and 4th base they would achieve **3** points and out.
- If the bowler bowls a 'bad ball' the batting team receive 1 point.

Key Words:

- Batting
- Bowling
- Deep Fielding
- Obstruction Power
- Accuracy Throwing
- Catching Umpire
- Stumping
- No ball
- Hit out
- Running Out
- Rounder
- Barrier
- Variation
- Reaction time
- Spatial awareness
- Momentum



Year 8 Term 3: Health Knowledge Organiser

USER GROUPS in Sport/Fitness

- Young children
- Teenagers
- People with disabilities
- Parents (singles or couples)
- People who work
- Unemployed/economically disadvantaged people
- Gender
- People from different ethnic groups
- Retired people/people over 60
- Families with children
- Carers
- People with family commitments

Barriers faced by user groups

- Employment and unemployment
- Family commitments
- Lack of disposable income
- Lack of transport
- Lack of positive sporting role models
- Lack of positive family role models or family support
- Lack of appropriate activity provision
- Lack of awareness of appropriate activity provision
- The lack of equal coverage in media in terms of gender and ethnicity by the media

NUTRITION:

A balanced diet consists of six essential nutrients:

- 1. Carbohydrates** – The body's main energy source, found in foods like grains, fruits, and vegetables.
- 2. Proteins** – Essential for growth, repair, and muscle maintenance, sourced from meat, beans, and dairy.
- 3. Fats** – Provide long-term energy and support cell function, found in nuts, oils, and fatty fish.
- 4. Vitamins** – Support immune function, metabolism, and overall health, present in fruits, vegetables, and dairy.
- 5. Minerals** – Aid in bone strength, nerve function, and hydration, including calcium, iron, and potassium from leafy greens, dairy, and meat.
- 6. Water** – Essential for hydration, digestion, and temperature regulation, making up a large portion of the body.

ROLE OF MACRO NUTRIENTS IN SPORT

Carbohydrates – The primary energy source for athletes, carbohydrates fuel endurance and high-intensity activities by providing glucose, which is stored as glycogen in muscles and the liver. They help maintain stamina, delay fatigue, and support quick recovery.

Proteins – Essential for muscle repair, recovery, and growth, proteins aid in rebuilding muscle fibers damaged during exercise. They also support immune function and contribute to enzyme and hormone production necessary for athletic performance.

Fats – A secondary energy source, fats provide sustained energy for long-duration, low- to moderate-intensity activities. They help preserve glycogen stores and support overall endurance, particularly in endurance sports like marathon running or cycling.

NUTRITION:

- Carbohydrates are essential in sporting activity because they provide a quick and efficient source of energy, fueling muscles and sustaining performance during exercise.
- Hydration is crucial as it regulates body temperature, maintains electrolyte balance, and prevents dehydration, which can impair endurance, strength, and overall athletic performance

Year 8 Term 3: Health Knowledge Organiser

FITT Principle

The **FITT Principle** is a guideline for structuring effective workout programs. It stands for:

1.Frequency – How often you exercise (e.g., 3-5 times per week).

2.Intensity – How hard you work out (e.g., moderate or high intensity, based on heart rate or weight resistance).

3.Time – Duration of the exercise session (e.g., 30-60 minutes).

4.Type – The kind of exercise performed (e.g., cardio, strength training, flexibility).

ANAEROBIC VS AEROBIC EXERCISE

- Aerobic exercise, like jogging or cycling, uses oxygen to produce energy, primarily generating carbon dioxide and water as byproducts.
- Anaerobic exercise, like sprinting or weightlifting, occurs without oxygen, producing lactic acid as a byproduct.

Energy Sources for Aerobic and Anaerobic Exercises

Aerobic Exercise (With Oxygen)

1. Uses **carbohydrates** (glucose/glycogen) and **fats** as the primary energy sources.
2. During prolonged, low-to-moderate intensity activities (e.g., jogging, cycling), the body primarily relies on **fat oxidation** for sustained energy.
3. **Oxygen is required** to break down these fuels efficiently, producing **ATP, water, and carbon dioxide** as byproducts.

Anaerobic Exercise (Without Oxygen)

1. Uses **stored ATP, creatine phosphate (CP)**, and **glycogen** as quick energy sources.
2. During short bursts of high-intensity activities (e.g., sprinting, weightlifting), the **ATP-PC system** and **anaerobic glycolysis** supply energy.
3. **Lactic acid** is produced as a byproduct when glycogen is broken down without oxygen, leading to muscle fatigue.

TRAINING PRINCIPLES:

Training thresholds refer to intensity levels that determine the effectiveness of an exercise program. There are two key thresholds:

1.Aerobic Threshold (50-70% of maximum heart rate) – The point where the body starts using oxygen efficiently for sustained activity, improving endurance.

2.Anaerobic Threshold (80-90% of maximum heart rate) – The intensity at which lactic acid accumulates faster than it can be cleared, enhancing high-intensity performance and muscle strength.

KARVONEN PRINCIPLE

The **Karvonen Principle** calculates target heart rate for optimal training intensity using the **Heart Rate Reserve (HRR)** method:

- HRR** = Maximum Heart Rate (220 - age) - Resting Heart Rate
- Intensity %** = Desired effort level (e.g., 60-85% for aerobic training)
- Resting Heart Rate (RHR)** = Measured at rest, indicating baseline fitness

This formula personalizes training zones, ensuring workouts are effective and aligned with fitness goals.

Age-predicted maximum heart rate (APMHR)

$$\text{HRmax} = 220 - \text{age}$$

Karvonen formula

$$\% \text{HRR} = [(\text{HRmax} - \text{RHR}) \times \% \text{intensity}] + \text{RHR}$$

Lesson 1. Anthropology of Jesus

Is there any evidence for the existence of Jesus?

1. Many historians agree that there is evidence of Jesus as a historical figure.
2. Evidence for Jesus as a historical figure includes the New Testament and writings from non-Christian scholars.
3. Sources of authority tell us that Jesus was a Jewish man, born in Bethlehem.
4. The writings of non-Christians on the existence of Jesus may be considered more reliable.
5. Jesus has had significant historical as well as religious influence.

Anthropology - relating to the study of humankind
Figure - a person who is important or distinctive in some way
Theologian - a person who studies religion, religious texts and religious beliefs

Lesson 2. Messianic Prophecy in Judaism

What different ideas exist about the Messiah?

1. The word 'Messiah' comes from the Hebrew meaning 'anointed one'.
2. Messianic prophecies are found in the Jewish Tanakh.
3. There are different theological interpretations of these texts, which lead to different understandings of the Messiah.
4. These interpretations of the texts mean that many Orthodox and Reform Jews hold different beliefs about the Messiah.
5. Most Jews reject Jesus as the Messiah, but a small number of Jews, known as Messianic Jews, regard Jesus as the Messiah.

Age - a distinct period of time
Descendant - your children and any further generations of children that begin from them
Messiah - 'anointed one'; chosen by God to bring a new age of peace
Messianic - relating to the Messiah
Prophecy - a prediction of what will happen in the future

Common misconception - All Jews reject Jesus as the Messiah

There is a very small number of Jews, known as Messianic Jews, who regard Jesus as the Messiah.

Lesson 3. Jesus of the Gospels

How is Jesus portrayed in the Gospels?

1. The Gospels are found in the New Testament and tell the story of Jesus and the New covenant.
2. The Gospels are named after the authors that they are attributed to.
3. The Gospels contain beliefs central to Christianity, but each places emphasis on different qualities of Jesus.
4. The Gospels portray Jesus as the Messiah and suffering servant prophesied in the Old Testament.
5. The Gospels portray Jesus as the saviour and the Son of God.

Old Testament - the first part of the Bible containing law, history, prophecy, and the wisdom of the people of Israel
Saviour - in Christianity, this refers to Jesus saving humanity from sin and its consequences
The Gospels - four Biblical narratives found in the New Testament that cover the life, death and resurrection of Jesus

Common misconception - The Gospels present exactly the same stories about Jesus, just in slightly different ways

Whilst there are many similarities across the Gospel books, there are also many differences. Some of the Gospels contain stories that others do not. For example, Jesus' birth is only recorded in Matthew and Luke.

4. Jesus the Incarnation: What do Christians believe about Jesus as the Son of God?

1. Incarnation means to be 'made flesh' and most Christians believe that Jesus is the incarnation of God.
2. Most Christians believe that Jesus is both fully human and fully divine, and a person of the Trinity.
3. Most Christians interpret Isaiah's Old Testament prophecy as predicting the arrival of Jesus as the incarnation.
4. The New Testament shows Jesus as fully human through his humble birth and his ability to feel emotion and pain.
5. The New Testament shows Jesus as fully divine through his mother, the Virgin Mary, and his miracles and resurrection.

Common misconception - All Christians believe in the incarnation There are a small number of Christians who do not believe that Jesus was God. Jehovah's Witnesses do not believe in the incarnation.

Divine - of or like God, or a god/goddess
Humble - ordinary; not special or very important
Incarnation - to be 'made flesh'; God or a god/goddess in human form
Miracle - extraordinary acts or events that defy the laws of nature
Propheesied - when a prediction about the future has been made

5. Jesus the Teacher: How do the teachings of Jesus influence Christians today?

1. The Sermon on the Mount is considered to be one of Jesus' most famous teaching moments.
2. The Sermon on the Mount includes the Beatitudes and Jesus' fulfilment of Old Testament law.
3. Jesus taught using parables to convey challenging ideas about God, the afterlife, society and morality.
4. Following the teachings of Jesus is central to many Christians' lives.
5. These teachings are interpreted differently by different Christians.

Common misconception - The Old Testament is not relevant to Jesus' teachings. Jesus developed many teachings from the Old Testament.

The Beatitudes - blessings given by Jesus during the Sermon on the Mount
Old Testament - the first part of the Bible containing law, history, prophecy and wisdom.
Parable - a simple story used to illustrate a moral or spiritual lesson
Sermon - a talk on a religious subject

Lesson 6. Jesus: Islamic Interpretations

What are Islamic interpretations of Jesus (Prophet Isa)?

1. Many Muslims refer to Jesus as 'Isa', which is the Arabic form of the name 'Jesus'.
2. In Islam, Isa is a prophet but not the son of God, and the holy text (the Qur'an) says that no-one is equal to Allah.
3. Many Muslims believe that Allah revealed the Injil, one of the four Islamic holy texts revealed by Allah, to Isa.
4. Many Muslims share the belief that Isa was born to a virgin and that Allah allowed Isa to perform miracles.
5. Many Muslims reject the crucifixion and resurrection and instead believe that Allah raised Isa to heaven.

Common Misconception - Jesus is not important within Islam. Jesus is highly regarded within Islam as one of the greatest prophets.

Isa - the Arabic form of the name 'Jesus'
Injil - the Arabic term for the Gospel; it was revealed to Isa and is one of the four holy books in Islam
Miracle - extraordinary acts or events that defy the laws of nature
Prophet - a person regarded as an inspired leader who shares the will of God



Lesson 1 – Who was Muhammad (PBUH) and why is he important?

- Muhammad (PBUH), was born in **Mecca** around **570 CE**.
- At the age of 40, Muhammad PBUH received his first revelations from the **Angel Jibril** (Gabriel) whilst praying in a cave “Hira” near Mecca
- Over the next **23 years**, he received messages that Muslims believe came directly from God.
- Through his teachings he preached about the oneness of God.
- These revelations became the Qur’an, the holy book of Islam.
- Muhammad is seen as the **final prophet** in a long line including Abraham, Moses and Jesus.
- His life (the **Sunnah**) and sayings (**Hadiths**) provide a model for Muslims to follow.

KEY TERMS:

- **Prophet:** A messenger chosen by God.
- **Revelation:** Gods communication to humans.
- **Sunnah:** The example set by Muhammad (PBUH)

Lesson 2 What is the Qur’an and why is it central?

- The Qur’an is considered by Muslims to be the literal word of God, unchanged since revelation and was revealed to Muhammad PBUH.
- It contains **114 chapters** which include topics such as faith, ethics, worship, and justice.
- It is written and recited in Arabic, and many Muslims learn parts by heart.
- It provides guidance on how to live, worship, and treat others and is influential on community values such as fairness and charity..
- Muslims often handle the Qur’an with respect – for example, by performing **Wudu** (ritual washing) before touching it.
- Verses from the Qur’an are used in daily prayer and ceremonies.

KEY TERMS:

- **Qur’an:** The holy book of Islam.
- **Wudu:** Ritual washing before prayer or reading the Qur’an.

Lesson 3 What are the five pillars and how do they shape Muslims’ lives?

- The five pillars are core practices that help Muslims live in submission to God:
- The **Shahadah** – Declaration of faith (There is no God but Allah, and Muhammad is the messenger)
- **Salah** – prayer five times a day.
- **Zakah** – giving 2.5% of wealth to charity.
- **Sawm** – fasting during the month of Ramadan.
- **Hajj** – pilgrimage to Mecca (once in a lifetime if possible).

- These five pillars shape **Muslim identity**, linking personal faith to community action remembering God through daily practices.

.KEY TERMS:

- **Pillar:** A foundation or essential support
- **Zakah:** giving to support the poor.



Lesson 4 What role do community and Mosques play in Islam?

- The Mosque (Masjid) is a place for worship, learning, and community support.
- It often serves as a center of community life, especially in local areas such as Bolton and Manchester.
- **Friday prayer** (Jumu'ah) is a key weekly gathering, where the Muslims community come to gather in prayer which is led by the Imam, and speeches about Islam and community notices are made.
- **Mosques also run youth programs**, charity drivers, and interfaith projects.
- The Muslim concept of **Ummah** refers to the worldwide community of believers.

KEY TERMS:

- **Mosque:** A place of worship for Muslims
- **Ummah:** The global Muslim community.
- **Imam:** the leader of prayer in a Mosque.

Lesson 5 How do Muslims live faithfully in modern Britain?

- Britain's Muslim population is diverse, including families with roots in Pakistan, Middle East and beyond.
- Muslims **contribute to all areas of life:** education, healthcare, businesses and politics.
- Many balance faith and modern life through halal choices, Islamic dress and prayer routines.
- British Mosques often promote dialogue, volunteering, and shared community work. An example of this is BCOM projects for the youth as well as yearly fundraising events for Muslims suffering from war in places like Gaza and Syria.
- However, challenges can include, misunderstanding or discrimination, but many Muslims place emphasis on peace, service, and faithfulness after the events of terrorisms.

KEY TERMS:

- **Halal:** Permitted by Islamic Law
- **Identity:** How people understand and express who they are.

Lesson 6 What does Islam teach about living a good life?

- In Islam, living a good life means **submitting to God (Allah)** through **faith, good character, and service to others.**
- Muslims believe that **every action can be an act of worship** if it is done with the right **intention** and benefits others.
- The Qur'an and the Prophet Muhammad's example (*Sunnah*) teach that a good life involves **justice, kindness, honesty, community spirit, and care for the environment.**
- A good Muslim life is **outward-looking** – focused on making a positive difference in family, neighborhood, and the wider world.
- The Qur'an describes humans as **stewards** of the earth, responsible for both people and the planet.
- Living a good life also prepares Muslims for the **Day of Judgement**, when their deeds towards others will be weighed.

.KEY TERMS:

- **Allah:** Arabic word for "God".
- **Sunnah:** following the examples of the Muhammad PBUH

KS3 Ecosystem

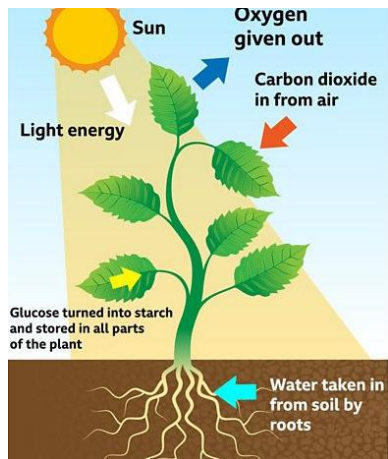
Photosynthesis

All life on earth depends on Photosynthesis.

Photosynthesis is when plants cell contain chlorophyll which absorbs energy from the light to covert carbon dioxide and water to glucose.

Equation:

Carbon dioxide+ water --> glucose + oxygen



Ecosystem

Ecosystems are made up of living organisms, which interact and depend on each other, and their physical environment.

Habitats are where plants and animals live.

Organisms interact with the environment in which they live.

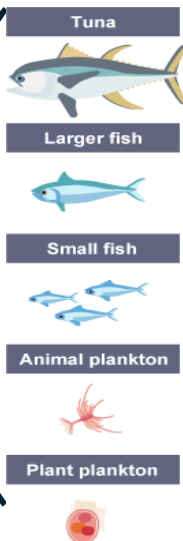
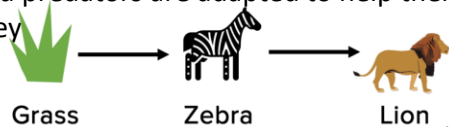
Each habitat is unique, it will accommodate the organism that can survive in that habitat.

Keywords

- Photosynthesis
- Glucose
- Ecosystem
- Environment
- Population
- Habitat
- Interdependence
- Producer
- Consumer
- Prey
- Predator
- Fertiliser
- Insecticide
- Pesticides
- Herbicide
- Toxin
- Bioaccumulation
- Pollination
- Food security

Food chain, Food web and adaptation

- Food chains show the flow of energy from one organism to another.
- Organisms in a food web depend on each other for nutrients.
- An adaptation is a feature that organisms have to help them live in a particular place.
- Prey have adaptations to help them avoid being hunted, and predators are adapted to help them capture prey



Bioaccumulation

Farmers use chemicals called fertiliser and pesticides to produce more crops.

Fertiliser and pesticides can be harmful to the environment and wildlife. Some toxic substances are persistent if consumed, can be passed up the food chain.

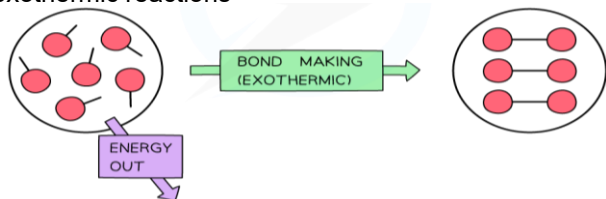
This cause damage to organisms, particularly top predators.

KS3 Energetics

Exothermic Reactions

In an exothermic reaction, thermal energy is **given out** to the surroundings, therefore there is a **temperature increase**.

Combustion, oxidation and neutralisation are all examples of exothermic reactions

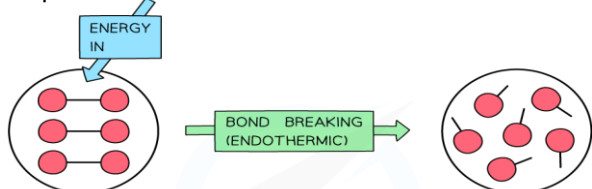


The reaction is exothermic because the energy **needed** to break the bonds is **less** than the energy **released** in making new bonds.

Endothermic Reactions

In an endothermic reaction, thermal energy is **taken in** from the surroundings, therefore there is a **temperature decrease**.

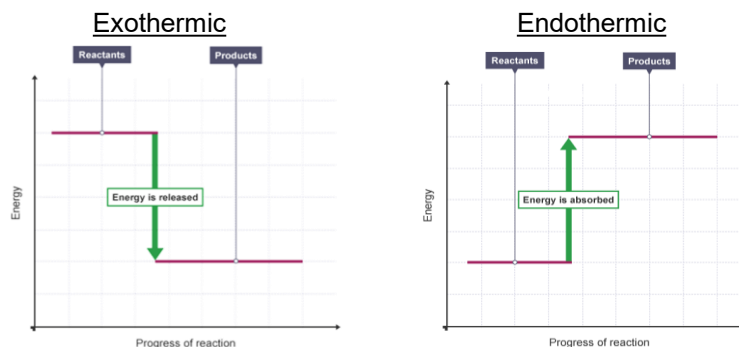
Thermal decomposition and photosynthesis are examples of endothermic reactions



If a reaction is endothermic then the energy **needed** to break the bonds is **more** than the energy **released** in making new bonds.

Energy Level Diagrams

Energy level diagrams are used to model energy changes during reactions. They show the relative energy levels of the products and reactants



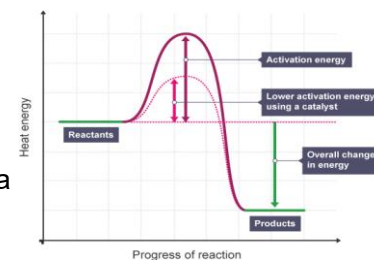
The energy level decreases in an exothermic reaction. This is because energy is given out to the surroundings. The downward arrow shows that energy is given out

The energy level increases in an endothermic reaction. This is because energy is taken in from the surroundings. An upwards arrow shows that energy is taken in

Catalysts

A catalyst is a substance that

- Speeds up the rate of a chemical reaction
- Does not alter the products of a reaction
- Is unchanged chemically and in mass at the end of a reaction.
- Catalyst provide an alternative pathway that has a lower activation energy than the uncatalysed reaction.



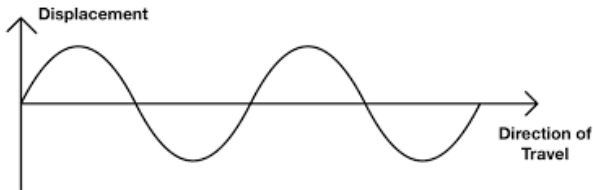
Keywords

- Endothermic
- Exothermic
- Oxidation
- Combustion
- Thermal decomposition
- Reactivity series
- Catalyst
- Activation Energy
- Displacement

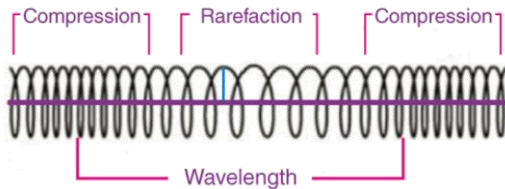
KS3 Waves

Waves

This is a transverse wave.



Light is a transverse wave. Water surface waves are also transverse waves.



Longitudinal wave energy move side to side, in parallel, to the particles. Sound is an example of a longitudinal wave.

Communication

Some waves can be used in communication.

Radio waves, microwaves, infrared radiation and visible light are all waves that can be used to

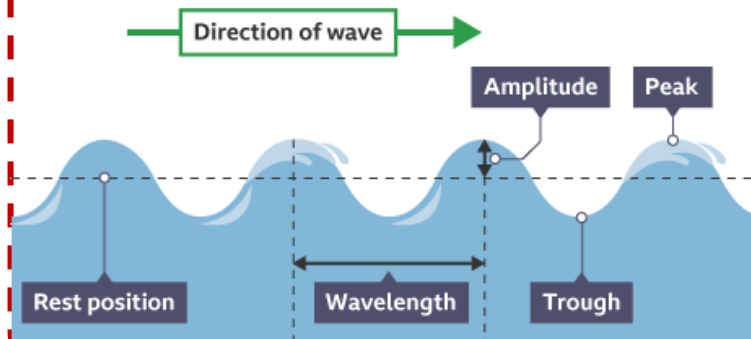
communicate.

Water waves

Water waves are ripples that travel through water.

Water waves are transverse waves.

Water waves have amplitude (height of wave), wavelength (length of wave), frequency (how many waves every second), peaks (highest part of wave) and troughs (lowest part of wave).



Keywords

- Transverse
- Longitudinal
- Frequency
- Wavelength
- Amplitude
- Energy
- Sound
- Light
- Ultrasound
- Colour
- Superposition
- Reflection
- Refraction
- Transmission
- Absorption

KS3 Waves

Sound waves

Sound is produced by vibrations and travels at 300m/s.

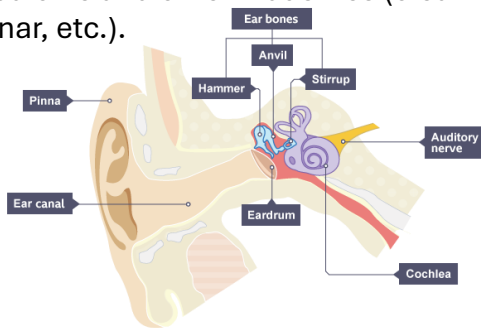
Sound can only travel in a medium (where particles exist), this means sound cannot be heard in space (a vacuum).

Sound can be reflected to produce an echo; it can be transmitted (radio) and can be absorbed. When sound is absorbed, the absorber heats up.

Sound energy travels through the air where it collides with the ear drum which then vibrates. This sends electrical signals to the brain.

Humans can only hear between 20Hz and 20 000Hz.

Ultrasound (higher than 20K Hz) is used in medicine and other industries (cleaning, sonar, etc.).



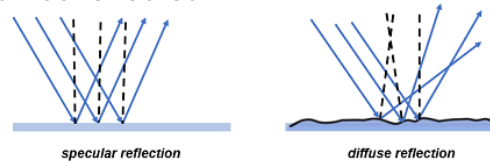
Light

Light is an electromagnetic wave. It is a transverse wave.

Light travels in all mediums and in vacuums. It does not need particles to move.

Light travels at 300 000 000m/s in a vacuum.

Light can be reflected

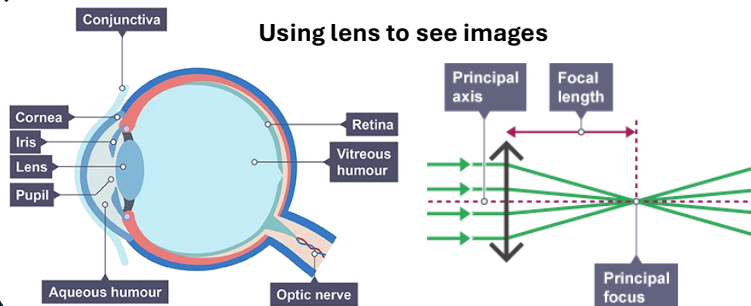


The surface will determine which type of reflection will be seen.

Specular reflection produces sharp images.

Diffuse reflection produces scattering.

Using lens to see images



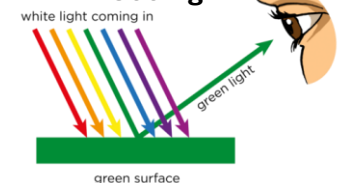
Colour

White light is made up of different colours based on their individual frequencies.



Red has the highest frequency. Some coloured objects absorb some colours and reflect/transmit others.

Seeing



We see objects because light reflects off the objects into our eyes.

Physical descriptions

De qué color tienes el pelo?

- What colour is your hair?

Tengo el pelo rubio - I have blonde hair

Tengo el pelo castaño - I have brown hair

Tengo el pelo negro - I have black hair

Soy pelirrojo - I have ginger hair

Tengo el pelo largo - I have long hair

Tengo el pelo corto - I have short hair

¿De qué color tienes los ojos? - What colour are your eyes?

Tengo los ojos verdes - I have green eyes

Tengo los ojos azules - I have blue eyes

¿Cómo eres? - What are you like?

Soy alto / alta - I am tall

Soy bajo / baja - I am short

Soy de talla mediana - I am of average height

Family

¿Tienes hermanos? - Do you have siblings?

Tengo un hermano - I have a brother

Tengo dos hermanos - I have two brothers

Tengo una hermana - I have a sister

Tengo tres hermanos - I have three sisters

Tengo un hermanastro - I have a stepbrother

Tengo una hermanastra - I have a stepsister

No tengo hermanos

- I don't have any brothers / siblings

No tengo hermanas - I don't have any sisters

Soy hijo único / Soy hija única

- I am an only child

En mi familia hay ... personas

- In my family there are ... people
mi madre - my mum

mi madrastra - my stepmum

mi padre - my dad

mi padrastro - my stedad

y yo - and me

Personality

¿Cómo es tu personalidad?

- What is your personality like?

Pienso que

- I think that

En mi opinión

- in my opinion

Mis amigos dicen que - my friends say that

soy responsable

- I am responsible

soy paciente

- I am patient

soy inteligente

- I am intelligent

soy listo / list

- I am clever

soy divertido / divertida - I am fun

soy tímido / tímida - I am shy

soy estricto / estricta - I am strict

soy serio / seria - I am serious

soy tranquilo / tranquila - I am calm

soy simpático / simpática - I am nice

soy hablador / habladora - I am chatty
soy trabajador / trabajadora - I am hard-working

soy un poco...

- I am a little bit

soy muy...

- I am very

soy bastante...

- I am quite

soy demasiado...

- I am too

no soy (tranquilo) - I am not (calm)

Antes era

- Before I was

En el pasado era

- In the past I was

Ahora soy

- Now I am

Pets

¿Tienes animales/mascotas?

- Do you have pets?

Tengo... - I have...

un pájaro - a bird

un conejo - a rabbit

un pez - a fish

un perro - a dog

un gato - a cat

un caballo - a horse

No tengo animales - I don't have pets

Antes tenía

- before I used to have/had

En el futuro me gustaría tener

- in the future I would like to have...



Key ideas

Personality

Age and birthday

Family

Physical descriptions

Pets

Age

¿Cuántos años tienes?

- How old are you?

Tengo doce años

- I am twelve years old

Birthdays

¿Cuándo es tu cumpleaños? - When is your birthday?

Mi cumpleaños es el... de... - My birthday is on the...of...

El cumpleaños de... es el... de... - ...'s birthday is on the...of...

Su cumpleaños es el... de... - his/her birthday is on the...of...

Year 8 Topic 2: Tu vida - Your Life



Numbers

uno (primero) – 1(1st)
dos – 2
tres – 3
cuatro – 4
cinco – 5
seis – 6
siete – 7
ocho – 8
nueve – 9
diez – 10

once – 11
doce – 12
trece – 13
catorce – 14
quince – 15
dieciséis – 16
diecisiete – 17
dieciocho – 18
diecinueve – 19
veinte – 20

veintiuno – 21
veintidós – 22
veintitrés – 23
veinticuatro – 24
veinticinco – 25
veintiséis – 26
veintisiete – 27
veintiocho – 28
veintinueve – 29
treinta – 30
Treinta y uno – 31

Year 8 Topic 2: Transferable Knowledge

Months

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

Connectives

y - and
o - or
también - also
pero - but
porque - because
ya que - since
dado que - given that
sin embargo - however
no obstante - however

Possessive Adjectives

Mi – my singular
Mis – my plural
Tu – your singular
Tus – your plural

A / an / some – Indefinite Article

un – masculine singular
una – feminine singular
unos – masculine plural
unas – feminine plural

Colours

azul - blue
verde - green
rojo - red
marrón - brown
naranja - orange
amarillo - yellow
rosa - pink
gris - grey
blanco - white

Adjectives

In Spanish, adjectives usually go after the noun they are describing and agree with the noun (masculine, feminine, singular, plural).

For example:

Un gato <i>blanco</i> – a <i>white</i> cat
Una serpiente <i>blanca</i> – a <i>white</i> snake
Dos gatos <i>blancos</i> – two <i>white</i> cats
Do serpientes <i>blancas</i> – two <i>white</i> snakes

Key verbs in the present tense



Tener – to have

Tengo - I have
Tienes - You have (singular / informal)
Tiene - He has/ She has
Tenemos - We have
Tenéis - You have (plural / informal)
Tienen - They have

Ser – to be

Soy - I am
Eres - You are (singular / informal)
Es - He is/ She is
Somos - We are
Sois - You are (plural / informal)
Son - They are



Year 8 Topic 3: Los pasatiempos – Free time



Key ideas: Sports and hobbies

Free time – opinons

¿Qué te gusta hacer en tu tiempo libre?

– What do you like to do in your free time?

Me gusta - I like

Me gusta mucho - I really like

No me gusta - I don't like

No me gusta nada - I don't like at all

Me chifla - I am nuts about

Me flipa - I am crazy about

Prefiero - I prefer

Me encanta - I love

Odio - I hate

Antes me gustaba - Before I used to like

En el pasado odiaba - In the past I used to hate

This weekend

¿Qué vas a hacer este fin de semana?

- What are you going to do this weekend?

Este fin de semana - this weekend

voy a – I am going

chatear - to chat (online)

escuchar música - to listen to music

jugar (a los) videojuegos - to play videogames

mandar SMS / mensajes - to send text messages

ver la televisión - to watch television

leer - to read

escribir correos (electrónicos) - to write letters (e-mails)

salir con mis amigos - to go out with my friends

bailar - to dance

Free time sentence openers

Todos los días – Everyday

A veces – Sometimes

De vez en cuando – From time to time

Nunca – Never

Los lunes – On Mondays/Every Monday

En primavera - In spring

En verano - In summer

En otoño - In autumn

En invierno - In winter

Cuando - When

llueve - it's raining

nieva - it's snowing

hace frío - it's cold

hace calor - it's hot

hace sol - it's sunny

hace buen tiempo - it's good weather

hace mal tiempo - it's bad weather

porque - because

es - it is

no es - it is not

era - it was

interesante - interesting

guay - cool

divertido - funny/amusing

aburrido - boring

Free time

¿Qué haces en tu tiempo libre?

– What do you do in your free time?

¿Qué haces normalmente?

– What do you do normally?

¿Qué haces en...?

– What do you do in...?

bailo - I dance

hablo con mis amigos – I talk with my friends

monto en bici - I ride my bike

canto canciones - I sing songs

saco / subo / cuelgo fotos

- I take photos / upload / post photos

chateo en línea - I chat online

toco la guitarra - I play the guitar

juego (a los) videojuegos - I play videogames

escucho música - I listen to music

mando SMS / mensajes - I send texts

hago atletismo - I do athletics

hago equitación - I do horse-riding

hago natación - I do swimming

juego al baloncesto - I play basketball

juego al fútbol - I play football

juego al tenis - I play tennis

juego al voleibol - I play volleyball



Year 8 Topic 3: Transferable Knowledge



-Ar verbs

Hablo	- I talk
Hablas	- You talk (singular / informal)
Habla	- He talks / She talks
Hablamos	- We talk
Habláis	- You talk (plural / polite)
Hablan	- They talk

Hacer – to do

Hago	- I do
Haces	- You do (singular / informal)
Hace	- He does/ She does
Hacemos	- We do
Hacéis	- You do (plural / informal)
Hacen	- they do

Key verbs in the present tense

Using a range of language improves the quality of our speaking and writing and allows us to access more challenging texts!

Connectives

y	- and
o	- or
también	- also
pero	- but
porque	- because
ya que	- since
dado que	- given that
sin embargo	- however
no obstante	- however

Opinions

¡Me gusta! - I like it!
Me encanta! - I love it!

Jugar – to play

Juego	- I play
Juegas	- You play (singular / informal)
Juega	- He plays/ She plays
Jugamos	- We play
Jugáis	- You play (plural / informal)
Juegan	- they play

Days of the Week

lunes	- Monday
martes	- Tuesday
miércoles	- Wednesday
jueves	- Thursday
viernes	- Friday
sábado	- Saturday
domingo	- Sunday

Infinitives

In Spanish infinitives end in:

-Ar
 -Er
 -Ir

In English, a verb will have “to” in front of it when it is in its infinitive form.

Structures followed by the infinitive

In Spanish, the second verb in a clause is usually in the infinitive form:

Me gusta bailar
 I like *to dance*

Voy a bailar
 I am going *to dance*

Possessive Adjectives

Mi – my singular
Mis – my plural
Tu – your singular
Tus – your plural

con - with

mi familia - my familia
mis amigos - my friends (m)
mis amigas - my friends (f)

Year 8 Technology : Textiles Design

Key Terminology

Cconstruction:

Anthropometric

Template

Manufacture

Monogram

Enhance

Fit

Pattern block

Photochromic

Application

Lay plan

Analyse

When sewing use a;
Sewing Machine

1. Sharp needle
2. Take-up lever pulls the thread through the machine
3. Can use different types of stitch patterns
4. Used to sew lots of different types of fabrics.
5. The balance wheel can move the position of the needle

Balance Wheel



Thread Guide

Spool Holder

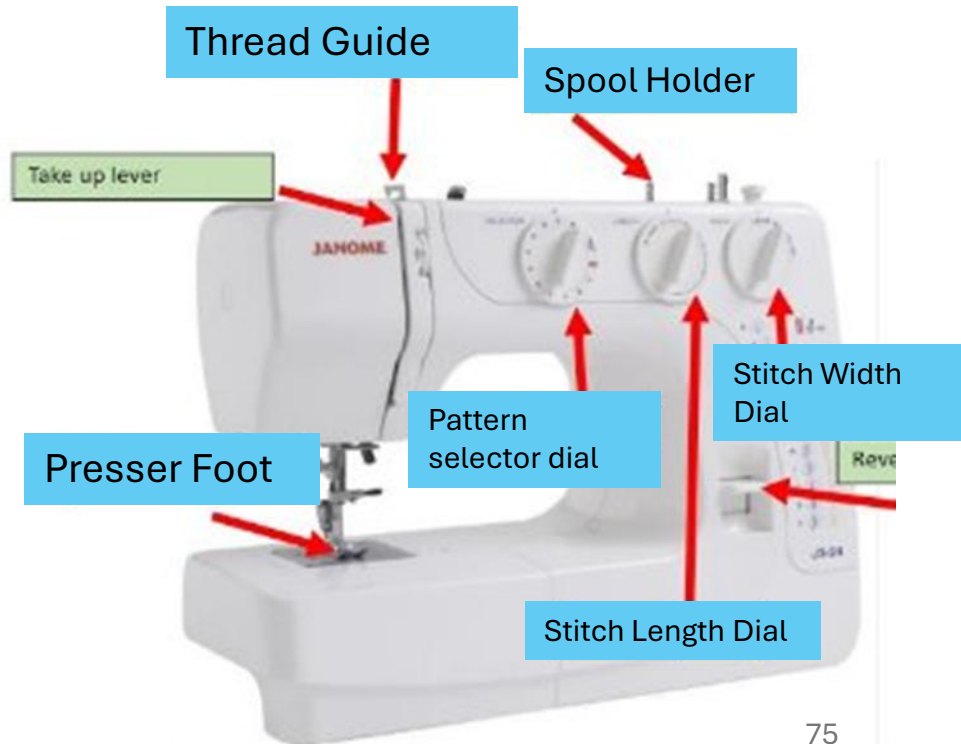
Take up lever

Presser Foot

Pattern selector dial

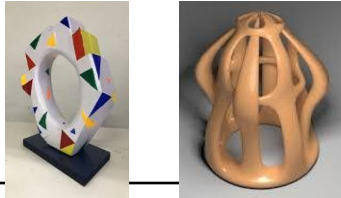

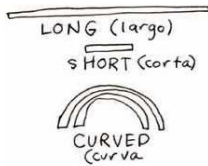


Stitch Width Dial

Stitch Length Dial



Year 8 Technology : Textiles Design

Design Principles

S C L P T	
S = Shape	
C = Colour	
L = Line	
P = Pattern	
T = Texture	

Unpicker



Sewing machine



Iron



Pins



Ruler



Tailors chalk



Fabric Shears



Seam allowance



Lettering is the art of drawing letters rather than writing them, functioning as a decorative, custom approach to typography

Ironing board



Monogram VS logo

Monogram

A monogram is a letter-based, stylized symbol.



LOGO

A logo can be a monogram, but also includes wordmarks (text), symbols, mascots, or emblems.



ABC ABC

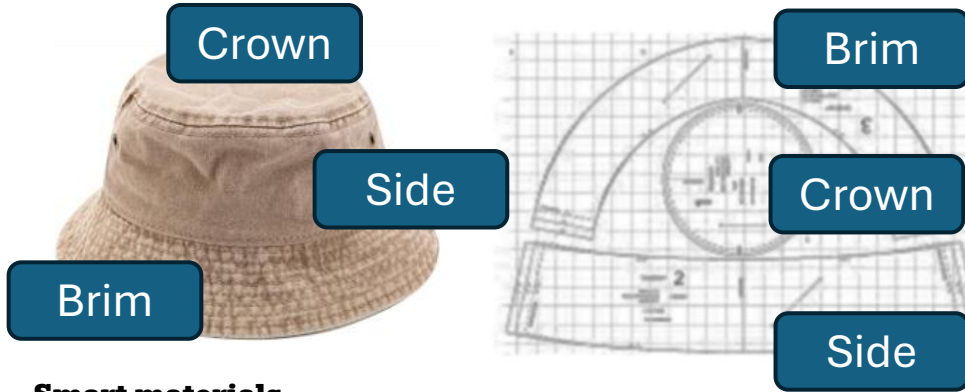
STYLE abc

ABCDE style

Letter abc

SERIF abc

Year 8 Technology : Textiles Design



Smart materials

Smart materials are engineered materials that change their properties (shape, colour, conductivity) in a controlled, reversible manner in response to external stimuli like temperature, light, pressure, or electricity.

Photochromic

innovative, UV-activated materials that reversibly change from colourless (or pale) to vibrant colours when exposed to sunlight or UV light



Thermochromic

temperature-sensitive, colour-changing materials made of microcapsules that change colour or become transparent when exposed to heat (typically 27°C–31°C, though ranges vary) and revert when cooled



Conductive thread is a sewing thread, made from stainless steel or silver-coated nylon, that carries electrical current to connect components in wearable electronics and e-textiles

Iron:

- NO talking whilst using iron
- No distracting others when using iron
- No touching base of iron either when on or off
- Do not use iron around water
- Unplug iron when not in use
- Stand iron on platform when not in use
- Do not walk around with the iron

Sewing Machine:

- No talking whilst using sewing machine
- No distracting others when using sewing machine
- Cable through the hole in the desk
- Sew at a safe speed
- Turn off machine if a problem occurs
- Never try to mend machine
- Never use sewing machine unless supervised by a teacher
- Machine switched off when threading the needle
- One person one machine one pedal

Equipment:

- Do not stick pins or needles in skin
- Do not point or wave around scissors
- Do not point or wave around un picker
- Do not use dyes or chemicals without permission

General:

- Do not run in classroom
- Do not act dangerously
- Follow instructions given by teacher
- No shouting
- Hair tied up
- Ties tucked in
- Chair on dots

Year 8 Technology : Textiles Design

LITERACY & GRAPHICACY : Visual Thinking Strategy: Analysis Product Analysis / Theme Analysis / Research Analysis / Design Reviews

BE ABLE TO: Analyse a product to support future design tasks

GOOD: Descriptive analysis

EBI: Extension tasks

INFORMATION : When we analyse a product we need to look at its

F.A.C.E

F= Function / A=Appearance / C=Construction / E= End User

TASK: Stage 1 Analyse a product using the observation stages: "I see"

1: I SEE



Describe what you see

When I LOOKED at.... / VIEWED the... / OBSERVED the....:

- *I see....*
- *I noticed...*

Example 1:

- *I see....a rabbit (not a description, just stated) □*
- *I see... a rabbit shaped back support (A for Appearance)*

Example 2:

- *I see 2 parts (not a description, just stated) □*
- *I noticed...2 components, one is the main body, the second is a support (F & A)*

Verbs

describe	locate	reproduce
duplicate	name	state
find	recall	tell
list	recognize	underline
		write

TASK: Stage 2: Analyse a product using the personal opinion stage: "I think"

2: I THINK

What do you think, when you look at it?

When I think about

I think....

Example 1:

- *The rabbit is good (no reason or specific detail)*
- *I think the rabbit shape is a strength, because it is realistic, yet cute.*

However, your opinion may be negative

- *When I think about the shape, I think it is a weakness, as the rabbit is "cute" and wouldn't appeal to my age group.*

EXTEND: Target User needs

- *PIES; Physical needs, Intellectual needs, Emotional needs, Social needs of the user when "interacting" with the product*

What are your thoughts on these matters?


1. *What do you think about the products safety? (E)*
2. *How easy do you think it is to use? (P/I)*
3. *Who do you think would buy this product? (S)*
4. *What do you think helps support the stability and balance? (P)*

Verbs

calculate	distinguish	locate
compare	expand	outline
define	explain	predict
describe	identify	report
discuss	interpret	restate
		translate

Year 8 Technology : Textiles Design

TASK: Stage 3: Analyse a product using the questioning stage: “I wonder?”

3: I WONDER  *What do you want to know, when you look at it?*

When I look at the product.....

I wonder?

Example 1:

- *What material? (not specific in detail)*
- *What material has been used to make the product?*

EXTEND: QUESTION IT; 5W’S AND 1 H

WHO / WHAT / WHERE / WHEN / WHY / HOW?

- *Review and extend to include a range of questions, beginning with different W’s or H*



CHALLENGE

- *Explain the purpose of the question*
- *I need to know this, so that.....*

TASK: Stage 4: Analyse a product using the reviewing stage: “I conclude”

TASK stage 4: I CONCLUDE

Review your analysis, what are the most important facts to take forward

When I review my analysis I need to consider that my design.....

1. *Must...so that*
2. *Could....because....*

Example:

- *Must be big (how big is big? Not specific enough) □*
- *The main body must be large enough to hold/support my phone*

EXTEND: Essential or Desirable

Essential= Need / Must have. Desirable= Want / Could have

- *Review work and ensure you have a range of essential & /or desirable points*

FINAL CHALLENGE



F.A.C.E & P.I.E.S analysis

1. *Code stage 4 facts ; F.A.C.E / P I E S*
2. *Review and Extend; Add to “I conclude” to make sure you have F.A.C.E & P.I.E.S design criteria*

ANALYSE

(an+uh+lyz)

Verbs

advertise	contrast	investigate
analyze	differentiate	organize
appraise	distinguish	outline
attribute	examine	separate
categorize	identify	sequence
compare	infer	test

Verbs

argue	decide	debate	justify
appraise	defend	dispute	prioritize
assess	determine	editorialize	rate
check	support	judge	recommend
	verify		select