



LYMM
HIGH SCHOOL

#3



NAME:

Year 7 Knowledge Organisers



Summer Term (Half term 5 and 6)





A Knowledge-Rich Curriculum at Lymm High School

Why are we using Knowledge Organisers?

Research around memory suggests that “knowledge is sticky”: the more factual knowledge you know, the easier it is to learn more in future! But there is a catch: If knowledge is studied once, and not revisited or revised, it is not stored in long-term memory.

To strengthen your memory, and ensure information is stored permanently in your long-term memory, it must be revisited frequently. This means that after one lesson, or a single test, the knowledge is not fully embedded or learned unless it is studied again.

This is why your knowledge organiser is an important part of revising the essential information you learn in class!

Use of Knowledge Organisers for revision and in class

As part of their home learning, students should be revising what they have learned recently, but also content they were taught previously. Therefore, as part of our strategy to ensure that knowledge is embedded over time, we have developed knowledge organisers, which contain the ‘bedrock knowledge’ necessary in each subject area. A mastery of this knowledge will ensure that students can progress comfortably to new units of learning, and can be successful in their subjects.

This information will provide the basis of our assessments and exams, and so getting into good revision habits with these resources will ensure students feel as prepared as possible.

Teachers may set specific areas of each knowledge organiser as part of homework tasks on ‘Satchel one’ – formerly ‘Show my Homework’ – however students should be using their knowledge organiser for independent revision regularly.

For mastery of your subjects, remember:

“Don’t practise until you get it right. Practise until you can’t get it wrong!”

As well as supporting revision at home, this knowledge organiser should be kept in students’ bags, and brought to school each day so that it can also be used and referred to in lessons.

CONTENTS

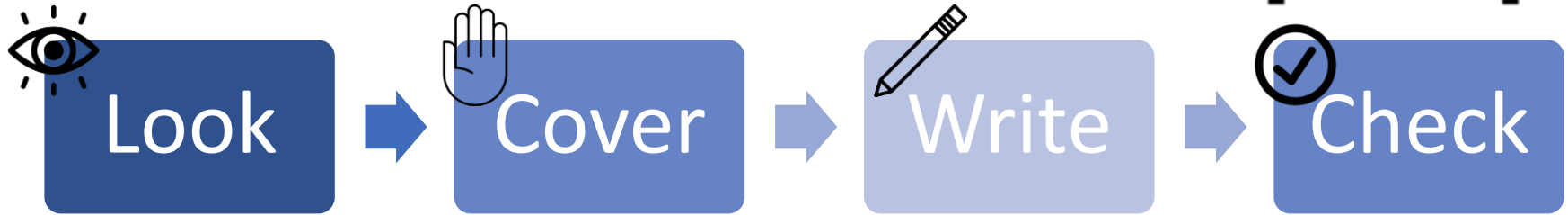
(Subjects are arranged alphabetically)

3	How to use your Knowledge organiser
4	Tier 2 Vocabulary
5	Art
6	Design Tech
9	English
13	Food Tech
16	French
18	Geography
20	History
22	IT
27	Maths
31	Music
32	Religious Studies
35	Science



How to use your knowledge organiser:

Recommended strategies (*don't just read or highlight – get active!*):



- Create **mind maps**
- Create **flash cards**
- Write out **key points on post-it notes** and place somewhere visible so you see and review them regularly
- **Write your own quiz questions** based on your knowledge organiser – leave until the next morning, next day, or next week to see how well you have retained the information
- **Get someone else to test you**
- Use **key vocabulary** from your KO in sentences
- Use the formulae, vocabulary lists, facts, processes etc on your KO to **help you complete homework tasks**
- **Draw diagrams and flow charts** of key information
- **Summarise each section** into your own words – what are the MOST important facts or details in each box?
- **“Just a minute”** – time yourself for 60 seconds. **Can you talk about this topic or explain it to someone else without stopping for a whole minute?**
- **Draw images/symbols** to represent the different concepts and vocabulary
- **Teach someone else** about this topic. Research suggests we retain even more information when we teach a topic than when we learn it or revise it.

Tier 2 Vocabulary – General academic vocabulary for success across all subjects



“The limits of my language are the limits of my world” - Ludwig Wittgenstein



List 1		List 2		List 3	
approach (v)	move towards/get closer	factors (n)	Influences/things involved in something	precise (adj)	exact
assessment (n)	test	function (n)	the point of something/what it does	required (v, adj)	needed
authority (n)	the person in charge/expert/power	identify (v)	pick out	response (n)	reply
available (adj)	free/not taken	indicate (v)	show	sector (n)	area
consistent (adj)	same every time	issues (n)	problems	significant (adj)	important
contract (n)	formal, signed agreement	legislation (n)	laws	structure (n)	how something is put together
definition (n)	what something means	labour (n)	work	subsequent (adj)	coming after
derived (from) (v)	coming from	major (adj)	important	theory (n)	An idea or belief (usually supported by evidence)
denote (v)	stand for	method (n)	way of doing something	variable (n)	A factor that might influence or change
distribution (n)	the spread of something	period (n)	chunk of time	worthwhile (adj)	worth doing
economic (adj)	to do with wealth and money	procedure (n)	Something which is done (e.g. an operation)	yearn (v)	To wish (usually for something you've lost)
establish (v)	Confirm or create something	perspective (n)	viewpoint	youthful (adj)	young

Organic Forms

Definition: Organic forms are associated with things from the natural world, like plants, fruit and animals.



Dawn Eaton

Born:
Nationality:
Current location:

Inspiration:

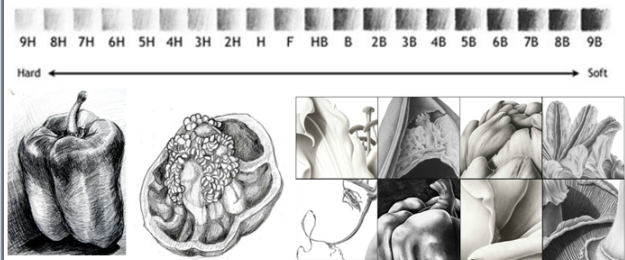
Quote: 'I like to zoom in on the exquisite beauty growing out of the mud. I discover extravagant, intricately designed, lavishly coloured leaves and petals sprouting from the ground. I am captivated by the lighting, the colour combinations, the naturally flowing curves and the graphic patterns found in flowers and their surroundings.'

What do I include on an artist research page?

- Title (artist name)
- Images and drawings of the artists work.
- Facts/information and annotation (include your own opinion)
- Consider creative presentation. Try to make the page reflect the artists style.

Tone	A tone is produced either by the mixture of a colour with grey, or by both tinting and shading.
Scale	Refers to the size of an object (a whole) in relationship to another object.
Line	A mark formed by drawing.
Composition	The position and layout of shapes on the paper.
Mark making	Different lines, patterns, and textures we create in a piece of art. It applies to any art material on any surface, not only paint on canvas or pencil on paper.
Blending	The technique of gently intermingling two or more colours or values to create a gradual transition or to soften lines.
Abstract	Seeks to break away from traditional representation of physical objects.
Enlarge	To make something bigger in size.
Cropping	The removal of unwanted outer areas from a photographic or illustrated image.
Viewfinder	A tool to help select a composition.

Drawing accurately
The easiest way to ensure an image is drawn accurately is by using a square grid. Over your image draw a grid. On a separate piece of paper, re draw the grid and start to plot out your image square by square.
Enlarging an image by hand
You can also use a grid to enlarge an image. Your second grid should be double in size so that when you plot your drawing it increases.



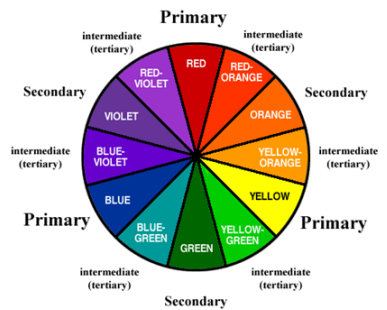
Using watercolours
Remember to hold your brush low so you have control of your strokes



Using oil pastels
Heavy pressure blending: Generously add oil pastel in one direction. You can layer colours to achieve a blended and rich look.
Light pressure blending: Lightly apply the oil pastel in one direction. You can layer colours over each other to create various hues.
Colour Mixing: Apply a layer of oil pastel and follow with a contrasting colour.
Sgraffito: Overlap two thick layers of different colours. Use a paper clip or sharp edge to scratch and scrape away the top layer to reveal the underneath colour.
Stippling: Use small choppy strokes to create a stippled effect. Layer colours to create texture and depth.



The colour wheel	This is a diagram that shows how colours are mixed or the relationship between colours.
Primary colours	Red, blue and yellow. These are colours that cant be made by mixing other colours together.
Secondary colours	Green, orange and purple. Mix two primary colours to create a secondary colour
Tertiary colours	These are colours create by mixing a primary and a secondary colour together.
Complimentary colours	These are colours that are opposite on the colour wheel.
Harmonious colours	These are colours from the same section of the colour wheel. These work well when blending.
Cool colours	Fall on one half of the colour wheel. Calm or soothing in nature. They are not overpowering and tend to recede in space. For this reason, they typically make a space seem larger.
Warm colours	Fall on the opposite side to the cool colours on the colour wheel. They are vivid or bold in nature. They tend to advance in space and can be overwhelming.



Macro Photography
Macro means you're taking super close-ups of objects at 1:1.
Scan the QR code to learn more about Macro photography



Year 7 Material Focus: Timber & Timber Products

Types of wood.....

Hardwood

You can have evergreen hardwood trees which do not lose their leaves and Deciduous trees which lose their leaves in winter

Tend to have a tighter grain

They can be very Expensive.

Most evergreens are found in **tropical** or **sub-tropical** countries such as South America



These are usually quite hard.

They are broad leaf trees and the seed are enclosed in the fruit that the tree produces

They generally grow in **temperate** climates including the British Isles

They are slower growing trees it can take 100 years to grow fully

Softwood

They mainly grow in a cooler climate like Canada

These cone bearing trees are called conifers

They have a looser grain structure

They are often used as building material.



These are usually softer and easy to work

The trees grow tall and straight which makes it easier for the manufacturer to cut long straight planks of wood

Evergreen trees which means they do not lose their leaves.

These grow quite faster and so are cheaper

Manufactured wood - Manufactured, or man-made, wood is board produced using industrial production techniques. It consists of gluing together wood layers or wood fibres.

Manufactured boards are usually made in very large sheets.

Designers choose manufactured boards when they require consistency in strength, workability and texture. Their plain appearance is often disguised by more decorative material.

Manufactured boards (man made woods)

Type of wood	Description	Usage
MDF medium density fibre board	Smooth even surface. Easily machined and painted or stained. Also available in water and fire-resistant forms	Used mainly for furniture and interior panelling due to its machining qualities. Often veneered or painted
Plywood	A very strong board which is constructed of layers of veneer or plies which are glued at 90degrees to each other. Interior and exterior grades available	Structural panelling in building construction. Furniture making. Some grades used for boat building and exterior work
Hardboard	A very inexpensive particle board which sometimes has a laminated plastic surface	Furniture backs, covering curved structures. Door panels
Chipboard	Made from chips of wood glued together. Usually veneered or covered in plastic laminate	Kitchen and bedroom furniture when veneered or plastic laminated. Shelving and general DIY work

Scan the QR code to learn how plywood is manufactured.....



Hardwoods

Type of wood	Description	Usage
Oak <small>American White Oak</small>	A very strong wood Light brown in colour. Open grained Difficult to work with	High quality furniture Beams used in buildings Veneers
Mahogany <small>Mahogany</small>	An easy to work with materials, Reddish brown in colour	Indoor furniture Shop fittings Bars Veneers
Beech <small>Beech</small>	A straight-grained wood with a fine texture. Light in colour Very hard but easy to work with Can be steam bent	Furniture Toys Tool handles
Teak <small>Teak</small>	A very durable oily wood Golden brown in colour. Highly resistant to moisture	Outdoor furniture Boat building Laboratory furniture and equipment

Softwoods

Type of wood	Description	Usage
Spruce <small>Spruce</small>	Creamy-white colour Has small hard knots Not very durable	General indoor work Used mainly for kitchens and bedrooms
Scots Pine <small>Scots Pine</small>	A straight-grained wood, but knotty. Light cream/pale brown in colour Fairly strong but easy to work with. Inexpensive	Readily available for DIY Constructional work and simple joinery work
Parana Pine <small>Parana Pine</small>	Hard and straight grained. Almost knot free. Fairly strong and durable. Expensive Pale yellow in colour with red/ brown streaks	Better quality pine furniture and fittings such as doors and staircases
Yellow cedar <small>Yellow Cedar</small>	A pale yellow colour with fine even texture Light in weight but stiff and stable	Furniture, amateur aeroplane building, boat building, veneers

Scan the QR code to learn how timber is processed.....

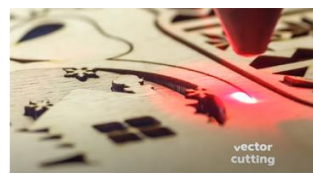


Manufacturing Processes

CAD/CAM (Computer Aided Design/Computer Aided Manufacture)



Laser cutter



vector cutting



Scan the QR code to learn how laser cutters work.....

A drawing is sent from a CAD program such as 2D Design, to the laser cutter.

A laser cutter can cut through acrylic, laser plywood and some metals.

Tools and Equipment.....

Wasting Tools....

Cutting....



Coping Saw



Tenon Saw



Hack Saw

Drilling....



Pillar Drill

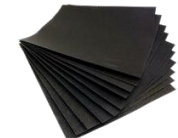


File

Finishing....



Glass Paper (Wood)



Wet & Dry Paper (Plastic & Metal)



Wood Oil

Drilling....

Twist Drill



Counter Sink Drill



Holding....



Metal Vice



Machine Vice



Joining....



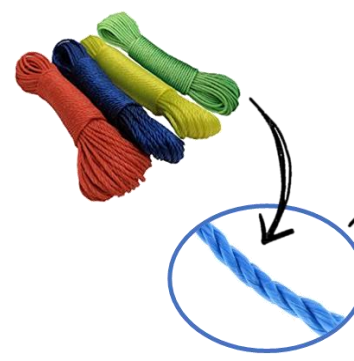
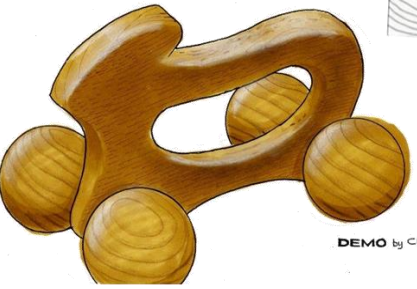
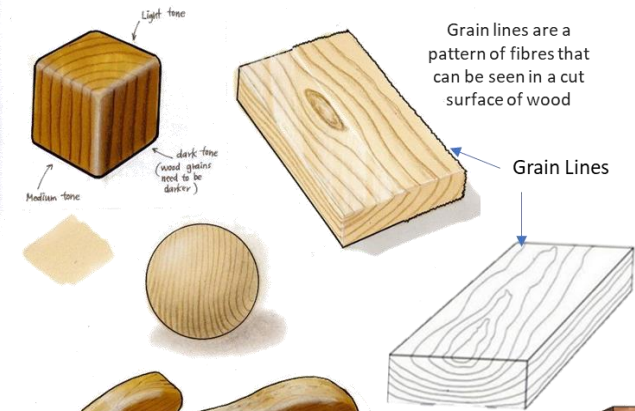
Nut and bolt



Screw

Shading an object to look like wood....

Shade the back ground colour of the wood first and then add the grain lines. Look at your pine wood to copy the detail of the grain lines.



You will use coloured rope to join the hands and feet on to the body. Try to show what the rope will look like and shade it the colour that you would like it to be. The rope can be different colours for the arm piece and leg piece.

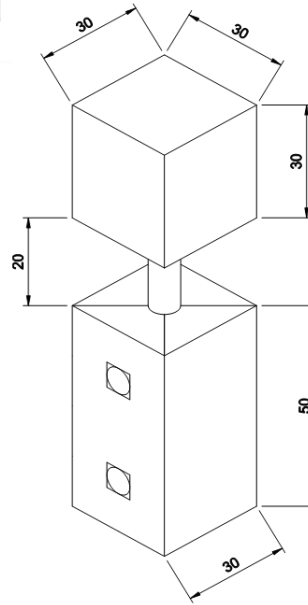
Isometric Drawing.....

YEAR 7

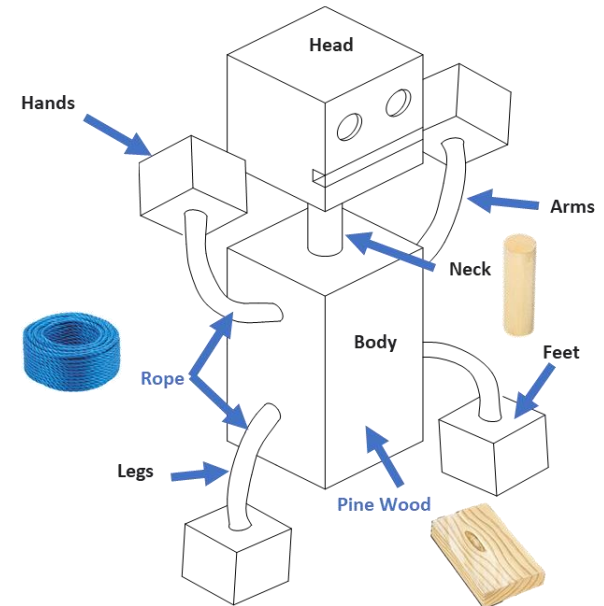
BLOCK-BOT PROJECT



Scan the QR code to learn how to shade a wooden texture.....

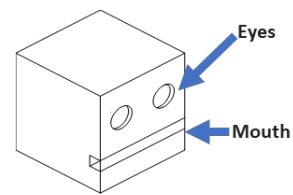


Block Bot with dimensions
All dimensions in mm



Final Block Bot Isometric Drawing

1



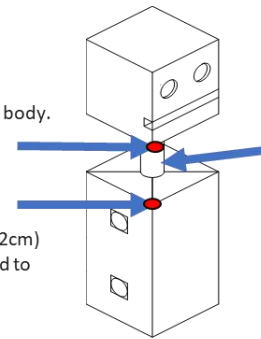
Draw the head. Then add the detail of the eyes and the mouth.

2

Draw the body.

Leave 20mm (2cm) from the head to the body.

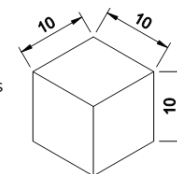
3



Then draw the neck. The neck is made from a piece of wooden dowel.

4

Then draw the hands and feet.



They will be connected with a piece of rope to create the arms and legs.



Analysing Sentence Starters

I think that.....
I liked/disliked this design as.....
It would appeal to a target audience of.....
The strengths of this design are..... because.....
The weaknesses of this work are..... because.....
Aesthetically this design.....
The use of the colours..... means/allows.....

Design Explanation Sentence Starters

I have chosen the colours..... because
This product is designed to.....
My product is made from.....
What I like about my design is.....
My design follows the theme of.....
I could improve my design further by.....

Annotation

Negatives:

What are the negatives about your design?

Positives:

What parts of your design work well?

Improvements:

What could you change and improve about your design?

Environment:

What impact would your design have on the environment?

Manufacture:

How would your design be manufactured?

Target Market:

Who would this design appeal to and why?

Materials

What materials would you use to create this?

Key Words

Design
Technology
Analysis
Investigate
Research
Generate
Develop
Model
Evaluate
Reflect
Manufacture
Sketch
Prototype
Aesthetics
Safety
Tenon saw
Coping saw
Pillar drill
Bench hook
Pine
Plywood

Describing Words

Accurate	Cheap	Curved	Fragile	Overlapping	Uneven
Attractive	Complex	Defective	Imaginative	Repeated	Smooth
Bland	Colourful	Delicate	Innovative	Rough	Subtle
Bright	Contrasting	Elegant	Interesting	Shiny	Suitable
Bulky	Creative	Geometric	Organic	Simple	Symmetrical

Function

Does the product do the job it was intended to do?
How does it work?
How easy is it to use?
What effects will using it have, including those beyond intended use and user?

Safety

How has the designer considered safety issues in the products design?
Think about the ways it is being used and how different parts have been joined together.
Are there any risk assessment issues in relation to the use of the product?

Customer

Who is the product designed for?
How and where would they use it?
What effect will it have on their lives and relationships?
Will it add value?
How is the product promoted to attract customers?
Has the designer considered how people will interact with the product?
Does the product target a particular age group or sector of people?
What assumptions have been made about the potential buyers/users?

Aesthetics

Does the product look good?
Does it make good use of colour and texture?
What has inspired its appearance? (E.g. is it organic? Is it industrial?)

Material

What materials are used to make the product and why?
Would another type of material work better?
What impact could the designers choice of material have on the environment?
Where do the materials and other resources needed for production come from?
Are they likely to run out?

Size

Are the product's proportions appropriate for its use?
If you increased or decreased the products size, would it look or function better?

Environment

What is the product's impact on the environment?
What happens to the product after use?
How long will it last?
What factors limit/lengthen its life span?
Can it be repaired? Can parts be replaced?
How easily can it be recycled?
Who would pay for the cost of recycling?

Cost

What is the estimated cost of the product?
What is the retail price?
What is the relationship between the two?
Is the product affordable?
Does it offer value for money?
What is the product's cost in relation to the income of potential buyers/users?



Scan the QR code to learn how to carry out a Task Analysis using ACCESSFM

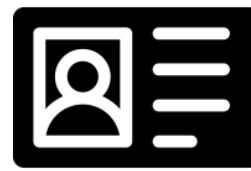
Questions to consider when analysing a product






ACCESSFM

Design and Technology

Year 7 Half-Term 5

Identity Poetry



Key Context	
	<p>Postcolonialism The study of the cultural legacy of colonialism, focusing on the human consequences of the control and exploitation of colonised people and their lands.</p>
	<p>Emigration The act of leaving one's own country to settle permanently in another; moving abroad.</p>
	<p>Racial Segregation Racial segregation is the separation of people into racial or other ethnic groups in daily life. It may apply to activities such as eating in a restaurant, drinking from a water fountain, using a public toilet, attending school etc. On December 1, 1955, in <u>Montgomery, Alabama</u>, Parks rejected bus driver <u>James F. Blake's</u> order to vacate a row of four seats in the "<u>colored</u>" section in favor of a white passenger, once the "white" section was filled.</p>
	<p>Apartheid (in South Africa) a policy or system of segregation or discrimination on grounds of race.</p>
	<p>Windrush Generation The Windrush generation refers to the immigrants who were invited to the UK between 1948 and 1971 from Caribbean countries such as Jamaica, Trinidad and Tobago and Barbados. The name derives from the ship MV Empire Windrush, which on June 22, 1948, docked in Tilbury, Essex, bringing nearly 500 Jamaicans to the UK.</p>

Word class	Definition	Example
Verb	A verb is a word or set of words that shows action (runs, is going, has been painting); feeling (loves, envies); or state of being (am, are, is, have been, was, seem)..	The child, <u>tore</u> off the wrapping paper and <u>beamed</u> at her gift. She <u>was</u> elated.
Adverb	An adverb labels how, when or where something happens (and they often end in '-ly').	The dog growled <u>menacingly</u> whenever the bird flew <u>gracefully</u> towards the window.
Noun	Nouns are names, places and things; they also signify imagined things like 'a ghost'; and ideas or concepts, such as 'love', 'guilt' or 'fate'.	There was a flash of <u>hope</u> in his <u>eyes</u> as he looked through the <u>window</u> .
Pronoun	Words used instead of a noun i.e. 'he', 'she', 'they', 'it'.	<u>She</u> was surprised <u>it</u> was happening.
Adjective	An adjective is a describing word or phrase that adds qualities to a noun. It normally comes before a noun, or after verbs like 'am', 'is', 'was', 'appears' or 'seems'.	The <u>ebullient</u> crowd stood together in solidarity.
Preposition	Prepositions are short words and phrases that give information about place, time and manner	The money was hidden <u>under</u> the bed, <u>beside</u> the old duvet, <u>on top</u> of the shoe box.
Intensifier	A word, especially an adverb or adjective, that has little meaning itself but is used to add emphasis to another adjective, verb, or adverb.	He was <u>too</u> dispirited to continue. The contract was <u>very</u> confusing. The card was <u>extremely</u> sentimental.
Minimiser	A word that is used to make another adjective, verb or adverb sound lesser.	She was <u>slightly</u> traumatised. They were <u>just</u> considering it. We were <u>a little</u> rancorous in their response.



Half Term 6 Shakespeare's Villains – Knowledge Organiser



Villain		
Tamora <i>'Titus Andronicus'</i>	Tamora. Queen of the Goths, mother of Chiron and Demetrius. After Titus ritually sacrifices her eldest son, Tamora makes it her mission in life to make Titus and his family suffer. She accomplishes this through her good looks, sensuality, and ability to manipulate those around her.	
Tybalt <i>'Romeo and Juliet'</i>	He is strong-willed, argumentative, passionate and loyal. Tybalt seeks his revenge by fighting with Romeo, but when Romeo refuses to fight he kills Romeo's best friend, Mercutio, instead. This causes Romeo to avenge his best friend's death. Tybalt is argumentative when he speaks to any of the Montague family.	
Shylock <i>'The Merchant of Venice'</i>	Shylock is a Jewish moneylender in Venice. He is unpopular with other characters who accuse him of practicing usury. This means lending money with outrageously high rates of interest. The merchants, such as Antonio, curse and spit at Shylock because they believe this way of making money is immoral.	
Iago <i>'Othello'</i>	Iago is a cunning schemer and manipulator, as he is often referred to as "honest Iago", displaying his skill at deceiving other characters so that not only do they not suspect him, but they count on him as the person most likely to be truthful.	
Goneril, Regan and Cordelia <i>'King Lear'</i>	King Lear's three daughters Goneril, Regan and Cordelia are the personifications of evil. They are extremely ambitious and in the play plot and scheme against their father the King. Due to this evil, by the end of the play all three sisters turn against one another, destroying each other.	
The Queen <i>'Cymbeline'</i>	The Queen is Cymbeline's second wife, a beautiful widow, and a rather classic evil stepmother. She marries Cymbeline for the sake of having him adopt her son Cloten as heir, after which she intends to poison him.	

Key Themes	
Jealousy	
Many of Shakespeare's villains experience jealousy which lead them to acts of revenge. Characters could be jealous of relationships, power or positions of others in society.	
Guilt	
Shakespeare explores the theme of guilt through his villainous characters. Some villains may show guilt regarding their actions. Other villains may show no guilt and try to suppress or hide this feeling resulting in anger.	
Representations of gender	
Gender is explored by Shakespeare in many ways. When looking at villains in particular the female ones, Shakespeare presents them as strong and ruthless however ultimately, they are punished.	
Love and loss	
Some of the villains Shakespeare present have suffered either a broken heart, loss of a loved one or isolation from society. The intense feelings of love and loss may cause some villainous characters to become vengeful.	
Good vs. Evil	
Ideas of 'Good vs. Evil' are presented by Shakespeare as his villains may be both good and evil or fully evil. Either way the contrast is presented by Shakespeare to make wider comments on society and people.	



Half Term 6 Shakespeare's Villains – Knowledge Organiser



Key Terminology	
Personification	Personification is giving an inanimate object human feelings or actions.
Metaphor	A metaphor is a word, or a phrase used to describe something as if it were something else.
Simile	A simile compares two things using the words 'like' or 'as'.
Soliloquy	A soliloquy is a passage in a drama in which a character directly addresses an audience or speaks his thoughts aloud while alone or while the other actors keep silent.
Imagery	Imagery is language that creates pictures in our minds and appeals to the senses.
Alliteration	Alliteration is when words start with the same sound.
Exclamatory sentence	The exclamation sentences are those sentences which are used to show strong feelings, these sentences normally end with an exclamation mark.

CONTEXT – Elizabethan England

Queen Elizabeth 1st (1533-1603)

- Known as the 'Virgin Queen' Elizabeth spent her life unmarried as she believed her duty and life should be devoted to her kingdom. Elizabeth was a strong, intelligent and loyal leader. During her reign however, much of England did expect her to marry as in this time marriage was expected of all women. Many of Shakespeare's plays feature strong female characters which could have been influenced by the Queen herself.



Gender roles in Elizabethan England

- Elizabethan society was patriarchal, meaning that men were considered to be the leaders and women their inferiors. Women were regarded as "the weaker sex", not just in terms of physical strength, but emotionally too. It was believed that women always needed someone to look after them. Women were owned by their fathers or brothers. Many of the villains in Shakespeare's work are women who are either too strong and powerful or are in some way a victim of a man's wrongdoings.



CONTEXT – Jacobean England

King James 1st (1566-1625)

- After the death of Elizabeth King James 1st took the throne. During his reign, many people did not support his claim to the throne due to his religion and him originally being the King of Scotland. King James was targeted by Catholics who attempted to end his life by blowing up the Houses of Parliament (The Gunpowder Plot). He was Shakespeare 'patron' meaning he paid Shakespeare to write some of his plays. James may have influenced some of Shakespeare's creative choices.

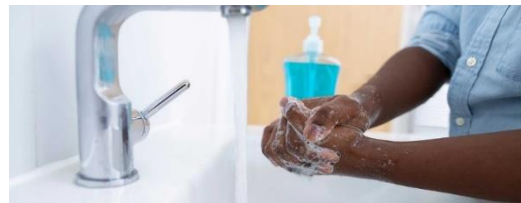
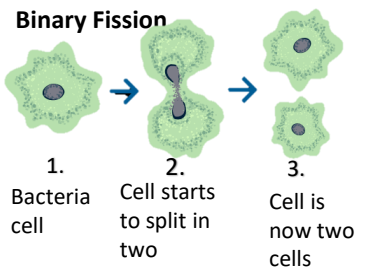


King James and the Supernatural

- King James 1st and Jacobean society were fascinated by the supernatural and many in the society believed in witches and witchcraft. This resulted in King James writing his own book on the supernatural named 'Demonology'. Shakespeare used aspects of the supernatural in his plays and this is also shown through the evil and wicked intentions of his villains.



1. Food Hygiene



Before Cooking:

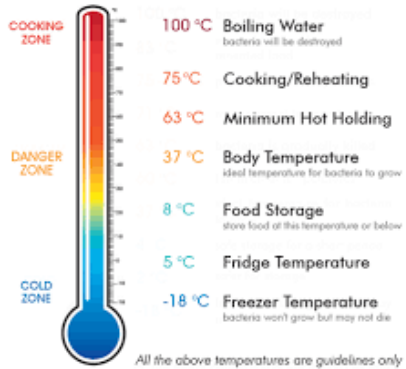
1. Put your apron on
2. Roll your sleeves up
3. If you have long hair tie it back with a bobble
4. Wash your hands with warm and soapy water
5. Dry your hands – moisture harbours bacteria

When Cooking:

1. Keep your cooking station neat and tidy

The Tidy Tick List:

- ✓ Clean and dry dishes
- ✓ No streaks and residue left on the glass bowls
- ✓ Clean dry work surfaces
- ✓ Clean sparkling hobs
- ✓ Clean cupboard doors and drawers
- ✓ Clean and dry sinks with no suds or residue food



2. Kitchen Safety

Kitchens can be dangerous places. To keep safe:

- Be aware of sharp equipment such as knives, peelers and graters- store them carefully and use the bridge hold and claw grip when chopping.
- Take care with hot equipment and food/ liquids- turn pan handles in, always use oven gloves and avoid splashes when stirring or draining foods.
- Wipe up spills quickly so you do not slip over
- Be aware of others in the kitchen
- Report any accident

Claw Grip

Used to hold long and narrow ingredients. Knuckles are used to guide the blade while pressure is pushed downwards to hold the ingredient in place.



Bridge Grip

Used to hold spherical and rounded ingredients. The knife can be placed safely between the arch of the hand.



Scan to view a quick clip about cleaning work surfaces.



Scan to view a quick clip on how to use an electronic scale.



Scan to view a quick clip about "Use By" and "Best Before".

CLEANING The 4C's

- Keep yourself and your hands clean
- Wash your hands before handling food, every 30 minutes and always after going to the toilet
- Keep work surfaces, equipment & utensils clean and disinfected
- Don't forget to clean dishcloths & cleaning equipment



Cross-contamination

Transferring bacteria from raw to ready to eat foods. Often through not washing hands or equipment after handling raw foods.

COOKING

- Cook thoroughly
- Cook raw foods to 75°C at the core, check it with a probe thermometer
- Reheat foods to 75°C
- Never reheat food more than once



Hygiene

Conditions and practices that prevent disease and illness through the act of cleanliness.

CHILLING

- Cool cooked food products as quickly as possible to 5°C
- Core temperature of cooked food must reach <10°C within 150 mins of end of cooking
- Food must be protected from contamination while cooling



Use By

The term used on products that must be eaten before or by the date stated. This term is used on high risk foods, where consumption past the stated date would cause illness.

Best Before

The term used on products that degrade slowly and can be eaten past the date stated but may not taste or look as good.

CROSS-CONTAMINATION

- Prevent cross-contamination
- Always separate raw-food from ready-to-eat food
- Use separate equipment, chopping boards and utensils
- Wash hands thoroughly after handling raw food before ready-to-eat food



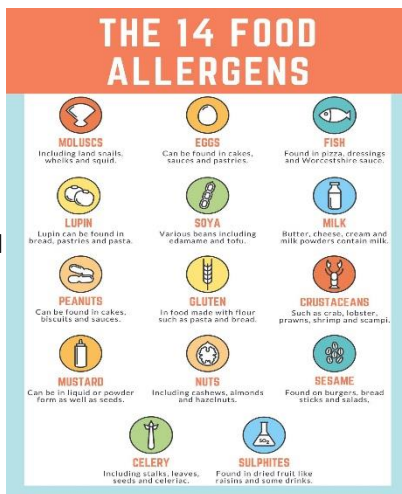
3. Weighing and Measuring

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



4. Allergies Vs Intolerance

A true food allergy causes an immune system reaction that affects numerous organs in the body. It can cause a range of symptoms. In some cases, an allergic food reaction can be severe or life-threatening. In contrast, food intolerance symptoms are generally less serious and often limited to digestive problems.



Fruit and Vegetables

Nutrients- Vitamins and minerals

Examples- Strawberries, apples, carrots and cauliflower

Potatoes, bread, rice, pasta and other starchy carbohydrates **Nutrients-** Carbohydrates

Examples- Cereals, wholemeal pasta, brown rice

Dairy and dairy alternatives **Nutrients-** Calcium, Protein **Examples-** Milk, cheese, yoghurt, almond milk

Beans, pulses, fish, eggs, meat and other proteins **Nutrients-** Protein **Examples-** Oily fish, chick peas, soya, eggs

Oils and spreads

Nutrients- Fats **Examples-** Olive oil, sunflower spread

5. Healthy Eating

What are the 8 government guidelines for healthy eating?

- 8 TIPS FOR EATING WELL.
- Base your meals on starchy foods.
- Eat lots of fruit and vegetables.
- Eat more fish.
- Cut down on saturated fat and sugar.
- Try to eat less salt- no more than 6g a day.
- Get active and try to be a healthy weight.
- Drink plenty of water.



Scan to view a quick clip about how carbohydrates help athletes when training.



Scan to view a quick clip about how protein helps athletes when training.



Scan to view a clip about how fats work.



Scan to view a clip about how fats help athletes.

6. Electrical Equipment

Oven/Grill



Hob The hob is used for heating sauce pans, frying pans, griddle pans etc.

Dials The dials allow the user to change the settings of the hob, oven and grill.

Grill The grill uses the radiation method of cooking with food placed on a wire rack below. Heat can be increased or decreased using the dials.

Oven The oven uses the convection method of cooking. Food can be placed on different racks within the oven. The dials control the temperature.

Using the Oven Safely

- Preheat the oven to the correct temperature. Use oven gloves to put food in and take food out.
- Set the timer to ensure food does not burn or under cook.
- Remove food using oven gloves.



Salamander

A salamander is a type of grill. Electric or gas heating elements that look like pipes produce a very high heat which cooks the food placed below it. It is used in catering due to how quick it can cook food. Specific cooking techniques include; grilling, toasting, browning of gratin dishes, melting and caramelising.

Shelf

Food is placed on a baking sheet on this shelf. Handles on the shelf make it safer and easier to place food under the grill.

Hand Mixer

This equipment is used to mix dry and wet ingredients together. The mixer can be set to higher or lower speeds.



Beaters

Using the Electric Whisk Safely

- When inserting the beaters or removing them, make sure the mixer is not plugged into the mains.
- Only switch the mixer on and off when the beaters are submerged in the mixture.
- Keep hands and utensils and the electrical wire way from the beaters when in use.
- When cleaning the device, remove and wash the beaters in hot water. Wipe the body of the mixer with a damp cloth only.

Microwave

Latch

Ensures the door is securely closed so that no radio waves escape.



Dials

Turns the food around to ensure radiation waves are evenly distributed.

Turn table





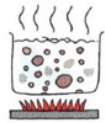
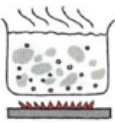

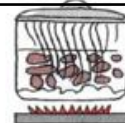



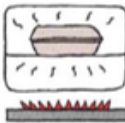
Microwaves use radiation method of cooking. Particle's in the food are made to vibrate very fast which causes heat. Metal must never be placed in a microwave.

Food Processor



A kitchen appliance that can cut, blend, grate and mince ingredients. A food processor is different to a blender because you can change the blades to complete different tasks. You can also fit more food into a food processor. Little or no water is required to ensure the food particles move around the blade.

7. Cooking Methods

Braising		Deep Frying		Saut�eing		Flamb�eing		Boiling		Simmering	
											
Wet	Slow	Dry	Fast	Dry	Fast	Dry	Fast	Wet	Fast	Wet	Fast
Pieces of food are first browned in a little fat, then cooked with some liquid in a closed pan.		Frying pieces of food in a deep pot or fryer with plenty of hot oil or fat.		Cooking small or thin pieces of food in very hot oil or fat. The frying pan is shaken constantly to stop the food from burning.		After frying, alcohol is added to the food in the frying pan and set on fire. This adds another flavour to the food.		Food is cooked in deep boiling liquid (water, stock, wine etc) in an open or covered saucepan.		Like boiling, but the liquid is kept just below boiling point in an uncovered pot.	
Steaming		Stewing		Pan-frying		Broiling/Grilling		Roasting		Baking	
											
Wet	Fast	Wet	Slow	Dry	Fast	Dry	Fast	Dry	Slow	Dry	Slow
Food is placed in a container and cooked in the steam from boiling water in a covered pan or steamer.		Cooking food in its own juices with a little additional liquid, in a covered pan at simmering point.		Frying food in a little oil or butter using a frying pan over a moderate heat.		Cooking food like steak or fish, over or under open heat, e.g. under the oven grill or on a barbeque or hot plate.		Cooking food like meat or poultry with some fat in a hot oven (between 200-240 degrees centigrade)		Cooking food like cakes, pies, bread etc. in a closed oven at a temperature of between 120-240 degrees centigrade.	

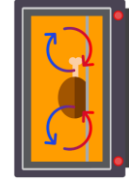
Wet or Dry Cooking Methods

Wet or dry refers to the texture of the cooked food so baking and frying are dry cooking methods and boiling and stewing are wet methods.

Fast or Slow Cooking Methods

Fast and slow methods refer to how long it takes. Generally less than an hour is a fast cooking method and over an hour is a slow cooking method.

Conduction



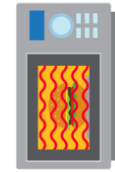
- This only happens in liquids and gases.
- The molecules of liquid or gas nearest the hot base of the pan gain heat energy, and start to rise in the pan.
- As the liquid rises to the top of the pan, it will begin to cool again, so starts to drop back to the bottom, where it will be heated up again.
- There is a convection current moving in the pan. Convection currents also happen in ovens.
- Hot air rises and cooler air falls.
- A convection oven uses a fan to move the heat around, so every part of the oven is approximately the same temperature.

Convection



- This happens when heat is directly touching a piece of equipment, or a piece of food.
- If you put a metal pan on an electric or gas hob, the heat from the hob will heat the base of the pan.
- There are good conductors of heat, and bad conductors of heat. Metal conducts heat very well, which is why saucepans and frying pans, along with baking trays and cake tins, are made of metal.
- Water is also a good conductor of heat, which is why boiling foods works well and cooks foods quickly. Wood, plastic, cloth and glass are poor conductors of heat.

Radiation



- This occurs through space or air. Radiation transfers energy through space by invisible electro-magnetic waves. The waves are either infra-red or microwaves. Infra-red heat waves are absorbed by the food when they reach it, and they create heat inside the food which cooks it.
- This happens when you put food under a grill. Cooking foods in microwaves also uses radiation. The microwaves are created by a magnetron inside the oven. The microwaves are absorbed by the food, making the molecules vibrate and heat up, which then cooks the food. Microwaves pass straight through glass, china and plastic, and do not heat them up. Metal will reflect the microwaves and damage the magnetron so do not put metal object into a microwave oven.

Year 7 French Knowledge Organiser (HT5)

Dynamo 1 - Module 5: En ville

Point de départ – places in a town/village

Qu'est-ce qu'il y a dans ... ?

ta ville/ton village

il y a

un centre de loisirs

un centre commercial

un château

un marché

une mosquée

une patinoire

une piscine

des magasins

Il n'y a pas de café / magasins.

Il n'y a pas d'église.

le prix

un euro

trois euros cinquante

un adulte / un enfant

moins de 12 ans

What is there in ... ?

your town/your village

there is

a leisure center

a shopping center

a castle

a market

a mosque

a skating rink

a swimming pool

some shops

There is/are no café/shops.

There is no church.

the price

a euro

three euros fifty

an adult/a child

less than 12 years



Unit 1 – where you go at the weekend

Où vas-tu le weekend?

Je vais ...

au bowling

au cinéma/parc

au stade

à la piscine

à la plage

à l'église

aux magasins

le samedi matin

après-midi / soir

Where do you go at the

weekend?

I go ...

bowling

to the cinema/park

to the stadium

to the pool

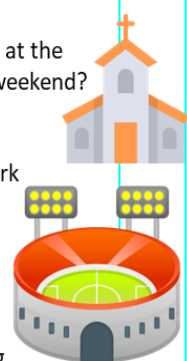
to the beach

to the church

to the shops

Saturday morning

afternoon/evening



Unit 2 – Inviting someone to a café

Tu veux aller au café?

Tu veux venir?

aujourd'hui

ce matin

cet après-midi

ce soir / weekend

Rendez-vous à quelle heure?

Rendez-vous à ...

Merci, Bonne idée!

Oui, je veux bien.

D'accord

Pourquoi pas?

Non, merci.

Désolé(e)!

Je ne veux pas.

Tu rigoles!

Do you want to go to a café?

Do you want to come?

today

this morning

this afternoon

this evening/weekend

What time are we meeting?

Meet at ...

Thanks, good idea

Yes, I'd love to

agreed

Why not?

No, thanks.

Sorry!

I don't want to.

You're joking!



Unit 3 – Saying what you want at the café

Vous désirez?

Pardon, madame/monsieur

Je voudrais ..

Pour moi ...

un Orangina

un diabolito menth

une grenadine à l'eau

un café expresso

un café crème

un chocolat chaud

un thé au lait/au citron

un jus d'orange

un coca (light)

une eau minérale

un croquemonsieur

un sandwich au fromage

un sandwich au jambon

une crêpe au sucre

What do you want?

Excuse me, madam/sir

I would like ...

... for me

an orangina

lemonade and mint cordial

pomegranate squash

an espresso

a white coffee

a hot chocolate

a tea with milk/lemon

an orange juice

a (diet) coke

a mineral water

a cheese and ham toastie

a cheese sandwich

a ham sandwich

a pancake with sugar



Unit 4 – Saying what you are going to do in Paris

Qu'est-ce que tu vas faire à Paris?

What are you going to do in Paris

Je vais...

I will

visiter la cathédrale Notre Dame

visiter la tour Eiffel

aller au musée du Louvre

aller aux Catacombes

faire une balade en bateau-mouche

prendre des photos

acheter des souvenirs

admirer la *Jaconde*

faire un pique-nique

visit Notre Dame cathedral

visit the Eiffel tower

go to the Louvre museum

go to the catacombes

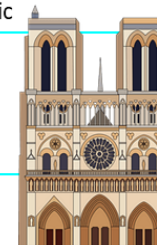
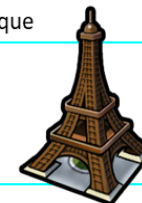
go on a river cruise

take photos

buy souvenirs

admire the *jaconde* cake

have a picnic



Unit 5 – Planning a visit to Paris

normalement/d'habitude

le weekend

le weekend prochain

Samedi prochain

je vais ...

jouer au basket

jouer au foot

jouer au laser-tag

manger un gâteau

manger une pizza

manger une glace

aller au zoo

aller au centre de loisirs

faire un tour en Segway

faire les magasins

usually

at the weekend

next weekend

next saturday

I'm going ...

to play basketball

to play football

to play laser-tag

to eat a cake

to eat a pizza

to eat an ice-cream

to go to the zoo

to go to the leisure centre

to do a tour on a Segway

to go shopping

Year 7 French Knowledge Organiser (HT6)

Revision and culture

13 Important Verbs

aller	to go
aimer	to like
avoir	to have
boire	to drink
adorer	to love
détester	to hate
être	to be
faire	to do
habiter	to live
jouer	to play
manger	to eat
regarder	to watch
vouloir	to want

The POWER of the INFINITIVE

You can add an infinitive to these phrases to:

- 1) give an **opinion** *or*
- 2) say something in the near **future** tense

Opinion phrases:

J'aime – I like	J'aime jouer . – I like to play.
J'adore – I love	J'adore chatter . – I love to chat.
Je déteste – I hate	Je déteste regarder la télé. – I hate to watch the TV.
Je veux – I want	Je veux boire un coca. – I want to drink a cola.

Near future:

Je vais – I am going	Je vais aller . – I am going to go.
	Je vais manger . – I am going to eat.

Recurring vocabulary

il y a	there is
il n'a pas	there is not
c'est	it is
ce n'est pas	it is not
et	and
mais	but
parce que	because
car	because
aussi	also
très	very
assez	quite
trop	too
ma/mon/mes	my
ta/ton/tes	your
sa/son/ses	his/her

Questions

qu'est-ce que	what
quoi	what
quel	which
quand	when
comment	how



Module 4 Unit 4 – Learning about Bastille Day

On fait la fête !	We are having a party.
le 14 juillet	14 July
la fête nationale	national holiday
un jour de congé	a day off
un défilé (militaire)	a (military) parade
un bal	a ball
je vais / on va	I'm going / we're going
regarder un feu d'artifice	to watch the firework
faire un pique-nique	have a picnic
faire la fête	have a party



adorer	to love
j'adore	I love
t'adores	you love
il/elle adore	he/she loves
on adore	we love



avoir	to have	être	to be
j'ai	I have	je suis	I am
tu as	you have	tu es	you are
il/elle a	he/she has	il/elle est	he/she is
on a	we have	on est	we are

jouer	to play
je joue	I play
tu joues	you play
il/elle joue	he/she plays
on joue	we play



regarder	to watch
je regarde	I watch
tu regardes	you watch
il/elle regarde	he/she watches

aller	to go
je vais	I go / I'm going
tu vas	you go
on va	we go



boire	to drink
je bois	I drink
tu bois	you drink
il/elle boit	he/she drinks



faire	to make/do
je fais	I do
tu fais	you do
il/elle fait	he/she does
on fait	we do

aimer	to like
j'aime	I like
t'aimes	you like
il/elle aime	he/she likes
on aime	we like



detester	to hate
je déteste	I hate
tu détestes	you hate
il/elle déteste	he/she hates
on déteste	we hate



habiter	to live/reside
j'habite	I live
t'habites	you live
il/elle habite	he/she lives



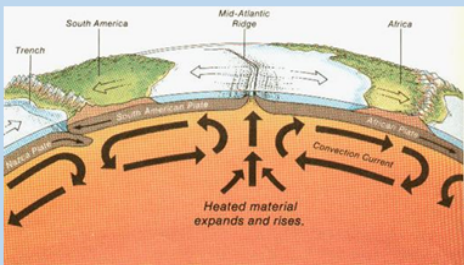
manger	to eat
je mange	I eat
tu manges	you eat
il/elle mange	he/she eats
on mange	we eat



vouloir	to want
je veux	I want
tu veux	you want
il/elle veut	he/she wants
on veut	we want

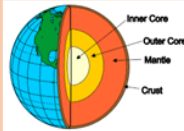
Plate tectonic theory

Tectonic plates move due to **convection currents** in the mantle. Heat from the core causes **magma** in the mantle to rise, then it cools again as it reaches the crust, then sinks.



Structure of the Earth

The earth has **4 layers**:
Inner core – Solid
Outer core – Liquid
Mantle – Semi-liquid
Crust – Solid



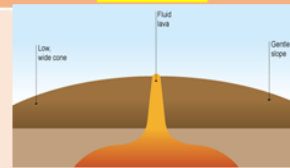
The crust is split into major sections called **tectonic plates**. There are 2 types of Crust:

Oceanic Crust	Continental Crust
Thinner	Thicker
Younger	Older
More dense	Less dense
Made of Basalt	Made of Granite

Volcanoes

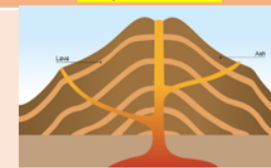
A volcano is an opening or vent in the earth's surface through which molten material erupts and solidifies as lava.

Shield Volcano



Form at **Constructive plate margins**
 Made up of layers of **lava**
 Shield shape – Wide & gentle slope
 Non-violent but frequent eruptions

Composite Volcano



Form at **destructive plate margins**.
 Made up of layers of **lava and ash**.
 Steep sided, **cone shape**.
 Very **violent** eruptions.

Active volcano = likely to erupt
 Dormant volcano = hasn't erupted for many years
 Extinct volcano = hasn't erupted for thousands or millions of years.

Montserrat Volcanic Eruption

Before the eruption:
 11,000 people lived on the island of Montserrat in the Caribbean. In 1995 the volcano became active after 400 years of being dormant. Most people left the southern part of the island, moving to the north or abroad. On the 25th June 1997 the volcano erupted killing 19 people who had stayed behind. The capital city (Plymouth) and airport was destroyed

After the eruption:
 Only 4,500 people are left on Montserrat, based in the north of the island. The south of the island is completely restricted (exclusion zone) – fines are given if people go there. They are now promoting tourism again as there is little land left to farm. New capital city (Little Bay) and airport built.

Restless Earth

Earthquakes

Earthquake	The shaking of the Earth's crust caused by the release of pressure which builds up as tectonic plates move.
Shockwaves	Pulses of energy that make the ground shake
Focus	The point where the Earthquake happens underground
Epicentre	The point on the surface above the focus
Richter Scale	A scale for measuring the energy given out in an Earthquake - Scientific

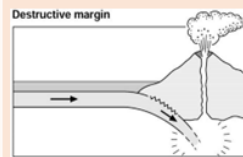
Reducing the impact of tectonic hazards

Monitoring	Protection
Seismometers and Tilt meters measure earth movements. Volcanoes give off gases. Animals may act strangely.	Reinforced buildings and making building foundations that absorb movement. Building regulations. Automatic shut offs for gas and electricity. Items screwed to walls.
Prediction	Prepare
By observing monitoring data, this can allow evacuation before event.	Avoid building in at risk areas. Training for emergency services and planned evacuation routes and drills.

Plates move in different directions causing different processes and landforms to occur:

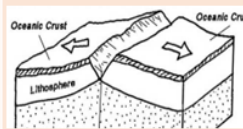
1. Destructive-subduction

The heavier oceanic crust gets pushed underneath the lighter continental crust. The rock jolts and grinds as it's pushed down, causing **earthquakes**. Some of the rock gets so hot it melts and forces its way through cracks to form a **volcano**.



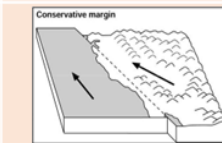
2. Collision

When two continental plates move towards each other the crust gets pushed and folded upwards to form **mountain ranges**. Huge **earthquakes** occur at these plate margins.



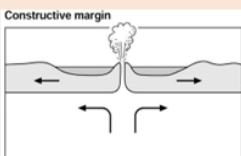
3. Conservative

Two plates move past each other either in the same or opposite direction. Parts of the plates get stuck, then lurch free causing **earthquakes**.



4. Constructive

Two oceanic plates move **apart**, magma rises between the plates to form new ocean floor. **Volcanoes** form here.



Distribution of tectonic activity

Along plate boundaries. On the edge of continents. Around the edge of the Pacific.



Haiti Earthquake

Epicentre: 25km from capital of Port-au-Prince
Focus: 13km below ground **When:** 12th January 2010 **Magnitude:** 7.0

Primary Effects

Over 220,000 deaths and 300,000 injured. Several hospitals collapsed. Airport and port badly damaged. Roads blocked.

Immediate Responses

Emergency teams arrived from many countries E.g. Iceland. Temporary field hospitals were built to treat injured people. (Red Cross). GIS was used to provide satellite images and maps.

Secondary Effects

1.3 million people made homeless. Aid supplies delayed due to airport & port closures. 2 million left without food or water.

Long term Responses

Money was given to assist with rebuilding - After 1 year there were still 1,300 temporary camps. 'Cash for work' programmes set up to pay locals to clear rubble. Small farmers were supported - so crops could be grown to feed the population.

Chile Earthquake

Epicentre: 3km off the coast
Focus: 30km below ground
Magnitude: 8.8

Effects:

500 deaths and 12,000 injured. Tsunami destroyed many coastal towns

Responses:

Repairs made to main highway within 24 hours
 Power and water restored to most within 10 days
 Little financial help needed due to own strong economy.

Fantastic and Forbidden Places

What do we mean?

There are many different definitions but fantastic and forbidden places are areas of the world that can trigger inspiration, intrigue, danger and excitement. Many have been shaped by nature, some created by humans. Everyone has places they consider to be fantastic; what are yours?

Death Valley

Death Valley is located in western USA in the state of California. It got its name from those people who crossed it during the Gold Rush as it is the **lowest, driest and hottest valley in the United States**. For many years scientists were baffled by strange rocks that appeared to have moved across the floor leaving trails behind the. The mysterious moving rocks are also known as sailing stones. They move because _____



Las Vegas

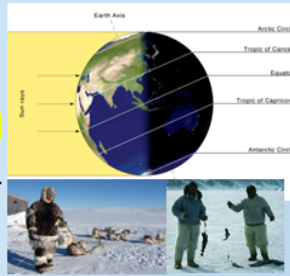
Las Vegas is located in the south east of the Nevada State in the Nevada desert. It has a dry desert climate which makes it particularly difficult for humans. The fast population growth has put enormous strain on water and food resources. In 1960 the population was 65k but by 2022 it was 650k. Also, approx. 40 million tourists visit each year. Engineering of huge dams, diversion of surrounding rivers and irrigation systems have enabled Las Vegas to grow and develop. As population and tourism continues to grow alongside the impact of climate change, Las Vegas is facing water shortages, so water conservation is needed.



Arctic - Svalbard

Svalbard is a remote Norwegian Island located in the Arctic Ocean, within the Arctic circle. The population of Svalbard is only 2600, there are more polar bears than humans. Due to its location and the Earth's axis, Svalbard experiences polar night in winter when there is no sunlight for 84 days.

The sun stays below the horizon and creates a cold, dry arctic desert. It is so cold because it has very little solar radiation. The area is a breeding ground to many birds, polar bears, reindeers and marine mammals which have adapted to living in these harsh conditions. People have also adapted to living in the arctic. E.g. Inuit. Indigenous people eat meat they can hunt, keep warm by wearing animal skins and live a nomadic lifestyle (move around), using reindeer or dogs as transport.



Totem pole and the tooth fish

The Totem Pole is a sea stack at popular amongst rock climbers in the Tasman National Park, Tasmania off the south coast of Australia. It is part of the many miles of rugged coastline and diverse forest ecosystems, which contain several species of rare flora and fauna. The National Park is a very popular area for tourism as it is within a few hours drive of the main city on the island, Hobart. The overfishing and conservation of the endangered Tooth fish are also linked to the totem pole as activists from Greenpeace have used the pole to try and raise public awareness about the fishing industry in this area.



Chernobyl

Chernobyl is a nuclear power plant located near to the city of Pripyat in northern Ukraine. The disaster was a catastrophic nuclear accident that occurred on 26 April 1986, which at the time the power plant was under the jurisdiction of the Soviet Union. An explosion and fire released large quantities of radioactive particles into the atmosphere, which spread over much of the western USSR and Europe. Since the disaster it has become a no go zone. Populations of people were forced to move away due to the contamination. Nature has since reclaimed the land affected and some species of animals such as Eurasian lynx, wild boar, grey wolf, elk, red deer, moose, brown bear, turtle, have thrived in the absence of humans. In recent years, people are now able to enter the area for short periods of time and tourism has become popular, with over 73,000 visitors in 2021. People can go on a day trip to one of the most radioactive places on earth. Whilst there they need to have a personal dosimeter which records the levels of radiation their body is being exposed to.



Coral Reefs

A coral reef is a community of living organisms. It is made up of plants, fish, and many other creatures. Coral reefs are some of the most diverse ecosystems in the world. They are home to about 25% of all marine life. The Great Barrier Reef is located off the North East coast of Australia and is the world's largest coral reef system. It has 2,900 individual coral reefs. Thousands of marine animal and plants live on the reef including vulnerable and endangered species. The Great Barrier Reef is one of the seven natural wonders of the world.

However, coral reefs are in danger due to various threats:

- Over fishing** – Unsustainable fishing can affect the rest of the food chain.
- Cyanide fishing** – The use of cyanide in this illegal fishing practice can kill the coral polyps.
- Use of dynamite** – Dynamite is used to kill or stun fish so they can be easily caught, but it also destroys the surrounding coral.
- Coral bleaching** – High sea temperatures and rising sea levels put the coral under stress leading to coral bleaching
- Muddy water** – Sediment deposits from rivers can smother the coral, preventing it from growing, reproducing and feeding.

Protecting coral reefs - More awareness is needed to help protect coral reefs. Climate change mitigation and adaptation is key, but coral reef restoration is also being implemented into reefs around the world.



Was 1348 the end of the world? – KEY IDEAS & EVENTS

The Arrival of the Black Death: The black death arrived in England in 1348 on a ship in Dorset. The first recorded outbreak was in central Asia in 1338-39. From there, the black death appears to have travelled long the silk road, reaching the Black Sea in 1343. The disease then seems to have spread by ship into central Europe, arriving in Italy in 1347 before spreading overland to France and Germany. It spread quickly through England by the movement of rats and by ships visiting the coastline.

Medieval Explanations of Disease: The church was very powerful and controlled who was educated and what people taught. It enforced its teachings by punishing people harshly for criticising the church. Medieval people believed they would be punished for not confessing their sins on earth. Medical knowledge was very limited and taught that the four humours caused disease. This meant that many people turned to religion to explain the black death. Some of the causes included beliefs that God was punishing people for sins, it was judgement day in which the world was ending and people were being judged for their sins, the disease was caused by bad air and the smell of the streets was causing people to die, that the planets were in an unusual position and that earthquakes have released bad air which has now spread to England.

How did people respond to the Black Death? Physicians tried to drain the pus from the buboes and then applying a poultice – sometimes these contained human or animal excrement. As people were very religious, a common reaction was to pray, go on a pilgrimage or whip themselves to show God they were sorry. Many people ran away from areas where the disease had taken hold, sat in front of a fire, used herbs to drive away bad smells, or draining excess blood.

Causes of the Peasants Revolt: (1) in 1351, the government passed a new law called the Statute of Labourers – to control wages. Peasants were not allowed to move away to find better work, it was forbidden to leave a job in search of another one, wages had to be the same as they were in 1346 and anyone who refused to pay the wages was sent to jail. (2) Poll Tax was introduced in 1377 and then again in 1380 and 1381 to pay for war with France. In 1381, the tax stated that everyone had to pay the same amount – people thought this was unfair. (3) In May 1381, tax collectors in Fobbing in Essex were attacked. Two groups of rebels emerged and the rebels selected Wat Tyler as their leader. They sought to plead their case in front of the King and destroyed records of the Poll Tax.

KEY TERMS

Peasant	A poor smallholder or agricultural laborer of low social status (chiefly in historical use or with reference to subsistence farming in poorer countries).
Four Humors	A theory about the cause of disease developed by the Greek doctor Hippocrates. He suggested the body was made up of 4 humours: phlegm, yellow bile, black bile and blood. Ill health was when they were out of balance.
Revolt	To take violent action against a government or ruler.
Feudal System	All of the land belonged to the King but lent land to his followers in exchange for loyalty. This meant the King had a constant supply of money and loyalty.
Rent	Medieval peasants had to pay rent to their lord to work and live on the land. As they had no money, this was usually paid in labour or goods.
Tax	A compulsory contribution to the money a country has.
Physicians	Another term for a doctor.
Poultice	A mixture designed to heal a wound – for example, butter, onions and garlic pressed onto a wound with a bandage.
Bondage/Servitude	To be an unfree peasant.
Hanged, drawn and quartered	This was a punishment for treason. Victims were hanged until they were almost dead, then they were cut down and cut open whilst still alive. Finally, the head was chopped off and cut into pieces.

EFFECTS OF THE BLACK DEATH

- Some people caught it and recovered.
- Whole towns were left deserted.
- The population didn't recover for hundreds of years.
- Two thirds of the population survived, one third died.
- Some measures the government took such as cleaning streets may have helped,
- Landowners could no longer expect free work from peasants.
- Peasants could now demand wages as there were fewer people to work the land.
- The feudal system began to break down.
- There were many farms left empty, so the peasants could negotiate cheaper rent.
- There were higher prices for some goods, for example wheat, as crops rotted in fields due to a lack of labour.
- Workers now worked for the landowner who paid the best wages.

Year 7 History, Unit 5: Challenges to the Catholic Church

KEY IDEAS & EVENTS

What was the king's great matter?: King Henry VIII was unhappy because his wife Catherine of Aragon, had **not borne a son**, someone to be Henry's heir and successor. Henry became concerned that Catherine was not able to have a baby boy because they were **being punished by God**. Catherine was married to Henry's older brother, Arthur, before he died, Henry concluded it was a sin to marry his brother's widow. **Henry needed to convince the Pope to grant him an annulment of his marriage**, this would have been very arduous as **divorce was forbidden in the Catholic Church**. Thomas Cranmer and Thomas Cromwell, Henry's advisors, persuaded the king to embrace the Protestant faith and make himself the **head of an independent church, the Church of England**. This was appealing as he was in love with Anne Boleyn, who may be able have a son. In 1534 the **Act of Supremacy** was passed, declaring Henry the head of the Church of England. Henry **married Anne and ignored the protests of the pope**.

What impact did Henry's decision have on England?: With the help of Thomas Cromwell and Cranmer, Henry pressed on with **changes to the Catholic Church**, taking the **Reformation** further than expected. The clergy were forced to swear an **oath of loyalty to Henry**, supporting his changes. Those who refused were executed. **Monasteries became a focus, they were loyal to the pope and had riches and land**. Henry wanted an excuse to destroy them so sent Cromwell and a team of inspectors to report on their activities. The report was then used to destroy the monasteries **and 800 monasteries were closed between 1536 and 1540**. Many of the most holy pilgrimage sites were destroyed, including Thomas Becket's shrine. **Henry changed church services, translated the Bible into English so everyone could read it**, kneeling before saints was forbidden and a new English litany was published in 1545. Edward VI, **Henry's son, Edward, continued the changes and was even more strict than his father**.

The Catholics strike back – Did Mary deserve her name?: By the summer of 1553, 15 year old King Edward VI knew that he was dying. He and his advisors wanted to protect Protestant England so named Edward's Protestant cousin Lady Jane Grey his successor instead of his Catholic half-sister, Mary. **Lady Jane Grey only had the throne for nine days, as Mary was so popular**. She was arrested and executed for treason, and Mary became queen instead. **Mary's primary aim was to return England to Catholicism**. She undid the Act of Supremacy and overturned all the changes made during the reign of Edward, **banning Protestant preachers and appointed a Catholic as Archbishop of Canterbury**. Mary began to root out 'heretics', **Protestants were burned to death for refusing to accept the Catholic faith**. Cranmer and other high-profile figures were put on trial and burned alive. This earned her the nickname **'Bloody Mary'**.

KEY TERMS

Reformation	A movement in the 16 th century which led to the founding of Protestantism .
Catholic	Christians part of the Catholic Church - under the authority of the Pope .
Protestant	A type of Christian - Usually part of the Church of England – different beliefs to Catholics.
Church of England	The Protestant church governed (ruled) by bishops, with the king or queen as its official head . One of the primary results of the Reformation King Henry VIII declared that he, not the pope , was the head of the Christian Church in England.
Act of Supremacy	An act passed by parliament which made Henry and his successors Supreme Head of the Church of England . It was abolished by Queen Mary and a new Act of Supremacy was passed under Elizabeth , making her Supreme Governor of the Church of England .
Annulment	Declaration that something is invalid .
Counter-Reformation	Go against the Protestant reformation to enforce Catholic practices and convert Protestants back to Catholicism .
Armada	A fleet of warships .
Empire	A group of nations/countries or peoples ruled over by an emperor or other powerful sovereign or government.
Regent	A person appointed to rule , normally while a monarch is abroad, ill or too young to rule.
Heretic	A person with religious views that disagree with official church teaching .
Excommunicated	Being cut off or banished from a religious group , in this case, the Catholic Church.
Litany	A long prayer , usually led by a priest but also involving responses from worshippers.
Conspiracy	A secret plan or plot to do something harmful or unlawful.
Popery	Catholic religious practices.
Clergy	People who work for The Church
Monastery	A group of buildings that belong to The Church , where monks and nuns work and live. They would offer food, medicine and education. 21

Scratch user interface - terminology



What is Scratch?

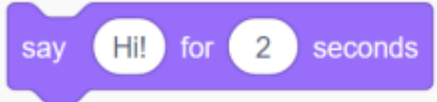
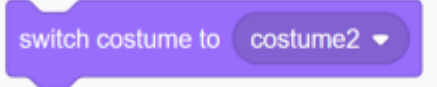
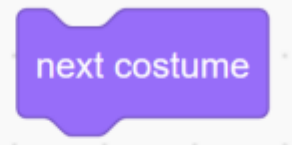
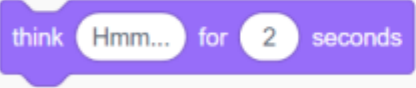
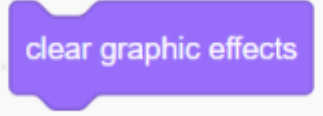
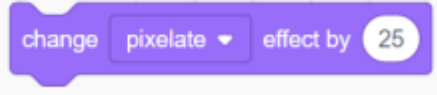
- Scratch is a block-based programming language designed to create interactive stories, games, and anima-

	Key Vocabulary	Definition
1	User Interface	Stage: The area where the program's output is displayed. <ul style="list-style-type: none">• Sprites: Characters or objects that can move and interact on the Stage.• Blocks Palette: Contains coding blocks to create scripts.• Scripts Area: Drag and connect blocks to create programs.
2	Basic Concepts	<ul style="list-style-type: none">• Events: Actions that trigger scripts (e.g., when the green flag is clicked).• Blocks: Different types of blocks for motion, looks, sound, etc.• Scripts: A sequence of connected blocks that form a program.
3	Motion Blocks	<ul style="list-style-type: none">• Move steps: Move a sprite in a specific direction.• Turn degrees: Rotate a sprite by a certain angle.• Glide: Make a sprite smoothly move to a target location.
4	Looks Blocks	<ul style="list-style-type: none">• Show/hide: Display or hide a sprite on the stage.• Say: Display text above the sprite.• Switch costume: Change the appearance of a sprite
5	Sound Blocks	<ul style="list-style-type: none">• Play sound: Play a sound or a musical note.• Stop all sounds: Stop any playing sounds in the project.
6	Control Blocks	<ul style="list-style-type: none">• Wait: Pause the script for a specified time.• Repeat: Execute a set of blocks multiple times.• If-else: Make decisions based on conditions.
7	Sensing Blocks	<ul style="list-style-type: none">• Touching/clicking: Detect if a sprite is touched or clicked.• Key pressed: Check if a specific key is pressed.• Timer: Track time in the project
8	Variables	<ul style="list-style-type: none">• Set Variable: Store and update values in a project.• Change Variable: Modify the value of a variable.• Use Variable: Access and utilize the value of a variable in scripts.
9	Broadcast and Receive	<ul style="list-style-type: none">• Broadcast Message: Send a message to trigger specific actions in other sprites.• When I Receive: Execute scripts when a specific message is received.
10	Pen Blocks	<ul style="list-style-type: none">• Pen down/up: Start or stop drawing with the sprite.• Pen colour/thickness: Change the colour and thickness of the drawing.
11	Debugging	<ul style="list-style-type: none">• Debugging tools: Use tools like "show" and "hide" blocks to test and identify issues in the code.

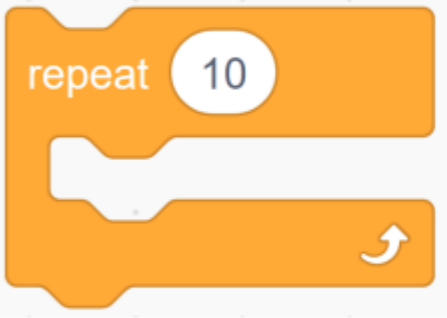

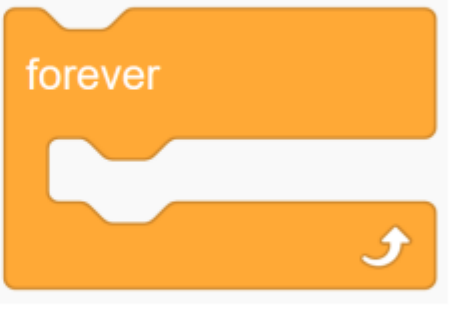




Looks Blocks

		
<p>Causes the sprite to say a message for a certain amount of time</p>	<p>Used to change the appearance of a sprite</p>	<p>Changes the costume (appearance) of the sprite to the costume after the current costume</p>
		
<p>Another way to output to the screen. Causes the message to appear in a 'thought bubble' next to the sprite</p>	<p>Removes any graphical effects that have been applied to the sprite</p>	<p>Used to apply a graphical effect to a sprite</p>

Iteration Blocks

		
<p>Count-controlled iteration - code inside the block repeats a set number of times</p>	<p>Condition-controlled iteration - code inside the block repeats until the condition is met (true)</p>	<p>Infinite iteration - repeats the code inside the block until the program is stopped by the user</p>





Variables Blocks

Used to set the value of a variable.	Used to change the value of a variable.
Adds an item to a list variable	Deletes all the items in a list variable
Deletes a certain item in a list variable	Checks if an item is in a list variable
Swaps an item in the list out with another item	Used to display or hide a list on the screen

Selection Blocks



Runs the code in the block if the condition is true	Runs the code in gap A if the condition is true. Runs the code in gap B if the condition is not true (false)

Motion Blocks

Used to move the sprite by a certain distance along the x or y	Moves the sprite to a particular position on the stage	Determines the direction in which the sprite can rotate
Rotates the sprite clockwise or anti-clockwise by a certain distance	Changes the direction in which the sprite is pointing	

	Key Vocabulary	Definition
1	Algorithm	A sequence of steps used by a human or computer to solve a problem or complete a task
2	Program	An algorithm expressed in a programming language
3	Programming language	A set of rules for instructing a computer to perform specific tasks
4	Interpreter	A program which translates high level language code to machine code and executes it
5	Program translation	One of the actions performed by an interpreter. Programming language code is converted into machine code that a computer can understand and execute
6	Program execution	One of the actions performed by an interpreter. Execution means doing the actions specified by the machine code
7	Programming environment	The tools a human uses to create programs
8	Input	Any method of getting data into the computer
9	Output	Any method of getting data out of the computer
10	Variable	A storage location with a name. The data in a variable can be changed after being initially set
11	Assignment	A statement in a programming language used to set or reset the data stored in a storage location identified by a variable name
12	Syntax error	An error that has occurred because the programmer has not followed the rules of the programming language they're using
13	Logical error	When a program does not behave in the way that it should, even though the programmer has followed the rules of the language
14	Arithmetic expression	A mathematical operation, for example, 10+5
15	Sequence	One of the three basic programming constructs. Instructions that are carried one after the other in order.
16	Selection	One of the three basic programming constructs. Instructions that can evaluate a Boolean expression and branch off to one or more alter-
17	Iteration	One of the three basic programming constructs. A selection of code that can be repeated either a set number of times (count-controlled)

IT: Computing

Output



The `print` function is used to write output to the screen. `print` takes one or more arguments (strings or variables between the brackets) and writes the data to the screen.

Output Examples

```
print("Hello World!")

print("Hello", name, "nice to meet you")
```

Variable Assignment



Variable assignments are not equations. Variable assignments are instructions for the computer. This means that the data stored in a variable can change throughout the runtime of the program.

Assignment examples

```
# Example 1
name = "Bob"

# Example 2
friendName = "Alice"

# Example 3
total = 20 + 50 + 35

# Example 4
area = 3.14 * r * r
```

Input



The `input` function is used to prompt the user to enter some data using the keyboard. `input` can take a string argument which is used as a prompt to the user to tell them what data the computer is expecting.

Type Casting

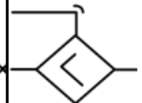
When inputting a number, the `int` function can be used to convert the number to an integer so that your program can perform mathematical operations on it. This is a form of type casting. Look at **Example 2** below to see this being done.

Input Examples

```
# Example 1
name = input("What is your name?")

# Example 2
age = int(input("What is your age?"))
```

Subtle point: Use of `elif`



Original Example 2 Code	Modified Example 2 Code
<pre>if age >= 18: print("You can watch any film") elif age >= 15: print("You can only watch films with a 15 rating or below") elif age >= 12: print("You can only watch films with a 12 rating or below") else: print("You can only watch PG or U rated films")</pre>	<pre>if age >= 18: print("You can watch any film") if age >= 15: print("You can only watch films with a 15 rating or below") if age >= 12: print("You can only watch films with a 12 rating or below") else: print("You can only watch PG or U rated films")</pre>

The output when age is 20 will be:

You can watch any film

The output when age is 20 will be:

You can watch any film

You can only watch films with a 15 rating or below

You can only watch films with a 12 rating or below

In this code, the use of `elif` means that only the first print statement is run because the first condition (`age >= 18`) is true.

In contrast, here `elif` has not been used so the first three print statements are all run because all of the conditions are true. This means we get an output that doesn't make sense.

Plotting Linear Graphs:

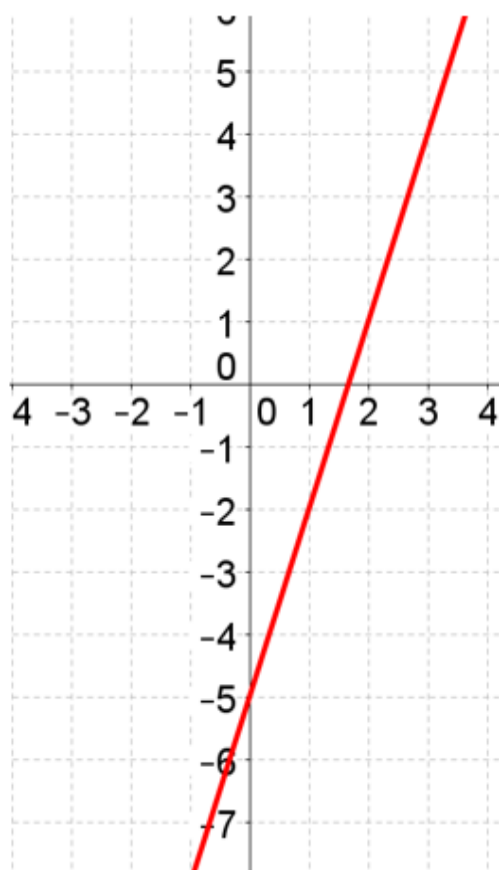
$$y = 3x - 5$$

When $x = 2, y = (3 \times 2) - 5 = 1$

x	-3	-2	-1	0	1	2	3
y	-14	-11	-8	-5	-2	1	4

Coordinates are (-3, -14), (-2, -11) etc.

Plot these coordinates on a coordinate grid and join them together to form a **STRAIGHT LINE**



Ratio

Billy and James have some sweets in the ratio **9:2**. Billy has **35 more** sweets than James. How many sweets are there altogether?

Billy has 7 more parts than James.

$$1 \text{ Part} = 35 \div 7 = 5.$$

$$2 \text{ Parts} = 2 \times 5 = 10$$

$$9 \text{ Parts} = 9 \times 5 = 45$$

$$\begin{aligned} \text{Total Number of sweets} \\ = 5 + 10 = 45 \end{aligned}$$

Recipes and Proportion:

8 People:

- 400g Pasta
- 2 Tins Chopped Tomatoes
- 1 Onion
- 4tbsp Tomato Puree

To find the recipe for 6 people, divide each amount by 8 and then multiply by 6:

6 People:

- $(400 \div 8) \times 6 = 300\text{g Pasta}$
- $(2 \div 8) \times 6 = 1.5 \text{ Tins Tomato}$
- $(1 \div 8) \times 6 = \frac{3}{4} \text{ Onion}$
- $(4 \div 8) \times 6 = 3\text{tbsp Puree}$

Combining Ratios

In a field, the ratio is Cows to Pigs is 3:4 and the ratio of Pigs to Sheep is 6:1. The ratio of Cows to Pigs to Sheep is given by:

$$\begin{array}{cc} \text{C:P} & \text{P:S} \\ 3:4 & 6:1 \end{array}$$

We need to make the number of Pigs the same as they are common to both ratios

$$\begin{array}{cc} \text{C:P} & \text{P:S} \\ 9:12 & 12:2 \end{array}$$

$$\begin{array}{c} \text{C:P:S} \\ 9:12:2 \end{array}$$

Dividing into a Ratio:

Share £480 in the ratio 3: 5: 4

$$3 + 5 + 4 = 12$$

$$1 \text{ Part} = £480 \div 12 = £40$$

$$3 \text{ Parts} = £40 \times 3 = £120$$

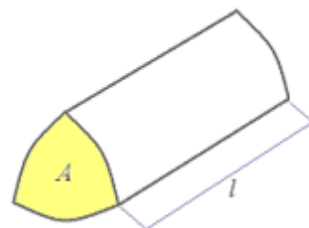
$$5 \text{ Parts} = £40 \times 5 = £200$$

$$4 \text{ Parts} = £40 \times 4 = £160$$

$$£120: £200: £160$$

7 Core & Extension Half-term 5

Volume of Prisms:



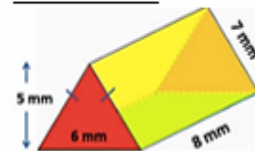
$$\text{Volume} = \text{Cross Sectional Area} \times \text{Length}$$

Volume of Cylinder

$$\text{Volume of a Cylinder} = \pi r^2 h$$

$$\text{Area of a Circle} = \pi r^2 h$$

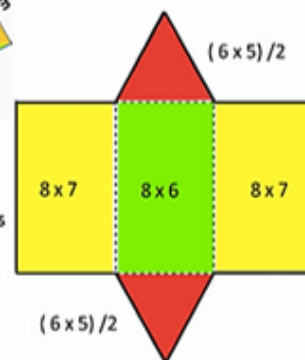
Surface Area



The "Total Surface Area" =

$$\begin{aligned} & 2 \times (6 \times 5) / 2 : \text{Two Reds} \\ & + 2 \times (8 \times 7) : \text{Two Yellows} \\ & + 1 \times (8 \times 6) : \text{One Green} \end{aligned}$$

$$\begin{aligned} & = 2 \times 15 + 2 \times 56 + 1 \times 48 \\ & = 190 \text{ mm}^2 \checkmark \end{aligned}$$



Surface Area of Cylinder

$$\text{Surface Area} = 2\pi r^2 + 2\pi r h$$

Area Formulae

$$\text{Area of Triangle} = \frac{b \times h}{2}$$

$$\text{Area of Trapezium} = \frac{(a + b) \times h}{2}$$

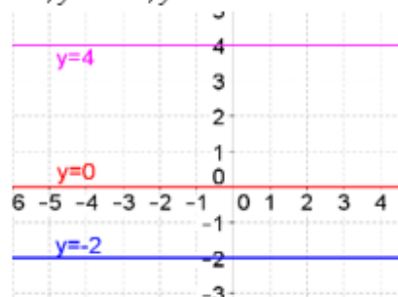
Metric Units for Area and Volume

$$\begin{aligned} 1\text{cm}^2 &= 100\text{mm}^2 & 1\text{m}^2 &= 10,000\text{cm}^2 \\ 1\text{cm}^3 &= 1000\text{mm}^3 & 1\text{m}^3 &= 1,000,000\text{cm}^3 \end{aligned}$$

7 Core & Support Half-term 5

Horizontal Line Graphs

$y = 4, y = -2, y = 0$ etc.



Vertical Line Graphs

$x = 3, x = -1, x = 0$ etc.



Metric Units:

Length

$$10\text{mm} = 1\text{cm}$$

$$1\text{m} = 100\text{cm} = 1000\text{mm}$$

$$1\text{km} = 1000\text{m}$$

Capacity

$$1\text{litre} = 100\text{cl} = 1000\text{ml}$$

Mass

$$1000\text{g} = 1\text{kg}$$

$$1\text{tonne} = 1000\text{kg}$$

Area of 2D Shapes

$$\text{Area of a Square} = \text{base} \times \text{base} = b^2$$

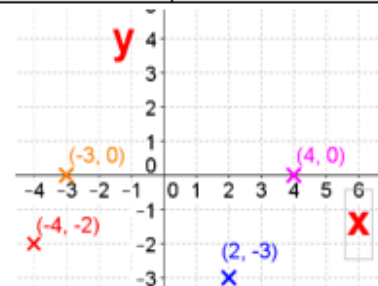
$$\text{Area of a Rectangle} = \text{base} \times \text{height} = b \times h$$

Coordinates

(x, y)

x value: Along the Corridor

y value: Up the stairs



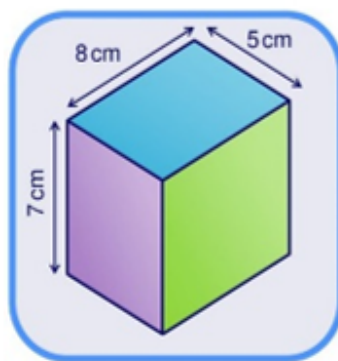
Volume of 3D Shapes

$$\text{Volume of a Cube} = b^3$$

$$\text{Volume of a Cuboid} = b \times h \times l$$

Surface Area:

The surface area of a 3D shape is the **TOTAL AREA OF ALL FACES**.



So the total surface area =

$$2 \times 40\text{cm}^2 \text{ Top and bottom}$$

$$+ 2 \times 35\text{cm}^2 \text{ Front and back}$$

$$+ 2 \times 56\text{cm}^2 \text{ Left and right side}$$

$$= 80 + 70 + 112 = 262\text{cm}^2$$

Proportion

10 cakes cost £3.40. 1 cake will cost £0.34 so 21 cakes will cost £7.14

Ratio:

Tom has 24 Xbox games and 38 PS4 games. The ratio of PS4 games to Xbox games is:

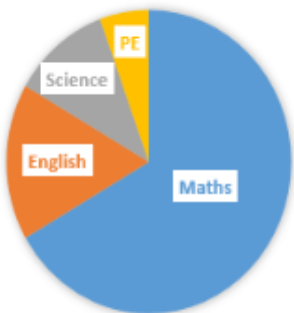
$$\begin{array}{ccc} \text{PS4: Xbox} & & \\ +2 & \curvearrowright & 38:24 & \curvearrowleft & +2 \\ & & \mathbf{19:12} & & \end{array}$$

There are 62 games altogether so, $\frac{38}{62}$ of the games are PS4 games.

Pie Charts:

Subject	Frequency	Angle = <i>Magic Number</i> × <i>Freq.</i>
Maths	12	$18 \times 12 = 216^\circ$
English	3	$18 \times 3 = 54^\circ$
Science	2	$18 \times 2 = 36^\circ$
PE	1	$18 \times 1 = 18^\circ$
Total = 20		

Degrees Per Person = $360 \div \text{Total Frequency} = 360 \div 20 = 18$



Nth term

Find the *n*th term of:

5, 11, 17, 23, ...

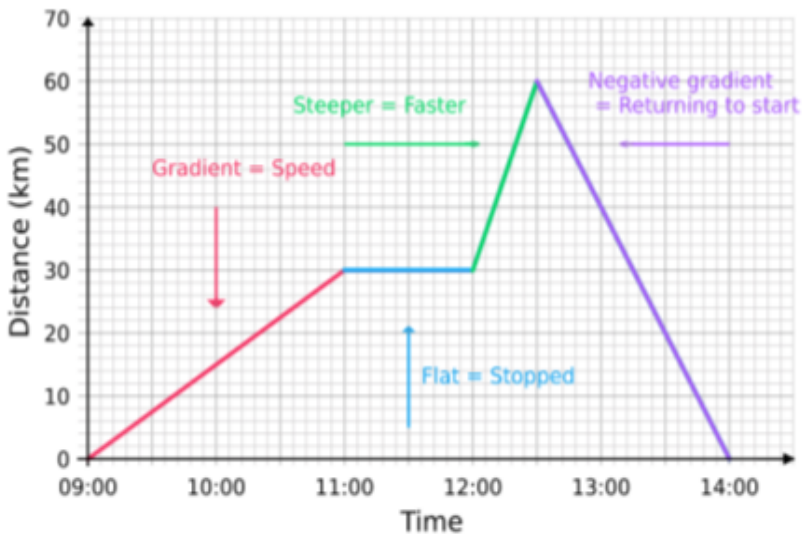
Our sequence is 1 less than the 6 times table. Therefore, the *n*th term is

$$6n - 1$$

The 50th term of the sequence is:

$$(6 \times 50) - 1 = 299$$

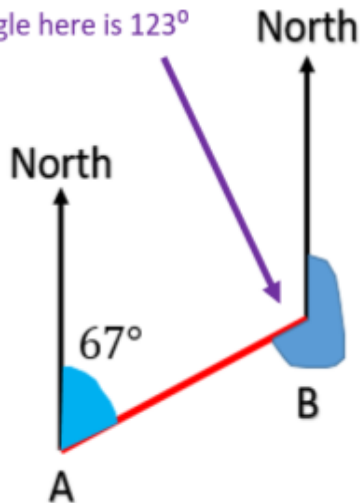
Distance-Time Graphs



Bearings:

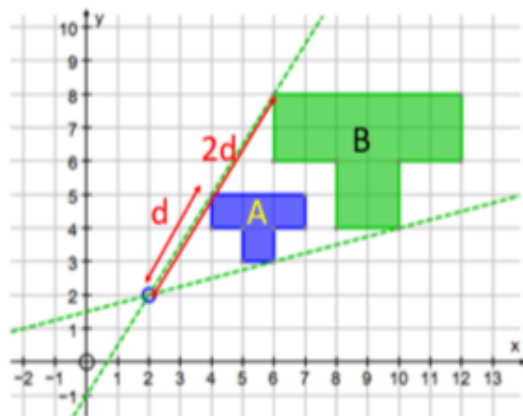
- 3 Figures
- Measure from North (000°)
- Measure Clockwise

Co-Interior Angles add up to 180°. The angle here is 123°



The bearing of **B from A** is **067°**. The bearing of **A from B** is **247°**

Enlargements



Shape A has been enlarged by a scale factor 2 about the point (2,2) to obtain shape B

Shape B is also twice the distance from (2,2) compared to Shape A

Compound Measures

Speed(S), Distance(D) and Time(T)

$$S = \frac{D}{T}, \quad D = S \times T, \quad T = \frac{D}{S}$$

Pressure(P), Force(F), and Area (A)

$$P = \frac{F}{A}, \quad F = P \times A, \quad A = \frac{F}{P}$$

Density(D), Mass(M) and Volume(V)

$$D = \frac{M}{V}, \quad M = D \times V, \quad V = \frac{M}{D}$$

Units:

Speed: m/s, km/h, mph

Pressure: N/m², N/cm²

Density: kg/m³, g/cm³

Sequences

Find the first 3 terms of the sequence with *n*th term: $4n + 9$

$$n = 1, \Rightarrow (4 \times 1) + 9 = 13$$

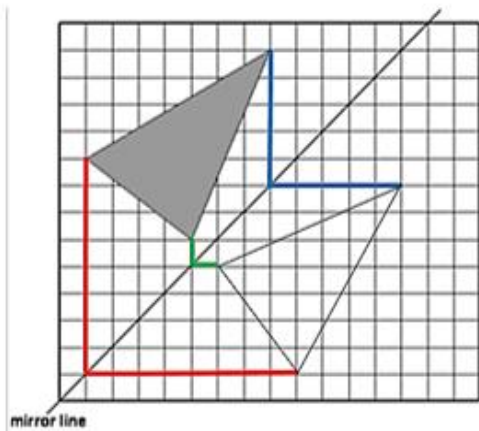
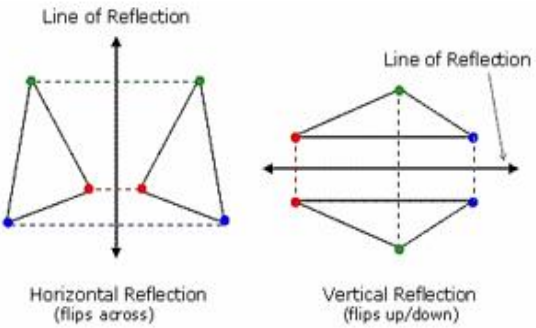
$$n = 2, \Rightarrow (4 \times 2) + 9 = 17$$

$$n = 3, \Rightarrow (4 \times 3) + 9 = 21$$

7

Core & Extension
Half-term 6

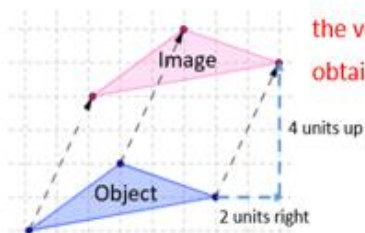
Reflections



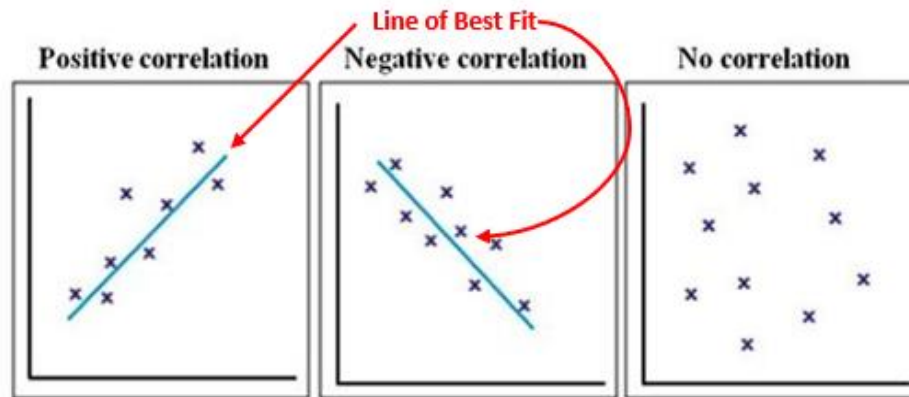
Translations:

Translation Vectors: $\begin{pmatrix} x \\ y \end{pmatrix}$

The object has been translated by the vector $\begin{pmatrix} 2 \\ 4 \end{pmatrix}$ to obtain the image



Scatter Graphs and Correlation



The points lie close to a straight line, which has a positive gradient.

This shows that as one variable **increases** the other **increases**.

The points lie close to a straight line, which has a negative gradient.

This shows that as one variable **increases**, the other **decreases**.

There is no pattern to the points.

This shows that there is **no connection** between the two variables.

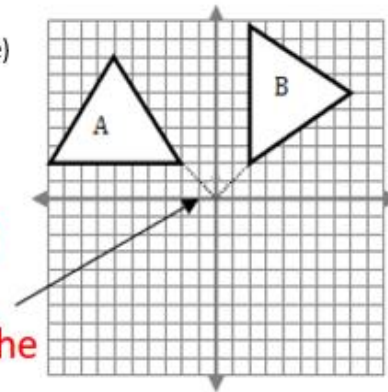
Rotations

Angle (90° , 180° or 270°)

Direction (Clockwise or Anti-Clockwise)

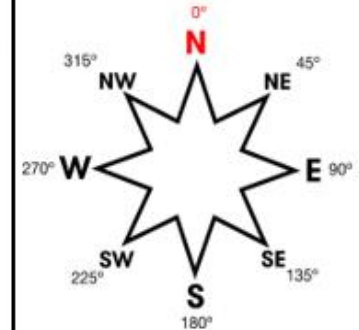
Centre of Enlargement

Shape A has been rotated 90° Clockwise about the Origin (0,0)



Bearings and Compass Points

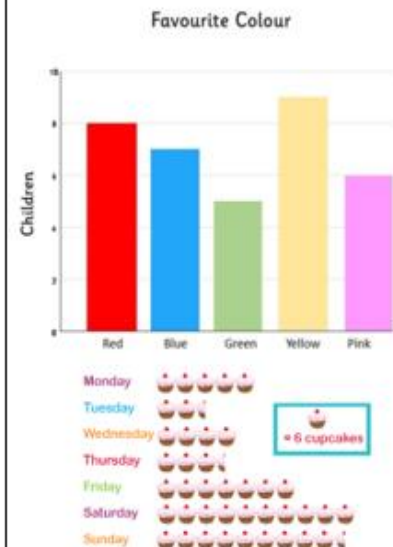
Points



7

Core & Support
Half-term 6

Bar Charts and Pictograms





Melody - When **Pitch** is added to **Rhythm** it creates **Melody**: The Main Tune



Texture: Describing the effect of different layers of sound and how they interact with each other

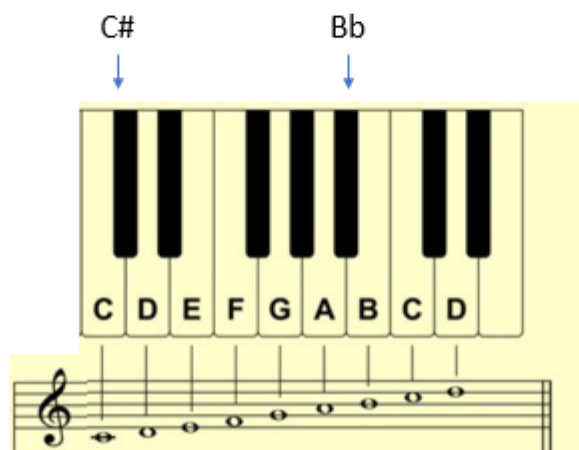


Dynamics The range of volume that notes can be played

Sharps – #
Flats – b

A sharp raises the pitch of a note by a semitone. Sharps are the black key to the right of the note.

A flat lowers the pitch of a note by a semitone. Flats are the black key to the left of the note.



Texture

Thick/Dense: lots of layers of sound

Thin/sparse: few layers of sound

How to tell:

- *List the instruments in the piece of music*
- *Identify the instruments playing the melody*
- *Identify the instruments playing the harmony/chords*
- **Monophonic**: when only one melody is being played with no harmony/chords

Dynamics

ff – fortissimo: very loud

f – forte: loud

mf – mezzo forte: moderately loud

mp – mezzo piano: moderately soft

p – piano: soft

pp – pianissimo: very soft

Crescendo: gradually getting louder

Diminuendo: gradually getting softer



What are Muslim beliefs and teachings?

Religion, Philosophy & Ethics



Key Terms	Definition
Islam	The religion of Muslims
Muslims	The follows of the teachings of Islam
Allah	The Arabic word for God
Prophet Muhammed	The final prophet of Islam, he received the Quran from Allah and is the ultimate role model for Muslims
Qur'an	The sacred text of Islam
Monotheism	Belief in one God. Muslims believe in one God.
Prophets	Someone who communicates with God
Five Pillars	The five duties that Muslims of all branches of Islam must follow.

"There is no God by Allah , and Muhammed is his messenger"
Shahadah

"Allah knows what is in every heart"
Qur'an

"Show forgiveness, enjoy kindness, avoid ignorance"
Qur'an



Muslim Beliefs

- Islam means "submission to God" or "peace"
- Muslims believe in one God (they are monotheists)
- There are approximately 1.8 billion Muslims in the world (about 26% of the global population)
- The Prophet Muhammed was Allah's (God's) messenger who founded the religion in the 6th century. He was the last messenger of God known as the *Seal of the Prophets*.
- Muslims believe Allah revealed his messages to Muhammed and these teachings now make up the Qur'an.
- Muhammed is so respected that it is usual for Muslims to say 'peace be upon him' when they mention his name

Origins of Islam & the Quran

- Muhammed was born in 570AD in Makkah (Saudi Arabia) where the temple known as Ka'bah is. The land was ruled by men who believed in many Gods and persecuted (treated terribly) those who disagreed with their beliefs.
- Muhammed was an orphan who grew up to be a business man. Around the age of 40, Muhammed went to the mountains and in a cave, whilst meditating and praying to Allah for guidance, he was visited by the angel Jibril who told him "you are the messenger of God". Angel Jibil gave him a scroll with the words of the Allah on and instructed him to read it. Since Muhammed couldn't read it was a miracle when he understood them. Muslims remember and celebrate this night as The Night of Power; they believe if they act as good Muslims Allah may grant them their desires just as he gave Muhammed the guidance he wanted.
- At various times, Allah sent direct messages to Muhammed. 23 years of messages were recorded by Muhammed to form the Qur'an.
- Three years later Muhammed preached monotheism (belief in only one God) in Mekkah, he also preached that people should be generous.
- Polytheists (people who believe in many Gods) were offended by Muhammed's teachings and war began between the follows of Islam and the polytheists in Mekkah. Muhammed and his followers won.
- After Muhammed died his followers couldn't agree on who should lead the religion which lead to different groups of Muslims. Sunni Muslims are the largest denomination (group) of Muslims.

Interesting Facts

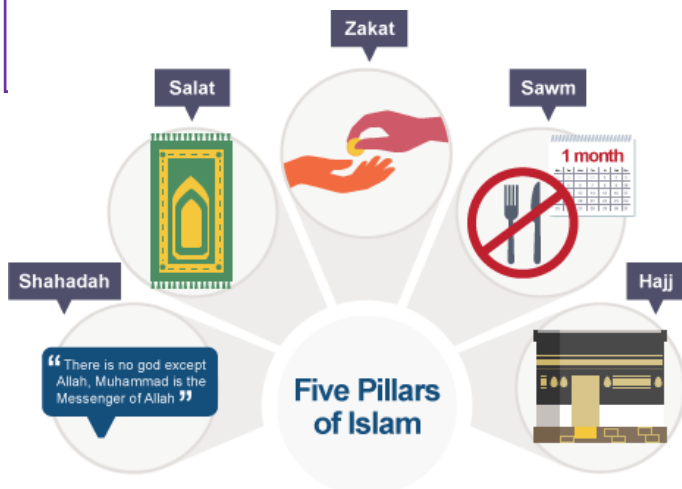
- Muslims do not believe it is right to draw Allah as the Qur'an forbids the worship of false idols (Gods) and throughout history people have falsely worshiped images and statues.
- Muslims believe the Qur'an should not be put on the floor as it isn't respectful.
- Some women chose to wear head or body coverings such as a Hijab or Burka, in front of any male that isn't family. They do so to express their faith and remain modest. Some countries have banned the use of full coverings (burkas) e.g. France, Belgium and Austria.

The Five Pillars

The Five Pillars of Islam are the five acts that every Muslim must do to live a good and responsible life, and in order to be close to God. They are written in the Hadith (a book containing the sayings of Muhammed).

The Five Pillars are...

1. **Shahadah** - This is the **declaration of faith** that is spoken times a day; "there is no God but Allah, and Muhammad is his messenger".
2. **Salat** - This is to perform set **prayers five times a day** at specific times in order to be reminded of the importance of Allah.
3. **Zakat** - This is to **give a compulsory amount of wealth to charity** as a type of worship and self-purification. Often Zakat is 2.5% of one's wealth each year goes to the poor.
4. **Sawm** - This is the **duty to fast** (from food, drinking, smoking and sexual activity) during Ramadan for Muslims that have reached maturity and are healthy. It helps Muslims become closer to Allah and remember those less fortunate.
5. **Hajj** - This is a **pilgrimage to Mekkah** that all Muslims, who can afford and are physically able, must make at least once in their life.



Hajj

- Hajj is a pilgrimage to Mekkah that Muslims have a **duty to do once in their life (if they are able)**.
- Once a year, Muslims from around the world **stand before the Kaaba praising Allah – a symbol for how everyone is equal, this is a practice designed to promote bonds between Muslims.**
- The Hajjis or pilgrims wear simple white clothes called Ihram.
- **The pilgrimage can help Muslims feel closer to Allah (God), spending time focusing only on him.**
- During the Hajj the Pilgrims perform acts of worship and they renew their sense of purpose in the world.
- Mekkah is so holy only Muslims may enter.



Ramadan

- **Ramadan is the holy month of fasting – when Muslims do not eat or drink during daylight hours** – they eat before the sun comes up and after it has gone down.
- Ramadan brings Muslims closer to Allah. It also a time to focus on being a better person and spending time with friends and family.
- **Muslims believe good actions will be rewards greater during Ramadan because the month is blessed by Allah.**
- During Ramadan, Muslims will spend their day trying to become better people, attending mosque, helping others and giving to charity. **This brings them closer to God.**
- The end of Ramadan is called **Eid al-Fitr, Muslims celebrate their devotion and renewed faith** by having a big family party, sharing a meal and dressing in their best clothes.



Happy Ramadan, May Allah accept from us all,

Lower your eyes
Don't fight
Conserve your tongue

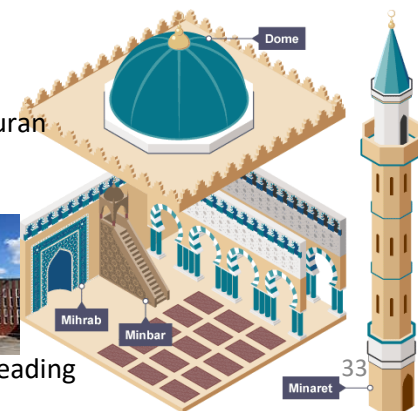
Help poor people
Pray
Read the Holy Qur'an

Mosques

A **mosque is an Islamic places of worship**. Muslims attend mosque to pray, study and celebrate their faith. **Often mosques are used as a school and community center too**. Mosques are led by Imams (religious leader like a priest).

Features...

- **Quibla** – prayer wall, it faces Mekkah
- **Imam** – a person chosen as leader due to knowledge of the Quran
- **Minbar** – a platform doe Immam's to deliver a sermon
- **Dome** – over the prayer hall, it represents Allah's power over creation
- **Minaret** – a tower from where the call to prayer (adhan) is performed.



Commonly Imams are men but there is a long history of women leading as Imams and teaching men the knowledge of the Quran.

World Religions - Hinduism Religion, Philosophy & Ethics

Overview

- Hinduism is the world's 3rd largest religion, with about 1.1 billion followers. It is around 5,000 years old.
- Hindus are the people who follow Hinduism.** It is a very complex religion that is followed by different people in different ways.
- Many gods are worshipped in Hinduism although all of these different Gods are believed to be a part of the supreme God named 'Brahman.'**
- Hindus believe in karma and reincarnation – that when you die you are reborn as something else.**
- Hinduism doesn't have one holy book, but several sacred texts. **Mandirs** are Hindu worship buildings.
- Diwali, festival of light, marks the Hindu New Year –** oil lamps are lit on rivers to welcome the Goddess of Wealth and fireworks set off to ward off evil spirits.
- Holi is the festival celebrating the start of spring** when people smear each other with colour

Karma & Reincarnation





- Hindus believe that when people die they are born again as another living thing. In each life, the person is rewarded or punished for the things they have done in their last life (karma).
- If someone lives a perfect life, they will be freed from the cycle of reincarnation and join the Gods (Moksha)



Brahman & the Gods

- Hindus believe in one supreme God called Brahman – he can be found in everyone and everything, including the other Gods.
- Some of the important other Gods include; Brahma (the creator), Shiva (the destroyer) and Vishnu (the protector) - these three form the 'Trimurti' (trinity).
- Other gods include Ganesh (remover of obstacles), Lakshmi (the Goddess of wealth & fortune) and Vishnu (the God who preserves life and stands up to evil).



Answers to Important Questions and Key Vocabulary		
Where and how do Hindus worship? Why?		<ul style="list-style-type: none"> Many Hindus worship at home in their own shrine – this could be anything from a room, an altar, or simply pictures or statues. The Hindu building for communal worship is called a Mandir (Hindu temple). The temples are dedicated to different gods and are the focus of religious life. At Mandirs, Hindu people often recite the names of Gods and Goddesses. They also offer water, fruit and flowers to the Gods.
What are the Hindu holy books?		<ul style="list-style-type: none"> There are many different types of holy texts in Hinduism. Perhaps the most sacred are called the Vedas. The Vedas guide people in their daily lives. They are written into the Sanskrit language.
Where do most Hindus live in the world?		<ul style="list-style-type: none"> About 15% of the world's population are Hindus. India has the most Hindus by far – about 1 billion Indians are Hindus – this is around 80% of all Indians. However, Nepal has the highest proportion of Hindus – about 83% of its population are Hindus. There are also lots of Hindus in Bangladesh, Indonesia, Malaysia, Pakistan and Sri Lanka. Most of the populous countries in the world contain a population of Hindu people.
How many different types of Hindus are there?		<ul style="list-style-type: none"> There are many, many different forms of Hinduism, as different types have developed over the thousands of years since it was founded. There are four main forms – Vaishnavism, Shaivism, Shaktism and Smartism. These four types can be broken down many more times! Although they have small differences, each of the different forms follows the same rough principles.

Key Vocabulary

- Hindu
- Brahman
- Karma
- Reincarnation
- Brahma
- Shiva
- Vishnu
- Holi
- Dewali
- Dhoti
- Sari
- River Ganges

Top 10 Facts!

- Hindus believe that all living things have souls.
- Because of this, very committed Hindus are vegetarians.
- Cows are considered to be particularly sacred, as they give milk to the people.
- People clean their houses, and then decorate them, to celebrate Diwali.
- Traditional Hindi clothes include a robe (dhoti) and shawl (chaddar) for men.
- Hindu women wear a long piece of clothing called a sari.
- Singing and dancing is an important part of Hindu worship, as is chanting.
- Big Hindu ceremonies include marriage (vivaha) and cremation (antyeshti)
- Hindu wedding celebrations last for many days. The bride and groom wear red and gold.
- After death, Hindus are cremated, and their remains are scattered in a nearby river.

Hindu Timeline

2500BCE: Evidence of Indus Valley Hindus.	1500 BCE: The oldest Hindu scriptures were created.	1300 BCE: The oldest Hindu hymns were composed.	800 BCE: The sacred text of the Mahabharata begins to be composed.	100 BCE: The Ramayana is written.	600CE: Hinduism begins to grow and flourish – prayers and songs written.	950-1050CE: A 'City of Temples' is built in India at Khajuraho – 80 still stand.	c. 1600 CE: The Hindu Renaissance begins. Many modern versions of sacred texts are found, translated and used.
---	---	---	--	-----------------------------------	--	--	--

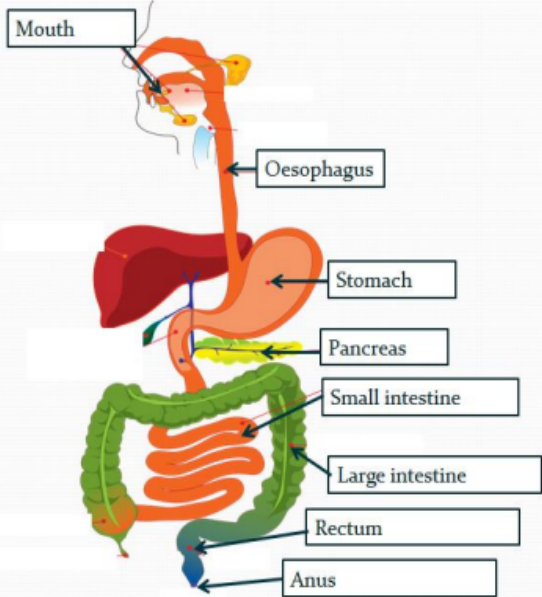
Y7 Bio T3 - Diet & Health

Digestive system

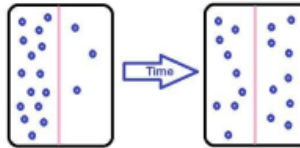
Large molecules are broken down into **small** molecules which can be absorbed into the blood.

There are two types of digestion:

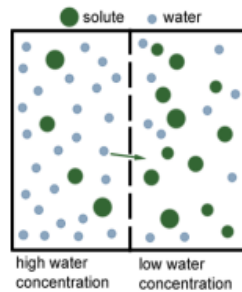
- Physical breakdown- Structures like teeth and muscular walls physically break up molecules
- Chemical breakdown- Enzymes break up molecules



Diffusion is the movement of particles from a high concentration to a low concentration.



Osmosis is a special kind of diffusion. Osmosis is the movement of water particles from a high water potential (concentration) to a low water potential (concentration)



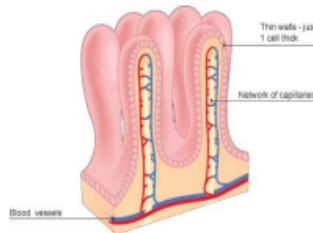
Food Group	Effect on the body	Example
Carbohydrates	Provides the body with the most energy	Bread, rice, pasta
Fats	Second best provider of energy, insulation.	Butter, oils
Protein	Growth and repair of cells	Meat, fish, eggs
Vitamins	Stay Healthy. <u>Vit A</u> = Eyes, <u>Vit C</u> = Immunity, <u>Vit D</u> = Bones	Fruit & Vegetables
Minerals	Stay Healthy. Iron= blood, Calcium= Teeth & bones	Milk, meat
Fibre	Prevents constipation	Cereal
Water	Hydrates cells, chemical reactions	Water

Lack of ...	Problems caused
Energy	- Weight loss, lack of growth - Starvation - E.g. Marasmus
Protein	- Lack of growth - Less repair of body tissues - E.g. Kwashiorkor
Fats	- Dry skin & fatigue - Less insulation - Loss of menstrual cycle
Vitamins & minerals	- Lack of formation of bones - Bleeding gums & loss of teeth - E.g. Rickets, Scurvy
<u>Overnutrition</u>	- Overweight & obesity - <u>Cardiovascular disease</u> - E.g. Type 2 diabetes

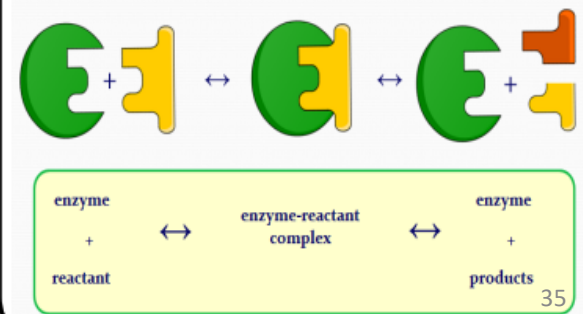
Organ	Function
Mouth	Chew food into smaller pieces
Oesophagus	Muscular tube which moves food to the stomach
Stomach	Produces acid (HCl) to kill any bacteria. Muscular walls to churn food.
Pancreas	Produces enzymes
Small intestine	Digested food absorbed into the blood
Large intestine	Water reabsorbed
Rectum	Faeces is stored
Anus	Faeces leave the body

Inside the small intestine there are small hair like structures called villi. Villi are adapted for absorption:

- Provide a large surface area
- Thin covering for a short diffusion distance
- Good blood supply



Enzymes are chemicals that speed up reactions. They help us break down food molecules



The Periodic Table of Elements

1	2											3	4	5	6	7	0											
		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Key relative atomic mass atomic symbol name atomic (proton) number </div>																				<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 1 H hydrogen 1 </div>						<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 4 He helium 2 </div>
7 Li lithium 3	9 Be beryllium 4											11 B boron 5	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluorine 9	20 Ne neon 10											
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulfur 16	35.5 Cl chlorine 17	40 Ar argon 18											
39 K potassium 19	40 Ca calcium 20	45 Sc scandium 21	48 Ti titanium 22	51 V vanadium 23	52 Cr chromium 24	55 Mn manganese 25	56 Fe iron 26	59 Co cobalt 27	59 Ni nickel 28	63.5 Cu copper 29	65 Zn zinc 30	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36											
85 Rb rubidium 37	88 Sr strontium 38	89 Y yttrium 39	91 Zr zirconium 40	93 Nb niobium 41	96 Mo molybdenum 42	[98] Tc technetium 43	101 Ru ruthenium 44	103 Rh rhodium 45	106 Pd palladium 46	108 Ag silver 47	112 Cd cadmium 48	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54											
133 Cs caesium 55	137 Ba barium 56	139 La* lanthanum 57	178 Hf hafnium 72	181 Ta tantalum 73	184 W tungsten 74	186 Re rhenium 75	190 Os osmium 76	192 Ir iridium 77	195 Pt platinum 78	197 Au gold 79	201 Hg mercury 80	204 Tl thallium 81	207 Pb lead 82	209 Bi bismuth 83	[209] Po polonium 84	[210] At astatine 85	[222] Rn radon 86											
[223] Fr francium 87	[226] Ra radium 88	[227] Ac* actinium 89	[261] Rf rutherfordium 104	[262] Db dubnium 105	[266] Sg seaborgium 106	[264] Bh bohrium 107	[277] Hs hassium 108	[268] Mt meitnerium 109	[271] Ds darmstadtium 110	[272] Rg roentgenium 111	[285] Cn copernicium 112	[286] Nh nihonium 113	[289] Fl flerovium 114	[289] Mc moscovium 115	[293] Lv livermorium 116	[294] Ts tennessine 117	[294] Og oganeson 118											

* The Lanthanides (atomic numbers 58 – 71) and the Actinides (atomic numbers 90 – 103) have been omitted.

Relative atomic masses for **Cu** and **Cl** have not been rounded to the nearest whole number.

Chemical reactions

Elements and compounds can react chemically by mixing them with other chemicals, or by using heat or electricity. You can tell that a **chemical reaction** has occurred if a new substance has been formed. This might be observed through a colour change, a gas being given off (bubbles), a solid being formed (eg a precipitate) or an energy change.

Most chemical reactions involve an energy change. This is usually in the form of heat, but can also involve light being given off, for example, in burning (**combustion**).

In a chemical reaction a new substance is always formed. Most chemical reactions are not easily reversed (they are **irreversible**). Some chemical reactions take place just by mixing. When you make a solid by mixing two liquids, the solid is called a **precipitate**.

Other chemical reactions need energy to start them off. This energy can be in the form of heat, light or electricity. When you use energy to split up compounds they are **decomposed**.

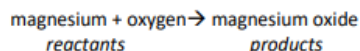
Combustion reactions

Combustion is the chemical name for burning. A fire needs three things to keep burning: fuel, oxygen and heat. We show these three things on the **Fire Triangle**.

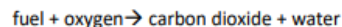


If any one of these three things runs out, the fire will go out.

When a metal burns, the metal combines with oxygen from the air to form a chemical called an **oxide**.



Fossil fuels contain a lot of carbon and hydrogen. When they burn they use up oxygen from the air and produce water and carbon dioxide. We can show the reaction using a word equation.



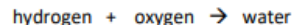
Y7 Chem T3- Chemical reactions

Word equations

We can write **word equations** to show a chemical reaction. The chemicals that you start with are called the **reactants**. The chemicals at the end are called the **products**.

When writing word equations, the reactants are on the left and the products are on the right, separated by an arrow.

Reactants \rightarrow Products



Word equations should only contain the names of the elements and compounds, not a mixture of names and formula.

Conservation of mass

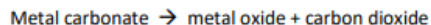
In a chemical reaction, no atoms are created or destroyed, they are just re-arranged to form the products. This means the mass of the reactants is the same as the mass of the products.

When metals react with oxygen their mass appears to go up, because oxygen is added to them. Sometimes the mass in a chemical reaction appears to go down, this is because a gas is given off and the gas escapes.

Thermal decomposition

In a thermal decomposition reaction, a substance breaks down into less complex substances when heated.

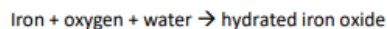
Metal carbonates are broken down by thermal decomposition.



You can test for carbon dioxide being given off by bubbling it through limewater. If the limewater goes cloudy carbon dioxide is present.

Oxidation

Combustion is an example of a type of reaction called oxidation. In an oxidation reaction, a substance gains oxygen. Most oxidation reactions give out heat energy. Rusting is an oxidation reaction.



Exothermic and Endothermic reactions

An **exothermic** reaction is a reaction that gives out heat energy. The temperature of the surroundings increases.

Combustion is an example of a type of exothermic reaction.

Exothermic reactions are useful as fuels, they can also be used in hand warmers and self-heating cans.

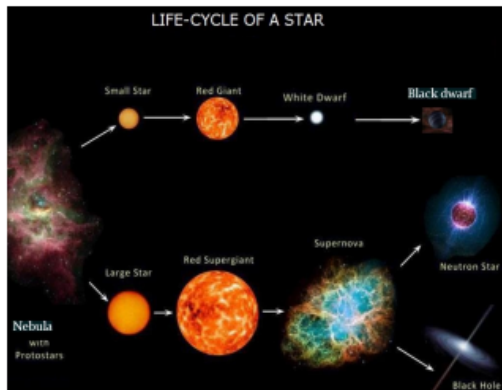
An **Endothermic** reaction is a reaction that absorbs heat energy.

Thermal decomposition is an example of an endothermic reaction. The temperature of the surroundings decreases.

Endothermic reactions can be used in cold packs to treat sports injuries.

To find out if a reaction is exothermic or endothermic you need to find the initial temperature of the reactants, then mix the chemicals and record the new temperature. If the temperature has gone up the reaction is exothermic, if the temperature has gone down the reaction is endothermic.

Y7 Phys T3- Space



Stars are born and die in space. Stars can be categorised as either normal stars or massive stars. Normal stars like ours follow the life cycle shown at the top (Nebula - average star - red giant - white dwarf - Black dwarf)

Massive stars (stars that are at least 1.4 times more massive than our sun) will go from being a massive star to a red supergiant, followed by a supernova. Then, it will either become a black hole or a neutron star.

Alien life is something that many astronomers are interested in. To date, scientists have discovered around 3,900 exoplanets. Exoplanets are planets which have been discovered orbiting around other stars.



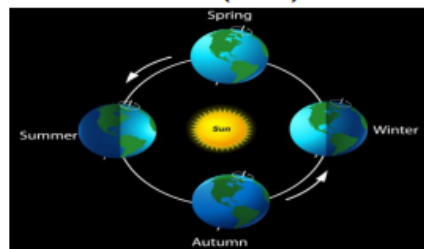
Some of these planets are too close to their parent star and so would be too hot for life. Some are too far away from their parent star and so would be too cold. Planets that are at just the right distance are in what we call the "habitable zone." Scientists are very interested to find out if these planets could contain life.

The geocentric model of the solar system was the model of the solar system which placed the earth at the centre. According to this model, everything orbits around the earth.

The heliocentric model is the model that places the sun at the centre of the solar system instead.



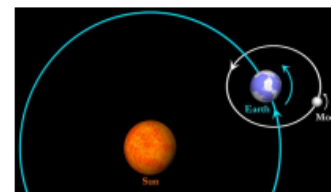
The seasons come about because the earth is slightly tilted. It is summer in the northern hemisphere when the northern hemisphere is tilted towards the sun. This results in greater intensity of solar radiation and longer days. When it is summer in the northern hemisphere, the southern hemisphere is tilted away from the sun, therefore the sun's rays are less intense and this makes it colder (winter).



To view distant planets we use space-based telescopes. We can also gather information about planets in our own solar system using rovers and probes.



The orbits of planets and moons is because of **gravity**.



The earth orbits around the sun, which takes 365.25 days to complete.

The moon orbits around the earth which takes about 29.5 days.

Since a calendar year is based on 365 days and not 365.25, every 4 years we have a leap year. This is where we have an extra day in February.

The earth also spins on its axis. It takes 24 hours for it to spin once, hence the length of a day is 24 hours.

Our solar system is made up from planets, satellites (both natural and man-made) and dwarf planets.

Dwarf planets are planets that are too small to become spherical under the force of gravity.

The sun is actually a star, and is one of billions of stars that make up our galaxy (The Milky Way).

The universe is made up of billions of galaxies of different sizes.

Space is very big and so metres and kilometres tend to be too small to be practical in astronomy. Instead, we use units such as light years and astronomical units:

1 light year is the distance that light travels in 1 year.

1 Astronomical Unit (1AU) is the distance from the sun to the earth.

The universe is about 13.75 billion years old and began with an event called the "big bang".

The universe has been expanding ever since and it appears to be speeding up in its expansion. Whilst there are theories about what will happen to our universe, no one knows for certain what the ultimate fate of the universe will be!