

Name and Tutor group:



Year 7 Knowledge Organiser

Term 6

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CORSHAM CHARACTER

INTELLECTUAL VALUES

The pursuit of truth,
knowledge and
understanding.

Be reflective. Be curious. Be
open-minded. Be creative.



PERFORMANCE VALUES

Maximum effort, maximum
focus.

Be resilient. Always Persevere.
Contribute to Teamwork.
Be ambitious.



DREAM BELIEVE ACHIEVE

Knowledge Organiser -Micro:Bits

Key vocab	
Microbit	A small computer designed by the BBC for use in computer education in the UK.
Processor	Receives inputs from the computer and produces outputs.
USB	The form of power supply used by the Microbit - power is transmitted from the computer via a micro-USB cable.
Buttons	Input devices used within the Microbit to control or alter programs whilst running.
LED (Light emitting diodes)	(LEDs) - used on the Microbit as a screen in a 5x5 grid to display information.
Accelerometer	An input device within the Microbit to control or alter programs by tilting or moving the device.
Microsoft Block Editor	The visual programming language used to create
Algorithm	A set of instructions to be followed to complete a given task or solve a problem.
Program	A sequence of instructions used by a computer.
Sequence	The order which the computer will run code in, one line at a time.
Selection	A decision made by a computer, choosing what code should be run only when certain conditions are met.
Condition	Checking to see whether a statement or sum is true or false.
Iteration	When a section of code is repeated several times - also known as looping.
Variable	Something which can be changed in a computer. Made up of a name and some data to be saved.

<https://makecode.microbit.org/>

Key features of the microbit

On-board motion detector or "accelerometer" that can detect movement and tell other devices you're on the go. Featured actions include shake, tilt and freefall.

A built-in compass or "magnetometer" to sense which direction you're facing, your movement in degrees, and where you are.

Bluetooth Smart Technology to connect to the internet and interact with the world around you.

Five Input and Output (I/O) rings to connect the microbit to devices or sensors using crocodile clips or 1mm banana plugs.

Buttons

1. LED display & light sensor
2. Pins - GPIO
3. Pin - 3 volt power
4. Pin - Ground

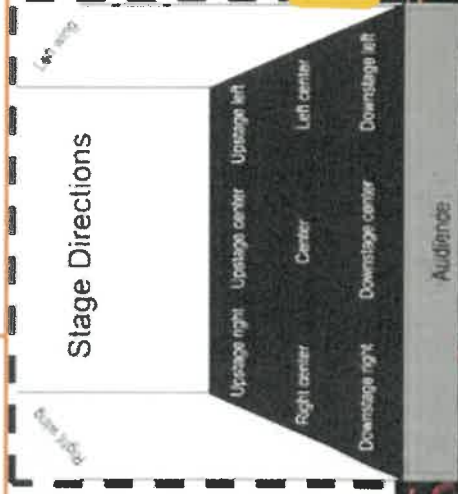
1. Radio & Bluetooth antenna
2. Processor & temperature sensor
3. Compass
4. Accelerometer
5. Pins
6. Micro USB socket
7. Single LED
8. Reset button
9. Battery socket
10. USB interface chip

Drama

Year 7 Knowledge Organiser

Creating a performance from a script

KEY PHYSICAL SKILLS	
Gesture	How everyday actions, such as shaking hands or putting on a jacket, express something about a character. What single gestures, like a wave or hug can reveal about a character.
Facial Expression	How different facial expressions reflect different characters and their moods. How eye movements can convey feelings and relationships.
Over Exaggeration	Exaggeration is a representation of something in an excessive manner. Overacting is the exaggeration of gestures and speech when acting.
Body Language	The gestures, postures, and facial expressions by which a person manifests various physical, mental, or emotional states and communicates nonverbally with others.
Slow Motion	How quickly or slowly a character makes a gesture or moves across the stage and how it influences our opinion of them.



"All the world's a stage."
William Shakespeare

Blocking is:

- the precise staging of actors.
- working out an actors movements on the stage.

DRAMA TECHNIQUES	
Freeze Frame	The action is frozen like a photograph.
Split Scene	Cutting from scene to scene.
Improvisation	Improvisation is a state of being and creating action without pre-planning. This can be when an individual or group is acting, dancing, singing, playing musical instruments, talking, creating artworks, problem solving, or reacting in the moment and in response to the stimulus.
Hot Seating	You are in role and people ask you questions about your background, behaviour and motivation.
Role on the Wall	Role on the Wall is a visual map that invites the actors to explore the inner feelings and outer influences on a character, place, or idea.
Thought Tracking	When frozen you speak the thought in the character's head aloud.
Levels	Using heights and proxemics to demonstrate meaning and relationships to the audience.

THE STAGE	
Set	The set is the constructed or created setting in which a play takes place.
Props	The props are the items used during a performance.
Costume	All the clothes and accessories an actor wears to demonstrate meaning and/or character.
Masks	Masks are a form of covering the face enabling actors to represent different people or beings leading to a more striking and effective performance.
Make-Up	Make-up is the cosmetic paint, powder and colouring used on stage to make faces and expressions visible to the audience.
Lighting	The use of artificial light to create a range of effects and moods, or to direct the audience's attention.
Sound	This includes everything the audience hears.

"We must all do theatre, to find out who we are, and to discover who we could become."

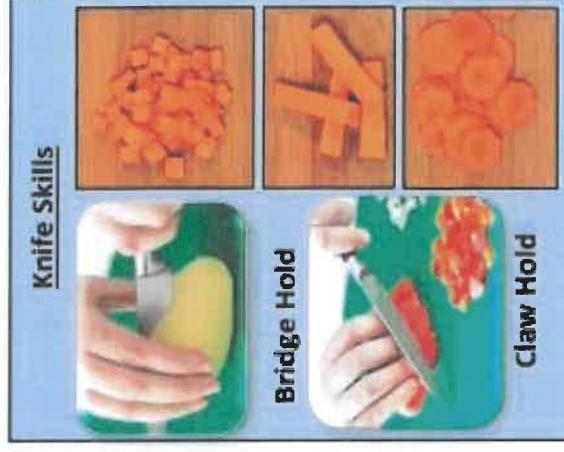
Augusto Boal

Tips for Learning Lines:

- Read the Entire Script:
- Highlight Your Lines:
- Read Aloud:
- Write Your Lines out:
- Run Lines with a Partner:
- Regular Practice:
- Prioritise Weak Areas:
- Use Apps: Run Lines With Me or Script Rehearser
- Make Audio Recordings: (You can even record the other characters' lines and leave gaps for your lines to practice speaking.)
- Learn Your Cues:

Year 7 Food and Nutrition- Knowledge Organiser

Nutrient/ Food group	Functions - Why do we need it?	Sources - Where they are found
Carbohydrates	These give us energy. Sugary ones give us quick release energy. Starchy ones give us slow release.	Bread, rice, pasta, potatoes
Protein	Needed for the growth and repair of our bodies and can also be used for energy.	Meat, fish, dairy products, tofu, soya, Quorn, nuts, seeds, lentils
Fat	These keep us warm, protect us and provides our bodies with energy	Butter, oil, processed foods e.g. crisps, chips, chocolate, cake.
Water	Keeps us hydrated and keeps our body's working properly.	Fruit and vegetables, water, fruit juices, milk.
Vitamins	These are needed generally to keep us healthy. The allow all the chemical reactions in our body and protect us from diseases.	Fruit, vegetables, cereals, dairy products
Minerals	Helps build bones and teeth and allow muscles to work properly.	Green vegetables, dairy products and red meat
Fibre	These are needed to keep our digestive system working (help us go to the toilet) and helps to fill us up.	Wholegrain cereals, brown rice, pasta, bread, fruit and vegetables



Preparation Boards			
Red	Yellow	Blue	Green
Types of food			
Raw meats	Cooked meats	Raw fish	Fruit and salad
		Vegetables	Bakery and dairy
		Brown	White

Keywords

- Hygiene
- Cross - Contamination
- Safety
- Healthy eating
- Bacteria
- Nutrient
- Food Group
- Eatwell Guide

Healthy eating

The Eatwell guide shows how much of what we eat in total should come from each of the five food groups.

Oils and Spreads	Fruits and vegetables	Meat, eggs and pulses	Starchy foods	Dairy foods
Butter, Vegetable oil, Margarine	Apples, Bananas, Oranges, Pepper, Carrots, Cabbage, Spinach, Frozen peas	Chicken, fish, Lentils, Chickpeas, beans	Bread, Potatoes, Pasta, Rice, Cereals	Milk, Cheese, Yogurt

The 4C's	Description
Cooking	Always cook food properly. Check that food is cooked in the centre.
Chilling	Store food safely between 0 and 5°C
Cleaning	Always wash and dry your hands and equipment properly. Keep everything clean.
Cross Contamination	Wash your hands after touching raw foods. Keep raw and cooked foods separate.

What is Energy balance

Energy in = energy out

Why is it important to keep it balanced?

To maintain a healthy weight and allow the body to stay healthy and work efficiently

Yr 7 Graphics – Healthy Bar Wrapper **DESIGN AND TECHNOLOGY**

Tools, Techniques, Materials and Equipment	
Paper	A compliant material made from wood pulp.
Board	Used for packaging, model making, photography and greeting cards.
Colour Rendering	A colour technique used for professional finish in DT.
Scoring	A method to create accurate folds.
Scissors / guillotine	To accurately cut paper.

Paper and Board
Papers and boards are made from wood pulp and are converted in a paper mill. Paper is measured in Grams Per Square Metre (GSM). Board thickness is quoted in microns or Grams Per Square Metre (GSM).

Packaging
To protect products, especially in transport
To promote product using attractive fonts, logos and designs.
To present the product.
To place the product.
To provide important information.

Keywords
Graphics
Communication
Commercial
Innovative
Onomatopoeia
Product
Branding
Logos
Font
Design Fixation
Collaboration
Paper
Packaging
Design Approach
Wrapper
Product
Information
Template

Paper finishes:
Off set lithography
Embossing
Varnish

Health and Safety in DT:

- Listen to your teacher's instructions
- Always wear an apron
- Long hair should be tied back
- Don't use equipment you are not trained on
- Always stand up during practical lessons
- When using machines, always wear safety glasses
- Only use the stop button in an emergency
- Work quietly and be sensible and careful at all times

Maths in DT:
Multiplication
Divide
Add / Subtract
Measurement conversion
Ratios
Percentages
Surface area

What is good design?
Clear ideas
Annotations
Measurements
Content
Presentation
Balance

Year 7 / 9 D&T RESISTANT MATERIALS UCD &Modelling: Playgrounds

Tools and Equipment

Measuring and marking

Steel rule



An accurate tool for measuring and marking out.

Set square



A ruler to ensure you measure and mark accurate 45 / 90 degree angles.

Template



A template is a tool used to mark out shapes repeatedly

Card shaping and adhesives

Slot



A joining technique to join card.

Curve cut



Kerf cutting (partial cuts) will ensure a smoother curve in the card.

Tabs



Tabs help to join the card components together.

Hot glue gun



An adhesive which joins card.

Masking tape



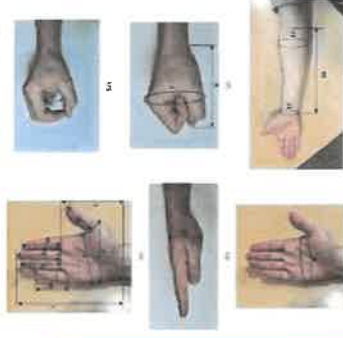
A temporary adhesive which joins card / paper.

Anthropometrics

Anthropometrics is the collection of maximum and minimum measurements of a target market. The data can be used to work out the dimensions of a product.

Ergonomics

Ergonomics Testing and analysing how a person interacts with the product can improve its **functionality** and how it fits into its surroundings.



Maths in DT:

Multiplication / Divide
Add / Subtract
Measurement conversion
Ratios / Percentages

Keywords

Modelling Iterative designs UCD
User needs Reformulate Creativity
Functional Innovative Anthropometrics
Ergonomics Social Client Testing
Evaluation

We use **ACCESS FM** to help us write a **specification** - a list of requirements for a design - and to help us **analyse** and **describe** an already existing product.

ACCESS FM - Helpsh

A is for **Aesthetics**



Aesthetics means what does the product look like? What does it feel like? What does it sound like? What does it smell like? What does it taste like? What does it weigh like? What does it feel like? What does it sound like? What does it smell like? What does it taste like?

C is for **Cost**



Cost means how much does the product cost to buy? How much does it cost to buy? How much does it cost to buy? How much does it cost to buy? How much does it cost to buy? How much does it cost to buy? How much does it cost to buy? How much does it cost to buy?

C is for **Customer**



Customer means who will buy or use your product? Who will buy your product? Who will use your product? Who will buy your product? Who will use your product? Who will buy your product? Who will use your product? Who will buy your product?

E is for **Environment**



Environment means what is the product used in? What is the product used in? What is the product used in? What is the product used in? What is the product used in? What is the product used in? What is the product used in? What is the product used in?

S is for **Size**



Size means how big or small is the product? How big is the product? How small is the product? How big is the product? How small is the product? How big is the product? How small is the product? How big is the product?

S is for **Safety**



Safety means how safe is the product when it is used? How safe is the product? How safe is the product? How safe is the product? How safe is the product? How safe is the product? How safe is the product? How safe is the product?

F is for **Function**



Function means how does the product work? How does the product work? How does the product work? How does the product work? How does the product work? How does the product work? How does the product work? How does the product work?

M is for **Material**



Material means what is the product made out of? What is the product made out of? What is the product made out of? What is the product made out of? What is the product made out of? What is the product made out of? What is the product made out of? What is the product made out of?

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KS3 YEAR 7 D&T RESISTANT MATERIALS

Tools and Equipment

Measuring and marking

Steel rule

An accurate tool for measuring and marking out

Try square

A tool used to check right angles on wood or plastic

Template

A template is a tool used to mark out shapes repeatedly

Shaping and finishing

Metal file

Used to shape or smooth wood, metal or plastic

Glass paper

An abrasive paper used to smooth the surface or edges of wood

Disc sander

A machine used to smooth the edges of materials

Traditiona

I wood joints:

Butt Joint
Lap / Rebate Joint
Finger Joint
Dovetail Joint
Mitre Joint

Maths in DT:

Multiplication
Divide
Add / Subtract
Measurement conversion
Ratios
Percentages
Surface area

Isometric Drawing

Softwood

Softwoods come from coniferous trees which are evergreen, needle-leaved, cone-bearing trees, such as cedar, fir and pine.

Hardwood

Hardwoods come from broadleaved, deciduous trees, such as oak, maple and beech.

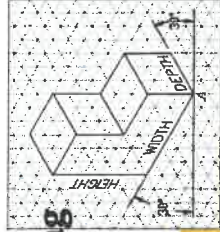
Hardwoods		Softwoods	
	Beech		Pine
	Oak		Spruce
	Ash		Cedar
	Teak		Fir

Manufactured board

Manufactured boards are timber sheets which are produced by gluing wood layers or wood fibres together. Manufactured boards often made use of waste wood materials. Ply, MDF or chipboard.

Keywords

Bench hook
Bookend
Coping saw
Hardwood
Softwood
Joint
Tenon saw
Reciprocating saw
Vice
Abrasive
Template
Specification
Research
Design
Practical task
Evaluation
Timber cycle



Cutting

Tenon saw



A hand saw with a stiff back used to cut straight lines in wood – back saw action

Coping saw



A hand saw used to cut complex shapes in wood and plastic

Scroll saw



A machine saw used to cut complex shapes in wood and plastic

Bench hook



Held against the front edge of a bench or table to support work

Pillar drill



A machine used to make holes in materials

Laser cutter



CAM: Laser cutting is the use of a high-powered laser to cut, etch and engrave your material

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ACCESS FM - Helpsheet

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WHAT?

MAKE A STATEMENT
POINT



HOW?

LOOK AT THE TEXT AND TECHNIQUES
EVIDENCE



WHY?

MEANS? SUGGESTS?
ANALYSIS



MAKE DEVELOPMENTS
LINKS



CONTEXTUAL KNOWLEDGE:

- Hitler wanted to create what he thought was the “best” and strongest race – and to the Nazi Party, this excluded certain groups, such as **Jews, Gypsies** and those with **physical** and **mental disabilities**. In an attempt to eliminate a “racial enemy” outside of Germany, such groups were also persecuted in the countries invaded by German forces.
- Around **six million** Jewish people were killed during World War 2 in one of history’s most terrible events – the **Holocaust**. Racist in his views, Hitler blamed Jewish people for Germany losing WW1 and claimed they were dangerous to German people and society.

TIER 3 VOCABULARY	DEFINITIONS
Juxtaposition (n)	the fact of two things being seen or placed together with contrasting effect.
Foreshadowing (v)	a warning or indication of a future event.
Foreboding (n)	a feeling that something bad will happen; fearful apprehension.
Illuminate (v)	help to clarify or explain.
Identify (v)	establish or indicate who or what (someone or something) is.
Dialogue (n)	a conversation between two or more people.
Connotation (v)	Implies or suggests something in addition to the primary or literal meaning.
Denote (v)	be a sign of, indicate.
Hook (n)	a literary technique that grabs the attention of the reader.
Evoke (v)	bring or recall (a feeling, memory or image) to the conscious mind.
Convey (v)	make (an idea, impression or feeling) known or understandable.

SUMMARY IN A NUTSHELL: Having lost their parents in the chaos of war, three Polish children are left alone to fend for themselves. They begin an epic journey across Europe to try and find their family.



KEY TECHNIQUES			
Narrative voice	Semantic field	Imagery	
Sibilance	Tension	Verb	
Pathetic fallacy	Alliteration	Adjective	
Contrast	Figurative	Personification	
Juxtaposition	Symbolism	Motif	



CHARACTERS

Joseph Balicki – A headmaster in Warsaw, Poland. Married to Margrit with three children.	Edek Balicki – He was 11 years old when his father, Joseph was taken away by the Nazis.
Margrit Balicki – A Swiss woman with three children.	Bronia Balicki – She is the youngest of the children and was only three years old when her father was taken away.
Ruth Balicki – The eldest of the children. She was nearly 13 when her Dad was taken away to prison.	Jan – a ragged, orphan boy who treasures a penknife – a silver sword. He loves animals of all types.



TIER 2 VOCABULARY

character	theme
structure	resolution
fiction	Non-fiction

KEY WORDS

DEFINITIONS

Loafing	Idly wasting time.
Tottering	Unsteady, potential to topple over.
Derelict	Shabby and dilapidated as a result of neglect and abandonment.
Plunder	to steal from enemies after defeating them in battle.
Contempt	Scornful derision and a general air of superiority toward another.
Ragamuffin	poverty-stricken street urchin, generally referring to a child.
Refugees	People displaced from their homeland, in search of a place to stay.
Repentant	Irrefutably apologetic for committing a shameful act.

CONTEXT TIMELINE:

- September 1, 1939 - Germany invades Poland.
- September 3, 1939 - Britain and France declare war on Germany (start of WW2).
- January, 1940 - Rationing introduced across the UK.
- May to June, 1940 - Dunkirk evacuated and France surrenders to Germany.
- July, 1940 - Germany launches air attacks on Great Britain (The Battle of Britain and the Blitz begins). Germany, Italy and Japan signed the Tripartite Pact creating the axis alliance.
- December 7, 1941 - The Japanese attack the US navy in Pearl Harbour. The next day, the USA enters the war fighting with the allies.
- June 6, 1944 - D-day and the Normandy invasion. Allied forces invade France and push back the Germans.
- April 30, 1945 - Adolf Hitler commits suicide.
- May 7, 1945 - Germany surrenders & victory in Europe is declared the next day.
- August 1945 - Atomic bombs dropped on Hiroshima & Nagasaki, Japan by the US killing approximately 226,000 people.
- September 2, 1945 - Japan surrenders signalling the end of WW2.
- July, 1954 - Rationing ends in the UK.

What is a natural resource?

Something that occurs naturally (without any human help) which we can make use of. These include soil, water, crops, sunlight.

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Renewable resources	Non renewable resources
A resource that we can keep using and it will not run out. e.g. wind, sunlight	If we continue to use the resource it will run out. This is also called a finite resource. e.g. copper, oil, gas

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Tackling water stress	Stop wasting it In 2020 in the UK, 3 billion litres of water was wasted. Fixing leaks can reduce this. Farming wastes a lot of water but by using “drip irrigation”, farmers can be efficient with the water they use.
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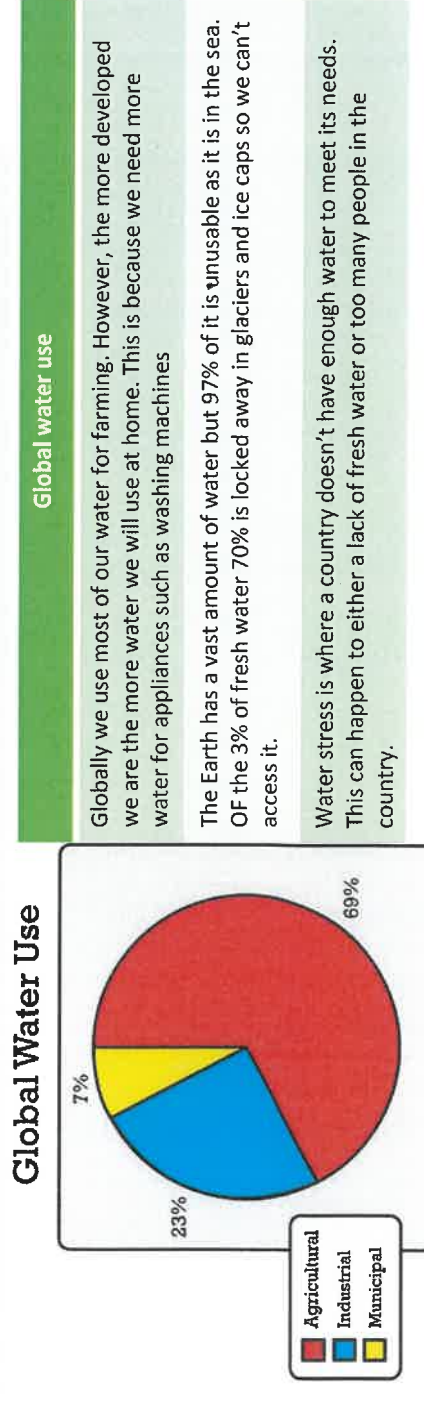
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Stop wasting it	In 2020 in the UK, 3 billion litres of water was wasted. Fixing leaks can reduce this. Farming wastes a lot of water but by using "drip irrigation", farmers can be efficient with the water they use.
Recycle it	In the UK, the waste water is cleaned then returned to rivers. In some countries the waste water is cleaned then used for crops. In some cities the waste water is super cleaned and used for drinking. 90% of water in Israel is recycled.
Move it	We can transfer water from areas that have a lot to areas that don't. In China they have built canals that move water from the wet south to the dry north. This reduces water insecurity.

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Global Water Use

Category	Percentage
Agricultural	69%
Industrial	23%
Municipal	7%

A pie chart titled 'Global Water Use' showing the distribution of water usage across three sectors. The largest portion is Agricultural at 69%, represented by a red slice. The next largest is Industrial at 23%, represented by a blue slice. The smallest portion is Municipal at 7%, represented by a yellow slice. A legend at the bottom right identifies the colors: red for Agricultural, blue for Industrial, and yellow for Municipal.



Global Water Use



Category	Percentage
Blue	23%
Yellow	7%
Red	70%

Global water use

Globally we use most of our water for farming. However, the more developed we are the more water we will use at home. This is because we need more water for appliances such as washing machines

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The Earth has a vast amount of water but 97% of it is unusable as it is in the sea. OF the 3% of fresh water 70% is locked away in glaciers and ice caps so we can't access it.

Water stress is where a country doesn't have enough water to meet its needs. This can happen to either a lack of fresh water or too many people in the country.

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Yellow	7%
Red	70%

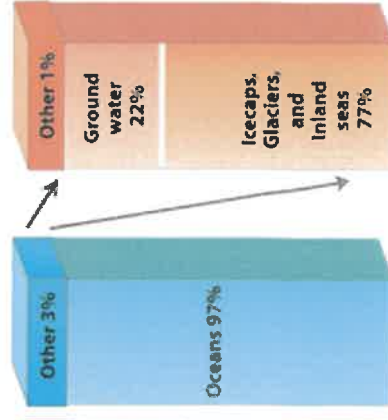
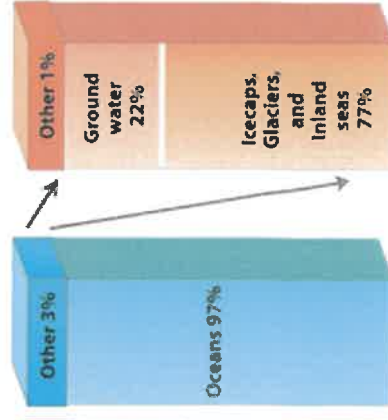
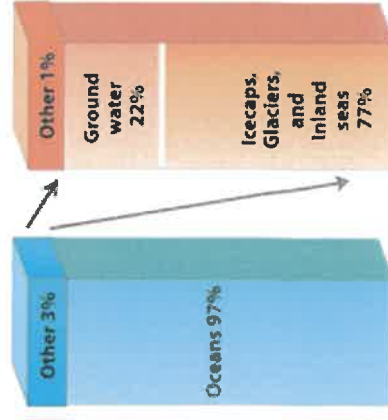
Global water use

Globally we use most of our water for farming. However, the more developed we are the more water we will use at home. This is because we need more water for appliances such as washing machines

Global Water Use

Category	Percentage
Agricultural	69%
Industrial	23%
Municipal	7%

A pie chart titled 'Global Water Use' showing the distribution of water usage across three sectors. The largest portion is Agricultural at 69%, represented by a red slice. The next largest is Industrial at 23%, represented by a blue slice. The smallest portion is Municipal at 7%, represented by a yellow slice. A legend at the bottom right identifies the colors: red for Agricultural, blue for Industrial, and yellow for Municipal.



The Ogallala

The Ogallala is an aquifer in the USA..

An aquifer is an underground rock that stores water. This can happen if the rock is permeable.

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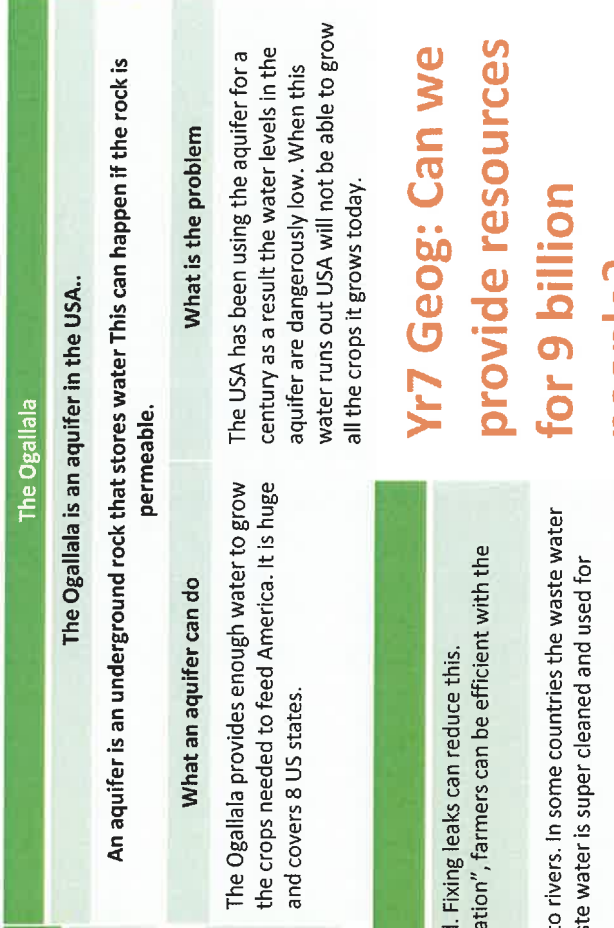
An aquifer is an underground rock that stores water. This can happen if the rock is permeable.

What an aquifer can do	What is the problem
The Ogallala provides enough water to grow the crops needed to feed America. It is huge and covers 8 US states.	The USA has been using the aquifer for a century as a result the water levels in the aquifer are dangerously low. When this water runs out USA will not be able to grow

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Yr7 Geog: Can we provide resources for 9 billion people?

Distribution of Water

What is food insecurity?

Food security is where a country provides enough food to healthily feed their entire population. Currently 2 billion people are not food secure, these countries are mostly found in Africa.

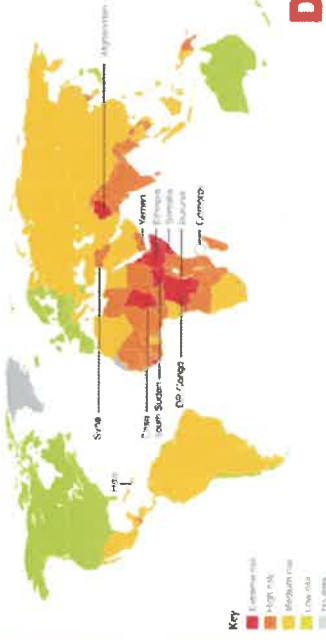
Physical causes of food insecurity

- Pests and disease destroys crops
- Not enough rainfall to grow crops
- Climate change reduces rainfall

Human causes of food insecurity

- Conflict in the country means food can't be transported.
- Poverty means food can't be transported.
- Poverty means they can't buy enough food.

Food Security Risk Index 2013



Is the UK food secure?

The UK has a high level of food security. However, many families struggle with food insecurity.

Reasons why the UK does not have full food security

Population growth

Our population is growing and we are becoming more developed so we want a wider range of food. Plus we create a lot of food waste.

Politics

Government make trade deals for trading food. A lot of trade is taxed (tariffs)
If countries increase their tariffs, food becomes more expensive and so families may not be able to afford the food they want.
Currently we import 30% of our food from the EU

Climate change

Other countries are going to have less food to sell us.
British farmers will struggle with heatwaves and floods.

Reducing food waste

Food miles explain how far food has travelled to get to your plate. The more developed a country is the greater the food miles and the more impact on the planet. More food miles means that you carbon footprint has been increased.

Eating produce in season

IF we can eat produce that is grown locally in season it will reduce the amount of food miles. This will reduce your own carbon footprint.

Eating up left over.

Eating left overs means that less food gets sent to landfill sites will in turn reduce the amount of methane being

Yr7 Geog: Can we provide resources for 9 billion people?

Drought Resistant Crops



Tackling food insecurity

Aid and charity work

By providing help to local farmers in LIDCs, (seeds and fertiliser). More crops can be grown and local families can become food secure.

Technology

Mobile phones are now all over the world. Local people in LIDCs can apply for food vouchers on their mobile phones.

Drought resistant crops

Technology has meant that we can now develop crops which can be grown with minimal water – perfect for countries that get a lot of drought.

Enquiry: What was the impact of European expansion on the wider world?



Outline: During the early Modern period, many European countries began to explore the rest of the world. The places they went to were inhabited by indigenous people but European countries claimed these for their own and set up colonies there. The indigenous people were often treated poorly by the settlers whilst the colonists began to establish colonies which would later lead to empires being created in Africa and India by Britain.

Event	Date	Summary
Roanoke settlement	1585-90	Failed colony attempt in Virginia. The colonists made many mistakes and also mistreated the indigenous people. The last colonists disappeared without trace
Jamestown	1607	The first English colony to be successfully set up on North America. It was in Virginia and was named after James I of England.
First enslaved people at Jamestown	1619	First documented arrival of enslaved people from Africa at an English colony. There about 20 individuals who were sold at an auction and then sent to work across Virginia, mainly on tobacco plantations.
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Indian War of Independence began	1857	Indian Sepoys protested at using bullets that went against their religion. The protest became a full scale revolt with violence on both sides.

History – Year 7 Knowledge Organiser Topic 5

Key individuals



Samurai Bill (William Adams).
One of the first Europeans to travel to Japan in 1600, he advised the Shogun and spent his life in Japan.



Pocahontas. A Native American woman who was kidnapped by the Jamestown colony. She was married to an Englishman and taken to England where she died.



Mangal Pandey. Helped to start the Indian War of Independence in 1857. He was a Sepoy who refused to use the new bullets due to religious reasons.



"Angela". One of the first enslaved people to arrive at Jamestown. She was probably from Angola in Africa. Her real name has not been recorded and no picture was made. She possibly died in 1625.



Key vocabulary:

Colonise: to send settlers to a place to establish control there
Colony: an area of land ruled by another country.
Empire: a collection of territories ruled over by another country.
Indigenous American: the people who were first living in America before settlers arrived. Often called native Americans or First Nations people.
Jamestown: one of the first colonies settled in America by the English. In Virginia.
Merchant: someone who trades items to make money
Mutiny: to try and overthrow your leaders in the armed forces.
Plantations: farms set up to grow crops by enslaved people.
Privateer: someone who is employed by a ruler to steal from the ships of other countries.
Roanoke: a failed settlement in Virginia.
Sepoy: the name for Indian soldiers who worked for the British army.
Settlers: those who travel to live in a colony; sometimes called colonists
Triangular trade: a trade in enslaved people who were taken from Africa to work in the Americas.



Furthering learning
Want to find out more about the British Empire?

Preparation for a summative assessment

Historical skill focus: using evidence

- What is the nature, origin and purpose of a source?
- What makes a source useful?

What to focus on

What is the **NATURE** of the source? Does this make it useful?

What is the **ORIGIN** of the source? Does this make it useful?

What is the **PURPOSE** of the source? Does this make it useful?

Starting sentences

Source A is useful because...

This is shown by...

The source is also useful due to its purpose which was to...

Nature = type of source like a painting or letter
Origin = date made and who made it
Purpose = why it was made = motivate/justify/persuade

History – Year 7
 Knowledge Organiser
 Topic 5

Pocahontas' portrait.

Unknown artist in England.
 Made in about 1616



Section C: Using evidence

How useful is this source to a historian investigating the life of Pocahontas? Write a paragraph to explain and try to use your own knowledge to support your ideas.

Developing

I can describe what I can see or read in a source.

Secure

I can make inferences using a source.

I can ask questions about sources such as who made the source or when it was made

Exceeding

I can explain how a source can be useful/not useful in a PEE paragraph.

I am starting to think about the nature, origin and purpose of the source and what its impact could be.

Point = One way the source is useful is...

Evidence = This is shown by the nature of the source...

Explain = This is useful because...

Preparation for a summative assessment

History – Year 7
Knowledge Organiser
Topic 5

Historical skill focus: interpretations

- What does an interpretation tell us
- How convincing is the interpretation?

What to focus on:

Starting sentences

What does the interpretation show? Does this fit your own knowledge?

What is the historian's opinion? Is he/she right?

When was the historian writing – what does this tell us?

Do any of the above make the interpretation convincing?

Interpretation A is convincing because...

This is shown by...

The interpretation is also convincing due to its purpose which was to...

Point = This interpretation is convincing because...

Evidence = This is shown by...

Explain = This is convincing because...



Gemma Hollman in Royal Witches. 2019

By 1487 ...the Malleus Maleficarum was published in Germany. The book known as the "Hammer of Witches" was a guide for secular and religious authorities dedicated to describing what witches were, how they acted and how they looked, so that they could successfully identify and prosecute them. The Malleus overwhelmingly blamed women for witchcraft and although at the time of its publication it was just one theory among many, by the mid sixteenth century it was regarded as the authority on witchcraft... Tried and tested methods developed and each allegation had traces of the previous one in it... As each woman was accused, so did their case influence contemporary ideas of witchcraft. Each time, the charges became easier to bring.

Section B: Using interpretations

How convincing is Interpretation A to a historian studying the witch hunts?

Make sure you use your own knowledge to show why the Interpretation is or isn't convincing. You can also consider the historian who has written the interpretation.

Developing

I can identify an interpretation.
I can repeat what an interpretation says about an event/individual

Secure

I can identify interpretations.
I can understand historians' methods.
I can use an interpretation to understand an event/individual and describe this.

Exceeding

I can decide whether an interpretation is convincing with some evidence.
I can write a PEE paragraph.
I can begin to explain the purpose of an interpretation.

YEAR 7 — REASONING WITH NUMBER

@whisto_maths

Developing number sense

What do I need to be able to do?

By the end of this unit you should be able to:

- Know and use mental addition/ subtraction
- Know and use mental multiplication/ division
- Know and use mental arithmetic for decimals
- Know and use mental arithmetic for fractions
- Use factors to simplify calculations
- Use estimation to check mental calculations
- Use number facts
- Use algebraic facts

Keywords

Commutative: changing the order of the operations does not change the result

Associative: when you add or multiply you can do so regardless of how the numbers are grouped

Dividend: the number being divided

Divisor: the number we divide by

Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

Equation: a mathematical statement that two things are equal

Quotient: the result of a division

Mental methods for addition/ subtraction

Addition is commutative



$$6 + 3 = 3 + 6$$

The order of addition does not change the result

Subtraction the order has to stay the same

$$360 - 147 = 360 - 100 - 40 - 7$$

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction

Mental methods for multiplication/ division

Multiplication is commutative



$$2 \times 4 = 4 \times 2$$

The order of multiplication does not change the result

Partitioning can help multiplication

$$\begin{aligned} 24 \times 6 &= 20 \times 6 + 4 \times 6 \\ &= 120 + 24 \\ &= 144 \end{aligned}$$

Division is not associative

Chunking the division can help $4000 \div 25$
"How many 25's in 100" then how many chunks of that in 4000.

Mental methods for decimals

Multiplying by a decimal < 1 will make the original value smaller e.g. $0.1 = \div 10$

Methods for multiplication 12×0.03

$$\begin{aligned} 12 \times 3 &= 36 \\ 12 \times 3 &= 36 \\ 12 \times 0.3 &= 3.6 \\ 12 \times 0.03 &= 0.36 \end{aligned}$$

Methods for addition $2.3 + 2.4$

$$\begin{aligned} 2 + 2 &= 4 \\ 0.3 + 0.4 &= 0.7 \\ 4 + 0.7 &= 4.7 \end{aligned}$$

Methods for division $15 \div 0.05$

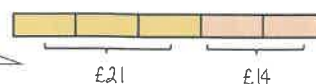
Multiply by powers of 10 until the divisor becomes an integer

$$\begin{aligned} 1.5 \div 0.05 &= 150 \div 5 \\ 150 \div 5 &= 30 \end{aligned}$$

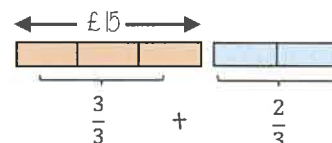
Mental methods for fractions

Use bar models where possible

I've spent $\frac{2}{5}$ of my money I have £21 left



How much did they have to begin with?



What is $\frac{5}{3}$ of £15?

Using factors to simplify calculations

$$30 \times 16$$

$$10 \times 3 \times 4 \times 4$$

$$10 \times 3 \times 2 \times 8$$

$$2 \times 5 \times 3 \times 2 \times 2 \times 2 \times 2$$

$$16 \times 10 \times 3$$

Multiplication is commutative
Factors can be multiplied in any order

Estimation

Estimations are useful — especially when using fractions and decimals to check if your solution is possible.

Most estimations round to 1 significant figure

Estimations are useful — especially when using fractions and decimals to check if your solution is possible.

$$210 + 899 < 1200$$

This is true because even if both numbers were rounded up, they would reach $300 + 900$.

The correct estimation would be $200 + 900 = 1100$.

Number facts

$$\text{Use } 124 \times 5 = 620$$

For multiplication, each value that is multiplied or divided by powers of 10 needs to happen to the result

$$620 \div 124 = 50$$

For division you must consider the impact of the divisor becoming smaller or bigger.
Smaller — the answer will be bigger (it is being shared into less parts)
Bigger — the answer will be smaller (it is being shared into more parts)

Algebraic facts

$$2a + 2b = 10 \quad \text{Everything } \times 2$$

$$0.1a + 0.1b = 0.5$$

Everything $\div 10$

$$a + b = 5$$

Odd 2 to the total

$$a + b + 2 = 7$$

The unknown quantity isn't changing but the variables change what is done to give the result

YEAR 7 — REASONING WITH NUMBER

@whisto_maths

Sets and probability

What do I need to be able to do?

By the end of this unit you should be able to:

- Identify and represent sets
- Interpret and create Venn diagrams
- Understand and use the intersection of sets
- Understand and use the union of sets
- Generate sample spaces for single events
- Calculate the probability of a single event
- Understand and use the probability scale

Keywords

Set: collection of things

Element: each item in a set is called an element

Intersection: the overlapping part of a Venn diagram (AND $\cap$)

Union: two ellipses that join (OR $\cup$)

Mutually Exclusive: events that do not occur at the same time

Probability: likelihood of an event happening

Bias: a built-in error that makes all values wrong (unequal) by a certain amount, e.g. a weighted dice

Fair: there is zero bias, and all outcomes have an equal likelihood

Random: something happens by chance and is unable to be predicted

Identify and represent sets

The **universal set** has this symbol ξ — this means **EVERYTHING** in the Venn diagram is in this set

A set is a collection of things — you write sets inside curly brackets { }

$\xi = \{\text{the numbers between 1 and 50 inclusive}\}$

My sets can include every number between 1 and 50 including those numbers

$A = \{\text{Square numbers}\}$

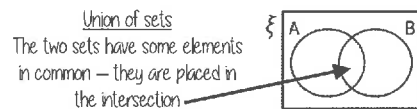
$A = \{1, 4, 9, 16, 25, 36, 49\}$

All the numbers in set A are square number and between 1 and 50

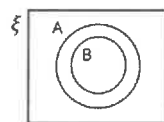
Interpret and create Venn diagrams



Mutually exclusive sets
The two sets have nothing in common
No overlap



Union of sets
The two sets have some elements in common — they are placed in the intersection



Subset
All of set B is also in Set A so the ellipse fits inside the set

The box

Around the outside of every Venn diagram will be a box. If an element is not part of any set it is placed outside an ellipse but inside the box

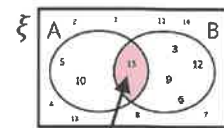
Intersection of sets

Elements in the intersection are in set A AND set B

The notation for this is $A \cap B$

$\xi = \{\text{the numbers between 1 and 15 inclusive}\}$

$A = \{\text{Multiples of 5}\}$ $B = \{\text{Multiples of 3}\}$

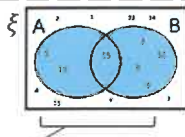


The element in $A \cap B$ is 15

In this example there is only one number that is both a multiple of 3 and a multiple of 5 between 1 and 15

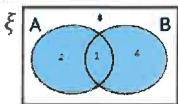
Union of sets

Elements in the union can be in set A OR set B



The notation for this is $A \cup B$

There are 7 elements that are either a multiple of 5 OR a multiple of 3 between 1 and 15



This Venn shows the number of elements in each set

Sample space — for single events



A sample space for rolling a six-sided die is $S = \{1, 2, 3, 4, 5, 6\}$



A sample space for this spinner is $S = \{\text{Pink, Blue, Yellow}\}$

You only need to write each element once in a sample space diagram

- A Sample space represents a possible outcome from an event
- They can be interpreted in a variety of ways because they do not tell you the probability

Probability of a single event



Probability = $\frac{\text{number of times event happens}}{\text{total number of possible outcomes}}$

$P(\text{Blue}) = \frac{4}{10}$ — There are 4 blue sectors

— There are 10 sectors overall

Probability notation
 $P(\text{event})$

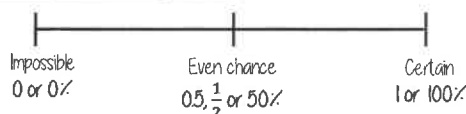
$$= \frac{2}{5}$$

Probability can be a fraction, decimal or percentage value

$$\frac{4}{10} = \frac{40}{100} = 0.40 = 40\%$$

Probability is always a value between 0 and 1

The probability scale



The more likely an event the further up the probability it will be in comparison to another event (it will have a probability closer to 1)



There are 2 pink and 2 yellow balls, so they have the same probability

There are 5 possible outcomes
So 5 intervals on this scale, each interval value is $\frac{1}{5}$

Sum of probabilities

Probability is always a value between 0 and 1



The probability of getting a blue ball is $\frac{1}{5}$
 $\therefore$ The probability of NOT getting a blue ball is $\frac{4}{5}$

The sum of the probabilities is 1

The table shows the probability of selecting a type of chocolate

Dark	Milk	White
0.15	0.35	

$$P(\text{white chocolate}) = 1 - 0.15 - 0.35 = 0.5$$



YEAR 7 — REASONING WITH NUMBER

@whisto_maths

Prime numbers and Proof

What do I need to be able to do?

By the end of this unit you should be able to:

- Find and use multiples
- Identify factors of numbers and expressions
- Recognise and identify prime numbers
- Recognise square and triangular numbers
- Find common factors including HCF
- Find common multiples including LCM

Keywords

Multiples: found by multiplying any number by positive integers

Factor: integers that multiply together to get another number.

Prime: an integer with only 2 factors.

Conjecture: a statement that might be true (based on reasoning) but is not proven.

Counterexample: a special type of example that disproves a statement.

Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

HCF: highest common factor (biggest factor two or more numbers share)

LCM: lowest common multiple (the first time the times table of two or more numbers match)

Multiples

The "times table" of a given number

All the numbers in this lists below are multiples of 3.

3, 6, 9, 12, 15...

$3x, 6x, 9x \dots$

This list continues and doesn't end

Non example of a multiple

4.5 is not a multiple of 3

because it is 3×1.5

Not an integer

x could take any value and as the variable is a multiple of 3 the answer will also be a multiple of 3

Factors

Arrays can help represent factors

5×2 or 2×5

Factors of 10
1, 2, 5, 10

10×1 or 1×10

The number itself is always a factor

Factors and expressions

$6x \times 1$ OR $6 \times x$

Factors of $6x$
 $6, x, 1, 6x, 2x, 3, 3x, 2$

$2x \times 3$

$3x \times 2$

Prime numbers

- Integer
- Only has 2 factors
- and itself

The first prime number
The only even prime number

Learn or how-to quick recall...

2, 3, 5, 7, 11, 13, 17, 19, 23, 29...

Square and triangular numbers

Square numbers

odd even odd

Representations are useful to understand a square number n^2

1, 4, 9, 16, 25, 36, 49, 64 ...

Triangular numbers

Representations are useful — an extra counter is added to each new row

Add two consecutive triangular numbers and get a square number

1, 3, 6, 10, 15, 21, 28, 36, 45...

Common factors and HCF

Common factors are factors two or more numbers share

HCF — Highest common factor

HCF of 18 and 30

18: 1, 2, 3, 6, 9, 18

30: 1, 2, 3, 5, 6, 10, 15, 30

Common factors
(factors of both numbers)

1, 2, 3, 6

HCF = 6

6 is the biggest factor they share

Common multiples and LCM

Common multiples are multiples two or more numbers share

LCM — Lowest common multiple

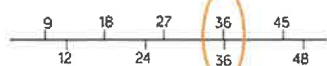
LCM of 9 and 12

9: 9, 18, 27, 36, 45, 54

12: 12, 24, 36, 48, 60

LCM = 36

The first time their multiples match



Comparing fractions

$\frac{3}{5}$ and $\frac{7}{10}$

Compare fractions using a LCM denominator

$\frac{6}{10}$ and $\frac{7}{10}$

Conjectures and counterexamples

Conjecture

1, 2, 4, ...

The numbers in the sequence are doubling each time.

Counterexamples



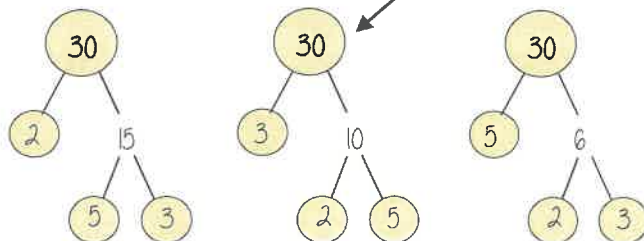
This sequence isn't doubling it is adding 2 each time

A pattern that is noticed for many cases

Only **one** counterexample is needed to disprove a conjecture

Product of prime factors

Multiplication part-whole models



All three prime factor trees represent the same decomposition

Multiplication is commutative

$30 = 2 \times 3 \times 5$

Multiplication of prime factors

Using prime factors for predictions

e.g. 60: 30×2 or $2 \times 3 \times 5 \times 2$

150: 30×5 or $2 \times 3 \times 5 \times 5$

ALL ABOUT THE BASS

A. Bass Clef & Bass Clef Notation

STAFF is the name given to the five lines where musical notes are written.

The position of notes on the staff or staff shows their **PITCH** (how high or low a note is).

The **BASS CLEF** is a symbol used to show low-pitched notes on the staff and is *usually* used for the left hand on a piano or keyboard to play the **BASS LINE** and also used by low pitched instruments (see B.)

The staff or staff is made up of 5 **LINES** and 4 **SPACES**.

Notes on the **LINES** of the **BASS CLEF**: G, B, D, F, A
Green Buses Drive Fast Always



Notes in the **SPACES** of the **BASS CLEF**: A, C, E, G
All Cows Eat Grass



Bass Clef **STAFF NOTATION**:



Exploring Bass Clef Reading and Notation and Bass Line Musical Patterns

B. Musical Instruments that use the Bass Clef



C. Bass Line Patterns

BASS RIFFS – Short, repeated, ‘catchy’ and memorable Bass Line

Patterns used in Rock, Rap, Hip Hop, R’n’B, and Pop songs often performed on Bass Guitar. Bass Riffs ‘fit’ with the notes in the chord, but also use other ‘**EXTRA**’ notes (**PASSING NOTES**) to make them more memorable.



WALKING BASS – used in Jazz, Blues, Rhythm and Blues, and Rock’n’roll, and featuring a note on every beat. Using the **ROOT**, **THIRD** and **FIFTH** of the chord, and ‘**EXTRA**’ notes (called **PASSING NOTES**) to create a smooth bass line often moving mainly by step (**CONJUNCT**).



ALBERTI BASS – a type of **ACCOMPANIMENT PATTERN** in the **BASS LINE** using the **ROOT**, **THIRD** and **FIFTH** notes of a **CHORD** played in a **specific order**:

ROOT	FIFTH	THIRD	FIFTH
Lowest	Highest	Middle	Highest

The pattern repeats, but notes change as chord changes and a melody is added ‘on top’ of the Alberti Bass. Used by Classical composers such as Mozart, especially in solo piano music, as well as modern composers.



ARPEGGIO: Playing the notes of a chord separately and in **order** root, third fifth, root, third, fifth etc, can be ascending (going up) or descending (going down).



[BASS] PEDAL (POINT/NOTE) – either **SUSTAINED** notes of **LONG DURATION**, or **REPEATED LONG NOTES**, often in **BASS LINE** PART, using the **ROOT** (a **TONIC PEDAL**) or the **FIFTH** (a **DOMINANT PEDAL**). Changing chords, harmonies, and a melody line ‘fit over the top’ of a **PEDAL** note.



CHRISTIANITY

Overview

Christianity is one of the world's major religions. It is the **world's largest religion**, with about 2.4 billion followers.

Christians (like Jews and Muslims) believe in one **God**, who created the world and all that is in it.

Christians believe in the teachings of **Jesus Christ**, who was a middle-eastern preacher and healer who lived around 2,000 years ago.

Christians believe that Jesus Christ was sent down to earth to save people, by taking their punishment and dying on the cross.

The holy book in Christianity is called the **Bible**. A church is a building designed for Christian worship.

An artist's image of Jesus Christ giving the 'sermon on the mount.'



Christian Beliefs

God's Creation



-Christians believe that God created the Earth and everything in it in 6 days, resting on the 7th.

-The story of creation tells Christians that at first everything was dark, until God intervened and created matter.

-Details about this are found in the Bible in Genesis 1 and 2.

The Holy Trinity

-Christians believe that God can be seen in three ways, known as the Holy Trinity:

- The Father – Creator of the world;
- The Son – Who came to Earth as Jesus;
- The Holy Spirit – God's power within Christians.



The Ten Commandments

-In the Bible, ten 'commandments' are shared, which Christians should aim to live their lives by:

1. You shall have no other Gods but me.
2. You shall not make for yourself any idol.
3. You shall not misuse the name of the Lord your God.
4. You shall remember and keep the Sabbath day holy.
5. Respect your father and mother.
6. You must not commit adultery.
7. You must not steal.
8. You must not be envious of your neighbour's goods.
9. You must not give false evidence against your neighbour.
10. You must not be envious of your neighbour's goods.

The Life of Jesus Christ



- Christians believe that Jesus was the son of God. He was born to ordinary parents, Mary and Joseph, in Bethlehem. Christians celebrate the birth of Jesus on 25th December – Christmas Day.

-Jesus travelled around, teaching people about God and helping the sick. He chose 12 men to travel with him. They were his special companions and are known as the disciples.

-Jesus was sentenced to death for calling himself the son of God. He had a final meal with his disciples (known as 'The Last Supper') before being crucified. He is said to have died for the sins of man.

Answers to Important Questions and Key Vocabulary

Where do Christians worship God?	-Christians can pray in any place, but the most common location is in a purpose-built building called a church. Churches can be very different – old, new, plain or highly decorated. Often, the floor plans of churches are shaped in a cross. -Church services often include hymns, prayers, and readings from the Bible. -Common church features include altar tables, lecterns, pulpits, fonts and stained glass windows.	Key Vocabulary God Jesus Bible Cross/ Crucifix Commandments Holy Trinity Catholic Protestant Orthodox Disciples Saint Church
What is the Bible?	The Bible is the holy book of Christians. It contains the Old and New Testaments. The Old Testament is similar to the Jewish Bible and was written before Jesus' birth. The New Testament contains stories about Jesus, written by those who knew him.	
How do Christians believe that people should live their lives?	-Christians believe that people should be compassionate to one another, and show respect to God, themselves and one another. -Christians believe that praying to God helps them to say sorry for the things they have done wrong, and thank them for the blessings given to them. -Christians believe that God wants them to carry on the good work that Jesus did in the world.	
How many different types of Christians are there?	-There are many different denominations (types) of Christians. All Christians were once Catholics, but other groups branched off many years ago. -The biggest Christian denomination is still Catholicism. To Catholics, the Pope is Christ's representative on earth. Other major groups include Protestants (including Anglican/ Church of England faiths) and Orthodox.	

Top 10 Facts!

1. Christians believe that God is everywhere, and sees and knows everything.
2. About 1/3 of the world's population are Christian.
3. The word Christ comes from the Greek word meaning Messiah – God's chosen one.
4. Although Christmas is celebrated on December 25th, no one knows exactly what date Jesus was born on.
5. Sunday is the holiest day in Christianity – many people meet to worship on Sunday.
6. There is very little written about Jesus before the age of about 30, when he began preaching and that he would die. He tried to warn his disciples of this at the Last Supper.
7. Jesus knew that he was going to be betrayed, and that he would die. He tried to warn his disciples of this at the Last Supper.
8. Jesus was buried in a tomb, but the tomb was found later. He then appeared to the disciples.
9. Jesus eventually went back up to heaven to be with God – this is called the ascension.
10. The cross is the symbol of Christianity – a reminder that Jesus was crucified.

Christianity Timeline

Beginning of time: God creates the world and everything in it.	Around 0 CE: Jesus is born in Bethlehem.	c.28CE: Jesus begins healing and preaching. He chooses 12 disciples.	c.30CE: Jesus feeds 5,000 with 5 loaves of bread and 2 fish!	c.33CE: Jesus is executed on the cross and then resurrects days later.	c.40CE: Church of Jerusalem – first Christian church – is founded.	c.1057CE: Orthodox Church breaks from Catholicism.	c.1534CE: Henry VIII forms the Church of England.
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Variation

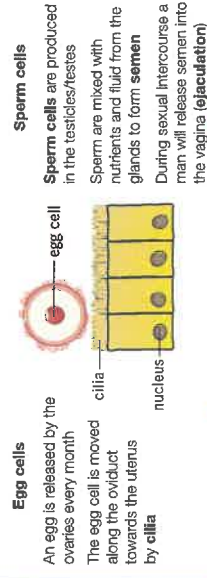
- The differences in characteristics of living things is known as **variation**
 - There is a large amount of variation between different **species**, but within species many more characteristics are shared
 - Even though two organisms may look the same, they will always have variation between them
- | Inherited variation | Environmental variation |
|--|--|
| <ul style="list-style-type: none"> Is anything that comes directly from your parents, anything that you inherit Examples can include lobe less or lobed ear lobes and eye colour | <ul style="list-style-type: none"> Is any type of variation that is caused by your surroundings Factors that can cause environmental variation include diet, education and lifestyle |
- Environmental factors can also impact inherited factors, for example a poor diet can affect height or your exposure to the sun can affect skin tone
 - Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases

Adaptations

- Adaptations** are characteristics which organisms have developed to best survive in their surroundings
- Organisms with the best suited adaptations can breed and pass these on
- Those who are not best adapted will die out and not be able to pass on their genes

Fertilisation, implantation and gestation

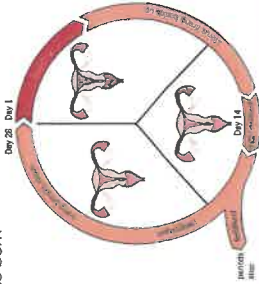
- Egg cells and sperm cells are also called **gametes**, and each contains half the genetic information needed to form a complete organism.



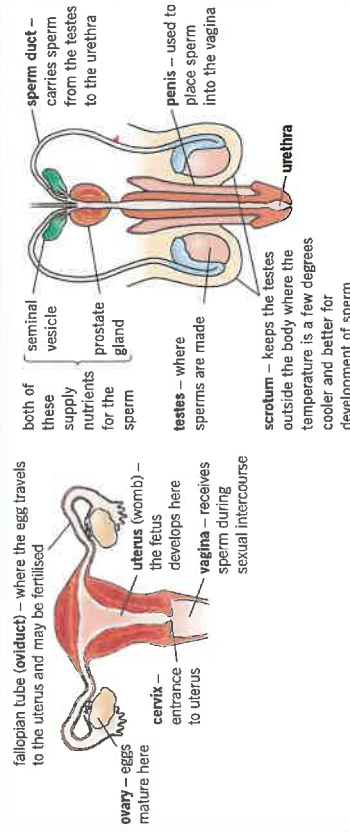
- During **gestation** the developing **fetus** needs nutrients from the mother, these are passed through the **placenta** which is connected to the fetus by the **umbilical cord**
 - Nutrients are passed from the mother to the baby and waste products are passed back from the baby to the mother
 - The baby is protected from bumps to the mother by the **amniotic sac** which acts as a shock absorber
- Timeline of development:
- Just a dot
 - 1 week – cells beginning to specialise
 - 3 mm long
 - 4 weeks – spine and brain forming, heart beating
 - 3 cm long
 - 9 weeks – tiny movements, lips and cheeks sense touch, eyes and ears forming
 - 7 cm long
 - 12 weeks – fetus uses its muscles to kick, suck, swallow, and practise breathing

The menstrual cycle

- The **menstrual cycle** is the process in which an egg is released from an ovary and leaves through the vagina
- Day 1: blood from the uterus lining leaves through the vagina, which is known as a **period**
- Day 5: the bleeding stops and the uterus lining starts to re-grow
- Day 14: an egg is released from one of the ovaries during **ovulation**
- If the egg is **fertilised** than the menstrual cycle stops until the baby is born



Reproductive systems



Adolescence

- Adolescence** is the process in which a child changes into an adult, it involves both physical and emotional changes
- The physical changes alone in this time are known as **puberty**, these are caused by **sex hormones**

Key terms

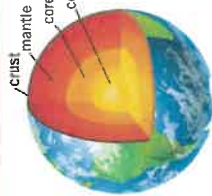
Make sure you can write definitions for these key terms.

adaptation adolescence amniotic sac cervix cilia egg cell embryo environmental variation fertilisation fetus gamete gestation implantation inherited variation menstrual cycle ovary oviduct ovulation penis period placenta puberty reproductive system scrotum semen sex hormones species sperm cell spermat duct testicles umbilical cord urethra uterus vagina variation

P1 Chapter 7: Earth Knowledge organiser

Activate
Question • Progress • Succeed

The Earth

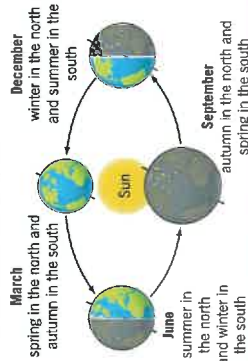


The Earth has three main layers:

- The **crust** is rocky and solid
- The **mantle** is made from mainly solid rock but this can flow
- The **outer core** is liquid metal and the **inner core** is solid

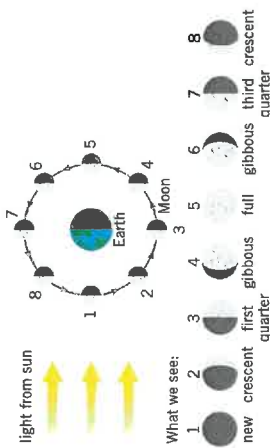
The spinning Earth

- The Earth takes 365 days to **orbit** the Sun, this is one **Earth year**
- The Earth takes 24 hours to spin on it's axis, that is why we have day and night
- The Earth's **axis** has a tilt of 23.4° which gives rise to our **seasons**



The Moon

- The Moon is a **natural satellite** which orbits the Earth
- One orbit of the Earth takes 27 days and 7 hours, this causes us to see the **phases of the moon**
- The different phases of the moon are caused by different parts of the Moon being lit by the Sun



The night sky

- A **galaxy** is a collection of **stars**, our galaxy is known as the **Milky Way**
- Stars** produce their own light
- Planets** are large objects which do not produce their own light but orbit stars
- Natural satellites** include moons which can orbit planets
- Artificial satellites**, such as the International Space Station, are man made structures which can orbit planets
- Planets, asteroids, and comets** may have moons

Types of rock

Type of rock	How it is formed	Properties	Uses
Sedimentary rock	- sediment piles up in one place and, over many years, sticks together by compaction or cementation compaction: weight of sediments above squeeze them into rocks cementation: another substance sticks the sediments together	porous: made of small grains stuck together so there are holes that water can pass through - soft: easy to break apart the sediments	building materials (e.g. sandstone and limestone)
Igneous rock	- when liquid rock cools it turns into igneous rocks these are made of crystals locked tightly together magma: liquid rock underground-cools slowly and forms large crystal lava: liquid rock above the ground-cools quickly and forms small crystals	durable and hard (difficult to damage): the crystals are locked tightly together - not porous: there is no space between crystals	- pavement - rail tracks
Metamorphic rock	- other rocks under that Earth are heated and put under pressure - over time, these rocks become metamorphic	not porous: there is no space between crystals	- marble used for kitchens - slate used for roofing tiles

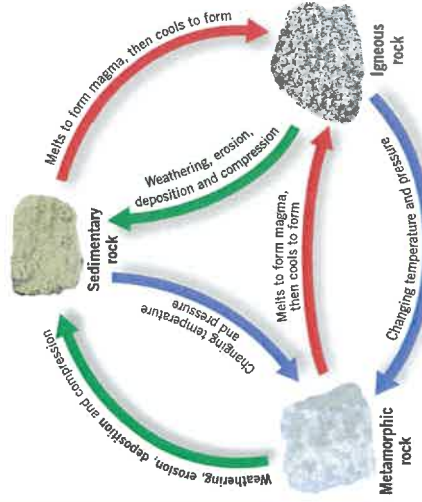
The Solar system

Our **solar system** consists of eight planets which orbit the Sun, four inner and four outer planets

- Inner planets**
 - Small and rocky planets (**dwarf planets**)
 - Mercury, Venus, Earth, Mars
- Outer planets**
 - Gas giants
 - Jupiter, Saturn, Uranus, Neptune
- Between the inner and outer planets, between Mars and Jupiter, there is the **asteroid belt**
- The planets all orbit the Sun, but the path of their orbits are all slightly different, giving them the look of 'wandering' in the sky

The rock cycle

The **rock cycle** shows how rocks change and how their materials are recycled over millions of years



Make sure you can write definitions for these key terms.

asteroid belt artificial satellite axis crust deposition durable dwarf planet galaxy gas giants igneous rock lava inner core magma mantle metamorphic rock milky way natural satellite orbit outer core phases of the moon planet porous rock cycle season sedimentary rock solar system star sun universe year