Rivers and the Water Cycle

Key Facts

Wherever rainfall lands it will always move downhill.

From a water source a stream will develop.

Rain water does not contain salt.

Sea water does.

The River Thames is the longest river in England as is the main river flowing through the capital city of London.

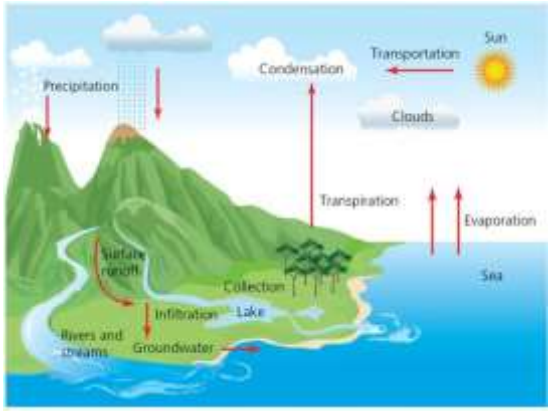
Mountains play an important part in the water cycle.

Changes in how the water flow can affect the direction and shape of the river.

Prior Knowledge

Key Vocabulary	Definition
sky (atmosphere)	The space between land and outer space
Water cycle	Also known as the hydrological cycle, the water cycle describes
Evaporation	A change of a state of matter – from liquid to gas
Condenses	A change of a state of matter from gas to liquiud
precipitation	Another word for rain fall, snow fall, hail, sleet
mountains	A large landform, often with a peak, rising high above the surrounding area
glaciers	A slow moving mass of ice

Image / diagram



Important People / Places

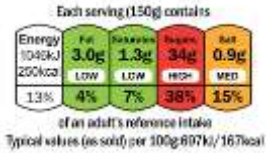
The River Thames has been an important trade and transport route since prehistoric times. London's fame and fortune is due to it's river. All through the middle ages the Thames was one of London's main highways.

Prior Knowledge

A healthy diet includes a balance of proteins, carbohydrates, fruit and vegetables.
Food can be grown, caught or reared.
Recipes can be adapted by using different ingredients.
Ingredients must be measured accurately.
How to peel, chop, slice and mix.

Technical Knowledge

Foods contain different amounts of carbohydrates, fats, protein, vitamins and minerals.
Nutritional information is shown on packets using the traffic light system.



Breads from all over the world come in a variety of different flavours and textures but all have a similar basic bread mix recipe.
Adapting a recipe changes the taste, appearance and texture of a food.

What will I be able to do after I make my bread?

Design : Evaluate different ingredients.
Adapt a recipe to create my own bread.
Draw and label a cross-sectional diagram.

Make: Weigh and measure ingredients using scales.
Choose the correct equipment for the task.
Use a range of cooking skills such as sieving, kneading and chopping.

Evaluate: Consider the strengths of my product and how it could be improved.
Listen to the feedback of others.
Make improvements to the recipe and make a bread product.

Making Bread
Year 4

Key Vocabulary	Definition
Appearance	The way something or someone looks.
Aroma	Smell.
Flavour	The way a product tastes.
Texture	The feel, appearance, or consistency of a surface or substance.
Dough	A thick, malleable mixture of flour and liquid, used for baking into bread or pastry.
Yeast	a microscopic fungus that produces carbon dioxide in bread causing it to rise.
Carbon dioxide	Carbon dioxide is produced and trapped as tiny pockets of air within the dough. This causes it to rise. During baking the carbon dioxide expands and causes the bread to rise further.
Knead	In cooking, kneading is a process in the making of bread or dough, used to mix the ingredients and add strength to the final product.
Crust	The hardened exterior or surface part of bread.

Image / diagram

Kneading

- Sprinkle flour on the table to stop the **dough** sticking.

- Stretch the **dough** away from you with the hee or knuckles of one hand and fold it back over the top towards you.

- Repeat until the **dough** is drier and less sticky.

Health and Safety

Knives must be carried pointing downwards with a firm grip on the handle.
Peelers and graters are sharp. Keep fingers away from the sharp edges.
Use oven gloves when removing items from the oven and always do this with an adult.

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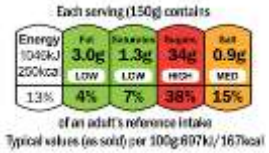

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Anglo Saxons Y4

Key Facts

- Anglo Saxon age is 410AD – 1066AD
- The Romans left Britain to be invaded by many foreign forces. They would come and go – taking what they wanted from our country until they eventually settled in the 'Angle-land' or England as it became known.
- At the age of 10 you were seen and treated like an adult.
- Boys learned their skills from their fathers and worked. The women worked at home making bread, cheese and mead.
- There was no official language or any writing for the Anglo Saxons. Stories were passed on by word of mouth.
- Farming was the most important job
- The most important find about the Anglo Saxons was a burial in Suffolk at a place called Sutton Hoo. It was discovered in 1938. It contained much treasure. It was probably buried in the 7th century for a famous cheiftan.

Prior Knowledge

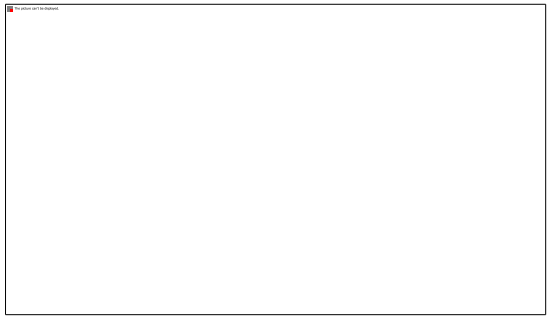
- Y3 Stone Age, Bronze Age, Iron Age settlements and life styles
- Children know that settlements were created around the ability to have food / crops / trade and water
- Romans occupied Britain until 410AD
- Romans had left a great legacy which did not go away just because they had.

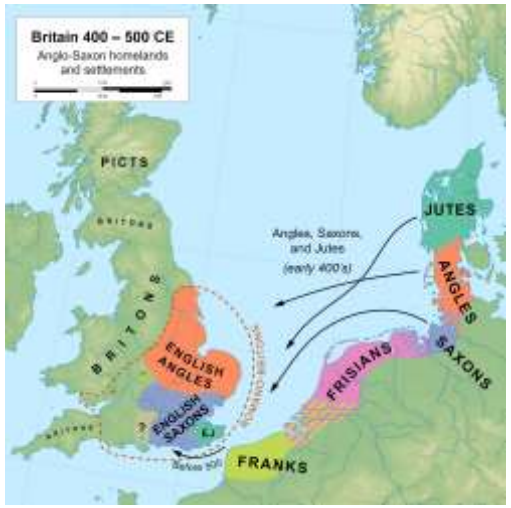
- Great websites to help:

https://www.bbc.co.uk/teach/school-radio/history-ks2-anglo-saxons-arrival-in-england/zftdd6f

Key Vocabulary	Definition
Angles	Tribes from the Demark / Netherlands areas of Europe
Jutes	Tribes from Demark
Saxons	Tribes from German areas in Europe
settlement	A place which could provide water and land for people to settle and set up their homes
wattle and daub	Plaster on homes made of mud, wool, straw and faeces
Witan	Council of rulers

Image / diagram





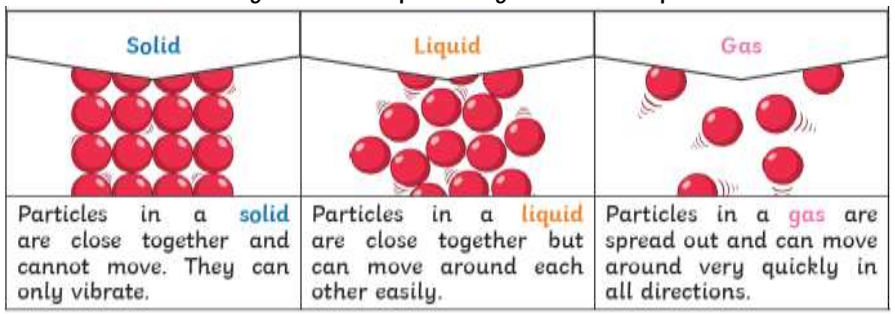
Important People / Places

- Alfred the Great
- Athelstan
- The Witan

- Jutes - Denmark
- Angles – Netherlands / Denmark
- Saxons – Germany
- Sutton Hoo – the biggest discovery of Anglo Saxon treasure and burial in England

Key Facts

- Matter is the stuff that makes up our planet & the whole universe.
- All matter exists in 3 states: solid, liquid or gas.
- Matter can change state depending on its temperature.



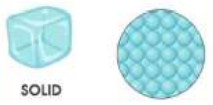
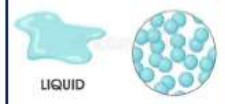
- I can compare and group materials together as to whether they are solid, liquid or gas.
- I know that some materials change state when they are heated / cooled and know temperatures when this can happen e.g. water boils at 100°C.
- I understand how evaporation and condensation work as part of the water cycle.
- I know that temperate affects how quickly a liquid evaporates.

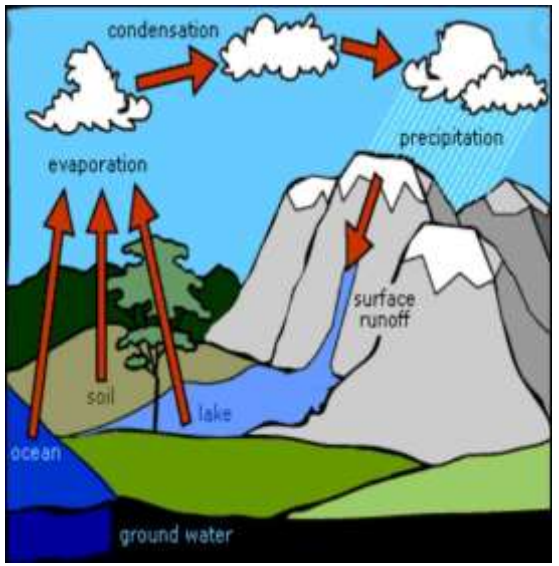
Prior Knowledge?

I know the difference between an object and the material from which it is made.
I can identify and name a variety of everyday materials.
I can describe, compare and group materials according to their properties.
I know the shape of solid objects can be changed.

STATES of MATTER

Images / diagrams

Solids • Solids hold their shape. • Solids are rigid. • Solid have a fixed volume.	Examples: • ice cubes • rock • most metals	
Liquids • Liquids do not hold their shape. • They have a fixed volume and are not rigid. • Liquids can be poured.	Examples: • water • oil • milk	
Gases • Gases do not hold their shape. • They are not rigid. • They do not have a fixed volume.	Examples: • oxygen • carbon dioxide • helium	



Key Vocabulary	Definition
gas	Gases can spread out to completely fill the room or container they are in.
liquid	Liquids take the shape of their container. They can change shape but do not change the amount of space they take up.
solid	Solids are materials that keep their shape unless a force is applied to them. They can be hard, soft or even squashy. Solids take up the same amount of space no matter what has happened to them.
orbit	To move in a regular, repeating curved path around another object.
water vapour	This is water that takes the form of gas. When water is boiled it evaporates into water vapour.
freeze (freezing) / solidification	liquid → solid low temperature
melt (melting)	solid → liquid heat or pressure
evaporate (evaporation)	liquid → gas when heated
condense (condensation)	gas → liquid when cooled

Important Scientists

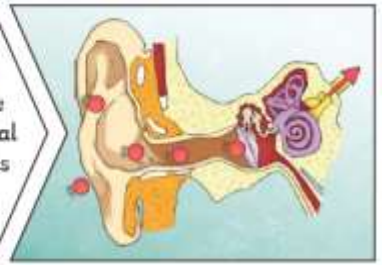
Key Facts

- Sounds are a type of energy.
- Sounds are created by vibrations.
- The louder the sound, the bigger the vibration.
- Sounds can travel through solids, liquids and gases.
- Sound travels as a wave, vibrating the particles in the medium it is travelling in.
- Sound cannot travel through a vacuum.

When you hit the drum, the drum skin vibrates. This makes the air particles closest to the drum start to vibrate as well.

The vibrations then pass to the next air particle, then the next, then the next. This carries on until the air particles closest to your ear vibrate, passing the vibrations into your ear.

Inside your ear, the vibrations hit the eardrum and are then passed to the middle and then the inner ear. They are then changed into electrical signals and sent to your brain. Your brain tells you that you are hearing a sound.



If you throw a stone in a pond, it will produce ripples. As the ripples spread out across the pond, they become smaller. When sound vibrations spread out over a distance, the sound becomes quieter, just like ripples in a pond.

You can change the pitch of a sound in different ways depending on the type of instrument you are playing.

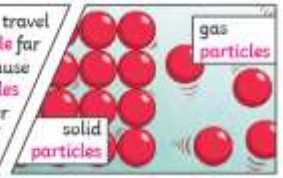
For example, if you are playing a xylophone, striking the smaller bars with the beater causes faster vibrations and so a higher pitched note. Striking the larger bars causes slower vibrations and produces a lower note.

Prior Knowledge?

I can identify, name, draw and label parts of the human body and say which part of the body is associated with each sense.

SOUND

Sound energy can travel from particle to particle far easier in a solid because the vibrating particles are closer together than in other states of matter.

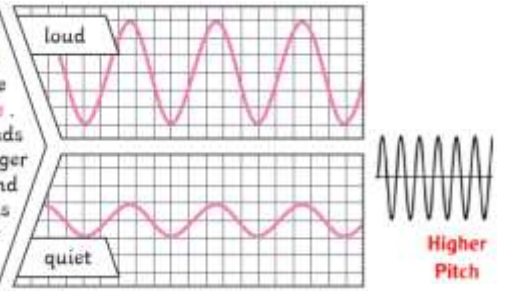


Key Vocabulary	Definition
amplitude	The size of a vibration (the larger the amplitude, the louder the sound).
ear drum	A part of the ear which is a thin, tough layer of tissue that is stretched like a drum skin. It separates the outer ear from the inner & middle ear. Sound waves make the ear drum vibrate.
pitch	How high or low a sound is.
source	The object that makes the sound.
sound	Something that can be heard.
vacuum	A space where there is nothing (there are no particles in a vacuum).
vibration	A movement backwards and forwards.
volume	How loud or quiet a sound is.

Images / diagrams

Pitch is a measure of how high or low a sound is. A whistle being blown creates a high-pitched sound. A rumble of thunder is an example of a low-pitched sound.

The size of the vibration is called the amplitude. Louder sounds have a larger amplitude, and quieter sounds have a smaller amplitude.



Rivers and the Water Cycle

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From a water source a stream will develop.

Rain water does not contain salt.

Sea water does.

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Mountains play an important part in the water cycle.

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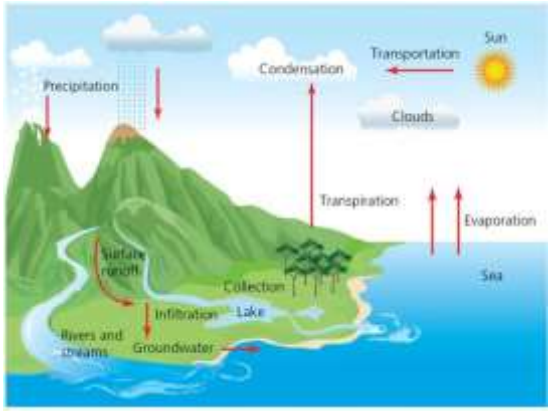
Image / diagram



Important People / Places

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Purple Mash Computing Scheme: Knowledge Organiser

Year 4

Unpacking Hardware and Software

Key Learning

- To understand what technology is, where we see it in everyday life, and how it helps us at school, home and beyond.
- To identify and describe different pieces of computer hardware and understand their functions.
- To understand what software is and how we use it to complete tasks.
- To explore how hardware and software interact to complete everyday tasks.

Key Resources

2Quiz

2Publish

Key Vocabulary

Application (App)
A type of software used for a specific task.

Component
Internal parts of a computer.

Computer System
All the parts of a computer working together.

Hardware
The physical parts of a computer that you can see and touch and the parts inside.

Input
Sending information into the computer.

Output
The computer sending information back to us.

Peripheral
A piece of hardware that you plug into or connect to a computer to help it work.

Process
A set of steps that happen in order to complete a task.

Software
Programs that tell a computer what to do to complete a task.

Storage
Where the computer saves information so you can use it again later.

Technology
Using scientific knowledge to design or make tools, systems, or machines that help solve problems or make tasks easier.


Hard drive


CPU


Motherboard


RAM


Power Supply


Fan


Graphics Card


Network Card


USB Stick


Speakers


Webcam


Printer

Purple Mash Computing Scheme: Knowledge Organiser

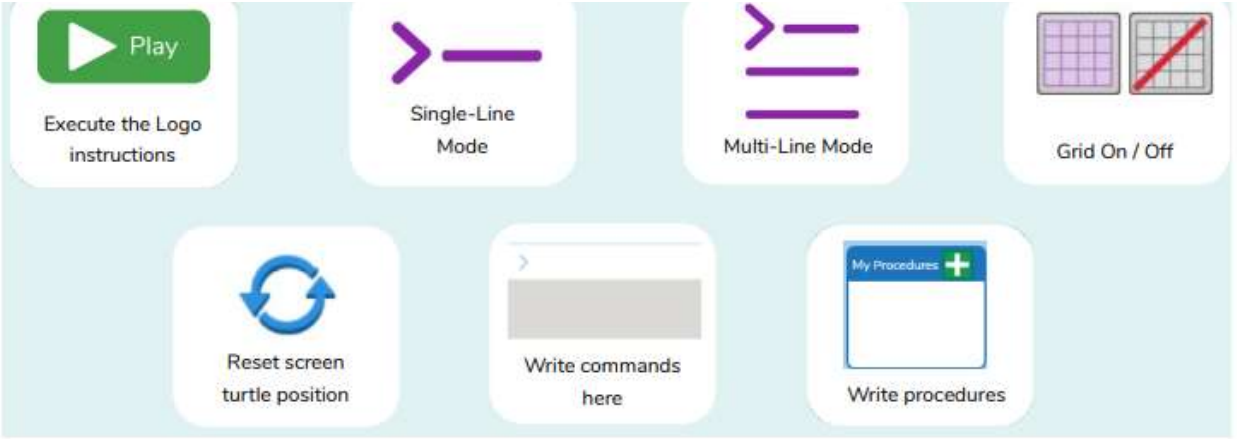
Year 4
Logo

Key Learning

- To know key commands and input simple instructions.
- To use a variety of commands to create shapes using multi-line mode.
- To use the Repeat command.
- To change the line thickness and colour.
- To use procedures to write instructions.

Key Resources

Logo



Key Vocabulary

Logo
A text-based coding language used to control an on-screen turtle to create.

Logo Commands
Instructions inputted to move the turtle around the screen.

Multi-Line Mode
A way of typing several lines of commands in the text area before the code is run.

Pen Down
A command which lowers the screen pen, so the Logo turtle draws a line on the screen.

Pen Up
A command which raises the screen pen, so the Logo turtle doesn't draw on screen.

Procedure
A set of named instructions that Logo can remember and use again later.

Repeat
A set of instructions that is run a specified number of times.

Set PC
Changes the colour of the line.

Set PS
Changes the thickness of the line.