Autumn 2 - Is water more important than anything else?

Changing State
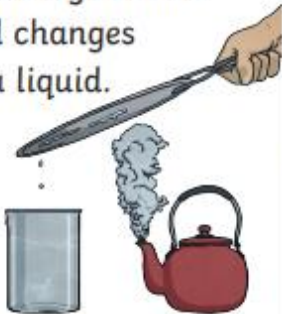
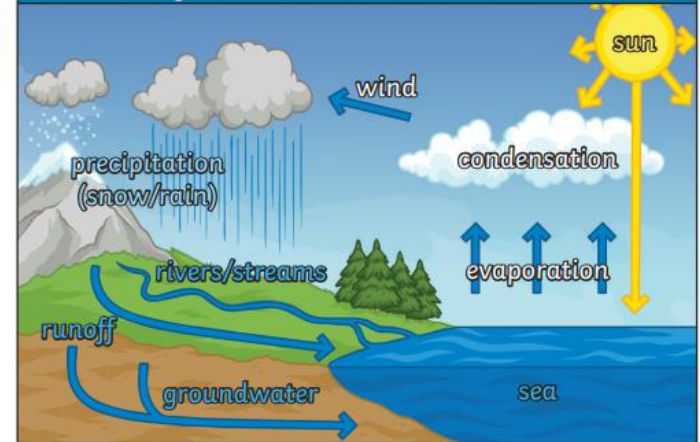| Evaporation	Condensation	Melting	Freezing
Evaporation occurs when a liquid changes into a gas or **water vapour**.	Condensation is when a gas cools and changes to a liquid.	This is when a solid is heated and changes to a liquid.	Freezing is the process of a liquid cooling and changing to a solid.

The Water Cycle
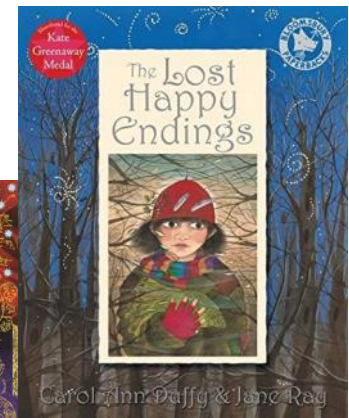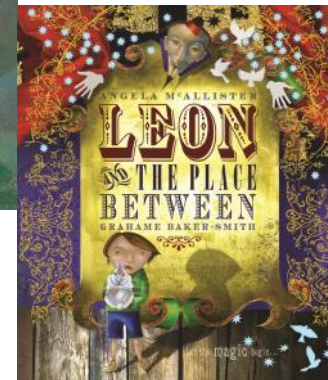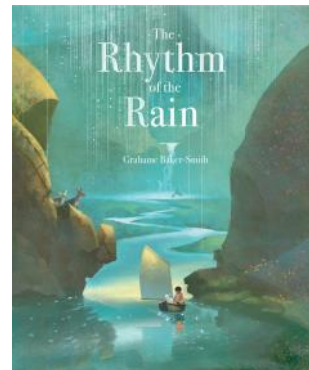
sun

wind

precipitation (snow/rain)

condensation

rivers/streams

evaporation

runoff

groundwater

sea

Key Vocabulary

dam	A barrier that blocks off flowing water.
fertiliser	A substance that helps make plants grow.
reservoir	A man made lake that is used to store water.
water vapor	Water that is in the form of a gas.
pesticides	A substance used to destroy pests such as small animals, insects and weeds.

Key texts

The Rhythm of the Rain — Grahame Baker-Smith

Leon and The Place Between — Angela McAllister, Grahame Baker-Smith

The Lost Happy Endings — Carol Ann Duffy & Jane Ray

Treating Water

Water is stored in reservoirs to allow solids to settle at the bottom.	Chemicals are added to help remove small particles.	Water passes through gravel and carbon to filter out tiny particles.	Chlorine is added to kill off bacteria.	Water is clean and safe to drink.

Flooding

Fluvial	Pluvial	Coastal	Plumbing
Lots of rainfall causing rivers to burst their banks.	Heavy rainfall cannot drain away quickly enough.	High tides and storms.	Broken pipes in buildings.

Flooding can be prevented in some areas by building dams and flood barriers. However, blocking a river at one location can cause flooding further up or downstream.

Pollution

- Chemicals – can poison animals.
- Litter – can be ingested by animals or trap them.
- Fertilisers – can cause a lack of oxygen and kill animals.

Reducing Pollution

- Be careful what you throw down the sink or toilet.
- Don't throw litter into lakes, rivers or oceans.
- Use environmentally-friendly household cleaning products.
- Have more plants in the garden to stop contaminated water running into the water supply.
- Don't over use fertilisers or pesticides.

Marine Protection and Conservation Areas

- Just under 25% of the UK coastal waters are protected.
- Over 6,500 species of plants and animals are found here.

Geography

- Continent Focus - Polar regions – Alaska and the Inuit People
- I describe the features of a polar landscape using geographical language
- I know that the life of Inuit people is shaped by the climate
- I can locate the Tropic of Cancer, the Tropic of Capricorn and the Greenwich Meridian on a map
- I know whether a country is located in the Southern or Northern Hemisphere

Computing

- To identify that sound can be recorded
- To explain that audio recordings can be edited
- To recognise the different parts of a podcast project
- To apply audio editing skills independently
- To combine audio to enhance my podcast project
- To evaluate the effective use of audio

Science

- I group materials based on their state of matter (solid, liquid, gas)
- I know how some materials can change state
- I explore how materials change state
- I measure the temperature at which materials change state
- I know how to use equipment, including thermometers and data loggers to make measurements
- I know about the water cycle
- I know the part played by evaporation and condensation in the water cycle
- I research to discover features of villages, towns and cities and appreciate the differences

Design and Technology

- To evaluate existing products, considering how well they have been made, materials, whether they work, how they're fit for purpose
- To use research to design ideas.
- To begin to create own design criteria
- To make and explain design decisions
- To explore how to join materials in different ways
- To use criteria to evaluate own product

Maths

- To add and subtract two 4-digit numbers using a formal method (column), where exchanging is required e.g 4358 + 153
- To recall multiplication and division facts for multiplication tables up to 12 × 12
- To recognise and use factor pairs and commutativity in mental calculations
- To count in multiples of 6, 7, 9, 25 and 1,000
- To find the area of rectilinear shapes by counting squares

Spelling

- /c/ sound spelt 'ch' e.g chaos, character
- /sh/ sound spelt 'ch' e.g chef, machine
- The suffix –ion e.g correction, location
- /j/ sound spelt 'g', 'dg', 'dge' e.g edge, age
- Adding the prefix –re e.g reply, rebuild
- Suffix –ed applying different rules