Class 2

Spring 2021:

Rivers and Climate

Half Term 1: The Journey of a River

Half Term 2: How can we help to reduce climate change?

Our Curriculum Intent:

To foster children who are aware of the world and their position within it by knowing how lucky they are and how others are far less fortunate. To actively be able to look out for, support and show kindness and empathy towards others, so they become citizens of the world whose aim is the betterment of society. To know and to be proud of where they are from and to fluently use a wide range of appropriate vocabulary when discussing and writing across our wide curriculum.

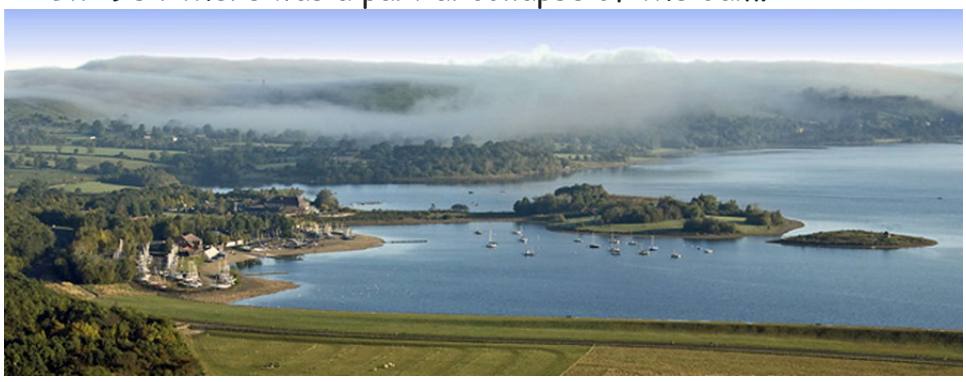
During our rivers topic, the children will learn how plants, animals and humans rely on rivers for life. They will recognise the importance of water for life and realise how lucky we are to have access to clean water unlike other people around the world. They will learn about how our climate is changing and the positive and negative impacts they can have on climate. They will be able to make decisions about their own way of life to positively impact on climate change.

Morley Journey	
Whole School	
Class 1	The children leant about how climate change is affecting Arctic animals such as polar bears. They will have already learnt about how plants need light, water and a suitable temperature to grow.
Class 3	
Subjects	**Areas Covered**
English/ Books	The Wind in the Willows The Drop in my Drink A River Ran Wild The Lost Words The Last Wolf The Window

Science	Y4 States of Matter: Compare and group materials according to whether they are solids, liquids or gases. Understand the role of temperature in changing states. Understand the water cycle and think about how climate change affects this. Y3 Plants: Explore the requirements of plants for life and growth and realise how our Earth relies on plants. Understand the life cycle of plants and how animals and humans rely on plants. Investigate the way water is transported in plants and further understand why plants need to be in a healthy environment to survive.
History	The History of the River Nile and how the Ancient Egyptians relied on it for life. Richard Arkwright – Cromford Mill.
Geography	Locate great rivers of the world using maps. Understand topographical features of rivers e.g. source, erosion, delta, banks
Art	Understand and explore how Claude Monet used light and colour to create impressions of the River Thames. Investigate the painting style of Monet and in particular the way he captured light reflecting on water. Paint a scene in impressionist style. Evaluate their work and that of others. Understand the contribution of Claude Monet to art.
D&T	Explore the features of existing greenhouses. Explore what makes a stable structure and think about the most suitable materials to use to make a mini greenhouse. Design, construct and evaluate their own mini greenhouse.
Music	Music Express and Wider Opportunities
Computing	
RE	Why do some people think that life is a journey and what significant experiences mark this?
PHSE	Being Healthy and Exploring Emotions
Enrichment	Carsington Water – River Derwent Detectives, Water filtration challenge

Key Knowledge: Half Term 1 The Journey of a River

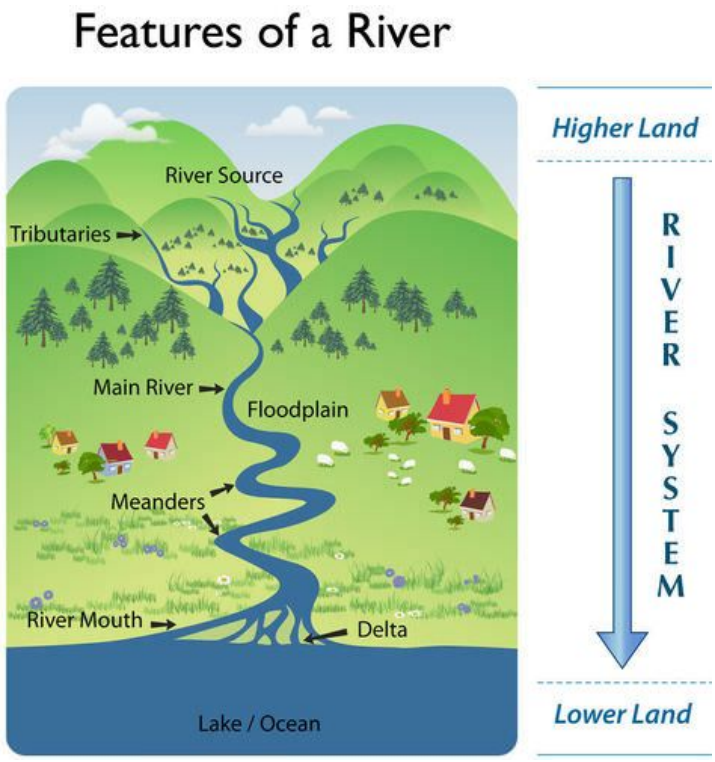
What I should know at the start of the topic	• The many uses of water for living e.g. drinking, cleaning, plants. • How to use geographical vocabulary to describe key physical features e.g. beach, cliff, coast, sea, ocean, river, valley. • How to use maps and atlases to locate countries, continents and oceans.

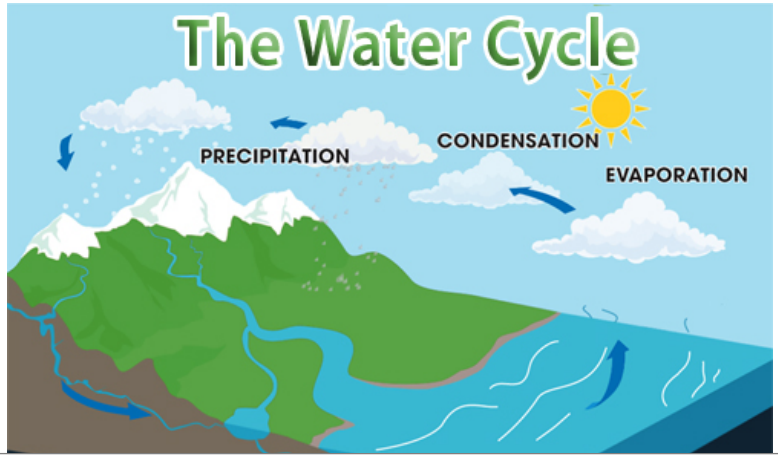
Significant People	**Richard Arkwright** – Born in 1732 in Preston, England, Arkwright was the youngest of thirteen children. Arkwright owned a barbering business and travelled the country buying human hair to make wigs. His travels brought him into contact with people who were concerned with weaving and spinning. When the fashion for wearing wigs declined, he looked to mechanical inventions in the field of textiles to make his fortune. With the help of a clockmaker, Arkwright constructed a spinning machine that produced a stronger yarn. He then built his first spinning mill. He was also the first to use James Watt's steam engine to power textile machinery, though he used it only to pump water to the millrace of a waterwheel. From the combined use of the steam engine and the machinery, the power loom eventually was developed. Arkwright was knighted by George III in 1786. He was able to leave a large fortune at his death, in Cromford, on August 3, 1792. 
Derby	• The **River Derwent** is our local river. Its source is in Bleaklow, Glossop and at it's mouth it joins the River Trent. There are four River Derwents in England! • **Carsington Water** is a massive reservoir operated by Severn Trent Water. It is England's ninth largest reservoir with a capacity of 35,412 megalitres. Planning for the reservoir started in the 1960s with actual construction staring in 1979. In 1984 there was a partial collapse of the dam. 

Key Information	• Water cycle • Derbyshire rivers and reservoirs • Monet • The River Nile is the longest river in the world at 6,650km long. This is closely followed by the Amazon river which is 6,575km long. The longest river in the UK is the River Thames which is 346km long. The most local river to us is the River Derwent which is only 80km long. • The River Nile is not as relied upon today as it was during the times of the Ancient Egyptians. The annual flooding of the Nile no longer happens since the construction of the Aswan High Dam in 1970.

Diagrams


Glossop
Chapel en le Frith
Eyam
Buxton
Chesterfield
Bakewell
Peak District National Park
Matlock
Leek
R. Derwent
Ilam
Ashbourne
Heanor
Ilkeston
R. Dove
Derby
Sudbury
Swadlincote

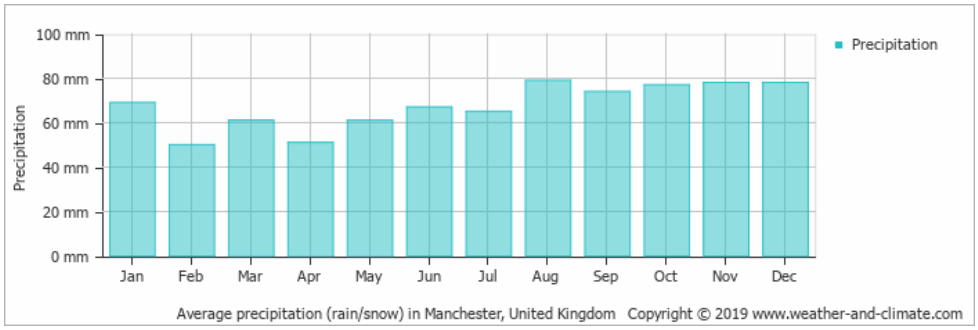

Features of a River
River Source
Tributaries
Main River
Floodplain
Meanders
River Mouth
Delta
Lake / Ocean
Higher Land
RIVER SYSTEM
Lower Land


The Water Cycle
PRECIPITATION
CONDENSATION
EVAPORATION

Vocabulary Ninja 	Estuary	Where a river meets the sea. There, saltwater mixes with freshwater. The river becomes wider and flows slowly to the ocean.
	Erosion	A process where natural forces like water, wind, ice, and gravity wear away rocks and soil.
	Oxbow lake	An area of water in a U-shape made by special bends in a river called meanders.
	Tributaries	A stream or river that flows into and joins a main river. The place where the tributary and main river meet is called a confluence.
	Source	The beginning of a stream of water.
	Reservoir	A lake that is usually man-made (meaning it was made by people). Reservoirs are used to store water for various uses like drinking.
	Delta	An area positioned at the end of a river made up of silt carried by the currents of the river and deposited as the water loses speed.

Key Knowledge: Half Term 2 How can we help to reduce climate change?

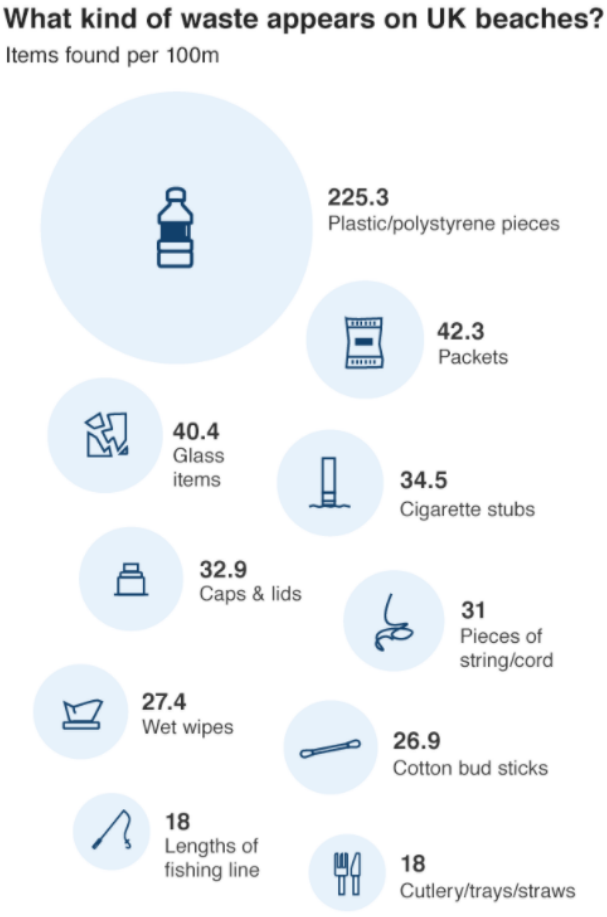
What I should know at the start of the topic	• The names and locations of the world's seven continents and five oceans. • The names and locations of the four countries in the United Kingdom and its surrounding seas. • Where the Polar Regions are located and that the Arctic ice is melting due to hotter temperatures.
Significant People	**David Attenborough** - Sir David Attenborough was born on 8 May, 1926 in West London (the same year as Queen Elizabeth II). He is a British naturalist and television personality and is world-famous for writing, presenting and producing award winning wildlife documentaries. He was raised on the campus of University College, Leicester where his dad was principal. He is the only person to have won BAFTAs for programmes in black and white, colour, HD and 3D. When Sir David got his first job in television, he didn't even own a TV (like most people in Britain at the time). In 1985, he received a knighthood for his services to broadcasting. At least fifteen plants and animals, both living and extinct, have been named in Attenborough's honour. David Attenborough is the oldest person to visit the North Pole, aged 83. 

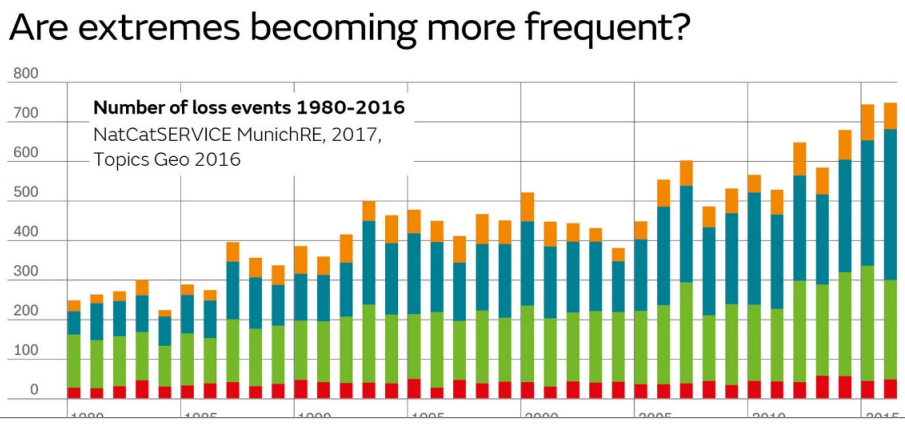
Derby	In November 2019, a month's worth of rain fell in less than 24 hours and affected Derbyshire very badly. Dozens of schools closed and trains were cancelled. Boris Johnson visited Matlock, an area badly affected by the floods.  

Key Information	• **Overfishing** is where humans catch too many fish from the oceans and other water bodies at a faster pace than nature can replenish. • Every year 8 million tonnes of **plastic pollution** ends up in our oceans. Over 700 species of marine animals have been reported to have eaten or been entangled in plastic and scientists think that the amount of plastic in the ocean may triple by 2050. Half of the plastic we produce is designed to be used just once and then thrown away (single-use plastic). Plastic takes over 400 years to decompose so causes damage for a very long time. • **Drought** is a continuous period of dry weather, when an area gets less than its normal amount of rain over months or years. Crops and other plants need water to grow, and land animals need it to live. It can become dangerous to people and other animals; causing famine and even creating deserts. A drought is a natural event, caused by other weather events like El Niño and high-pressure systems. Drought can also be triggered by deforestation, by global warming, and by diverting rivers or emptying lakes. • A **flood** is an overflow of water on land which is usually dry. Sometimes a river receives too much extra water, either from heavy rain or other natural disasters. When this happens, the water overflows from its normal path in the river bed and onto dry land. This is called a flood. Flash floods happen quickly. Extreme flooding can also be caused by a tsunami or a large storm that will cause the sea to surge inland.

Diagrams


Atlantic Overfishing: Europe's Worst Offenders
Share of total allowable catch (TAC) in excess of scientific advice in the northeast Atlantic (2019)*
Member State
Excess TAC (%)
Excess TAC (tonnes)
Sweden 52.4 17,369
United Kingdom 24.3 106,925
Ireland 21.7 34,052
Denmark 19.7 49,914
Germany 18.0 20,620
The Netherlands 13.5 31,910
Belgium 10.4 3,009
France 9.4 27,230
Spain 6.6 16,689
Portugal 3.8 3,662


What kind of waste appears on UK beaches?
Items found per 100m
225.3
Plastic/polystyrene pieces
42.3
Packets
40.4
Glass items
34.5
Cigarette stubs
32.9
Caps & lids
31
Pieces of string/cord
27.4
Wet wipes
26.9
Cotton bud sticks
18
Lengths of fishing line
18
Cutlery/trays/straws


Are extremes becoming more frequent?
Number of loss events 1980-2016
NatCatSERVICE MunichRE, 2017,
Topics Geo 2016
800
700
600
500
400
300
200
100
0

Vocabulary Ninja 	Pollution	Pollution happens when the environment is contaminated, or dirtied, by waste, chemicals, and other harmful substances. There are three main forms of pollution: air, water, and land.
	Overfishing	The overharvesting of fish and marine animals at such a rate that the species is unable to recover to normal quantities.
	Climate	The average measurements of temperature, wind, humidity, snow, and rain in a place over years.
	Flood	A rise of water with no place to go.
	Drought	A continuous period of dry weather over months or years.