



CONONLEY PRIMARY SCHOOL
Inspiring and Challenging Our Children

Key Stage 2

Rivers and Mountains

Location Knowledge:	Europe, Asia, North America, South America, Oceania, Latitude and Longitude, Southern Hemisphere, Northern Hemisphere, Time Zones
Place Knowledge:	River Axe (Dorset, Somerset and Devon) River Aire (North Yorkshire, West Yorkshire, East Yorkshire). Major UK Rivers: Thames, Ouse, Dee, Mersey, Severn, Clyde, Forth, Test and Exe. Bangladesh, Mountain Ranges: Himalayas, Andes, Rockies, Cambrian Mountains (UK)
Human and Physical Geography:	Earthquakes and Volcanoes, Mountains, Rivers and the water cycle, Natural Resources
Skills and Fieldwork:	Maps, atlases, globes, digital / computer mapping, 8 compass points, 4 & 6 figure grid references, Map symbols and Key; use of Ordnance Survey maps. Fieldwork: observe, measure, record, present.
How does this unit build on the knowledge and skills developed in KS1 and link with the knowledge and skills in other KS2 units?	See the 'Geography Curriculum: Unit Links' document on the school website.
Links to other areas of the curriculum:	Science: Evolution and Inheritance, Rocks and Soils, Earth and Space, Living Things and Their Habitats Music: focus on 'Vltava', from Ma Vlast, Smetana and 'Hall of the Mountain King', from Peer Gynt Suite, Grieg. Maths: analysing data, calculating

Curriculum Intent: Key Lines of Enquiry

1: How does the course of the River Axe change from source to mouth?

Pupils will learn about:

- the course of the River Axe
- how physical features of rivers change from source to mouth
- why the course of a river changes as it flows from higher to lower ground

Key Vocabulary

Course: the path of the river from its source to the mouth.

Source: the original point from which the river flows.

Channel: Rivers flow in channels. The bottom of the channel is called the bed and the sides of the channel are called the banks.

Mouth: the point where a stream flows into a body of water such as a **river** or where a river flows into a body of water such as a sea or ocean.

Stream: a small, flowing body of water

Mud bank: the sides of the stream or river which are made out of mud.

Waterfall: part of a river or stream where the water flows over a steep drop

Rapids: where the river bed is rocky, and the river runs fast over and around the rocks

Estuary: where a river meets the sea. There, saltwater mixes with freshwater. The river becomes wider and wider and flows slowly to the ocean.

Sea: a large area of salt water which is smaller than an ocean.

Erosion: a process where natural forces like water, wind, ice, and gravity wear away rocks and soil.

Village: A **village** is a community made up of a small number of houses, usually in a country area. A **village** is bigger than a hamlet but smaller than a town or city

Town: a place where lots of people live closely together, usually larger than a village but smaller than a city

Marina: a small harbour for small boats that are used for leisure

Natural features: found in **nature** and not involving anything made or done by people, for example, rivers, hills, mountains, lakes.

Semi-natural: something which has been changed by humans but still has natural features, for example, fields and hedgerows.

Human-made Features: things which have been made by humans such as bridges, roads and buildings.

River Axe: a river in South West England.

Meander: a curve or bend in a stream or river.

Lake: a large body of water surrounded by land and not part of an ocean or sea.

Steep Slope: a hill which rises sharply or straight up. On a map, the contour lines are close together.

Gentle Slope: land which rises slowly, a slight incline. On a map, the contour lines are far apart.

Contour Lines: a **line** drawn on a map connecting points of equal height. Contour lines are a way of showing hills on a map.

Ox Bow Lake: a type of lake which is formed when a meander from a stream or a river is cut off to form a lake. **Ox Bow lakes** are often shaped like a crescent or a horse shoe.

Tributary: a stream or river that flows into and joins a main river. It does not flow directly into the sea.

Confluence: the place where the tributary and the main river meet is called a confluence.

Curriculum Intent: Key Lines of Enquiry

2: How does the course of the River Aire change from source to mouth?

Pupils will learn about:

- the course of the River Aire from source to mouth
- changes in physical features from source to mouth **and compare with River Axe.**
- whether the Aire is a healthy habitat for living things (see DNAire)
- **changes along a section of a local river and to reach a conclusion as to whether it constitutes a healthy habitat for living things**

Key Vocabulary

River Aire: a major river in Yorkshire which flows past Cononley.

Upper course: the start of the path of the river, usually on high ground such as hills and mountains. The stream or river is small and fast flowing. It flows downwards through steep hillsides creating waterfalls and rapids.

Middle course: the river becomes faster, deeper, wider and flattens out. It often meanders and ox-bow lakes can be created.

Lower course: the end of the river's journey as it moves to the mouth.

River cliff: a cliff, or steep slope, that has been created by the river running through the land.

Slip off slope: the gentle slope on the inside bend of a river.

Meander: a curve or bend in a stream or river.

Ox Bow Lake: a type of lake which is formed when a meander from a stream or a river is cut off to form a lake. Ox Bow lakes are often shaped like a crescent or a horse shoe.

River habitat: the river and the surrounding banks which create homes for plants, animals and insects. **Freshwater pollution:** when waste, chemicals, or other particles cause streams, rivers and lakes to become harmful to the fish and animals that need the **water** to survive.

Organic matter: the remains of plants and animals which are decaying.

Oxygen: a chemical element in the air which is necessary for life.

Nitrates: a chemical used in fertilizers

Phosphates: a chemical used in fertilisers

Algae: a type of plant with no stems or leaves that grows in water or on damp surfaces.

Eutrophication: when fertilizers containing nitrates and phosphates accidentally enter streams, rivers and lakes causing plants such as algae to multiply and starve other creatures of the oxygen they need to live.

Indicator species: an insect, animal, micro-organism or plant which tells the conditions of a habitat, for example, the presence of May Flies near a river tells us that there is oxygen in the river enabling the May Fly eggs to hatch, become larvae and transform into adult May Fly.

Invertebrates: an animal that does not have a backbone or skeleton inside its body. Insects, spiders, worms, snails, clams, crabs, and squids

Biotic index: is a scale for showing the quality of an environment by indicating the types of organisms present in it. It is often used to assess the quality of water in rivers.

Curriculum Intent: Key Lines of Enquiry

3: Why are river estuaries such important places for wildlife?

Pupils will learn about:

- the course of major UK rivers: *Thames, Ouse, Dee, Mersey, Severn (the longest river), Clyde, Forth, Test and Exe.* (Year 3 / 4 to choose 5 rivers from above list)
- the features of river estuaries of above rivers
- why they are such important ecosystems for wildlife

Key Vocabulary

Course: the path of the river from its source to the mouth.

Source: the original point from which the river flows.

Channel: Rivers flow in channels. The bottom of the channel is called the bed and the sides of the channel are called the banks.

Estuary: where a river meets the sea. There, saltwater mixes with freshwater. The river becomes wider and wider and flows slowly to the ocean.

Mud bank: the sides of the stream or river which are made out of mud.

Mud flats: a flat area of very wet soil near the sea that is covered at high tide

Shallow water: when the water is not deep.

Tide: the alternate rise and fall of the sea level due to the gravitational pull of the moon.

High tide: the time when the sea reaches its highest level next to the shore.

Low tide: the time when the sea is at its lowest level next to the shore.

Food chain: the order in which organisms, or living things, depend on each other for **food**.

Curriculum Intent: Key Lines of Enquiry

<p>4: Why are rivers such an important part of the water cycle?</p>	<p>5: How has the <i>Isle of Dogs</i> changed since the reign of Henry VIII?</p>	<p>6: Why is river flooding such a problem in Bangladesh?</p>
<p>Pupils will learn about:</p> <ul style="list-style-type: none"> the components of the hydrological or water cycle the important role that rivers play 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> the reasons why the <i>Isle of Dogs</i> developed to become part of the busiest river port in the world the causes of its sudden decline and closure 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> the location of Bangladesh Geographical features of Bangladesh why Bangladesh is at such a risk of serious annual river flooding economic consequences how to use a range of evidence to answer a question
<p>Key Vocabulary</p>	<p>Key Vocabulary</p>	<p>Key Vocabulary</p>
<p>Precipitation: The liquid and solid water particles that fall from clouds and reach the ground are known as precipitation. These particles include drizzle, rain, snow, snow pellets, ice crystals, and hail. 'Run off': occurs when there is more water (from rain, snow, hail etc) than land can absorb. The water eventually makes its way in to streams and rivers. Absorption: the process where water is soaked up Evaporation: a process where liquids change to a gas or vapour. Water changes to water vapour (steam) Vaporise: when a liquid is changed into a gas Condensation: when a gas changes back into a liquid as it touches a cooler surface. Aquifers - underground layers of rock or soil that store water</p>	<p>Meander: a curve or bend in a stream or river Marsh: a type of wetland with soil that is rich in minerals. Mud flats: see definition for key question 3. Creek: a natural stream of water smaller than a river River: a flowing, moving stream of water. Usually a river feeds water into an ocean, lake, pond, or even another river Flood: a flood happens when water covers land that is usually dry. Port: a town or city next to a river or the sea with a harbour where ships load or unload cargo Trade: the activity of buying, selling, or exchanging goods or services between people, firms, or countries. British Empire: overseas territories under British rule. It originated with the overseas possessions and trading posts established by England between the late 16th and early 18th centuries. Dock: an enclosed area of water in a port for the loading, unloading, and repair of ships Decline: to gradually become less, worse, or less powerful or important.</p>	<p>Natural disaster: events caused by forces of nature that cause destruction of life and/or property. Well known natural disasters include avalanches, earthquakes, mud slides, volcanic eruptions, floods, tsunamis, cyclones, storms, droughts, tornadoes, forest fires, epidemics and famine. Flood: a flood happens when water covers land that is usually dry. Climate: the average temperature and rainfall (a pattern of weather) measured over a long time such as years and centuries. Monsoon season: a monsoon is actually the wind pattern that causes such rains. Monsoon winds reverse direction between winter and summer. They bring wet summers and dry winters to the regions where they blow. Indian Ocean: The Indian Ocean is the world's third largest ocean, after the Pacific and Atlantic Oceans. It is located between Africa, Asia (including India), Australia and the Southern Ocean.</p> <div style="text-align: center;">  <p>Tolerance and respect of opinions & diversity</p> </div>

Curriculum Intent: Key Lines of Enquiry

<p>7: How do we know what happened to the River Thames during the <i>Little Ice Age</i>? (Optional)</p>	<p>8. Why is Mount Everest so Famous?</p> <p>Why are the three mountains of Olympus, Mauna Kea and Everest so famous?</p>	<p>9: How were the world's greatest mountain ranges formed?</p>
<p>Pupils will learn about:</p> <ul style="list-style-type: none"> the course of the River Thames through London what the 'Little Ice Age' means the impact of severe winters on the River Thames and the people of London. 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> what geographers define as mountains locate Everest and Mauna Kea on a map Features of Everest (Mauna Kea and Olympus) which make it famous 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> location of the largest ranges of mountains in the world and the countries that they cover (Year 3 / 4 – focus on the Himalayas) movement of plates of the Earth's crust can form ranges of fold mountains link with previous learning about Volcanoes
<p>Key Vocabulary</p>	<p>Key Vocabulary</p>	<p>Key Vocabulary</p>
<p>Climate: the average temperature and rainfall (a pattern of weather) measured over a long time such as years and centuries.</p> <p>Little Ice Age: a period of cooling of the earth's temperature lasting from the mid-14th through mid-19th centuries</p>	<p>Mountain: a large mass of earth or rock taller than 304.8 m (1000 ft) that rises up above the surrounding land</p> <p>Volcano: a landform (usually a mountain) where molten rock erupts through the surface of the planet.</p> <p>Base: the bottom of the mountain or volcano.</p> <p>Summit: the bottom of the mountain or volcano</p> <p>Satellite: a small object that orbits, or revolves around, a larger object in space.</p> <p>Solar System: The solar system consists of the sun and everything that orbits, or travels around, the sun.</p> <p>Mountain range: a large area where many mountains can be found close together</p> <p>Fold mountains: Fold mountains are formed when two plates run into each other or collide. The force of the two plates running into each other causes the Earth's crust to crumple and fold.</p> <p>Crust: the outermost layer of the earth</p> <p>Plates: the idea that Earth's outer layer is made up of large, moving pieces called plates. The plates are made of solid rock. Under the plates is a weaker layer of partially melted rock. The plates are constantly moving over this weaker layer.</p> <p>Strata – layers of rock</p>	<p>Mountain range - a large area where many mountains can be found close together</p> <p>Fold mountains: Fold mountains are formed when two plates run into each other or collide. The force of the two plates running into each other causes the Earth's crust to crumple and fold. Many of the world's great mountain ranges are fold mountains including the Andes, Himalayas, and the Rockies</p> <p>Crust: the outermost layer of the earth</p> <p>Plates: the idea that that Earth's outer layer is made up of large, moving pieces called plates. The plates are made of solid rock. Under the plates is a weaker layer of partially melted rock. The plates are constantly moving over this weaker layer.</p> <p>Strata: layers of rock</p>

Curriculum Intent: Key Lines of Enquiry

<p>10: Why is the legend of Mallory and Irvine the greatest unsolved mystery of mountaineering?</p>	<p>11: Why did Edmund Hillary and Tenzing Norgay find fossils of sea animals on the summit of Everest?</p>	<p>12: How are the Cambrian Mountains different from the Himalaya Mountains?</p>
<p>Pupils will learn about:</p> <ul style="list-style-type: none"> • Reflect upon, evaluate evidence and reach a conclusion and judgement regarding the success or failure of expedition of Mallory and Irvine to climb Mount Everest in 1924 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> • How fossils form (briefly) • Why Edmund Hillary and Tenzing Norgay discovered fossils of sea animals on the summit of Mount Everest in 1953 • How the crinoids were formed, with reference to the Tethys Sea, which once lay in between the Indian and Eurasian tectonic plates 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> • The location of the Cambrian Mountains • The differences between the Cambrian Mountains of Wales and the Himalaya Mountains
<p>Key Vocabulary</p>	<p>Key Vocabulary</p>	<p>Key Vocabulary</p>
<p>Mountaineer: a person who climbs mountains Summit: the top of a Mountain: a large mass of earth or rock taller than 304.8 m (1000 ft) that rises up above the surrounding land Everest: one of the Himalayas and the highest mountain in the world above sea level.</p>	<p>Fossils: the remains of animals and plants that lived long ago. To be classified as a fossil the remains must be over 10 000 years old Crinoids: a type of fossil Sea bed: the floor of the sea or ocean Sediment: the material from a liquid (such as rivers and seas) that settles to the bottom Silt: a solid, dust-like sediment that water, ice, and wind transport and deposit. Silt is made up of rock and mineral particles that are larger than clay but smaller than sand. Tectonic Plates: the idea that that Earth's outer layer is made up of large, moving pieces called plates. The plates are made of solid rock. Under the plates is a weaker layer of partially melted rock. The plates are constantly moving over this weaker layer.</p>	<p>Distribution: sharing our or spreading out Higher ground: an area of land that is higher than the area surrounding it Mountains: a large mass of earth or rock taller than 304.8 m (1000 ft) that rises up above the surrounding land Fold mountains: formed when two plates run into each other or collide. The force of the two plates running into each other causes the Earth's crust to crumple and fold. Many of the world's great mountain ranges are fold mountains including the Andes, Himalayas, and the Rockies Erosion: the process where rock is dissolved, worn away or broken down into smaller and smaller pieces. The rocks and sediments are picked up and moved to another place by ice, water, wind or gravity.</p>

Curriculum Intent: Key Lines of Enquiry

<p>13: Why is the climate such a challenge for Derek, a farmer in the Cambrian Mountains? (Compare with hill farmers in the Yorkshire Dales)</p>	<p>14: Why do tourists visit the Cambrian Mountains? (Compare with tourism in the Yorkshire Dales)</p>
<p>Pupils will learn about:</p> <ul style="list-style-type: none"> • the climate on the Cambrian Mountains • how to use climate data to record and analyse information about the Cambrian Mountains • the similarities / differences between the climate on the Cambrian Mountains and the Craven area. • why the mountains of the north and west of the United Kingdom are generally wetter and cooler than places in the south and east 	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> • the tourist attractions of the Cambrian Mountains • the interaction between humans and the landscape.
<p>Key Vocabulary</p>	<p>Key Vocabulary</p>
<p>Economic activity: a system of making and trading things of value. Natural: found in or produced by nature Environmental: everything around us Climate: the average temperature and rainfall (a pattern of weather) measured over a long time such as years and centuries. Climate graph: displays yearly temperature and precipitation (rainfall) statistics for a particular location Prevailing winds: A wind that blows predominantly from a single general direction.</p>	<p>Tourism: the business of encouraging and supporting tourists. Tourists: when people travel for pleasure Diversification: introducing a variety of different ways to make money.</p> <div style="text-align: center;">  <p>Mutual Respect</p> </div>