Wellington Primary Science

Parental Information

Year Group – 4

Term – Summer

Topic – Misty Mountains

In the Misty Mountain, Winding River project, your child will learn about the characteristics and physical processes of rivers, including how they shape the landscape over time, their significance around the world and the impact of flooding. They will learn how to use the eight points of a compass, four and six-figure grid references, symbols and a key to locate and plot geographical places and features on a map, as well as how contour lines are used to show the topography of an area. They will have the opportunity to learn about the stages of the water cycle and about mountains and their different formations, studying mountain ranges in the United Kingdom and around the world. They will also learn about habitats and how human and natural influences can have an impact on the environment..

Your child will receive a copy of the knowledge organiser below to aid their learning. Please take time to look through this at home with your child.

Your child will be bringing home a 'Home Learning' guide and workbook, in which they can record home learning tasks for this topic. Included is a further reading suggestion list and some suitable child friendly websites, which can be used to deepen their understanding of the topics that they will be covering in class.

Class teachers will guide your child on activities which will directly support that week's learning and any homework expectations – there is no requirement for the children to complete all of the tasks in the pack.

Should you have any questions please don't hesitate to contact the Year Group Team.

Misty Mountain, Winding River

Rivers

A river is a body of water that flows downhill, usually to the sea. Rivers start in mountains or upland areas and flow downstream, collecting water from small, narrow streams, springs, rainfall or other water sources on the way to the sea.

River features

A variety of physical features can be found along the course of a river.

delta	A triangular piece of land at the mouth of a river that has formed because of a build up of sediment.
floodplain	An area of flat land next to a river that floods when the river bursts its banks.
interlocking spurs	Ridges that are formed when a river meanders around areas of harder rock.
meander	A bend in a river or stream.
oxbow lake	A curved lake that was once a meander in a river.
V-shaped valley	A deep, straight channel that has been cut into the rock by erosion.
waterfall	A cascade of water that falls from a higher level to a lower level.

River stages

The upper course

The upper course of a river is narrow. Water flows over the riverbed, carrying rocks that erode the land and create steep-sided, V-shaped valleys.

The middle course

The middle course of a river grows wider and deeper as the land becomes flatter. Bends called meanders form.

The lower course

The lower course is the widest part of a river. The land is flat, and the water flows into the sea at the river's mouth.

Changing landscapes

Rivers, seas and oceans transform a landscape through erosion, deposition and transportation.

Erosion

Erosion is the wearing away and removal of rock and soil by means of wind or water.

Transportation

Transportation is when rocks and soil that have been dislodged and worn away by erosion are transported in flowing water.

Deposition

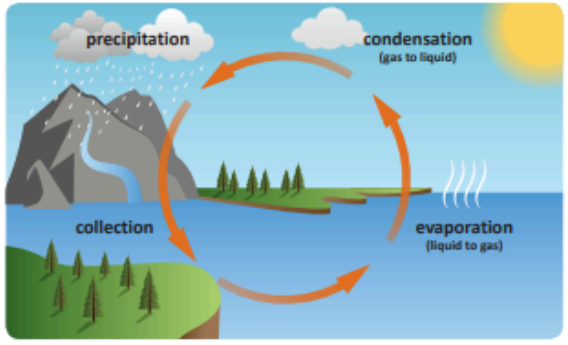
Deposition happens when flowing water slows down. Eroded rock and soil that have been transported are left behind.

Uses of rivers

Settlements have been built next to rivers for thousands of years because rivers provided essential water, food and power for people in the past. Today, rivers provide habitats for wildlife, hydroelectric power and water for crops. Rivers are also used for leisure activities, such as canoeing and fishing and for transporting goods and people.

Water cycle

The water cycle is the journey water takes as it travels from rivers, lakes, seas and oceans into the sky and then back down to the ground. Water changes state as it goes around the cycle in four stages: evaporation, condensation, precipitation and collection.



Flooding

Flooding can happen for a wide variety of natural and human reasons, including excessive rainfall, lack of river dredging, land use and the topography of the land. Flooding can cause problems, including damaging property and equipment, contaminating farmland and cutting people off from vital services and supplies of food and water.

Mountains

A mountain is a large, raised part of the Earth's surface. A mountain's highest point is called its peak or summit. Mountains are at least 610m in height. A mountain range is a chain of mountains that are close together. They are usually arranged in a line connected by ridges.

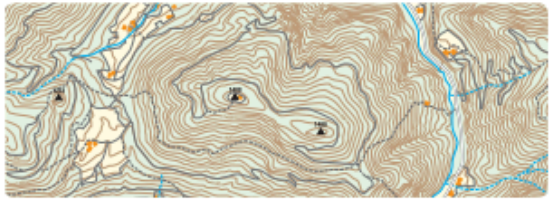
Himalayas mountain range

Altitudinal zones

In mountainous areas, there are large differences in altitude. These differences mean that the climate, landscape and oxygen levels at the bottom of a mountain can be very different from those at the top. These differences create altitudinal zones, with each zone supporting a range of different plants and animals.

Contour lines

Contour lines are used on maps to show the topography of the land. They join places of equal height and are usually labelled in intervals of 10m. If contour lines on a map are close together, the land is steep. If they are far apart, the land is flat.



contour lines

Types of mountain

Mountains can be classified according to what they look like and how they were formed.

Fold mountains form when tectonic plates collide with each other. One plate is pushed down while the other is pushed up and compressed, forming folds.

Volcanic mountains are formed when lava, ash and gases erupt and then cool. This type of mountain often has steep, symmetrical slopes.

Fault-block mountains form at plate boundaries. The earth on one side of the boundary is forced up, and the other side collapses.

Dome mountains are the result of when magma is pushed upwards against the Earth's crust. Instead of erupting through the crust, the magma cools and hardens.

Plateau mountains are formed when land is lifted by magma below the Earth's crust. Large, flat areas of land are forced upwards, creating a plateau.

Glossary

altitude	The height of an object or point above sea level.
altitudinal zone	One layer out of many that naturally occur in mountainous regions to form a particular habitat.
collection	The process of water gathering in oceans, rivers, lakes and streams after falling as precipitation.
condensation	The process of a gas or vapour cooling down and changing state into a liquid.
contaminate	The process of making something poisonous or less pure.
dredge	The clearing of the bed of an area of water by removing mud, weeds and rubbish.
evaporation	The process of a liquid heating up and changing state into a gas or vapour.
plate boundary	The place where two tectonic plates meet.
ridge	Long, narrow sections of rocky ground that connect mountains.
sediment	Very small pieces of sand, soil and stone that form through the process of erosion.
topography	The physical appearance of an area of land, especially relating to its shape and surface.