

Interconnected World

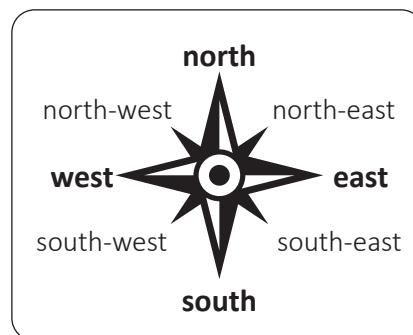
Atlases and maps

Maps, charts and atlases contain data about countries, such as their population and land height. Political maps show the locations of countries and cities. Physical maps show the location of physical features.

Compass points

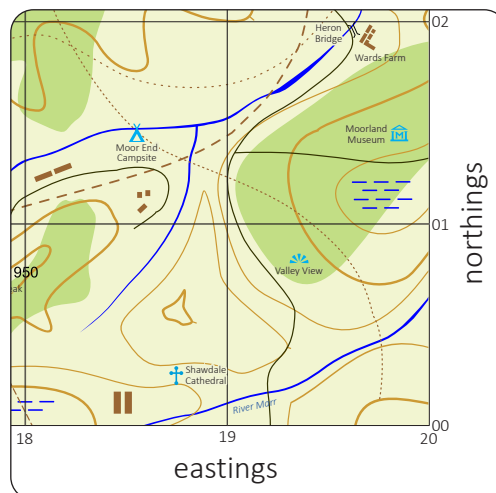
There are eight points on a compass. There are four cardinal points: north, south, east and west.

There are four intercardinal points: north-east, north-west, south-east and south-west. People use the cardinal and intercardinal points to give directions and plot human and physical features on maps.



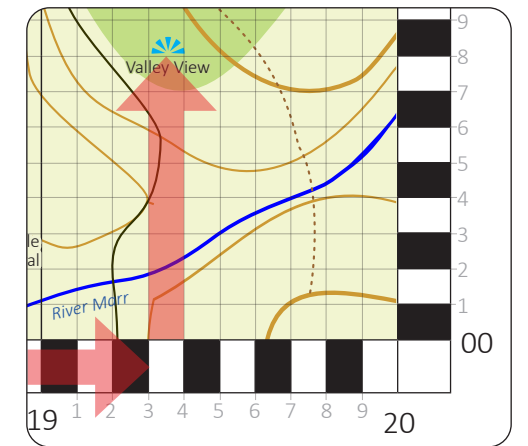
Four-figure grid references

A grid reference is a location on a map. Four-figure grid references are used to locate a grid square on a map. To find a four-figure grid reference, you follow the horizontal axis, called the easting, from west to east, and then the vertical axis, called the northing, from south to north, until they meet at the bottom left-hand corner of the square you want to reference. The easting followed by the northing makes a four-figure grid reference. The four-figure grid reference for the square containing Shawdale Cathedral is 18 00.



Six-figure grid references

A six-figure grid reference is six numbers that locate an exact position of a human or physical feature within a grid square on a map. On an Ordnance Survey map, markers divide each grid square into 100 smaller squares. We go 'along the corridor' to the left side of the square and 'up the stairs' to the bottom left-hand corner of the square to find the six-figure grid reference. For example, the six-figure grid reference for the viewpoint, Valley View, is 193 008.

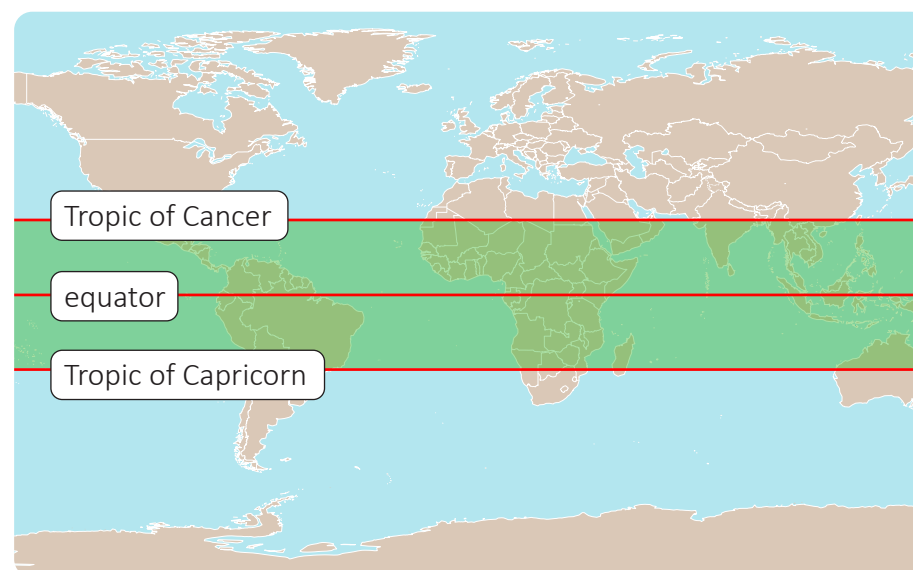


Tropics of Cancer and Capricorn

The tropics is an area between two imaginary lines of latitude, the Tropics of Cancer and Capricorn, which lie on either side of the equator.

The Tropic of Cancer lies 23°N of the equator in the Northern Hemisphere. The Tropic of Capricorn lies 23°S of the equator in the Southern Hemisphere.

The tropics is an area of significance. It contains 95% of the world's mangrove forests, which absorb large amounts of carbon dioxide from the atmosphere and release oxygen. The hot and wet climate produces fresh food all year round, which is shipped worldwide, such as rice, bananas and mangoes.



Life in North and South America

Cultural studies of a country include the language, religion and values of the people who originate from or live in a particular place. The countries in North and South America have a range of different cultures, which have been influenced by indigenous peoples, European colonisation and immigration.

Canada

Continent: North America

Official languages: French and English

Religion: 90% of Canadian people practise Christianity

Values: Canadian people respect different cultures and value gender and racial equality. They also appreciate nature.



Canadian flag

Brazil

Continent: South America

Official languages: Portuguese

Religion: 90% of Brazilian people practise Catholicism

Values: Brazilian people value relationships, family, honesty and respect. Respecting elders is part of the law.

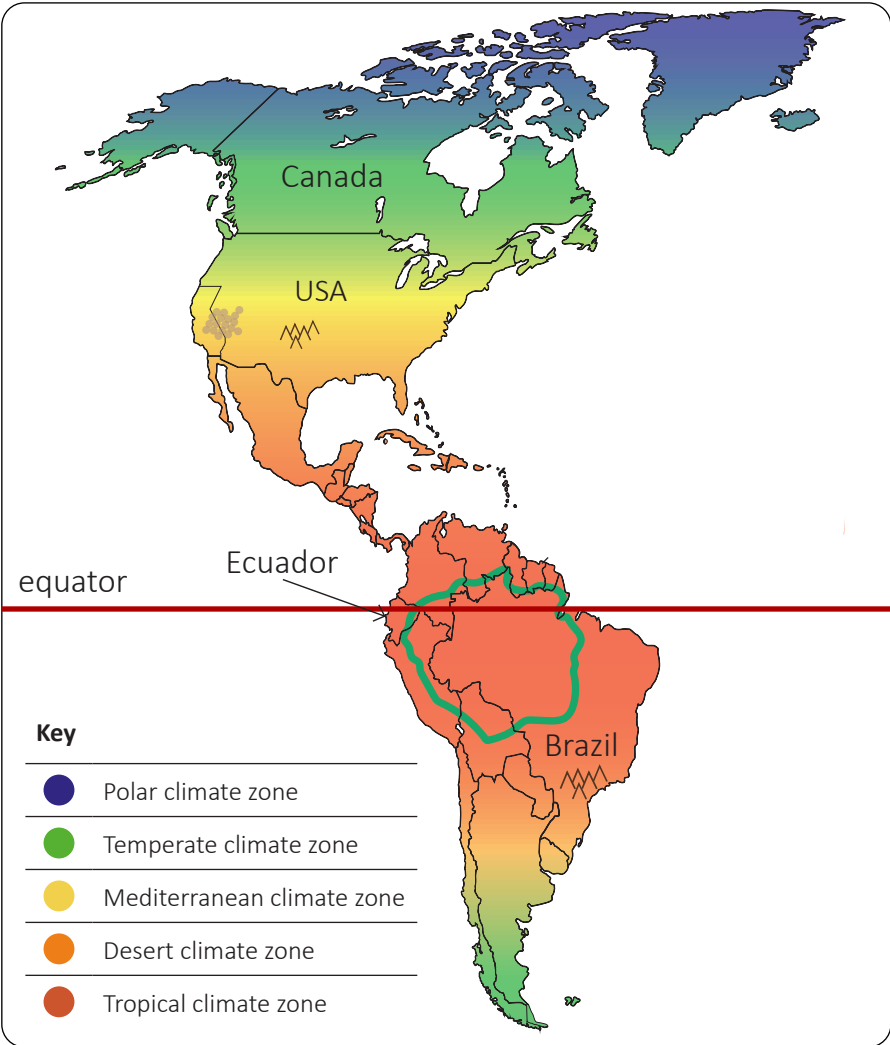


Brazilian flag



Contrasting climates

Some countries have contrasting climate zones, which means that the typical weather conditions can be very different. Countries in the continents of North and South America have contrasting climate zones.



Canada has a polar climate in the north and a temperate climate in the south. The United States of America has a mainly tropical climate but the north is cooler. Most of Ecuador has a tropical climate. Brazil has a tropical climate overall, but there are some temperate regions further from the equator.

The distance of a country from the equator affects climate. Countries nearer the equator are hotter, and countries further from the equator are colder. Physical features, such as mountains and rainforests, also affect the climate.

Significant features of the United Kingdom

Significant features of the United Kingdom include forests, mountains, rivers, lakes and islands, such as the New Forest National Park in England, the Grampian Mountains in Scotland, River Bann in Northern Ireland and Anglesey, an island in Wales.



National Rail network

National Rail is a company that owns, looks after and develops Britain’s railway network and trains. Principal railway routes link major towns and cities across Britain. Many principal routes terminate in London. Railway stations are sometimes linked to ferry interchanges and airports.

Canals

Canals are man-made waterways. They were created during the Industrial Revolution to transport raw materials and goods around the country. Locks, tunnels and aqueducts are all features of canals. Canals declined when railways and roads developed but were conserved after the Second World War and are used today for recreation and leisure.

Glossary

colonisation	Settlers from other countries taking control of an area from indigenous people.
immigration	Coming to another country to live there permanently.
line of latitude	An imaginary, horizontal line around Earth.
mangrove forest	A large area of tropical trees that grow in saltwater.
originate	To come from a particular place.
principal	Main or most important.
terminate	The end of a journey.



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

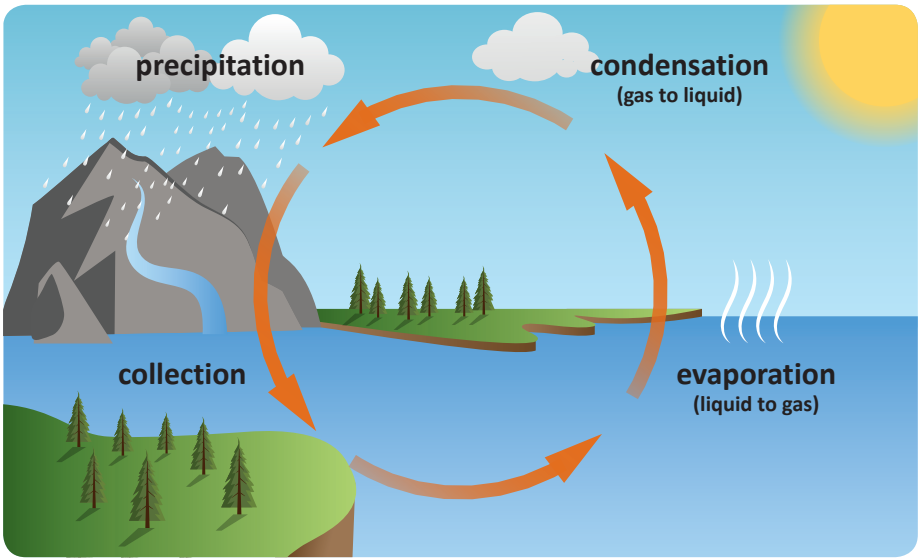
Deposition happens when flowing water slows down. Eroded rock and soil that have been transported are left behind.

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.



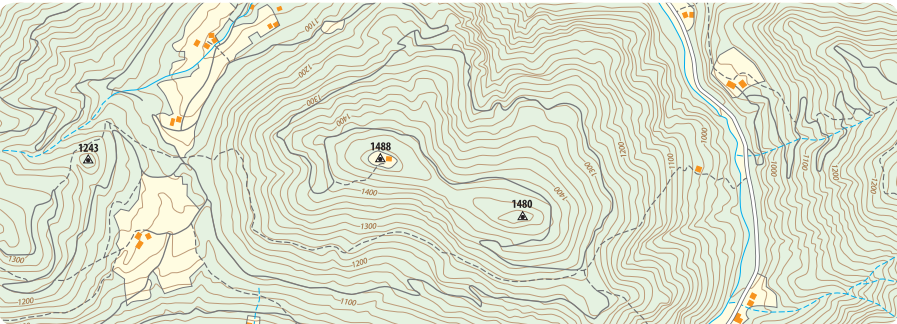
Himalayas mountain range

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.

