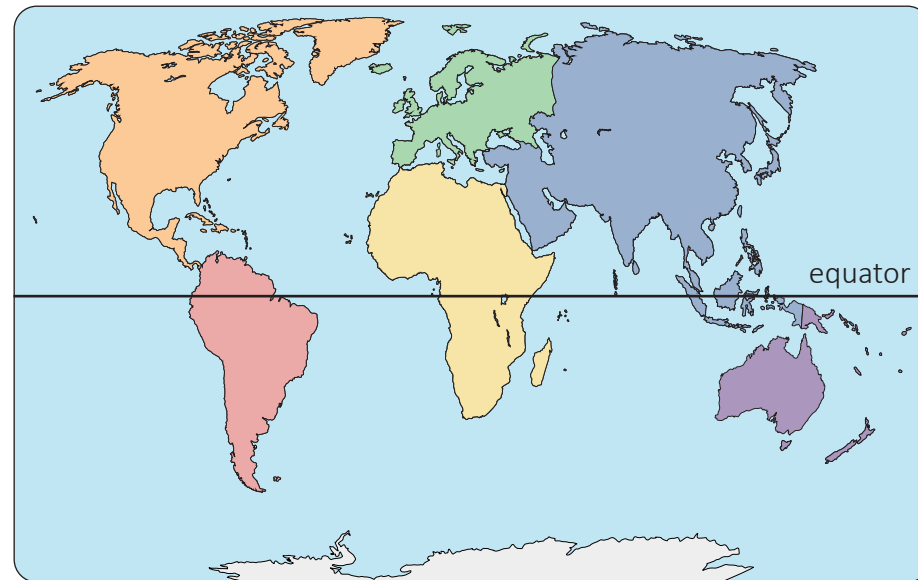


One Planet, Our World

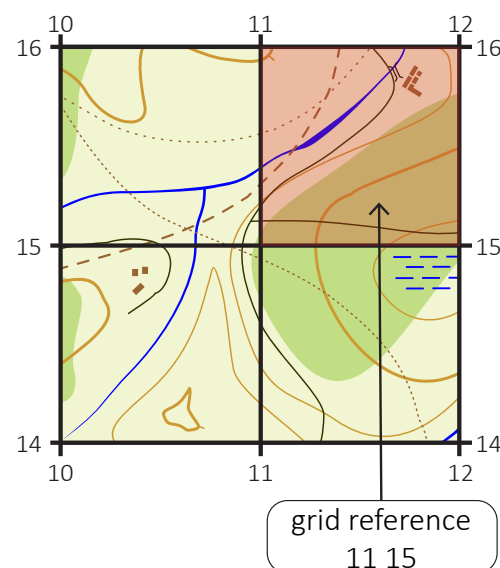
Using maps

Maps, atlases and globes show the continents and countries of the world. Maps show the shape and size of each country as well as its borders and distance from the equator. Most countries have a capital city, which is their most important city.



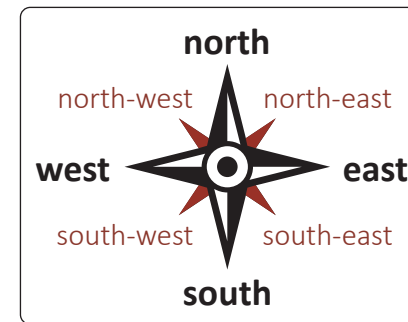
Four-figure grid references

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.



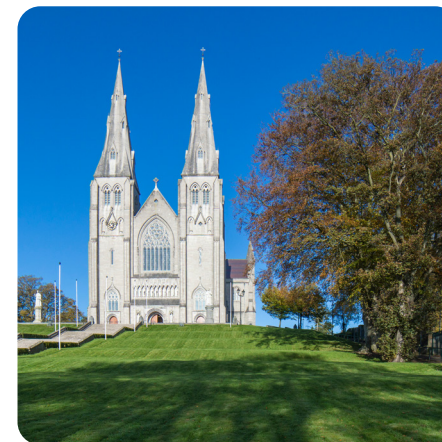
Compass points

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.



Counties of the United Kingdom

The countries of England, Northern Ireland, Scotland and Wales are divided into counties. Counties in the United Kingdom include Yorkshire, Suffolk, Pembrokeshire, Inverness-shire and County Armagh. Counties are governed by local governments and have unique physical and human characteristics.



County Armagh is famous for its orchards and St Patrick's Cathedral.



Suffolk is famous for its beaches and port at Ipswich.

Physical and human features

Physical features are natural and include cliffs, mountains and beaches. Human features have been made by people and include houses, bridges and roads. There are many physical and human features in the United Kingdom.



cliff



bridge

Land use

There are five main types of land use. These are:

- **agricultural** land, which is used for farming
- **commercial** land, which is used for shops and businesses
- **recreational** land, which is used for leisure activities
- **residential** land, which is used for housing
- **transportation**, including roads, airports and railways.



Rural areas are mainly used for agriculture and recreation.



Urban areas are mainly used for commercial and residential reasons and for transportation.



Climate zones

There are five major climate zones on Earth.

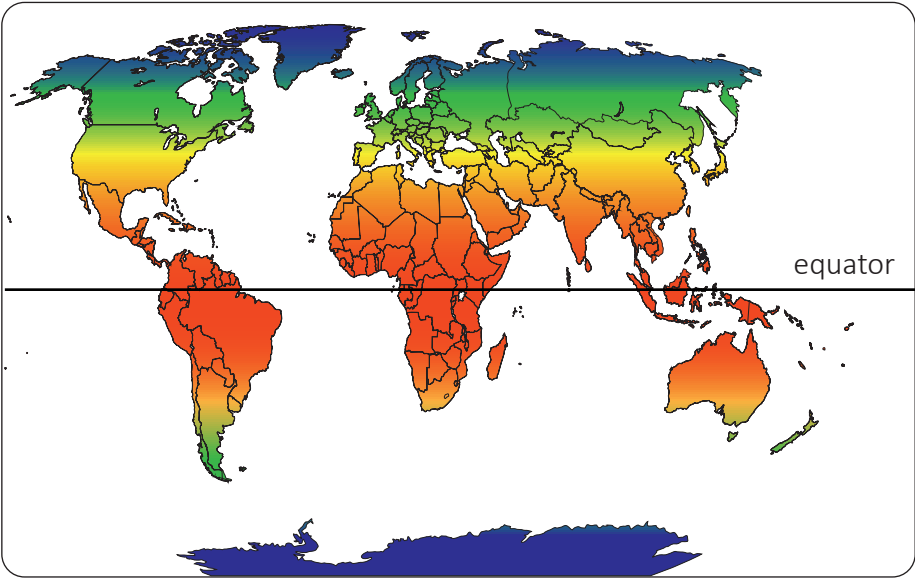
The **polar zone** is the coldest.

The **temperate zone** has warm summers and cool winters.

The **Mediterranean zone** has hot summers and mild winters.

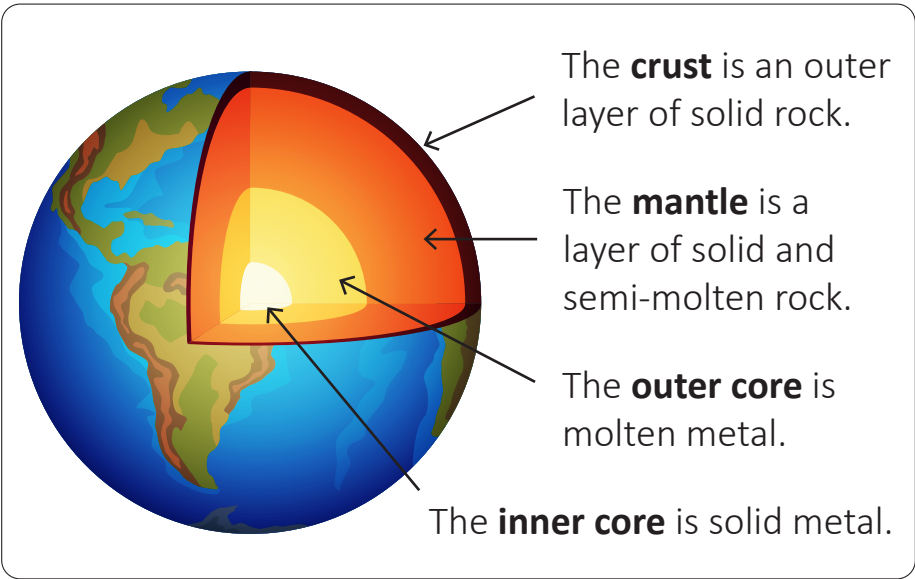
The **desert zone** is the hottest.

The **tropical zone** is hot and wet all year round.



Earth's layers

The Earth is made of four layers.



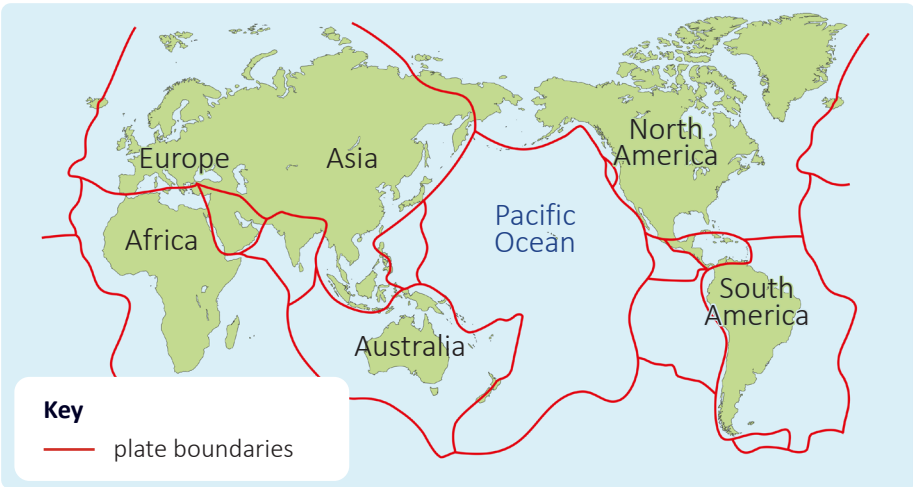
Latitude and longitude

Lines of latitude are imaginary horizontal lines that span the globe. Lines of longitude are imaginary vertical lines that span the globe. Lines of latitude and longitude tells us how far north, south, east or west a location is.



Plate tectonics

The Earth's crust is made of tectonic plates, which move slowly over the mantle. They push together to form mountains, pull apart to form valleys and slide past each other to create earthquakes and faults. The movement of the tectonic plates created the continents from one large landmass called Pangaea millions of years ago.



Glossary

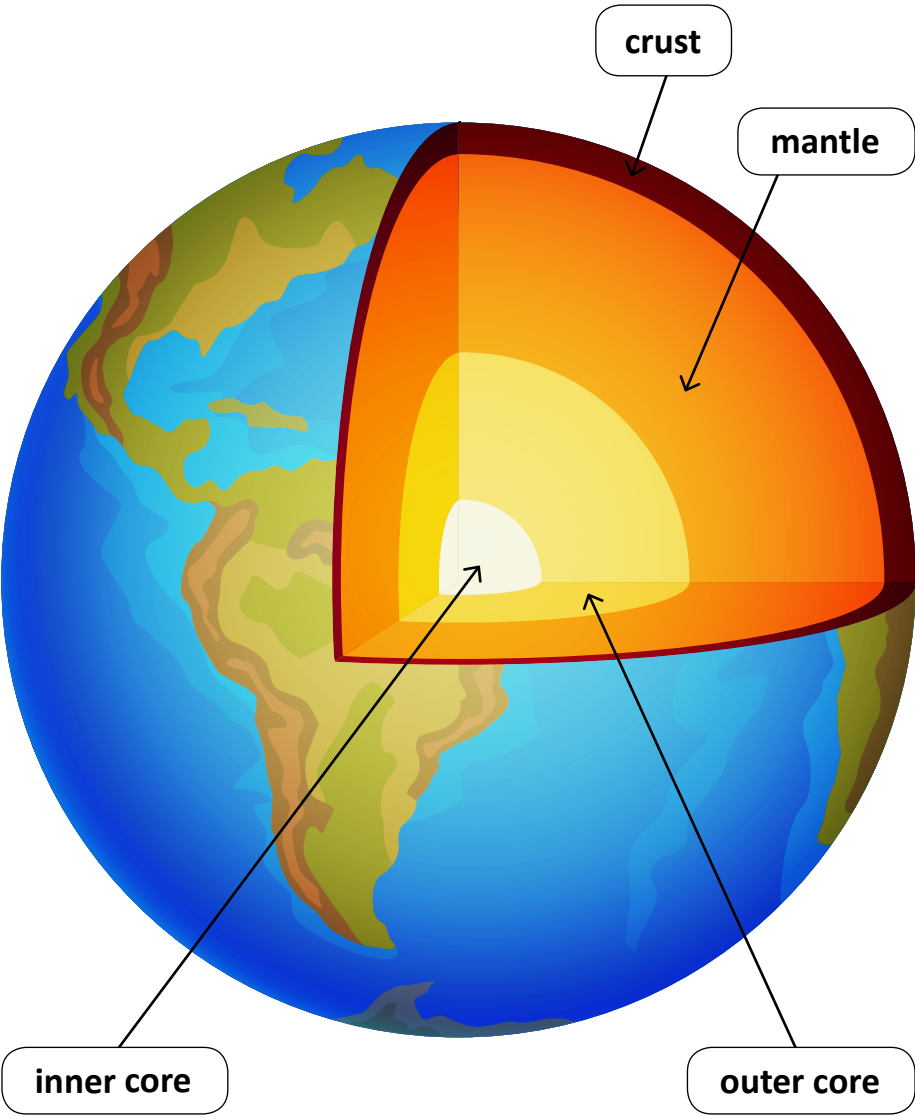
climate	The general weather conditions found in a place over a period of time.
county	An area of the United Kingdom that a local government manages.
fault	A large crack in the ground.
molten	Something that has melted and is in a liquid state.
plate boundary	The place where two tectonic plates meet.
tectonic plate	A piece of the Earth's crust.



Rocks, Relics and Rumbles

Structure of Earth

Earth is made up of four layers. These are the crust, mantle, outer core and inner core. The crust is a thin layer of rock on the surface that is broken into large pieces called tectonic plates. The mantle is made up of molten and semi-molten rock called magma. The outer core is a liquid layer of metal. The inner core is solid metal, and the hottest part of the Earth.









Types of rock

There are three main types of rock in the Earth’s crust. These are sedimentary, igneous and metamorphic.

Sedimentary rocks are made from layers of mud and sand, called sediment, that have settled in water and have been squashed over a long time to form rock.

Igneous rocks are made from cooled magma or lava.

Metamorphic rocks are formed when existing rocks are changed by heat and pressure.

Sedimentary rocks	Igneous rocks	Metamorphic rocks
 sandstone	 granite	 marble
 limestone	 obsidian	 slate

Uses of rocks

The appearance and properties of rocks affect how they are used.

Chalk, a sedimentary rock, is soft and can be easily eroded. This makes chalk suitable for writing and drawing on blackboards.



Granite, an igneous rock, is very hard and impermeable. Granite is used for making kitchen work surfaces.



Marble is a metamorphic rock. It is easy to carve and is not easily eroded, making it suitable for sculptures.



Fossils

Fossils are the remains, or traces, of once-living things preserved as rock. Fossils are only found in sedimentary rock and the conditions must be just right for them to develop.



Mary Anning

Mary Anning (1799–1847) was an English fossil collector. She lived in Lyme Regis in Dorset, in an area now known as the Jurassic Coast. Mary had little formal education but was taught fossil hunting by her father. She made many important fossil discoveries during her lifetime, including an *Ichthyosaurus* fossil in 1811 and a fossilised *Plesiosaur* in 1823.



fossilised *Plesiosaur* skeleton

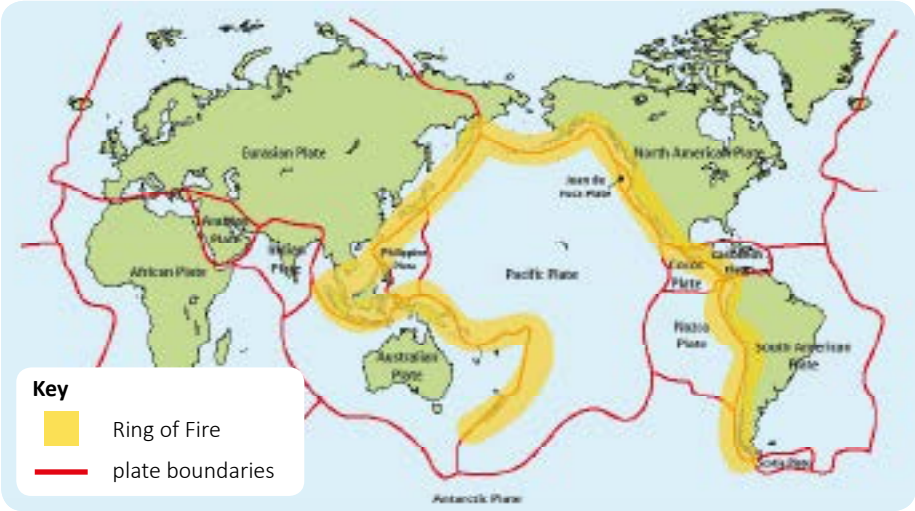
Soil

Soil is the material that covers the Earth’s crust. It is made from a mixture of organic matter, air and rock particles from the underlying rock. Soil has many important functions, including anchorage for plant and tree roots and supporting many food chains. There are three main types of soil. These are sandy, silty and clay.



Plate tectonics

The tectonic plates that make up the Earth’s crust float on top of the mantle and are constantly moving. The places where tectonic plates meet are called plate boundaries. Tectonic plates can push together, pull apart or slide against each other. This movement at the plate boundaries can cause volcanic eruptions, earthquakes and tsunamis.



Earth’s tectonic plates

Volcanoes

Volcanoes are mountains or hills with vents at the top through which lava, gases and ash erupt. There are four different types of volcano. These are shield, stratovolcano, cinder cone and lava dome. Volcanoes are classed as active, dormant or extinct. Active volcanoes are likely to erupt again. Dormant volcanoes might erupt again in the future. Extinct volcanoes will not erupt again.



Earthquakes

An earthquake is the sudden, violent shaking of the ground. As the Earth’s tectonic plates try to move past each other at plate boundaries they can get stuck. The pressure builds up so that when the plates eventually slip, a huge amount of energy is released causing an earthquake. Earthquakes can cause a lot of damage, especially to buildings and roads.



earthquake damage

Tsunamis

A tsunami is a series of waves caused by a volcanic eruption or earthquake under the sea. As the waves near the shore, they become larger and can travel a long way inland, causing a huge amount of damage to buildings, belongings and people.



tsunami damage

Glossary

erode	Be gradually worn away.
impermeable	Not allowing water to pass through. Also described as waterproof.
lava	Hot, molten rock that comes out of a volcano.
liquid	A material that is runny, can be poured easily and takes the shape of its container.
magma	Hot molten rock found in the Earth’s mantle.
molten	Metal or rock that is in a liquid state because of great heat.
organic matter	Dead and decaying plants and animals.
Ring of Fire	Area around the Pacific Ocean where many earthquakes and volcanic eruptions occur.
solid	A material that doesn’t flow and can be held.
tectonic plate	A large, slow-moving piece of rock that makes up the Earth’s crust.
vent	An opening in the Earth’s crust through which lava escapes.
volcanic eruption	The sudden and violent explosion of lava, gas, ash and rock out of a volcano.