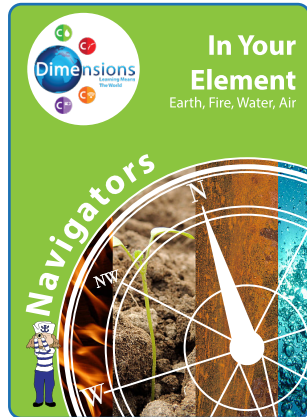


Navigators - In Your Element

What
I
Should
Know
Dimensions
CURRICULUM



Overview

"In Your Element" is a thematic unit based around the four elements of earth, air, water and fire with a key focus on geography. As well as extending our knowledge of rocks and soils, we will learn about natural phenomena such as earthquakes, volcanoes, tsunamis and tornados. We will also develop our knowledge of rivers and mountains, learning about some of the most important physical features of the UK and the wider world.

Earth

Earth is one of the four main elements that make up our planet. Earth is the term that covers things like rocks, soils and minerals. Humans have explored their properties and have used rocks, soils and minerals for many different things over the millenia. The Earth's crust is made of between 15 and 20 tectonic plates that shift across one another. The plates can be thought of like pieces of a cracked shell that rest on the hot, molten rock of Earth's mantle and fit snugly against one another. The places where the Earth's tectonic plates meet are called fault lines and this is where the most tectonic activity occurs. These shifts can cause earthquakes which, in turn, can create mountains. Some of the world's most famous mountain ranges have been formed by the shifting of the Earth's crust. The Alps in Europe were formed by earthquake activity. The highest mountain ranges in the UK are Scafell Pike (England), Ben Nevis (Scotland), Snowdon (Wales) and Slieve Donard (N. Ireland).

Fire

Fire is an element that also helped to shape our planet. Under the Earth's crust is magma - a thick, extremely hot liquid that forms part of our planet's structure. The cooling of the Earth after formation meant that a crust of different rock types was created. As we know, the Earth's crusts movements made mountains, but they also formed volcanoes. Volcanoes are "vents" that allow heat in the form of gas and lava to escape from beneath the Earth's crust.



Water

71% of the Earth's surface is covered in water and it is incredibly important to the survival of life on the planet. Water and Earth have a close connection. As previously mentioned, the Earth's crust can shift and move. This can form mountains, but it can also severely displace the water in the oceans and cause tsunamis. Tsunamis, if they meet the land, can be extremely destructive and can cause flooding. The water in the seas and oceans is salt water but most lakes and rivers contain fresh water. The UK has many rivers that start high in the mountains and hills and flow towards the sea. Key UK rivers are River Severn (England / Wales), River Thames (England), River Tay (Scotland), River Shannon (N. Ireland). Water has been key to trade over thousands of years with many empires and civilisations based upon the movement of goods and people across the planet.

Air

When air moves around the planet it is known as wind. Winds can end up blowing very quickly and, depending on where you live on the planet, you may experience a hurricane, typhoon or a tornado. Hurricanes and typhoons occur over the ocean. When they meet land, they lose a lot of their energy but can still be very destructive. Tornados tend to occur over land. They are also not as big as hurricanes and typhoons in size, but can sometimes be much more powerful! Hurricanes and tornados only tend to occur in certain climate zones.

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Vocabulary

Climate	the usual weather conditions in a place
Drought	a long period with little or no rain
Earthquake	shaking or other movement of part of the earth's surface
Flood	an overflow of water onto land that is not normally submerged
Hurricane	a large rotating storm with high speed winds that forms over water in tropical areas
Lava	hot, melted rock that erupts from a volcano
Magma	hot, liquid matter beneath the earth's surface that cools to form igneous rock
Minerals	a substance formed in the earth that is not an animal or plant
Mountain	a land mass with great height and steep sides that is higher than a hill
Mountain range	a group of connected mountains that were formed during the same time period
Rock	a solid mass made up of minerals. Rock forms much of the earth's outer layer, including cliffs and mountains.
Soil	the top layer of the earth's surface
Tectonic plate	a massive, irregularly shaped slab of solid rock
Tornado	a storm of very strong winds that form a cloud shaped like a funnel
Tsunami	a very large, often destructive sea wave caused by a marine earthquake or volcanic explosion
Typhoon	a hurricane that occurs in the western Pacific area and the China Sea.
Volcano	an opening in the earth's crust through which melted rock, ash, and gases are forced out

Concept Flow

- To name and locate main UK and world mountains
- To learn about different types of rocks, soils and minerals
- To learn about earthquakes
- To name and locate famous volcanoes, studying different types of volcanic material e.g. lava
- To learn about tsunamis and their link with earthquakes
- To learn about the use of water in trade links
- To learn about the distribution of water and water supplies e.g. drought, flooding
- To know the difference between a tornado, hurricane and cyclone

My Notes / Questions