Volcanoes

What is a volcano?

A volcano is an opening in the surface of the Earth in which gas, magma and ash can escape. They come in many different shapes and sizes and can be very dangerous if they erupt.

A volcano erupting.

How do volcanoes erupt?

Volcanoes are normally found close to where tectonic plates meet. Tectonic plates are huge slabs of rock that make up the Earth's crust. The gaps where the different plates meet is where magma and gases escape. The high heat and pressure cause the magma to rise to the Earth's surface. The places where magma heats up rises is called 'hot spots.' When there is gaps or weak spot in the Earth's crust magma can break through the surface and erupt. This eruption can be explosive or a single small stream. When magma breaks through to the surface, it is then called lava. Cinders, ash and other gases also escape from this eruption. As lava cools, it builds up, creating the steep slopes of mountains we associate with volcanoes.

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Are volcanoes dangerous?

Volcanoes can be very dangerous if people are close by when they erupt. Many people have been killed in history by volcanoes. A long time ago in Italy (79 A.D) the volcano Mount Vesuvius erupted and destroyed many towns such as Pompeii.

A large part of the danger of a volcanic eruption is the lava that spews from the top of the mountain. However, the volcanic ash and gases can cause severe health problems and harm.

At the same time, volcanoes can have many benefits to the local environment. When volcanoes erupt, many minerals are also ejected. These minerals can help plants and make the soil around volcanoes very fertile.

What are the different types of volcanoes?

Volcanoes can be **active** (could erupt at any time), **dormant** (hasn't erupted for a long time) or **extinct** (very unlikely to erupt again). Some volcanoes are tall like a cone and other volcanoes are wider and flatter like a shield.

Now can you answer these questions?

1. Where are volcanoes normally found?

2. What causes magma to rise to the Earth's surface?

3. When magma breaks through to the surface, what is it called?

4. What escapes when a volcano erupts?

5. What are the benefits of volcanoes to the local environment?

6. What are the different types of volcanoes?