Background Information:

Rocks & Minerals

Rocks are made up of many different minerals. Some rocks, like sandstone or limestone might only contain one type of mineral. Some rocks, like granite, contain many minerals.

Minerals are natural chemicals that are made through processes in the Earth's crust. Some minerals can form as large crystals, but often they are found as smaller grains, like sand.

There are three different types of rock: sedimentary, metamorphic and igneous.

Sedimentary Rocks

Sedimentary rocks are formed on the surface of the Earth, and are made up of much smaller pieces of other rocks. Some sedimentary rocks can be formed from the remains of living things. For example, limestone is a sedimentary rock that is formed in tropical sea-beds and can be made up of tiny fragments of shells from sea-creatures. Similarly, coal is a sedimentary rock that was originally formed in tropical jungles, and made from trees and plants. Other sedimentary rocks like sandstone might form in a desert from the grains of sand, or from tiny fragments of rock in a wide river bed.

In sedimentary rocks, you can often see layers, known as 'beds'. The type of rock in these beds often tells scientists a lot about the Earth's environment in that area at the time it was deposited.

Metamorphic Rocks

Metamorphic rocks are formed deep in the Earth's crust where pressure from the rocks above and heat from the core below can change the minerals and the structure of the rock. Metamorphic rocks like marble and slate are known to have changed from specific sedimentary rocks, like limestone and shale.

Although they are often formed deep in the Earth's crust, metamorphic rocks can be found at the surface after millions of years. This is because of the constant changes in the Earths crust caused by the movement and collision of continents, and other upheavals.

Igneous Rocks

Igneous rocks are formed from liquid molten rock called magma. Deep in the Earth's crust, it can be so hot that rock will melt. Molten rock can travel up through the Earth's crust. Sometimes when the liquid rock reaches the surface, it erupts in the form of a volcano.

Some molten rock never makes it to the surface, and will cool and harden beneath the surface. If you look at the size of the crystals in an igneous rock, it can tell you where in the crust the magma

cooled. Small crystals mean the rock erupted at the surface as lava, and larger crystals mean the rock cooled beneath the surface.

museum links

Find out more about the rocks where coal is found, on site at the Museum in the Coal Interface Gallery and on the underground tour.