

HUMBER ARBORETUM ECO CENTRE



Rocks and Minerals



INTERESTING FACTS

- ✦ The Earth's crust is always changing. Forces on the Earth's surface are constantly breaking it down and building it up. This is called the Rock Cycle.
- ✦ The Earth's crust is made up of large tectonic plates that interact with each other resulting in earthquakes, tsunamis and deep ocean trenches.
- ✦ The Himalayan Mountains in the north of India contain the highest peaks on the earth. Although weathering is wearing down these mountains, they remain the highest peaks because uplift of the crust due to tectonic forces balances the forces of weathering and erosion.
- ✦ Diamond is the hardest substance on Earth. Most diamonds that are found are not jewellery quality but are used in industrial applications. Diamond tipped drills are used to drill deep into the rock of the earth's crust for mining and blasting. Diamond cutters are used to cut glass.

COOL ACTIVITIES

Grow your own salt crystals in the classroom!

You will need a glass jar, a pencil, thread or string and pickling salt (pure salt).

1. Fill the jar half filled with warm water.
2. Add salt by spoonfuls, stirring after each addition until no more salt will dissolve.
3. Tie the string to the pencil so that, when the pencil is set across the top of the jar, the string hangs into the mixture but does not touch the bottom.
4. Set the jar on a counter to allow the water to slowly evaporate.
5. Observe the jar to watch for crystals forming on the string. Use a magnifying glass to examine the crystals. They should form in the shape of small cubes.

For some interesting activities on rocks and minerals try visiting this site.
<http://library.thinkquest.org/J002289/act.html>

REVIEW QUESTIONS

1. What is the difference between a rock and a mineral? (ANS: A mineral is a pure crystalline substance and a rock is a mixture of two or more minerals. In nature, most minerals are found in mixtures in rocks. Minerals can be extracted from rocks and purified for use.)
2. What are the three groups that rocks are divided into based on their formation. (ANS: Igneous Rocks: formed by the cooling of magma from beneath the Earth's crust (Intrusive Igneous Rock) or the cooling of lava from a volcano (Extrusive Igneous Rock). Sedimentary Rock: formed from sediments that accumulate at the bottom of an ocean or sea. They often contain layers or fossils. Metamorphic Rock: Igneous or Sedimentary rock that has been subjected to millions of years of heat and pressure deep inside the Earth.)
3. Name some household items that use rock or mineral products. (ANS: toothpaste and polishes use diatomaceous earth (powdered fossils), coins are made from minerals, pencils contain graphite, to name a few.)