



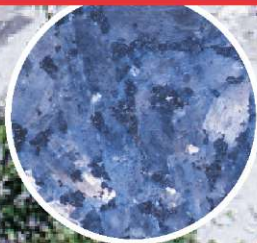
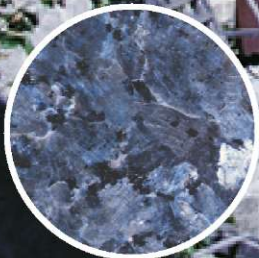
Rocks and Minerals

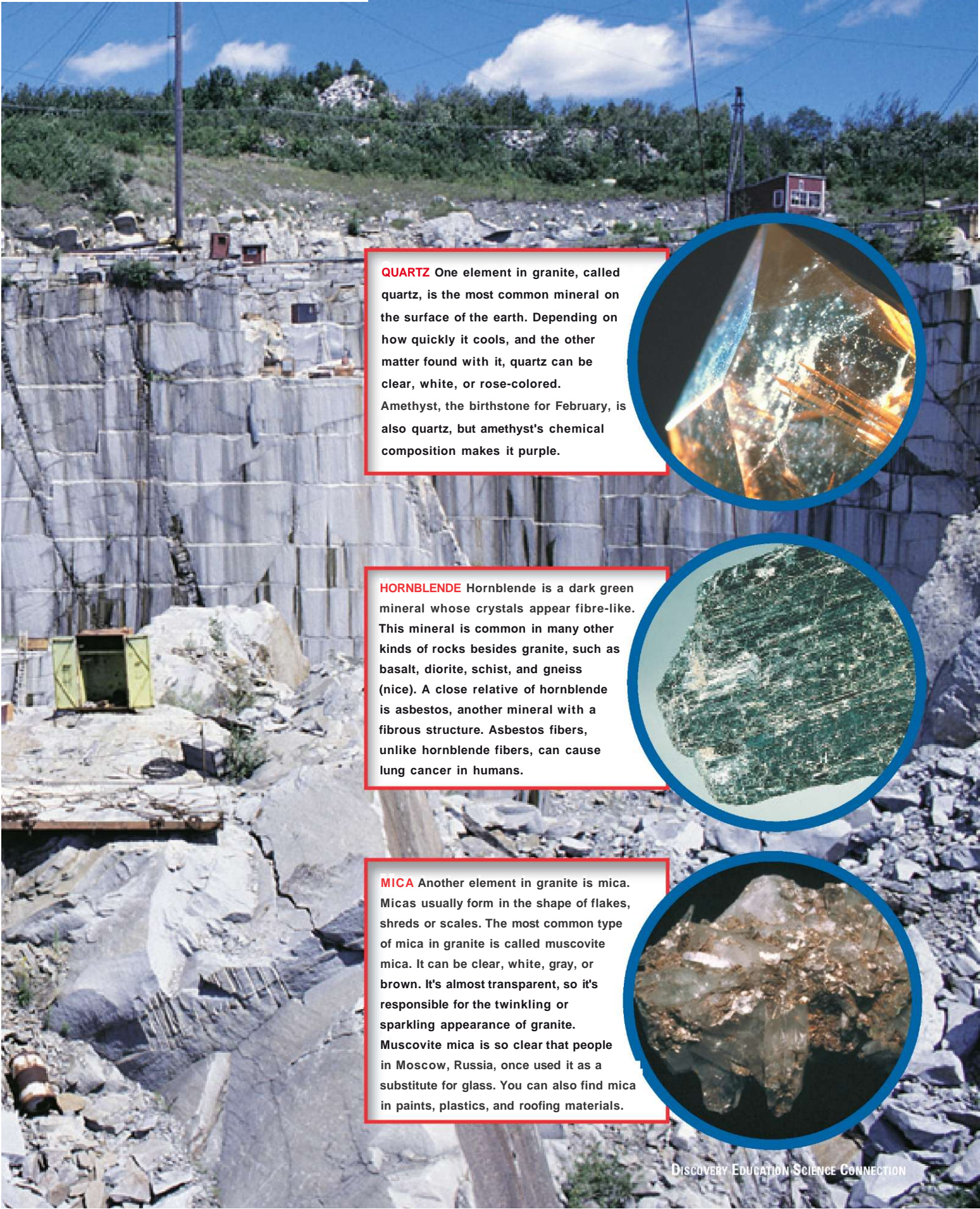
You need minerals. And so do rocks. That's because a rock is a solid mixture of one or more minerals, although rocks can also include organic matter. Minerals are pure chemical compounds found on, in, and below the Earth's crust. There are about 4,000 minerals on Earth.

If minerals make up rocks, then what makes up minerals? Elements, such as carbon, oxygen, sodium, and iron, are the building blocks of minerals. Some minerals—gold, silver, and copper—are made up of only one element. These types of minerals are called native elements. But other minerals are a mixture of different elements.

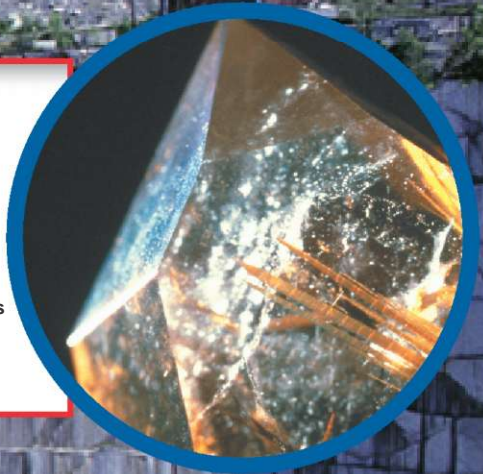
GRANITE is a type of rock that's made up of a mineral mixture of quartz, hornblend, mica and small amounts of other minerals. Granite is an igneous rock that forms when magma cools below the earth's surface. As the crust wears away or is pushed up by geological forces, granite shows up on the earth's surface. Some mountains have huge amounts of granite, like the Green Mountains in Vermont, pictured here.

DIFFERENT MIX Not all granites look alike. Some are darker than others, some look white, some look pink, some look black. In fact, granite comes in lots of different colors. Why does granite vary? Granite rocks differ because some have a greater amount of quartz or mica. In addition, other minerals may have also made their way into the granite rock.

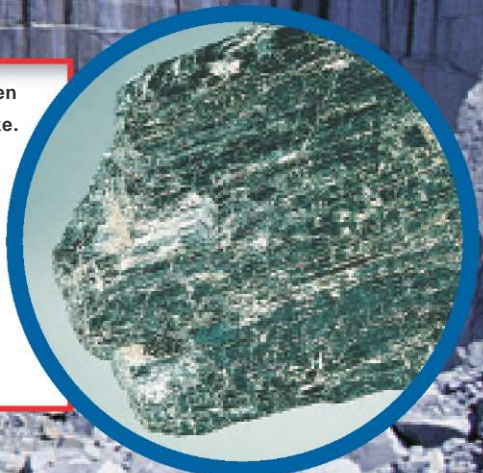




QUARTZ One element in granite, called quartz, is the most common mineral on the surface of the earth. Depending on how quickly it cools, and the other matter found with it, quartz can be clear, white, or rose-colored. Amethyst, the birthstone for February, is also quartz, but amethyst's chemical composition makes it purple.



HORNBLLENDE Hornblende is a dark green mineral whose crystals appear fibre-like. This mineral is common in many other kinds of rocks besides granite, such as basalt, diorite, schist, and gneiss (nice). A close relative of hornblende is asbestos, another mineral with a fibrous structure. Asbestos fibers, unlike hornblende fibers, can cause lung cancer in humans.



MICA Another element in granite is mica. Micas usually form in the shape of flakes, shreds or scales. The most common type of mica in granite is called muscovite mica. It can be clear, white, gray, or brown. It's almost transparent, so it's responsible for the twinkling or sparkling appearance of granite. Muscovite mica is so clear that people in Moscow, Russia, once used it as a substitute for glass. You can also find mica in paints, plastics, and roofing materials.

