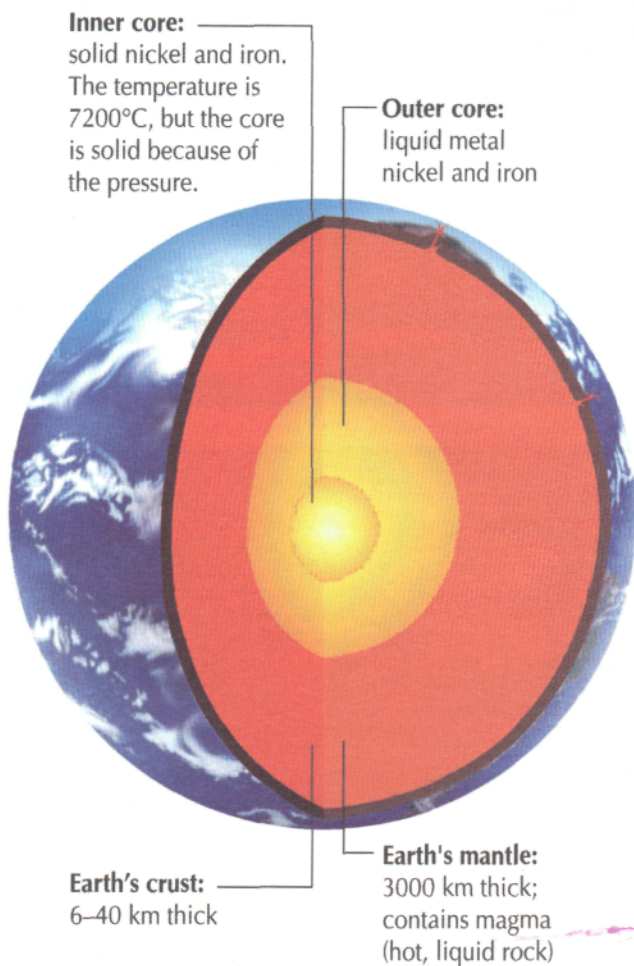


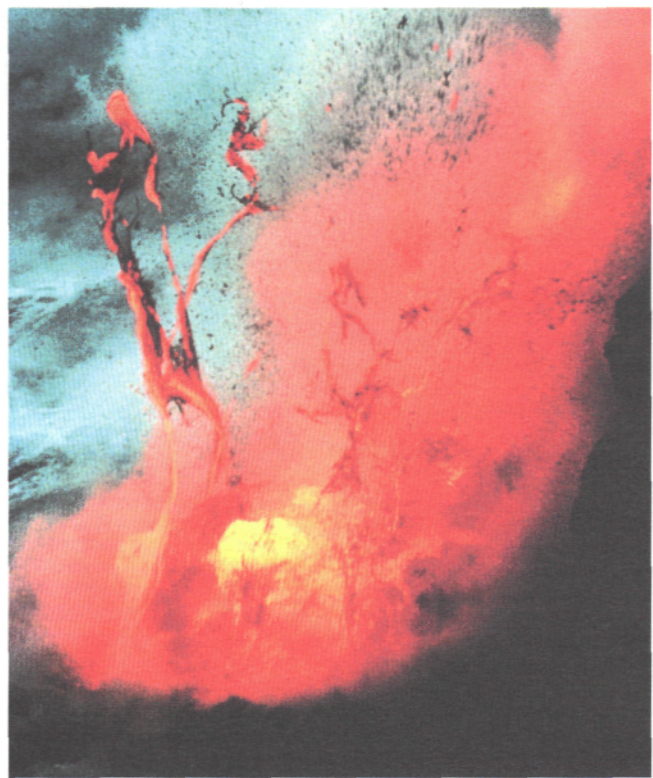
If you could dig a hole to the centre of the Earth, the depth of the hole would be about the same distance as Edmonton, Alberta is from St. John's, Newfoundland—6400 km. To dig the hole you would have to dig through various types of rocks. It would be very difficult, hot work!

The Earth is like a hard-boiled egg with a cracked shell. At the core, which is like the yolk of the egg, the pressure and the temperature are the greatest. The next layer is the mantle (or egg white) which is 3000 km thick. The outer layer is the crust (or shell of the egg) which is 6–40 km thick. The crust contains the land and ocean plates that move slowly over the mantle beneath.

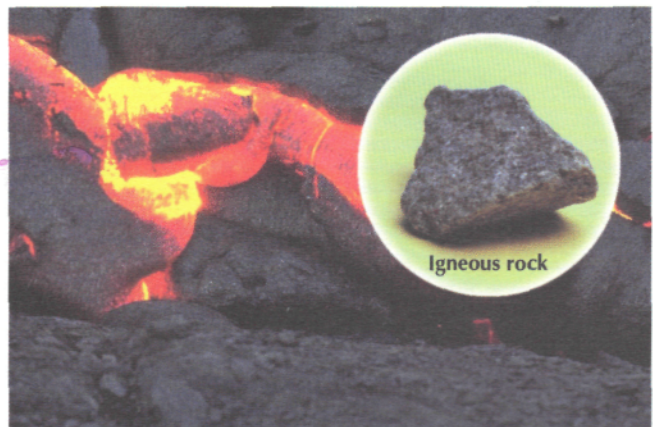


Believe it or not, rocks form in only three different ways. Scientists classify all rocks by how they were formed.

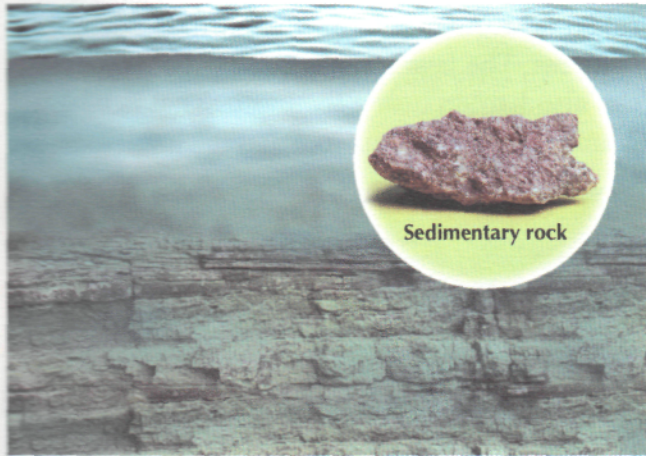
The oldest rocks on Earth are those “made by fire.” **Igneous rock** begins as hot, **molten** minerals inside the Earth. The molten minerals are called **magma**. Some magma squeezes its way up through holes and cracks in the Earth's crust. If magma escapes through the crust, it is called **lava**. A volcano may be formed when this happens. The lava cools and hardens. Magma can also harden inside the Earth. That is where granite forms. Igneous rock is very hard.



A volcano erupting



The second kind of rock is much softer than igneous rock. **Sedimentary rock** forms in water when **sediment** such as clay, mud, sand, pebbles, or tiny skeletons and seashells from water animals pile up on each other over a long, long time to form layers. Sedimentary actually means "settled down." The layers are squeezed and glued together by pressure and chemical changes. Of course, this takes millions of years.

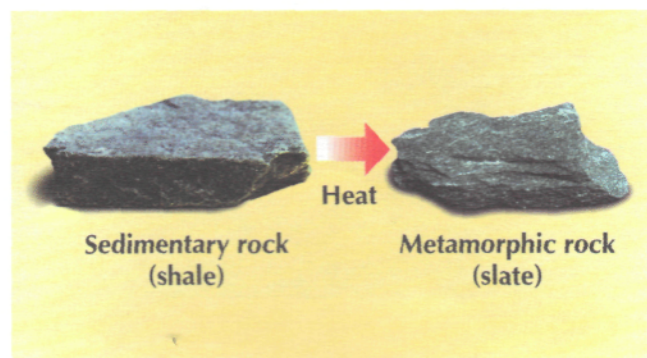
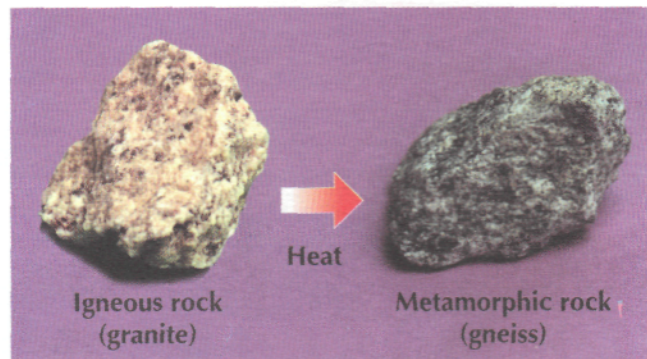
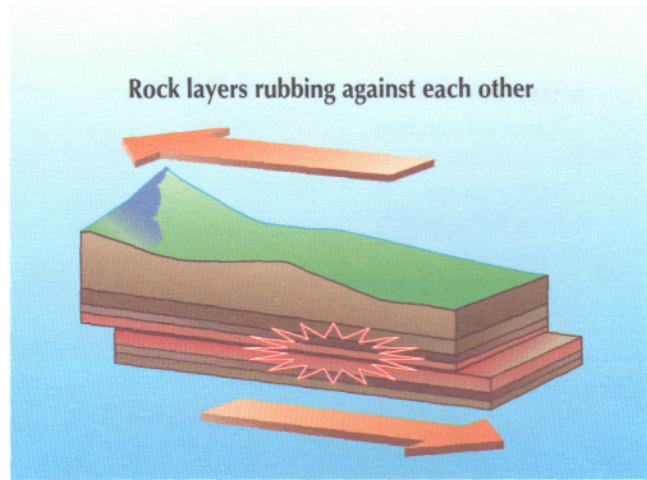


Limestone cut on the highway near Bobcaygeon



Niagara Falls showing the limestone gorge

The third kind of rock is called metamorphic. "Morph" means "to change." **Metamorphic rock** was once igneous or sedimentary rock. But the surface of the Earth actually moves. The movement causes friction and friction causes heat. Rub your hands together very quickly. Do you feel how hot they get? A similar thing happens to the Earth's crust. Huge chunks of rock rub against each other, though not as fast as your hands move! As they heat up, the minerals that make up the rocks can change. Then, after the minerals cool down, there are new rocks. Just remember this metamorphic rock recipe:



video + note m/c