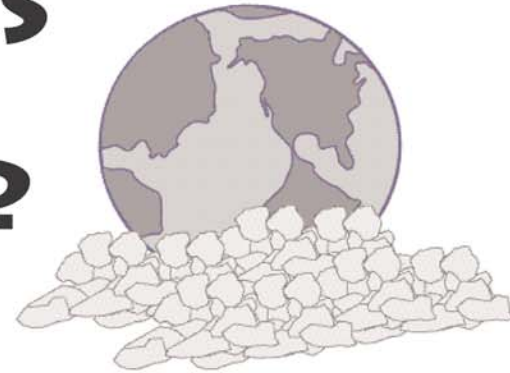


HOW MANY ROCKS DOES IT TAKE TO COVER THE EARTH?



ONLY THREE...IGNEOUS, SEDIMENTARY AND METAMORPHIC. BUT IT ISN'T AN EASY JOB!



1. IGNEOUS means "fire." Igneous rock was once hot liquid inside the Earth. Rock that erupted from volcanoes and cooled on the surface is called **EXTRUSIVE** igneous rock. **IGNEOUS** rock that cooled more slowly inside the Earth is called **INTRUSIVE**.

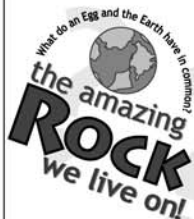
For this project you'll need:

The Volcanic Egg from the previous page.

Think about the egg white that cooked and cooled inside the shell. Is it intrusive or extrusive?

What would you call the egg white that "erupted" and cooled on the outside of the shell?

Peel the egg and look at the egg white that was inside the shell. Is it firmer or softer than the egg white that cooked out?



How do you think intrusive and extrusive rocks may be different?

SEDIMENTARY SEDIMENTARY SEDIMENTARY

2. SEDIMENTARY rock started out as sand, clay or smashed-up seashells. The tiny bits settled and built up into thick layers. Minerals from water seeped into the spaces between the particles and bonded them into solid rock. Limestone is a type of sedimentary rock.

For this project you'll need:

- A mixing bowl
- Coarse sand
- Epson salt
- A spoon or a stick
- A small paper cup
- 1 cup of water

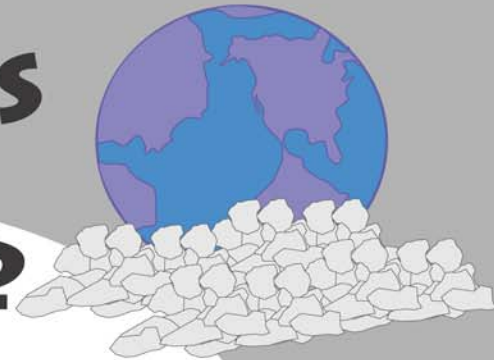
Mix 1 cup of water and 1/2 cup of epon salt in the mixing bowl. Stir until most of the salt dissolves. Place about 1 in. of coarse sand into a small paper cup. Add enough salt solution to just cover the sand. Mix well. Let the mixture stand until dry (about two to three days). Cut off the paper.

Take a close look at the rock.

Where is the salt?

How does the sand hold together?

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METAMORPHIC

3. METAMORPHIC (meaning "to change") rock used to be igneous or sedimentary rock that was changed by heat or pressure or both.

For this project you'll need:

- Modeling clay
- Waxed paper
- Three or four books

Make about two dozen pea-sized balls from modeling clay of various colors. These clay balls represent rock particles. Place the clay balls close together on a piece of waxed paper. Place a second sheet of waxed paper on top of the clay balls.

Now, put a book on top of the waxed paper—then another and another. Imagine that the books are layers of rock building up on top of the rock particles. The pressure on the rock particles increases as you add each layer. Heat builds as the rock particles are pushed deeper into the Earth's crust.

Now remove the books and peel away the waxed paper. Look at the clay. An entirely new kind of rock has been formed. The same thing happens to igneous and sedimentary rocks when they are changed.