

DO ROCKS FLOAT? LETS EXPERIMENT...

WHAT IS A ROCK?

Have you seen a rock? Try to explain what a rock is made of.

We all know what a rock is when we see one and most of us have thrown them across water to see if we can skip them before they sink. Rocks are everywhere. They are part of nature and they help form our planet Earth. A rock (or stone) is a natural substance, a solid piece of nature that is made of one or more minerals. Mountains have rock in them. Some of the greatest historical findings have been made through studying fossils found in rocks. The Earth's crust is made of rock.

The rocks that form Earth's crust are continually destroyed and reshaped in a process called the rock cycle. Rock is formed by melting, cooling and turning solid. Rocks, or stones, change through heat and pressure and by weather and erosion. There are three main types of rock—sedimentary, igneous, and metamorphic rock.

Each type of rock is made in different ways and have different texture or grain size and different chemical or

DO ALL ROCKS FLOAT?

What do you think?

Rocks are usually hard, solid and heavy. This means they should sink... Right? If you gather a collection of rocks you can perform an experiment and test the question "do all rocks float?"

Any rocks with a density less than the water in which it is placed will float. There is one popular rock that you might see washed up on the beach side that does in fact float. Pumice! It is a volcanic rock that will float on water.

WHY DOES PUMICE ROCK FLOAT?

Pumice is an igneous rock that has been made from hardened foam of lava when it comes out of a volcano. The inside of a volcano has very high pressure, and can be extremely hot. When lava comes out of the volcano, it meets the cold air and sometimes it meets the cold sea water.

Air and water that are mixed in the lava rising out form a foam as the pressure changes and temperature falls. The huge difference in temperature gives the lava a cold shock and freezes it. So the air bubbles get trapped in the centre of the forming stone. These trapped bubbles are the reason why Pumice rocks float. In some kinds of pumice rocks the air bubbles can make up to 90% of the rocks volume. That rock is nearly all air!

FOLLOW THIS UP:

What shape rocks can you find? What texture do they have? Can you see what they are made of? Can you break or crumble them against each other? What happens after they have been soaked in water? Do you know any specific types of rocks and what they are called?

Try this: Find an unusual rock and make a pet rock, or paint a rock for your garden. Try stacking rocks.