

Rock Labs for Arbor School Juniors (grade 2-3)

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Igneous Rocks: "Pumice"

makes about 10 two-inch rocks

Heat to 300°F for at least 10 minutes:

½ c. water

¼ c. light corn syrup

1 ½ c. sugar

Remove from heat and add 1 Tbsp. baking soda. You should see gas bubbles forming, simulating lava.

Carefully pour or scoop the hot "pumice" mixture onto wax paper to form small "rocks" and let cool. Test later to see if the "pumice rocks" float and compare them to real pumice. Unlike real pumice, they are edible!

Sedimentary Rocks: "Sandstone"

demonstrate first!

Set up a tray for each student as a work area. Each student receives ¼ c. dry sand and a small container of cementing mixture of 2 parts water mixed with 1 part Elmer's glue. Students add 1 Tbsp. of cementing mixture at a time to their dry sand, compacting the resulting mixture until the sand is completely saturated. Shape the resulting "sandstone" like a rock and set it on wax paper to dry (this will take up to 1 week). Compare the "sandstone" to real sandstone rock, both with the naked eye and with a microscope.

Metamorphic Rocks: Dots Rock

Give each student 5-6 Dots candies of different colors on a piece of wax paper. Each Dot color represents a different type of rock. Students can sketch their "rocks" on the wax paper, then start applying heat and pressure to the Dots by hand. They will need to work for at least 15 minutes to create metamorphic Dots rock, and the heat must come only from friction — no electrical appliances. They should observe and sketch their new metamorphic "rock;" the Dots will flatten and fold and the colors may completely change. Dots rock is also edible if the heat and pressure were applied with clean hands!

Magma Chamber

Set up deep trays with sand. Each student attaches a red or orange (simulating the color of magma) balloon to a bendy straw with tape. They bury the balloons in the sand with the straws sticking out and pack down the sand. Blowing through the straw will create a bulging “magma chamber” — students should observe how the surface of the “land” starts to deform. As the magma chamber deflates, they can observe the crater left behind.