

MAKE YOUR OWN ROCK CYCLE

Materials needed:

- graham crackers
- peanut butter
- jelly or jam
- sugar
- cookie sprinkles
- measuring cup
- two paper plates
- butter knife for spreading
- spoon
- two mixing bowls
- water
- blender (optional with parent permission)
- table
- plastic tablecloth

(sometimes science can be a bit messy so be sure that when doing experiments, you are using a space that is okay to be a bit messy in and taking precautions, like putting down a table cloth)

Now that we have all our materials let us make our rock cycle.

Step 1: Put one graham cracker on a paper plate. I use a whole cracker, but you can use half if you would like. The graham cracker represents the bedrock, rock that was already there. What we are going to make first is a sedimentary rock, the one with layers.

Step 2: Here comes a mudslide! Spread a layer of peanut butter on the graham cracker.

Step 3: A sandstorm! Sprinkle some sugar on the peanut butter.

Step 4: A volcanic eruption in another part of the world drops ash. Add some sprinkles.

Step 5: A earthquake drops a big slab of rock! Add another graham cracker.

Step 6: Another mudslide, more peanut butter.

Step 7: The rain that caused the mudslide, caused a flood. Spread on some jelly.

Step 8: Another sandstorm! More sugar.

Step 9: More volcanic ash. Add some sprinkles.

Step 10: Another big slab of rock from another earthquake. Add another graham cracker. We now have a sedimentary rock with 10 layers. But rocks can change from one kind to another in the rock cycle. Let us suppose there is an earthquake that opens a deep hole and our rock tumbles into it.

Step 11: It is time to make a metamorphic rock, remember, we need heat and pressure. Keep your sedimentary rock on the paper plate and put another paper plate on top of it. Press down on the paper plate or gently hit it with your hand. You want to break up the graham crackers and change your layers. Your hand represents the heat and pressure forces deep in the earth.

Step 12: Lift off the top paper plate. Look at your rock. Does it look the same? Even though you may be able to recognize parts of your rock the heat and pressure deep in the earth have changed the rock's appearance.

Step 13: Another earthquake, and our rock goes deeper into the earth where there is molten rock. Place your metamorphic rock into the mixing bowl. Add some water, about two cups. The water represents the magma, or liquid rock, deep in the earth. Stir everything up. (Here you could use a blender instead of the mixing bowl and spoon, with parent permission and help.) You now have a molten rock. Pour a little of your rock into the other bowl, this is like a volcanic eruption bringing lava to the earth's surface. Even though everything you started with is still there, your rock looks completely different. If you would like, let your rock dry up and see what it looks like!

Step 14: Clean up! You always want to be sure that when you make a fun science mess you also clean up the fun science mess.