

# Edible Rocks

Rocks can be broken into three main categories based on how they were formed. Those divisions are:

1. **Sedimentary rock**– This type of rock is made from various layers of crushed minerals and the decayed remains of plants or animals. The layers can easily be seen and sedimentary rock tends to be very weak.
2. **Metamorphic rock** – This type of rock that has been changed by heat or pressure. Metamorphic rock is very strong and the layers in it can be difficult to distinguish.
3. **Igneous rock**– This type of rock is formed by fire. It begins as molten rock, or magma, from the Earth's core and cools to form igneous rock. The shape and form are determined by how quickly it cools.

Crystals don't fall into what we normally consider to be rocks, but they are composed of the same minerals. The difference is that these minerals were in high enough concentration and they had enough space to form the shape they were meant to be. This could have happened as the molten rock cooled or through deposits that form as water moves through the rock.

## HOW TO MAKE EDIBLE ROCKS

So, now that you know how to explain the different types of rocks to your students, let's do a simple activity to help them see the difference between a sedimentary and a metamorphic rock.

You will need the following:

- Glass cup
- Chocolate chips
- Peanut butter chips
- White chocolate chips
- Spoon
- Plastic wrap

Begin by adding  $\frac{1}{4}$  cup of chocolate chips, followed by  $\frac{1}{4}$  cup of peanut butter chips, and finally by  $\frac{1}{4}$  cup of white chips. Repeat the layers once more and observe what you see.

Next, use the back of the spoon to press down and crush the layers as much as you can. Observe how the layers have changed. (*You should see that the layers are relatively compact, but that it is still easy to define the different types of chips. This is meant to be a representation of sedimentary rock.*)

Then, cover the cup with plastic wrap and heat it in the microwave at 30-second intervals until all the layers have melted together. (*CAUTION: At this point, the cup and the material will be extremely hot. Do NOT remove them until the cup has completely cooled.*)

After the cup cools, take it out of the microwave and gently smooch the chocolate with the back of the spoon once more. Observe how the layers have changed at this point. (*You should see that the layers are even more compact and it is difficult to discern the different types of chips as they have swirled together. This is meant to be a representation of metamorphic rock.*)

When your chocolate rock cools completely, you can pop it out of the glass and have yourself a metamorphic treat! If you can't wait that long, put it in the freezer for a few minutes to quickly cool and it should slide right out into your hands.