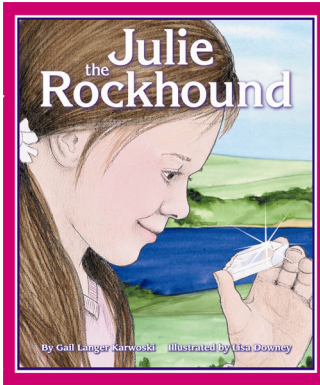




# Sylvan Dell Publishing

*Science and Math through Literature*



## Food Rocks!

The recipes below may serve as models to understand how rocks are formed.

**Sedimentary Rocks:** Take one slice of white bread and one slice of wheat/rye bread and remove the crusts. Spread a layer of margarine on the top side of one slice of bread. Make a sandwich by adding a slice of yellow cheese and a slice of ham or turkey as the filling. Pretend that each of these layers is made of particles like some of the sediments we talked about earlier. Can you see the layers you might see in a

sedimentary rock? Some are very thin (like the margarine), some are medium (like the meat & cheese), and some are thicker (like the bread).

Given the right circumstances, any kind of rock can be changed to another. Now we can model changing a sedimentary rock to a metamorphic one by adding heat and pressure (remember the word **METAMORPHIC** means **CHANGED!**).

**Metamorphic Rocks:** Get an adult to help you with the waffle iron or the stove! Put your "sedimentary sandwich" onto a hot waffle iron or flat frying pan. Close the sides of the waffle/sandwich iron or press down with a spatula to apply both heat and pressure. After a minute or two, take out your grilled cheese sandwich. How have the layers changed? Like a metamorphic rock, it was changed by heat and pressure into a (delicious) new form.

**Igneous Rocks:** With an adult's help, melt chocolate chips over a double boiler. Place a cookie pan on a table, but lean one end of the pan on a stack of napkins to create a tilt. Pretend the heated chocolate is lava and pour some onto the sheet pan. Watch it flow down the surface, just as though it had poured out of the top of the volcano. Can you see how it cools and hardens quickly? This is how some igneous rocks form. Now turn off the burner and allow the rest of the chocolate "magma" in the pot to cool. Because it is such a thick layer, it will harden and cool more slowly. This is how some igneous rocks (like the granite in countertops) form.

For more fun activities, visit [www.SylvanDellPublishing.com](http://www.SylvanDellPublishing.com)!

