# Chocolate Rock Cycle

**Activity Source:**

The Geological Society of London. Adapted with permission.

How sweet is this activity? It's an introduction to the rock cycle using chocolate!

Chocolate can be ground into small particles (weathered), heated, cooled, and compressed — just like rocks. Unlike rocks, chocolate can undergo these processes safely and at reasonable temperatures.

Use your chocolate to create "sedimentary," "metamorphic," and "igneous" chocolate. And at the end of it all, make a tasty treat!

## Materials

- Blocks of dark and white chocolate
- Aluminum foil and/or aluminum foil cupcake holders
- Hot water and a container to hold it
- A plastic knife or another simple scraping device

## Procedure

First, make "sedimentary" chocolate:

1. Scrape some small shavings from your chocolate blocks.

2. Gather these scrapings onto a piece of aluminum foil and press down on them. You might fold the aluminum foil and then press on the chocolate shavings. You could even stand on enclosed foil packages.

3. Observe the joined-together bunch of chocolate scrapings in the foil, which is now similar to sedimentary rock.

Second, make "metamorphic" chocolate:

1. Place a small pile of your sedimentary chocolate, maybe some of your original unused shavings, and a couple of small chunks from your original blocks into aluminum foil or a cupcake holder.

2. Float this concoction on medium hot water.

3. Watch as the heat from the water transfers to the foil and chocolate, which should start to melt.

4. Remove the foil when the chocolate is soft to the touch (for safety, use the plastic knife, not fingers).

5. Let the chocolate cool. The partially melted and cooled chocolate is now similar to metamorphic rock.

Third, make "igneous" chocolate:

1. Place a small pile of sedimentary and metamorphic chocolate and some chunks from the original blocks into your aluminum foil or cupcake holder.

2. Float this concoction on very hot water.

3. Watch as the heat transfers from the water to the foil and melting chocolate. Allow the chocolate to melt until a smooth liquid forms.

4. Carefully remove the molten chocolate and let it cool, still contained in aluminum. Your melted and cooled chocolate is now similar to igneous rock

Discuss: The “chocolate cycle” is designed to mirror the rock cycle. The rock cycle is a continuing process that has occurred throughout geological time. One type of rock can become another type over time. Very little rock on the surface of the earth has remained fixed in its original rock type. Most rocks have undergone several changes of the rock cycle!