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Earth/Space Science
Grade: 3
“ A Sweet Rock Cycle”
Modified from the GLC lesson plan by Debbie Bassett
Objective: Students will learn that rocks are composed of minerals and that pressure and heat form minerals into rocks. They will also learn that there are three different types of rocks; igneous, sedimentary, and metamorphic.
QCC: 1, 4, 21

Materials:
Book: Let’s Go Rock Collecting by Roma Gans

For each group of students:
- 4 zippered sandwich bags
  - 1 containing 15 chocolate chips
  - 1 containing 15 peanut butter chips
  - 1 containing 15 white chocolate chips
- 2 strips of waxed paper
- plastic knife
- 2 styrofoam cups
- hot and cold water
- ice cubes
- Paper towels

Step 1 (10 mins):
Read aloud Roma Gans’ book, Let’s Go Rock Collecting
Emphasize the three different types of rocks, Metamorphic, Sedimentary, and Igneous.
Explain that rocks are made up of different minerals.

Step 2 (10 mins):
Each student in a group receives a bag of candy morsels. These represent minerals.
Using the heat and pressure of their hands, the students will melt the candy into one “metamorphic rock”

Step 3 (5 mins):
One at a time, each student will remove their rock (by turning the bag inside out carefully) and place it on the waxed paper and cover it with the second sheet. By using pressure, they will flatten their rock, uncover it, and pass it to the next student. That student will place their rock on the others and flatten it in the same manner. The last student will finish the three layers, forming a “sedimentary rock”.

Step 4 (5 mins):
The students will be instructed to cut their rock into small pieces. These will be placed inside a clean zippered bag and sealed. “Weathering” has just occurred.

Step 5 (5 mins):
Each group will place their bag into a cup of hot water. Let stand for a few minutes. The heat of the water is melting their rock like magma melts rock.

Step 6 (5 mins):
Once their rock is melted, remove the bag from the hot water and place it in the ice water. Let it sit for a few minutes. Once it has hardened, they can remove their “igneous rock” from the water.