

**FOCUS:**

Understand water seeping through porous rock and cracks carries dissolved minerals. As the water drips from the ceiling of a cave, some of it evaporates and leaves behind a mineral deposit in the form of a stalactite. Water that drips onto the floor of a cave also evaporates, and this mineral deposit forms a stalagmite. Stalagmites and stalactites grow very slowly; this activity allows students to witness model formations over the course of just a few days.

MATERIALS:

- Epsom salt
- Hot tap water
- A large container for mixing
- A spoon
- 2 small glass containers such as beakers or baby food jars
- A piece of heavy cotton cord or string, 6 – 8 inches long
- Aluminum foil

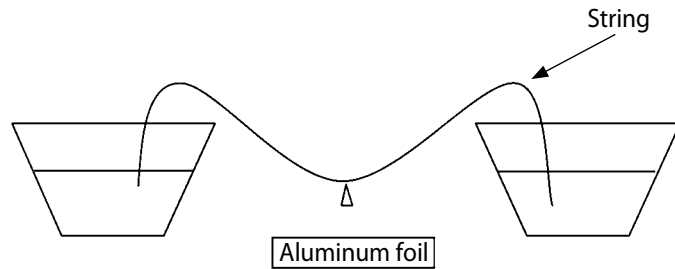
CHALLENGE:

Can you create stalactite and stalagmite formations in a much shorter time?

TIME: 3 to 5 days

Drip Sculpture

Grades 3 – 5

**PROCEDURE:**

- 1) Into a large container, pour an amount of hot water equal to the volume of the two small glass containers.
- 2) While continuously stirring, add Epsom salt to the water until no more salt will dissolve. Do not be surprised by how much it will take.
- 3) Fill each of the smaller containers with the concentrated Epsom salt solution to within an inch of the brim.
- 4) Place the two small containers in an area where they will not be disturbed and position them about 3 – 4 inches apart. Insert the ends of the string into the containers and let the string sag in the middle. (You may need to weigh down the ends of the string with paperclips.) Place the aluminum foil under the dripping spot of the string.
- 5) Let the containers stand undisturbed for several days. As the salt solution evaporates, the Epsom salt will begin to deposit on the string in much the same way a stalactite forms.
- 6) Explain to your students that natural cave formations take much longer because the amount of dissolved mineral material (calcium carbonate) in the dripping water is very small and evaporation is usually very slow.

Adapted from *Water, Stones, & Fossil Bones*, P. 65 by Karen K. Lind
Activity created by Edward P. Ortleb

