

Title: Environment And Conservation: Acid Rain

Level: Intermediate

Time: 1 day set up -- observations 1 week

KERA Goals: 2.1, 2.2

Objective: Determine the effect of an acid on different types of rocks.

Materials:

1. Chalk (two pieces)
2. Limestone (two pieces)
3. Students bring in various other rocks (two of each type) such as brick, cinder block, concrete, stucco
4. Cups (one for each rock)
5. Vinegar
6. Water
7. Labels
8. Marker

Activity:

1. Fill each of two cups $\frac{3}{4}$ full of liquid—one with vinegar, and one with water.
2. Select two like rocks and place one in the vinegar and one in the water.
3. Label the cups (type of liquid and rock).
4. Follow this procedure with each type of rock.

Observations:

Observe the rocks immediately. Use one of the attached observation sheets to record any sketches/comments that you wish to make.

Observe the rocks again after 24 hours. Draw and/or describe any changes in the rocks or in the liquids.

Observe the rocks once more after seven days. Once again, describe any changes that you notice. Record your observations on a data sheet.

Conclusions:

1. What have you learned about the effects of acid and of water on different types of rock?
2. How do your observations relate to the concept of acid rain?
3. If statues are made of marble, which reacts with acid like limestone and chalk, then what is happening to the world's art due to acid rain?

Bonus: Test different types of building materials. Try pieces of brick, cinder block, concrete, and stucco.

What are the effects of acid and water on each?

**Environment and Conservation: Acid Rain
Observation Sheet**

Immediate Observations:

**Environment and Conservation: Acid Rain
Observation Sheet**

Observations After 24 Hours:

Environment and Conservation - Primary

Environment and Conservation: Acid Rain
Observation Sheet

Observations After 7 Days:

Environment and Conservation - Primary

Provided by Pittsburgh Energy Technology Center