Acid Rain – Student Activity

Weathering is a destructive process.
When plants and animals use food to create energy, the gas carbon dioxide is produced. When we breathe out the exhaled air is rich in carbon dioxide produced by our cells. This can dissolve in water and form a mild acid. Since the Industrial Revolution however, people have burned fossil fuels that release much more carbon dioxide and sulphur dioxide and this dissolves in moisture in the atmosphere to produce ***acid rain***.

Student Activity

Materials per student or group

- A dropper.
- A nail or metal scraper
- A lump of limestone or chalk
- A Petri dish or saucer
- Acetic acid (vinegar)

Method

1. Place the rock onto the Petri dish or saucer. I used sand to hold it in place.
2. Scrape a depression to hold some acid into the top of the rock.
3. Squeeze the end of the dropper and place the tip into the acid.
4. When the squeeze is relaxed the dropper should partly fill with acid.
5. Drop a little acid (5 drops) into the depression and observe what happens.
6. Repeat until dropper is empty.

Observations (What did you see, hear, smell?)
What happened when acid was dropped into the depression in the limestone/chalk?

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Discussion
Draw what would happen if mild acid rain fell on a limestone or chalk mountain over a long period. What changes would happen to the surface of the Earth?