Acid Weathering - Student Activity

Measured dissolution of limestone - Fair test

Materials per student or group

- A small lump of limestone, chalk or soft carbonate rock
- A nail to scrape a depression or hollow into the rock
- Triple beam balance
- One half of a plastic Petri dish
- Sand, soil or plasticine to support the rock so that the hollow will hold acid (see picture above)
- A small beaker of weak acid.
- A Pasteur or transfer pipette.
- A camera (optional)

1. With the nail, scrape a small depression into one side of the limestone rock
2. Using sand or plasticine, set the rock upright onto the Petri dish so that the depression will hold liquid
3. Take a picture of the rock
4. Compress the bulb of the pipette and suck in exactly 5mL of acid
5. Little by little drip acid into the depression on the rock. Be careful not to overfill and spill
6. Observe what happens
7. Continue refilling until either all the acid has been used up or 35 minutes have passed.
8. Review your activity to see if this used good scientific practice.

When you added the acid to the limestone, what did you observe? _____

_____

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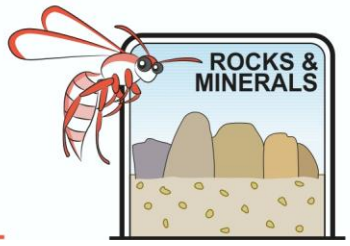

At the end of the experiment, had the limestone changed? _____

Was this a chemical change or physical change? _____

Write a word equation for this chemical reaction

_____

Why had this change occurred?

_____

Did you CONTROL the experiment? _____

What things did you keep the same? _____

What things were not kept the same? _____

What could you have done to improve control? _____

_____

Explain your answers. Was your data:

Observable? _____

Measurable? _____

Repeatable?_____

Reportable?_____

Was this a "fair test"?

_____