

Name _____



Weathering & Wind

Background Information: The force of the wind can change the surface of the earth in a small way by removing materials and wearing down rock surfaces. Rocks that are made of soft minerals are broken down when they are hit by wind-blown pieces of sand or smaller particles of rock. This kind of weathering is not very strong. Wind takes a lot of energy to move sand and rock. Each impact can break off small pieces of the larger rock, leaving them in place. Fragments of rock left on the larger rock stay in place and wait for stronger forces, such as water, to carry them away (erosion).

Purpose: To simulate the effects of weathering by wind.

Question: How does the size of rock carried by the wind affect the weathering of a larger rock?

Hypothesis: If _____,
then _____.

Materials:

2 film canisters	2 sugar cubes	1 sheet of fine grained sand paper
1 sheet of coarse grained sandpaper	Hand lens	1 piece of screen

Procedure:

1. Line one of the film canisters with a strip of coarse sandpaper. Label the canister "coarse."
2. Line the other canister with a strip of fine sandpaper. Label the canister "fine."
3. Put a sugar in each canister. Gently swirl the canisters for one minute.
4. After one minute, open the canisters and compare the sugar compare the sugar cubes. Record your observations in your data table.
5. Repeat step 4 for a total of 5 trials.

Data:

Make a table to record your data for:

1. The effect of the coarse sandpaper on the sugar cube
2. The effect of the fine sandpaper on the sugar cube

Data Analysis: Describe the relationship between the size of the sandpaper and the weathering of the sugar cube.

Questions:

1. Which sand paper was most effective in breaking down the sugar cube fastest? Why?

2. Where might you see a similar type of weathering in nature?

3. Explain why this was an EXPERIMENTAL investigation.

4. List the independent, dependent, and controlled variables in this investigation.

Conclusion: Write a short paragraph answering the original questions. Use actual data to explain why your hypothesis was supported or not supported.
