

Grade Level: 4

Topic: Earth Science

Title: *What Affects How Rain Erodes Soil?*

Objectives/Goals

Students make a model that shows factors that affect how erosion shapes land.

Standards

4.1.1

[View Resource\(s\)](#)

Observe and describe that scientific investigations generally work the same way in different places.

Scientific Inquiry

4.1.2

[View Resource\(s\)](#)

Recognize and describe that results of scientific investigations are seldom exactly the same. If differences occur, such as large variation in the measurement of plant growth, propose reasons for why these differences exist, using recorded information about investigations.

4.3.5

[View Resource\(s\)](#)

Describe how waves, wind, water, and glacial ice shape and reshape Earth's land surface by the erosion of rock and soil in some areas and depositing them in other areas.

Materials

- Gloves
- Masking tape
- 3 containers and soil
- Small paper cup
- 3 books
- Small paper clip and foam cup
- Water and graduated cylinder
- Metric ruler

Adapted from *Scott Foresman Science* 4th grade, Chapter 10 :page 308

Activities

1. Distribute all materials.
2. Teacher direction: objective of lesson
3. Notebook entries
 - a. Name, date, and time
 - b. Give students question “How can you make a model of an earthworm habitat?”
 - c. Students predict in notebook “How does the way water falls on soil change the amount of soil moved?”
4. Students predict in their notebooks what will happen to soil with water falling on it at different rates.
5. Students create a chart in their notebooks for the design and test outcomes.
6. Complete activity based on student written procedures.
7. Students will write a conclusion in their notebook based on the question being investigated.

Extension

Predict results for only one of the following three: mud, sand, or rocks. Design and write procedures in notebook for the new activity. Create chart to record observations. Write conclusion in notebooks based on results.

Assessment

Scoring rubric (see attachment)