

12. Explain to the students that they will need to devise a step-by-step procedure for their investigation and complete Part V Procedure. The procedure should include a method for collecting data in Part VI. Allow students time to complete the investigation.
13. Have the students write a conclusion for their investigation in Part VII. Remind students that the teacher must initial all sections of the activity sheet before they begin each new section.



Select Inquiry #9 “Erosion” and have groups compare their data with the data on the “Erosion Investigation” sequence.

Explain

1. Discuss the activity:
 - Have each group describe its investigation, share its data, and discuss how the variable that was changed affected the amount of sediment that was produced.
 - If more than one group investigated the same variable, discuss how their results were similar or different. If the results are radically different, discuss external variables (such as student error) that may have affected the outcome of the investigation.
 - Students should observe that as the slope of the land increases, the amount of sediment that is produced also increases.
 - Students should observe that as the amount of rainfall increases, the amount of sediment that is produced also increases.
 - Students should observe that grass-covered soil produces the least sediment, while bare soil and sand-covered soil produce the most sediment.
2. Have students make connections between the results of the investigations and what happens in the real world when the slope of the land, the force of rainfall, or the composition of the ground surface are changed.
 - Flowing water erodes more sediment from steep land surfaces than from flat surfaces. Over long periods of time, wind and rain will gradually wear down mountains. Sharper, taller mountain ranges, like the Rocky Mountains, are younger than the smaller, rounder Appalachian Mountains, which have eroded over a longer period of time.
 - Heavy rainfall erodes more sediment than moderate or light rainfall. Ask students to recall, describe, and compare what they have observed in their own neighborhoods during different types of rainfall (from thunderstorms to gentle, spring rains).
 - Soil that is covered with rooted plants erodes less than bare soil because the plants slow down the flowing water and hold the soil in place. Flowing water erodes considerable sediment from construction areas, strip mines, and other areas where the soil has been laid bare.