



# Teacher Toolkit

Activity: Healthy Water, Healthy People

Adapted from: Foundation for Ohio River Education River REACH Curriculum

Grade Level(s) 4<sup>th</sup>-5<sup>th</sup> grade

## Activity Description

Explore how vegetation helps minimize the effects of storm water runoff and soil erosion in this interactive lesson.



## Ohio Standards Met

- Science, Grade 4: Earth's surface
- Science, Grade 4: Earth's living history
- Science, Grade 4: Matter
- Science, Grade 5: Matter
- Science, Grade 5: Interactions within ecosystems

## Instructions

- Prior to the activity, delineate a hillside or an outdoor area that will simulate a bare hillside—approximately 15 meters wide. Use a rope to signify the edge of a river that runs along the bottom of the hill.
- Randomly scatter the tokens across the area.
- Divide students into four groups, explaining that they will be simulating soil erosion, or sediment, that leads to high turbidity in the river below.
- Assign three of the four groups of students to be water. The fourth group will serve as data recorders for the first part of the activity, and plants in the second part.
- Have the “water” students stand side by side, facing downhill, at the top of the slope or playing area.

Thanks to Greater Cincinnati Environmental Educators (GCEE) for collecting activities for the Teacher Toolkit



## Instructions (continued)

- Announce the arrival of a rainstorm, which prompts the water students to proceed downhill. As they walk, they should collect tokens, which represent sediment that is carried by the water as it moves down the hill. Remind students that water droplets do not wander from side to side, but pick up only the soil particles that lie in their path.
- Students continue down the slope until they congregate in the river at the bottom of the hill. Here they count the number of tokens (sediment) that reached the river. The fourth group of students now records the number of tokens that each water student carried down the slope and deposited in the river.
- (Option: Have students create graphs of the amount of sediment tokens present in the river after each round.)
- Wrap Up: After the students have completed the activity, discuss the results with them. Were there more soil particles in the river with or without vegetation? In which round would the turbidity of the stream be higher—with or without vegetation? Why? What are some other ways to decrease the amount of soil erosion that enters a river (sediment fences, tree plantings, etc.)? Why is it important that we try to reduce erosion and sediment in our streams?

## Materials Needed

- Rope
- Tokens (such as rocks, marbles, acorns, small pieces of cardboard, poker chips, etc.)

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