

WHERE DOES ALL THE POLLUTION GO?

SUMMARY

We all live in a watershed. All watersheds are exposed to pollution. In this program students learn of nonpoint pollution sources and possible solutions to these problems. Afterwards, they learn about the extent pollution can have on nearby waters by delineating watersheds.

GRADE LEVEL: 3-12

PROGRAM DURATION: 1 hour

SETTING & ACTIVITY: Classroom; Model, Case Study-Rubric Grading Exercise; Activity Sheet

OBJECTIVES: With the use of a model community, this program provides students with a simulation of everyday pollution along with ways to prevent it. Afterwards, students learn about watersheds and how pollution can spread many miles. Following the program students should be able to:

- Explain what happens to polluted surface waters.
- Provide a solution to control certain pollution.
- Describe what a Best Management Practice is.
- List everyday sources of pollution.

KAS: 3-ESS3-1, 4-ESS2-1, 4-ESS2-2, 5-ESS3-1, MS-ESS3-3, HS-LS2-7

FORGING ASSOCIATIONS: The program content can be used as a transition or extension between associated standards. Some examples include:

- 3-LS4-4: Pollution control and remediation can provide solutions to a wrongfully impacted environment.
- 4-ESS3-2: Erosion can result in dangerous natural disasters that can impact humans.
- 4-LS1-1: Bioremediation is the use of specific plants to remediate and control pollution through use of internal and external structures.
- 5-ESS2-2: The dangers of pollution to fresh-water habitats can be even more emphasized when students learn just how little of the Earth's waters are fresh.
- MS-ESS3-3: Ideas gathered through this program can help students design methods of minimizing human impact.
- HS-LS2-7: Ideas gathered through this program can help students design, evaluate, and refine solutions for reducing human impact.

COLLABORATIVE PROGRAMS: When paired with the *Guided Cave Tour* or *Immersion Off-trail Tour*, students can go underground to see the groundwater which can be impacted by pollution. Both programs *Water Quality* and *Dirty Water* will add another dimension to the everyday occurrences that can affect water quality. *Eco Engineers* will allow students to recognize potential pollution sources on their own industrial sites and contemplate a solution. *Cave Creatures* will show students that besides humans, many other organisms depend on clean groundwater. Displays in the museum also show sources and prevention methods for water quality.

