

A MODEL WATERSHED

SUMMARY

Students will learn to identify sources of point and nonpoint source pollution which end up as stormwater runoff and pose a threat to water quality.

GRADE LEVEL: 7-12

ACTIVITY DURATION: 45 minutes

SETTING: Classroom using an Evironescape Model

SUBJECT AREAS: Matter and Energy in Organisms and Ecosystems, Interdependent relationships in Ecosystems, Human Impact, Earth's Systems, Human Sustainability, Interdependent Relationships in Ecosystems

NGSS: MS-LS2-4, MS-LS2-2, MS-ESS3-3, HS-ESS2-2, HS-ESS3-4, HS-ESS3-6, HS-LS4-6

OBJECTIVES: This program is designed to provide an example, by using a model of a community's watershed, of what population is common, how pollution can enter into our water and how we can help prevent certain pollution. At the end of the program, the student should be able to :

- Give examples of man-made pollution
- Explain solutions to how we can control some pollution
- Provide an argument that humans can change their environments when trying to meet their own needs.

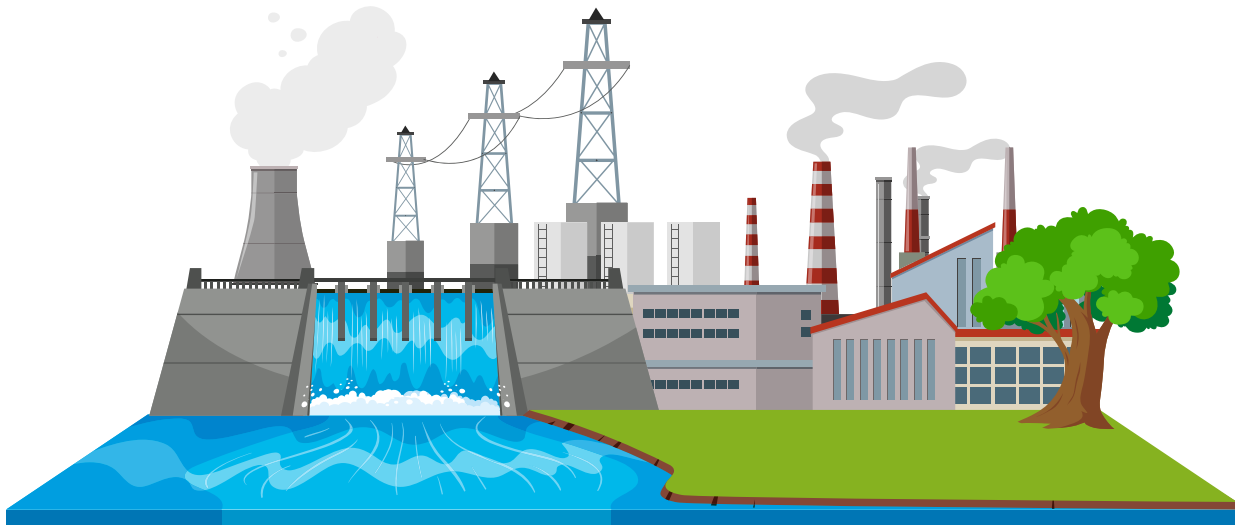
COOPERATIVE APPROACH: This program is designed to work along with *How Wetlands Work* and *Nature's Filter* for a full experience of why we need wetlands, how wetlands work to clean pollution, and how effective wetlands are at performing their job of cleansing. This program works well with the Cave Boat Tour by providing students with a view of the groundwater they learned to protect.

MAKING CONNECTIONS: Students are familiar with some of the chemicals we use, but may not be able to determine that improper use could be harmful to the environment. Students look at the responsible actions of being a citizen and protecting the environment.

EXTENSION:

STEM

The Model Watershed program can be extended into a longer program in which principles of Technology, Engineering, and Math are applied. By following this program with the program *How Wetlands Work* and then by *Nature's Filter*, Students will receive why we need wetlands, how wetlands work to clean pollution, and how effective wetlands are at performing the job of cleansing.



VOCABULARY: Pollution, Groundwater, Point Source, Nonpoint Source