

Guide for Teachers and Caregivers: Watersheds

Key Concepts students should already understand

- [The water cycle](#)
- [Basic map reading skills](#)

Key Concepts learned from this activity

- Watersheds and their importance
- Understanding how New Yorkers get their water
- Individuals rely on large systems (watersheds) that span landscapes and regions
- How an individual can make changes to improve a system (watersheds)

Questions to Test Understanding

Use these questions to test your student's understanding of the topic after the activity is complete.

Q: *Why are watersheds important?*

A: Students answers could include: provides water for drinking, bathing, watering plants, and other uses.

Q: *Where does New York City get its drinking water?*

A: Student answers should include any of the following: Upstate New York; the Croton Watershed; the Catskill/Delaware Watershed; Reservoirs upstate

Q: *What happens when people put pollutants in the watershed?*

A: Student answers should demonstrate that: They flow downstream and contaminate the water.

Vocabulary

Watersheds- All of the precipitation (rain, snow, etc.) that falls on land and drains into a particular body of water. Precipitation flows into water bodies, including rivers, streams, and lakes. Eventually, most water will make its way to the ocean though not always.

Pollutants- Something released into the environment (air, water, or land) that is dirty, unclean, or has a harmful effect.

Reservoirs- A large lake, usually human-made, used to store water often for drinking water supply

Aqueducts- A long human-made channel or tunnel used to transport water

Answer Key

Pre-Experiment Questions

Q: Water isn't just for drinking! Make a list of all the ways you use water every day.

A: Student answers could include: Bathing, showering, cooking, dishes, cleaning, watering plants, etc.

Q: What are some pollutants that might cause water to be unclean in a waterbody?

A: Student answers could include: Dirt/soil, fertilizers, gasoline, pesticides, harmful chemicals, trash, etc.

Q: Why is it important to keep the watershed clean?

A: Student answers should include: Watersheds provide drinking water for humans. Clean watersheds provide clean water.

Post-Experiment Questions

Q: What did you notice about the two colors as you sprayed the paper?

A: Students should be able to say that: The two colors mixed and flowed into the valleys (downstream)

Q: Do you think it would be easy to separate these two colors (the “pollution” and the “clean water”)? What do you think this shows about pollution and clean water in real life watersheds?

A: Students should be able to answer that:

1. It would not be easy to separate the two colors.
2. Once pollutants get into the water, it is tough to remove them.

Q: What are some ways you think NYC residents can improve their watersheds?

A: Student answers could include: Throw trash into trash bins; clean up spilled gasoline; trash cleanups along rivers or in the forest; teach other people about watersheds; don't fertilize lawns; don't spray pesticides; clean up all chemical spills; etc.

Additional Resources

[What are Watersheds? \(short animated video for younger students\)](#)

[PBS Kids Video on Watersheds \(Grades 6-12\)](#)

[Resources for Students and Educators about Nonpoint Source Pollution](#)

[NYC DEP Resources For Educators](#)

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