

Teacher's Guide

"Pollution Solutions"



Grade Level:

3rd

GSE Reference:

S3L2 a, b

Summary

Students investigate the various types of pollution, their possible causes and some possible solutions to pollution. Students discover how people contribute to pollution problems and recognize ways to reduce, reuse and recycle.

Objective

Students will understand types of pollution and recognize causes for and possible solutions to pollution issues.

Essential Questions

When reviewing "Pollution Solutions" with your students, begin with general questions and move into more thought-provoking questions.

- What are some types of pollution?
- Where does pollution come from?
- What happens to pollution after it is in our environment?
- How can we manage pollution?
- How can we reduce pollution?
- How does pollution affect humans?
- How does pollution affect the natural world?

Vocabulary

- 🌀 *Point Source Pollution* - pollutants that are discharged from and can be traced back to an identifiable source
- 🌀 *Non-Point Source Pollution* - pollutants that cannot be traced back to an identifiable source
- 🌀 *Reduce* - to buy durable products with longer useful lives and lessen the amount of throwaway products
- 🌀 *Reuse* - to use something again
- 🌀 *Recycle* - to reprocess something in order to use again, possibly for a new function

Pre-Visit Activities

- 🌀 **Search your School** Look for pollution or sources of pollution on your school grounds. What types of pollution can a school produce? What does your school do to decrease the amount of pollution it creates?
- 🌀 **Recycle Relay** Research what items can be recycled near you. Then, gather 2 sets of a variety of materials (recyclable and non-recyclable) and hold a recycle relay in your classroom. Make bins for each team labeled TRASH, REUSE and RECYCLE. At the end of the relay discuss why students placed each material in each bin. Could any items be placed in a different bin? How would these items affect native plants and animals if they were not disposed of properly?

Post-Visit Activities

- 🔗 Review the major concepts and vocabulary.
- 🔗 **Help the Lorax and the Once-ler!** Read The Lorax by Dr. Seuss with your students. Using the “Further Investigations” sheet, students can list the types of pollution and ways the Once-ler can reduce his pollution.
- 🔗 Help clean up the Chattahoochee Riverkeeper keep our water source clean! Families can volunteer to help with a clean up. <https://chattahoochee.org/cleanups/>
- 🔗 **Citizen science** Adopt a nearby stream to monitor and report your data <https://adoptastream.georgia.gov/getting-started>
- 🔗 **Calculate your water footprint** Visit http://www.h2oconserve.org/?page_id=503 and have students calculate their water usage. What can we do to reduce our water footprint? Where does your water come from in your home? How many uses for water can you think of?
- 🔗 **Calculate your land footprint** Visit <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/> and have students calculate their land footprint.
- 🔗 **Start something!** Use the links below to take what students have learned and put your knowledge into action! Think about the health benefits to humans, animals, and our environment.
- 🔗 Does your school have recycling bins available to students? <http://www.recycleworks.org/schools/schoolpgm.html>
- 🔗 **Does your cafeteria use reusable trays and utensils?** Help students understand the benefits of reusable items in the cafeteria. A report for adults showing the benefits of reusable items: <http://www.greenlivingtips.com/articles/school-lunch-tray-dilemma.html>
- 🔗 **Do cars in the carpool line idle?** Start a Clean Air School program at your school. Encourage buses, car riders, and other drivers to shut off their engine and keep our air clean! Visit <http://onairschools.org/campaign/no-idling/> for more information.

Suggesting Reading

Protecting Our Rivers and Lakes by Rosa Costa-Pau

Cleaning Up Our Water by Linda Goldman

Like a Fish on a Bike! By Paul Piferski

One Small Square: Pond by Donald M. Silver

Environmental Awareness: Water Pollution by Mary Ellen Snodgrass

Polluted Water by Jennifer Stefanow

The Lorax by Dr. Sues

Suggested Websites

<http://tiki.oneworld.org/>

<http://kids.niehs.nih.gov/explore/pollute/index.htm>

http://www.airnow.gov/index.cfm?action=aqikids_home.index

http://www.h2oconserve.org/?page_id=255

Further Investigations!



Help the Lorax and the Once-ler!

With your class, read The Lorax by Dr. Seuss. List types of pollution you observe in the story. Can you help the Once-ler come up with solutions to reduce his pollution? Will our solutions help the Lorax and the animals in the Truffula forest? Can manufacturers in our neighborhoods also reduce their pollution?

Pollution Source:

Pollution Type:

Solution:

Pollution Source:

Pollution Type:

Solution:

Pollution Source:

Pollution Type:

Solution:

Pollution Source:

Pollution Type:

Solution: