



Pollution is for the Birds Classroom Guide

PREVIEW

Welcome to *Pollution is for the Birds!*

The *Pollution is for the Birds* comics, along with this classroom guide are part of the Think Earth Environmental Education Curriculum. The goal for this unit is to provide upper elementary students with a basic understanding of causes and effects of air, water, and soil pollution, and of ways to reduce pollution.



Pollution is for the Birds Part 1 covers how human activities can pollute the environment and what problems pollution causes for people and the environment.

Pollution is for the Birds Part 2 addresses how individuals, industry, and government can all help reduce pollution.

This guide can help you and your students use the *Pollution is for the Birds* comics effectively in the classroom. The guide contains:

- What Students Will Learn with *Pollution is for the Birds* page 2
- How to Use *Pollution is for the Birds* in the Classroom page 3
- Why Use Comics? page 4
- How to Read Comics page 5
- Vocabulary page 6
- Discussion Guide pages 7–15
- Follow-Up Learning Activities pages 16–30
 - Review and Discuss Pollution Images page 16
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 - Conduct a Hands-on Activity: *Can You Undo Pollution?* pages 17–19
 - Create Cause and Effect Webs page 20
 - Research Pollution Solutions pages 21–22
 - Weigh Advantages and Disadvantages pages 21 and 23
 - Role Play pages 24–25
 - Round Robin Ways to Think Earth pages 24 and 26–28
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What Students Will Learn with *Pollution is for the Birds*

Concepts

Pollution is for the Birds presents the following concepts:

1. Clean air, water, and soil are important for all living things.
2. Human activities can pollute the environment – our air, water, and land.
3. Pollution causes problems for people and the environment.
4. We can all help reduce pollution.

Behaviors

Pollution is for the Birds will motivate students to help reduce pollution by practicing the following behaviors:

- Use electricity, water, gasoline, and natural gas efficiently (i.e., conserve resources).
- Carpool, bike, walk, skate, or use public transportation when possible.
- Choose environmentally safe, non-toxic products.
- Dispose of solid and liquid wastes in ways that prevent pollution.
- Reduce the amount of waste produced; reuse products; and recycle resources.
- Plant and nurture trees.





How to use *Pollution is for the Birds* in the Classroom

This guide provides a wide range of resources and activities. Read and discuss the *Pollution is for the Birds* comics with your students as outlined below. Then, use as many of the follow-up activities as you choose to fit your students and the time you have available.

Pre-Teach

- If desired, pre-teach the vocabulary found on page 6.
- Activate students' prior knowledge and prepare them for reading each comic using the pre-reading activities found in the discussion guides on pages 7 to 15.
- If students are unfamiliar with comics, print or project *How to Read Comics* (page 5) and review it together.

Read the Comic

- Read through each *Pollution is for the Birds* comic with students in small groups or with your whole class. You can print or project the comics or have students view them on computers or tablets. The comic pages have been formatted in the landscape orientation for easy viewing on screens.
- On each page, give students some time to look at the pictures silently, and then read the text aloud together. If desired, you can have students read dialogue aloud in a reader's theater format—students often enjoy using different voices and making sound effects.
- At the end of each page, ask students to explain what happened in the pictures and articulate their understanding of the concepts.
- After reading each comic together, you may opt to have students read it again on their own or with a partner. Ask them to look for details they may have missed in the group reading.

Discuss the Comic

- Use the questions in the discussion guides to reinforce students' understanding of the concepts presented in the comics, provide background information, and get students thinking about what they have learned and how they can apply it to their own lives. Encourage students to go back to the comics to find answers if they need to.

Conduct Follow-Up

- Conduct *Follow-up Learning Activities* to extend student learning. These activities will reinforce the concepts and lead students toward applying them to their own lives.





Names: _____ Date: _____

Crude Oil

Crude oil is a thick, dark liquid found deep underground. It is a fossil fuel, formed from the remains of plants and animals from millions of years ago. We pump crude oil out of the ground and use it to make products like gasoline and plastic. Sometimes we pump oil up from under the ocean. If a well or a pipe in the ocean leaks, oil will get into the water.

Oil has to be moved from where we pump it to places that use it. It can be moved through pipelines, on railways, in trucks, or in tanker ships. If a tanker ship carrying oil has an accident or a leak, oil can get into the water. Crude oil is very thick and sticky. It sticks to and harms sand, rocks, plants, and animals. It is very hard to clean up.

Directions: You will choose materials and use them to try cleaning oil out of water. Crude oil is not safe for you to work with, so the "oil" you will be using is vegetable oil with some cocoa powder in it (to make it look darker). It is very messy, but it will not hurt you.

- 1. Choose four materials to test. Take a small sample of each material to your station. Record what materials you chose and why you chose each material.

Material	Why We Chose It
1.	
2.	
3.	
4.	

- 2. Which material do you predict will work best? Why?

Empty box for student response to question 2.



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POLLUTION BIRDS

PART 2

is for the

BIRDS

We're going to *save the world*?

Yes!
You've opened my eyes to *pollution*, now keep your eyes open for *solutions!*

 **Think Earth**
ENVIRONMENTAL EDUCATION
FOUNDATION

How're we going to get *billions* of people to pollute less?

We'll start by not giving up!

I'll do my best.
Then what?

We'll go one human at a time.

CLUNK

