

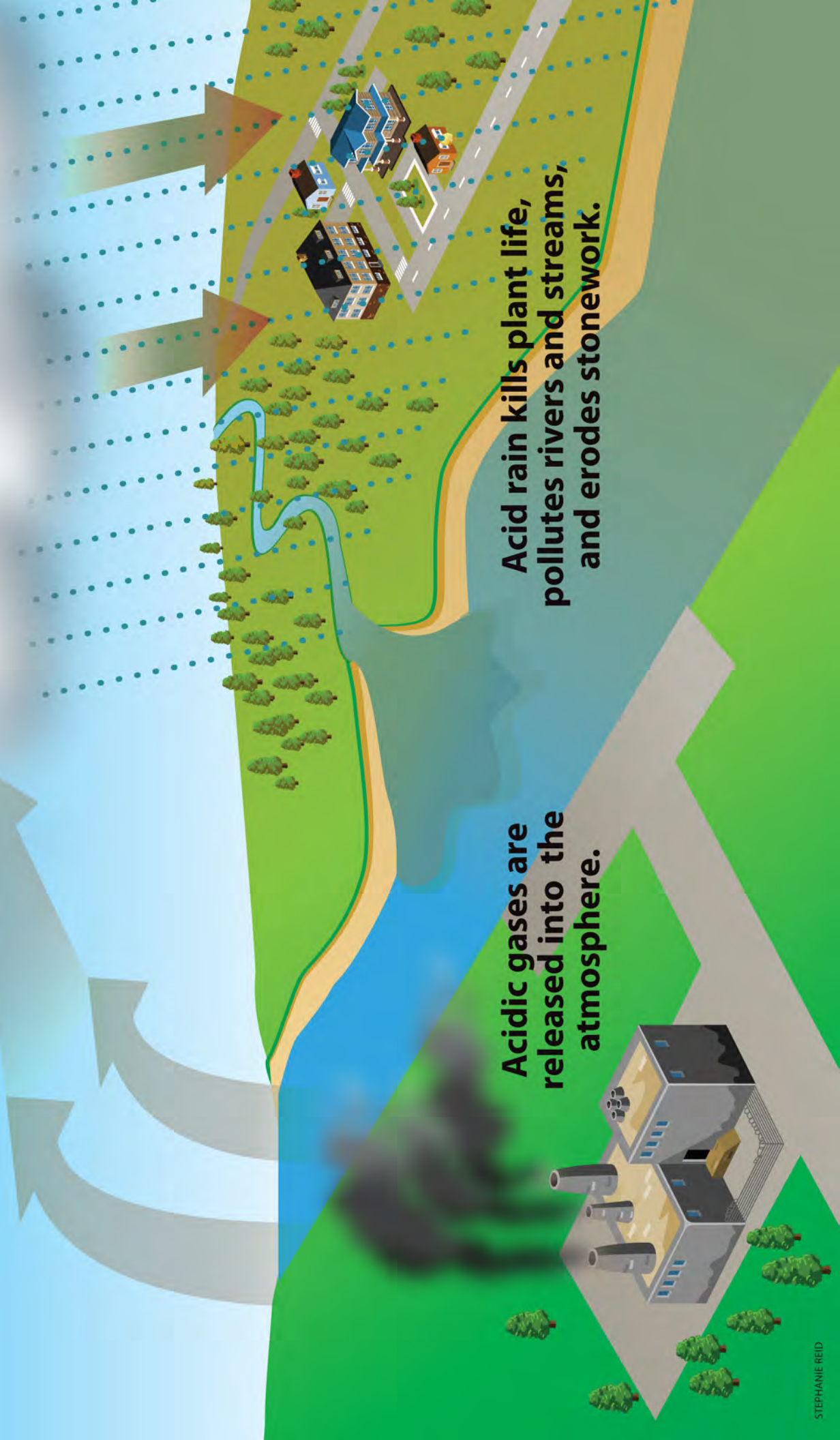
Lesson 13

**Gases are
carried by wind.**

**Gases dissolve in rainwater
to form acid rain.**

**Acidic gases are
released into the
atmosphere.**

**Acid rain kills plant life,
pollutes rivers and streams,
and erodes stonework.**





Causes of Acid Rain

Background Information

Acid rain is rain that has harmful chemicals mixed with it. There are two main sources of acid rain. One is the burning of fossil fuels in factories and buildings. This produces carbon dioxide. A second source of acid rain is exhaust from cars, trucks, and planes. Both sources release pollutants into the air. The harmful chemicals rise into the atmosphere. Then they mix with water vapor inside clouds. When the water vapor condenses, it falls to the ground. The chemicals and pollutants are still mixed with water. So, they fall to the ground, too. This is called *acid rain*.

Acid rain causes a lot of damage to the environment. It can be harmful for lakes. It can be harmful for streams and rivers, too. Fish and other aquatic animals are exposed to these chemicals. These chemicals can make them sick. These animals may not get enough oxygen because the water is too dirty. This can cause them to die.

Acid rain also impacts ecosystems around the world. Acid rain is absorbed by soil. The chemicals and pollutants get into the soil. Trees, plants, and other living organisms take in the chemicals and pollutants. Some plants and animals get sick. Some may even die.

Analyzing Science

- What is acid rain and what causes it?
- Why is acid rain an issue for all living organisms on our planet?
- ▲ Think about a food web. How can acid rain impact a food web and affect plants and animals that are connected to each other?

Nonfiction Writing Prompt

Pollutants in the air can travel long distances. This means that people's health may be impacted by air pollution that is created from sources far away. Write a short essay explaining the reasons that acid rain should be a serious concern to your community. Describe potential sources near and far that could be contributing pollution to acid rain in your community.

Fiction Writing Prompt

Write a story about an environmentally conscious character who wants to stop acid rain from forming. Include all of the behaviors and actions that he or she may do to be part of a solution to the problem of acid rain.

Scientific Challenge

How can renewable sources of energy play a part in reducing acid rain and resolving other issues related to air pollution? Research this question on the Internet or at the library. Create a brochure detailing your answer. Include pictures and diagrams to display the data you collected.