

**UNIT**

# C

## **HEAT IN THE ENVIRONMENT**



## Unit Preview

Canadian educator and environmentalist David Suzuki once described Earth as “a tiny blue and green oasis in a cold universe.” This description reminds us that our planet is a unique and fragile place. It is the only planet we know of that can provide the necessities of life.

Earth’s main source of energy is the Sun. All living things need energy to grow, move, and stay warm. Living things also use energy to move objects and build structures. Energy from the Sun even affects non-living things. Although Earth absorbs a lot of energy from the Sun, it maintains a balance by transferring some of this energy back into space.

Recently, scientists have noticed that Earth’s climate is changing. They have evidence suggesting that the changes are due to human activities. Concern about climate change is making societies think about how to live in ways that take Earth’s energy balance into account.

In this unit, you will learn about energy. How does the transfer of energy as heat affect life on Earth? How do humans use energy? What are some of the positive and negative impacts of energy use on society and on the environment?

### BIG Ideas

- Heat is a form of energy that can be transformed and transferred. These processes can be explained using the particle theory of matter.
- There are many sources of heat.
- Heat has both positive and negative effects on the environment.

**CHAPTER 7** Heating and Cooling

**CHAPTER 8** Energy Transfer and Conservation

**CHAPTER 9** Heat Sources in the Environment