

**CHAPTER 1** The World of Life Science

**SECTION 1** **Asking About Life**

**BEFORE YOU READ**

After you read this section, you should be able to answer these questions:

- What is life science?
- Why is life science important for everyday life?

**What Is Life Science?**

Imagine that it is summer. You are lying on the grass in a park watching dogs play and bees visiting flowers. An ant carries away a crumb from your lunch. Suddenly, questions pop into your head: How do ants find food? Why don't bees visit every flower? Why do dogs play? By asking these question, you are thinking like a life scientist.

**Life science** is the study of living things. Asking questions about the world around you is the first step in any scientific investigation. ✓



Part of science is asking questions about the world around you.

**What Questions Do Life Scientists Ask?**

Take a look around your home or neighborhood. Just about anywhere you go, you will find some kind of living thing. The world around us is full of an amazing diversity of life. Single-celled algae, giant redwood trees, and 40-ton whales are all living things. For any living thing, you can ask: How does it get its food? Where does it live? How does it behave? Life scientists ask questions like these to learn about the world.

**STUDY TIP**

**Predict** As you read this section, write a list of 10 questions that a life scientist might ask.

**READING CHECK**

**1. Identify** What is the first step in a scientific investigation?

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**SECTION 1** Asking About Life *continued*

### Critical Thinking

**2. Predict** Aside from studying the environment, how can life scientists affect your life? Give two ways.

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### What Do Life Scientists Do?

Life scientists can study many different topics. Many of these topics can affect your life. As you study life science, you will begin to see how important life science is in your life. Answering questions can help life scientists learn how to fight disease, produce food, and protect the environment.

#### FIGHTING DISEASE

Scientists have been successful at getting rid of some diseases. For example, *polio* is a disease that affects the brain and nerves. Polio can make it hard for a person to breathe or walk. Polio used to be very common, but today it is a very rare disease. This is because life scientists studied polio and learned how to keep it from spreading.

Today, scientists are looking for ways to stop the spread of the virus that causes *acquired immune deficiency syndrome* (AIDS). By studying how this virus affects the body and causes AIDS, scientists hope to find a cure.

Abdul Lakhani is a life scientist who studies the AIDS virus. He is trying to find a cure for the disease.



#### PRODUCING FOOD

How can we produce enough food to feed everyone? How can we make sure that foods are safe to eat? To answer these questions, some scientists design experiments to learn what makes plants grow larger or faster. Other scientists look for ways to preserve foods better so that they will last longer. ✓

 **READING CHECK**

**3. Identify** Give one question about producing food that life scientists are trying to answer.

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#### PROTECTING THE ENVIRONMENT

Many environmental problems are caused by people misusing natural resources. Life scientists try to understand how we affect the world around us. We can use this information to find solutions to environmental problems.

**SECTION 1** Asking About Life *continued*

**Who Is a Life Scientist?**

A *life scientist* is anyone who studies *organisms*, or living things. The women and men who are life scientists can live and work anywhere in the world. Some life scientists work on farms. Others study organisms in forests or in oceans. Some even work in space! ✓

Life scientists can study many different features of organisms. They may study how organisms behave and how organisms affect their environments. Some life scientists study how organisms change with time and how they pass on their features to their young. Some life scientists even study organisms that lived millions of years ago.

**READING CHECK**

**4. Define** What is a life scientist?

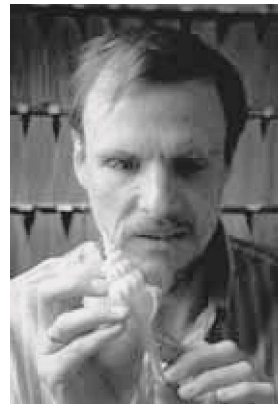
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Irene Duhart Long studies how space travel affects the human body.

Geerat Vermeij studies how the shells of certain animals have changed with time.



**TAKE A LOOK**

**5. Infer** What questions are these scientists probably trying to answer?

Irene Duhart Long:

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Geerat Vermeij:

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Irene Pepperberg:

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Irene Pepperberg studies whether parrots can learn human language.