Discovering Cells (pages 50–57)

An Overview of Cells (page 51)

Key Concept: **Cells are the basic units of structure and function in living things.**

- **Cells** make up the structures in all living things. Cells also carry out all of the functions, or jobs, of living things.
- Living things look like they do because of the different ways cells are put together.
- The different things that living things do are all done by cells. For example, digesting food, moving, and growing are all done by cells.
- Cells are so small that they cannot be seen with your eyes alone.

Answer the following questions. Use your textbook and the ideas above.

1. Read each word in the box. In each sentence below, fill in the correct word.

functions	structures	units

a. Cells make up the _____ in all living things.

b. Cells carry out all the _____ of living things.

2. Is the following sentence true or false? You can see cells with just your eyes alone. _____

First Observations of Cells (pages 51–53)

Key Concept: **The invention of the microscope made it possible for people to discover and learn about cells.**

- A **microscope** is a tool that makes small objects look larger.
- Many microscopes work by using curved pieces of glass or plastic to focus light.
- Robert Hooke was an English scientist who was one of the first people to see a cell with a microscope.

Answer the following question. Use your textbook and the ideas above.

3. Circle the letter of what a microscope does.

a. makes large objects look smaller

b. makes small objects look larger

c. makes faraway objects look closer

Development of the Cell Theory

(pages 54–55)

Key Concept: **The cell theory states the following: All living things are composed of cells. Cells are the basic units of structure and function in living things. All cells are produced from other cells.**

- As more and more scientists used microscopes to observe cells, they learned that cells are the building blocks of living things.
- Many different scientists worked together to develop the cell theory. The **cell theory** explains the relationship between cells and living thing.
- The cell theory is true for all living things. Scientists can study cells to learn how living things function and grow.

Answer the following question. Use your textbook and the ideas on page 29.

4. Circle the letter of each sentence that is true about cells.

a. Not all living things are made of cells.

b. The cell theory explains how cells are made.

c. Scientists learn how living things function by studying cells.

Light and Electron Microscopes

(pages 55–57)

Key Concept: **The lenses in light microscopes magnify an object by bending the light that passes through them. Electron microscopes use a beam of electrons instead of light to produce a magnified image.**

- Microscopes magnify objects. To magnify means to make things look larger than they are.
- Light microscopes have lenses. A lens is a piece of curved glass or plastic. The lens bends light that passes through it. When the light hits your eyes, your eyes see the object larger than it really is.
- Electron microscopes use electrons to make an image. Electrons are very tiny particles. You can see things with an electron microscope that are too small to see with a light microscope.

Answer the following question. Use your textbook and the ideas above.

5. Circle the letter of each type of microscope.

a. electron microscope

b. light microscope

c. telescope