

Microscopes and Cells

Section Review

Reviewing Terms

On the line provided, write the letter of the term from the list that matches each description.

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|--|------------------------------|
| _____ 1. microscope that uses a beam of electrons instead of light to examine a sample | a. cells |
| _____ 2. name Robert Hooke gave the tiny rectangular chambers in a plant | b. cell theory |
| _____ 3. microscope that traces the surface of a sample without using lenses or requiring that the sample be in a vacuum | c. compound light microscope |
| _____ 4. set of statements suggesting that all living things are composed of cells and that all cells come from preexisting cells by cell division | d. electron microscope |
| _____ 5. multi-lens microscope that can be used to study living organisms | e. scanning probe microscope |

Reviewing Concepts

Complete each statement by writing the correct term in the space provided.

- Anton van Leeuwenhoek used a microscope to look at pond water and discovered tiny living things he called _____.
- Robert Hooke believed that only _____ were made of cells.
- Robert Brown discovered a dark-staining object near the center of many cells that is now called the _____.
- In 1855, Rudolf Virchow proposed that cells are produced only by _____.
- The cell theory states that _____ are the smallest working units of living things.
- The compound light microscope can magnify an image up to _____ times.
- There are two basic kinds of electron microscopes—the _____ electron microscope and the _____ electron microscope.
- Pictures of individual atoms have been produced by _____ microscopes.

Microscopes and Cells
Section Review (continued)

Reviewing Skills

Answer each of the following in the space provided. Use complete sentences as appropriate.

14. What is the relationship between the discovery of the microscope and the discovery of cells in living things? (*Relating*)

15. State the three important points of the cell theory. (*Interpreting*)

16. Compare the different kinds of microscopes described in this section of your textbook. (*Comparing*)

17. The cell theory states that all living things are composed of cells. Do you think all the cells in an organism are exactly the same? Explain your answer. (*Drawing conclusions*)
