

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

## Science B NTI Day 1 Introduction to Cells

Term	Meaning
Cell	The smallest living unit of life
Microscope	Instrument used to magnify objects too small to be seen with the naked eye
Cell theory	The explanation of the relationship between cells and all living organisms

### Cell discovery and cell theory

Time	Event
Early 1600s	Robert Hooke discovers dead cells using early microscope.
Late 1600s	Anton von Leeuwenhoek develops a more powerful microscope that allows him to see living cells like bacteria.
Early 1800s	Matthias Schleiden and Theodor Schwann conclude that all living organisms are made of cells, and that cells can be produced from other cells.
Mid 1800s	Rudolf Virchow confirms that all cells must come from preexisting cells.

These events gave way to the modern cell theory, which states:

1. All living things are composed of one or more cells.
2. The cell is the basic unit of life.
3. New cells arise from pre-existing cells.

Common mistakes and misconceptions

- Not all cells are the same. Although cells are the basic units of life, there are many different kinds of cells that make up multicellular organisms. Some cells have specialized jobs that allow them to work with one another to perform an organism's biological functions. Cells are the smallest living thing, but they are not the smallest thing. Cells are small enough that we need microscopes to view them, but they are much larger than some other substances that we have seen under the microscope.

Use the information you read to answer the following questions.

1. Who was the first scientist to look at bacteria under a microscope? \_\_\_\_\_
2. TRUE OR FALSE? The cell is the smallest unit of life. \_\_\_\_\_
3. Who was the first scientist to view a cell with a microscope? \_\_\_\_\_

4. Rudolf Virchow stated that all cells come from \_\_\_\_\_ cells.
5. TRUE OR FALSE? All cells are the same. \_\_\_\_\_
6. What did Robert Hooke see under the microscope? \_\_\_\_\_
7. The basic unit of life is the \_\_\_\_\_.
8. What was one organism that Leeuwenhoek saw under the microscope? \_\_\_\_\_
9. TRUE OR FALSE? Before the 1600.s there were no microscopes.
10. Who were the two scientists who said that all cells come from pre-existing cells?  
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