

## Chapter One - Cells: The Basic Unit of Life.

Online resources [http://www.scienceman.com/bc8/pgs/links\\_u1.html](http://www.scienceman.com/bc8/pgs/links_u1.html)

1. Why is this chapter important?
2. Both unicellular and multicellular living things are called \_\_\_\_\_.
3. All the \_\_\_\_\_ that keep an \_\_\_\_\_ take place inside the \_\_\_\_\_.  
This is why the \_\_\_\_\_ is called the \_\_\_\_\_.
4. Living things survive in many different \_\_\_\_\_.
5. All living things have \_\_\_\_\_ that demonstrate they are alive.
6. Some living things are \_\_\_\_\_ and can be \_\_\_\_\_ only with a \_\_\_\_\_.
7. Regardless of where they live, all \_\_\_\_\_ things have needs that must be met if they are to \_\_\_\_\_ in their \_\_\_\_\_.
8. What is the difference between unicellular and multicellular living things?
9. Define stimulus and provide an example.
10. What are three waste products produced by animals?
11. Describe the five characteristics of living things.

12. Early microscopes were built in the late \_\_\_\_\_ and early \_\_\_\_\_.  
\_\_\_\_\_ was one of the first people to build a microscope.
13. What was the approximate magnification of his first microscope? \_\_\_\_\_
14. When you look through a microscope, you will observe an \_\_\_\_\_ that is \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
15. To determine the \_\_\_\_\_ of the microscope when using each \_\_\_\_\_ lens, you \_\_\_\_\_ the \_\_\_\_\_ of the \_\_\_\_\_ by the \_\_\_\_\_ of the \_\_\_\_\_.
16. Define resolving power.
17. All cells have similar \_\_\_\_\_ and \_\_\_\_\_.
18. Each structure and organelle carries out a \_\_\_\_\_ to help \_\_\_\_\_ the \_\_\_\_\_ of a \_\_\_\_\_.
19. Organelles take up about \_\_\_\_\_ percent of cell. The rest of the cell consists of \_\_\_\_\_.
20. The nucleus contains \_\_\_\_\_ or \_\_\_\_\_ which carries the \_\_\_\_\_ material that is passed from \_\_\_\_\_ to \_\_\_\_\_.
21. The \_\_\_\_\_ are the energy producers in the cell.
22. The total of all chemical reactions that take place in our cells is called our \_\_\_\_\_.
23. Functions that organelles can perform are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
24. What is the difference between plant and animal cells?

25. What is photosynthesis?
  
  
  
  
  
  
  
  
  
  
26. What is the Cell Theory?
  
  
  
  
  
  
  
  
  
  
27. Cell theory is considered one of the main ideas of modern biology, which is the \_\_\_\_\_ of \_\_\_\_\_.
  
  
  
  
  
  
  
  
  
  
28. Scientists divide cells into two different groups. Name them and state the difference between them.
  
  
  
  
  
  
  
  
  
  
29. What kind of cells are bacteria? \_\_\_\_\_.
  
  
  
  
  
  
  
  
  
  
30. Are all bacteria harmful? Defend your answer.
  
  
  
  
  
  
  
  
  
  
31. What are viruses?
  
  
  
  
  
  
  
  
  
  
32. What is diffusion?
  
  
  
  
  
  
  
  
  
  
33. Why is the cell membrane called a selectively permeable membrane?
  
  
  
  
  
  
  
  
  
  
34. What is osmosis?

35. \_\_\_\_\_ is a special term that scientists use when referring to the movement of \_\_\_\_\_ through a \_\_\_\_\_.
36. What is reverse osmosis and how could it be used.
37. Create your own summary of the key ideas in this chapter. *See Science skill 10 for help in using graphic organizers.* Use these headings to organize your notes: Characteristics of Living Things, The Microscope, Cell Theory, Cell Organelles, Diffusion & Osmosis.
38. Check your understanding of the contents of this chapter by doing the Chapter Review exercises on pages 50-51.
39. If you are using the Student Workbook, complete Chapter 1, pages 2-19.

Key Terms to know:

compound light microscope

electron micrograph

magnification power

resolving power

scanning electron microscope

bacteria

cell membrane

cell theory

cytoplasm

mitochondria

nucleus

organelle

vacuole

viruses

concentration

diffusion

osmosis

selectively permeable membrane