

## Cell Structure and Function Review

1. Organelle means "little organ." How are organelles similar to organs?
2. Name the 3 different ways materials can be moved into or out of a cell.
3. All large organisms have cells with organelles. What advantage do organelles give the cell?
4. The cell requires instructions in order to function correctly; where are these instructions found?
5. Where would you expect to find more chloroplasts, in a potato root or a potato leaf? Explain.
6. If you put a human cell into pure tap water, it will die. What word describes this type of environment? Why will it die?
7. By comparing a bee's body mass to its wing span, it has been calculated that a bee should not be able to fly. Cell biologists have since found that the muscles which control the wings of the bee have a huge number of mitochondria. Explain why this discovery may help explain why bees are able to fly.
8. Your stomach makes and secretes all kinds of digestive enzymes. Cells of the stomach lining have large numbers of ribosomes and Golgi. Explain what each of these are doing in those stomach cells.

9. A Biology student has observed a mold cell, a cheek cell and an Elodea cell and made drawings of each. You are grading the drawings and notice that they have drawn a chloroplast in two of the three different cells. Do you take points off or not? Explain.
10. If the ER is called "rough" if it has what organelle attached to it? What is going on there that is not happening on "smooth" ER?
11. The function of a centriole is to help  
a) digest macromolecules (b) carry out photosynthesis (c) in cell reproduction (d) in the synthesis of proteins
12. How does a prokaryotic cell differ from a eukaryotic cell?
13. A cell part that is not present in animal cells is  
a) centriole (b) cell wall (c) cell membrane (d) vacuole
14. The most likely place to find DNA in the cell is  
a) at the ribosome (b) in the cytoplasm (c) in the nucleus (d) almost anywhere
15. The cell membrane is composed of  
a) nucleic acids and proteins (b) starch and a double layer of protein (c) sugar and cellulose (d) double layer of phospholipids and protein
16. Ribosomes carry out important functions in the cell. Identify these three molecules:  
a. The instructions they read -  
b. The molecule they produce -  
c. They raw materials that they need to make b -