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**SB1 a and d review**

**SB1. Students will analyze the nature of the relationships between structures and functions in living cells.**

1. Explain the role of cell organelles for both prokaryotic and eukaryotic cells, including the cell membrane, in maintaining homeostasis and cell reproduction.
2. Explain the impact of water on life processes (i.e., osmosis, diffusion).

Review

1. Be able to identify the 8 characteristics of living things. Know an example for each of the characteristics of living things (for example: birds flying south for the winter is an example of responding to the environment.)
2. Know the differences between prokaryotic organisms and eukaryotic organisms.
3. Be able to identify examples of prokaryotes or eukaryotes. Understand the organizations options for a multi-cellular eukaryote.
4. Understand how the function relates to cell homeostasis and be able to identify(or draw) the following organelles: nucleus, endoplasmic reticulum, golgi apparatus, cytoplasm, cell membrane, cell wall, lysosomes, ribosomes, mitochondria, chloroplast, vacuole, cytoskeleton, nuclear membrane, nucleolus, centrioles.
5. Know the 3 organelles that are found in a plant cell and not an animal cell.
6. Know the 2 organelles found in an animal cell and not a plant cell.
7. Understand the 3 parts of the cell theory.
8. Understand why water has cohesive and adhesive properties.
9. What are the characteristics and functions of the cell membrane?
10. Describe the difference between passive and active transport. (include which concentration gradient for each type of transport uses)
11. How are solute, solvent, and solution related?
12. What molecule provides energy in active transport?
13. What are some common examples of processes or molecules (ions) that would cross a selectively permeable membrane using active transport?
14. What are the three examples of passive transport?
15. What is the difference between diffusion and facilitated diffusion?
16. What type of molecules typically undergoes diffusion?
17. What molecules does osmosis deal with? What are the three results of a cell after osmosis?