**3.2 Cell Organelles**

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| **Read the attached article (3.2 Cell Organelles) and use the information to answer the following questions.** |

**Connect to Your World**

1. What are some examples of how your organs are specialized to perform particular tasks?

**Cells have an internal structure**

1. Give an example of how cells are highly structured structures?
2. What would happen if the plasma membrane were removed from a cell?
3. What is a cells cytoskeleton?
4. What is the cytoskeleton made of?
5. There are three main types of fibers that make up the cytoskeleton. Next to each type explain its function for the cell.

* Microtubules-
* Intermediate filaments-
* Microfilaments-

1. What problems might a cell experience if it had non cytoskeleton?
2. Where is the cytoplasm located?

**Several Organelles are involved in making and processing proteins**

1. What are proteins made of?
2. What are the two major demands of the nucleus?
3. Describe the composition of the nucleus.
4. Describe the structure of the nuclear envelope.
5. What takes place in the nucleolus?
6. What is the endoplasmic reticulum (ER)?
7. What processes take place on and in the ER?
8. What are ribosomes?
9. What happens to ribosomes after they are assembled in the nucleolus?
10. What do we call ER that is covered in ribosomes? Why do we call it that?
11. What do we call ER that do not contain ribosomes?
12. What is the function of the Golgi apparatus?
13. What are vesicles?

**Other organelles have various functions**

1. What do mitochondria do for the cell?
2. What is the function of a vacuole?
3. Explain why a plants leaves shrivel when it wilts?
4. Lysosomes are membrane bound organelles that contain enzymes. What is their function in the cell?
5. What is the function of the centrosome?
6. What role do centrioles play in cell division?

**Plants have cell walls and chloroplasts**

1. What two features of a plant cell are not shared by animal cells?
2. What is the function of the cell wall?
3. What is the function of chloroplasts?
4. What is photosynthesis?