

Cell Structures – Cells Alive

Biology

Using the web site http://www.cellsalive.com/cells/cell_model.htm, answer the following questions. (If you want, you may use additional web sites to help you understand the different cellular structures.) Type your responses in Microsoft Word, work individually, and save your work to your H: drive. When you have completed the assignment please e-mail your work to dan.bregar@corvallis.k12.or.us with the subject “per X your name cells alive”.

Part I – Animal Cells

1. Describe the physical appearance of the cell nucleus.
2. In your own words, describe the function of the cell nucleus.
3. Describe the physical appearance of the nucleolus.
4. In your own words, explain the difference between a cell nucleus and a nucleolus.
5. Click on “cytosol” – and using the information there, explain in your own words what is meant by the term “cytoplasm”.
6. Describe the physical appearance of the Golgi apparatus.
7. In your own words, explain the function of the Golgi apparatus.
8. Describe the physical appearance of mitochondria.
9. In your own words, explain the function of mitochondria.
10. Describe the physical appearance of vacuoles.
11. In your own words, explain the function of vacuoles.
12. Describe the physical appearance of lysosomes.
13. In your own words, explain the function of lysosomes.
14. Describe the physical appearance of endoplasmic reticulum.
15. What are the differences in appearance between smooth endoplasmic reticulum, rough endoplasmic reticulum, and the Golgi apparatus?
16. In your own words, explain the function of endoplasmic reticulum (you do not need to differentiate between smooth and rough endoplasmic reticulum).
17. Describe the physical appearance of ribosomes.
18. In your own words, explain the function of ribosomes.
19. Explain the relationship and interaction between rough endoplasmic reticulum and ribosomes.

Part II – Plant cells

1. Explain the function and composition of cell walls.
2. What are cell walls made of – proteins, lipids, nucleic acids, or carbohydrates?
3. Describe the physical appearance of chloroplasts.
4. In your own words, explain the function of chloroplasts.
5. Describe the difference in appearance between vacuoles in animal cells and vacuoles in plant cells.
6. In your own words, explain the difference in function between vacuoles in animal cells and vacuoles in plant cells.

