VIRTUAL CELL

Overview of Assignment:

During this assignment you will view five different web sites to learn about cell structure and function. Please follow the instructions carefully or you will find it difficult to answer the questions. If you do not have enough space to answer the questions, please use a separate piece of paper.

Website One: "Virtual Cell" http://www.ibiblio.org/virtualcell/index.htm

- 1. Click onto the Virtual Cell tour.
- 2. Click onto the nucleus....
- A. What is the function of the nucleus?
- 3. Cut the nucleus and click onto the arrow on the left
- **B.** What is inside the nucleus?
- 4. Dissolve the nuclear membrane.
- C. What is the function of the two structures inside?
- 5. Go back to the home page and click onto the mitochondria.
- D. What is the function of the mitochondria?
- 6. Cut the mitochondria open and click the arrow on the left
- E. Draw the mitochondria

F. What are the white structures inside?

- 7. Go back to the home page and click onto the chloroplast
- G. What is the function of the chloroplast?
- 8. Click cut open and Hit the arrow on the left
- H. What are the two structures inside the chloroplast?
- 9. Go back to the home page and click onto the brown circular structures.

I. What are these structures?

J. What is their function?

- 10. Cut these open and click onto the arrows on the left
- K. What is autolysis?
- 11. Go back to the homepage
- L. What are the green star-shaped structures in the top left corner?

12. On the home page.... Click onto the clear, grayish colored golgi body

M. What is its function?

N. Draw the golgi body

13. Click onto make it work... be patient

O. Describe what is happening

Web Site Two: "Cells Alive" http://www.cellsalive.com

- 1. Click onto the cell gallery
- 2. Click onto the macrophage eating streptococcus
- A. What is a macrophage?
- **B.** What is it doing in this picture?
- 3. Click back to the main page
- C. Draw any two cells that you choose (Be Careful.... notice that not all objects on this page are cells!)

- 4. On the main page...click onto cell models
- D. What are the two main types of cells?

E. How are they different? List at least two main ways

- 5. Click onto the plant cell picture
- 6. Click onto the large vacuole
- F. What are the functions that are listed for vacuoles?
- 7. Go back to the plant cell and click onto the small yellow circles
- G. What is their function?
- 8. In the left side window... click onto quizzes
- 9. Choose Quiz on Cell Biology
- H. Take the quiz (Note: some are questions on things we have not covered!) Enjoy!
 - Quiz Score

Web Site Three: "How Stuff Works/The Cell" http://www.howstuffworks.com/cell.htm

- 1. Click onto cell parts
- A. How many cells make up your body?
- **B.** Draw and label the bacteria cell

Web Site Four: "Biology Pages/Animal Cell" http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/A/AnimalCells.html

Sketch each structure and define the Functions of Each: Intermediate filaments **Pinocytotic Vesicle**

Microtubules

Rough endoplasmic reticulum

Plasma Membrane

Web Site Five: "Microsoft Encarta/Cell Biology" http://encarta.msn.com/encnet/refpages/refarticle.aspx?refid=761568585

List ten new facts from this page that are not in another part of this assignment: