

# Cells, Tissues, Organs and Systems

## Assignment #5- Virtual Cell Worksheet

NAME: \_\_\_\_\_ Date Due: \_\_\_\_\_

Go to my science web page and click on "assignment #5 Virtual Cell Tour" under Cells, Tissues, Organs and Systems. Use the web page to fill in the blanks and draw a picture of each in the right hand column.

**0.5 for each blank=**

**/21 marks**

1. 2. Lysosomes are called \_\_\_\_\_ sacks. They are produced by the \_\_\_\_\_ body. They consist of a single membrane surrounding powerful \_\_\_\_\_ enzymes. Those lumpy brown structures are digestive \_\_\_\_\_. They help protect you by \_\_\_\_\_ the bacteria that your white blood cells engulf. \_\_\_\_\_ act as a clean up crew for the cell. Zoom in and draw what you see.

Lysosomes

2. 3. Chloroplasts are the site of \_\_\_\_\_. They consists of a \_\_\_\_\_ membrane. The stacks of disk like structures are called the \_\_\_\_\_. The membranes connecting them are the \_\_\_\_\_ membranes. Zoom in and draw a picture.

Chloroplasts

3. 4. Mitochondrion is the \_\_\_\_\_ of the cell. It is the site of \_\_\_\_\_. It has a \_\_\_\_\_ membrane. The inner membrane is where most \_\_\_\_\_ respiration occurs. The inner membranes is \_\_\_\_\_ with a very large surface area. These ruffles are called \_\_\_\_\_. Mitochondria have their own \_\_\_\_\_ and manufacture some of their own \_\_\_\_\_. Draw a picture of the mitochondrion with its membrane cut.

Mitochondrion

4. 5. Endoplasmic Reticulum (ER) is a series of double membranes that \_\_\_\_\_ back and forth between the cell membrane and the \_\_\_\_\_. These membranes fill the \_\_\_\_\_ but you cannot see them because they are very

Endoplasmic Reticulum  
(ER)

\_\_\_\_\_. The rough E.R. has \_\_\_\_\_ attached to it. This gives it its texture. These ribosomes manufacture \_\_\_\_\_ for the cell. The ribosomes are the \_\_\_\_\_ which manufacture proteins. Draw the rough ER with a ribosome.

5. 7. Cell Membrane performs a number of critical functions for the \_\_\_\_\_. It regulates all that \_\_\_\_\_ and leaves the cell; in multicellular organisms it allows \_\_\_\_\_ recognition. Draw and shade the cell membrane.

6. 8. Nucleus is called the \_\_\_\_\_ of the cell. It is a large \_\_\_\_\_ spot in eukaryotic cells. It \_\_\_\_\_ all cell activity. The nuclear membrane has many \_\_\_\_\_. The thick ropy strands are the \_\_\_\_\_. The large solid spot is the \_\_\_\_\_. The nucleolus is a spot of \_\_\_\_\_ chromatin. It manufactures \_\_\_\_\_. The chromatin is \_\_\_\_\_ in its active form. It is a \_\_\_\_\_ of DNA and histone proteins. It stores the information needed for the manufacture of \_\_\_\_\_. Draw a picture of the nucleus and its nucleolus.

7. 9. Golgi Body is responsible for packaging \_\_\_\_\_ for the cell. Once the proteins are produced by the \_\_\_\_\_ E.R., they pass into the \_\_\_\_\_ like cisternae that are the main part of the Golgi body. These proteins are then squeezed off into the little \_\_\_\_\_ which drift off into the cytoplasm. Draw a picture of the Golgi Body as it is squeezing off the proteins.

Cell Membrane
Nucleolus
Golgi Body