

KEY

Name _____ Hour _____

The virtual Cell Worksheet

Directions: Go to Mrs. Sorensen's web-page and click on the Virtual Cell link. Find the answers to each question by exploring this website.

1. **Centrioles** are only found in _____ANIMAL_____ cells. They function in cell _____DIVISION_____. They have _____9_____ groups of _____3_____ arrangement of the protein fibers. Draw a picture of a centriole in the box.
2. **Lysosomes** are called _____SUICIDE_____ sacks. They are produced by the _____GOLGI_____ body. They consist of a single membrane surrounding powerful _____DIGESTIVE_____ enzymes. Those lumpy brown structures are digestive _____ENZYMES_____. They help protect you by _____DISSOLVING_____ the bacteria that your white blood cells engulf. _____LYSOSOMES_____ act as a clean up crew for the cell. Zoom in and draw what you see.
3. **Chloroplasts** are the site of _____PHOTOSYNTHESIS_____. They consist of a _____DOUBLE_____ membrane. The stacks of disk like structures are called the _____GRANA_____. The membranes connecting them are the _____THYLAKOID_____ membranes. Zoom in and draw a picture.
4. **Mitochondrion** is the _____POWERHOUSE_____ of the cell. It is the site of _____RESPIRATION_____. It has a _____DOUBLE_____ membrane. The inner membrane is where most _____AEROBIC_____ respiration occurs. The inner membranes are _____FOLDED_____ with a very large surface area. These ruffles are called _____CRISTAE_____. Mitochondria have their own _____DNA_____ and manufacture some of their own _____PROTEINS_____. Draw a picture of the mitochondrion with its membrane cut.
5. **Endoplasmic Reticulum (ER)** is a series of double membranes that _____LOOP_____ back and forth between the cell membrane and the _____NUCLEUS_____. These membranes fill the _____CYTOPLASM_____ but you cannot see them because they are very _____TRANSPARENT_____. The rough E.R. has _____RIBOSOMES_____ attached to it. This gives it its texture. These ribosomes manufacture _____PROTEIN_____ for the cell. The ribosomes are the _____ORGANELLE_____ which manufacture proteins. Draw the rough ER with a ribosome.
6. **Smooth E.R.** _____LACKS_____ ribosomes. It acts as a _____PATHWAY_____ throughout the cytoplasm. It runs from the cell membrane to the nuclear _____MEMBRANE_____ and throughout the rest of the cell. It also produces _____LIPIDS_____ for the cell. Draw a picture of the smooth ER.

Centriole
Lysosomes
Chloroplasts
Mitochondrion
Endoplasmic Reticulum (ER)
Smooth ER