



Cell Organelles: Nucleus to Mitochondria
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Sites for Track #237442:

1. **Nucleus: Cell Textbook:** <http://personal.tmlp.com/jimr57/textbook/chapter3/nucs2.htm>

Within the nucleus are found _____ and a structure called _____.

What is chromatin?

What does the nucleolus manufacture?

2. **Nucleus: Science Review:** <http://www.scientia.org/>

Click on "Caduceus Science Review," then on the "Biology MCAT." Click on "Eukaryotic Cell" on the left, then click on "Cell Nucleus" on the right.

The nucleus guides the _____ processes of the cell by issuing three types of instructions.

FIRST, the nucleus directs _____.

SECOND, the nucleus controls _____.

THIRD, the nucleus regulates _____.

The nucleus is the _____, most prominent structure within a cell.

3. **Plasma Membrane: Cell Textbook:** <http://personal.tmlp.com/jimr57/textbook/chapter3/cm.htm>

The cell membrane is the _____ structure that surrounds the
_____ of the cell.

It also connects the _____ and the _____.

4. **Plasma Membrane: Cell Basics:** <http://gslc.genetics.utah.edu/units/basics/cell/>

Click on "Cell Membrane" in the model and read the information on the left.

The cell membrane is like _____ because it gives the cell support and _____ the cell from the outside environment.

Also, just like _____, the cell membrane has openings that
_____. These openings are called _____.

5. **Plasma Membrane: Cell Membrane:** <http://projects.edtech.sandi.net/miramesa/Organelles/memb.html>

It serves as a _____ which helps to control _____.

Structurally, the membrane is a lipid _____. How many layers does this mean?

6. **Endoplasmic Reticulum:** http://www.cbc.umn.edu/~mwd/cell_www/chapter2/ER.html

The ER membrane typically makes up more than _____ of the total membrane in the cell.

7. **Endoplasmic Reticulum: Cell Organelles:** <http://www.winterwren.com/apbio/cellorganelles/er.html>

The ER is an extensive network of membranes that extends from the _____ through the cytoplasm to the _____.

There are _____ types of ER. Name them and describe the differences between them.

8. **Endoplasmic Reticulum:** <http://www.cdli.ca/~dpower/cell/er.htm>

What does the term “endoplasmic reticulum” mean?

What does the rough ER specialize in?

Name the organelles, in order, that protein molecules travel through.

9. **Golgi Apparatus: Cell Organelles:** <http://www.winterwren.com/apbio/cellorganelles/golgi.html>

The golgi apparatus consists of _____.

It looks like a stack of _____.

The two functions of the golgi apparatus is:

1)

2)

It is often called the “_____” of the cell.

The vesicles that pinch off move to the _____, and the material inside the vesicle is released to _____.

Some of these vesicles become _____.

10. **Lysosomes: Cell Organelles:** <http://www.winterwren.com/apbio/cellorganelles/lyso.html>

What are the three most important facts regarding the lysosome?

The term “lysosome” comes from two roots – “lys” meaning _____, and “some” meaning _____. Therefore, the literal translation is _____.

11. **Lysosomes:** <http://projects.edtech.sandi.net/miramesa/Organelles/lyso.html>

Lysosomes are sometimes called “_____.”

What happens when a cell needs to digest food?

Which other organelle in the cell produces lysosomes?

12. **Lysosomes: Thinkquest:** <http://library.thinkquest.org/12413/structures.html>

What happens to a cell if the lysosome were to explode?

13. **Mitochondria: Thinkquest:** <http://library.thinkquest.org/12413/structures.html>

The mitochondria is the _____ largest organelle in the cell.

How many layers does its membrane have?

What are the folds of the membrane called?

The mitochondria controls levels of _____ and recycles and decomposes _____, carbohydrates, _____ and forms _____.

14. **Mitochondria:** <http://projects.edtech.sandi.net/miramesa/Organelles/mito.html>

Mitochondria can be called the “_____” of a cell. What does that mean?

What is the usable form of energy that mitochondria produce?