

Name:

Date:

Period:

Cell Structure and Function: WebQuest (cell structure)

The links to the websites listed can be found under references in the Cell Structure and Function unit on the BHS Biology page.

Part I, Cell Parts:

http://www.wiley.com/legacy/college/boyer/0470003790/animations/cell_structure/cell_structure.htm

Introduction

Observe the 3 different cell types you will be reviewing and make a few observations about each cell type below.

Prokaryote	Eukaryote (Animal Cell)	Eukaryote (Plant Cell)

Prokaryote

Move the cursor over the different regions of the cell and in your own words briefly describe the function of the organelle.

Nucleoid Region:

Flagella:

Ribosomes:

Cytoplasm:

Cell Wall:

Continue to the Quiz questions to see how much you already learned about the bacteria cell.

When you're finished continue on to the Animal Cell.

Animal Cell

Using the cursor roll over the different organelles in an Animal cell. In the table below list all organelles that are in the Animal cell along with a brief description of their function.

Organelle	Brief description of Function

What are some organelles that you know exist in the Animal cell but were not represented in this animation (yes, there are some!)?

Continue on to the quiz to see how much you learned about this type of cell!

Plant Cell

Move your cursor over the plant cell and determine which organelles are unique to the plant cell.

List which organelles are unique to the plant cell (the organelles that animal cells do not have) and write a brief description of their function.

Construct a Cell

Go to the "Construct Cell" icon and select the correct organelles for each of the cell types. **In the space below identify the organelles that Prokaryotes and Eukaryotes have in common.**

Part II, History of studying cells & cell theory:

Go to < http://www.biology.arizona.edu/cell_bio/tutorials/cells/cells3.html>

Answer the following questions based on the timeline

1. What did Robert Hooke observe with a primitive microscope?
2. What year was this? _____
3. Anton Leeuwenhoek discovered what two types of organisms: _____ & _____
4. The *Cell Theory* was proposed in _____ by _____ & _____
5. The electron microscope magnifies objects much greater than the light microscope. In what year was it first developed _____.

Cell Theory

What are the 3 parts of the cell theory?

1.

2.

3.

4. The Cell Theory gives us an operational definition of _____.

Part III: Magnification Module

Go to <http://micro.magnet.fsu.edu/primer/virtual/magnifying/index.html>

Cells may have never been discovered without the discovery of the microscope. A microscope allows objects to be viewed at different magnifications. Choose any sample to view at the various magnifications and answer the questions below.

1. At which power do you see the greatest detail? _____
2. At which power do you see the largest amount of the sample? _____
3. At which power do you see the smallest amount of the sample? _____
4. What do you notice about the image as you increase the magnification?