

Name: _____

Period : _____

Cells Alive~ Internet Lesson

URL: www.cellsalive.com

Objective: You will look at computer models of cells to learn the functions and the descriptions of the cells and their components.

Navigating the site: Cells.alive has a navigation bar at the left. After accessing the page, click on CELL BIOLOGY on the left side navigation bar. From here, you will access the links: "How Big.", the animal cell model, the plant cell model, and the bacterial cell model.

Part A. "HOW BIG IS A...."

Here you will look at objects found on the head of a pin. Your job is to rank them in order of size on the chart below and estimate the length of each (in nanometers, micrometers, or millimeters). The line in the bottom right corner of the screen is used to help you estimate. Sketch each of the objects.

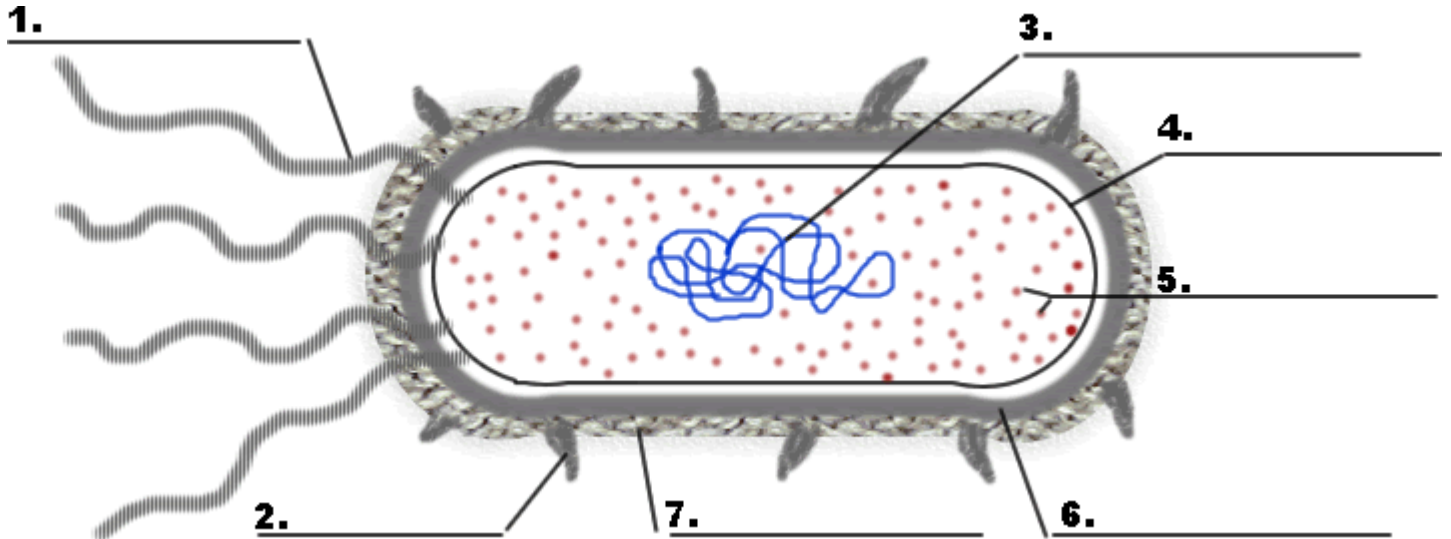
| Object | Sketch | Size in nanometers, micrometers or millimeters |
|-----------------|--------|--|
| Human hair | | |
| Dust Mite | | |
| Red Blood Cells | | |
| E. coli | | |
| Staphylococcus | | |
| Ebola virus | | |
| Rhinovirus | | |

Name: _____

Period : _____

Part B: Bacterial Cell Model

(Return to the "Cell Biology" link to access this page, or hit your back button)



Part C: Animal Cell Model

(Return to the "Cell Biology" link to access this page, or hit your back button)

For this model, you will need to click on the various parts of the cell to go to a screen that tells you about the parts. Answers to the following questions are found there.

1. What do mitochondria do?

Sketch of Mitochondria:

2. How big are mitochondria?

3. What does the Golgi apparatus (body) do?

Sketch of Golgi:

Name: _____

Period : _____

4. What is the difference between smooth and rough ER?

Sketch of Rough ER:



5. Where is the nucleolus found?

6. What does the nucleolus do?

7. What does the cytoskeleton do?

8. Cytosol goes by what other name?

9. What is the function of the cytosol?

10. What is the function of the lysosome?

Sketch of Lysosome:



Name: _____

Period : _____

Part D: Plant Cell Model

(Return to the "Cell Biology" link to access this page, or hit your back button)

1. What other type of cell has a cell wall?

2. What makes the plant cells green?

Sketch of Chloroplast:

3. In plant cells, what does the vacuole do?

Sketch of Vacuole:

Part E: Overview

For the chart below, place a check in the box if the cell has that component.

| | Plant | Animal | Bacteria |
|-----------------------|-------|--------|----------|
| Chloroplast | | | |
| Vacuole | | | |
| Ribosome | | | |
| Mitochondria | | | |
| DNA | | | |
| Endoplasmic Reticulum | | | |
| Cell Wall | | | |
| Golgi Apparatus | | | |