

Cells Alive

Name _____ Date _____

URL: www.cellsalive.com

Navigating the site: Cellsalive.com 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 is a..", the animal cell model, the plant cell model, and the bacterial cell model.

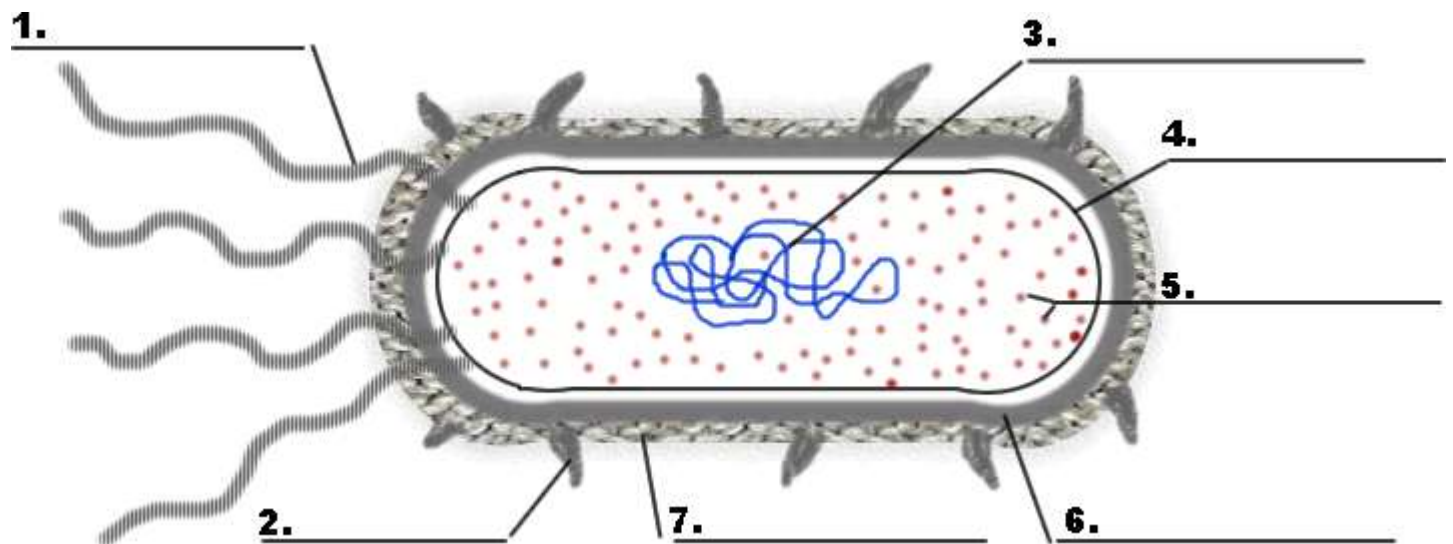
Part A. "HOW BIG IS A...."

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		

Part B: Bacterial Cell Model - (you will need to return to the "Cell Biology" link to access this page, or hit your back button). Select Cell Models, "Take Me To The Bacterial Cell. Complete the diagram



Part C: Animal Cell Model - (you will need to return to the "Cell Biology" link to access this page, or hit your back button). Select the "Take Me To The Animation, Animal Cell".

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?

2. How big are mitochondria?

3. What does the Golgi Apparatus do?

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

5. Where is the nucleolus found?

6. What does the nucleolus do?

7. What does the cytoskeleton do?

8. What is the function of the lysosome?

Sketch each of the following.

Mitochondria
Lysosome
Golgi Apparatus
Rough ER

Part D: Plant Cell Model - (you will need to return to the "Cell Biology" link to access this page, or hit your back button) Select the "Take Me To The Animation, Plant Cell".

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

Sketch the following

2. What makes the plant cells green?

Chloroplast

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

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			
Cell Membrane			
Mitochondria			
DNA			
Endoplasmic Reticulum			
Cell Wall			
Golgi Apparatus			
Nucleus			