

Name _____
Date _____

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Cells Alive Webquest

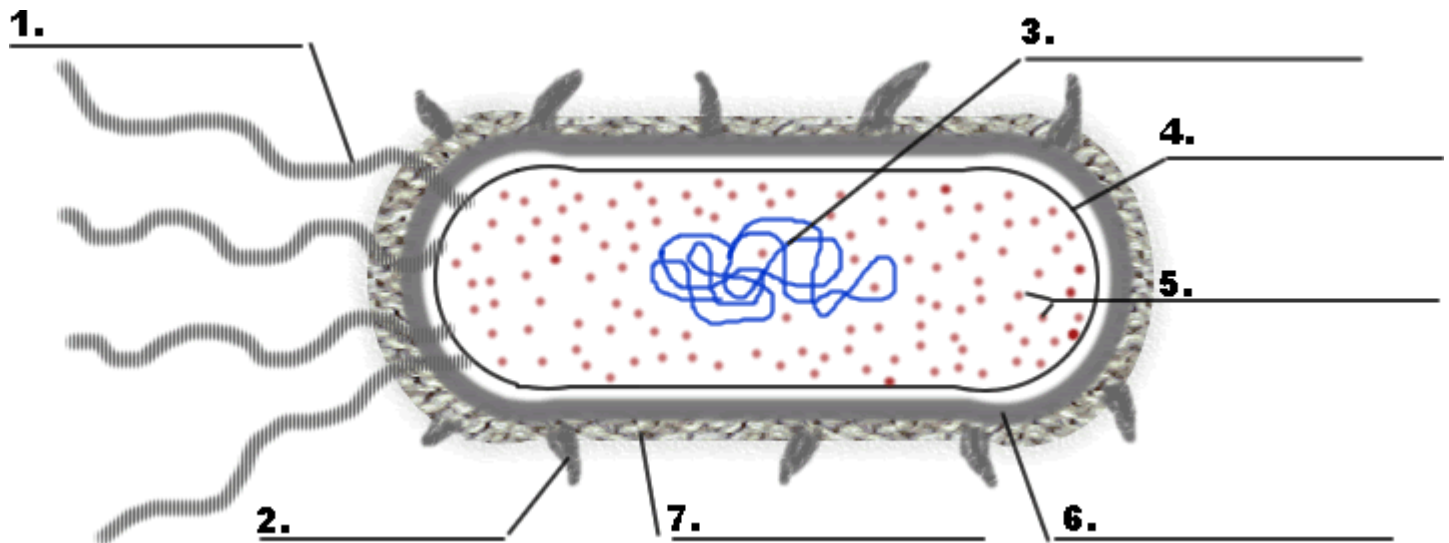
Cells Alive- Internet Lesson

URL: www.cellsalive.com

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

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: Bacterial Cell Model - (you will need to go to the "Cell Biology" link to access this page, or hit your back button)



Part B: Animal Cell Model - (you will need to return to the "Cell Biology" link to access this page, then click on "Cell Models"). 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 each of the following.

2. How big are mitochondria?

3. What does the Golgi Apparatus do?

Mitochondria

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

5. What's the function of each type of ER?

6. What do the centrioles do?

7. Where is the nucleolus found?

8. What does the nucleolus do?

9. What does the cytoskeleton do?

10. Which cells have cell membranes?

11. Which part of the membrane is "water loving"? "water fearing"?

12. What is the job of the vacuole?

13. Which organelle adds amino acids together to make proteins?

14. What is the function of the cytosol?

15. What is the function of the lysosome?

Lysosome
Golgi Apparatus
Rough ER

Part C: Plant Cell Model - (you will need to 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?

Sketch the following

Chloroplast
Vacuole

2. What makes the plant cells green?

3. What process occurs in the chloroplasts?

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

ANIMAL CELL COLORING:

CHOOSE A COLOR FOR EACH OF THE CELL PARTS LISTED BELOW. COLOR THE SQUARE AND THE PART OF THE CELL.

CELL MEMBRANE

RIBOSOME

CYTOPLASM

SMOOTH ENDOPLASMIC RETICULUM

NUCLEAR MEMBRANE

ROUGH ENDOPLASMIC RETICULUM

NUCLEOLUS

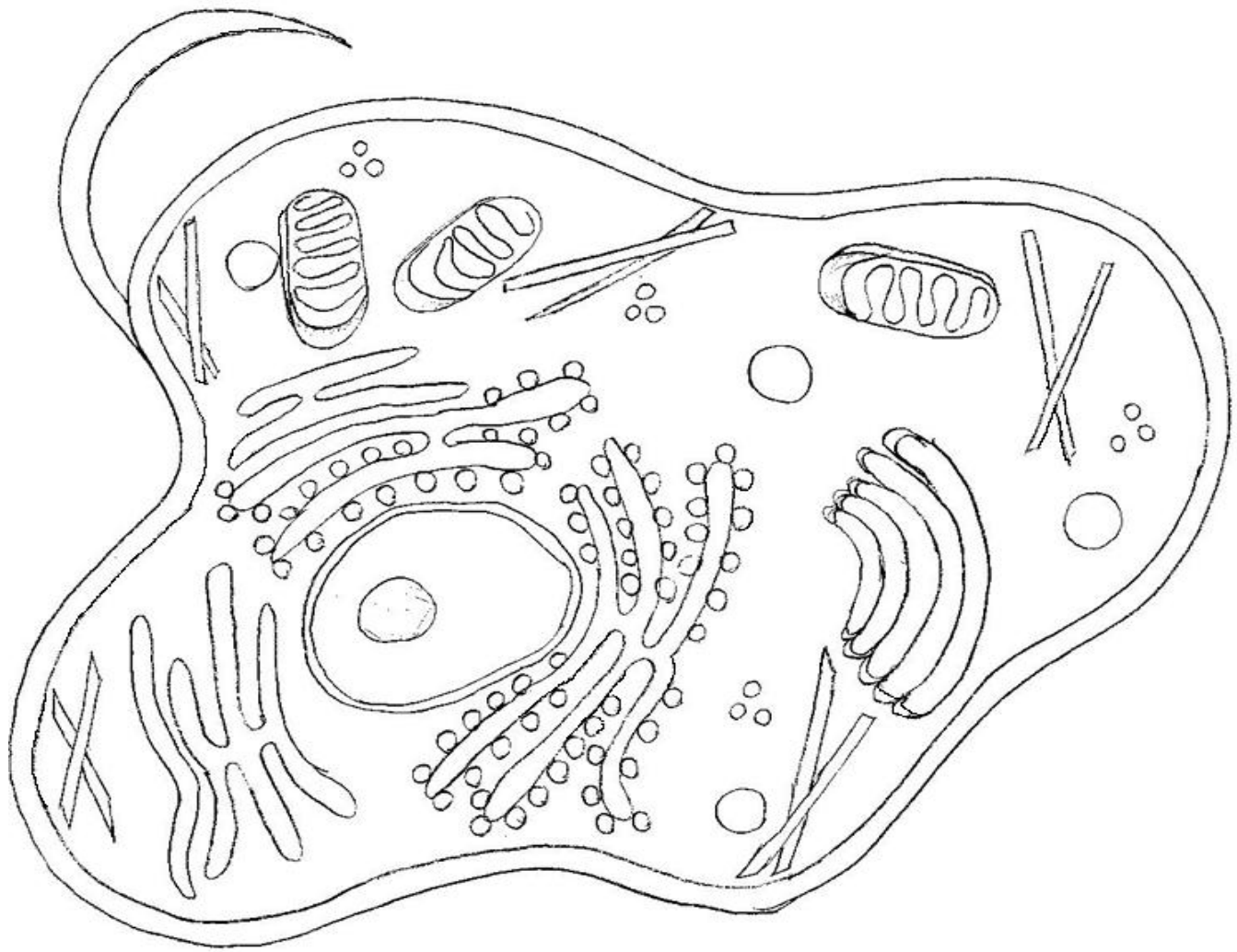
MITOCHONDRIA

GOLGI APPARATUS

LYSOSOME

FLAGELLA

NUCLEUS



PLANT CELL COLORING:

CHOOSE A COLOR FOR EACH OF THE CELL PARTS LISTED BELOW. COLOR THE SQUARE AND THE PART OF THE CELL.

CELL MEMBRANE

RIBOSOME

CYTOPLASM

SMOOTH ENDOPLASMIC RETICULUM

NUCLEAR MEMBRANE

ROUGH ENDOPLASMIC RETICULUM

NUCLEOLUS

MITOCHONDRIA

GOLGI APPARATUS

CHLOROPLASTS

VACUOLE

CELL WALL



Part D: Overview

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

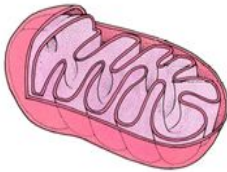
	Plant	Animal	Bacterium
Chloroplast			
Vacuole			
Ribosome			
Mitochondria			
DNA			
Endoplasmic Reticulum			
Cell Wall			
Golgi Apparatus			

READY FOR THE CELL QUIZ?

1. What part of the cell is responsible for breaking down & digesting things?

- ribosomes
- lysosomes
- endoplasmic reticulum
- vacuole

2. Identify the organelle pictured.



- chloroplast
- endoplasmic reticulum
- golgi apparatus
- mitochondria

3. What part of the cell serves as the intracellular highway?

- endoplasmic reticulum
- golgi apparatus
- cell membrane
- mitochondria

4. Which of the following would you NOT find in a bacterial cell?

- DNA
- cell membrane
- golgi apparatus
- ribosomes

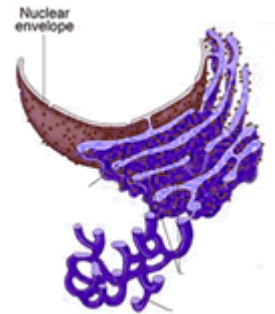
5. Which of the following is found in plant cells, but not a

- cell wall
- vacuole
- mitochondria
- endoplasmic reticulum

6. The jellylike interior of the cell is called the:

- vacuole
- cytoplasm
- cytoskeleton
- nucleus

7. Identify the organelle.



- golgi apparatus
- endoplasmic reticulum
- mitochondria
- lysosome

8. What part of the cell makes proteins?

- ribosomes
- mitochondria
- lysosomes
- vacuole

9. Where are ribosomes usually located in animal and plant cells?

- inside the nucleus
- near the cell membrane
- on the endoplasmic reticulum
- inside the vacuole

10. What part of the cell serves to process, package and export proteins?

- mitochondria
- endoplasmic reticulum
- nucleolus
- golgi apparatus