

PLANT & ANIMAL CELLS STUDY GUIDE

Cell Basics

1. What are tiny structures found inside of cells called?
2. Which organelle is the control center of a cell?
3. What are organelles that contain chlorophyll and use energy from sunlight to produce food called?
4. What part of a cell controls what enters and leaves the cell?
5. Which organelles store food and other materials needed by the cell?
6. What do you call the jelly-like substance that flows throughout a cell?
7. What cell part separates and protects the nucleus from the cytoplasm?
8. What makes up all living things?

Organelle Application

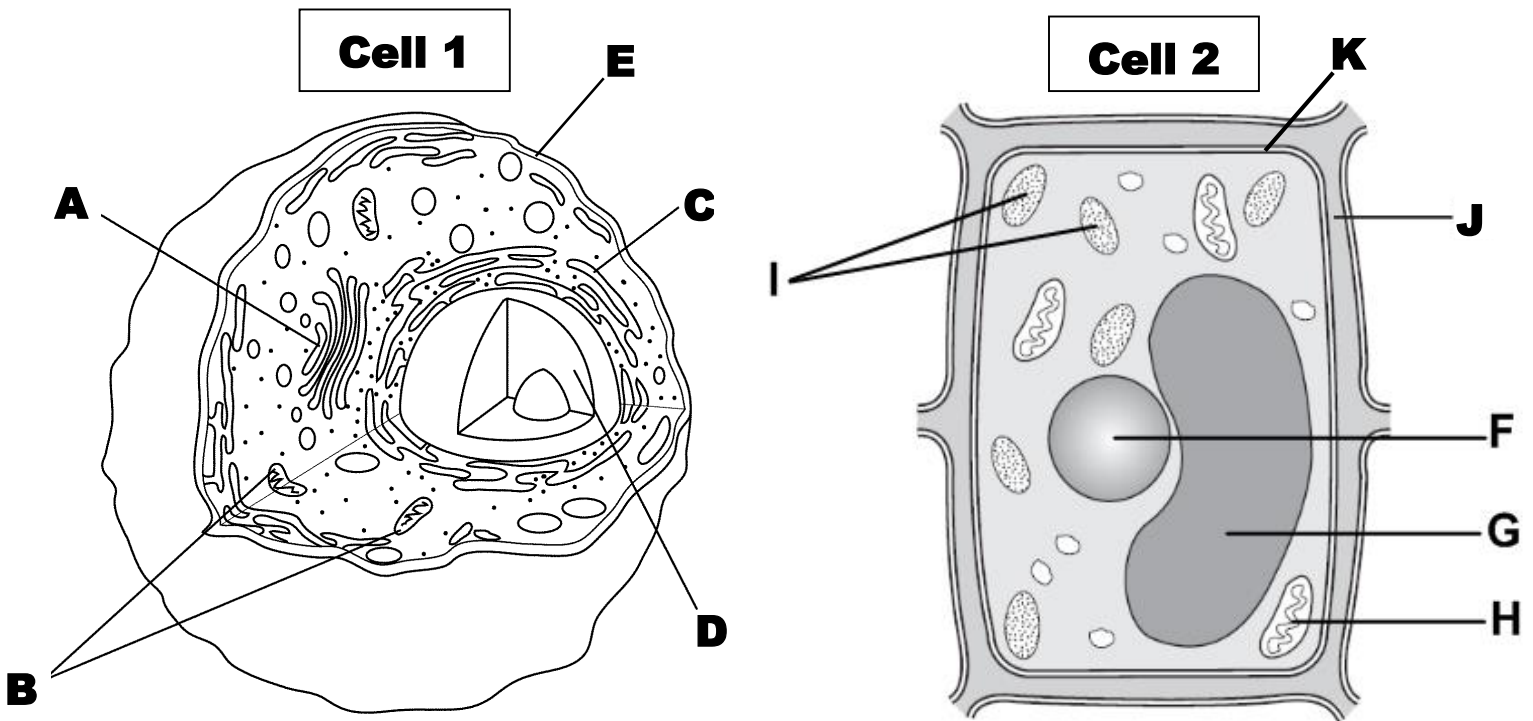
9. What is the function of the mitochondria?
10. What is the function of a cell wall?
11. How is the cell wall different from the cell membrane?

12. How are mitochondria and chloroplasts related?
13. What process allows plant cells to be able to convert the sun's light energy into food?
14. What 2 organelles do plant cells have that animal cells do not?
15. For what purpose does the cell membrane allow certain types of matter to pass into the cell?
16. What organelle gives plants their green color and enables them to produce their own food?
17. During science class, a group of students went on a field trip to a nearby pond where they collected samples of pond water and pond plants. The students used a microscope to study cells in their samples. They also took samples of their own cheek cells and studied them using the microscope. The results are shown in the following table.

Sample	Nucleus	Cell Membrane	Cell Wall	Cytoplasm	Chloroplast	Vacuole
Cheek Cells	X	X		X		X
Pond Plant Cells	X	X	X	X	X	X
Pond Organism #1	X	X	X	X	X	X
Pond Organism #2	X	X		X		X

According to the table provided, which pond organism shares the most characteristics with animal cells?

Use the diagrams below to answer questions # 18-21



17. Identify by LETTER and NAME the 2 structures which are found in Cell 2, but NOT found in Cell 1.

18. Identify the LETTER of each organelle in BOTH Cell 1 and Cell 2.

- I. Mitochondria:
- II. Cell Membrane:

19. Identify the LETTER of each organelle in Cell 2.

- I. Cell Wall:
- II. Chloroplast:

20. What are structure D in Cell 1 and structure F in Cell 2?

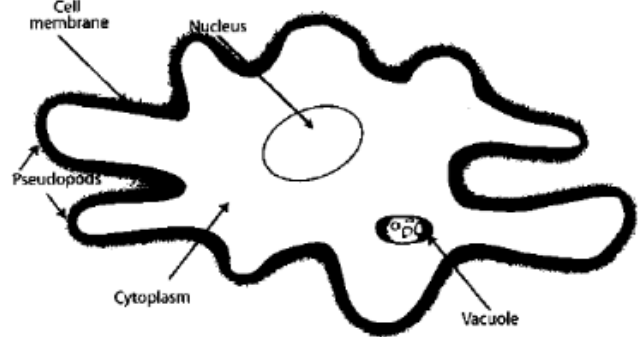
21. Which cell is the plant cell and which cell is the animal cell?

22. Identify the following structures and give their functions:

- I. B & H -
- II. E & K -
- III. D & F -

Comparing/Contrasting Cells

23. How does a protist cell differ from a plant or animal cell?
24. What organelle found in plant cells, is also found in some protist cells, but NOT in animal cells?
25. What organelle found in plant and animal cells is also found in protists?
26. What structure is found on the amoeba, and helps it move, is NOT found on plant and animal cells?



27. What 2 protists are most like plant cells?
28. What are the 3 ways protists move?

Fill in the Blank: Directions: fill in the blank with the correct word. A list of possible answers is provided at the bottom of the page.

29. The smaller structures that make up cells are called _____.
30. The _____ acts as the brain of the cell.
31. _____ are the powerhouses of the cell and break down food to produce large amounts of energy.
32. _____ are the parts of the cell responsible for storage of food, materials, and waste.
33. An organelle that enables a plant to produce its own food is called a _____.

Word Bank		
Endoplasmic Reticulum	Organelles	Ribosomes
Nucleus	Mitochondria	Lysosomes
Vacuoles	Chloroplasts	Cellulose