

## Cell Worksheet

Go to the website [www.cellsalive.com](http://www.cellsalive.com) and answer the questions below:

Part 1: Go to the interactive bacteria animation and answer the following questions:

1. Is the bacteria a prokaryotic or eukaryotic cell?
2. Is the bacteria unicellular or multicellular?
3. Does a bacteria cell have DNA? Where is the DNA found?
4. Does the bacteria cell have chromosomes? If yes, how many?
5. If a bacteria has chromosome(s), what shape are the chromosome(s)?
6. Does a bacteria have cell walls? If it has cell walls, what purpose do they serve?
7. Does a bacteria have a cell membrane? If it does, what purpose does it serve?
8. Does a bacteria have a nucleus?
9. Does a bacteria have cytoplasm? If yes, why is cytoplasm important?
10. How do bacteria move around?
11. Do bacteria have ribosomes? If yes, why do they have them?
12. What are pilli? What purpose do pilli serve?
13. How many membranes does a bacteria have?
14. What is a plasmid? What purpose does the plasmid serve?
15. What is the difference between a nucleoid and a nucleus?
16. Go to the website [http://www.sheppardsoftware.com/health/anatomy/cell/bacteria\\_cell\\_tutorial.htm](http://www.sheppardsoftware.com/health/anatomy/cell/bacteria_cell_tutorial.htm) and play the game. Explain what happens when you get a perfect score.

Part II. Go to the website [www.cellsalive.com](http://www.cellsalive.com) and answer the questions about animal cells below:

1. How is the shape of a bacteria cell different than the shape of an animal cell?
2. Is an animal cell a prokaryotic or eukaryotic cell?
3. Is an animal cell unicellular or multicellular?
4. Does an animal cell have DNA? Where is the DNA found?
5. Does an animal cell have chromosomes? Where are the chromosomes found in an animal cell? What shape are the chromosome?
6. Does an animal cell have cell walls? If not, why not?
7. Does an animal cell have a cell membrane? ? If it does, what purpose does it serve?
8. Does an animal have a nucleus? If it does, why is a nucleus important?
9. Does an animal cell have cytoplasm? If yes, why?
10. What is the energy center of a eukaryotic cell?
11. Does an animal cell have chloroplasts? Why or why not.
12. What is the difference between the rough and smooth endoplasmic reticulum?
13. What function does the golgi apparatus serve?

14. What organelles clean and detoxify the cell?
15. What are mitochondria and why are they important?

Part III. Go to the website [www.cellsalive.com](http://www.cellsalive.com) and answer the questions about plant cells below:

1. What is different about the shape of a plant cell versus the shape of an animal cell?
2. Why is the difference in shape important?
3. What green organelle stands out when we look at a plant cell? What is the importance of this organelle?
4. Why are vacuoles so big in plant cells? What purpose do they serve?
5. What organelles are the same between plant and animal cells? Why are these organelles necessary for both?
6. What organelles are the same between plant, animal and bacteria cells? Why are these organelles found in all living things?
7. Bacteria cells have flagella but plant and animal cells do not? Why?
8. Do animals produce any cells with flagella? Why?
9. Why does a plant cell have a cell wall but an animal cell does not?
10. What would bacteria need cell walls?
11. Are bacteria cell walls and plant cell walls the same? Explain.