

Science 8
Cell Unit Practice Test

Name:
Date:
Block:

1. List the 7 characteristics of living things.

2. An explorer from another galaxy has arrived on Earth and believes cars are living things.
 - a. Which characteristic(s) of a living thing would a car show?

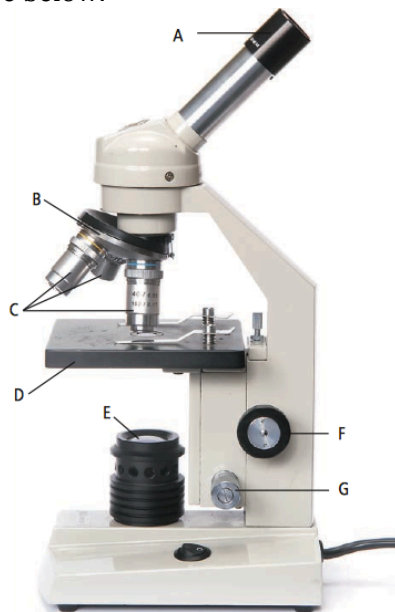
 - b. How would you explain that a car is not a living thing?

3. The coarse focus knob on a microscope should be used with which objective lens(es)?

4. A slide on the microscope is moved toward you. In which direction does the object you are viewing through the eyepiece move?

5. What is a wet mount slide? List the steps of making a wet mount.

6. Label the parts of the microscope below.

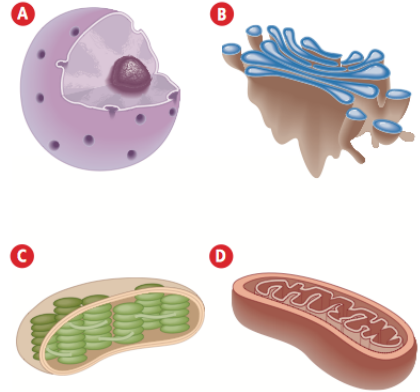


7. Animal cell vs. plant cell.
- Which two organelles do plants have that animals do not?
 - What are their functions?

8. Which organelle stores food and waste?

9. Identify each cell structure below and write its function.

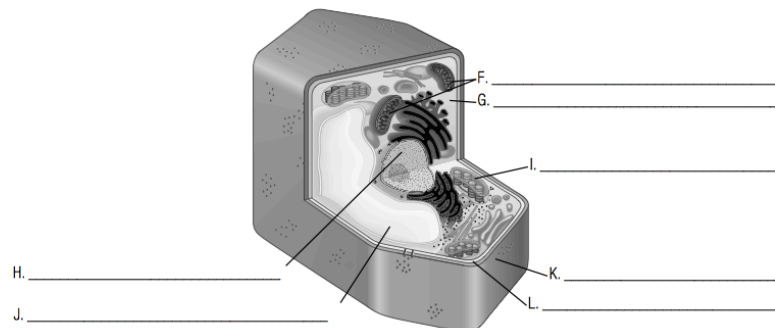
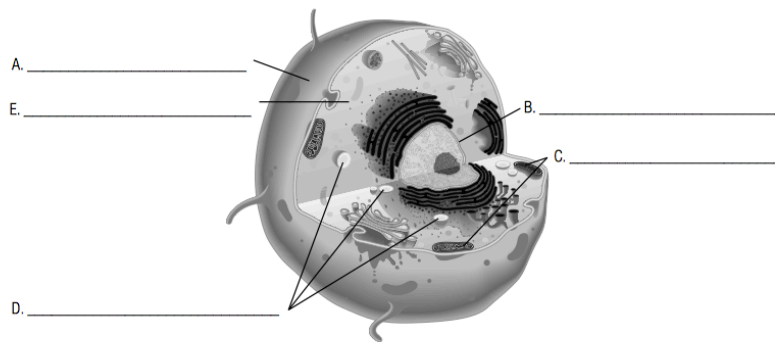
	Structure	Function
A		
B		
C		
D		



10. Animal cells do not have chloroplasts. Explain why.

11. Compare and contrast the processes of cellular respiration and photosynthesis.

12. Identify the follow cells as either a plant or animal cell and then label the organelles.



13. Summarize the 3 key points of the cell theory.

14. What is the difference between a prokaryotic and eukaryotic cell? Give an example of each.

15. Describe one difference between bacteria and viruses.

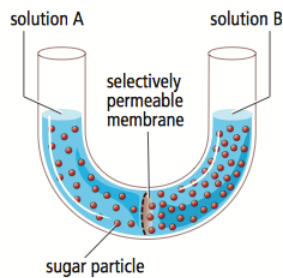
16. What process causes water to enter and leave the cell?

17. Diffusion vs. Osmosis

a. How are diffusion and osmosis similar?

b. How are they different?

18. Which way will the water flow in the diagram below? Explain.



19. Why are vacuoles usually larger in plant cells than in animal cells?

20. During class someone peels an orange. Why will everyone in the class not smell the orange at the same time? Explain and draw a diagram.

21. You have just bought a tropical fish for your freshwater aquarium. Unfortunately, you do not realize it is a saltwater fish. Using your knowledge of osmosis, explain why this fish will not survive in your aquarium.

22. The tables below show the results of an experiment to find the effect of osmosis on potato cells. Two cubes of potato were weighed and placed in purified water, and another two cubes were weighed and placed in salt water. The mass of each potato cube was then measure every 15 minutes for an hour.

Time (min)	Salt Water		
	Cube 1 Mass (g)	Cube 2 Mass (g)	Average Mass (g)
0	59	60	
15	58	58	
30	50	55	
45	50	54	
60	50	53	

Time (min)	Purified Water		
	Cube 1 Mass (g)	Cube 2 Mass (g)	Average Mass (g)
0	51	52	
15	51	52	
30	52	53	
45	53	54	
60	55	53	

a. Calculate the average mass of the potato cubes in purified water and the average mass of the potato cubes in salt water for each time interval. Write your results in the last column of each table.

$$\text{Average Mass} = (\text{Cube 1 Mass} + \text{Cube 2 Mass}) \div 2$$

b. What happened to the mass of the potato cubes in purified water? Why?

c. What happened to the mass of the potato cubes in salt water? Why?