Science 8

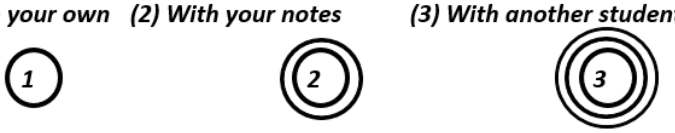
Cell Theory 4 Practice Quiz

Name:
Date:
Block:

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

(1) On your own (2) With your notes (3) With another student



Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

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

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

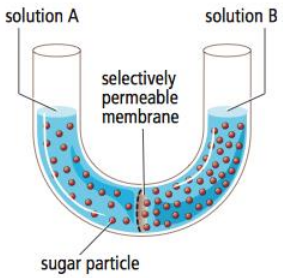
3. Describe one difference between bacteria and viruses.

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

5. Diffusion vs. Osmosis
    a. How are diffusion and osmosis similar?

    b. How are they different?

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



7. 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.

8. 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.

9. 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.

Average Mass = (Cube 1 Mass + Cube 2 Mass) ÷ 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?