

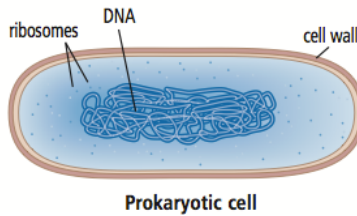
- | |
|---|
| <ol style="list-style-type: none">1. Cell Theory2. Diffusion & Osmosis |
|---|

Cell Theory

1. The cell is the _____.
2. All organisms are composed of _____.
3. All cells from _____.

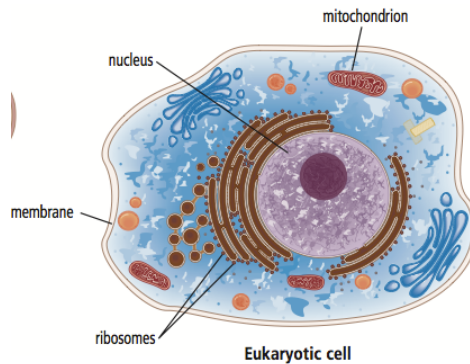
Prokaryotic Cells

-
-
- Ex:



Eukaryotic Cells

-
-
- Ex:



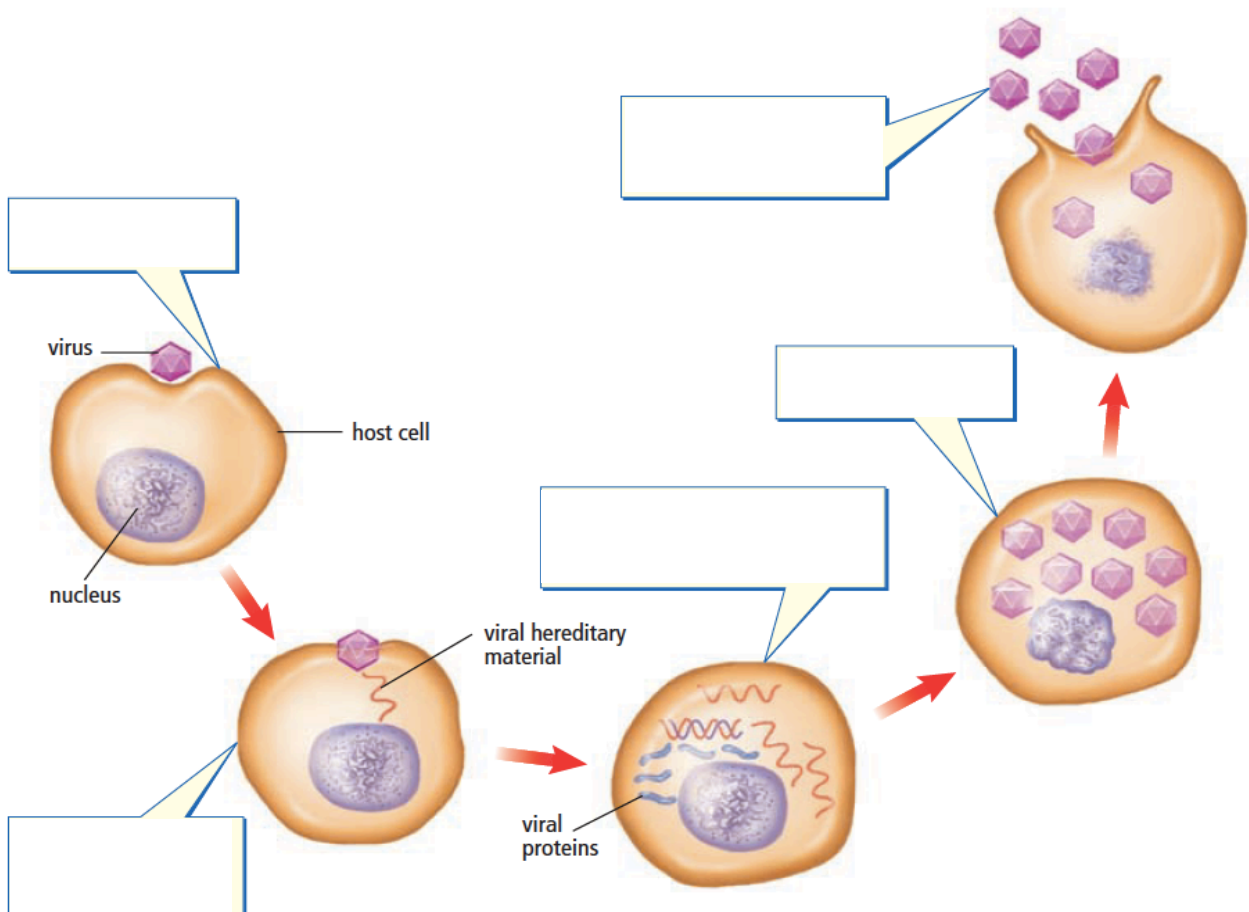
Prokaryotic Cells - Bacteria!

-
- Harmful:
- Helpful:
- Three different shapes:
 - 1.
 - 2.
 - 3.



Viruses

-
-
-
- A virus inserts its DNA into the nucleus of the host cell and “tricks” the cell into making new virus particles.



Inside a cell

Vocabulary	
bacteria	living thing
cell theory	mitochondria
cell membrane	organelle
cell wall	prokaryotic
chloroplasts	nucleus
cytoplasm	vacuoles
eukaryotic	viruses

Use the terms in the vocabulary box to fill in the blanks. Each term may be used only once. You will not need to use all the terms.

1. A(n) _____ is a cell structure in which functions are carried out to ensure the cell's survival.
2. Each cell is surrounded by a _____ that separates the interior of the cell from its surroundings.
3. Within the cell is a jelly-like substance called _____.
4. The _____ is the organelle that controls all the activities within the cell.
5. The _____ are the energy producers in the cell.
6. _____ are temporary storage compartments that sometimes store waste.
7. The _____ is a tough, rigid structure that surrounds the cell membrane and protects the cell.
8. The _____ trap the energy from the Sun and change it into chemical energy.
9. Plant and animal cells are examples of _____ cells.
10. _____ cells are cells that do not have organelles with membranes around them.
11. _____ are examples of prokaryotic cells that can cause disease.
12. _____ are examples of non-living things that are able to reproduce.

True or false?

Read the statements given below. If the statement is true, write “T” on the line in front of the statement. If it is false, write “F” and rewrite the statement to make it true.

1. ____ The cell is the basic unit of life.

2. ____ All organisms are composed of only one cell.

3. ____ Animal cells use chloroplasts to trap the Sun’s energy.

4. ____ Prokaryotic cells are cells that are surrounded by a cell wall.

5. ____ Eukaryotic cells are cells that are surrounded by a cell membrane.



6. ____ Some bacteria cause diseases.

7. ____ Viruses are non-living things.

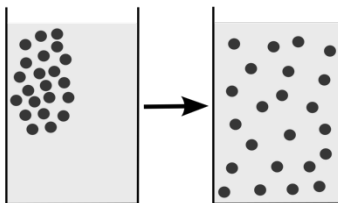
8. ____ Bacteria are an example of eukaryotic cells.

Diffusion & Osmosis

In a cell, particles move _____ the cell and also _____ of the cell.

Within the cell:	In and out of the cell:
	
Particles can move in _____. 	Particles move _____.
Size of particles _____. 	Size of particles _____ _____ _____.
Results in an _____ concentration _____ _____. 	Results in an _____ concentration _____ _____.

MOVEMENT OF PARTICLES IN GENERAL:



How would you describe the movement of particles?

DIFFUSION:

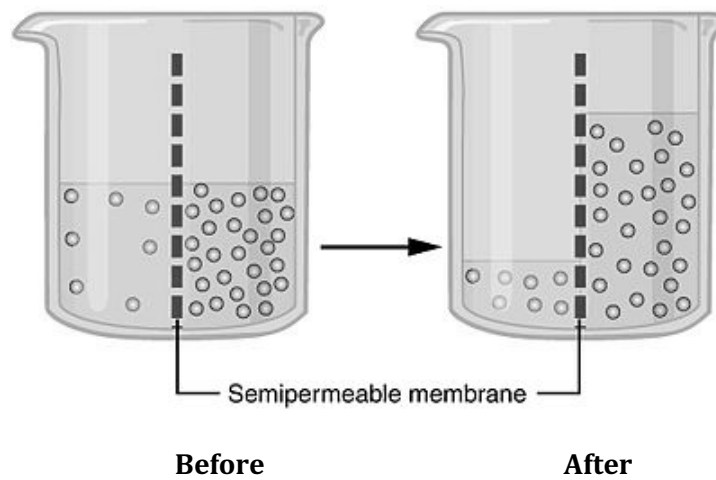
Provide 3 examples of diffusion in every day life:

1.

2.

3.

MOVEMENT OF WATER PARTICLES:



Look at the **BEFORE** picture.

- Which side has a higher concentration of particles?
- In order to even out the concentration of particles, which way must the water move?

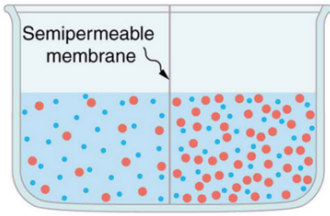
Look at the **AFTER** picture.

- Which side has a higher concentration of particles?
- Which side has more water?

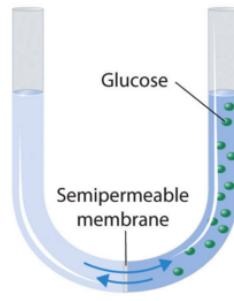
OSMOSIS:

For the pictures below, which direction do you think the water will move? Show your answer with an arrow.

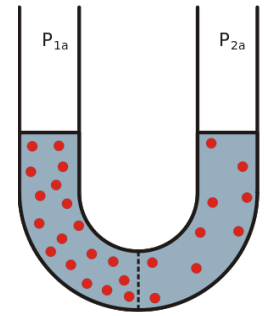
(1)



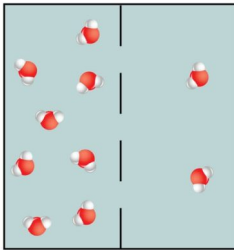
(2)



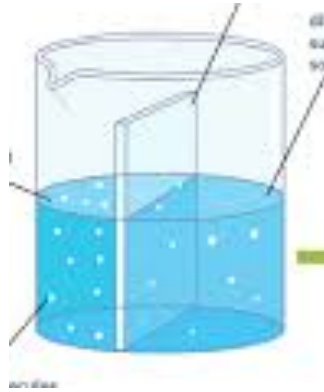
(3)



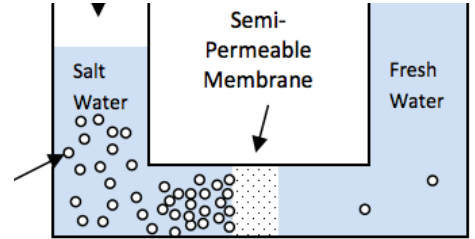
(4)



(5)



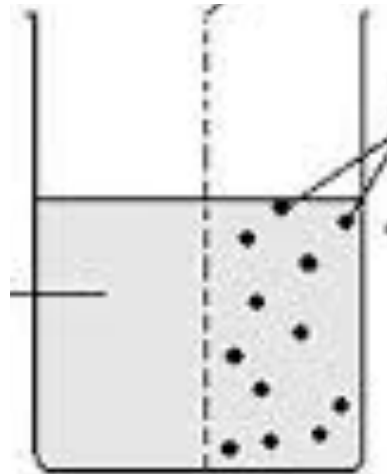
(6)



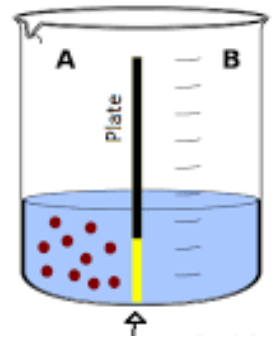
(7)



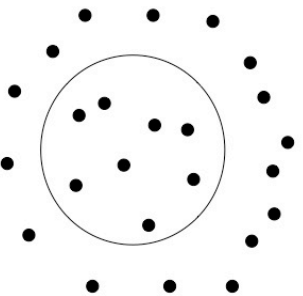
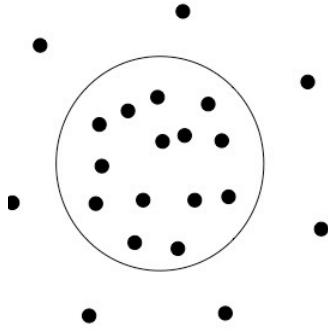
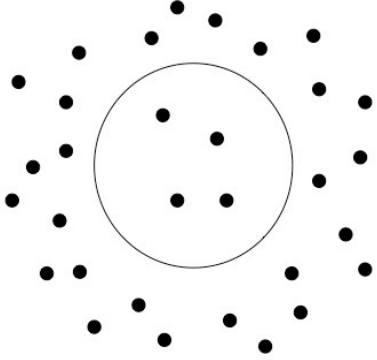
(8)



(9)



There are three situations where there is a movement of water particles through a membrane.

<p>1. Concentration inside and outside of the cell is the same.</p> <p>Inside = Outside</p>	<p>Before Osmosis</p>  <p>The diagram shows a central circle representing a cell. Inside the circle, there are 10 small black dots representing particles. Outside the circle, there are also 10 small black dots, arranged in a ring around the cell. This indicates that the concentration of particles is equal both inside and outside the cell.</p>	<p>After Osmosis</p>
<p>2. Concentration of particles inside the cell is higher than the solution outside the cell.</p> <p>Inside > Outside</p>	<p>Before Osmosis</p>  <p>The diagram shows a central circle representing a cell. Inside the circle, there are 15 small black dots. Outside the circle, there are only 5 small black dots. This indicates that the concentration of particles is higher inside the cell than outside.</p>	<p>After Osmosis</p>
<p>3. Concentration of particles inside the cell is lower than the solution outside the cell.</p> <p>Inside < Outside</p>	<p>Before Osmosis</p>  <p>The diagram shows a central circle representing a cell. Inside the circle, there are 5 small black dots. Outside the circle, there are 15 small black dots. This indicates that the concentration of particles is lower inside the cell than outside.</p>	<p>After Osmosis</p>