

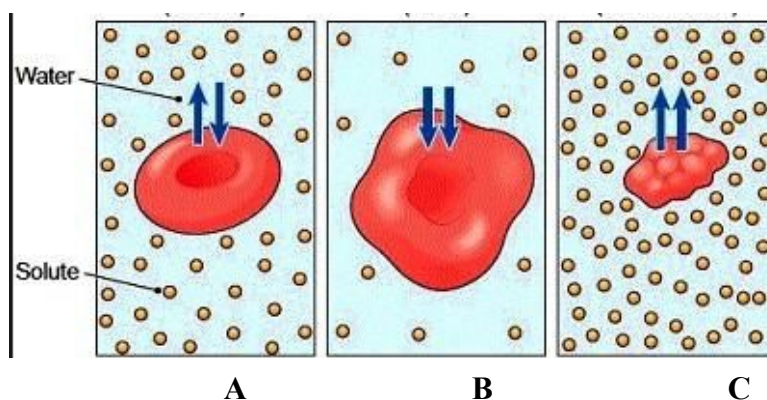
## DIFFUSION & OSMOSIS WORKSHEET

<b>Vocabulary</b>	
A selectively permeable membrane	Diffusion
Concentration	Osmosis

*Use your notes and the terms in the vocabulary box to fill in the blanks for the following 8 questions. Words may be used more than once.*

- 1) **Concentration** \_\_\_\_\_ refers to the amount of a substance in a given space.
- 2) **Diffusion** \_\_\_\_\_ is the movement of particles from an area of higher concentration to an area of lower concentration.
- 3) **A selectively permeable membrane** \_\_\_\_\_ allows some materials to pass through it but keeps other materials out.
- 4) **Osmosis** \_\_\_\_\_ is the diffusion of water molecules through a selectively permeable membrane.
- 5) **Diffusion** \_\_\_\_\_ moves wastes from inside a cell to outside a cell.
- 6) **A selectively permeable membrane** \_\_\_\_\_ can be compared to a window screen.
- 7) **Osmosis** \_\_\_\_\_ happens when water particles move from a place where their concentration is higher to a place where their concentration is lower.
- 8) **Diffusion** \_\_\_\_\_ is the process by which oxygen is moved into and carbon dioxide is moved into a cell.

*Use the following diagram to answer questions 9 to 11*






- 9) Which diagram shows an isotonic solution?
- 10) Which diagram shows a hypertonic solution?
- 11) Which diagram shows a hypotonic solution?

**A**

**C**

**B**

12) Match each **Term** on the left with the best **Descriptor** on the right. Each Descriptor may be used only once

Term		Descriptor	
<b>E</b>	Concentration	A.	Moves oxygen into cells
<b>A</b>	Diffusion	B.	
<b>B</b>	Equal amount of water inside a cell as outside	C.	Allows some substances through
<b>D</b>	More water outside a cell than inside	D.	
<b>C</b>	Selectively permeable membrane	E.	Amount of a substance in a certain place
<b>G</b>	Osmosis	F.	
<b>F</b>	More water inside a cell than outside	G.	Moves water into and out of cells

13) Explain what happens if you give a plant too much fertilizer.

**Fertilizer would pull water out of the root cells (osmosis). Root cells would become dehydrated, shrivel up and die.**

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14) You have just bought a tropical fish for your freshwater aquarium (no salt). Unfortunately, you do not realize it is a saltwater fish (lives in and is isotonic to salt water). Using your knowledge of osmosis, explain why this fish will not survive in your aquarium.

**Fish has more solute than the fresh water in the aquarium. The aquarium is a hypotonic solution. Water would move into the fish's cells (osmosis), they would swell up and eventually burst killing the fish.**

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