NAME:_____ DATE:_____

DIFFUSION, OSMOSIS AND ACTIVE TRANSPORT

Indicate whether the following information refers to Diffusion, Osmosis, and Active Transport.

	Diffusion	Osmosis	Active Transport
A substance moves from an area of low concentration to an area of high concentration.			
Can happen in dead cells.			
A substance moves and becomes more evenly spread out.			
The movement does not use energy and is caused by the random movement of individual particles.			
The movement requires energy from respiration.			
Only water is involved in this type of movement.			
Water moves from a less concentrated solution to a more concentrated solution.			

2. Choose a word from the box at the bottom of the page to fill in the gaps in the sentences below. You can use words once, twice or not at all.

In animals, oxygen ..... into cells across cell membranes to be used in ..... Carbon dioxide ..... out of cells.

In plants, carbon dioxide diffuses into cells to be used in .....

Water enters the roots of plants by ..... Water moves into cells through ..... permeable membranes, which allow small molecules, such as water, to pass through, but not large molecules.

Plants use a process called ..... to move minerals such as nitrates into root cells. This requires .....

diffuses	photosynthesis	osmosis	
active transport	energy	partially	respiration

Indicate TRUE or FALSE after each statement below.

a. Osmosis is the movement of water and sugars. _____

b. Diffusion is the movement of substance from a high concentration. _____

c. Both diffusion and osmosis need lots of energy to occur. _____

d. Osmosis requires a partially permeable membrane. _____

e. A partially permeable membrane lets all size substances through. _____

3. Do the following statements refer to DIFFUSION or OSMOSIS?

a. Shaun's plant looked dead but when he watered it, it sprang right back up.

_____

b. The girl sitting two rows ahead of you put on too much perfume this morning.

_____

c. Yum! Something smells good. The neighbours are cooking on the grill!

_____

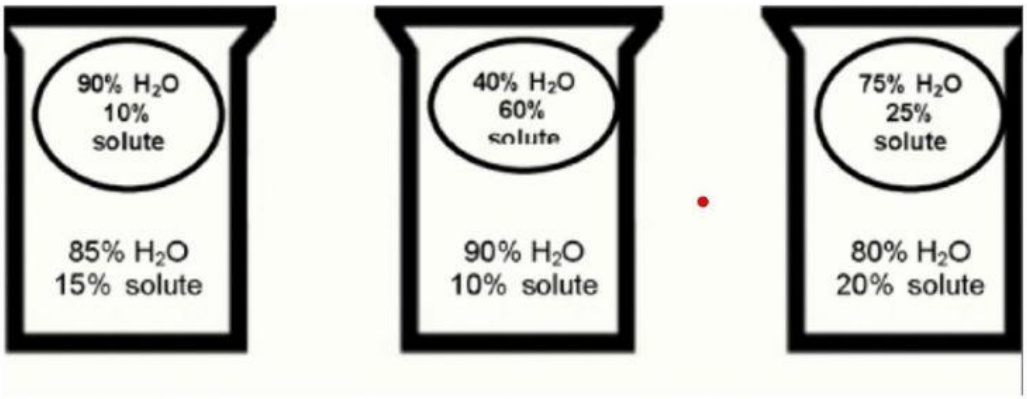
d. You put raisins in a glass of water, and they plump up. _____

e. Ronald has his stinky shoes off again, and you can tell from the next room.

_____

4. Below, the circles represent animal cells placed in beakers containing solutions of different concentrations.

Indicate whether the solution in the beaker is HYPOTONIC, HYPERTONIC or ISOTONIC when compared with the cytoplasm solution in the cells and if water will ENTER or LEAVE the cell.



Solution
In beaker _____ _____ _____

Movement
Of water _____ _____ _____