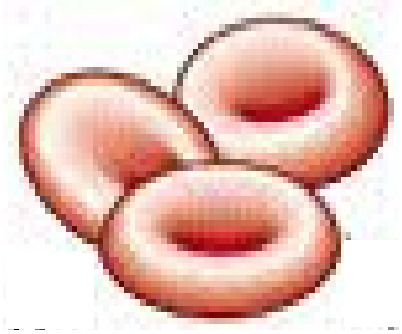	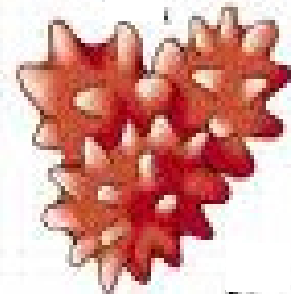	
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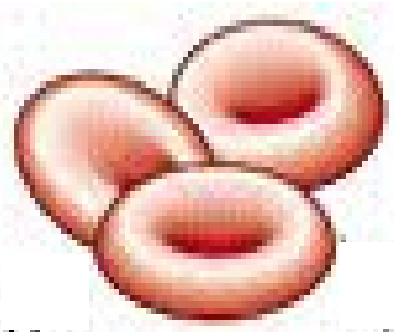	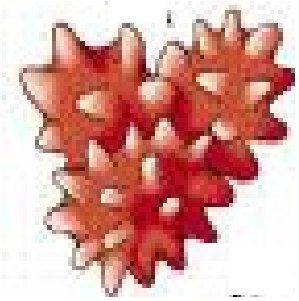	
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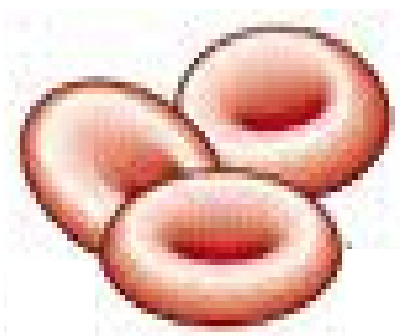
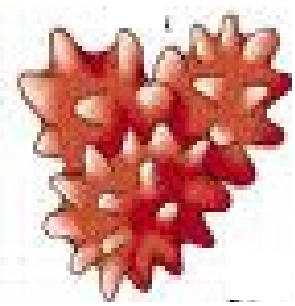
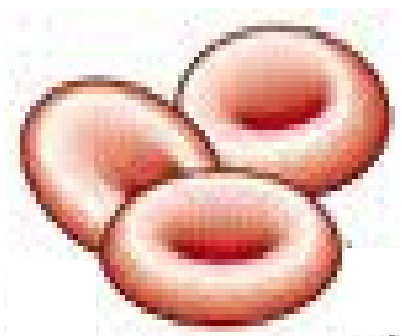
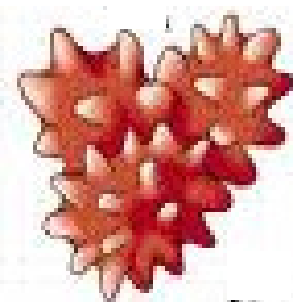
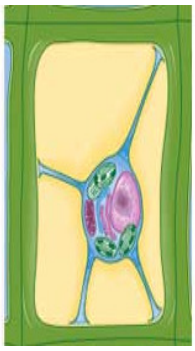
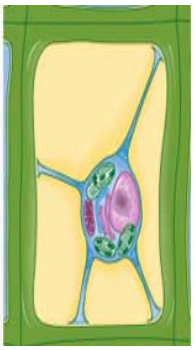
		
Normal	**Shrink**	**Swell/ Burst**
		
Normal	**Shrink**	**Swell/ Burst**

		
Normal	**Plasmolyzed**	**Turgid**
		
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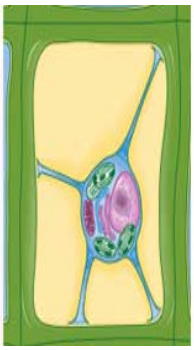
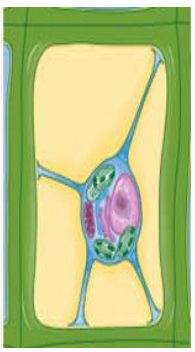
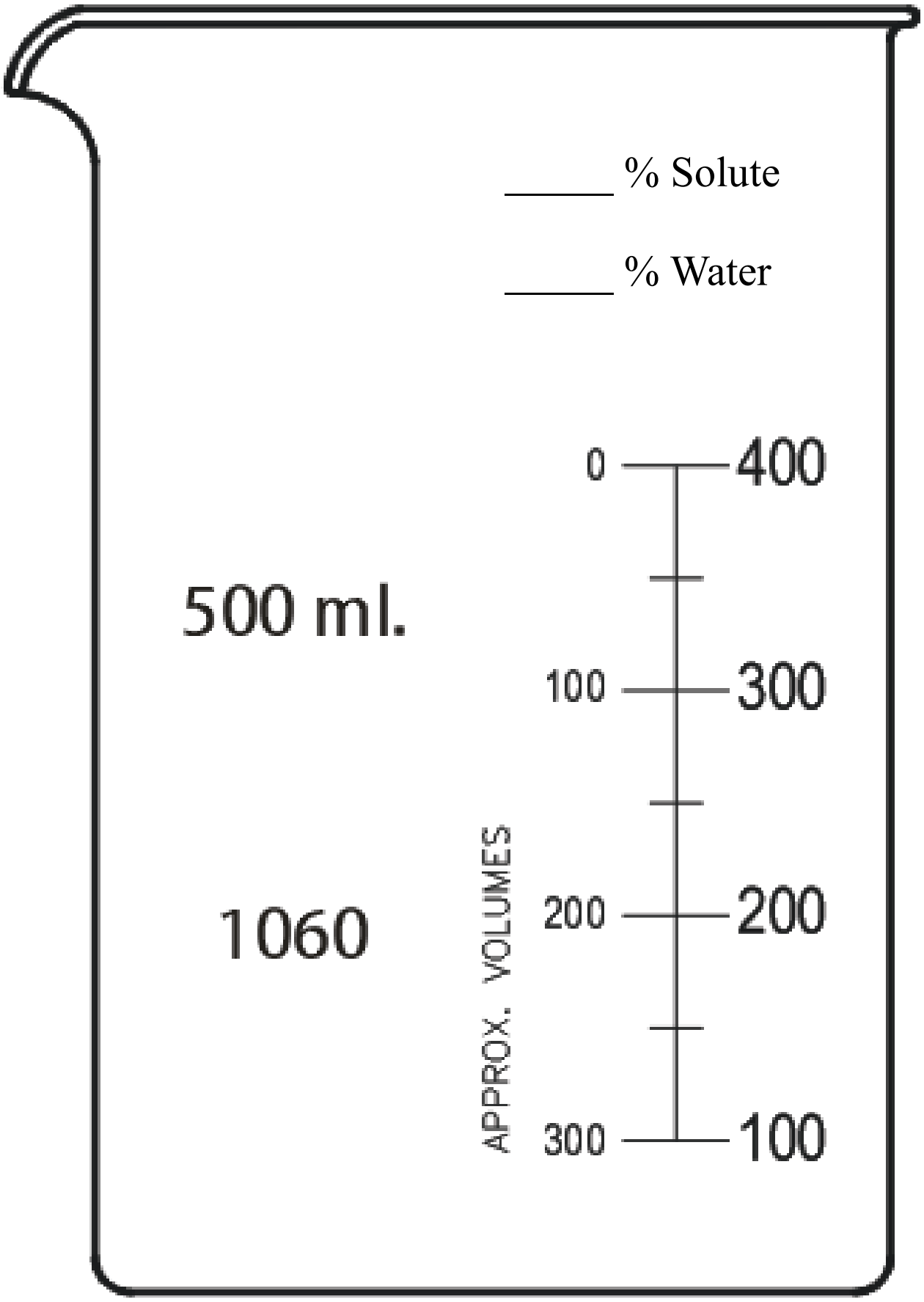
		
Normal	**Plasmolyzed**	**Turgid**
		
Normal	**Plasmolyzed**	**Turgid**

		Original Red Blood Cell (Animal) 25% Solute 75% Water
		Normal Red Blood Cell (Animal) 25% Solute 75% Water
		Normal Red Blood Cell (Animal) 25% Solute 75% Water
		Normal Red Blood Cell (Animal) 25% Solute 75% Water

		Original Plant Cell 25% Solute 75% Water
		Normal Plant Cell 25% Solute 75% Water
		Normal Plant Cell 25% Solute 75% Water
		Normal Plant Cell 25% Solute 75% Water


_____ % Solute
_____ % Water
500 ml.
1060
APPROX. VOLUMES
0
400
100
300
200
200
300
100

Name _____ Period _____ Date _____

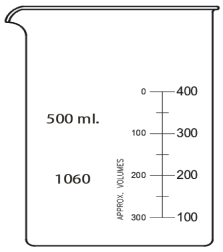
Answer Sheet Cell Transport Manipulative

Beaker A:

This beaker contain a solution that is 25% solutes and 75% water. Cell membrane is permeable to both solutes and water, meaning that both are able to freely cross the cell membrane.

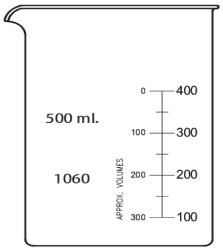
1. Beaker _____ % Solute, _____ % Water

   Cell _____ % Solute, _____ % Water
2. The percent of water is higher in the (*beaker, cell, equal*)
3. The percent of solutes is higher in the (*beaker, cell, equal*)
4. The cell is in a (*hypertonic, hypotonic, isotonic*) solution.
5. Water will move (*into, out of, both*) the cell?
6. Solutes will move (*into, out of, both*) the cell?
7. Will the overall shape of the cell (*stay the same, increase, or decrease)*?
8. Display the correct new cell on your beaker.
9. Will (*diffusion, osmosis, or facilitated*) transport occur?



Original
____% Solute
____% Water

Draw cells shape in beaker



Final

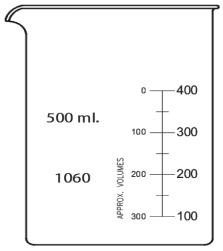
Draw cells shape in beaker

Beaker B:

This beaker contain a solution that is 16% solutes and 84% water. Cell membrane is permeable to both solutes and water, meaning that both are able to freely cross the cell membrane.

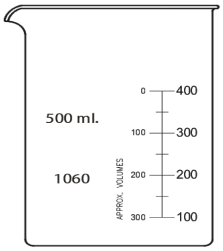
1. Beaker _____ % Solute, _____ % Water

   Cell _____ % Solute, _____ % Water
2. The percent of water is higher in the (*beaker, cell, equal*)
3. The percent of solutes is higher in the (*beaker, cell, equal*)
4. The cell is in a (*hypertonic, hypotonic, isotonic*) solution.
5. Water will move (*into, out of, both*) the cell?
6. Solutes will move (*into, out of, both*) the cell?
7. Will the overall shape of the cell (*stay the same, increase, or decrease)*?
8. Display the correct new cell on your beaker.
9. Will (*diffusion, osmosis, or facilitated*) transport occur?



Original
____% Solute
____% Water

Draw cells shape in beaker



Final

Draw cells shape in beaker

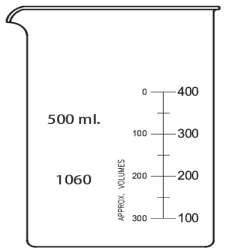
Name _____ Period _____ Date _____

Beaker C:

This beaker contain a solution that is 45% solutes and 65% water. The cell membrane is **impermeable** to water. This means that only solutes can cross the cell membrane.

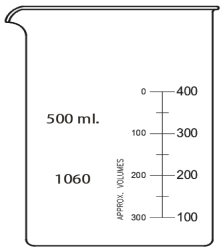
1. Beaker _____ % Solute, _____ % Water

   Cell _____ % Solute, _____ % Water
2. The percent of water is higher in the (*beaker, cell, equal*)
3. The percent of solutes is higher in the (*beaker, cell, equal*)
4. The cell is in a (*hypertonic, hypotonic, isotonic*) solution.
5. Water will move (*into, out of, neither*) the cell?
6. Solutes will move (*into, out of, neither*) the cell?
7. Will the overall shape of the cell (*stay the same, increase, or decrease)*?
8. Display the correct new cell on your beaker.
9. Will (*diffusion, osmosis, or facilitated*) transport occur?



Original
____% Solute
____% Water

Draw cells shape in beaker



Final

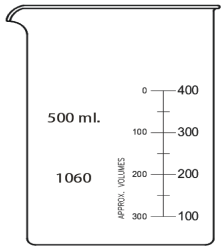
Draw cells shape in beaker

Beaker D:

This beaker contain a solution that is 16% solutes and 84% water. The cell membrane is **impermeable** to solutes. This means that only water can cross the cell membrane.

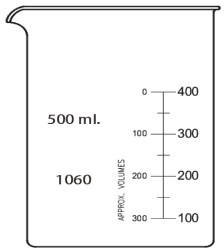
1. Beaker _____ % Solute, _____ % Water

   Cell _____ % Solute, _____ % Water
2. The percent of water is higher in the (*beaker, cell, equal*)
3. The percent of solutes is higher in the (*beaker, cell, equal*)
4. The cell is in a (*hypertonic, hypotonic, isotonic*) solution.
5. Water will move (*into, out of, neither*) the cell?
6. Solutes will move (*into, out of, neither*) the cell?
7. Will the overall shape of the cell (*stay the same, increase, or decrease)*?
8. Display the correct new cell on your beaker.
9. Will (*diffusion, osmosis, or facilitated*) transport occur?



Original
____% Solute
____% Water

Draw cell shape in beaker



Final

Draw cells shape in beaker