# Cell Transport Review Worksheet

Complete the table by checking the correct column for each statement:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Isotonic solution</th>
<th>Hypotonic solution</th>
<th>Hypertonic solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes a cell to swell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doesn’t change the shape of a cell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Causes osmosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Causes a cell to shrink</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Match the term with its correct description:

- a. energy
- b. facilitated diffusion
- c. endocytosis
- d. passive transport
- e. active transport
- f. exocytosis
- g. carrier protein
- h. channel protein

______ Transport protein that provides a tube-like opening in the plasma membrane through which particles can diffuse
______ Is used during active transport but not passive transport
______ Process by which a cell takes in material by forming a vacuole around it
______ Particle movement from an area of higher concentration to an area of lower concentration
______ Process by which a cell expels wastes from a vacuole
______ A form of passive transport that uses transport proteins
______ Particle movement from an area of lower concentration to an area of higher concentration
______ Transport protein that changes shape when a particle binds with it

Match the term with its correct description:

- a. transport protein
- b. active transport
- c. diffusion
- d. passive transport
- e. osmosis
- f. endocytosis
- g. exocytosis
- h. equilibrium

______ The diffusion of water through a cell membrane
______ The movement of substances through the cell membrane without the use of cellular energy
______ Used to help substances enter or exit the cell membrane
______ When energy is required to move materials through a cell membrane
______ When the molecules of one substance are spread evenly throughout another substance to become balanced
______ A vacuole membrane fuses (becomes a part of) the cell membrane and the contents are released
The cell membrane forms around another substance, for example, how the amoeba gets its food. When molecules move from areas of high concentration to areas of low concentration.

Label the diagrams of cells using the following terms: diffusion, active transport, osmosis, equilibrium. The arrows show the direction of transport. You may use the terms more than once!

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**Osmosis Practice Activity**

Osmosis is the diffusion of water from an area of high concentration to an area of low concentration. Only water moves in osmosis! The diagrams below show the concentration of water and salt inside the cell and the concentration of water and salt surrounding the cell. Complete the sentences below by comparing the concentration of the water inside the cell and the concentration outside the cell.

1. 
   
   ![Diagram 1](image1)
   
   a. Water will flow ___________ (into the cell, out of the cell, in both directions).
   
   b. The cell will ___________ (shrink, burst, stay the same).

2. 
   
   ![Diagram 2](image2)
   
   a. Water will flow ___________ (into the cell, out of the cell, in both directions).
   
   b. The cell will ___________ (shrink, burst, stay the same).
3. a. Water will flow __________ (into the cell, out of the cell, in both directions).
   b. The cell will __________ (shrink, burst, stay the same).

4. At which solution of concentration gradient is each cell diagram? (Hypotonic, Hypertonic, Isotonic)
   a. ________________
   b. ________________
   c. ________________

5. This diagram is moving from a high to a low concentration:
   MOVEMENT OF WATER MOLECULES

6. Using a transport protein to move particles across the membrane:

7. Describe the processes occurring in the following pictures: