Transport Through Membranes

Complete the concept map on transport of materials through membranes. Use these words or phrases one or more times: *simple diffusion, energy, higher concentration, lower concentration, osmosis, passive, facilitated diffusion.*

1. which requires
2. transport proteins
3. to move materials from a region of
4. which requires
5. no energy such as in
6. example
7. example
8. which move materials from a region of
9. to a region of
Chapter 8

Cellular Transport and the Cell Cycle

In your textbook, read about osmosis: diffusion of water.

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>1. Causes a cell to swell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Doesn’t change the shape of a cell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Causes osmosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Causes a cell to shrink</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In your textbook, read about passive transport and active transport.

For each item in Column A, write the letter of the matching item in Column B.

Column A

1. Transport protein that provides a tubelike opening in the plasma membrane through which particles can diffuse

2. Is used during active transport but not passive transport

3. Process by which a cell takes in material by forming a vacuole around it

4. Particle movement from an area of higher concentration to an area of lower concentration

5. Process by which a cell expels wastes from a vacuole

6. A form of passive transport that uses transport proteins

7. Particle movement from an area of lower concentration to an area of higher concentration

8. Transport protein that changes shape when a particle binds with it

Column B

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