Notes: 8.L.5.1

**Selectively Permeable**: Allows some things to pass through

**Permeable:** Allows nothing to get through

Draw a permeable substance and a selective permeable substance.

**Diffusion**: Moves from an area of high concentration to a low concentration

Draw Figure 23 on page 396 from textbook.

**Osmosis**: Diffusion of water molecules through a selectively permeable membrane. Cells need water.

Many cellular processes depend on osmosis.

Osmosis is when water molecules by diffusion move from an area where they are highly concentrated through the cell membrane to an area of less concentration.

Draw Figure 24 on page 397

Passive Transport: Movement of dissolved materials without using cellular energy.

Active Transport: Movement through cell membrane using cellular energy – cell uses its own energy. This is done using Transport proteins which move the substance across.

Draw Figure 25 on page 398

Answer the following questions:

1. Use diffusion to explain what happens when you drop a sugar cube into a mug of hot tea.
2. Describe how water molecules move through the cell membrane during osmosis.
3. A selectively permeable membrane separates solution A and B. The concentration of water molecules in Solution Be is higher than that in Solution A. Describe how the water molecules will move.
4. How is active transport different from passive transport?
5. Explain why transport proteins require energy to function in active transport.