**Questions to answer:**

1. How does the second law of thermodynamics allow for diffusion of substances?
2. How is active transport possible, since it contradicts the tendencies of the second law of thermodynamics?
3. Diagram one complete cycle of the Sodium-Potassium pump.  Is this active or passive transport?
4. Is it possible for a solution to be both hypertonic and hypotonic?  Why or Why not?
5. How do large molecules get taken in to or removed from the cell?

**Things you should make sure you understand:**

**(feel free to ask questions about them in class)**

* The similarities and differences between simple diffusion, facilitated diffusion, and active transport.
* Where cells get the energy to power active transport.
* The relationship between osmosis and tonicity.
* The adaptive strategies of animal, plant, and protist cells for dealing with the tonicity of their environments.