LS11 CELLULAR PROCESSES STUDY GUIDE

Movement across a membrane:

1. Be able to define diffusion, osmosis, equilibrium, concentration gradient, selectively permeable, tonicity, facilitated transport, forms of activity transport.
2. What materials can pass through a membrane via passive transport?
3. What is the difference between diffusion and osmosis?
4. What 2 things are needed for osmosis to occur?
5. What happens to a cell when placed in a hypertonic solution? Why?
6. Describe a form of active transport. Why does it require energy?
7. Why would cells need active transport?
8. Why are cells so small?
9. What adaptations do some cells have to optimize SA/volume?

Photosynthesis

1. What is the chemical formula for photosynthesis?
2. Compare Light Dependent and Light Independent reactions in terms of location where they occur, requirements (reactants), end products.

Cellular Respiration

1. Define aerobic, anaerobic, cellular respiration,
2. What organisms use cellular respiration?
3. What is the net gain of cellular respiration?
4. What is necessary (reactants)?

Fermentation

1. Describe the two forms of fermentation
2. when / what type of an organism would use them?