Study Guide for Scope 7L2B

1. Know the levels of organization (fill in the blank, you will need to fill in a few)
   1. cell -> tissue ->organ ->organ system -> organism
   2. Population -> Community ->Ecosystem
2. Know why cells cannot get too big
   1. Surface to volume ratio- The cell would not be able to get enough food through the cell membrane
3. Know that prokaryotic cells are also called bacteria
4. Know the differences between prokaryotic and eukaryotic cells(multiple choice)
5. Know the organelles and their functions (multiple choice)
6. Know why trees can stay upright and not fall over (hint: it’s part of their cells) – Cell wall is rigid
7. Know the difference between active and passive transport (multiple choice)(be able to understand the process on a picture)
   1. Active Transport requires ATP (energy) because it pushes against the flow from an area of low concentration to an area of high concentration
   2. Passive Transport does NOT require ATP (energy) because it goes from an area of high concentration to an area of low concentration
8. Know the difference between endocytosis and exocytosis
   1. Endocytosis brings larger materials in to the cell
   2. Exocytosis removes larger materials from the cell
9. Know the definition of osmosis and diffusion and the difference between them
   1. Osmosis – type of diffusion where water moves through the cell membrane
   2. Diffusion - movement of particles from an area where their concentration is high to an area where concentration is low
10. Know the process of photosynthesis (what goes in and what comes out)
11. Know the process of cellular respiration (what goes in and what comes out )(fill in the blank) or