Review of Concepts Taught:

Go back over your notes, the materials available on the website <http://sharpescience.weebly.com>,

and your materials in your binder and textbook to review the following concepts in depth. You will be given practice questions daily on these topics in prep for your mid-term.

1. Introduction to Biology
   1. Six characteristics of life
      1. Be able to grow and develop
      2. Be able to adapt to the environment
      3. Be able to respond to the environment
      4. Be able to reproduce fertile offspring
      5. Be able to obtain and use nutrients
      6. Be composed of a cell or cells
2. Scientific Method
3. Biomolecules or Organic Compounds
   1. Carbohydrates
   2. Lipids
   3. Proteins
   4. Nucleic Acids
4. Cells
   1. Prokaryotic Cell
      1. Draw and label parts of bacteria
   2. Eukaryotic Cell
      1. Fungi, animal. Plant, and protists
      2. Draw and label, compare and contrast plant and animal cell
   3. Cell specialization (different jobs of cells)
   4. Cell communication (why important to communicate, hormone regulation, protein involvement in chemical reaction)
5. Energy production in plant and animal cells
   1. Cellular respiration
      1. Formula (reactants/products, balanced)
      2. Stages (how much energy produced and where takes place)
      3. Aerobic (36 ATP) and anaerobic (2 ATP)
   2. Photosynthesis
      1. Formula (reactants/products, balanced)
      2. Where it takes place in plant
      3. Know the terms stoma, xylem (vascular tissue) and phloem (allow plant to grow tall)
      4. Plant types, plant anatomy, and importance of plants
   3. Be able to compare and contrast photosynthesis and cellular respiration
   4. Know what fermentation produces and the use for the process
6. Cellular transport
   1. Cell membrane (lipid layer composition)
   2. Main structure that maintains homeostasis
   3. Body temperature, pH level, water balance (what would happen if they get out of balance?)
   4. High body temp denatures enzymes
   5. pH level is maintained by buffering agents
   6. water balance (active and passive transport)