Movement and Nutrition in Cells Study Guide
Science 6 – Ch. 3 Lesson 3

1. diffusion – the movement of molecules from areas of higher to lower concentration; diffusion occurs within cells as well as in gases
2. passive transport – the movement of molecules through a cell membrane without the use of energy
3. osmosis – the diffusion of water through a cell membrane
4. cell membrane – a cell's outer covering, which give the cell shape and helps control materials that move in and out of the cell
5. equilibrium – balance, such as an equal concentration of water molecules, on both sides of a cell membrane
6. respiration – the process where energy in a sugar molecule is released
7. fermentation – the process of respiration without oxygen
8. active transport – movement of material through a cell membrane with the use of energy, molecules move from an area from lesser concentration to higher concentration
9. photosynthesis – the food-making process that uses sunlight to produce sugar
10. producer – in takes in water and carbon dioxide and changes them into sugar and oxygen
11. yeast – one-celled organism that during fermentation break down sugar to produce carbon dioxide and alcohol
12. a living cell – the basic unit of life, it is made up of 70 to 95 percent water
13. molecule – a group of tightly bonded atoms that acts like a single particle, the molecules are in constant motion

Reproduction and Growth
3.4 Study Guide

1. sexual reproduction – when new organisms are produced from two parents
2. asexual reproduction – when new organisms are produced from one parent
3. mitosis – the division of a nucleus into two while a cell is dividing into <u>two identical cells</u>; mitosis ends when the cytoplasm divides and two new cells are formed
    a. interphase – the stage where a cell spends most of its cycle; chromosomes make copies of themselves
    b. prophase – membrane around the nucleus disappears
    c. metaphase – chromosome pairs line up along the middle of the cell
    d. anaphase – chromosomes split apart and travel to opposite sides
    e. telophase – the cytoplasm divides and two new cells are formed
4. egg – the female sex cell; human egg cell has 23 chromosomes
5. sperm – the male sex cell; human sperm cell has 23 chromosomes
6. meiosis – the process in which the nucleus of a sex cell divides twice
7. fertilization – the process of an egg and a sperm joining
8. zygote – a fertilized egg cell
9. cell cycle – time of <u>growth</u> and time of <u>dividing</u> of a cell
10. life cycle – the stages all organisms go through
11. human body cell – contains 46 chromosomes
12. German scientist, Walther Fleming, used dye to observe the phases of mitosis. He placed the phases in sequence.