**Muscular System Study Guide**

* Know the three types of muscle tissue, whether or not they are voluntary or involuntary, have striations (or not), and where they are located.
* Know the functions of the muscular system.
* Know the 4 characteristics of muscle tissue.
* What two structures attach muscles to bone?
* What is a muscle cell called?
* What is the cell membrane of a muscle fiber called?

* What makes up the thin and thick filaments?

* What are myofibrils made up of?

* Know the differences between epimysium, perimysium, and endomysium, and where each is located.

* Know the parts of a muscle in the correct order (muscle flow chart).

* What is the sliding-filament theory?
* What is the difference between atrophy & hypertrophy?
* Know the parts of a neuromuscular junction.
* What makes up a motor unit?
* Know the difference between the origin & insertion of a muscle.
* Know the difference between an agonist, synergist, and antagonist.
* What is a sarcomere?
* Why do your muscles burn during strenuous exercise?

* Know the difference between slow-twitch & fast-twitch muscle fibers and what types of activities would be best suited for each type of fiber.

* Know the difference between isotonic, isometric, concentric, and eccentric contractions.

* Be able to identify how various muscles are named.
  + Example – Biceps femoris - # of heads/divisions and location

* Know the steps and important molecules used in muscle contraction & relaxation.

* Know the function of the following muscles (if they contract, what happens?):  
  + Obicularis occuli-
  + Obicularis oris-
  + Biceps brachii-
  + Triceps brachii-
  + Rectus femoris-
  + Deltoid-
  + Biceps femoris-
  + Gluteus maximus
  + Rectus abdominis
  + Flexor carpi radialis
  + Extensor carpi ulnaris