SECTION 1.3: THE MUSCULAR SYSTEM MAKES MOVEMENT POSSIBLE *(pages B22-B27 & Brainpop.com)*

Muscles Perform Important Functions

Every movement of your body occurs because of muscles. Some movement is under your control, some movement happens automatically.

Movement:

- **Muscular System** – The muscles of the body that, together with the skeletal system, function to produce movement.
- Muscles are made of "muscle fibers."
- Muscles usually work in pairs. One side pulls (contracts) while the other side relaxes. (Muscles do not push; they only pull.)

Maintaining Body Temperature:

- When muscles contract they release heat.
- Shivering helps the body stay warm by releasing heat from muscles.

Maintaining Posture:

- Your muscles help you stand upright even though gravity is pulling you down.

Your Body Has Different Types of Muscles

Voluntary Muscles – Muscles that allow you to make movements that you choose to make. (You can choose to run or pick up a book or wave your hand.)

Involuntary Muscle – Automatic "reflexes" that you do not control. (Examples: Blinking when you sneeze, your heart functions, muscles that move food through your intestines, etc.)

Three different types of muscle: Skeletal, Smooth, Cardiac

Skeletal Muscles – Muscles that are attached to your skeleton. These are voluntary muscles.

Smooth Muscle – Muscle that is inside some organs (such as the intestines and stomach). These are involuntary muscles.

Cardiac Muscle – Your heart. Muscles cause it to pump blood through your body. Your heart uses involuntary muscles.

Skeletal Muscles and Tendons Allow Bones to Move

Tendons – Strong tissues that connect skeletal muscles to bone.

Muscles and tendons work together to allow your body to move.

Muscles Grow and Heal

Muscles need to be used to stay strong and healthy.

Newborn babies have muscles that are very weak, but their muscles get stronger as they use their body more and more.

Exercise can make your muscles grow larger, caused by faster cell reproduction.

Sore muscles are caused by chemicals that build up after too much exercise which causes damage to muscle fibers; also by over-stretched or torn muscle fibers. The body removes the injured cells and replaces them with healthy new ones.