**Chapter 27.5 Muscles**

**27.5 Muscles move the skeleton by contracting.**

* How do muscles and bones move the body? What else in our body "moves?"

*Copy the list from slide 4 and add your own ideas*

| Move our bones |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

**Vocabulary**

Voluntary- under conscious control; you think about it and the somatic nervous system reacts

Involuntary- under unconscious control; you do not think about it and the autonomic nervous system controls functions

Striated- "striped" due to repeating bands of actin and myosin

Smooth- no bands of actin and myosin

**Structure of Muscle Tissues**

*(use the pear deck slides 5 & 6 and the vocabulary)*

| **Type** | **Describe structure of cells** | **Striated or Smooth** | **Location in body** |
| --- | --- | --- | --- |
| Skeletal Muscle |  |  |  |
| Smooth Muscle |  |  |  |
| Cardiac Muscle |  |  |  |

**Functions of Muscle Tissues**

| **Type** | **Voluntary or Involuntary** | **Response Time**  (slow, medium, fast) | **Fatigue rate**  (slow, medium, fast) | **Function in Body** |
| --- | --- | --- | --- | --- |
| Skeletal Muscle |  |  |  |  |
| Smooth Muscle |  |  |  |  |
| Cardiac Muscle |  |  |  |  |

* What is the structure of a skeletal muscle?
  + Vocabulary: use vocabulary terms from section 27.5 to fill in the blanks.
    - Tendon
    - Muscle fiber
    - Myofibrils
    - Sarcomere
    - Actin
    - Myosin

Skeletal muscles are attached to bones by a dense connective tissue called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Skeletal muscles are made of bundles of parallel \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and supplies of nerves and blood vessels.

Within the muscle bundles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which are long cylindrical muscle cells with multiple nuclei.

Muscle fibers are made of bundles of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. These have alternating bands of light and dark striations.

Within a myofibril are repeating units called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which are made of alternating fibers of actin and myosin.

The thin filaments in the sarcomere are made of twisted, ropelike proteins called \_\_\_\_\_\_\_\_\_\_\_\_.

The thick filaments in the sarcomere are made of thick proteins with bumps called heads. These

filaments are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.