

Muscular System Tour Lab

Name _____ Hour _____

Muscular System

There are more than _____ muscles in the Human Body!

Muscles are:

Needed for _____

Needed for _____

Needed for _____

Needed for _____

Cardiac Muscle

1. The muscle of the heart.

2. Involuntary (_____)

3. Works _____

4. Strongest _____ Draw the cardiac muscle on high power.

5. Only _____

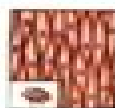
6. Some _____

A.D.A.M. Video clip: Exercise

- Weightlifting, pushups, and sprinting are forms of aerobic/anaerobic exercise? (circle one)
- Muscles fatigue (get tired) fastest with aerobic/anaerobic exercise? (circle one)

3 Types of Muscle

Identify the three types of muscle from the diagram:



Muscle

Muscle

Muscle

Smooth Muscle

1. The muscle of _____

2. Involuntary (_____)

3. Contract _____

4. Can remain _____

5. Usually _____

6. No stripes (striations)

A.D.A.M. Video clip: Exercise: not in the chart

Type of Muscle	Where Found	Voluntary / Involuntary
	Walls of body organs (stomach and intestines)	
cardiac		
	Attached to bones	

Skeletal Muscle

1. Move your bones.

2. Voluntary (_____)

3. Over _____

4. Long _____

5. Stripes _____

Draw the skeletal muscle on high power. Label striations.

Anatomy of a Muscle

Label:

Bone

Tendon

Myofibril

Cell Nuclei

Fascicle

Body of Muscle

Muscle Fiber

Which of these (above) is the muscle cell?

A.D.A.M. Video clip: Skeletal Muscle

- Which is larger, a muscle fascicle or a muscle fiber?
- Which is larger, a muscle fiber or a myofibril?

How a Muscle Works

- A skeletal muscle works by _____
- The muscle can shorten as much as _____
- Each muscle cell is made up of smaller _____
- The _____ are in contact with a nerve ending.
- The nerve releases a chemical called a _____
- The _____ stimulates the entire muscle to contract.

Label the parts of the diagram.



Muscle to Tendon to Bone

Tendons attach _____ to _____



Label the two diagrams:
Ligament, Tendon, Bone



Opposites Contract ... and relax

- Muscles work in _____
- While one muscle in the pair contracts the other must _____

Label all parts of the diagram.



Muscle Fatigue ... Weight Lifting

How long did you hold the book before fatigue got the better of you?
_____ minutes _____ seconds

Which arm felt the fatigue the most? (straight out or by your side)

Which muscles experienced the most fatigue? (circle one)
a) biceps b) triceps c) deltoids d) pectoralis major

Hint: you may want to check the stations with the labeled muscles.

Muscle Fatigue ... Too Tired to Sit

How long did you sit before your legs started to burn like crazy?

Muscle Fatigue ... To Beat or Not to Beat

How is your heart (cardiac) muscle different from your arm (skeletal)?

Muscular System Escience Labs Answers

Emilie Sanchez



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