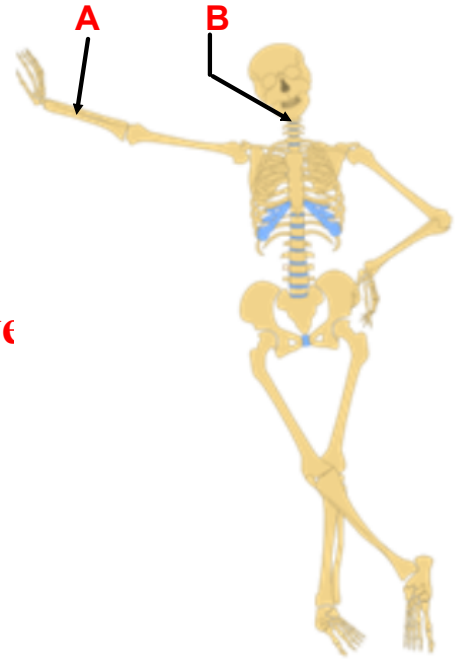
Review For Quiz: Skeletal and Muscular Systems

Types of Joints:
Name, describe locations, and movement for each of the 4 major joint types covered in class:

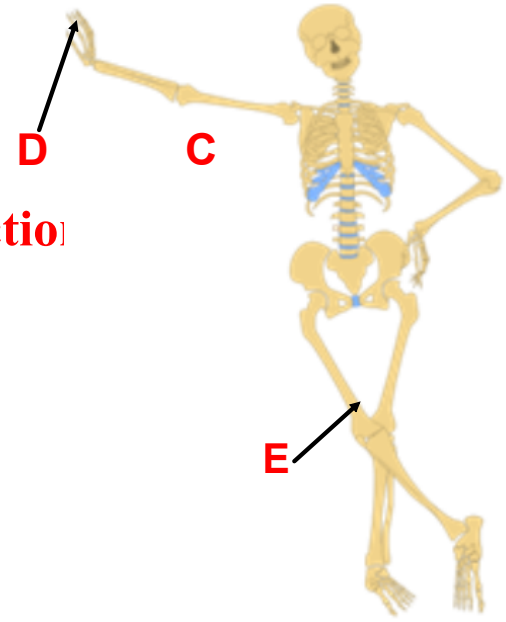
Pivot:
Locations:
A. Head/Vertebrae
B. 2 bones in forearm



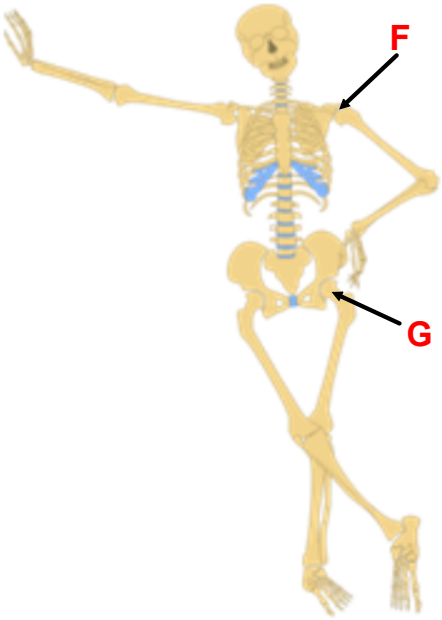
Describe movement:
1 bone rotates around/ove bone

Hinge:
Locations:
C. Elbow
D. Fingers
E. Knee

Describe movement:
Back & forth in 1 directio



Ball & Socket:
Locations:
F. Shoulder
G. Hip



Describe movement:
Full range of motion in all directions
Full circles, most movement

Gliding:
Locations:
H. Wrist
I. Ankle

Describe movement:
Bones glide past each oth movement.
2 directions well. Not as f & Socket

Muscle and Skeleton System Review

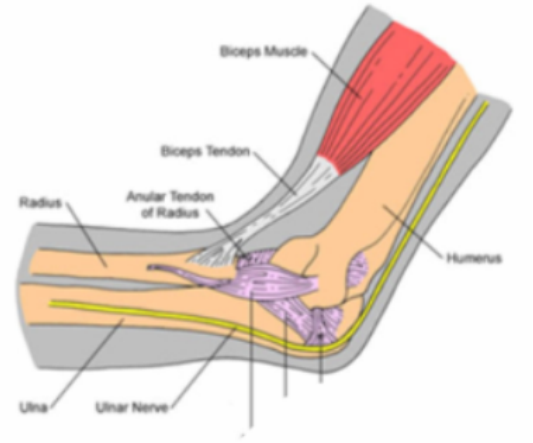
Muscles & Joints: Structures, Functions, Vocabulary

1. Define each term:
   a. Joint:

Any place 2 or more bones come together

ınect muscles to bones

nects bone to bone

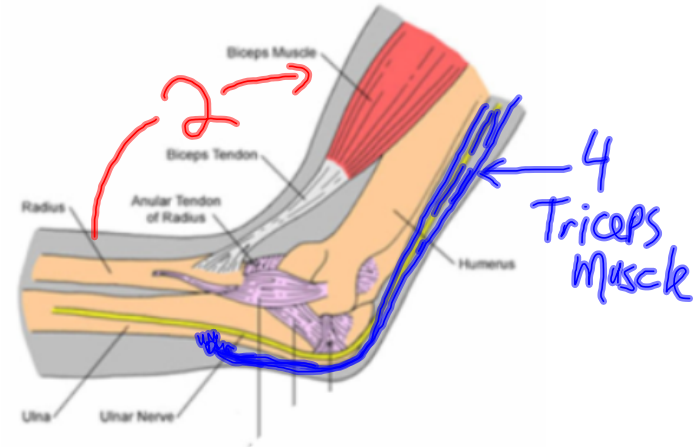


2. Draw an arrow showing what happens when the biceps contracts

3. Without a Triceps muscle, what CAN'T this arm do?

THe arm could not EXTEND (Straighten) without a Triceps muscle

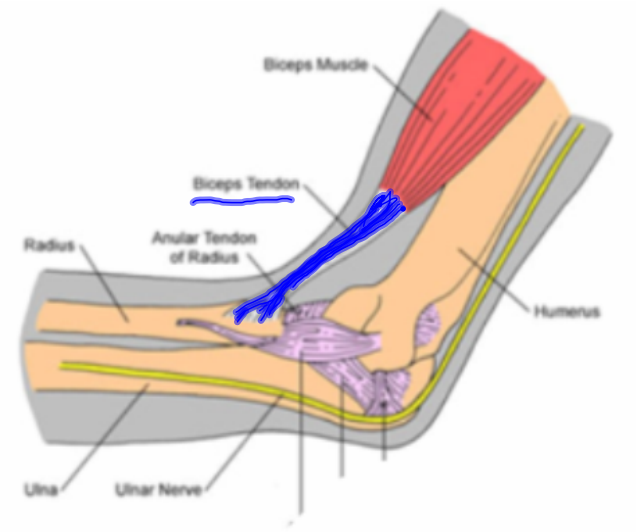
4. Draw in the Triceps muscle



5. Why is the structure called "Biceps Tendon" instead of "Biceps Ligament"?

It is called a TENDON because: **it connects the bicep muscle to the bone in the forearm**

It is NOT called a LIGAMENT because: **Ligaments connect BONE to BONE, and this connects muscle to bone**



Skeletal System Functions:

Shape & Support:

Define/Describe:

THe Skeletal System holds up all of your weight

Example/Explanation:

It passes your weight through your vertebrae--Femur--Lower leg--feet to the ground

Muscle and Skeleton System Review

Movement:

Define/Describe:

Skeletal muscles are attached to bones. When they contract, they move the bones.

Example/Explanation:

What other system relates to this function?

Muscular System

How did Inquiry 19's arm model show this function?

THe ropes represented muscles. When we pulled the rope, it acted like muscles contracting, pulling the bones to move them.

It also showed that Skeletal Muscles occur in pairs--
1 to flex, 1 to extend

Protection:

Define/Describe:

Cetain parts of the skeleton are designed to protect internal body parts from injury when you fall, or are hit by something

Example/Explanation:

How did Inquiry 19's vertebrae modes show this function?

THe pipe cleaner spinal cord was in the middle of the vertebrae, which protects it from injury

Give other examples of this function, including structure, and what it protects:

- THe Skull protects the brain

- THe rib cage protects the heart & lungs

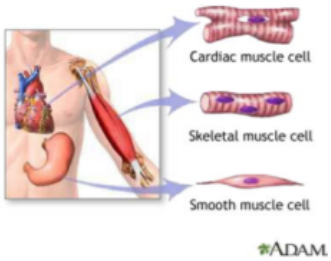
Making Blood Cells
Define/Describe:

Red & White blood cells, and platelets, are made inside of long bones

Example/Explanation:
What part of the bone does this?

The bone marrow, which is found in the middle of long bones, and in spongy bone

This function connects the Skeletal System to the **Circulatory** *system*



Cardiac Muscle:

Location(s): **Only in the Heart**

Circle one: Voluntary or **involuntary**

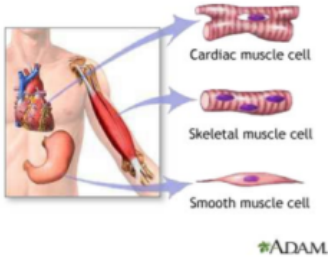
Other unique information:

Never fatigues-Beats from before birth until death

Striped like skeletal, but involuntary like smooth

Can beat without signal from brain

Muscle and Skeleton System Review



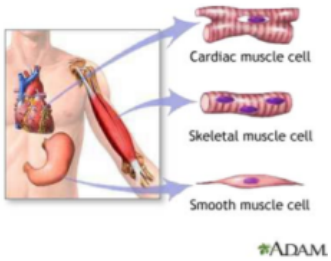
Skeletal Muscle:

Location(s): **Arms, Legs, neck, abdomen, etc.**

Circle one: **Voluntary** or involuntary

Other unique information:
Work by <u>PULLING</u> - not pushing

Occur in OPPOSITE PAIRS -
Like biceps (flexes) and triceps (extends)



Smooth Muscle:

Location(s): **Wrapping digestive organs, bladder**

Circle one: Voluntary or **involuntary**

Other unique information:
Most move things inside body through Peristalsis

What did Inq. 19 show us about Skeletal Muscles?

-Skeletal muscles attach to 2 bones

-Skeletal muscles move bones

-Muscles work when the pull, and do nothing when they push

-Skeletal muscles usually occur in pairs

What did Inq. 20 show us about muscle size and strength?

-Bigger muscles are not necessarily stronger muscles

-Many factors, including bone size, health/condition/tone of the muscle, influence muscle size

What did Inq. 21 show us about muscle fatigue?

-Skeletal muscles will show fatigue after constant use

-Muscles get sore because of fatigue. This is because of a build up of waste products

-Skeletal muscles are voluntary, so a person can voluntarily push them to do more