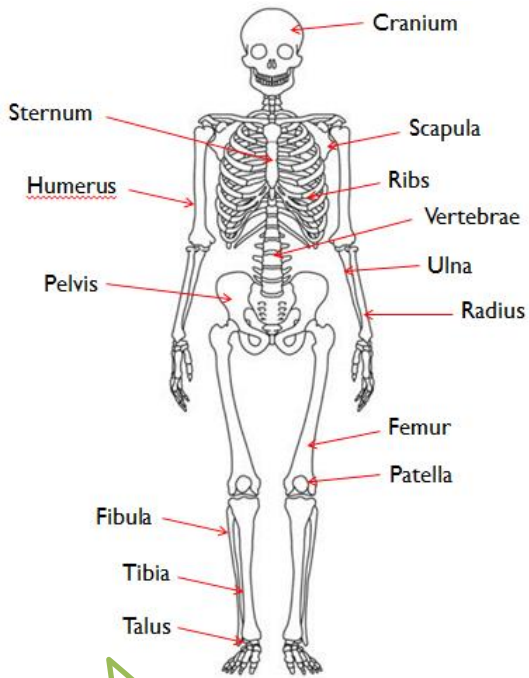


GCSE PE

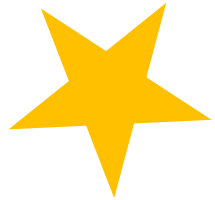
The human body and movement in physical activity and sport



Functions of the skeleton

Super Star Performers Make Mince Pies

- Support
- Shape
- Protection
- Movement
- Mineral storage
- Production



Identify the movement occurring at the **ball and socket** joint

Which bones form the major joints in the body?

Identify the movement occurring at the **hinge** joint in the arm...

Joint Capsule:

Tough tissue that surrounds the joint, supporting by ligaments to keep the joints in place

Synovial membrane

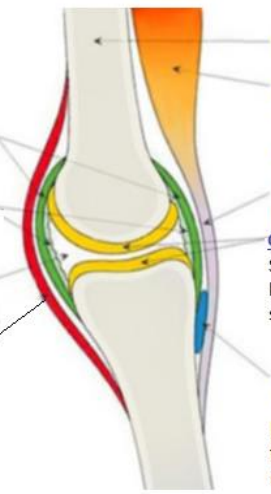
This produces synovial fluid to prevent friction at the joint

Joint cavity

This contains the synovial fluid to prevent friction at the joint

Ligament

Joins bone to bone



Bone

Muscle

Tendons

Attaches muscle to bone to allow movement

Cartilage

Spongy material at the end of each bone to provide a friction free surface

Bursae

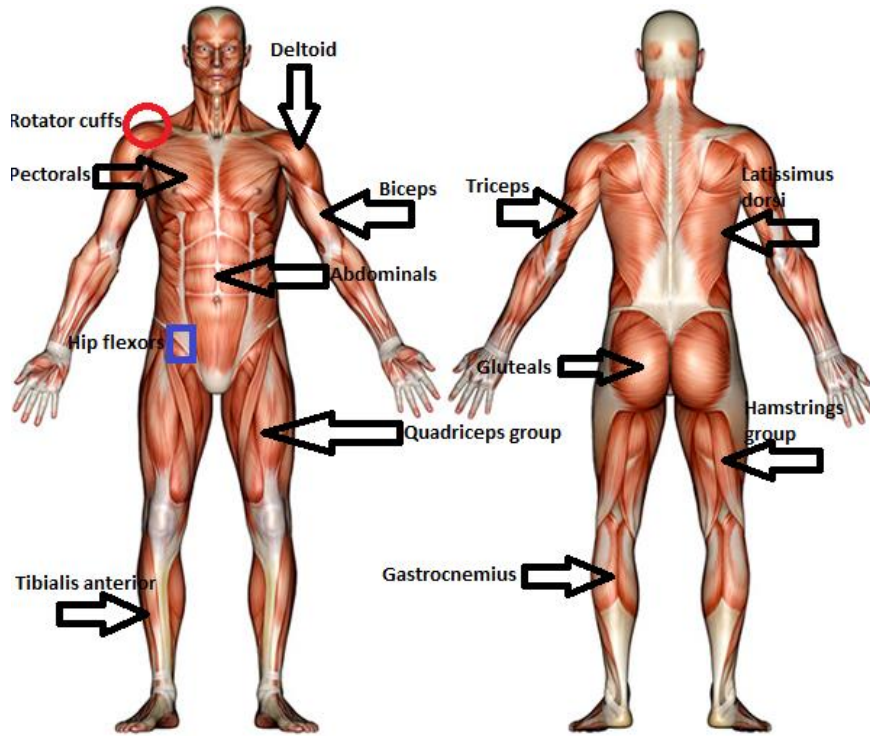
Fluid filled bag on the outside of the joint that helps reduce friction from movement of the tendons



Movement	Description
Flexion	Movement where angle between bones reduces
Extension	Movement where angle between bones increases
Abduction	Movement where limbs are moved away from the body
Adduction	Movement where limbs are moved back towards the body
Rotation	Turning a limb along its long axis
Plantar flexion	Movement at the ankle where the toes are pointed towards the ground
Dorsiflexion	Movement at ankle where the toes are pulled up towards the knee

GCSE PE

The human body and movement in physical activity and sport



Muscle Action

Phase 1 of a bicep curl

The bicep is the **prime mover/agonist** because it is the **contracting** muscle.

Phase 2 of a bicep curl

The bicep is the **antagonist** because it is the **relaxing** muscle.

The tricep is the **prime mover/agonist** because it is the **contracting** muscle.

wi: Isometric muscle contraction

Isotonic muscle contraction

Shortens as it contracts

Concentric contraction

Eccentric contraction

Lengthens as it contracts

Muscles stay the same length