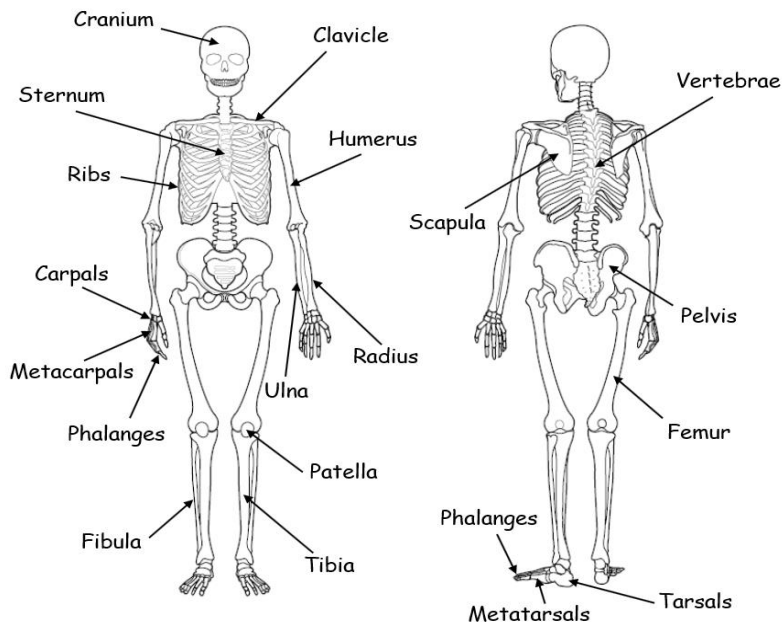


1.1.a. The structure and function of the skeletal system

Location of major bones:



Functions of the skeleton:

The skeleton has many functions that help your performance in sport. The functions you need to now are listed below:

- Support
- Posture
- Protection
- Movement
- Blood cell production
- Storage of minerals

Sporting Examples		
The ribs protect the vital organs such as the heart and lungs when getting tackled in rugby		The cranium protects the brain when heading the ball
Bones provide anchors for muscles to attach . Tendons attach muscles to bones. Muscles pull on bones to create movement		The skeleton provides shape. This helps you have a good posture . Posture is how you hold your body.
Platelets clot blood when we are cut to stop the bleeding		Movement happens at joints . Bones act as levers to create movement . The longer the levers the greater the force
White blood cells fight infection so we are fit to take part in physical activity		Red blood cells carry oxygen that is delivered to the working muscles during exercise
		Calcium and Phosphorus is stored in the bones to keep them strong

Types of movement at hinge/ball & socket joints:

Flexion	A bending movement that decreases the angle between body parts	Extension	A straightening movement that increases the angle between body parts
Abduction	The movement of a bone or limb away from the midline of a joint	Adduction	The movement of a bone or limb towards the midline of a joint
Rotation	A rotational movement around a joint or axis	Circumduction	Combination of flexion & extension, abduction & adduction.

Different joints allow different movements	Examples	Types of movement					
		Flexion	Extension	Abduction	Adduction	Rotation	Circumduction
Ball & socket	Hip & Shoulder	✓	✓	✓	✓	✓	✓
Hinge	Knee & Elbow	✓	✓	X	X	X	X

Types of synovial joint:

Type of synovial joint	Location	Articulating bones
Hinge	Knee	Femur, Tibia,
	Elbow	Humerus, Radius, Ulna
Ball & socket	Shoulder	Scapula, Humerus,
	Hip	Pelvis, Femur

Other components of joints:

Ligaments join bone to bone and stabilise joints. Strong ligaments can prevent injuries such as dislocation

Tendons join muscle to bone. They are needed when performing actions such as kicking, jumping and throwing

Cartilage covers the ends of bones. It helps cushion the joint and helps prevent wear and tear of the bones