

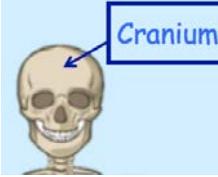
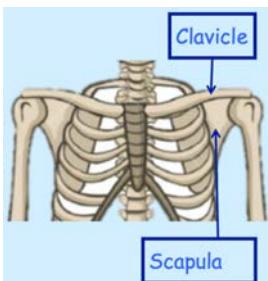
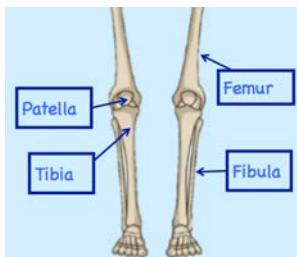
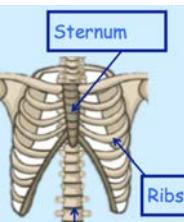
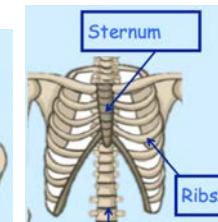
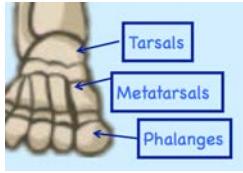
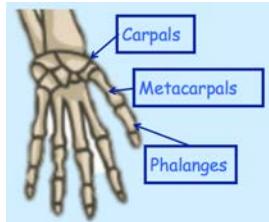
Skeletal System (1.1a)

Skeletal System (1.1a): Bones and functions

Functions of the skeleton:

- Shape and support
- Allows movement

- Blood production
- Stores minerals
- Protection of organs



Skeletal System (1.1a): Joints

- **Synovial Joint:** This is a freely movable joint where two or more bones articulate.
- **Tendons:** Connect muscle to bone and transmit muscular force to move bone.
- **Ligaments:** Connect bone to bone and keep joints stable.
- **Articular cartilage:** Protects the bones surface at joints by reducing friction and absorbing shock. Difficult to heal as no blood supply.
- **Articulating bones:** bones that move within a joint

Hinge Joints: (movement) flexion and extension

Knee: tibia + femur

Elbow: radius, humerus + ulna



Ball and socket joints: (movement) all movements

Hip: pelvis + femur

Shoulder: clavicle + scapula

Skeletal System (1.1a): Types of movement

Flexion: the decrease in angle around a joint, e.g. the preparation phase when the leg is drawn back before striking a football.



Extension: the increase in angle around a joint, e.g. the execution phase as the ball is released when shooting a basketball.



Abduction: movement away from the midline of the body, e.g. A swimmer moves their arms out to the side during butterfly.



Adduction: movement towards the midline of the body, e.g. Recovery leg kick action in breaststroke.



Rotation: when a bone turns about its longitudinal axis, e.g. during the backswing of a tennis serve.

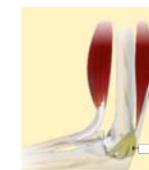


Circumduction: all movements combined to produce continuous motion.

Skeletal System (1.1a) Key Terms:

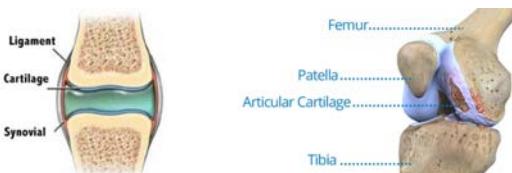
Ligaments:

- Attach bone to bone
- Stabilise joint
- Tough tissue



Tendons:

- Attach muscle to bone
- Transmit movement



Cartilage:

- Reduce friction
- Act as a shock absorber
- Difficult to heal as no blood supply



