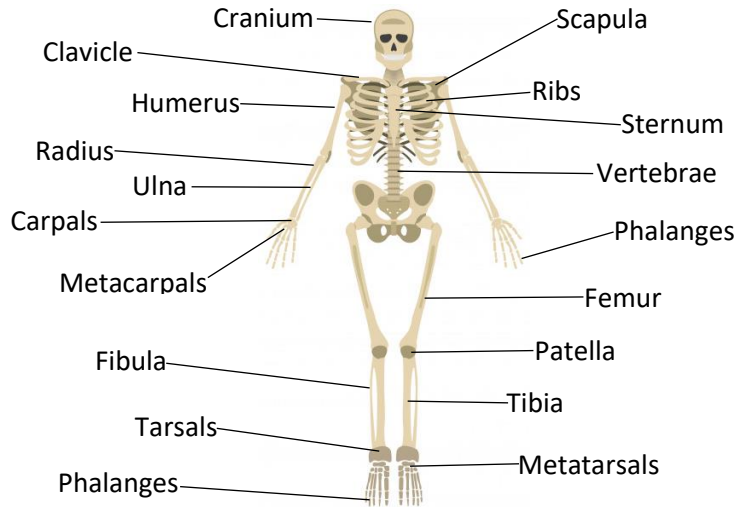


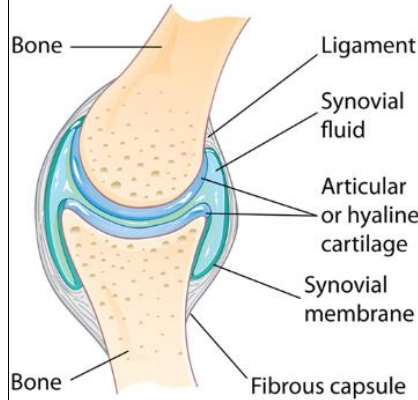
# GCSE Physical Education – The structure and functions of the skeletal system

## STRUCTURE OF THE SKELETAL SYSTEM A



## FUNCTION OF THE SKELETON B

- Movement** – the skeleton allows movement of the body as a whole and its individual parts. The bones act as levers and also form joints that allow muscles to pull on them and produce joint movements.
- Support** – the skeleton keeps the body upright and provides a framework for muscle and tissue attachment.
- Protection** – the bones of the skeleton protect the internal organs and reduce the risk of injury on impact. For example, the cranium protects the brain, the ribs offer protection to the heart and lungs, the vertebrae protect the spinal cord and the pelvis offers protection to the sensitive reproductive organs.
- Production of blood cells** – certain bones in the skeleton contain red bone marrow and the bone marrow produces red blood cells, white blood cells and platelets. Examples of bones that contain marrow are the pelvis, sternum, vertebrae and clavicle.
- Mineral storage** – the bones themselves are made of minerals and act as a mineral store for calcium and phosphorous, which can be given up if the body requires the minerals for other functions.
- Posture** – the skeleton provides the human shape and determines the height of a person.



## SYNOVIAL JOINT C

### Examples of a Synovial Joint

Ball & Socket – Hip and Shoulder  
Hinge – Knee and Elbow

### Cartilage

Cover ends of bones. Tough and flexible. Prevents friction/wear and tear/bones rubbing together. Produces synovial fluid. Act as a shock absorber.

### Tendons

Connect bone to muscle. Not elastic. Stabilise/anchor the muscle. Change in size, depending on muscle

### Ligaments

Connect bone to bone. Slightly elastic. Stabilise the joints during movement. Can absorb shock because of their elasticity.  
Help maintain correct posture and movement

## TYPES OF MOVEMENT D

<p><b>Flexion</b></p> <p>Decreasing the angle at a joint (bending)</p>	<p><b>Adduction</b></p> <p>Limbs moving towards the midline of the body.</p>	<p><b>Rotation</b></p> <p>The TWISTING of a body part about its single axis, as if on a pivot.</p>
<p><b>Extension</b></p> <p>Increasing the angle at a joint (straightening)</p>	<p><b>Abduction</b></p> <p>Limbs moving away from the midline of the body.</p>	<p><b>Circumduction</b></p> <p>The conical circular movement of a joint. It is a movement pattern that combines flexion, extension, adduction, and abduction</p>