Ken Stimpson GCSE Physical Education – The Skeletal System

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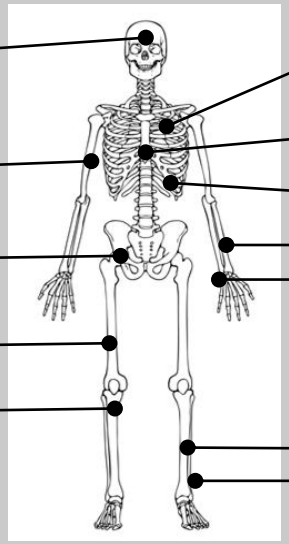
Structure of the skeletal system



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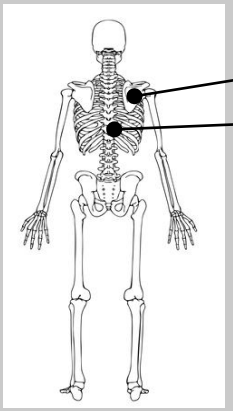
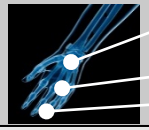
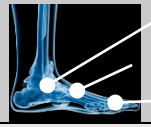


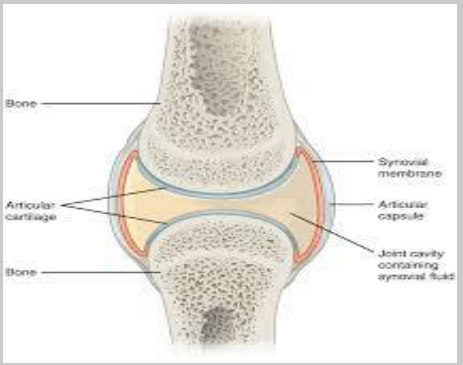




Synovial Joints

These are **freely movable** joints where the joint surfaces are covered in **cartilage**, they are connected by a fibrous tissue capsule (joint capsule) and lined with fluid (synovial fluid).

Common joints are hip and shoulder

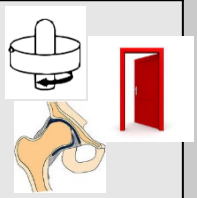


Function of the skeleton

- **Shape and Support** – posture
- **Movement** - muscle attachment & joint movement
- **Protection** of vital organs
- **Production** – platelets, red and white blood cells
- **Storage** - of minerals (calcium, phosphorus, iron, potassium)

Classification of joint

- Pivot (neck – atlas and axis)
- Hinge (elbow and knee)
- Ball and socket (hip and shoulder)



Connective tissue

Ligaments – attaches bone to bone to add joint stability.

Tendons – attaches muscles to bone and contributes to joint movement as a result of muscle contraction.

Cartilage:

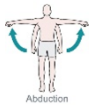
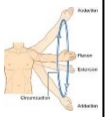
Used to reduce friction at a joint

Hyaline cartilage (articular) – on the ends of bones at a synovial joint to stop rubbing

White Fibro-cartilage – between bones as a shock absorber e.g. vertebrae, knee

Joint movements

Extended Knowledge

Flexion	Adduction	Rotation	Dorsi-Flexion (ankle joint)
Decreasing the angle at a joint (bending) 	Limbs moving towards the midline of the body. 	A twisting/turning action around a joint. 	When the toes are turned up to the body. 
Extension	**Abduction**	**Circumduction**	**Planter-Flexion (ankle joint)**
Increasing the angle at a joint (straightening) 	Limbs moving away from the midline of the body. 	A combination of flexion, extension, adduction & abduction. 	When the toes are pointed away from the body. 

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Term	Definition/notes/concept

Keywords: