

SKELETON, BONES & JOINTS

The human skeleton is made up of more than 200 bones which provide us...

- **Main functions:**

- **Support & framework.**

Our body needs to achieve a good posture and hold vital organs in place.

- **Protection.**

The SKULL protects the brain, the VERTEBRAL COLUMN protects the spinal cord and the RIB CAGE protects the heart and lungs.

- **Movement.**

Our muscles are attached to bones to cause movement and the skeleton is jointed which allows a wide range of movements.

- **Making blood cells**

Inside the bones marrow, red and white cells are produced.

SPORTS & EXERCISE help the development of the skeleton in young people, exercise can increase bone width density and strength but no effect on bone length.

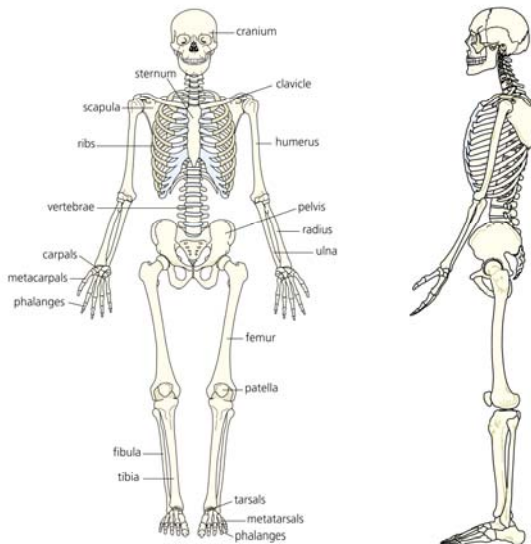
- **Types of bones:** - LONG BONES (femur) – SHORT BONES (metacarpals) – FLAT BONES (skull) – IRREGULAR BONES (vertebrae).

- **What are the main parts of our skeleton?**

How do we move?

The skeleton

The skeleton has 206 bones, held together at **joints** by strong fibres called **ligaments**. These are its main bones:

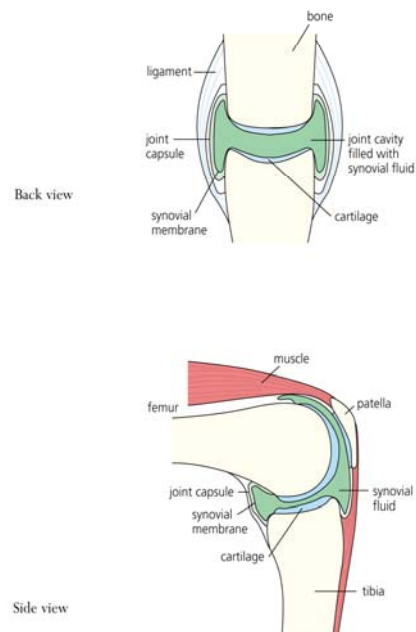


Our skeleton is divided into the axial skeleton and the appendicular skeleton:

AXIAL – (Shoulder girdle, Arms, Hip girdle & Legs)

APPENDICULAR – (Skull, Vertebral column, Sternum & Ribs)

The knee joint



Parts of a joint:

CARTILAGE (covers & protects bones head reduction friction).

SYNOVIAL FLUID (lubricates joints).

JOINT CAPSULE (holds & protects the bones together at the joint).

LIGAMENT (limits range of movement, prevent dislocation)

The **VERTEBRAL COLUMN** is also called the SPINE or SPINAL COLUMN and it is made up of 33 small bones called vertebrae divided into five regions (7 **cervical** vertebrae, 12 **thoracic** vertebrae, 5 **lumbar** vertebrae, 5 **sacral** vertebrae & 4 **coccyx**).

