

KNOWLEDGE ORGANISER

KS3 Cells and Organisation Knowledge Organiser

The Skeleton

The skeleton has several functions:

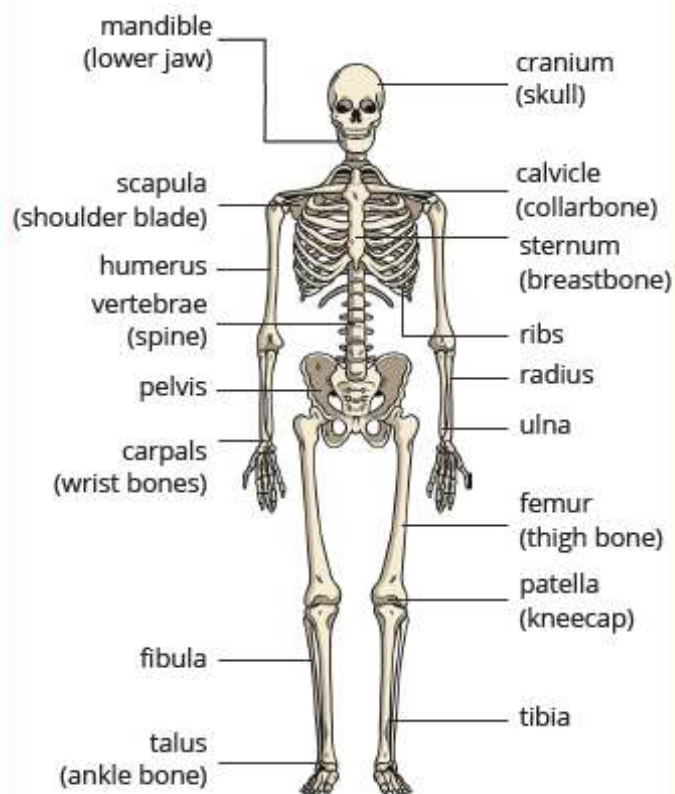
Support – The skeleton provides a frame to hold your body upright and keep your organs in place.

Protection - Bones are hard and strong to protect important organs such as the heart and the brain.

Movement - Your bones and muscles work together to allow your body to move.

Making blood cells – Some bones contain a soft tissue called bone marrow. Red blood cells and white blood cells are made in the bone marrow.

The adult body contains around 206 bones. Some are shown below:



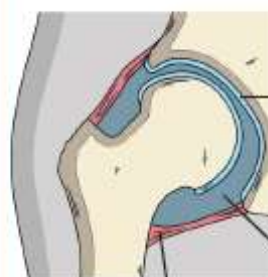
Joints

Joints are found where bones meet. Sometimes these joints are fixed but most joints are flexible to allow the body to move.

A **hinge joint** allows backwards and forwards movements. Knees and elbows are hinge joints.



A **ball and socket joint** allows movement in all directions. Shoulders and hips are ball and socket joints.



Cartilage is a strong, smooth tissue that covers the ends of the bones to protect them from damage.

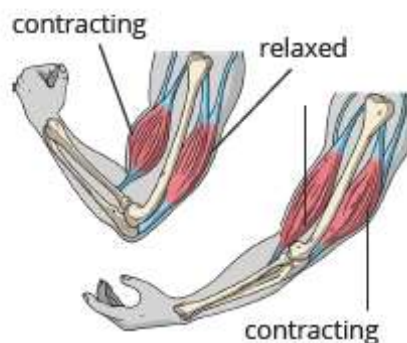
Ligaments hold the bones together.

Fluid in the joints keeps the cartilage slippery to reduce friction.

Muscles

Muscles can't push, they can only pull.

A pair of muscles that work together are called **antagonistic muscles**.



This combination of muscles, bones and joints making our bodies move is called **biomechanics**.