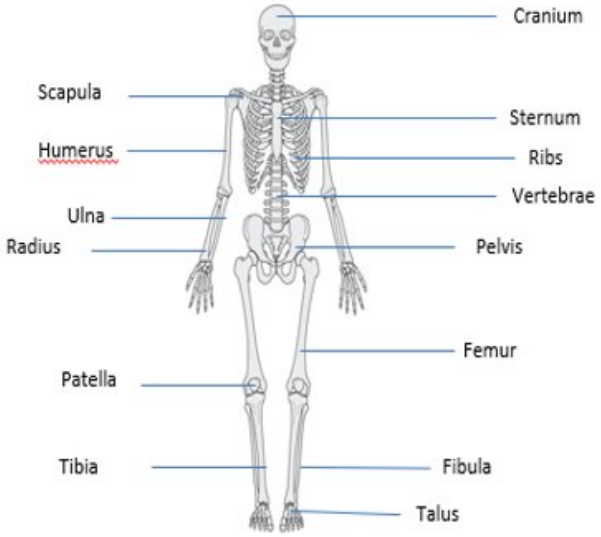
The structure and functions of the Skeletal System

Big idea: The body systems and their impact on physical activity.



Knowledge organiser – The skeleton

Types of Bones	
Flat	bones protect vital organs e.g. cranium protects your brain, ribs protect heart and lungs
Long	bones enable gross (large) movements e.g. femur, tibia and fibula in the leg which allow us to run, humerus, radius and ulna in arm which allows us to throw a ball.
Short	bones enable fine (small) movements e.g. fingers allowing you to spin a cricket ball.

Bones located at joints	**Elbow** = Humerus, Radius, Ulna
Head and Neck = Cranium and Vertebrae	**Hip** = Pelvis, Femur
Shoulder = Scapula and Humerus	**Knee** = Femur, Tibia, Patella
Chest = Ribs and Sternum	**Ankle** = Tibia, Fibula, Talus

Function of the Skeleton	
Support	The bones are solid and rigid. They keep us upright and hold the rest of the body – the muscles and organs – in place.
Movement	The skeleton helps the body move by providing anchor points for the muscles to pull against.
Structural shape and points for attachment	The skeleton gives us our general shape such as height and build. The skeleton also provides anchorage points for the muscles to attach via tendons, so when muscles contract movement occurs.
Protection	Certain parts of the skeleton enclose and protect the body's organs from external forces e.g. the brain is inside the cranium. This function is especially important in activities that involve contact. E.g. rugby, boxing.
Production of Blood Cells	The bone marrow in long bones and ribs produce red and white blood cells.
Mineral Storage	Bones store several minerals e.g. calcium, which can be released into the blood when needed.