

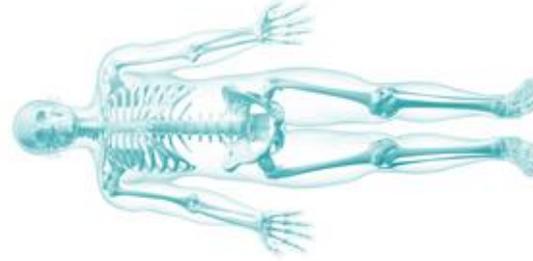
## Skeleton System Knowledge Organiser

1. Appendicular skeleton	126 bones which are located at the outer parts, e.g. Femur	10. Types of bone	<p><b>Irregular:</b> Movement, support, protection, e.g. Vertebrae</p> <p><b>Flat bones:</b> Protection and attachment sites for muscles, e.g. Ribs, Sternum, Scapula</p> <p><b>Long bones:</b> Act as levers for muscles and to provide support e.g. Humerus and Femur</p> <p><b>Short bones:</b> Provides shock absorption, flexibility, elasticity and movement</p>	17. Types of joints	<p><b>Fixed:</b> Those in your skull, are fixed and don't allow any movement.</p>
2. Axial Skeleton	80 bones which are located in the upper central part of the body, e.g. Ribs				<p><b>Slightly movable joints:</b> Other joints, such as those between the vertebrae in your spine, which are connected to each other by pads of cartilage, can only move a small amount.</p>
3. Vertebrae	Cervical(Neck)Thoracic (Chest)Lumbar (Lower back) Sacrum (pelvis)Coccyx (Tail bone)				<p><b>Synovial joints/freely:</b> They are movable joints containing a lubricating liquid called synovial fluid. Synovial joints are predominant in your limbs where mobility is important. Ligaments help provide their stability and muscles contract to produce movement, e.g Knee joint.</p>
4. Support	The body is shaped by the skeleton, provides a framework to support body structures	11.Types of movement	<p><b>Abduction:</b> Movement away from the mid-line of the body</p> <p><b>Adduction:</b> Movement towards the mid-line of the body</p> <p><b>Extension:</b> Straightening limbs at a joint.</p> <p><b>Flexion:</b> Bending the limbs at a joint</p> <p><b>Rotation:</b> A circular movement around a fixed point</p>	18. Articular Cartilage	This is the smooth, white tissue that covers the ends of bones where they come together at a joint. It allows the bones to glide over each other with very little friction.
5. Movement	Muscles need attachment points to work against . The bones within the body are used as levers in which one muscle contracts in order for another to extend.				
6. Protection	Bones play an important role in protecting the body from harm. E.g. Rib cage	12. Ligaments	Connect bones to other bones to form joints.	19. Cartilage	A firm connective tissue
7 Shape	The skeleton gives the body shape, which changes with growth.	13. Tendons	Bone to muscle		
8. Storage of Minerals	The bones also act as storage areas in which minerals that are much needed for your body are stored within the bones such as calcium.	14. Joints	<p><b>Where two of more bones meet!</b></p> <p><b>Pivot:</b> Vertebrae</p> <p><b>Hinge:</b> Humerus and Ulna</p> <p><b>Saddle:</b> Metacarpal and Carpal</p> <p><b>Gliding:</b> Clavicle</p> <p><b>Condyloid:</b> Metacarpals and phalanges</p> <p><b>Ball and socket:</b> Femur and hip</p>	20. Joint capsule	Holds bones in place
9. Blood Cell production	Within the long bones red and white blood cells are produced. Red cells carry oxygen around the body and white blood cells fight infection			15. Hamstrings	Provides stability at the knee joint and movement through flexion and extension.
		16.Femur, Tibia and Fibula	Provides stability and support to the knee joint.	22. Synovial fluid	This fluid circulates around the patella, tibia, and femur. It helps lubricate and provide nutrients to the joint.

22. Function of the spine	1. Protection of the spinal cord
	2. Strength and support to the body and skull
	3. Provide a moveable support structure
	4. Provides a base for the ribs to attach which surround and protect our major organs
	5. Production of blood cells and minerals
	6. Connect the upper body to the lower body
23. Lordosis	Excessive inward curve of the lumbar region of the spine.
24. Kyphosis	Excessive outward curve of the thoracic region of the spine.
25. Impact of poor posture	Damaged joints, bones and muscles
	Stressed organs, including the heart with blood flow becoming inefficient
	Negative mood and lower self-esteem

## The appendicular skeleton

Clavicle  
Scapula  
Humerus  
Radius  
Ulna  
Carpals  
Tarsal



Pelvis  
Femur  
Tibia  
Fibula  
Phalanges

Can you label these bones in the appendicular skeleton?

## Synovial Joints

