

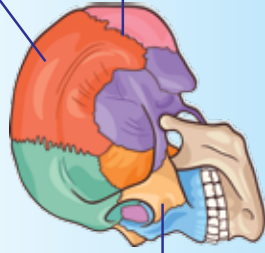
Skill

Facial bones

- Protect eyes, ears and nose.
- Provide the entrances to the digestive and respiratory systems.

Cranial bones

- Enclose and protect the brain.



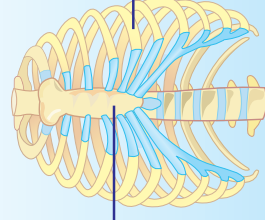
Suture

- The bones are held together by immovable joints called **suture**.

Thoracic cage

Sternum

A flat and arrow bone located in the centre of the anterior thoracic wall.



Ribs

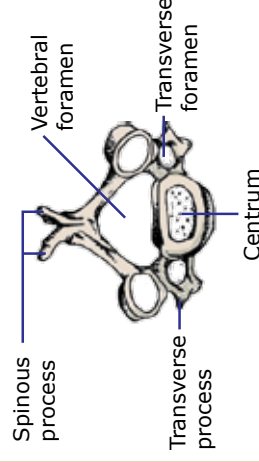
- 12 pairs of ribs make up the sides of the thoracic.
- The ribs articulate with the 12 vertebrae of the thoracic region.

Vertebral column

The vertebral column, also called spine or backbone, consists of five types of vertebrae joined to one another. The vertebrae of each region have differences in size and shape.

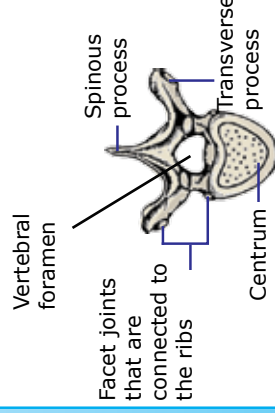
Cervical vertebrae

- Have two **transverse foramen** which allow the blood vessels and nerves to pass to the brain.



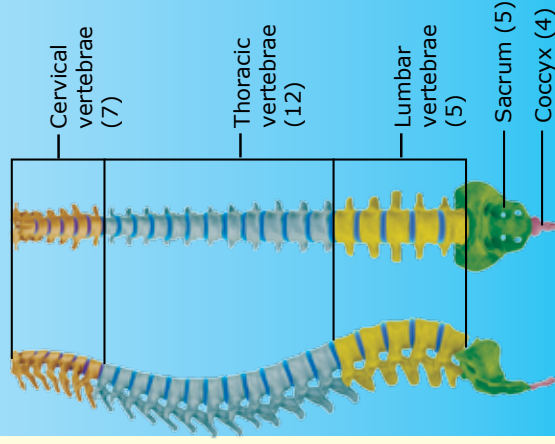
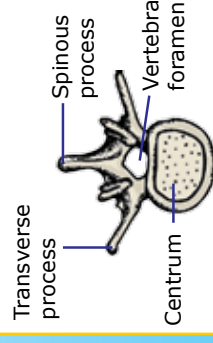
Thoracic vertebrae

- Have long spinous processes which directed downwards.



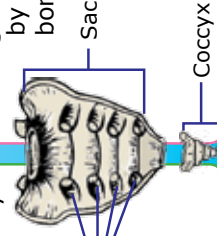
Lumbar vertebrae

- Have short but large centrum to bear the weight of the lower back.



Coccyx

- Triangular bone formed by fusion of 4 bones.



Sacrum

- Triangular bone formed by fusion of 5 bones.



Functions of the vertebral column:

- Protects the spinal cord.
- Supports the head.
- Articulates with other bones.
- Provides points for attachment of muscles.

Appendicular skeleton: Pectoral girdle, upper limbs, pelvic girdle and lower limbs.

Pectoral girdle

- Consists of the clavicle and scapula.
- To attach the upper limbs to the axial skeleton.

Clavicle

- Long and slender S-shaped bone.
- Connects to the scapula and sternum.

Scapula

- Large, flat and triangular-shaped bone.
- Articulates with the head of the humerus to form ball-and-socket joint.

Tulang lengan

Humerus

- The longest and largest bone of the upper limb.
- Articulates with:
 - the scapula at the shoulder to form ball-and-socket joint.
 - the ulna and radius at the elbow to form a hinge joint.

Carpals (wrist of the hand)

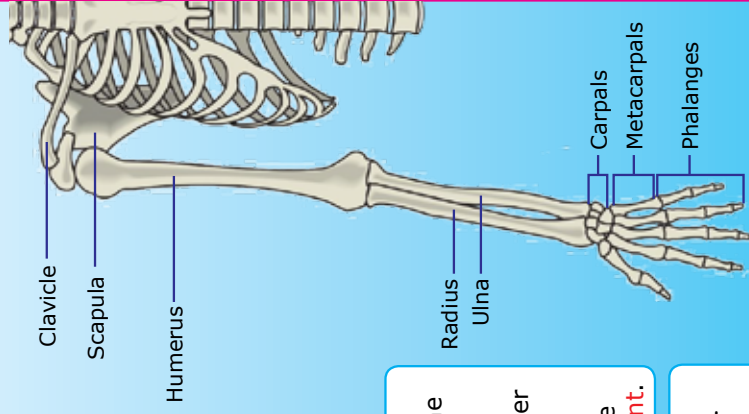
- Consists of 8 small bones at the wrist.

Metacarpals (palm of the hand)

- Consists of 5 bones at the palm.

Phalanges

- Consist of 14 bones at the fingers.



Pelvic girdle

- Consists of a pair of hip bones.
- To attach lower limbs to the axial skeleton.

Hip bones

- Each half consists of 3 fused bones: ilium, ischium and pubis.
- Joined to each other at the pubic symphysis.

Lower limbs

Femur

- The longest, heaviest and strongest bone in the body.
- Articulates with:
 - the hip bone to form ball and-socket joint.
 - the tibia to form a hinge joint at knee.

Patella (kneecap)

- Small triangular bone which protects the knee joint.

Tibia and fibula

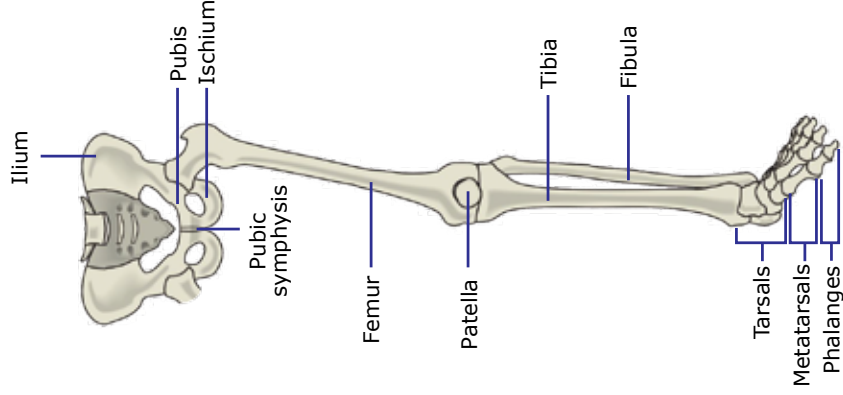
- Articulates with the tarsals of the ankle.
- The fibula is smaller than tibia.

Tarsals

- Consists of 7 bones at the ankle.

Metatarsals

- Consists of 5 bones at the foot.



Falanks

- Empat belas tulang yang membentuk jari kaki.