



Chapter 8

BODY MOVEMENTS

Notes

- The ability of an organism to move from one place to another using their body parts is called body movements.
- The place where two or more bones join together is called joints. It allows movement of bones. There are different types of joints. They are (a) ball and socket joints (b) Pivotal joints (c) Hinge joints and (d) Fixed joints.
- Ball and socket joints: Ball and socket joints are movable joints. In this, a rounded end of one bone fits into the cavity (hollow space) of the other bone. Such a joint allows movements in all directions.

Example: Hip bone, shoulder bone.

- Pivotal joints: The joint where our neck joins the head is a pivotal joint. A cylindrical bone rotates in a ring in this joints and allows to bend our head forward and backward and turn the head to our right or left.
- Hinge joints: This joints allows only a back and forth movement. Example: Knee, elbow.
- Fixed joint: Fixed joints are immovable joints. Such joints are found in skull. However, the lower jaw of the skull is movable.
- Skeleton form a framework to give a shape and support to our body.
- Skeleton is made up of bones and consists of 206 bones. It protects internal organs.
- The various part of skeletal system are
 1. Skull: Skull is made up of many bones joined together. It encloses and protects the brain.
 2. Backbone: It is made up of many small bones called vertebrae. It consists of 33 vertebrae. The ribcage is joined to these bones.
 3. Ribs and breast bone: The ribs join the chest bone and the backbone together to form a box. This is called the rib cage. There are 12 ribs on each side of chest. It protects the important internal parts of our body.
 4. Shoulder and pelvic bones: The two bones of the shoulder are called shoulder bones. The bone that encloses the portion of our body below the stomach is pelvic bone.
 5. Bones of hands and legs: Bones of arms and thigh are long and give strength to our body. Bones of fingers and toes helps in holding things.

- Cartilage are some additional parts of the skeleton that are not as hard as the bones and which can be bent. It is also found in the joints of the body. Example: Upper part of human ear.
- X-rays shows the shape of the bones in our body.
- Muscles are attached to bones and helps in movement of human body. Muscles always work in pair.
- Gait of animals:
 - (a) Earthworm: Earthworm has many rings joined end to end. An earthworm does not have bones and moves with the help of muscles. Its body secretes slimy substance and moves by muscle expansion and contraction. The tiny bristles under its body helps it to get a good grip on the ground.
 - (b) Snails: Snails move with the help of thick, strong muscular foot.
 - (c) Cockroaches: It has three pairs of legs for walking and two pair of wings attached to the body behind its head for flying. The body muscles move the wings when it flies. It has distinct muscles that are used for movement.
 - (d) Birds: Their bodies are well suited for flying as their bones are hollow and light. The hind limbs help in walking and perching. The forelimbs are modified as wings.
 - (e) Fish: Fishes have streamlined body that allows it to move freely in water. They use tail fin for small jerks through water and other fins helps to keep the balance of the body and to keep direction while swimming.
 - (f) Snake: Snakes have a long backbone and thin muscles. The loop made by its body helps it to move forward. They move very fast but not in straight line.

