SNBP International & Senior Secondary School, Chikhali, Pune.
Affiliation No. 1130703
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NOTES (TERM-1)

Class: 5th | Subject: Science
Prepared By: Shreya Bhogal | L-1: The skeletal system and The muscular system
Date: _____

I. Key words:

1. Scapula
2. Vertebrae
3. Humerus
4. Bone marrow
5. Ligament
6. Hinge
7. Cartilage
8. Contraction
9. Tendons
10. Cardiac
11. Voluntary
12. Pivot

II. Pre activity: List the different parts of a skeleton.

III. Name the following.

1. What are the muscles of the heart called?
Ans: Cardiac muscle

2. How many bones is the human skeleton made up of?
Ans: 206 bones

3. How many types of joints are there in human skeleton?
Ans: 2 types – movable (4 kinds) and immovable

4. What gives shape to our body?
Ans. Skeletal System

5. Name the immovable bone in our body.
Ans. The bones of the skull

IV. Short answer questions.

1. What is the function of the skeletal system?
Ans: Functions of the Skeletal System
• The skeletal system protects the soft internal organs of the body.
• It contains bones that have marrow, where our blood cells are made.
• It makes movement of different parts of the body possible.
• The body gets its shape because of the skeleton. Without the bones, our body would be floppy like a jelly.

2. What is bone marrow?
Ans: There is a soft, fatty substance called bone marrow at the centre of the long bones of the skeleton. The bone marrow creates the red blood cells that send oxygen to different parts of the body and white blood cells that fight against infection.

3. What is the vertebral column?
Ans: The backbone forms the main axis of the skeleton with the skull attached at the top. 33 small bones called vertebrae form a strong column, through which passes the delicate spinal cord. The small structure of bones in the vertebral column helps us to move and bend.

4. Describe in brief the structure of a rib cage.
Ans. 12 pairs of bones called the ribs make up the rib cage. A rib is a thin, curved bone. The ribs run horizontally in the chest area. The heart and the lungs are protected by the rib cage. The ribs are attached to the vertebral column at the back and the breastbone at the front. The lowest two pairs are attached only at the back and are called floating ribs.

5. Can the skeletal system work without the muscular system?
Ans. The skeletal system cannot work without the muscular system. 650 muscles are attached to the various bones in our body. They expand and contract to allow the movement of the bones.

V. Long answer questions.

1. Define joint. What are the four movable joints?
Ans: A joint is where two bones are attached. They hold the bones together using strong tissues called ligaments. Our body has several joints. The joints may be movable or immovable. Of all the joints in our body, only the ones in the skull are immovable.
There are four types of movable joints in our body.

Hinge Joint: Just like a hinge on the door, the hinge joint can move the bones only in one direction. Examples of the hinge joints in our body are elbows, knees, fingers and toes.

Ball and Socket Joint: The end of one bone has a ball-like shape while the other bone has a socket-like shape. The ball fits within the socket and allows rotational movement. Examples of the ball and socket joints are the girdle bones of the hip and the shoulder. It allows movement in many directions. The humerus fits in the socket of the pectoral girdle. The femur ball fits in the socket of the pelvic girdle.

Pivot Joint: Just like a pivot, this type of joint allows upward, downward, and sideways movement. An example of a pivot joint is the one between the skull and the first vertebra of the vertebral column.

Gliding Joint: The gliding joint, allows the bones to bend, twist and turn. Examples of the gliding joints are the joints at the wrist and ankle, and also between any two vertebrae of the vertebral column. They are also called sliding joints, as they allow sliding movement of bones.

2. Distinguish between the voluntary and involuntary muscles.
Ans: The main differences between voluntary and involuntary muscles are
as follows:

Voluntary Muscles: We can control these muscles. We can decide whether to move them or keep them stationary. Voluntary muscles are in our limbs, neck and back.

Involuntary Muscles: These muscles are not under our control. They work automatically. These muscles work on their own to expand and contract, e.g. muscles in the lungs and digestive system.

3. What protects the brain from injuries?
Ans: There are 22 bones in our skull, which consist of the head and the face. The upper part of the skull is the head, and it is made up of 8 bones that form the protective covering of our brain.

4. Define tendons and ligaments. What are their functions?
Ans: A joint is where two bones are attached to each other. They hold the bones together using strong tissues called ligaments. Tendons are tissues that attach the muscles to the bones.

VIII. Post activity:

Draw a flow chart of the different types of joints.

Subject Teacher H.O.D. Co-ordinator Principal