

SKELETAL SYSTEM

- Provides a framework to support and protect the body.
- The system that supports, protects, and gives shape to your body. It also works with the muscular system to move your body.

CARTILAGE

Soft bones are found in the parts of the nose, ears, and at the ends of many bones, and in tubes that carry air to the lungs.

BONES

The adult skeleton has 206 bones.

Bone Marrow- where the blood cells are made.

A. SKULL – *is a set of more than 20 bones most joined tightly together.*

- The skull surrounds the brain, protecting this delicate organ.

B. SPINE – *runs down the center of the back. It is made of separate bones called vertebrae.*

- The spine surrounds and protects a set of nerves called the spinal cord.
- It also supports the entire body, allowing it to stand upright.

C. RIBS AND STERNUM – *12 ribs are attached to the spine and wrapped around the body.*

- The ribs and sternum protect the heart lungs and other organs of the chest.

D. COLLAR, SHOULDER, AND HIP BONES – *These bones have curve shapes.*

- They support the arms and legs allowing them to move freely.

E. ARM AND LEG BONES – *The arm and the leg each contain on long bones in the upper half of the limb and 2 long bones in the lower half.*

JOINTS – is a point where two bones meet.

TYPES OF JOINTS

BALL-AND-SOCKET JOINTS – allows movement backward, forward and side to side. These joints are found in the shoulders and hips.

HINGE JOINTS, like the hinges of doors, allow backward and forward movement. These joints are found in the elbow, knee, fingers, and spines.

SADDLE JOINT- Allow movement backward, forward, and side to side, but limited rotation. A saddle joint connects the thumb to the rest of the hand.

IMMOVABLE JOINTS- some joints cannot move.

FREE-MOVING JOINTS- allow body parts to bend or twist. Inside this joint is a space filled with fluid.

MUSCULAR SYSTEM

-Helps keep the body balanced, allowing it to stand up straight and hold other positions.

THREE TYPES OF MUSCLE:

1. SKELETAL MUSCLE- moves bones, is voluntarily controlled, and has striated cell structure.

2. SMOOTH MUSCLE-move the intestines, stomach, and other organs, automatically controlled and has no striated-in cells.

3. CARDIAC MUSCLE- pumps the heart, is automatically controlled, and has a striated cell structure that differs from skeletal muscles.

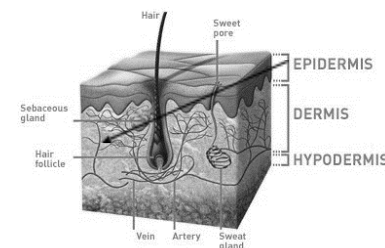
INTEGUMENTARY SYSTEM

This body system includes skin, hair, fingernails, and toenails.

SKIN- Largest organ on the outside.

-it separates and protects the internal organs and tissues from everything outside.

TWO LAYERS OF THE SKIN



EPIDERMIS-outer layer of the skin. It sheds dead cells.

DERMIS-contains blood vessels, nerves, sweat glands, oil glands, and hair follicles

HYPODERMIS- the inner

most layer. Also called “Subcutaneous Tissue”.



EPITHELIAL CELLS- Make up the epidermis.

KERATIN- a tough and flexible protein found in hair and fingernails.

MELANOCYTES- found in the epidermis and are cells that produce a pigment called melanin.

MELANIN- is a dark-brown pigment that gives color to the skin.

SWEAT GLANDS- help regulate body temperature by producing and excreting sweat.

SEBACEOUS GLANDS- produce an oily secretion that helps keep the epidermis flexible and waterproof.

DIGESTIVE SYSTEM

-A system that converts food into energy and basic nutrients that can be absorbed and used by the cells of the body.

ALIMENTARY CANAL- a flexible tube that extends through the body, with several specialized structures and accessories around it.

PARTS OF DIGESTIVE SYSTEM (DIGESTIVE ORGANS)

MOUTH- also called the “oral cavity”.

ESOPHAGUS- food tube

STOMACH- is a large muscular sac with which walls are lined with millions of microscopic gastric glands. Produce hydrochloric acids and pepsin to digest proteins and break them into smaller fragments.

SMALL INTESTINE- it absorbs nutrients and minerals from the food eaten.

PANCREAS is found below the stomach and secretes pancreatic juice, sodium bicarbonate, and insulin.

LIVER- is the largest gland and the second largest organ of the human body. Produced bile that helps digest fats by breaking them up into small droplets.

LARGE INTESTINE or Colon- absorbs water from the remaining indigestible food matter and transmits the useless waste material from the body