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Ensayo del tema: THE HUMAN BODY SYSTEM.

“Ciencia y Conocimiento”

THE HUMAN BODY SYSTEM

Skeletal system

Function:

- They protect our internal organs.
- They provide a frame for the body (just like the spokes of an umbrella provide a frame).
- They contain red marrow that produces blood cells and yellow marrow that also stores fat.

Cartilage: it is softer than the bones and is somewhat flexible, like rubber, the cartilage connects the ribs to the sternum allowing the ribs to move as we breathe. Cartilage supports our nose and external ears. The joints contain some cartilage

Function the Backbone: The spinal column is made up of 26 bones called vertebrae. Vertebrae protect the spinal cord and allow you to stand and bend

Bones that make up the skeletal system: skull, scapula (shoulder blade), ribs, humerus, radius, ulna, carpus, metacarpals, phalanges, femur, patella, fibula, tibia, tarsi, pelvis, metatarsals, calcaneal phalanges, vertebral column (spine), Clavicle (clavicle), breastbone (breastbone).

Muscular system

- **Function:** Tendons attach one end of the biceps and triceps to the shoulder blade and the other end of the radius or ulna. Every the muscle can pull, but cannot push. That that's why it takes two muscles to bend arm back and forth at the elbow.
- **There are three types of muscles:** Skeletal muscle, Smooth muscle, Cardiac muscle.
- **muscles that make it up:** Frontalis, Occuli Orbicularis, Orbicularis oris , Trapezius, Deltoid, Pectorals, Biceps, Triceps, Rectus abdominus, Finger flexors, Finger extensors, Sartorius, Adductor, Quadriceps femoris, Gastrocnemius, Soleus, Peroneus.

Digestive system

- **Digestion breaks down food in materials the body can use:** for example, the stomach stores food that you don't need to eat continuously. It also breaks down food with acid and enzymes, the large intestine recovers water and releases waste
- The stomach does not have a fixed way everyone's internal organs are slightly different. The shape and position of your the stomach also depends on how much food that contains, and if you're standing or lying down
- **Components of the digestive system:** Mouth, Salivary glands, Pharynx, Oesophagus, Stomach, Liver, Gallbladder, Pancreas, Small intestine, Large intestine, Rectum.

Respiratory system

- Through breathing we exchange gases with our ambient. Our cells require a continuum oxygen supply (O2) for energy of food molecules.
- The three essential processes for the transfer of oxygen from the air outside to the blood flowing through the lungs are: ventilation, diffusion and perfusion.
- Parts of the respiratory system: Sinuses, Nasal cavities, Pharynx, Larynx, Trachea (windpipe), Bronchus, Bronchiole, Lung, Diaphragm.

Circulatory system

- **Function:** The circulatory system transports respiratory gases, nutrient molecules, wastes, and hormones throughout the body. These materials are carried by an intricate network of blood vessels, which follow continuous circuits from the heart through arteries, capillaries, and veins back to the heart. The circulatory system also regulates our body temperature.
- **Components of the circulatory system:** Carotid artery, Jugular vein, Superior vena cava, Aorta, Pulmonary artery carries blood from the right ventricle to the lungs, Heart pumps blood to the body, Abdominal aorta, Inferior vena cava, Hepatic artery, Portal vein, Iliac artery, Femoral artery, Femoral vein.

THE HUMAN BODY SYSTEM

Lymphatic system

- All the cells in our body live in a interstitial fluid, which supplies its food and carry waste products. This fluid escapes the circulatory system. The lymphatic system provides a way to return excess fluid to the circulatory system, thus keeping fluids in balance.
- The lymph nodes contain lymphocytes and macrophages, which attack microbes and even cancer cells that It may be in the lymph. Finally, the lymph re-enters circulatory system through the thoracic duct and right lymphatic duct, which drain into the veins in the back.
- White blood cells in the lymphatic system fight disease: The immune response: lymphocytes are white blood cells that defend the body from viruses, bacteria and even cancer cells. The inflammatory response: release of damaged cells Chemicals that indicate blood vessels to dilate and release white blood cells and fluids such as macrophages, which attack any foreign body.

Nervous system

- The nervous system consists of the structures and processes that make up the brain, spinal cord and peripheral nerves distributed throughout the body.
- The functions of the nervous system: 1. Sensory input 2. Integration 3. engine output
- The brain: the brain is the site of awareness. It produces thoughts, feelings, memory and creativity. That monitors and controls our unconscious and well aware behavior.

Endocrine system

- The endocrine system is made up of glands that produce and secrete hormones. These medium chemical substances in almost any process in our body: they provide energy to cells and organs, activate them, travel through the bloodstream to regulate our behavior, emotions, metabolism, etc.
- Molecular messengers: Hormones are molecules that are secreted in one part of the body and travel through the bloodstream to control what happens in another part. Endocrine glands secrete hormones directly into the bloodstream.

Urinary system

- The urinary system regulates fluids in the body. Kidneys help maintain the chemical amount composition and acidity of fluids do this for collecting water and waste of blood and excreting them in the form of urine. Urine is stored in the urinary bladder before it is excreted the urethra.
- Each kidney contains millions of nephrons that filter the blood that passes them. In the nephron, capillaries pass through the glomerulus. The grooves in the glomerulus avoid blood cells and larger molecules pass outside. Acidity and concentrations of various substances in the blood are maintained by active diffusion and transport of excess amounts in urine collecting tubules. Urine is made of water (approximately 95%), potassium, bicarbonate, sodium, glucose, amino acids and waste products of urea and uric acid.

Reproductive system

- The survival of the human population is maintained by reproduction. In order for sexual reproduction to occur, to woman's ovaries produces ova (eggs) and a man's testes produces sperm. After an egg has been fertilized by a sperm, it grows inside the woman's uterus to produces new human being
- Female Reproductive Organs: Fallopian tubes, Ovary, Uterus, Cervix, Urinary bladder, Vagina, Clitoris, Hymen, anus.
- Male Reproductive Organs: Seminal vesicles produce a seminal fluid, Penis, Prostate gland produces a seminal fluid, Vas deferens, and Testis produces sperm, Scrotum the sac that holds the testes outside of the abdomen, to keep them cool, as required for sperm production.