

A. Skeletal System

1. How the skeletal system works

a. consists of 206 bones in the adult skeleton (~350 for the infant); femur is longest

b. functions

1.

2.

3.

4.

5.

6.

c. connective tissue

1. cartilage- acts as a cushion between bones

a. ossification

2. ligament-

3. tendon-

d. joints- place where two bones meet

1. ball & socket-

2. hinge-

3. pivot-

4. immovable

2. Understanding skeletal problems

a. fracture-

b. injuries to joints

1. dislocation-

2. torn cartilage-

3. arthritis-

c. Osteoporosis- condition in which there is progressive loss of bone tissue

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d. Scoliosis- lateral (side to side) curvature of the spine

B. The Muscular System

1. Skeletal muscle- muscles attached to bone; cause body movements

a. voluntary-

b.

c.

d. perform opposite actions to produce movement

1. flexor- muscle that closes a joint

2. extensor- muscle that opens a joint

2. Cardiac muscle- lines the walls of the heart; striated

a. involuntary-

b.

3. Smooth muscle- acts on the lining of the body's passageways and hollow organs; mainly in the digestive system

a. involuntary

b. unstriated muscle-

4. Understanding muscular problems

a. bruise-

b. strain-

c. tendonitis-

d. hernia-

e. muscular dystrophy-

C. The Nervous System

1. The Central Nervous System (CNS)- made up of the brain & spinal cord

a. Brain-

1. Cerebrum- largest, most complex part of the brain

a. right hemisphere-

b. left hemisphere-

2. Lobes of the brain

a. frontal

b. parietal

c. occipital

d. temporal

3. Cerebellum-

4. Brain stem-

a. medulla oblongata

b. pons

c. midbrain

d. thalamus

e. hypothalamus-

2. The Peripheral Nervous System-

a. autonomic nervous system

1. sympathetic nervous system-

2. parasympathetic nervous system-

b. somatic nervous system-

3. Problems of the nervous system

a. head injuries-

b. spinal injuries-

c. meningitis-

d. epilepsy-

e. cerebral palsy-

D. The Cardiovascular System

1. Functions of the Cardiovascular System (CVS)

a.

b.

c.

2. Circulation of blood in the CVS

- a. pulmonary (lungs) circulation- flows from the heart, to the lungs, & back to the heart
- b. systemic circulation- blood flow to all body parts except the lungs

3. Heart- pumps the blood; about the size of the fist

- a. top chambers-
- b. bottom chambers-
- c. left ventricle is the strongest chamber of the heart

4. Components of the Blood

- a. plasma-
- b. red blood cell (RBC)-
- c. Hemoglobin-
- d. white blood cell (WBC)-
- e. platelets-

5. Blood Types- blood can be donated every 56 days

- a.
- b. Rh factor-
- c. type O-
- d. type AB+

6. Blood Vessels- transport blood throughout the body; 60,000 miles of them if stretched out

- a. artery-
- b. vein-
- c. capillaries-

7. Maintaining Circulatory Health

- a. well-balanced diet
- b. maintain a healthy weight
- c. regular aerobic exercise
- d. avoid tobacco products
- e. avoid illegal drug use
- f. get regular checkups
- g. maintain normal blood pressure-

8. Cardiovascular System Problems

- a. congenital heart defect-
- b. heart murmur-
- c. varicose veins-
- d. anemia-
- e. hemophilia-
- f. leukemia-

E. The Respiratory System

1. What happens during respiration?

- a. external respiration-
- b. internal respiration-

2. How respiration works

- a. diaphragm- muscle that separates the chest wall from the abdominal cavity
- b. lungs
 1. air moves into lungs through trachea (windpipe)
 2. bronchi-
 3. bronchioles-
 4. alveoli-

3. Other respiratory structures

- a. cilia-
- b. pharynx-
- c. trachea-
- d. larynx-

- a. bronchitis-
- b. asthma-
- c. pneumonia-
- d. tuberculosis-
- e. emphysema-

F. The Digestive System

1. Digestive System Functions

- a. digestion-
- b. absorption-
- c. elimination

2. How digestion works

- a. teeth-
- b. salivary glands-
- c. tongue-

- 1. uvula- small flap that keeps food out of nasal passages
- 2. epiglottis- small flap that keeps food out of trachea

d. esophagus-

- 1. peristalsis- series of involuntary contractions that move food in digestion

e. stomach-

- 1. mixes food with gastric juices, creating chyme
- 2. stores partially digested food

f. small intestine-

- 1. contains three parts-

g. large intestine-

h. pancreas-

- i. liver-
- j. gallbladder- stores bile

3. Digestive System Problems

- a. indigestion-
- b. constipation- causes feces to become dry/hard
- c. diarrhea- frequent passage of watery feces
- d. heartburn-
- e. peptic ulcer-
- f. gallstones-
- g. lactose intolerance- an inability to digest lactose, a sugar found in dairy products
- h. appendicitis-
- i. colon cancer-
- j. hemorrhoids-
- k. cirrhosis-