

UNIT STUDY GUIDE – HUMAN BODY SYSTEMS

Structure or term	√	Function
Digestive System		System responsible for moving and breaking down food into smaller, usable nutrients
Mouth		Teeth grind and break up food in mechanical digestion
Saliva		Located in the mouth and aids in chemical digestion
Esophagus		Moves food to the stomach through peristalsis
Stomach		Where the hydrochloric acid breaks down food
Small intestine		Where nutrients are absorbed for the body
Villi		Small structures that contain folds to absorb nutrients
Large intestine		Absorbs water and where the remaining waste is compacted
Rectum		Stores feces before it is released from the body
Hydrochloric acid		Located in the stomach and breaks down food through chemical digestion
Mechanical digestion		The physical process of breaking food into smaller pieces
Chemical digestion		Chemical changes actually change the food into different substances
Muscular System		System responsible for producing movement, keeping body temperature stable, and maintaining posture
Voluntary muscles		Muscles that you choose to move
Involuntary muscles		Muscles that perform automatic movement without thought
Cardiac muscle		Muscles found in the heart that keep it pumping blood
Smooth muscle		Muscles found in the organs that move involuntarily
Skeletal muscle		Muscles that are attached to our skeleton and aid in moving
Tendons		The stretchy connective tissue that connects bones to muscles
Skeletal System		System responsible for allowing movement, provides support, and protects soft organs inside the body
Bones		Strong structures that provide the body its shape
Axial skeleton		Part of the skeleton that provides support and protection (made up of the skull and the spinal column)
Appendicular skeleton		Part of the skeleton that allows movement (made up of the shoulders, arms, hips and legs)
Joint		Where two bones meet and can be movable or fixed
Ball-and-socket joint		Allows for a wide range of motions (hips and shoulders)
Hinged joint		Can only flex or extend in one direction (elbows or knees)
Cartilage		The tissue that acts as a buffer between bones
Respiratory System		System responsible for getting oxygen from the environment and removing carbon dioxide and other waste from the body
Trachea		The tube-like structure where air passes through
Lungs		Large organs for breathing located on either side of your heart
Alveoli		Tiny air sacs with walls only one cell thick that pass oxygen into the blood and remove carbon dioxide from the blood
Diaphragm		Large muscle that contracts downward when you inhale to pull air into the lungs so oxygen can be passed into the blood
Bronchi		The two tubes that branch from the trachea to each lung
Bronchial Tubes		The little tubes that travel from the bronchi to the alveoli

Circulatory System		System responsible to transport materials in the blood from the digestive and respiratory systems to the cells of the body
Heart		Pushes blood throughout the body
Arteries		Takes blood away from the heart (carries oxygen rich blood)
Veins		Takes blood back to the heart (carries oxygen poor blood)
Capillaries		Smallest blood vessels that connect arteries with veins
Red blood cells		Carries oxygen throughout the body
White blood cells		Helps fight infection and diseases
Platelets		Solid, large cell fragments which help form blood clots
Plasma		Liquid part of the blood that contains substances such as proteins, glucose, hormones and gases dissolved in water

Review Questions

1. Describe the path food goes through the digestive system.
2. Compare and contrast the small and large intestines.
3. Compare and contrast the three main types of muscles.
4. Describe real life examples of voluntary and involuntary muscles.
5. What is the difference between the axial and appendicular skeletons?
6. Describe five types of joints by name, give an example of each and explain the movement for each type of joint.
7. Describe the movement of the diaphragm when you breathe. Why is this important?
8. What is the function of the alveoli?
9. Describe the path air goes through the respiratory system starting at the mouth.
10. Compare and contrast plasma and platelets. Why do humans need both?
11. Compare and contrast arteries, veins, and capillaries.
12. Why do humans need both red and white blood cells?
13. How do the respiratory and circulatory systems work together to keep you alive?
14. How do the skeletal and muscular systems work together to keep you alive?
15. How do the digestive and muscular systems work together to keep you alive?