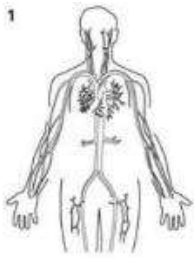


Name _____

Human Body Study Guide

Lesson 1

1. homeostasis: the maintenance of a constant internal environment when outside conditions change
2. Write digestive, nervous, cardiovascular, or respiratory on the line next to the correct picture and function.



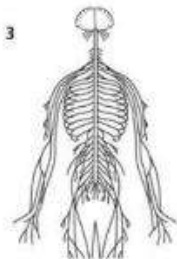
a. cardiovascular

transports blood, nutrients, and gases (oxygen and carbon dioxide) around the body



b. digestive

breaks down food into nutrients that can be used by the body



c. nervous

collects and responds to information by sending electrical messages; controls the functions of the other systems



d. respiratory

takes in oxygen and gets rid of carbon dioxide; occurs in the lungs

3. Place a number next to the event in the order of how your body reacts to temperature changes.

3 The body sweats or shivers depending on the temperature.

1 Sensory receptors in the skin detect a change in temperature.

4 Homeostasis is maintained.

2 The sensory receptors send a signal to the brain.

4. Fill in the blanks with one of the words from the box. Each word can only be used once.

bones	nervous	lymphatic	endocrine	cardiovascular	muscles
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This is how your body reacts to getting a paper cut on your finger.

- Your skin senses the pain and sends messages to the nervous system.
- The nervous system sends a message to the muscles in your hand, arm, and shoulder.
- The muscles in your hand, arm, and shoulder contract pulling on the bones to pull your finger away from the paper.
- The cardiovascular system moves more blood to the injured area to provide nutrients for cell growth.
- The endocrine system makes adrenaline, which increases your heart rate and alertness in dangerous situations to react faster. It also maintains homeostasis by controlling the metabolism and growth processes necessary to heal the cut by sending chemical messages to get more blood and nutrients to the finger.
- The lymphatic system carries away dead cells and excess fluid that leaks into the tissues that surround the wound.

Lesson 2

5. Write each part of the body from the box under the correct type of joint.

finger	knee	shoulder	ankle	spine	elbow	hip	wrist
Gliding			Hinge			Ball and Socket	
<u>ankle</u>			<u>finger</u>			<u>shoulder</u>	
<u>spine</u>			<u>knee</u>			<u>hip</u>	
<u>wrist</u>			<u>elbow</u>				

6. Circle the example and choice that describes each type of muscle.

Smooth Muscle:	heart	<u>blood vessels</u>	biceps	voluntary	<u>involuntary</u>
Cardiac Muscle:	<u>heart</u>	blood vessels	biceps	voluntary	<u>involuntary</u>
Skeletal Muscle:	heart	blood vessels	<u>biceps</u>	<u>voluntary</u>	involuntary

7. *tendon*: tissue that connects a muscle to a bone

8. Give two examples for anaerobic and aerobic exercise.

Anaerobic

lifting weights

pushups

Aerobic

running, walking, bicycling

skating, swimming

Lesson 3

9. *lymph node*: remove pathogens and dead cells from lymph




10. Where are the three places lymph nodes can be found?

armpits

groin

neck

11. Complete the table below by naming the blood vessels and either sketching or describing their function.

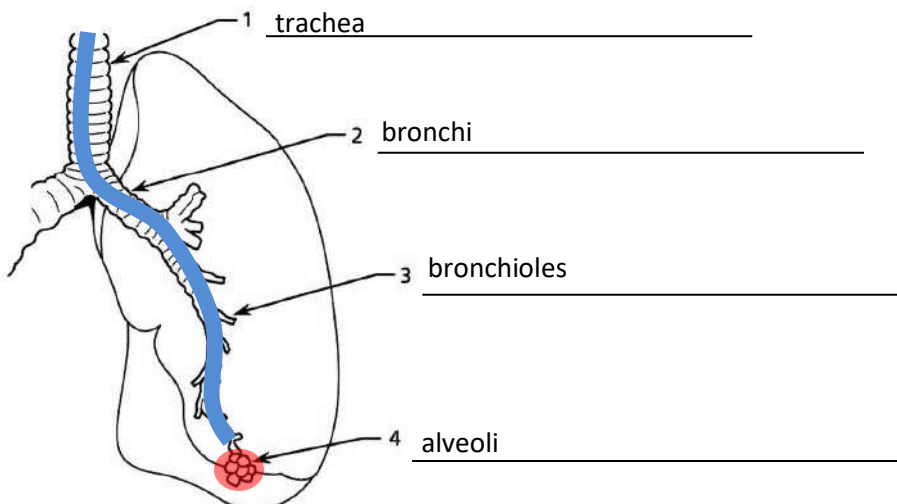
Type of Blood Vessel	<u>artery</u>	<u>vein</u>	<u>capillary</u>
Sketch or Description of Function	<u>carries oxygen-rich blood away from the heart</u> 	<u>carries oxygen-poor blood back to the heart</u> 	<u>delivers oxygen-rich blood to body cells and takes oxygen-poor blood away from body cells</u> 

12. Circle the correct word from each pair of words to complete the sentence.

a. Arteries / Veins carry oxygen-rich / oxygen poor blood away from the heart. It contains more oxygen because it delivers oxygen from the lungs / heart to the valves / capillaries.

b. Arteries / Veins carry oxygen-rich / oxygen poor blood back to the heart. The blood with less oxygen is taken from the body cells / valves.

13. Label each number using alveoli, bronchi, bronchioles, and trachea. Color the tubes blue where air travels and color the area red where oxygen and carbon dioxide are exchanged.



Lesson 4

14. Fill in the blanks using *chemical digestion*, *pancreas*, *fat*, *bile*, and *enzymes*. Each word will be used once.

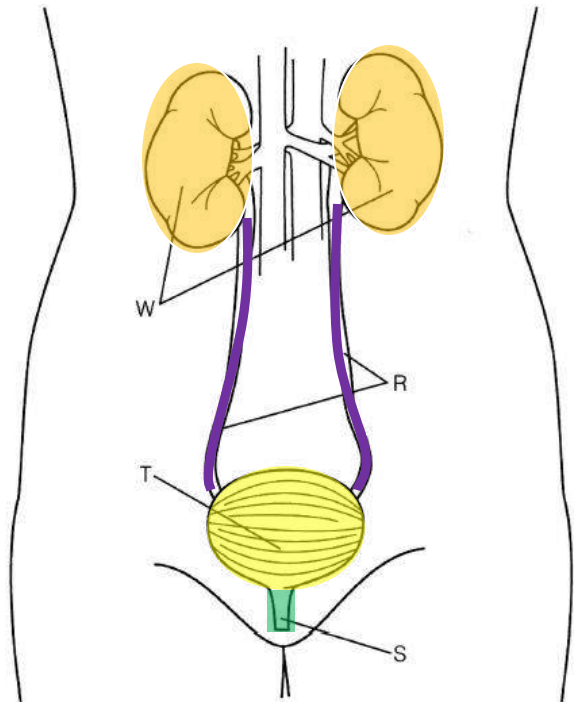
- a. The pancreas produces enzymes that break down foods into smaller molecules for chemical digestion.
- b. The liver makes and releases a mixture called bile which breaks up large fat droplets into smaller pieces.

15. Write the letter matching each body part to its description. Color each body part using the key provided.

- R The ureters are tubes that carry liquid waste from the kidneys to the bladder.
- S The urethra is a tube that carries liquid waste out of the bladder.
- W The kidneys filter water and wastes from the blood and also regulate the amount of water in the body maintaining homeostasis.
- T The bladder is a muscular sac that stores liquid waste.

Color Key

ureters – purple
urethra – green
bladder – yellow
kidneys – orange



16. What order does liquid wastes move through structures of the excretory system?

kidneys → ureters → bladder → urethra

Lesson 5

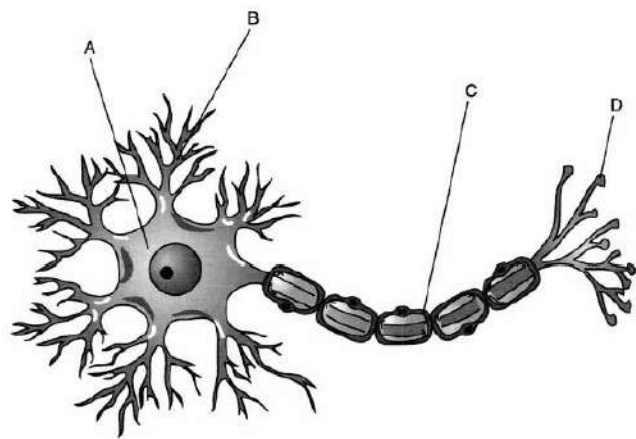
17. Circle two important roles of the nervous system.

protect organs respond to information gather information transport oxygen

18. Write *central* or *peripheral* on the lines provided.

- a. The central nervous system includes the brain and spinal cord.
- b. The central nervous system processes and sends messages.
- c. The peripheral nervous system includes the nerves connected to the whole body.
- d. The peripheral nervous system transports messages between the central nervous system and the rest of the body.

19. Complete the table at the right with the appropriate neuron parts and functions.



Label	Neuron Part	Function
A	<u>cell body</u>	<u>gathers information from dendrites</u>
B	<u>dendrite</u>	<u>receives information</u>
C	<u>axon</u>	<u>sends ELECTRICAL signals</u>
D	<u>axon terminal</u>	<u>changes electrical signals to CHEMICAL signals</u>

20. Complete the Venn diagram for the nervous and endocrine systems. Think about messages.

