

The Human Torso

Locate the following body parts on your model and read about their function. The body part definitions are arranged from the top of the model to the bottom and from the outside of the model to the inside.

brain: control center of the body, which does everything from coordinating our movements to managing our thoughts and emotions. The brain is divided into two hemispheres.

left brain hemisphere: controls verbal, analytical, and sequential thinking and logical processing

right brain hemisphere: controls emotional expression, visual imagination and nonverbal processing, and is typically associated with the intuitive, creative and artistic aspects of behavior

muscular system: part of our body that allows us to move; muscles are made up of special tissues that can contract, or shorten, when they receive a signal from the brain.

trachea: windpipe that brings oxygen to our lungs. The trachea divides into the left and right bronchi. (On the model, the trachea is attached to the esophagus.)

esophagus: leads chewed food from the throat to the stomach. (On the model, the esophagus connects to the trachea.)

lungs: two organs of respiration that bring fresh oxygen into our bodies and remove carbon dioxide and other gaseous waste products

bronchi: tube that leads to both lungs. Like a branch, once inside the lung, each bronchus divides again and again, becoming narrower and narrower.

diaphragm: muscle in our rib cage that pulls air into our lungs. As we breathe air in, the diaphragm contracts, or tightens and flattens, allowing air to be sucked into the lungs.

heart: engine of the circulatory system that pumps oxygen-rich blood throughout the body

pulmonary artery: one of the main arteries of the heart. It transports blood from the heart to the lungs.

aorta: an artery of the heart, which transports blood from the heart to the rest of the body. Blood provides important nourishment to all body organs and tissues.

stomach: storage organ for large quantities of food. Protein in your food is digested here.

liver: body's largest organ. Its two main functions are to process nutrients from the intestine and to remove unwanted or harmful chemicals that are produced in the body or that are taken into the body.

gall bladder: excess bile is stored in the gall bladder. It is a green muscular sac attached to the lower part of the liver. (On the model, the gall bladder is located on the liver.)

spleen: organ involved in the production and maintenance of red blood cells. It is located on the left side of the body behind the stomach.

intestines: tube that extends from the stomach and completes the job of digesting food so that food can be absorbed in the blood. The intestines are comprised of two main sections.

small intestine: longest section of the digestive tract with an average length of about 6 meters. Almost all the body's nutrient absorption occurs in the small intestine.

large intestine: also known as the colon, the large intestine is the final organ of the digestive process. It is responsible for drying out indigestible food residues by absorbing fluid and producing solid waste for elimination.

vertebrae: also known as the backbone. The vertebrae supports the body in an upright position and protects the spinal cord.

kidney: two bean-shaped organs, located in the middle of the back. Among other functions, kidneys regulate the composition of the blood and stimulate the making of red blood cells.

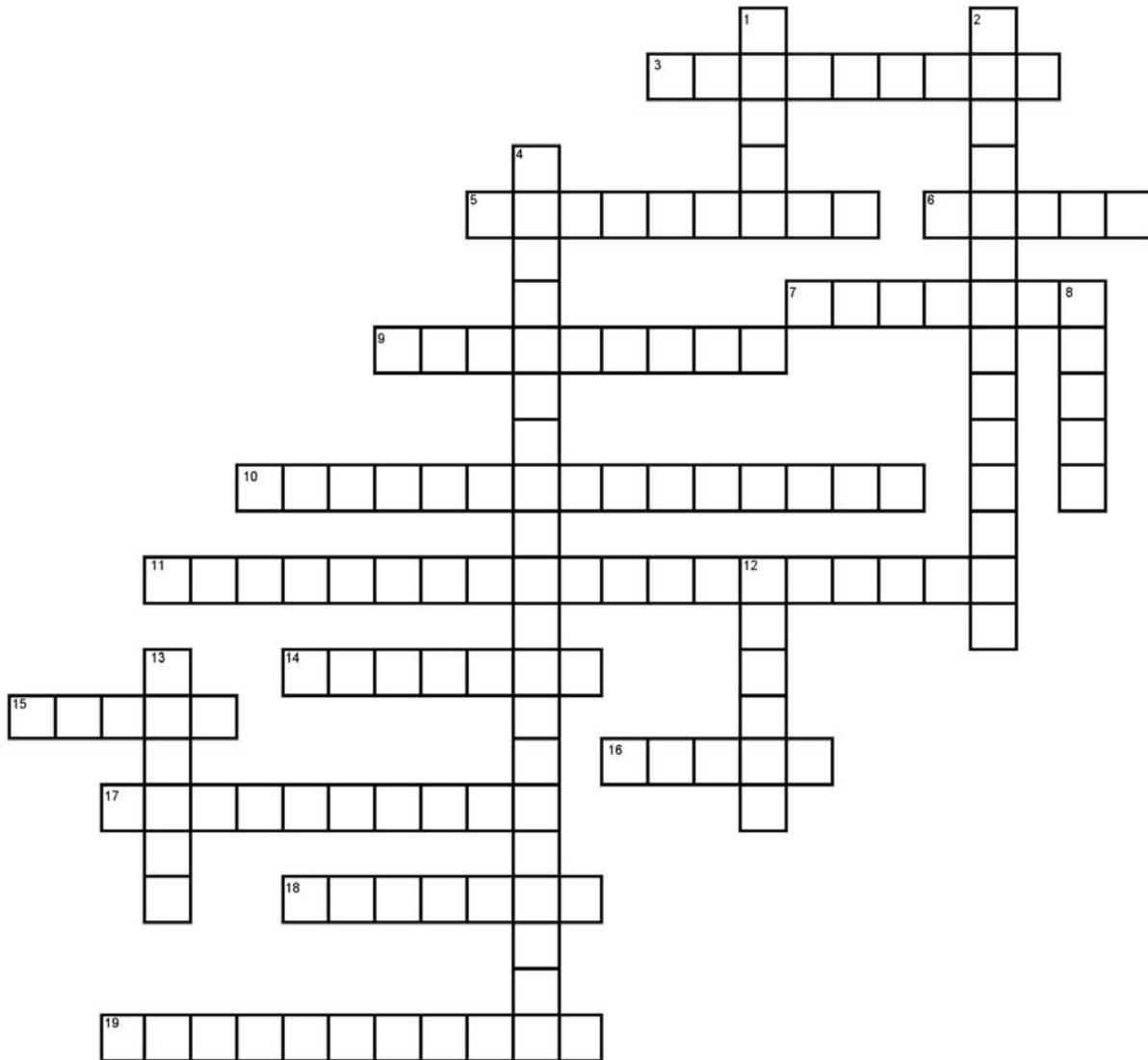
Name _____ Date _____

Word Scramble

Directions: Unscramble the letters in each word to identify a body part from the human torso.

1. TRHEA _____
2. LYPUNOARM YTRAER _____
3. AUCLSURM TMSSYE _____
4. RAOTA _____
5. SIEHESMREPH _____
6. TNISTEINES _____
7. CRTEAHA _____
8. EPENLS _____
9. CRNBHIO _____
10. OHSSUGPEA _____
11. GLAL IDRBEAD _____
12. BINRA _____
13. EILVR _____
14. SOAHCMT _____
15. VETRABEER _____
16. EYDINK _____
17. RAMHGPAID _____

Torso Crossword Puzzle



Across

- 3. Leads food from the throat to the stomach
- 5. The muscle in our rib cage that pulls air into our lungs
- 6. The organs of respiration
- 7. The storage organ for food
- 9. The bone that supports the body and protects the spinal cord
- 10. The artery that transports blood to the lungs
- 11. Controls verbal, analytical, and sequential thinking
- 13. The bean-shaped organ that stimulates the making of red blood cells
- 14. The windpipe
- 15. The control center of the body
- 16. The body's largest organ
- 17. The longest organ in the body that has the job of finishing digestion
- 18. The branch-like tubes that lead air into our lungs
- 19. The organ that stores excess bile

Down

- 1. One of the main arteries of the heart
- 2. The system in our body that allows us to move
- 4. Controls emotional expression and visual imagination
- 8. The organ that pumps blood throughout the body
- 12. An organ involved in the production of red blood cells

Respiratory Fun

Here's a fun experiment to test how much air your lungs can hold.

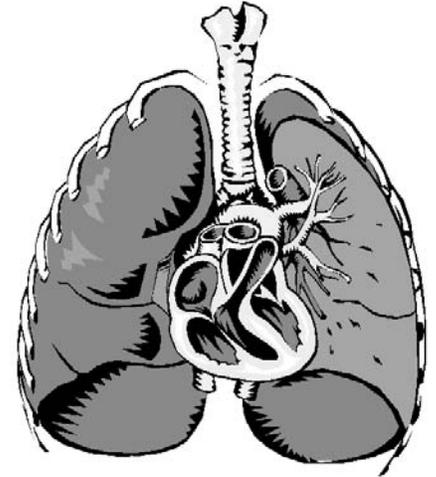
You can measure the maximum volume of air your lungs can hold with a device called a spirometer. Most spirometers are bulky, expensive devices, but you can make a simple spirometer using materials found at home.

Materials needed:

1 liter plastic soda bottle
piece of tubing (about 1 foot in length)
mixing bowl
measuring cup

Procedure:

1. Fill the soda bottle all the way to the top with water. Put the soda bottle in the bowl and place one end of the tubing into the bottle. Be careful not to displace a lot of water when the tube is put into the bottle.
2. While a partner holds the bottle, inhale as deeply as you can and exhale normally into tube that leads to the bottle. **DO NOT** blow out all of the extra air in your lungs; just exhale to the point you would if you exhaled a normal breath. The water will spill out of the bottle and into the bowl. Take this water and pour it into the measuring cup to gauge the amount of water that was expelled with the air in your lungs. Keep the water in the measuring cup. This measurement is called the "inspiratory reserve."
3. Refill the bottle. Now take a normal breath and exhale as you normally would. Next, use your diaphragm to help blow into the tube all of the extra air still in your lungs. Pour this water into the measuring cup. This measurement is called the "expiratory reserve."
4. Record what the measuring cup is holding. The amount of water in the measuring cup that was expelled from your lungs from both breaths is your "vital capacity." This number is the maximum amount of air your lungs can hold.

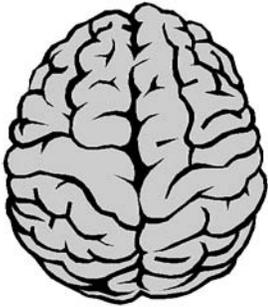


Questions:

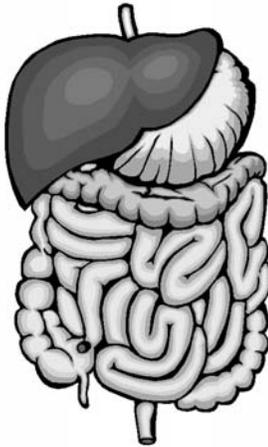
1. Who had the highest "vital capacity" in the group?
2. Was this person tall, short, big, small, male, female?
3. What do you think makes a person have a large "vital capacity"?

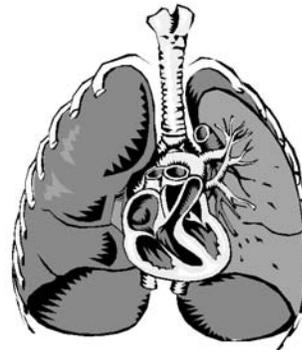
What Do They Do?

For each body part displayed, choose words from the list below that describe something about it. Some words can be used for more than one body part.









blood
brain
breathing
carbon dioxide
circulatory system

digestive system
emotions
heart
intestines
liver

lungs
moving
nervous system
nourishment
oxygen

respiratory system
stomach
thinking

Answer Sheet for Torso Reproducibles

Word Scramble

1. heart
2. pulmonary artery
3. muscular system
4. aorta
5. hemispheres
6. intestines
7. trachea
8. spleen
9. bronchi
10. esophagus
11. gall bladder
12. brain
13. liver
14. stomach
15. vertebrae
16. kidney
17. diaphragm

Crossword Puzzle

Across

3. esophagus
5. diaphragm
6. lungs
7. stomach
9. vertebrae
10. pulmonary artery
11. left brain hemisphere
14. trachea
15. brain
16. liver
17. intestines
18. bronchi
19. gall bladder

Down

1. aorta
2. muscular system
4. right brain hemisphere
8. heart
12. spleen
13. kidney

What Do They Do?

Illustration 1: brain

- emotions
- imagination
- moving
- nervous system
- thinking

Illustration 2: heart

- blood
- carbon dioxide
- circulatory system
- heart
- oxygen

Illustration 3: digestive system

- digestive system
- intestines
- liver
- nourishment
- stomach

Illustration 4: lungs

- breathing
- carbon dioxide
- lungs
- oxygen
- respiratory system

Human Anatomy Model

The parts of your model are numbered. See the list below to learn the names of each part.

1. skull (cranium)
2. cerebrum
3. cerebellum
4. medulla
5. eye
6. larynx
7. and 8. carotid arteries
9. and 10. jugular veins
11. trachea
12. and 13. bronchi
14. ventricle
15. aorta
16. superior vena cava
17. renal vein
18. pulmonary artery
19. atrium
20. and 21. lungs
22. esophagus
23. diaphragm
24. liver
25. gallbladder
26. stomach
27. duodenum
28. pancreas
29. spleen
30. and 31. kidneys
32. and 33. adrenal glands
34. and 35. ureters
36. bladder
37. inferior vena cava
38. iliac artery
39. iliac vein
40. jejunum
41. ileum
42. cecum
43. appendix
44. ascending colon
45. transverse colon
46. descending colon
47. rectum
48. trapezius muscle
49. deltoid muscle
50. pectoral muscle
51. biceps muscle
52. abdominal muscle
53. latissimus dorsi muscle
54. triceps muscle
55. gluteus maximus muscle
56. rectus femoris muscle (thigh)

© Educational Insights, Inc., Rancho Dominguez, CA 90220 (USA).

Learning Resources, Ltd., King's Lynn, Norfolk (UK).

All rights reserved. Conforms to ASTM F 963. Made in China. Please retain this information.

TELL EDUCATIONAL INSIGHTS: We welcome your comments or questions about our products or service.

CALL: (800) 995-4436 Monday-Friday

OR VISIT OUR WEBSITE: www.EducationalInsights.com

