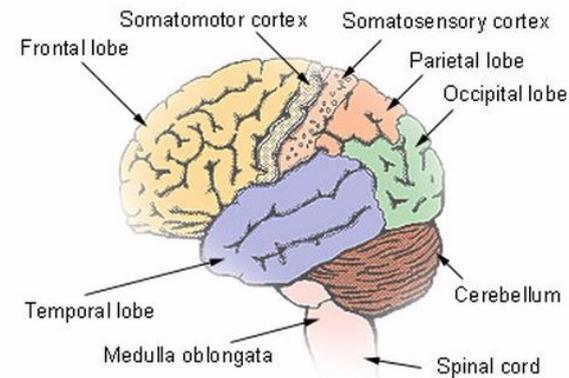


Focus: What's Inside



Lobes of the cerebrum

Why is the brain so mighty? It has billions of *neurons* (nerve cells) to carry out its commands. Without the brain, you would not be able to think, feel, move, remember, or do all the things that make you the special person you are.

At birth, the brains of infants weigh the same. But by adulthood, that changes. The average male brain weighs about 11 to 12 percent more than a woman's brain. But brain weight and size have nothing to do with intelligence. What matters is what's *inside* the brain.

Despite its small size (about 3 pounds), the brain is able to receive and send an unlimited number of messages. It does this with the help of the spinal cord, the sense organs, and the autonomic (automatic) nervous system. The brain carries out this task by assigning jobs.

- It puts the *cerebellum* (sair-ah-BELL-um) in charge of balance and coordination.
- The *brainstem* regulates heartbeat, breathing, and blood pressure.
- And the largest parts of the brain, the *cerebral cortex* (suh-REE-brul CORE-tex) and the *cerebrum* (suh-REE-brum), control thoughts, feelings, and actions.

The cerebrum is divided into two halves. Each controls the muscles on the opposite side of the body. So if you usually eat with your right hand and kick with your right foot, then your brain's left half is said to "dominate," and you're right-handed. When the opposite is true, your brain's right half takes the lead and you're left-handed.

People use both halves of the brain, but the left half is especially good at helping you with words and numbers and helping you read and speak. The right side is better at creative tasks, such as music and art. And your sense of humor develops there.

Each half has four sets of lobes (sections). The *frontal lobes* behind your forehead do a lot of the thinking and planning. The *parietal* (pa-RYE-ih-tul) *lobes* toward the back of your head sense pain. And the *occipital* (ock-SIP-ah-tul) *lobes* at the base of the brain allow you to see. The *temporal lobes* behind your ears store memories of music, taste, vision, and touch.

Name: _____ Date: _____

1. According to the passage, how much does a brain weigh?

- A. 11 pounds
- B. 12 pounds
- C. 20 pounds
- D. 3 pounds

2. The passage describes the different jobs the parts of the brain are responsible for. Which of the following parts is in charge of regulating breathing?

- A. brainstem
- B. cerebral cortex
- C. cerebrum
- D. cerebellum

3. It can be inferred from the passage that people with dominant right half brains do which of the following?

- A. kick a soccer ball with their right foot
- B. eat with their right hand
- C. write with their left hand
- D. draw with their right hand

4. Read the following sentence: "So if you usually eat with your right hand and kick with your right foot, then your brain's left half is said to 'dominate,' and you're right-handed."

As used in the passage, **dominate** means

- A. weaken
- B. speak
- C. control
- D. choose

5. What is the main idea of this passage?

- A. The brain is a small organ that does many things for the human body.
- B. A funny person has a bigger brain than other people.

- C. The brain has two halves that control which hand you write with.
- D. The lobes in the brain do different tasks.

6. What are the two parts of the brain that control thoughts, feelings, and actions?

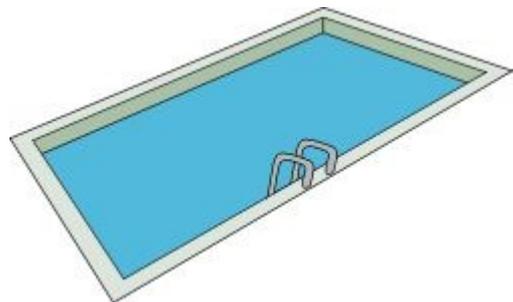
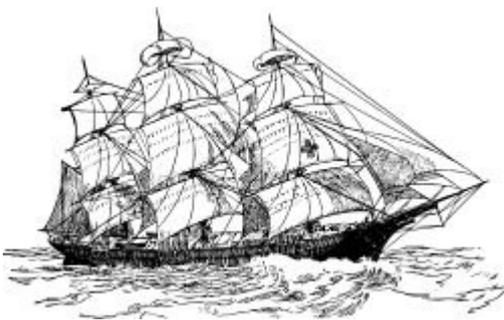
7. Based on the passage, what might happen if the cerebellum of the brain is damaged? Why?

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

The cerebrum's two halves control muscles on the opposite side of the body, _____ if your brain's left half dominates you will eat with your right hand.

- A. because
- B. but
- C. so
- D. after

9. Where can the water temperature be regulated?



10. How do traffic lights regulate driving?

1. According to the passage, how much does a brain weigh?

- A. 11 pounds
- B. 12 pounds
- C. 20 pounds
- D. 3 pounds**

2. The passage describes the different jobs the parts of the brain are responsible for. Which of the following parts is in charge of regulating breathing?

- A. brainstem**
- B. cerebral cortex
- C. cerebrum
- D. cerebellum

3. It can be inferred from the passage that people with dominant right half brains do which of the following?

- A. kick a soccer ball with their right foot
- B. eat with their right hand
- C. write with their left hand**
- D. draw with their right hand

4. Read the following sentence: "So if you usually eat with your right hand and kick with your right foot, then your brain's left half is said to 'dominate,' and you're right-handed."

As used in the passage, **dominate** means

- A. weaken
- B. speak
- C. control**
- D. choose

5. What is the main idea of this passage?

- A. The brain is a small organ that does many things for the human body.**
- B. A funny person has a bigger brain than other people.
- C. The brain has two halves that control which hand you write with.
- D. The lobes in the brain do different tasks.

6. What are the two parts of the brain that control thoughts, feelings, and actions?

The two parts of the brain that control thoughts, feelings and actions are the cerebral cortex and the cerebrum.

7. Based on the passage, what might happen if the cerebellum of the brain is damaged? Why?

If the cerebellum is damaged, a person may not be able to balance because the cerebellum controls balance and coordination.

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

The cerebrum's two halves control muscles on the opposite side of the body, ____ if your brain's left half dominates you will eat with your right hand.

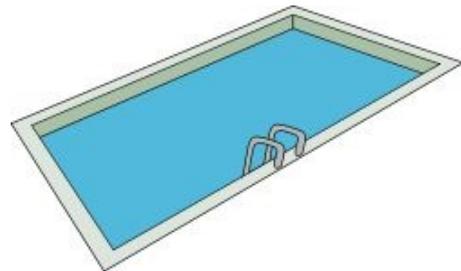
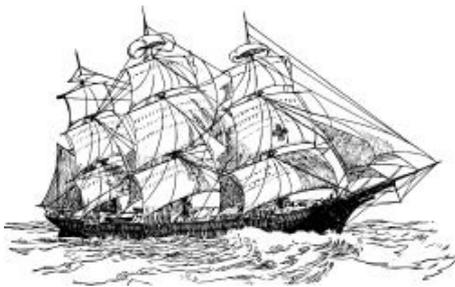
A. because

B. but

C. so

D. after

9. Where can the water temperature be regulated?



10. How do traffic lights regulate driving?

Traffic lights can help regulate or control driving because they tell people when to stop or go, which is helpful because there will be fewer accidents.