

Boost Your Brain

Lesson One: Students will learn the brain's anatomy, function and how to boost its power.

MATERIALS:

1. Copy of "How Does Your Brain Work?" printable
2. Scissors
3. Glue

SETUP:

1. Start the lesson by going over what the brain is and its purpose. Share that the brain has billions of nerve cells. These cells send and receive information all over your body. The brain controls your thoughts, movements, memories and decisions. It's the boss of your body!
2. Healthy brains rely on blood (pumped by your heart) to deliver the oxygen and nutrients that the brain needs.
3. A healthy brain helps you pay attention, solve problems and communicate clearly. But your brain depends on you to work at its peak performance. What's good for your heart is also good for your brain.
4. Live a healthy life by eating healthy (eat more fruits and vegetables and reduce sodium, added sugar and saturated and trans fats). Move more – kids should get at least 60 minutes a day of physical activity. Get enough sleep – 9 to 11 hours a night for kids 6- to 13-years-old and 8 to 10 hours a night for kids 14- to 17-years-old. Maintain a healthy weight, and never vape or use tobacco.

Ask the students:

1. **How much does an adult brain weigh?** Answer: 3 pounds, that's about 2% of an adult's weight but the brain uses 20% of the body's energy.
2. **Is the human brain bigger or smaller than other mammals with similar body sizes?** Answer: Three times bigger.
3. **What does your brain do while you sleep?** Answer: It keeps working of course. It stores your memories and controls your body. It also makes new connections, thinks up new ideas, makes decisions and solves problems.

Now, let the class know that we're going to learn about the five main parts of the brain and their function. First, your brain is covered by your skull – also known as your cranium. The skull has 22 bones that work like a helmet for your brain. Under your skull is your brain:

- The **cerebrum** is the largest part of your brain and is made up of two sections or hemispheres (or lobes). The cerebrum controls your thinking, moves your muscles and remembers information. Ask the class to repeat the word cerebrum.
- The **hypothalamus** controls your body's temperature.
- The **cerebellum** controls balance, movement and coordination.
- The **pituitary gland** controls hormones, substances that affect your growth, mood and how your body's organs work .
- The **brain stem** controls involuntary muscles — muscles that work without you thinking about them, such as breathing, digesting food, circulating blood and more.

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INSTRUCTIONS:

Divide the class into pairs. Distribute the materials listed on the previous sheet. Have each twosome work together to complete the printable as directed. They learned what each part of the brain does but they haven't learned where each part is located. This exercise will help teach them. Check your students' work as a class, directing students to reposition any boxes they placed incorrectly. Once the position of each box has been determined, have students glue the boxes in place.

To conclude, divide the class into groups and ask each group to list out 3 new things they learned today about the brain and report back to the class.

Answer Key

CEREBRUM

Controls thinking, moving, your muscles and remembering information

HYPOTHALAMUS

Controls your body temperature

PITUITARY GLAND

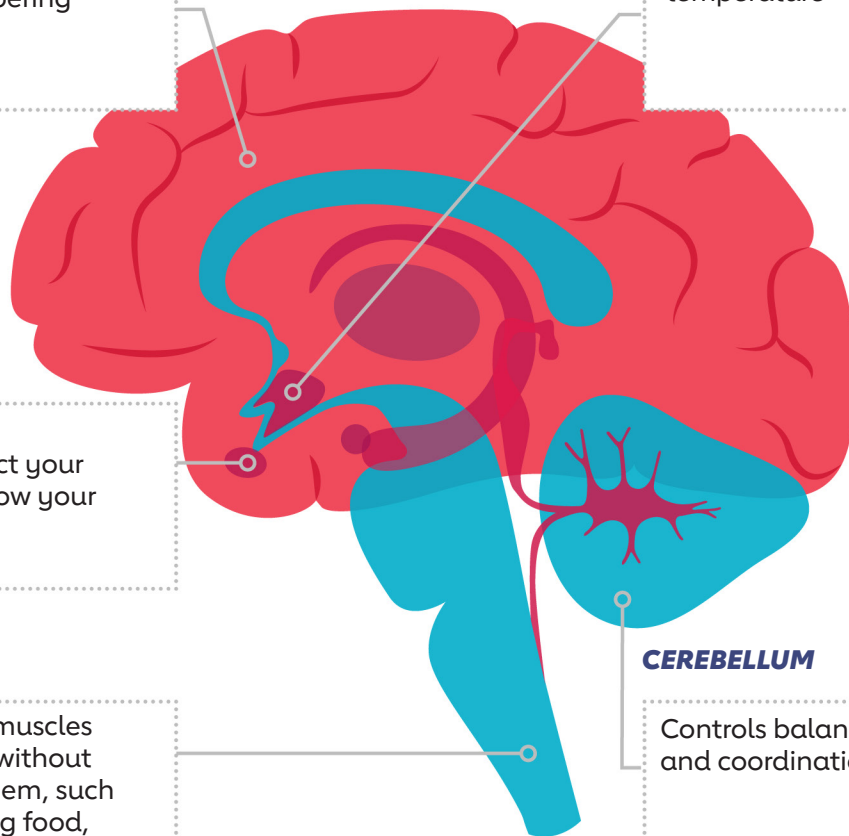
Controls hormones - substances that affect your growth, mood and how your body's organs work

BRAIN STEM

Controls involuntary muscles — muscles that work without you thinking about them, such as breathing, digesting food, circulating blood and more

CEREBELLUM

Controls balance, movement and coordination



How Does Your Brain Work?

Name:

Date:

Cut out each definition at the bottom of the page and place it in the correct box. After checking and correcting your work, glue the boxes to the diagram.

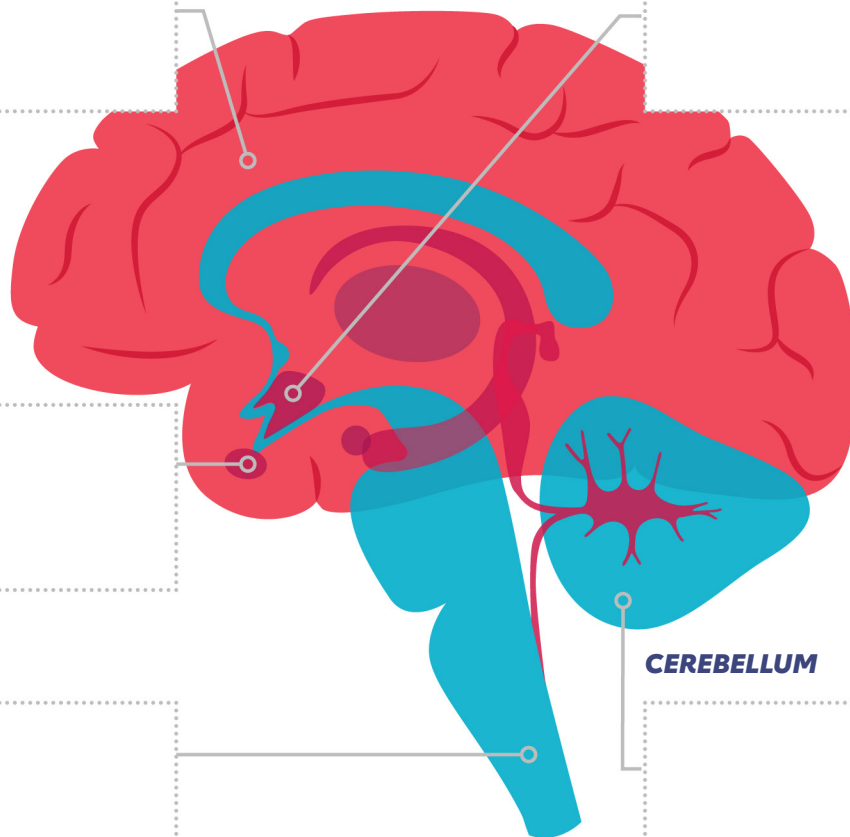
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