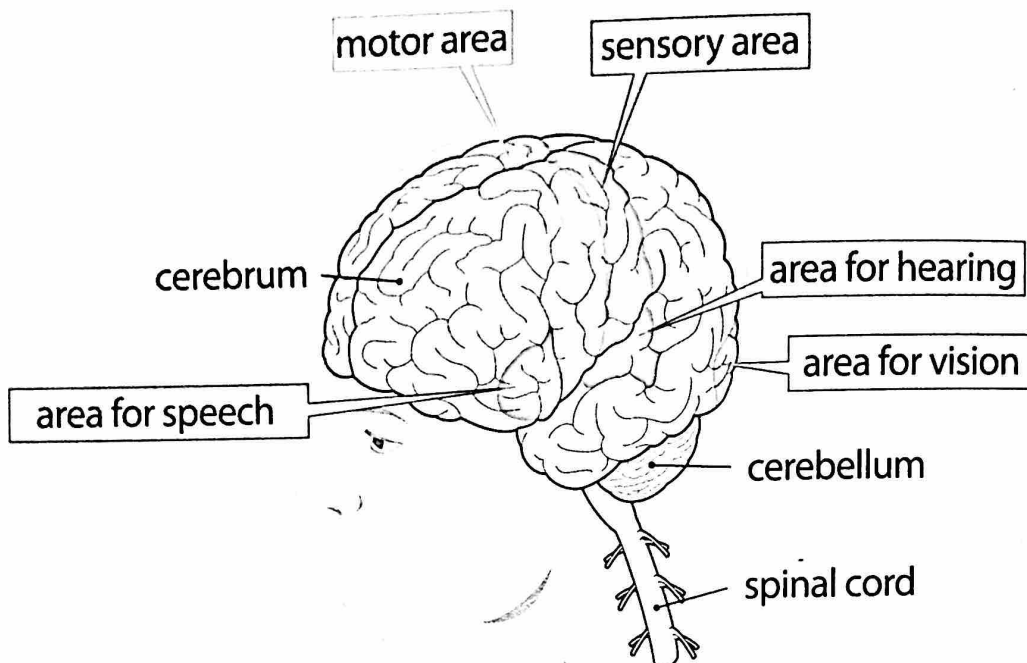


How Does the Brain Work?

Talk about the diagram and read the explanation.



The brain is a living **organ** inside your head, which controls your whole body. It keeps all parts of the body working and is responsible for thoughts, feelings and memory. You also use the brain to make sense of the things you experience.

The brain fits snugly inside a hard bony case called the **skull**. The skull protects the brain, which itself looks like a mass of grey, wrinkled and wobbly jelly. Taking up about half of the space inside the head, an adult's brain weighs about 1.4 kilograms.

The human brain is divided into many different areas, which control the things you do, say, hear, feel, think and see (see diagram). The largest part of the brain is called the **cerebrum**, which has two sides. The right side of the brain controls the left side of the body and the left side of the brain controls the right side of the body. It has also been discovered that each side of the brain looks after different skills and activities. The right side controls artistic talent and imagination, while the left is responsible for working things out like mathematical problems and **logical** thinking. Below the cerebrum lies the **cerebellum**, which helps you to balance and co-ordinate your movements.

The brain operates like a computer inside your head. It is linked to the body by the **spinal cord** and **nerves**. Your nerves are like long, thin wires that run all over the body. These operate like telephone wires, sending information to and from the brain in the form of tiny electrical currents. In the human body, there are 100 million nerves. Some carry messages from your five senses to the brain, while others bring instructions from the brain to your muscles. Since the brain acts like the control centre of the body, its job is to keep track of and to make sense of all this information.

The brain is both a fascinating and a truly amazing organ. About the size of two fists, it works automatically day and night and keeps the body ticking over even when you are fast asleep. It controls many things like breathing and sends signals to the nerves at speeds of up to 400 km per hour!

Examine This Explanation

Examine the explanation carefully and answer the following.

- ① Underline the sentence which explains what a brain is.
- ② Use your dictionary to explain the words in bold type.

organ _____

skull _____

logical _____

spinal cord _____

nerves _____

- ③ Explain what facts you have understood from this explanation about the human brain, by answering the following.

(a) **When** do you use it? _____

(b) **Where** is it? _____

(c) **What** does it look like? _____

(d) **Why** do we need it? _____

(e) **How** does it work? _____

- ④ What information about the brain did you find most interesting?

- ⑤ Why, do you think, is the brain compared to a computer?

Follow-up Activity

Sometimes the body reacts without waiting for a message from the brain. This is called a reflex action. To observe a reflex action, sit with your legs crossed and ask a friend to tap gently below your kneecap. When the right spot is tapped, your foot will jerk up!