

## **Your Amazing Brain**

Your brain controls everything you do. It makes it possible for you to think, learn, create and feel emotions, to blink and breathe and for your heart to beat – this fantastic control centre is your brain. It is so amazing that a famous scientist once called it ‘the most complex thing we have yet discovered in our universe’.

Trying to make sense of the brain isn’t easy. We know it’s the organ that makes us human by giving us the ability to create art and language, make decisions and produce rational thought. It’s also responsible for our personalities, memories, movement and how we understand the world.

Can this small grey organ, which weighs less than one and a half kilos, really do so much? Amazingly, your brain contains about 100 billion microscopic cells called neurons. It would take you over 3000 years to count them all. Whenever you dream, laugh, think, see or move, it’s because signals are racing between these neurons. Believe or not, the activity in your brain never stops. Your neurons create and send more messages than all the phones in the world. And although one neuron creates only a very small amount of electricity, all your neurons together can produce enough electricity to power a light bulb.

So exactly how fast does your brain work? Well, imagine this: a bee lands on your foot. Neurons in your skin send this information to your brain at a speed of more than 240 kilometres per hour. Your brain then uses other neurons to send the message back to your foot to shake the bee off quickly. These neurons can send this information at more than 320 kilometres per hour. No computer has your brain’s incredible ability to cope with the amount of information coming from your eyes, ears and other sensory organs.

But how does your brain allow you to learn things that you will use in the future? The structure of your brain changes every time you have a new thought, remember or learn something. For example, riding a bike seems impossible at first, but soon you are able to do it. How? As you practice, your brain sends ‘bike riding’ messages again and again. Soon, the actions are learnt and you are able to ride a bike easily from then on.

How quickly we learn things varies from person to person, but there are some things which can help us to learn faster, and surprisingly, exercise is one of them. We know that any exercise that makes your heartbeat faster is great for your body and can even help improve your mood, but we know less about the effects of exercise on learning. However, scientists have recently discovered that for a period of time after you’ve exercised, your body produces a chemical that makes it easier for your brain to learn. So, if you’re stuck on a homework problem that is too difficult to solve, go out and play a game of football, then try the problem again. You just might discover that you’re able to solve it.

### **Part 1: Read the text and answer some MCQ Questions.**

1. Why does the writer mention computers?
  - a. to compare them to the human brain
  - b. to show how fast they have become
  - c. to say that computers have no abilities
  - d. to say that computers need eyes and ears

2. We know that neurons...

- a. send messages very slowly.
- b. are only found in skin.
- c. deliver messages to your brain.
- d. need electricity to work.

3. When you have a new thought,

- a. your heart beats faster.
- b. the structure of your brain changes.
- c. you learn something new
- d. you remember something.

4. What does the writer tell us about exercise?

- a. It can make you less intelligent.
- b. It needs a special chemical
- c. Its effects are not well known.
- d. It can make you feel better.

5. What is the article generally about?

- a. All the steps that are involved when your brain learns things.
- b. What an incredible organ the human brain is.
- c. How the brain makes people smarter than computers.
- d. The things you can do to speed up your brain.

**Part 2: Fill in the blanks with the words given.**

structure	mood	organs	sense	signals
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- 1. Electrical messages in the body are known as \_\_\_\_\_.
- 2. Your \_\_\_\_\_ is the way you are feeling at a certain time.
- 3. The way something is built is known as its \_\_\_\_\_.
- 4. If the meaning of something is not clear, it doesn't make \_\_\_\_\_.
- 5. The eyes, ears, nose, mouth and skin are all \_\_\_\_\_.

**Part 3: Brain Teaser (Just for Fun – See if you can figure it out)**

A man went for a walk. After about an hour, he came to a deep, wide river. There was no bridge. He didn't have a boat or raft, or any materials to make one. He couldn't swim. How did he get across the river?

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