Human Brain - How Does It Work

This video clip - from the University of Bristol (in England) - explains the various parts of the human brain. Using animation, it also explains how the brain functions.

Since the narrator is British, some of the pronunciations of various words (like parietal or cerebral) may seem different to American viewers.

The human brain is the most complex organ in our bodies. It controls much of who we are as a person. We can examine some parts of the brain, starting with an area deep in its center.

The Brain Stem

Deep in the center of our brain, the stem controls many essential functions (such as breathing, blood pressure and heart rate). It also controls whether we feel hungry or thirsty, happy or sad, loving or fearful. All of these emotions seem to reside in the brain stem.

Thalamus

The thalamus, which sits above the brain stem, acts like a gateway to the higher cortical regions. All sensory information - whether a sense of touch or sensations from the skin - passes through the thalamus. Then it goes to the correct regions for further processing. The thalamus regulates our consciousness, determining whether we're alert or asleep.

Hippocampus

This part of the brain, which is named for its resemblance to a seahorse, is the seat of our spatial working memory. It helps us to remember where we left our keys or how to get home.

Cerebral Cortex

This area of the brain, with a surface which looks like it is folded around itself, is divided into different lobes. Although the surface looks the same, the various lobes have very different functions:

Occipital Lobe - contains the visual cortex, so it is mainly concerned with our ability to see.

Parietal Lobe - this lobe processes sensory information and integrates those signals with visual information from the occipital lobe.

Temporal Lobe - this is our center of learning and memory. It helps us to recognize different sounds and environments.

Frontal Lobe - This area really defines who we are. It's where our higher emotions and personality reside. It's our language and decision-making center. It contains the motor cortex which controls our voluntary movements.

Cerebellum

Located at the back of the brain are the two lobes of the cerebellum. This region is a coordinating center for movement. We can talk, walk, pick things up and put them down because of the cerebellum.

Other Brainy Facts

Did you know that it takes over 1/5 of all the calories we eat, every day, just to keep our brains running?

So ... how does the brain communicate within itself? It has billions of neurons, with long extensions, which talk to each other. How do neurons talk to each other? The brain uses electrical signals and chemical processes to send signals which travel, via neurotransmitters, in an extremely complex system.

We really *are* our brain, and this animation helps us to better understand how it all works.

Credits:

Video clip, of an animated tour of the human brain, is online via the University of Bristol's channel at YouTube.

See Alignments to State and Common Core standards for this story online at:
http://www.awesomestories.com/asset/AcademicAlignment/Human-Brain-How-Does-It-Work

See Learning Tasks for this story online at:
http://www.awesomestories.com/asset/AcademicActivities/Human-Brain-How-Does-It-Work