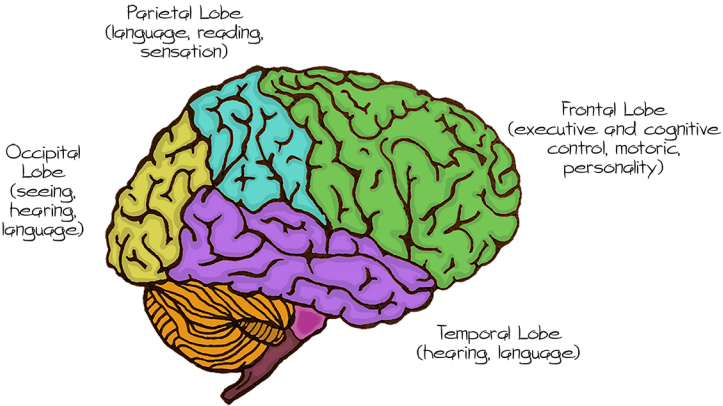


# HUMAN BRAIN ANATOMY



The human brain can be divided into three parts: The cerebrum, the cerebellum and the brainstem



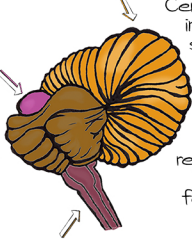
This is how the cerebrum looks from the top.

## 1. THE CEREBRUM

The cerebrum is the largest part of the brain. It is made up of two hemispheres (left and right) and can be divided into four lobes. The cerebrum controls many different behaviors, it is seat of our personality, feelings and thoughts. While we can assign basic functions to certain brain regions, it is always a combination of areas working together to make us speak, hear, see, talk, dance, laugh, etc.

## 2. THE CEREBELLUM

Cerebellum is latin for little brain. And indeed this part of the brain is a small part almost hiding under the bigger cerebrum. The cerebellum is involved in motor control, for example for the correct timing of movements, for precision and coordination. Along with cerebral regions, the cerebellum is activated during more complex tasks too, for example language or attention.



## 3. THE BRAINSTEM

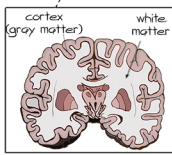
This part is called midbrain. The midbrain is involved in being awake or asleep, for hearing, vision and motor control.

This part is called the pons. Pons is the latin word for bridge. Like a bridge the pons is connecting different brain areas.

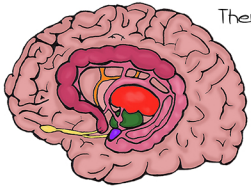
This long branch-like arm is called the medulla (or medulla oblongata). It controls heart rate and breathing. It is also involved when we sneeze or vomit.

## CROSS-SECTION

This is how it looks if we were to cut through a brain. The area on the outside is called cortex or gray matter. Inside you can see the white matter.



## THE LIMBIC CIRCUIT



There are many important circuits inside the brain too. This one is called the limbic circuit. It contains different structures that particularly process emotion/related information.

# FUN BRAIN FACTS

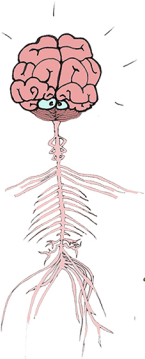


The brain's consistency resembles a ripe avocado.

The brain is mostly made up of water (~73%).



The average adult brain weighs around 1.2-1.5Kg.



Neurons are nerve cells that build the brain's core: they can communicate with each other.



There are about 86 billion neurons in the brain.

Each neuron has many, many connections (synapses). They build networks.



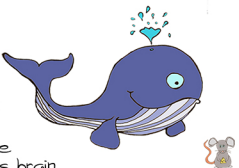
Treeshrews have the highest brain-to-body ratio of all mammals.



Some connections are extremely fast...

...others are slow.

At two-years of age, the brain is about 80% of the size of an adult's brain.



Brain size is related to body size. Little animals like ants and mice have smaller brains than bigger animals, like elephants or whales.



Female bodies and brains are on average slightly smaller than males. Also, neanderthals had bigger brains than us.

Size is not everything! Our brain-body ratio, the number of neural connections and the folding of our brain (the brain's organization) are important to consider too.