

The Brain Write-Up

By [REDACTED]

The brain is a very important part of your body. It keeps your memories safe, your emotions intact, and that information you need to study for your test. Your brain is what separates you from animals. Your brain is how you think.

Commented [B1]: Great introduction to your paper! Introductions are an important way to frame the paper, giving it voice, purpose, and an audience.

The brain is made up of billions of specialty cells called neurons. Those neurons are linked together by the gaps in-between them known as synapses. The synapses allow the neurons to transmit information between them, like a highway for information or signals, allowing your brain to create memories, think, and learn. The neuron is made up of three main parts: the cell body or soma (that contains the neuron's

Commented [B2]: Excellent use of simile in your write up! What is the difference between the electrical and chemical signals that neurons produce?

nucleus), dendrites (signal receivers) and the axon (which conduct nerve signals and transmit information through synapses to other neurons). The term neuron was introduced in 1891, and also during the decade the term axon (by Rudolph Von Kollicker), Dendrites (by Wilhelm His) and synapse by Sir Charles Sherrington (from the Greek roots *syn* meaning 'together' and *haptein* meaning 'to clasp').

FUN FACT!
The information transmitted can travel up to 200mph!

Commented [B3]: Your "Fun Fact" is a great idea!

Lot's of research on the neurons was done near the end of the 1800s and a lot of information is still used today for further research.

Commented [B4]: Excellent use of background information to paint a picture of the information you are portraying.

The brain is often known to be made up of different 'lobes' as well as other parts. These lobes and different parts are responsible for their own thing, yet work in conjunction to make your brain work. There are four lobes in the brain - the frontal lobe (located at the front of your brain), the parietal lobes (located at the top of your brain), the occipital lobes (located at the back of your brain) and the temporal lobes (located near your temples). The frontal lobe is responsible for 'executive processes' (voluntary behavior, for example problem solving and decision making), cognition, intelligence, attention, language processing, comprehension and voluntary motor control. There are also many other functions. Then we have the parietal lobes which have the functions of perception, visuospatial processing, number representation, and spatial attention and mapping. Next is the

Commented [B5]: Yes! Very true! There is some specific functionality, but important to note that they work together.

occipital lobes that are responsible for vision and the temporal lobes that help your perception, understanding language, recognition, memory, and learning. (Accurate paraphrasing, and thorough summary of functionality)

Some of the different parts of the brain are the cerebellum, thalamus, hypothalamus, the amygdala, and the hippocampus.

The amygdala and hippocampus are located very close together. This has helped generations survive for centuries. I think because of their proximity to each other, it affects their respective functions. For example if I had an extremely tragic and horrific experience from going on an escalator, it would affect how I see them in the future. The amygdala is responsible for our emotions whereas the hippocampus is responsible for our memories. Many of our memories reflect how we felt about a situation and it affects how we see it in the future. It affects if we remember it in a good way or if we remember it as a nightmare. I also think that if the memory is “scarring” enough, important or full of joy, it becomes implanted in our memories. We want remember or completely forget it. Embarrassing events can help correct our mistakes in the future, and I feel like our brains want us to remember this so we can learn from it.

Great job, [redacted]! A very thorough description of what we have learned in our neuroanatomy/neurophysiology unit. For your next non-fiction or science write up, I would like to encourage you to try to cite your information and create a reference list. A great source for learning how to do this properly is Purdue Owl (<https://owl.english.purdue.edu/owl/>). For science in particular, you want to use the APA format (<https://owl.english.purdue.edu/owl/section/2/10/>).

Good luck with the rest of your courses! If you have any questions about any of the comments or prompts I have mentioned above in Track Changes, be sure to email me!

Model: Exceeding Expectations
Write up: Exceeding Expectations

Commented [B6]: What importance do these parts play? What would happen if any of these parts were damaged? We talked about damaged hippocampus with patient H.M., but what do you think would happen if our frontal lobe was damaged? (Look up the story of Phineas Gage) and what about if our cerebellum was damaged? (look up ataxia).

Commented [B7]: These two sentences might be best if they were switched. They are located close together, therefore they affect their respective functions. Then mention that it has helped generations survive, so that the next sentence explains why you have said that (the justification of that claim).

Commented [B8]: Definitely. Look up “Flashbulb memories,” an interesting phenomenon that involves the amygdala and the hippocampus.

Commented [B9]: Wont? Want to?

Commented [B10]: Great examples and justification! Can you find any studies or sources that have specifically looked at this topic? Where would you search for this? Are you familiar with your library’s database?