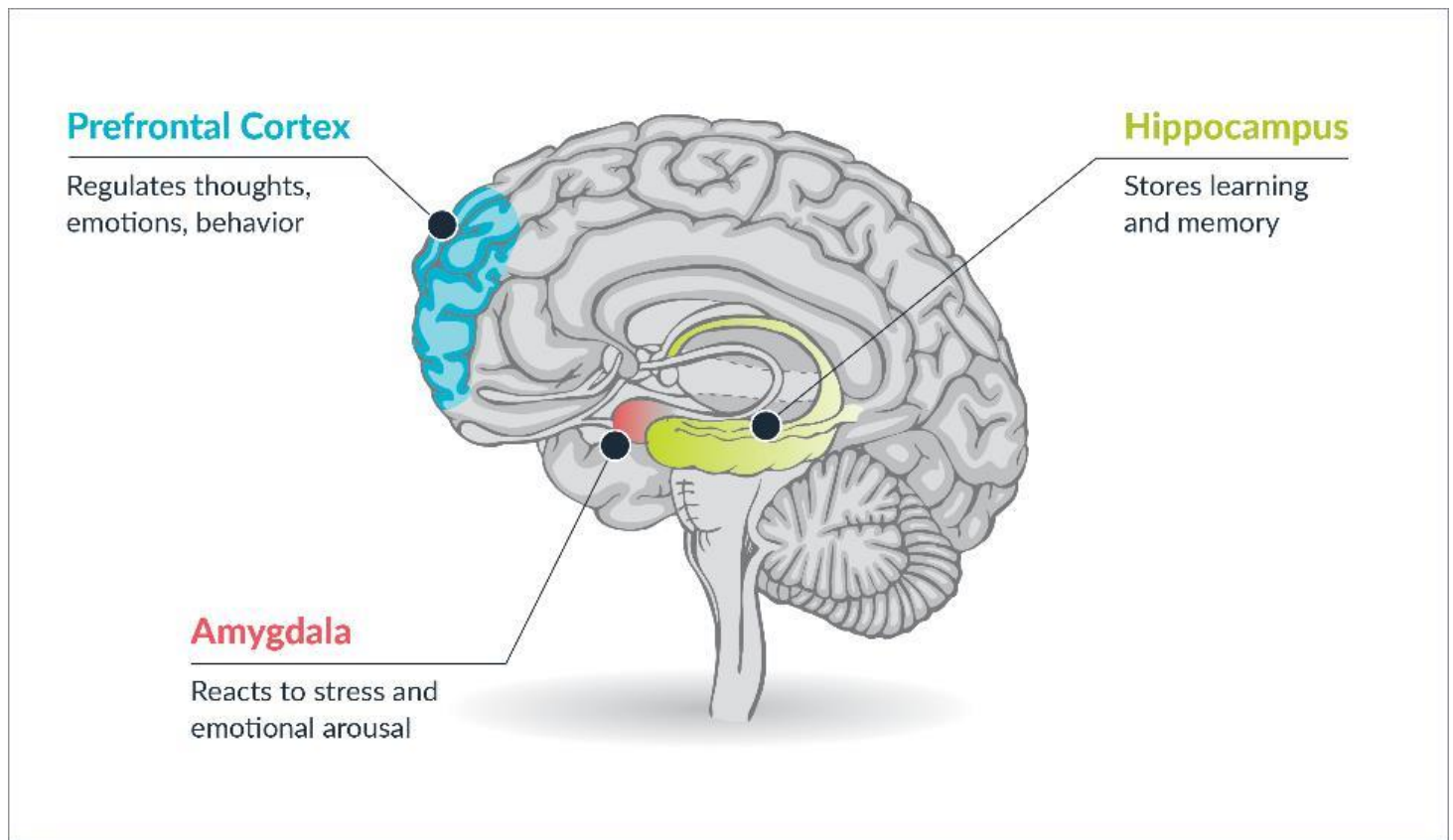


The Learning Centers of the Brain

The **prefrontal cortex**, **hippocampus** and **amygdala** are key parts of the brain's limbic system. Working together, these structures allow students to regulate emotion, attention, thoughts, memory and behavior – all key components of academic success.



Each one of these parts of the brain plays an important role in learning.

- The **prefrontal cortex** is a specialized area located right behind the forehead, as part of your frontal lobe. It plays a key role in regulating thoughts, emotions and behaviors.
- The **hippocampus** is a small, curved structure (often compared to a seahorse) located symmetrically on either side of your brain (there are two!). It stores our learning and memory.
- The **amygdala** is a small, almond-shaped structure located symmetrically on either side of your brain. It reacts to stress and emotional arousal. It is often called the “alarm center,” but it is not just for negative emotions! Positive emotions like excitement are also related to amygdala activity.

These parts of the brain work together as part of the limbic system to regulate emotion, attention and behavior, and to learn and remember, all key components of academic (and life!) success.

- These areas in the brain do not work in isolation; they are structurally and functionally integrated. This means they are physically interwoven – they communicate, interact and impact each other.
- When these structures work together effectively, they help you to adapt to the environment you are in to accomplish your goals. For a student, that would be engaging in learning in a classroom.
- These structures, like the rest of the brain, are malleable – they change in response to experience.
- This is both an opportunity and a vulnerability, depending on the context.