



MY MINDFUL BRAIN FOR K-3

"The brain is like a muscle. When it is in use we feel very good. Understanding is joyous."

—Carl Sagan

OVERVIEW

Students learn about the three parts of the brain--the amygdala, the hippocampus, and the prefrontal cortex--involved with emotion regulation, attention, and learning to engage their interest and enhance their self-awareness.

PLANNING FOR IT

WHEN YOU MIGHT USE THIS PRACTICE

- Before inviting students to participate in any contemplative (mindfulness) practice
- In preparation for the [MindUP™ program](#), to introduce students to the concept that they can use their brain in ways that will help them focus their attention when needed, calm themselves in the face of anxiety, and be less reactive and more proactive in creating a more productive experience.
- To provide students with the science behind the benefits of mindfulness practice
- To give students a sense of control and empowerment through an understanding of the brain structure and functions
- To teach students about the brain and how it works so that they can use it for greater success in school as well as interpersonal relationships

TIME REQUIRED

- ≤ 30 minutes

LEVEL

- PreK/Lower Elementary

MATERIALS

- Images of the brain, such as this one

LEARNING OBJECTIVE

Students will:

- Identify the amygdala, the hippocampus, and prefrontal cortex on a diagram of the brain
- Give a simple definition of the amygdala, the hippocampus and prefrontal cortex
- Apply their new knowledge of the brain to everyday scenarios

SEL COMPETENCIES

- Self-awareness
- Self-management
- Social awareness
- Responsible decision-making

HOW TO DO IT

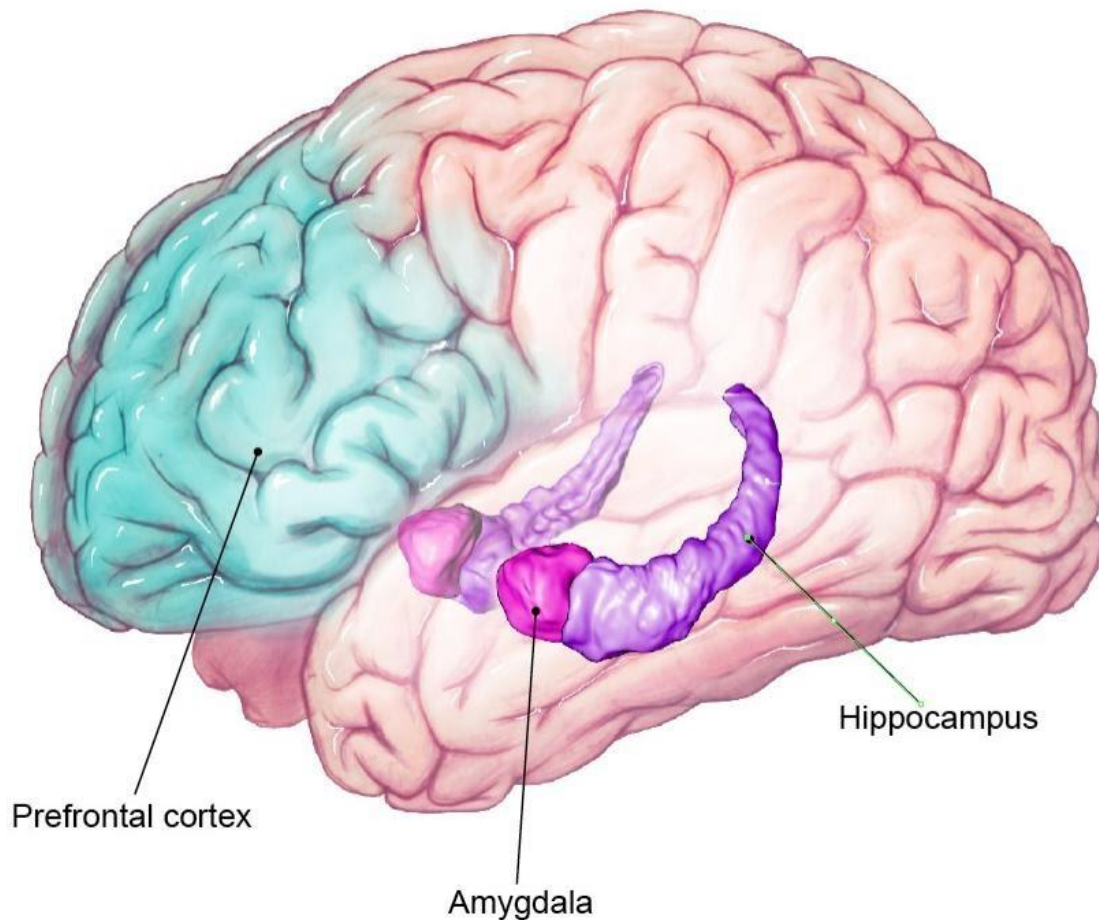
REFLECTION BEFORE THE PRACTICE

- Consider a recent stressful experience. What did you notice about your thoughts, feelings, sensations, and ability to problem-solve? What steps did you take to calm yourself?
- Next, consider a time you observed a student who was stressed or upset. What did you notice about how their ability to learn or problem-solve was impacted? What helped to calm the student?

INSTRUCTIONS

CLASS DISCUSSION (5 MINUTES)

- Lead a class discussion by selecting a few of the following guiding prompting questions:
 - *What do you know about the brain?*
 - *Where is your brain?*
 - *How big is your brain?*
 - *What do you think it looks like?*
 - *What color is it?*
 - *Do you think your friend's brain is exactly the same as yours?*
 - *How do we use our brains?*
 - *If our bodies need exercise, what about our brains?*
 - *Do brains need exercise too?*
- Show the image of the brain below (this image may be scanned and projected or blown up and printed for display):



- Explain:
 - *We are going to learn about three very important parts of the brain. Understanding these parts of the brain and how they work can help us get better at making good choices and help us learn better.*

MINDFUL ACTIVITY (15 MINUTES)

- Focus the children's attention to the large drawing of the brain. Point to the prefrontal cortex, the hippocampus, and the amygdala and explain:
 - *The names of these parts of the brain are the **prefrontal cortex**, the **hippocampus**, and **amygdala**. (You may want to have the students practice pronouncing these terms with you)*
- Have students touch the center of their own foreheads and explain the **prefrontal cortex** is just behind. Point to the **prefrontal cortex** on the diagram.
- Next, have students touch their ears and explain the **hippocampus** is just behind. There are two **hippocampi**, one on each side of the brain. Point to the **hippocampus** on the diagram.

- Now point to the **amygdala** on the large drawing and explain that it is located deep in the middle of the brain. The name **amygdala** comes from it being shaped like an almond. There are two **amygdalae** located on each side of the brain.
- Go back and point to **prefrontal cortex** and say:
 - *This part of your brain helps you make good choices, pay attention, and learn more.*
- Next point to the **hippocampus** and say:
 - *The hippocampus helps us to remember things. Its job is to store memories and find them when we need them.*
 - *The hippocampus also helps us manage our fear response – we are going to learn more about our fear response later in this lesson.*
- Now point to the **amygdala** and say:
 - *This almond shaped part of the brain is one of the oldest parts of the brain. It doesn't think! It just reacts.*
 - *Sometimes it helps us stay safe but other times it gets in the way of making good choices.*
- Tell the story:
 - *What do you think you would do if you were walking to school and you saw a tyrannosaurus rex?*
 - *How would your body feel?*
- After getting student feedback, explain:
 - *The **amygdala's** job is to keep us safe. It doesn't think. It just reacts. It helps get our bodies ready to act really fast, like running away from something or fighting.*
 - *When we are in that state -- our body is ready for action, but our brain, our prefrontal cortex doesn't think or problem solve very well.*

MAKING CONNECTIONS (10 MINUTES)

Step 1: Share Experiences

- Discuss:
 - *Sometimes things happen and we feel very afraid or very angry. This is our amygdala telling us that something is wrong. But remember, our amygdala doesn't think. Its job is to let us know when we are in danger.*
 - *The problem is the amygdala sometimes makes us feel like we are in danger when really we are not.*
- Ask:
 - *Can you think of a time when you were afraid or angry, but running away or fighting wouldn't be a good solution to the problem?*
 - *For example, an argument with a sibling or friend or feeling nervous before a test or performance.*
 - *What happens if our amygdala responds in these examples? Do we make our best choices?*
 - *No--it means we may respond in anger in the case of an argument, or we will have a hard time remembering facts and knowledge for a test, or we may fumble during a performance.*
- Explain:
 - *When our amygdala gets our body ready to respond to a threat, it means we aren't able to use our prefrontal cortex very well--that means our decision-making might not be very good!*
 - *We need to use our prefrontal cortex to make good decisions, problem-solve, and manage our feelings.*

Step 2: Summarize the Key Points

- Now summarize important points about this lesson.
 - The **prefrontal cortex** is the part of your brain that helps you make good choices, pay attention, and learn more.
 - The **hippocampus** is the part of the brain that helps us with our memory. It helps us to remember things.
 - The **amygdala** is the almond-shaped part of the brain and is the oldest part of the brain. It doesn't think! It just reacts.

CLOSURE

- Say:
 - Together we are going to learn special ways, using mindful awareness, to exercise our brain, especially our **prefrontal cortex**. This will help us make good choices, pay attention, and learn more.

EXTENSIONS

- *Note to educator:* This activity can be implemented at a subsequent time. The intention is to assist students with the transfer and application of their learning about the brain to everyday activities.

MY BRAIN IN LIFE

- As a class, review what they have learned about the three parts of the brain. Ask the students to notice their thoughts throughout the day and think about which parts of the brain they are using in different scenarios. Brainstorm relevant scenarios with students.
- Possible scenarios:
 - Choosing to read a book (prefrontal cortex)
 - Jumping out of the way of a speeding bicycle (amygdala)
 - Remembering a story a friend told (hippocampus)
 - Listening to your parents' request (prefrontal cortex)
 - Remembering the math facts (hippocampus)
- If time allows the next day, re-visit these scenarios and continue to remind students about what parts of the brain they are using throughout each day.
- Invite students to write or draw about how their brain reacts in different scenarios in their life, as explored in the **My Brain in Life** activity. Ask students to think about one time their amygdala was reactive, and one time they felt their prefrontal cortex was in charge.
 - For example, students who are in sports could reflect on what parts of the brain are active when they play, and what happens when they feel nervous before a game.
 - Other suggestions:
 - My brain when I do art
 - My brain when I met someone new
 - My brain when I dance
 - My brain when I get in an argument
 - My brain before a test

REFLECTION AFTER THE PRACTICE

- Do you notice if students are making connections between what they have learned about the brain, and their thoughts, feelings, and actions?

THE RESEARCH BEHIND THE PRACTICE

EVIDENCE THAT IT WORKS

Learning about the brain and how it impacts our thoughts, emotions, and actions helps to develop students' self-awareness, or the [ability to be aware](#) of their inner lives.

WHY DOES IT MATTER?

As students grow in self-awareness, they cultivate their ability to know how and when to use self-management skills such as navigating emotions in a healthy way (i.e., emotion regulation), persistence, asking for help, setting goals, empathy, and other crucial skills for success.

Indeed, studies have found that teaching students to effectively manage their [thinking](#), [attention](#), and [behavior](#) can lead to better grades, higher test scores, and [stronger relationships](#).

SOURCE

MindUP

Since 2003, MindUP has been helping children develop the mental fitness necessary to thrive in school and throughout their lives. MindUP is the signature program of The Goldie Hawn Foundation, a not-for-profit organization created in response to the global epidemic of childhood aggression, anxiety, depression and suicide. Based firmly in neuroscience, MindUP gives children the knowledge and tools they need to manage stress, regulate emotions and face the challenges of the 21st century with optimism, resilience and compassion. www.mindup.org