

Lesson 2: My Amazing Brain

Grades K-2

Purpose

Students are introduced to the core theme of the MindUP program: the brain and how they can use it to focus their attention and calm down. They are introduced to three key brain structures that help them do that: the amygdala, hippocampus, and prefrontal cortex (PFC).

Concepts

- I can use my brain to focus my attention and calm down.
- Three parts of my brain help me stay safe, calm down, and focus and learn: the amygdala, hippocampus, and PFC.

Lesson Objectives

Students will:

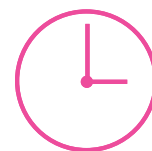
- Identify the amygdala, hippocampus, and PFC on a diagram of the brain.
- Define the basic functions of the amygdala, hippocampus, and PFC.
- Consider how their new knowledge about the brain may inform their MindUP learning community agreement and daily activities.

Social and Emotional Learning Connections

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

Materials & Preparation

- ✓ MindUP Brain poster (downloadable from the course module along with this lesson)
- ✓ My Mindful Brain handout (located at the end of this lesson)
- ✓ Mindful Me Portfolio



Estimated Time:
40-45 minutes

Brain Link

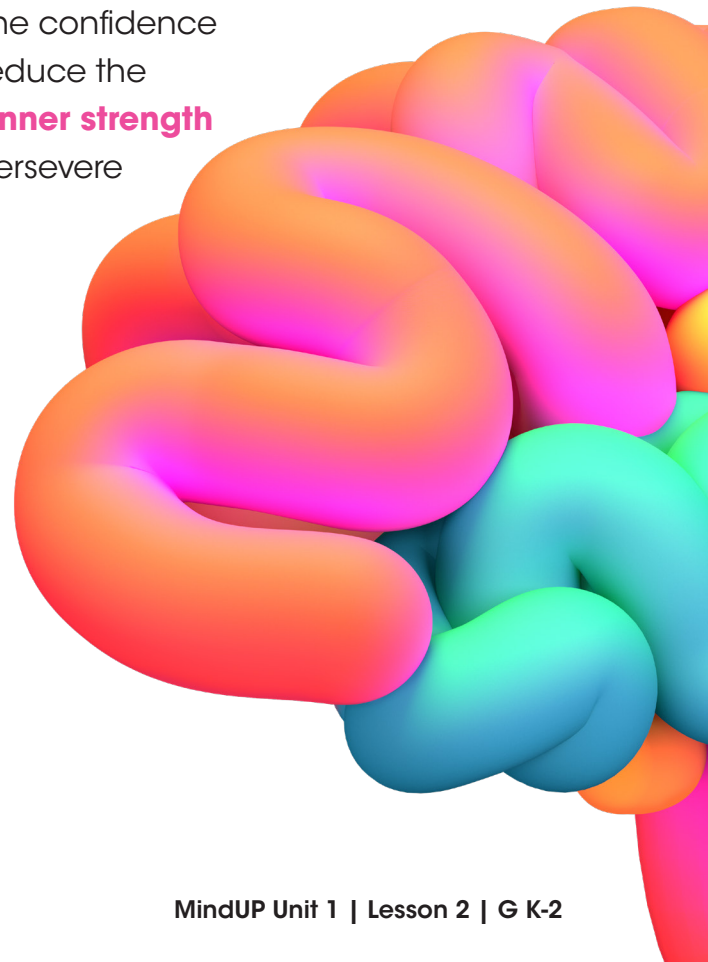
Learning about the Brain

Our brains change throughout our lives in response to our environment and experience. This is called **neuroplasticity**. It means we can play a role in how our brain changes and develops based on what we choose to do.

Learning about the brain in easy-to-understand language helps children feel like they're in the driver's seat. They discover they can **change their brains**—which in turn can change how they think, feel, and act.

When children learn new things, their brains form new connections or prune away unnecessary ones. This leads to development of new skills and better performance of old skills.

Showing students they can shape their brains increases their sense of having some control over their lives. The confidence that they can change things for the better or reduce the impact of things they cannot change inspires **inner strength and resilience**. This resilience helps children persevere through challenges they face in learning and in relationships.



Getting Started with the Lesson

Review of MindUP Learning Community Agreement

Remind your students of the attitudes and actions agreed upon together to ensure the learning community is safe, kind, and focused.

Activity: Class Discussion to Access Prior Knowledge

Use the script below to prepare your students for a discussion:

- 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?

Activity: The Mindful Brain

Read the script:

We are going to learn about three very important parts of the brain. Understanding how your brain works can help you learn better and make good choices.

① Step 1: Name and Locate the Parts of the Brain

Point to each part of the brain on the MindUP Brain poster as you name it. You may print the poster or display the digital file.

Read the script:

These parts of the brain are called the **prefrontal cortex** or **PFC**, the **hippocampus**, and the **amygdala**.

You may want to have the students practice pronouncing these terms with you. You can clap out the syllables to support learning.

Have students touch the center of their foreheads, and explain that the **PFC** is just behind. Point to the **PFC** on the poster.

Next, have students touch their ears, and explain that the **hippocampus** is just behind. There are two **hippocampi**, one on each side of the brain. Point to these on the poster.

Now point to the **amygdala** on the brain poster, and explain that it is located deep in the middle of the brain, close to the hippocampus. Have students touch the sides of their heads right above their ears. There are two **amygdalae**, one on each side of the brain.

A large rectangular box with a black border, intended for a brain poster. The text "Brain Poster" is centered within the box in a large, black, sans-serif font.

Brain
Poster

② Step 2: Functions of the Parts of the Brain

Explain the function of each brain part. Have students touch where the brain part is located as you explain.

Go back and point to the **PFC** and say:

This part of your brain helps you make good choices, pay attention, and learn. The PFC is like your Wise Owl.

Next, point to the **hippocampus** and say:

The hippocampus helps us remember things. Its job is to decide which memories to store and to find them when we need them. The hippocampus also helps us when we're scared. Your hippocampus is like your Elephant who has a great memory!

Now point to the **amygdala** and say:

This part of the brain doesn't think! It just reacts. Your amygdala is like your Guard Dog. It helps keep you safe!

Ask this question:

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. Sometimes, when we are very frightened, our body might freeze! When we are in those states, our body is ready for action, but our PFC can't think or problem-solve very well.

③ Step 3: My Mindful Brain Worksheet

Hand out the My Mindful Brain worksheet, and ask students to label the PFC, **hippocampus**, and **amygdala**.

Note: Some of your students may need help with this. This is a great activity to do with a big-buddy class.

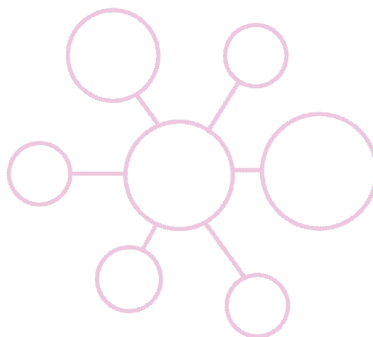
When they are done labeling, invite students to draw a picture of themselves and their mindful brain.

Making Connections

① Step 1: Summarize the Key Points

Read the script:

- The **PFC** is the part of the brain that helps us make good choices, pay attention, and learn.
- The **hippocampus** is the part of the brain that helps us with our memory. It helps us remember things.
- The **amygdala** is the part of the brain that keeps us safe. But it doesn't think; it just reacts.
- This was the second lesson from our **MindUP** program. We are going to have fun and learn special ways to help our brain parts work better, especially our **PFC**. This will help us be calm and focused so we can make good choices and learn better.



② Step 2: Review MindUP Learning Community Agreement

Invite students to apply their new knowledge about the brain to their shared MindUP learning community agreement poster.

Read the script:

- How might our new learning about the brain help our agreement?
- Where do you see connections?
- Is there anything we wish to add or change in our agreement?

Following Up

Over the next few days, reinforce the ideas learned in the lesson by implementing the following MindUP for Home and Life and Mindful Me Portfolio activities.

MindUP for Home and Life

My Brain in Life

As a class, review what students have learned about the three parts of the brain. Ask students to notice their thoughts throughout their day and think about which parts of the brain they are using in different scenarios. Brainstorm relevant scenarios with students, such as:

- Choosing to read a book (PFC)
- Jumping out of the way of a speeding bicycle (amygdala)
- Remembering a story a friend told (hippocampus)
- Listening to an adult's request (PFC)
- Remembering math facts (hippocampus)

If time allows the next day, revisit these scenarios, and continue to remind students about what parts of the brain they are using throughout each day.

Mindful Me Portfolio

My Brain

Invite students to write or draw about how their brain reacts in different scenarios in their lives, as explored in the MindUP for Home and Life activity. Ask students to think about one time their amygdala was reactive and one time they felt their PFC 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 meet someone new
- My brain when I dance
- My brain when I get in an argument
- My brain before a test



Note:

This assignment should be checked for completion, but it should **not** be graded.

Integrating the Diverse Learner

① Lesson Simplification Ideas:

- Introduce the brain by exploring where it is in the body. Give students a silhouette of their head, and demonstrate where the brain is located. Have students draw it on the silhouette.
- Introduce only one part of the brain at a time (one per lesson).
- Teach a song or poem about the brain.
- Read a simple science book about the brain.

② Lesson Challenger Ideas:

- Make large laminated images of each of the three parts of the brain and label them. Have students throw a beanbag at each part of the brain, identify it, and describe its function.
- Use salt dough to create small models of the brain.

MindUP Literature List

A Walk in the Rain with a Brain – Edward M. Hallowell, MD

The Brain Is Kind of a Big Deal – Nick Seluk

Brain Puzzles – Sarah Khan

See Inside Your Head – Alex Frith & Colin King

Understanding Your Brain – Rebecca Treays

What Goes On in My Head? – Robert Winston

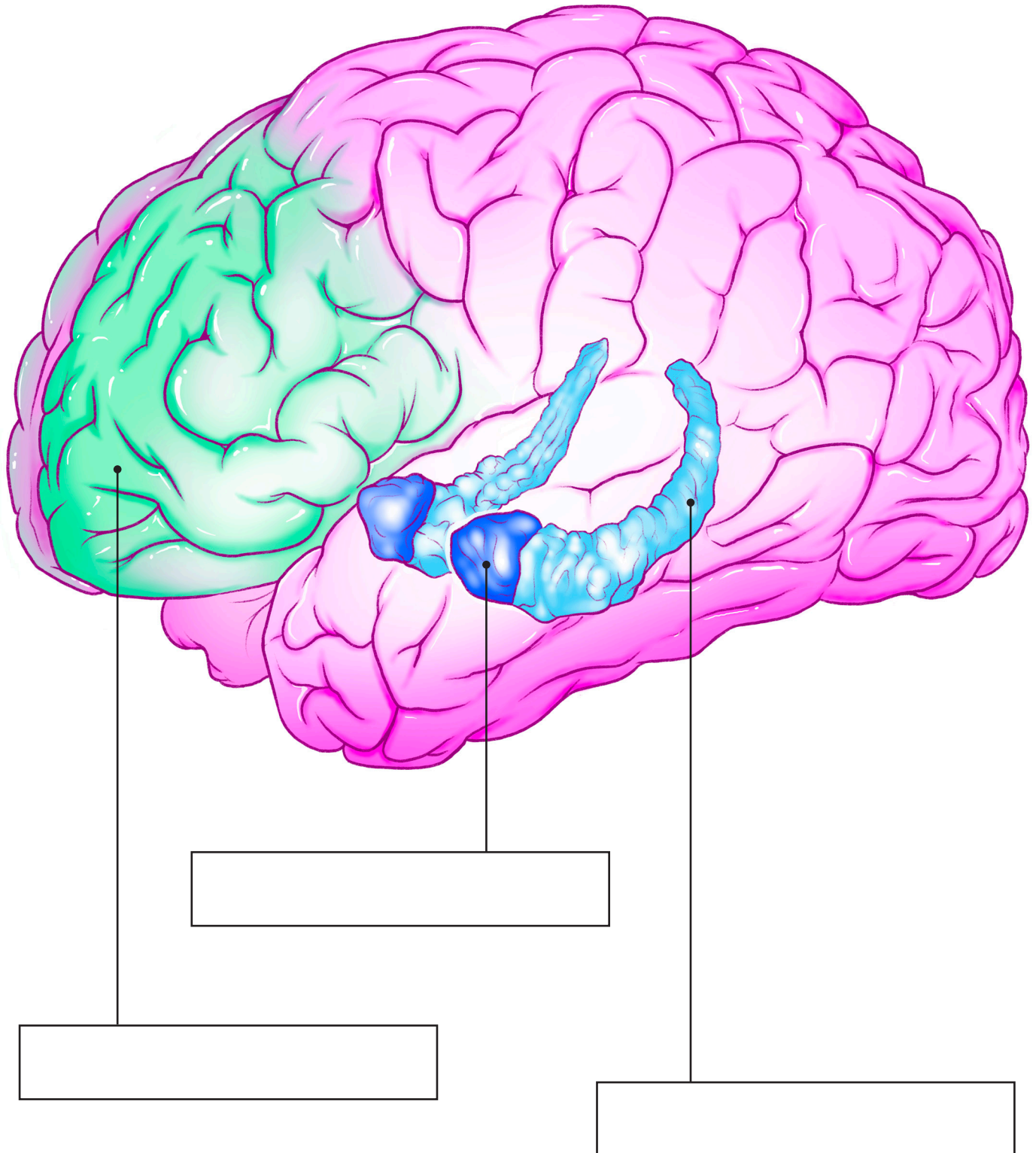
Your Fantastic Elastic Brain – JoAnn Deak, PhD

Brain and Senses – Jen Green

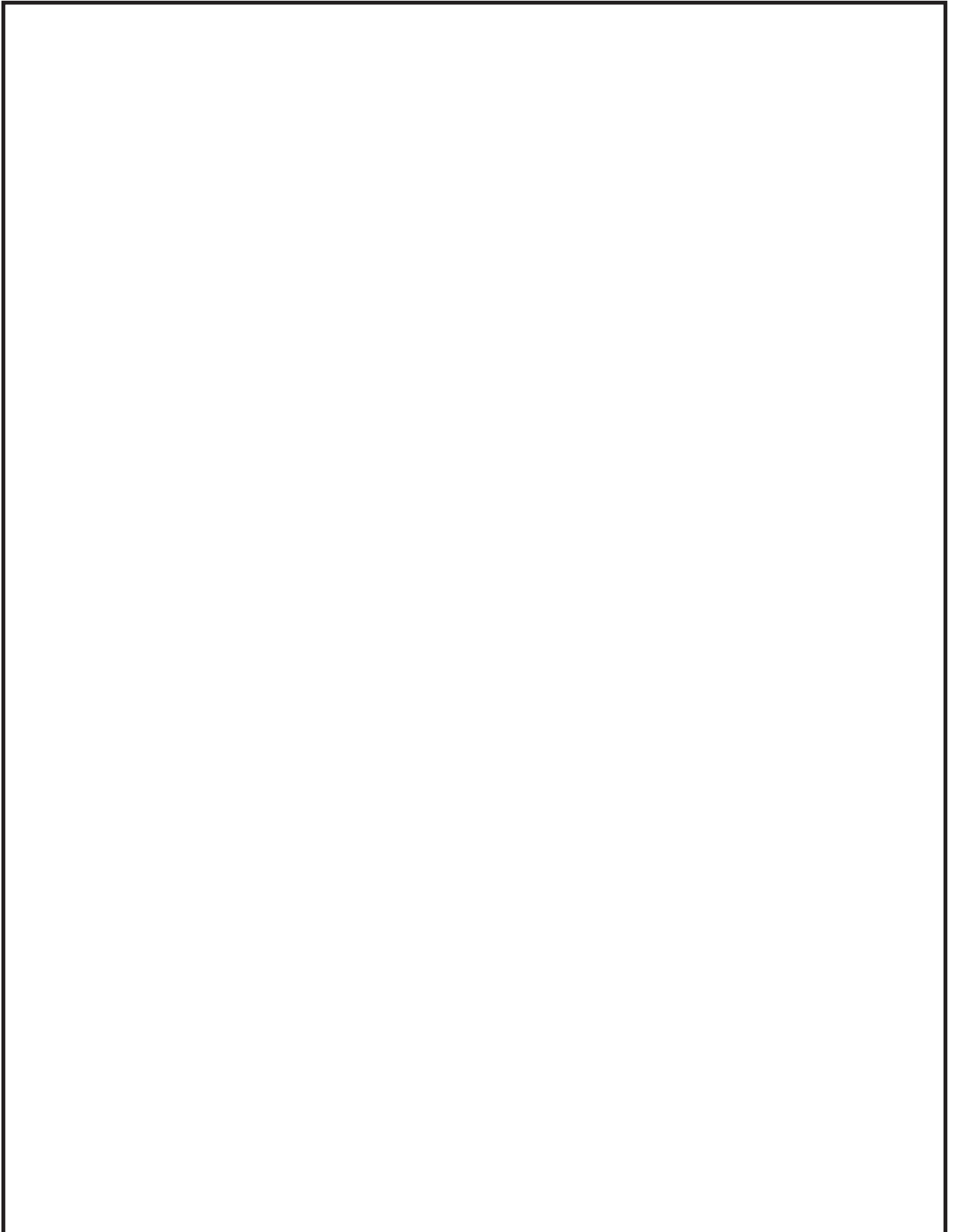


My Mindful Brain

Name: _____



My Mindful Brain!

A large, empty rectangular box with a black border, occupying the majority of the page. It is intended for a student to draw or write about their 'Mindful Brain'.