

Title: How Our Brain Works

Jennifer Uhlman	Grade 8 Healthy Living (This will require two classes to complete, approx 120 min)
Lesson Goals:	For students to identify the key players of the brain that control emotions and to understand how our brains respond/react to stress. This will prepare them for creating a calm mindset for thoughtful decision making.
Outcomes Targeted:	HL 8.11- demonstrate an understanding that there are many factors that contribute to our health status ELA 2.1- contribute to small-group and whole-group discussion, choosing appropriate strategies that contribute to effective talk 8.3- begin to use forms of note-making appropriate for purpose and situation
I Can Statement:	I can identify three parts of the brain: the amygdala, the hippocampus, and the prefrontal cortex on a diagram of a brain and provide a definition of its processes within the limbic system.
Key Vocabulary and Skills:	Amygdala, Hippocampus, Prefrontal Cortex, Limbic System
Material Needed:	iPads, access to internet, paper, markers, projector, "Getting to Know Your Brain" ppt, Brain Power handout (for labelling and definitions), Brain poster

Lesson:

I. Introduction (Teacher organized)

- a) Begin by asking students how they think that people acquire different skills. Ex: a basketball player will practice by shooting hoops, a pianist will warm up by playing the scales etc. Jot answers down on the board
- b) Discuss with the students the role that the brain plays in being successful in these different types of situations. Ex: don't let yourself get psyched out during a game, don't freeze up with stage fright before a performance
- c) Let students know that the reason behind these lessons in mindfulness will be to help them develop mind skills- ways to rev up their minds for new ideas and to calm them down and focus in order to concentrate.

Time Allotted: 5-10 min

II. Guided Learning (Teacher/student collaboration)

1. Show video The Emotional Brain <https://www.youtube.com/watch?v=xNY0AAUtH3g>
2. Show the "Getting to Know Your Brain" ppt. Students should be taking notes on their sheet in regards to the parts of the brain and a definition for each.

http://msuhlman.weebly.com/uploads/2/4/8/2/24828726/getting_to_know_your_brain.pdf

Screencast of Power Point: <https://youtu.be/WaFCF4k0NGM>

Also post the Getting to know your Brain poster in the room as a visual

Getting to Know and Love Your Brain

There are three big helpers in your brain. One helps you make smart choices. One helps protect you from danger. And one saves your favorite memories and your ABCs. Can you name the three helpers?

Prefrontal Cortex
(pree-FRUN-tuhl KOR-teks)
I'm prefrontal cortex—PFC, for short. I help you solve math problems and get to know your favorite book and TV characters. Give me time to work, and I can help you make friends, or make the best decision in a tough situation.

Amygdala
(uh-MIG-duh-luh)
I'm amygdala and I'm here to keep you safe! I react FAST. If there's serious danger, I'll help you run, freeze, or fight back.

Hippocampus
(huh-puh-KAM-puhs)
I'm hippocampus and I'm like a scrapbook in your brain! I save everything important that you want to remember—from your ABCs to the names of all the people in your family. When something happens to make you smile, I'll save that as a happy memory!

Breathing to the rescue!
Breathe deep into your belly to stay calm and help your PFC think clearly.

SCHOLASTIC

Time Allotted: 30-40 min

III. Collaborative Learning (Student focused activity)

Keeping Our Brains Safe

- a) Lead the assignment by telling the students that they have many reasons to care about their brain's safety. Important functions such as; decision making, keeping them out of danger, storing memories, controlling emotional response
- b) Ask students to become brain safety experts by having them brainstorm things that could hurt their brains and research ways to keep their brains safe. Students can work in partners or small groups and should take notes with the categories such as brain safety and drugs, brain safety and sports etc. They can use paper or their iPads for this.
- c) Once the research has been completed, have the groups create an advertisement that will get people's attention and help them take brain safety seriously. They can choose one or more of the categories that they researched. These posters will be posted in the classroom or in the hallway. Students can use any medium they wish to create their poster.

Time Allotted: Rest of time remaining from day 1 and most of day 2 class.

IV. Grand Finale

After Day 1- Exit slip- Think about a time when you helped someone calm down. What kinds of things did you say or do? What worked best? What didn't work at all? What do you need to feel calm?

Day 2-

- a) Students will start class by sharing their thoughts from the exit slip.
- b) Students are to complete their advertisements. Once finished, groups will share with the class and then determine where the posters should be hung.

Assessment and Evaluation:

Teacher will monitor individual and group sharing
Advertisement will be assessed using a rubric

Adaptations and IPPs: Noted students are able to work in a different space if required (resource room)

