

{WE} Well-being

Deeper Dive
WE Boost Our Brain!

AN INITIATIVE OF

{WE} Well-being

A program offered by WE Schools

OBJECTIVES

- Students will learn about several neurochemicals that are linked to well-being.
- Students will make connections between the positive human qualities explored in WE Well-being, brain health and well-being.
- Students will make a plan and take action to promote their own brain health and well-being by implementing strategies learned in this lesson.

OVERVIEW

- Students investigate and learn about neurochemicals and work creatively to express their comprehension of what each neurochemical does.
- Students take what they have learned about the connection between positive human qualities and neurochemicals and make a plan and take action to engage in strategies to promote healthy habits for their own brain health and well-being.
- Students reflect upon their efforts to foster healthy habits for well-being.

MATERIALS

Large poster boards or chart paper; Markers; Art supplies (drawing/painting materials, sculpting clay, miscellaneous materials to make puppets, ie. Paper bags or socks, pompoms, googly eyes, foam shapes, etc.)

SEL LINKS

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

PREPARATION

This deeper dive is a series of four parts. You can implement the four parts over the course of several days. You may choose to spend more or less time on each activity depending on your class needs. Note that you may allow for several days in between Parts 3 and 4 so that students have time to try out their strategies prior to reflection.

INTRODUCTION

PART 1: MINDFUL PRACTICE

Step 1: Lead a Short Mindful Moment.

Guide students through the following mindful moment or choose from the Additional Mindful Awareness Practices found at the end of Lesson 2: WE Are Mindful.

Remember that mindful moments are an invitation to students and are not mandatory.

Guided Mindful Moment

- Let's take a short mindful moment together.
- First, find a comfortable seat in your chair. Place your feet flat on the ground. Rest your hands on your lap. (Alternate: First, find a comfortable seat on the carpet. Rest your hands on your lap)
- If it feels comfortable, you can close your eyes. If not, just look softly down toward your desk (or the floor).
- Now, just begin by noticing any sounds that are here in this room now.
- No need to do anything but notice what you hear.
- Now, see if you can turn your attention to your breath. Notice that you're breathing now.
- Feel the air moving in and out of your nose.
- Next, we're going to try taking slow breaths in and out ...
- Now, take a slow breath in ...
- And, then, slowly ... let your breath out through your mouth.
- At your own pace, take two more deep breaths in through your nose and slowly out through your mouth.
- When you are ready, you can open your eyes.

Step 2: Reflection

Invite the class to briefly share their thoughts on the following prompt:

- What did you notice about your mind and body after our mindful moment?
 - How did your body feel—more energy, less energy, relaxed?
 - How did your mind feel—busy, calm or something else?
- Note common responses on the board.
 - Highlight themes that come up around feelings of calm and stress reduction.
- Let students know that you will return to this theme during today's lesson.

PART 2: INVESTIGATE AND LEARN – WELL-BEING AND YOUR BRAIN

Step 1: Introduce the Brain

Ask students to brainstorm together:

- What do you know about your brain? What does your brain do?
- How do you think the brain is connected to your well-being?

*If students need some probing, encourage them to reflect back on their brainstorm from Lesson 1: Welcome to WE Well-being:

- What is well-being?
- What are the things that we do to increase our wellbeing? (sleep, exercise, eating healthy food, spending time with people who make us happy, when we succeed at a task, when we help others, etc)
- How are these activities related to our brains?

- **Definition:** A neurochemical sends messages around the brain and to parts of the body.
 - Neurochemicals (for younger students, you may refer to them as your brain's messengers) help our brain communicate with our body.
 - These messengers have different names and they each have different jobs.
 - Their job is to communicate different things to our body, like when we are hungry or when we need to sleep.
 - They can affect how we feel (our mood and emotions) so they are a big part of our well-being!
- Today, we are going to learn about four **neurochemicals/messengers** that are important for well-being and are connected to what we've been learning about in the WE Wellbeing program

Step 2: Investigate and Learn About Neurochemicals

Introduce the Topic:

- Today we're going to learn a little bit about the science of our brains!
- Did you know that the brain communicates using something called **neurochemicals** that have
- a big impact on our well-being?

Step 3: Let's Meet the Neurochemicals!

In this section, you will introduce students to four neurochemicals and explain what each neurochemical does. You may do this in chart form, assigning a symbol to each neurochemical.

- Let's meet four neurochemicals/messengers that help our brain and body with our well-being:

Neurochemical	Symbol	What Does It Do?	Healthy Ways to Get a Boost
GABA (Gamma-aminobutyric acid)		<ul style="list-style-type: none"> Helps to create a feeling of calm. Reduces stress and anxiety. Helps with sleep. 	<p>Healthy ways to boost GABA:</p> <ul style="list-style-type: none"> Practice mindfulness or yoga. Exercise. Eat healthy food like bananas, almonds, spinach, potatoes, lentils, brown rice and citrus fruits (oranges, grapefruits and lemons).
Oxytocin		<ul style="list-style-type: none"> Helps us bond with others—we feel safe and close to others. It's released when we connect with friends and loved ones. It helps us to care about others and work together for common goals. Reduces stress. Oxytocin helps us to show empathy and compassion for others. 	<p>Healthy ways to increase oxytocin:</p> <ul style="list-style-type: none"> Spend time with friends. Cuddle your pets. Hug your family (when we hug our loved ones, we release oxytocin). Altruism! Do something nice for someone else (give a gift or help someone in need).
Dopamine		<ul style="list-style-type: none"> Makes us feel good! This feel-good chemical shows up when we get a reward, achieve something or do something challenging. Dopamine helps us to help others (share, cooperate and help). It helps with motivation, which helps to put you into action to achieve your goals. 	<p>Healthy ways keep your dopamine levels up:</p> <ul style="list-style-type: none"> Get a good night's sleep. Exercise. Try new things. Practice gratitude.
Serotonin		<ul style="list-style-type: none"> Is connected to happiness. Is released when you feel a sense of purpose, or accomplishment—that "I did it!" feeling. Helps with learning and memory. 	<p>Healthy ways to boost serotonin:</p> <ul style="list-style-type: none"> Practice gratitude. Help others (altruism). Go outside! Exposure to bright light has been linked to higher serotonin. Exercise.

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- How are these activities related to our brains?

Optional: Show the following clip to introduce students to some basic facts about the brain:

<https://sentis.com.au/articles/brain-animation-series>

Show the first “How the Brain Works” video found on the above link.

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In this section, you will introduce students to four After

After introducing each neurochemical, ask some questions to ensure student comprehension:

- Which neurochemical helps us to calm down or to sleep?
- Which neurochemical shows up when we do a good job on something or receive a reward? (dopamine or serotonin would be applicable)
- Which neurochemical is connected to happiness?
- Which neurochemical shows up when we give a warm hug?

(Optional): Neurochemicals Action Game

Let students know that you will be playing a quick game to remember each neurochemical. As a class, come up with an action to match each neurochemical.

Suggestions:

- GABA: pretending to sleep (hands together beside face).
- Oxytocin: hug (hug oneself), or make a heart with

PART 3: PLAN- POSITIVE HUMAN QUALITIES AND NEUROCHEMICALS

Step 1: Plan

Invite students to share their artistic expressions and then to return to the chart you made as a class to help them think about ways they will plan to promote their own brain health.

Invite students to think back on the positive human qualities from their earlier lessons in the WE Well-being program: gratitude, empathy, compassion, altruism and resilience:

- How are the neurochemicals we just learned about connected to gratitude? Empathy? Etc.

Make Connections

Ask students the following prompting questions:

- |What things have we already learned about and tried together (for example, gratitude and mindfulness) that could help our well-being neurochemicals?
- What new things (for example, exercise, being outdoors and healthy eating) have you learned about that could help our neurochemicals?

Next, invite students to make a plan to incorporate some of the activities they have learned about that help to promote healthy brain chemistry.

Examples:

- Go outside a play instead of watching TV.
(This offers both the benefit of getting some bright light and exercise!)
- Eat a healthy snack after school.
- Practice mindful moments.
(This can be done through coloring, doodling, washing hands, being present when in a car, when walking etc.)
- Write or draw in a gratitude journal.
- Help a friend with their homework.

Note to Teacher: you may opt to create an action plan as a class do you can manage student's participation and support younger students with developing a new habit.

PART 4: HEALTHY HABITS, HEALTHY BRAINS

Reflection

After a few days, check in with your students and invite them to reflect on what they have noticed about their efforts to promote their brain health and well-being.

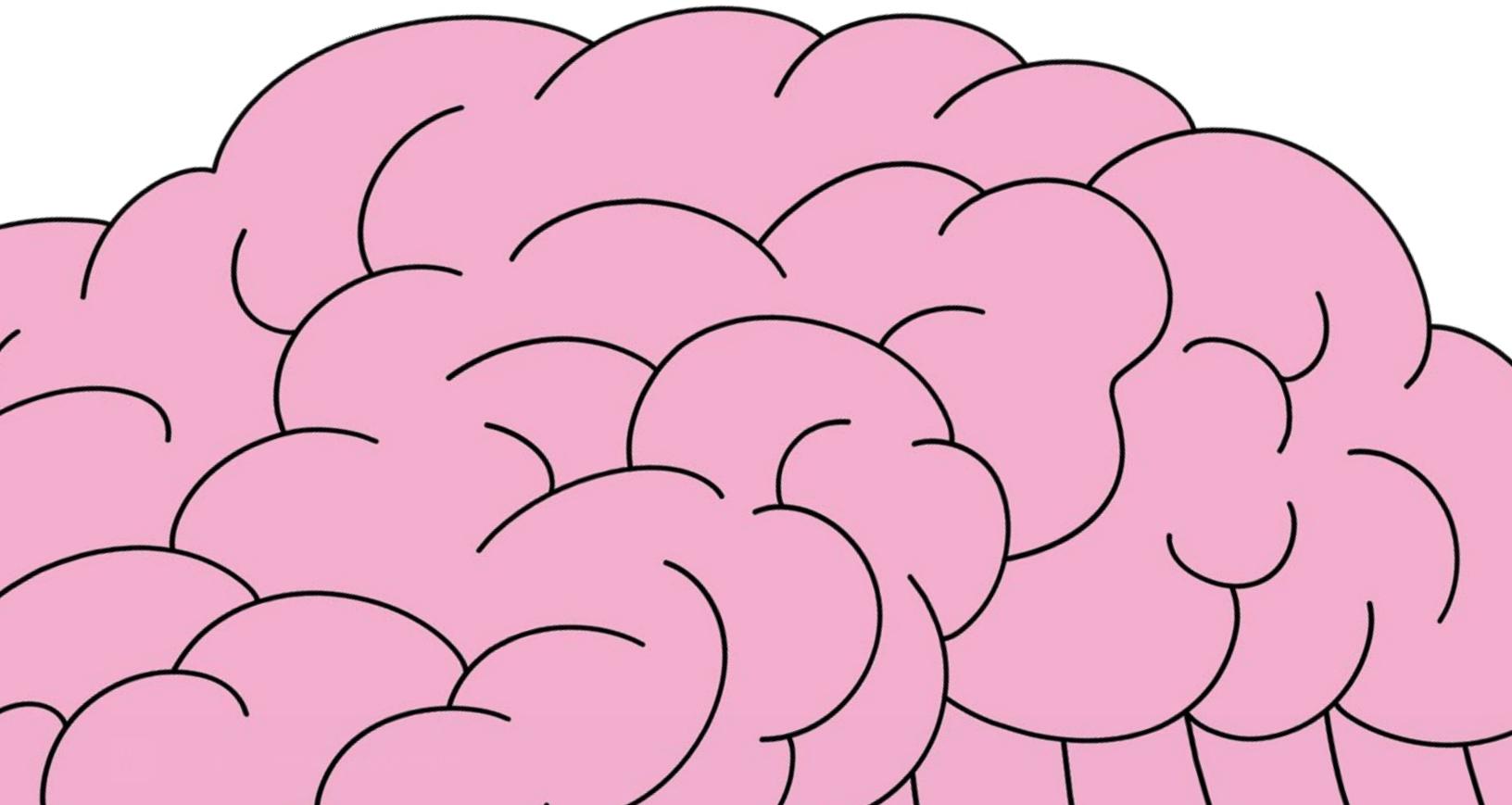
Prompting Questions:

- What do you remember about our lesson on neurochemicals?
- What is each neurochemical's job?
- What are some healthy ways to boost each neurochemical?
- What new activity did you try to give your brain a boost?
- What did you notice about your mood when you tried your activity?
- Was it easy or challenging to keep up the healthy brain habits?
- What do you need to do to keep your healthy habits? Should we keep trying healthy brain habits together as a class?

Differentiation: Students may draw, discuss or write their reflection to convey how they have felt since trying their "Healthy Brain" strategies.

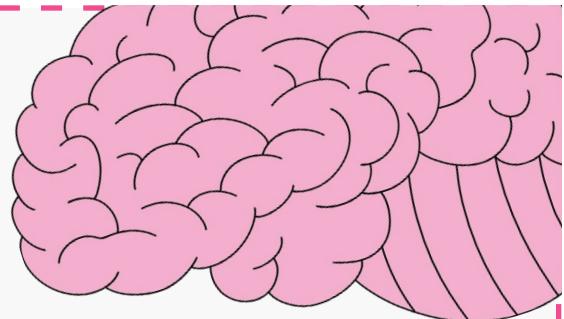
Additional Extension Activities

- Supplement this deeper dive by engaging your students with the WE Well-being Brain Science Cards, where you will find discussion starters and activities that extend and transfer learning about the brain and well-being.



GABA (GAMMA-AMINOBUTYRIC ACID)

Helps us to stay calm • helps with anxiety and stress • helps us sleep



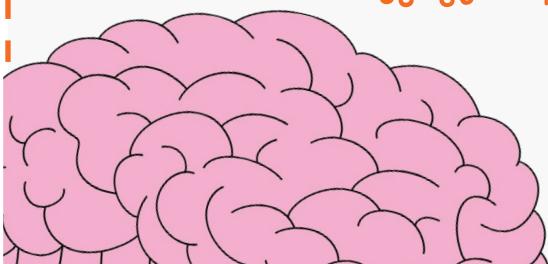
HEALTHY WAYS TO BOOST:



OXYTOCIN

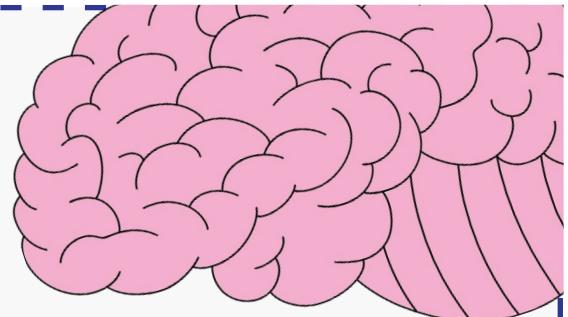
Helps us feel connected to others, helps us to feel empathy and compassion

HEALTHY WAYS TO BOOST:



DOPAMINE

Makes us feel good, when we do a good job or succeed at something difficult



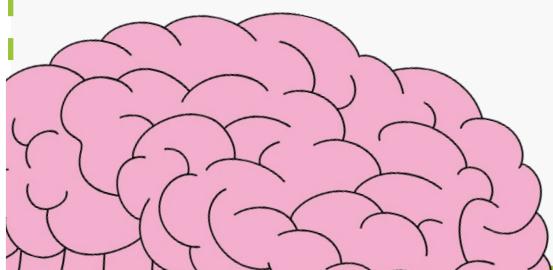
HEALTHY WAYS TO BOOST:



SEROTONIN

Makes us happy, helps with learning and memory, released when we accomplish something

HEALTHY WAYS TO BOOST:





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