






K-2 SELf Success*Lesson 2: The Dinosaur Brain*

<u>Time</u> 	25-35 minutes
<u>Materials</u> 	<ul style="list-style-type: none">• Worksheet: Dinosaur Brain• Coloring supplies• Resources to play videos for students• Internet access
<u>Vocabulary</u> 	<ul style="list-style-type: none">• brain stem• instinct• stress• Butterfly Breathing
<u>Overview</u> 	<u>Lesson Description:</u> Students will be introduced to the idea of the brain stem, also referred to as the "Dinosaur Brain." They will learn about the brain stem's primary job, which is managing vital functions such as breathing, blood pressure, heart rate, and sleep.

<p><u>Agenda</u></p>	<ul style="list-style-type: none"> ● Introduction ● Green Our Planet Studios Video ● Activity: Worksheet ● Reflection & Sharing ● Closure
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<p><u>Learning Objectives</u></p> 	<ul style="list-style-type: none"> ● Define the Dinosaur Brain (brain stem). ● Describe changes in the body during the fight or flight response. ● Understand how breathing and movement (Butterfly Breathing) help calm and relax the nervous system.
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<p><u>Evidence-Based Checklist</u></p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Best Practice (A method that has consistently shown superior results and is recognized as an optimal approach.) <input checked="" type="checkbox"/> Action Research (Individual investigates own practice to improve content & delivery.) <input checked="" type="checkbox"/> Evidence-Based Research (Systematic & rigorous research and evaluation, empirical evidence demonstrating effectiveness.) <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Neuroscientific Research (The study of the nervous system, including the links between behavior, cognition, and physiological function.) <input checked="" type="checkbox"/> Social-Emotional Learning Research (Interventions and programs designed to enhance students' social and emotional skills.)
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<p><u>Dimensions of Learning</u></p>	<ul style="list-style-type: none"> ● Mindsets & Behaviors ● SEL Competencies ● Science Standards ● Math Standards ● Health Standards
	<p><u>Mindsets & Behaviors:</u> ☑</p> <p>For the full list of ASCA (American School Counselor Association) Student Standards, please see the “ASCA Student Standards” section of the manual.</p>
	<p><u>SEL Competencies:</u> ☑</p> <p>For the full list of CASEL (Collaborative for Academic, Social, Emotional Learning) Competencies, please see the “SEL Competencies” section of the manual.</p>
	<p><u>Next Generation Science Standards:</u> ☑</p> <p>K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats.</p>
	<p><u>Math Standards: (Optional/Additional Lesson plans)</u> ☑</p> <p>K.CC.A.2: Count forward beginning from a given number within the known sequence (a backwards counting activity aligns with the Counting and Cardinality standard for Kindergarten).</p>
	<p><u>Health Standards:</u> ☑</p> <p>For the full list of National Health Education Standards, please see the "Health Standards" section of the manual.</p>

Procedures



- Engage
- Explore
- Explain
- Elaborate
- Evaluate

ENGAGE: Opening Activity – Access Prior Learning / Stimulate Interest / Generate Questions:

1. Say to students: *Today we are going to continue to be brain scientists! Ask students: Has anyone ever seen cartoons or pictures of the brain? What does it look like?* Invite students to make two fists, then put them side by side. Tell them that this is roughly the size of their brain in their head.
2. Ask students: *What's the brain's job?* Allow students time to respond in a whole group setting.
 - Highlight functions of the brain: it helps us to eat and breathe; keeps our heart beating; keeps us alive; and is responsible for our thoughts and emotions, etc.
3. Say to students: *Today we are going to be brain scientists that study a special part of the brain. This part of the brain is called the Dinosaur Brain. Adults call it the brain stem.*
4. Say to students: *The Dinosaur Brain is located in the back of our head, right above the neck. All people have brain stems.*

EXPLORE: Lesson Description – Materials Needed / Probing

or Clarifying Questions:

1. Say to students: *As brain scientists, we are going to continue to study changes in the body. Ask students: When your Dinosaur Brain turns on, what do you notice happens in your body?*
2. Say to students: *We're going to learn how to help our body calm down by learning how to do a special type of breathing called Butterfly Breathing.*
3. Show students the video *The Dinosaur Brain*.
4. After the video, ask students: *Now that we have a better idea about how the Dinosaur Brain works, can you think of a time that your Dinosaur Brain was activated or turned on? Allow students time to generate an example. Invite students to describe the situation.*

EXPLAIN: Concepts Explained:

1. Say to students: *When the Dinosaur Brain takes over, changes happen in the body. You might notice that your breathing changes, that your belly or stomach feels different, and/or that your body's temperature changes.*
2. Say to students: *When the Dinosaur Brain takes over, both kids and grownups might notice that thinking (staying focused, making a decision) and reacting (making a good choice or decision) can feel harder than usual.*
3. Highlight:
 - All people have a Dinosaur Brain.

- Sometimes it takes some time for the Dinosaur Brain to calm down.
- The Dinosaur Brain helps keep us safe.


ELABORATE: Applications and Extensions:


1. Say to students: *We have just learned about the Dinosaur Brain and practiced Butterfly Breathing.*
2. Encourage students to complete the worksheet Dinosaur Brain using colors that represent how they're feeling.
3. Highlight:
 - Thank students for participating in the experiment.
 - Some students may not experience a change during the experiment or after the activity. Each person will have a different response to the activity. Normalize their feelings.
 - Remind students that as brain scientists, we conduct experiments, which can always be repeated on a different day, time, or place. Invite students to stay curious.

EVALUATE: Discussion & Assessment:

1. Discussion Questions:
 - *What did you learn about your Dinosaur Brain today?*
 - *What did you notice when you were Butterfly Breathing?*
2. Invite students to reflect and share their experiences.
3. Collect the worksheets.

	<p>ELABORATE FURTHER/REFLECT: Enrichment</p> <p>Exit Ticket to end class and to encourage students to think critically and express their thoughts. After asking the question, ask for volunteers to share with the group:</p> <ul style="list-style-type: none"> • <i>When your Dinosaur Brain jumps into action to protect you, what activity or activities could you do to help your Dinosaur Brain calm down?</i>
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<p><u>Independent Practice</u></p> 	<ul style="list-style-type: none"> • Invite students to continue to pay attention and to notice changes in their physical (physiology) and/or emotional (heart) body. • Encourage students to experiment with breathing as a self-care practice. • Practice scenarios (view additional resources dropdown) • Practice locations: On the bus, in the car, at the park, on the playground, in the classroom, at home, etc.
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<p><u>Additional Resources</u></p> 	<ul style="list-style-type: none"> • Additional Math & Science lesson plans (view additional resources dropdown)
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<p><u>Inspirational Quote</u></p> 	<p>“We delight in the beauty of the butterfly, but rarely admit the changes it has gone through to achieve that beauty.” -Poet and civil rights activist Maya Angelou</p>
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