






3-5 SEL + Science Adventures

Lesson 1: Fight, Flight, or Freeze: An Introduction to Brain Science


Time 	25-35 minutes
Materials 	<ul style="list-style-type: none">• Worksheet: Fight, Flight, or Freeze• Writing, drawing, & coloring supplies• Resources to play videos for students• Internet access
Vocabulary 	<ul style="list-style-type: none">• fight• flight• freeze• adrenaline
Overview 	Lesson Description: Students will learn about brain science, how it relates to our reactions, and how movement can help support and stabilize these reactions.
Agenda	<ul style="list-style-type: none">• Introduction• Green Our Planet Studios Video• Activity: Worksheet• Reflection & Sharing• Closure

<p><u>Learning Objectives</u></p> 	<ul style="list-style-type: none"> ● Recognize the fight, flight, or freeze response. ● Identify the chain of reactions of the fight, flight, or freeze response. ● Understand how breathing and movement (Shaking and Dancing) 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
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	<ul style="list-style-type: none"> ● 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>3-LS4-3: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p> <p>4-LS1-2: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.</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>

<p><u>Procedures</u></p> 	<ul style="list-style-type: none"> ● Engage ● Explore ● Explain ● Elaborate ● Evaluate
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ENGAGE: Opening Activity – Access Prior Learning / Stimulate Interest / Generate Questions:

1. Say to students: *Hello, young scientists! Today, we're going to dive into the world of brains. Have you ever heard of brain scientists? What do you think they do? Let's talk about it together!* Allow students time to respond in a whole group setting.
2. Say to students: *Today we are going to be brain scientists that study a special alarm system that goes off in the brain. This alarm is called the Fight or Flight alarm. Adults call it the Fight or Flight response.*
3. Say to students: *When this alarm goes off, your body gets ready to fight, run away, or stay really still. There's a hormone called adrenaline that rushes through you. Your heart beats faster to help you move quickly. Blood goes to your muscles, making you ready to run like the wind. And guess what? Your eyes get super focused by making your pupils large, so you can see everything clearly. How cool is that? Let's explore the amazing world of our brains!*

EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions:

1. Say to students: *As brain scientists, we're not just exploring brains; we're diving into sensations and feelings too. What do you think a sensation is? And how about a feeling? Let's chat about it!* Allow students time to discuss these terms in a whole group setting.


	<ol style="list-style-type: none">2. Say to students: <i>Now, let's check out this awesome video called Fight or Flight! Introduction to Brain Science. It's going to give us some super cool insights.</i> Show students the video <i>Fight or Flight! Introduction to Brain Science.</i>3. After the video, ask students: <i>Now that we're experts on the emergency signal, what happens when your body turns on its emergency signal? Take your time and think about it.</i> Allow students to share their thoughts in a whole group setting.
	<p>EXPLAIN: Concepts Explained:</p> <ol style="list-style-type: none">1. Say to students: <i>When the fight, flight, or freeze response "kicks in," or is activated, we can feel different sizes and strengths of feelings: small, medium, large, or even extra-large!</i>2. Say to students: <i>As brain scientists, we can study two types of feelings: comfortable feelings and uncomfortable feelings.</i>3. Say to students: <i>Remember, all feelings are okay to have. Feelings are not labeled as "good" or "bad." Feelings are like friends or family—they can change or be around us in others. Sometimes feelings change, and sometimes they don't.</i>4. Say to students: <i>Guess what? Feelings are like messengers. They give us information, or data, about what's happening in our bodies and brains.</i>
	<p>ELABORATE: Applications and Extensions:</p>


1. Say to students: *We have just learned about the body's alarm system and tried the Shaking and Dancing activity. Now we have one more creative thing to do!*
2. Invite students to complete the worksheet Fight, Flight, or Freeze.
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. Every brain is unique! We all react in our own special ways.
 - Remind students that as brain scientists, we conduct experiments, which can always be repeated on a different day, time, or place. Let's keep our brains buzzing with curiosity!


EVALUATE: Formative Monitoring (Questioning & Discussion):

1. Discussion Questions:
 - *What was something that surprised you in the video?*
 - *What was one thing that you learned today?*
 - *What did you notice when you were Shaking and Dancing?*
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 body's emergency signal goes off, what can you do to help your brain, body, and heart?</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 when they have a S, M, L, or XL feeling in their body. • Encourage students to experiment with moving their bodies if/when a feeling is present. • Practice scenarios • 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 Science lesson plans
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<p><u>Inspirational Quote</u></p> 	<p>"Dancing is poetry with arms and legs." Charles Baudelaire</p>
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