K-2 SEL + Science Adventures

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

Time	25-35 minutes

Materials	• Worksheet: Fight or Flight • Coloring supplies • TV or equipment to play videos for students • Internet access

Vocabulary	• alarm • fight or flight • feeling

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	• Introduction • Activity: Worksheet • Green Our Planet Studios Video • Reflection & Sharing • Closure

Learning Objectives 	• **Recognize** the fight or flight response. • **Identify** the chain of reactions of the fight or flight response. • **Understand** how breathing and movement (Shaking and Dancing) help calm and relax the nervous system.

Evidence-Based Checklist	☑ **Best Practice** (A method that has consistently shown superior results and is recognized as an optimal approach.)
	☑ **Action Research** (Individual investigates own practice to improve content & delivery.)
	☑ **Evidence-Based Research** (Systematic & rigorous research and evaluation, empirical evidence demonstrating effectiveness.)
	  ☑ **Neuroscientific Research** (The study of the nervous system, including the links between behavior, cognition, and physiological function.)
	  ☑ **Social-Emotional Learning Research** (Interventions and programs designed to enhance students' social and emotional skills.)

Dimensions of Learning	• **Mindsets & Behaviors** • **SEL Competencies** • **Science Standards** • **Math Standards** • **Health Standards**
	Mindsets & Behaviors: ☑ For the full list of ASCA (American School Counselor Association) Student Standards, please see the "ASCA Student Standards" section of the manual.
	SEL Competencies: ☑ For the full list of CASEL (Collaborative for Academic, Social, Emotional Learning) Competencies, please see the "SEL Competencies" section of the manual.
	Next Generation Science Standards: ☑ **K-2-ETS1-1:** Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. **K-LS1-1:** Use observations to describe patterns of what plants and animals (including humans) need to survive.
	Math Standards: (Optional/Additional Lesson plans) ☑ **CCSS.MATH.CONTENT.1.MD.B.3:** Measurement and Data Standard Description: Tell and write time in hours and half-hours using analog and digital clocks.

	CCSS.MATH.CONTENT.2.MD.C.7: Measurement and Data Standard Description: Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
	Health Standards: ☑ For the full list of National Health Education Standards, please see the "Health Standards" section of the manual.

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 be brain scientists!* Ask students: *Do you know what a brain scientist is? Can you guess what a brain scientist does?* 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.*

	3. Say to students: *When this alarm goes off, your body wants to fight like a tiger or flee like a rabbit. Your heart beats extra fast so you can act swiftly. Your blood pumps into your muscles, allowing you to run quickly. Your eyes become like superhero eyes so that you can see better.*
	EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions: 1. Say to students: *As brain scientists, we're also going to study the body (sensations) and the heart (feelings).* Ask students: *What is a sensation? What is a feeling?* Allow students time to respond in a whole group setting. 2. Show students the video *Fight or Flight! Introduction to Brain Science*. 3. After the video, ask students: *Now that we have a better idea of how the emergency signal works, do you think that you are more like a tiger or a rabbit? When your brain's alarm system goes off, do you want to fight like a tiger or flee like a rabbit?* Allow students time to think about their response, then invite them to share their thoughts.
	EXPLAIN: Concepts Explained: 1. Tell students that when the fight or flight response goes off, the body can generate feelings. Feelings

	can be small, medium, large, or extra large in size and strength. 2. Explain that as brain scientists, we study the two types of feelings: ○ Comfortable feelings ○ Uncomfortable feelings 3. Highlight: ○ All feelings are okay to have. ○ Feelings are not “good” or “bad.” ○ Sometimes feelings change, and sometimes they don't. ○ Feelings give us information, or data, about our bodies and brains.
	ELABORATE: Applications and Extensions: 1. Say to students: *We have just learned about the body's alarm system, played the Feelings Rainbow game, and tried the Shaking and Dancing activity.* 2. Invite students to complete the worksheet Fight or Flight, circling the emoji and choosing a color which best represents how they are feeling right now. 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 by saying: *Some of you might not feel different after our experiment or activity, and that's okay. Everyone reacts in their own way. It's normal for each person to have different 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: Formative Monitoring (Questioning & Discussion): 1. Discussion Questions: ○ *Was your color different at the beginning of the video than at the end?* ○ *Why do you think that is?* ○ *What did you notice when you were Shaking and Dancing?* 2. Invite students to reflect and share their experiences. 3. Collect the worksheets.
	ELABORATE FURTHER/REFLECT: Enrichment: 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:

	• *When you feel like you want to "fight like a tiger" or "flee like a rabbit," what can you do to help your brain, body, and heart?*

Independent Practice 	• Invite students to continue to pay attention and to notice when they have an 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 (view additional resources dropdown) • Practice locations: On the bus, in the car, at the park, on the playground, in the classroom, at home, etc.

Additional Resources 	• Additional Math & Science lesson plans (view additional resources dropdown)

Inspirational Quote 	"Dance first, think later." -Samuel Beckett