

Unit 3C: The Brain's Stress Response System



Vocabulary:

Hormones - Chemical messengers produced in the body that give the body cells instructions on what to do.

Adrenal glands - Small glands located on top of each kidney that produce necessary hormones, including cortisol.

Cortisol - A hormone that helps the body respond to stress.

Teacher's Notes:

How To Begin and End Each Lesson

Begin With a Breath Brake

Instruct students to stand at attention, repeat the hand motions and the mantra, **Power Peace Purpose**, and end with a bow. Ask students to take several breaths to clear their minds and prepare to watch the video.

Teacher Statement:



The Breath Brake helps us clear our minds, relax and focus. Focused breathing stops the flow of stress chemicals from the brain. You can close your eyes if you want to. Follow along:

- ★ *Breathe in through your nose, slowly and deeply. Think of each breath as a wave as it gently raises, holds, and then slowly lowers your body.*
- ★ *Hold it for three seconds.*
- ★ *Breathe out slowly and steadily from your mouth while you feel your body gently relax.*
- ★ *Breathe in and visualize that you are breathing in a powerful light.*
- ★ *Breathe out and imagine you are blowing out any darkness.*
- ★ *Breathe in, hold for 3 seconds, then breathe out. Repeat as needed.*

*Remember when you breathe, you are helping others who need your light. **Power Peace Purpose.***

There are thousands of children around the world who spend a lot of time in the hospital. Sometimes, they feel very lonely. When you join the Heroes Circle, it makes them feel better. When you do your power breathing you are also teaching your family and friends around you. You are an amazing teacher and a good friend!

End with Power Peace Purpose:

Recite and review the Power Peace Purpose mantra with students at the end of each day's lesson. Then, the students bow.



The Breath Brake helps you restore your power, brings you to a place of peace, and enables you to understand your purpose.

Unit 3C: The Brain's Stress Response System

Day 1: WATCH



Focus: Social Awareness

Students will watch a video about the brain's stress response system.

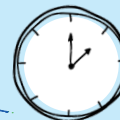
Learning Objectives:

In this lesson, students will:

- Observe how the brain responds to stressful situations and sends messages to the body.
- Describe how cortisol and other hormones work in response to stressful situations.
- Practice the Breath Brake and repeat the **Power Peace Purpose** mantra.

Time Requirement:

15 minutes



Materials Needed:

Video - HeroesCircle.org/SupportMaterials3

Lesson Process:

1 Begin with a Breath Brake:

Begin the lesson with the mantra **Power Peace Purpose**. Students bow.
Lead students through a Breath Brake.

2 Introduce key concepts:



Today, we'll watch a video about how the brain and body respond to stressful situations. Pay attention to how the brain releases hormones and chemicals that contribute to each person's stress response.

3 Show the video:

Show Video – HeroesCircle.org/SupportMaterials3

4 Talk about key concepts:

Use the following talking points to encourage discussion as a class, in small groups, or pairs:

- How does your brain respond to stressful situations?

Responses may include:

- The brain releases stress hormones, like cortisol.
- The hormones travel through and to different parts of your body.
- The hormones carry messages that tell the body how to respond.

- What is the Fight or Flight Response?

Responses may include:

- Fight or Flight are two natural ways your body might respond to a stressful situation.
- When you feel threatened, your brain sends the body messages to prepare to fight.
- When you face danger, your brain sends the body messages to run away (flight).

5 End with Power Peace Purpose mantra:

Power Peace Purpose. Then, students bow.

Day 2: THINK



Focus: Responsible Decision Making

Students will be encouraged to think and talk about the brain and the body's response to stress, namely the Fight or Flight Response.

Time Requirement:

15 minutes



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Materials Needed: N/A

Learning Objectives: In this lesson, students will:

- Describe what happens during the Fight or Flight Response to stressful situations.
- Identify common body responses to stressful situations.
- Practice the Breath Brake and repeat the **Power Peace Purpose** mantra.

Lesson Process:

1 Begin with a Breath Brake:

Begin with the mantra **Power Peace Purpose**. Students bow. Lead students through a Breath Brake.

2 Review key concepts:



Remember the video that we watched yesterday. We learned how your brain helps you do everything! Sometimes your brain can play tricks on you. When something stressful happens, your brain might make you think that something is a big deal when it isn't.

Ask students to share what they learned from this week's video.

3 Think about key concepts:



Today we will talk more about how the brain sends messages to the body to respond to stressful situations with Fight or Flight. The brain automatically releases hormones and chemicals and sends these hormones and chemicals as messages throughout the body to prepare the person to fight or run away. You may feel these messages as a faster heartbeat, sweating, upset stomach, fidgeting, or something else. Sometimes, the brain tries to trick you into thinking a situation is worse than it is, and you may overreact because you let the brain take control. When you face stress, your brain wants to control what happens, but you control your brain. When you use a Breath Brake, you are taking back control of your brain, and you become very powerful.

4 Talk about key concepts:

Discuss the following talking points as a whole class, in small groups, or partner pairs:

- How can you take control so your brain cannot trick you into overreacting?
- If everyone took control of their brain and how they respond during a difficult situation, how could it help the school community? Responses may include:
 - You can use calming breaths to stop the stress signals and hormones from being released.
 - You can use the Stop, Breathe, Think, then Respond technique.
- How might overreacting affect other people and the whole school? Responses may include:
 - When one person overreacts, other people might overreact as well.
 - One person may trigger another, and a small situation can snowball into something big.
- When you feel nervous or afraid, what are some common sensations you feel in your body? Responses may include:
 - rapid heartbeat.
 - butterflies in the stomach.
 - headache.

5 End with Power Peace Purpose:

Power Peace Purpose. Students bow.

Unit 3C: The Brain's Stress Response System

Day 3: DISCUSS

Focus: Relationship Skills

Students will talk with each other about stressful situations and the brain's attempts to trick you into overresponding.

Learning Objectives:


In this lesson, students will:

- Identify at least two examples of stressful situations.
- Describe how the brain tries to trick you into overreacting unnecessarily to a stressful situation.
- Practice the Breath Brake and repeat the **Power Peace Purpose** mantra.

Time Requirement:

15 minutes



 Materials Needed: N/A

Lesson Process:

1 Begin with a Breath Brake:

Begin with the mantra **Power Peace Purpose**. Then, students bow. Lead students through a Breath Brake.

2 Review key concepts:



What were some of the important messages we learned from the video about the brain stress response system? We learned about stress hormones and the fight or flight response.

Ask students to recall key messages from the video.

3 Discuss key concepts:



Today we will talk more about examples of stressful situations you might face. We will also talk about how your brain tries to trick you into thinking something is more stressful than it is. Remember, your brain automatically releases stress hormones and messages to different parts of the body. It tries to control how you respond. But you can take back control. You can stop those hormones and messages. You control your brain.

Use these talking points to discuss stressful situations with the class, in small groups or student pairs:

- **What are some stressful situations that you might face? Remember, stress can include experiences that are painful, scary, or uncomfortable. They can include real or imagined situations. Responses may include:**



- A performance in front of a group
- Feeling left out of a group
- Family or friendship conflicts

- **If the brain tries to trick you by releasing stress hormones, how can you regain control? Responses may include:**

- You can stop the automatic release of hormones by using a Breath Brake.
- You can use the Stop Breathe Think, then Respond Strategy to calm down and make a thoughtful decision about what to do.

4 End with Power Peace Purpose:

Power Peace Purpose. Students bow.

Day 4: APPLY

Focus: Self-Management

Students will work independently to apply the concepts from the video to a self-reflective activity about the brain's stress response system.

Learning Objectives: In this lesson, students will:

- Describe their personal stress response with details about body sensations.
- Identify how the Breath Brake interrupts the release of stress hormones and messages.
- Practice the Breath Brake and repeat the **Power Peace Purpose** mantra.

Time Requirement:

15 minutes



Materials Needed:

ACTIVITY SHEET -
3C: MY STRESS RESPONSE

Lesson Process:

1 Begin with a Breath Brake:

Begin with the mantra **Power Peace Purpose**. Students bow.
Lead students through a Breath Brake.

2 Review key concepts:



We talked about some of the common body responses to stressful experiences yesterday. We also talked about different stressful situations or experiences. Today you will examine your stress response. You will describe one situation that stresses you out, describe how you feel stress in your body, and then you'll imagine and draw a picture to show your stress.

3 Personalize key concepts:

Please encourage students to share how they feel stress in their bodies. Remind students that everyone's stress response is different, but there are common body responses to stressful situations.

- When you feel stress in your body, what can you do? Responses will vary.
 - Take a Breath Brake to stop the stress hormones.
 - Relax and calm down.
- How can learning how to pay attention to your stress response be helpful? Responses will vary.
 - You will learn what triggers your stress and situations that are stressful.
 - You can prepare to deal with stress in better ways.
- Do you have control over your stress response? Do you control your brain? Responses will vary.
 - You have control over your brain and your stress response.
 - Your brain tries to trick you, but you can take control again.

4 Apply key concepts:

Distribute the ACTIVITY SHEET - 3C: MY STRESS RESPONSE. Ask students to work independently to complete the activity sheet about their stress response.

5 End with **Power Peace Purpose**:

Power Peace Purpose. Students bow.

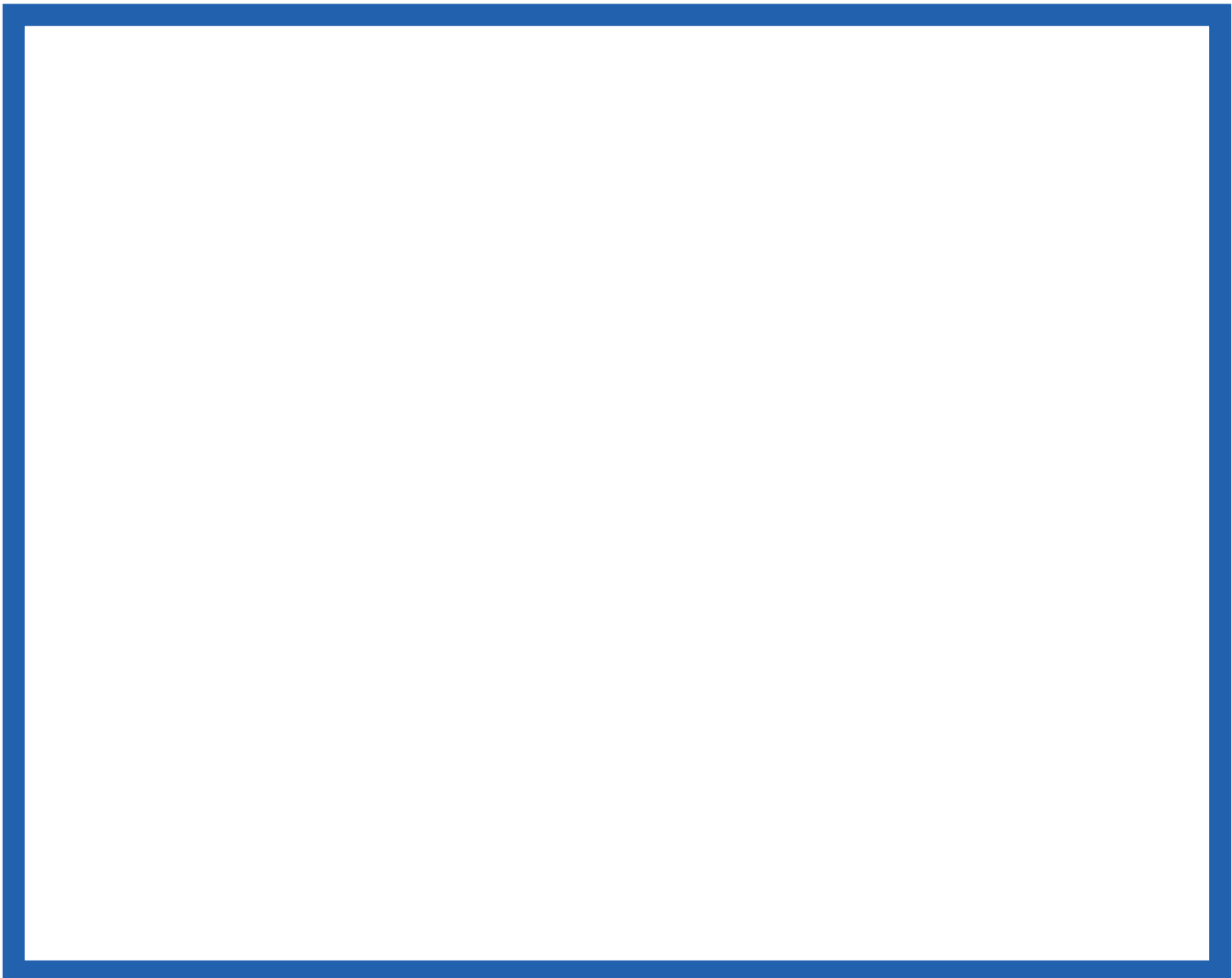
Activity Sheet - 3C: MY STRESS RESPONSE

Name _____ Date _____

To me, the most stressful situation is:

Describe your stress: Use words or phrases to describe how you experience stress in your body.

Draw your stress: Use lines, shapes, and colors to draw what you imagine your stress looks like.



Day 5: SHARE



Focus: Self-Awareness

Students will share their learning about the brain's stress response system and their personal stress responses.

Learning Objectives: In this lesson, students will:

- Share a few details about their personal stress response.
- Identify how they could use the Breath Brake to better manage stressful situations.
- Practice the Breath Brake and repeat the **Power Peace Purpose** mantra.

Time Requirement:

15 minutes



Materials Needed:

ACTIVITY SHEET - 3C: MY STRESS RESPONSE (completed)

Lesson Process:

1 Begin with a Breath Brake:

Begin with the mantra **Power Peace Purpose**. Students bow. Lead students through a Breath Brake.

2 Review key concepts:

This week, we learned about the brain's automatic stress response, called the Fight or Flight response. When you face a stressful situation, your brain naturally responds by releasing hormones and sending messages throughout the body. Those messages prepare the body for fight or flight. You might feel the stress response in your body as a fast heartbeat, tightness in your muscles, sweating, or butterflies in the stomach. The brain tries to control you, but you control your brain. You can retrain your brain with a Breath Brake.



3 Share the learning:

Today we will review your responses to the activity sheet and what you learned about the brain's stress response system and your stress response.



Ask students to reflect on their completed activity sheet, ACTIVITY SHEET - 3C: MY STRESS RESPONSE. Ask for a few volunteers to share their positive statements with the class.

4 Summarize key concepts:

Use the following talking points to discuss as a class, in small groups, or student pairs:

- How can the Breath Brake help you? Responses will vary.
- How can reciting the mantra **Power Peace Purpose** help you? Responses will vary.
- How could knowing and understanding your stress response help you, others, your school, and the world? Responses will vary.



5 End with Power Peace Purpose:

Power Peace Purpose. Students bow.