



Thank you for joining us!

**Session:** Neuroscience of Stress and  
Reciprocity of Care  
**Trainer:** Gill McClean

### Getting Started:

1. You will receive a follow-up email within 24 hours of this session and that will serve as your certificate of completion.
2. If you have any questions, please type them into the Q&A box.
3. If you'd like, grab a pen/pencil/paper to jot down your thoughts.



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# Introductions

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Gill McClean

**[gill@pureedgeinc.org](mailto:gill@pureedgeinc.org)**

*Director of Professional Development & National Trainer*

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# Introductions



Respond to the poll  
to tell us a little  
about yourself.



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<http://www.earlylearninghq.org.uk/class-management/multilingual-hello-poster/>



# Who We Are

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**Pure Edge, Inc. (PEI)** is a private operating foundation that provides direct service to organizations through professional development & strategy thought partnership.

PEI also provides grants to national organizations that advance the work of whole child development & SEL.

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# Welcoming Activity



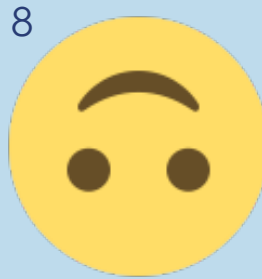
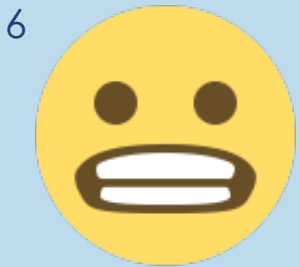
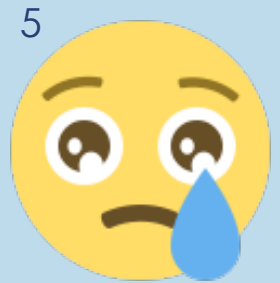
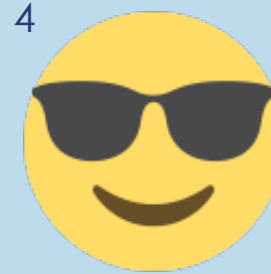
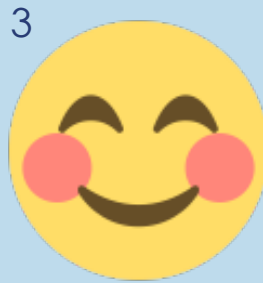
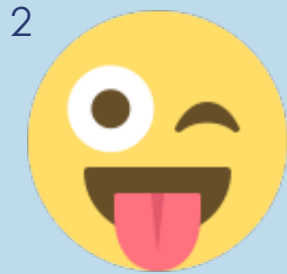
Respond to the poll on the next slide to share which of the following images most accurately reflects your feelings right now.



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## Engaging Activity: Mindful Minute



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# Learning Objectives

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- ❖ Recognize the physiological response to stress.
  - ❖ Experience **self-care practices** throughout the session.
  - ❖ Explore the interconnectedness of stress, educator self-care, and negativity bias.
- 



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In order to have an impact on others, you must first have an impact on yourself.



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# Breathe



# Move



# Rest



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What we hope to do

*Respond*

Vs.



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# Benefits of Nasal Breathing

- ❖ **Filters dust and impurities** from the air
- ❖ Warms the air to body temperature
- ❖ The diaphragm is more easily controlled, which supports the development of **internal core strength**
- ❖ More control over lengthening the breath (extended exhalations help activate the parasympathetic nervous system)
- ❖ Increased oxygen from nasal breath **increases energy** and vitality



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Northwestern University. "Rhythm of breathing affects memory, fear: Breathing is not just for oxygen; it's also linked to brain function, behavior." ScienceDaily. ScienceDaily, 7 December 2016. <[www.sciencedaily.com/releases/2016/12/161207093034.htm](http://www.sciencedaily.com/releases/2016/12/161207093034.htm)>



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# Does It Matter How We Breathe?

## Nasal Breathing & Extended Breaths

- Lung capacity increases
- 18% more oxygen absorbed
- Heart relaxes
- Respiratory & nervous systems cohere
- Blood pressure decreases

## Mouth Breathing

- Body moisture sapped
- Lungs irritated
- Soft tissue of mouth flexes, leaving less space to breathe
- Useful when doing aerobic exercise



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Nestor, J. (2020, May 21). The Healing Power of Proper Breathing. Retrieved from [www.wsj.com/articles/the-healing-power-of-proper-breathing-11590098696](https://www.wsj.com/articles/the-healing-power-of-proper-breathing-11590098696)



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**"Breathing properly can allow us to live longer and healthier lives."**

—James Nestor



Breathing poorly can exacerbate or cause:

- ❖ asthma
- ❖ anxiety
- ❖ attention deficit hyperactivity disorder
- ❖ hypertension
- ❖ and more.

Poor breathing habits can even change the **physical structure of our skeletons**, depleting essential minerals and weakening our bones.

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Nestor, J. (2020, May 21). The Healing Power of Proper Breathing. Retrieved from [www.wsj.com/articles/the-healing-power-of-proper-breathing-11590098696](https://www.wsj.com/articles/the-healing-power-of-proper-breathing-11590098696)

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## Engaging Activity: Easy In, Extend Out

1. Breathe in naturally.
2. Breathe out slowly, making the exhalation longer than the inhalation.
3. Keep going, making the exhalation longer than the inhalation.
4. Notice how you feel.

*\*Lengthening the exhalation tends to have a calming effect on the mind and body.*



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## What is stress?

A physiological reaction that prepares an individual to respond to a stressor.

## What is a stressor?

The stressor is usually something that threatens the well-being or homeostasis (stable equilibrium) of the individual.







## Engaging Activity: Think-Ink-Share



Where do you feel  
stress in your body?

Where do you feel  
joy in your body?



## Benefits

- ❖ Positive challenge
- ❖ Motivates us to take action
- ❖ Promotes well-being
- ❖ Enhances performance

## Detriments

- ❖ No relief in sight
- ❖ Makes us physically sick
- ❖ Weakens immune system
- ❖ Impairs performance



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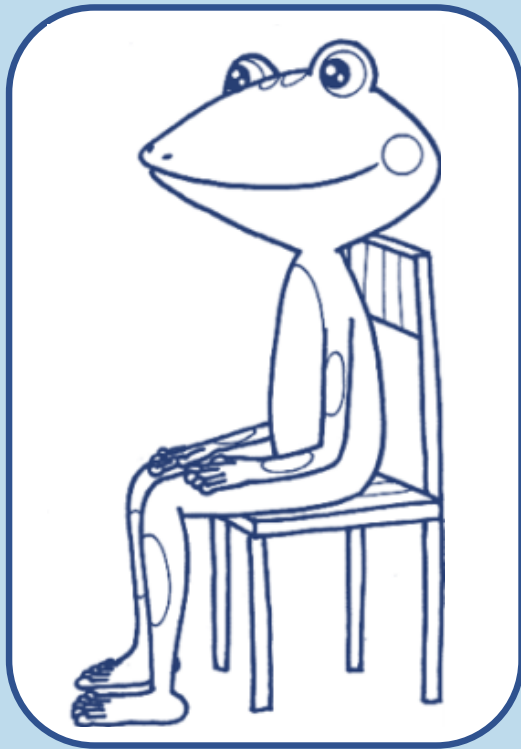
Marc Brackett, PhD Yale Center for Emotional Intelligence  
Victor Carrion, MD Stanford School of Medicine



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## Engaging Activity: Even In, Even Out



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# Stress Accumulates ↔ Allostatic Load

**Allostatic load** is "the wear and tear on the body," which accumulates as an individual is exposed to repeated or chronic stress.



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McEwen, BS; Stellar, E (Sep 27, 1993). "Stress and the individual. Mechanisms leading to disease". Archives of Internal Medicine. 153 (18): 2093-101.



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# Stress Is Contagious



Higher cortisol levels were found in students whose teachers reported high levels of stress and burnout.

Researcher Kimberly Schonert-Reichl (University of British Columbia) urges educators to be aware of their own mindsets and to practice mental wellness exercises to reduce their stress levels.



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Strandberg, D. (2019, December 11). Stress is contagious, education leaders told. Retrieved from <http://www.tricitynews.com/news/stress-is-contagious-education-leaders-told-1.24030014>



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*It is essential for adults working with young children to be well physically and emotionally.*

*Better health enables better relationships with children, and research has long demonstrated that good relationships are crucial for children's learning and social-emotional development.*

Dr. Kate Gallagher  
Director of Research and Evaluation,  
Buffett Early Childhood Institute, University of Nebraska



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<https://medicalxpress.com/news/2014-09-mindfulness-adults-childhood-adversity.html>





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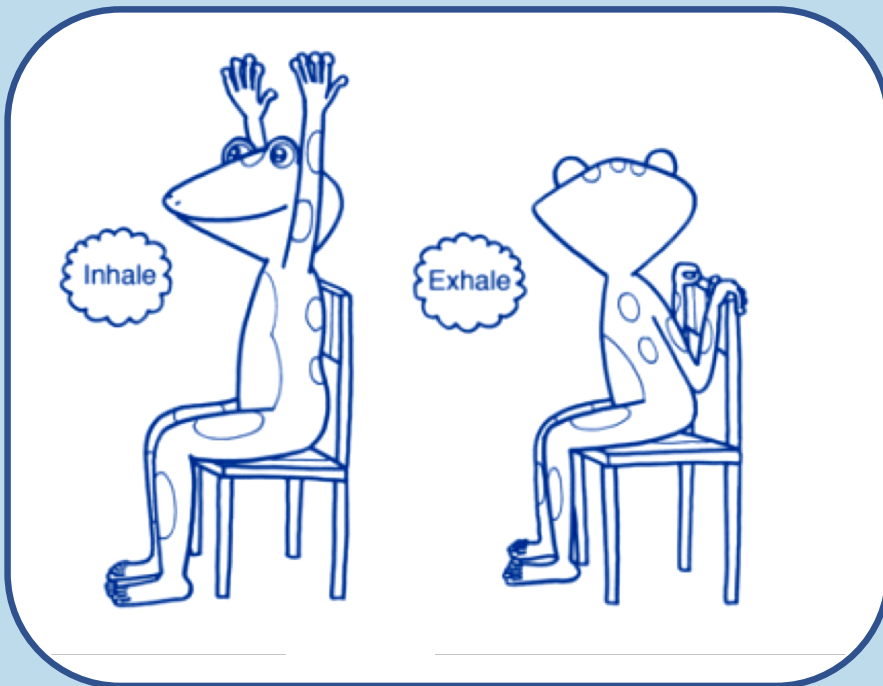
<https://www.kqed.org/mindshift/53681/how-movement-and-exercise-help-kids-learn>



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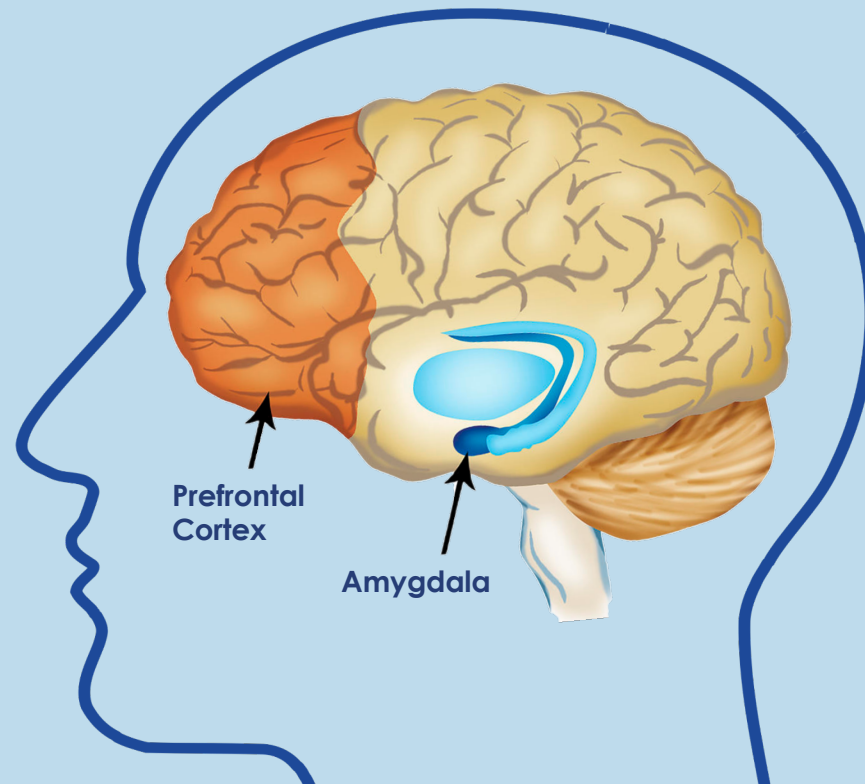
## Engaging Activity: Chair Sunrise Twist



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# Self-Regulation & the Brain



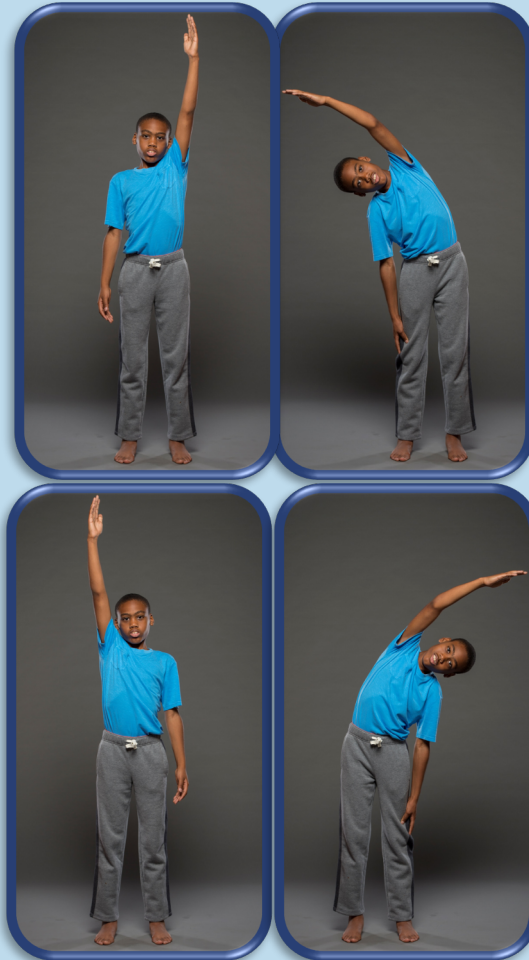
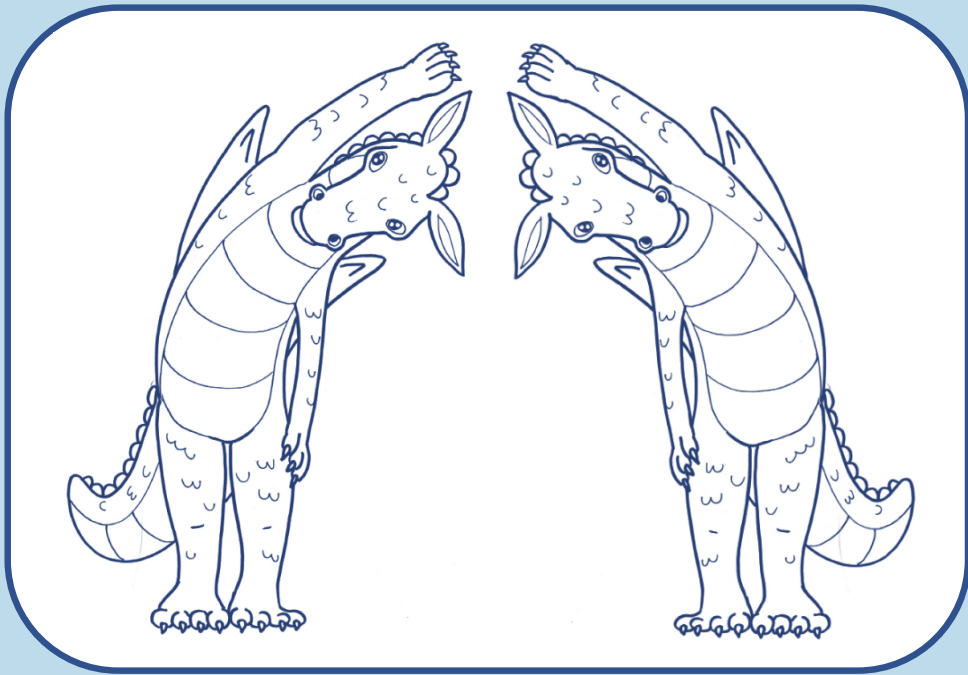
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## Engaging Activity: Standing Half Moon



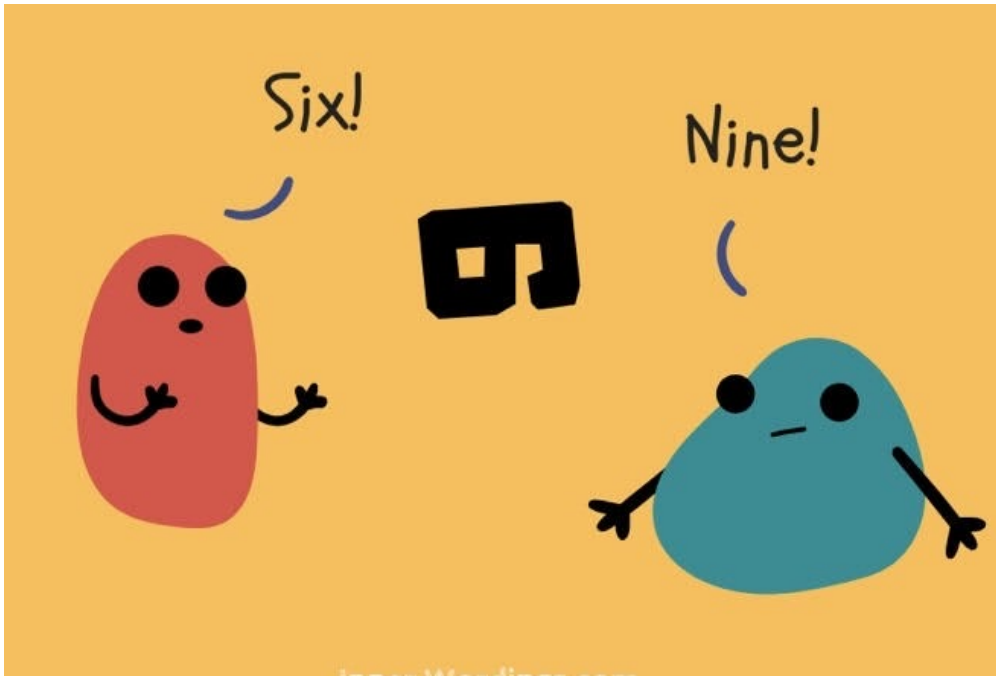
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# Bias

An inherent or learned prejudice against a thing, person, or group when compared with another.<sup>1</sup>

Nearly all humans share a **negativity bias**, that is our tendency to hold on to or collect negative information in the form of **memories** or **impressions**.



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1: [Bias](#) | Definition of Bias by Merriam-Webster



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# Negativity Bias

Negativity bias can take the shape of:

- ❖ Excessive worry
- ❖ Anxiety
- ❖ Frustration
- ❖ Aggression
- ❖ Judgement

**Sometimes it leads us to look for or expect danger.**



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Image: <https://www.relevantinsights.com/blog/10-cognitive-biases>



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# Negativity Bias

For example, studies have found that:

- **In a relationship**, it typically takes five good interactions to make-up for a single bad one.
- People will work much harder to **avoid losing \$100** than they will work to gain the same amount of money.
- **Painful experiences** are much more memorable than pleasurable ones.<sup>1</sup>



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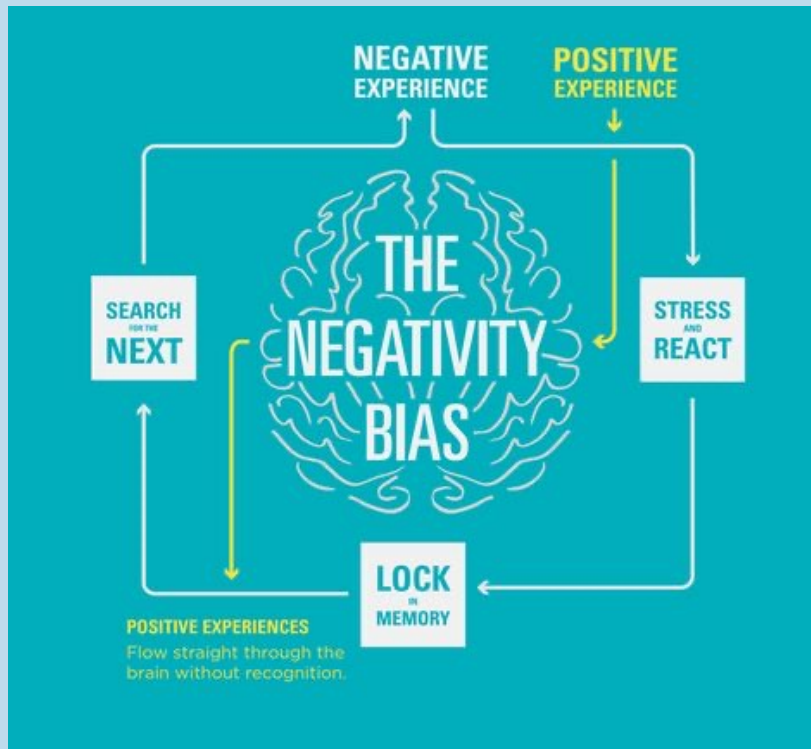
<sup>1</sup>: Hanson, Dr. Rick, Take in the Good, May 5, 2020.

Image: Paauw, Kathy, Life Management, Managing Priorities and Relationship Building, November 6, 2018



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# Taking in the Good



“The brain is like Velcro for negative experiences and like Teflon for positive ones.”<sup>1</sup>

That shades “implicit memory” – your underlying expectations, beliefs, action strategies, and mood – in an increasingly **negative direction**.



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1: Rick Hanson and Rick Mendius, “Positive Emotions and Taking In the Good,” 2007. <http://www.wisebrain.org/PositiveEmotions.pdf>



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## Engaging Activity: Taking in the Good

1. Think of one thing from the day that you feel good about, and be specific—for example, you listened, you were more creative, you lent a helping hand, or someone smiled at you, etc.
2. Hold on to that memory for the next 30 seconds. Remember it in as much detail as you can.
3. Allow the feeling associated with the memory to sink in your mind. Act as a sponge, absorbing the memory and the feeling together.



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# Taking in the Good

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**Taking in the Good** entails:

- focusing on the positive in what is occurring or has already occurred.
- absorbing and appreciating the experience itself of a positive thought or memory **in order to cultivate resilience and gratitude.**

*This differs from **positive thinking methods** in which one hopes for a particular outcome.*



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1: Rick Hanson and Rick Mendius, "Positive Emotions and Taking In the Good," 2007. <http://www.wisebrain.org/PositiveEmotions.pdf>



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“

“The three most important aspects of learning  
–**attention, focus, and memory**–  
are all controlled by our emotions,  
not by cognition.”

~Marc Brackett

”



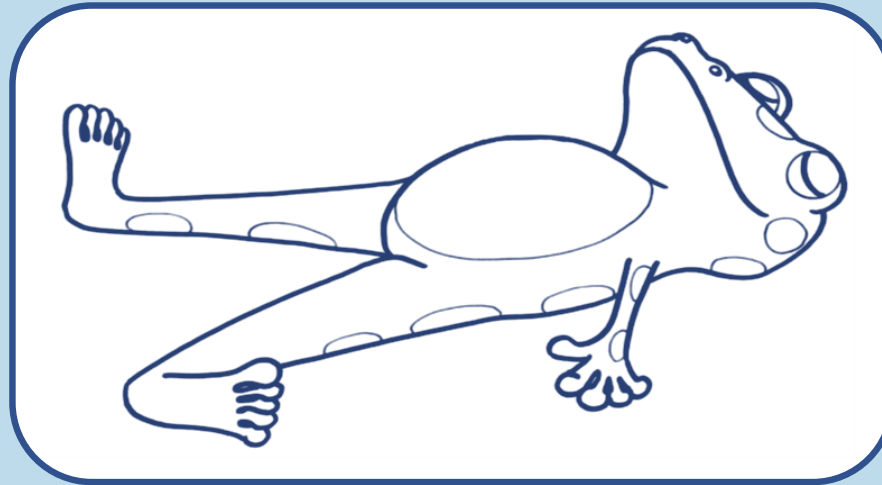
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Brackett Ph.D., M. (2019). *Permission to Feel: Unlocking the Power of Emotions to Help Our Kids, Ourselves, and Our Society Thrive*. New York, NY: Celadon Books.



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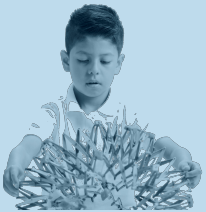
# Optimistic Closure: Guided Rest / Body Scan



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# Brain Breaks Review



## Breathe

- ❖ Even In, Even Out
- ❖ Easy In, Extend Out



## Move

- ❖ Chair Sunrise Twist
- ❖ Standing Half Moon



## Rest

- ❖ Mindful Minute
- ❖ Taking in the Good
- ❖ Guided Rest/Body Scan



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# Takeaways

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- ❖ Stress impacts us physically and mentally.
- ❖ We can use the breath and body to decrease Allostatic Load.
- ❖ The “Brain” muscle needs exercise too.
- ❖ Self-care strategies build resilience.



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Evidence-Based Approach  
Thoughtful Partnerships  
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## Success Through Focus

Strategies for educators and learners to  
develop social, emotional, and academic  
learning skills through mindful  
movement and rest.



Online Curriculum

Log Out

+ MENU

•  
breathe

•  
move

•  
rest



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**Optimistic Closure:** One Word To  
Describe How You Feel – Type it in the chat box!



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Photo: Juan Monino



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**Session:** Neuroscience of Stress and Reciprocity of Care

**Trainer:** Gill McClean



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# Appendix

## Brain Breaks

## Directions



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## Engaging Activity: Mindful Minute



- Start in Seated Mountain.
- Bring your attention to the present moment. We are going to start by taking a Mindful Minute.
- Start bringing your attention to the breath, noticing its qualities (fast, slow, warm, cool, shallow, deep...).
- Continue to focus your attention on the breath, and notice how you are feeling. Just notice.



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## Engaging Activity: Even In, Even Out

1. Start in Seated Mountain with a tall spine, relaxed shoulders, and eyes gently closed.
2. Breathe naturally through the nose.
3. We are going to focus on making our inhales and exhales even.
4. Inhale deeply through the nose and exhale through the mouth for a count of one.
5. On the next breath, lets count to two on the inhale and the exhale.
6. Repeat, continuing to extend the breath up to a count of five.





## Engaging Activity: Easy In, Extend Out

1. Breathe in naturally.
2. Breathe out slowly, making the exhalation longer than the inhalation.
3. Keep going, making the exhalation longer than the inhalation.
4. Notice how you feel.

*\*Lengthening the exhalation tends to have a calming effect on the mind and body.*



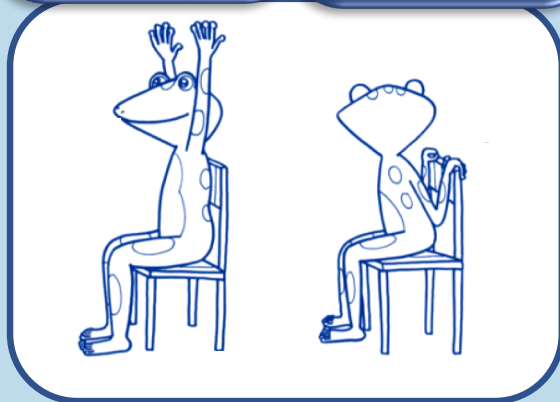
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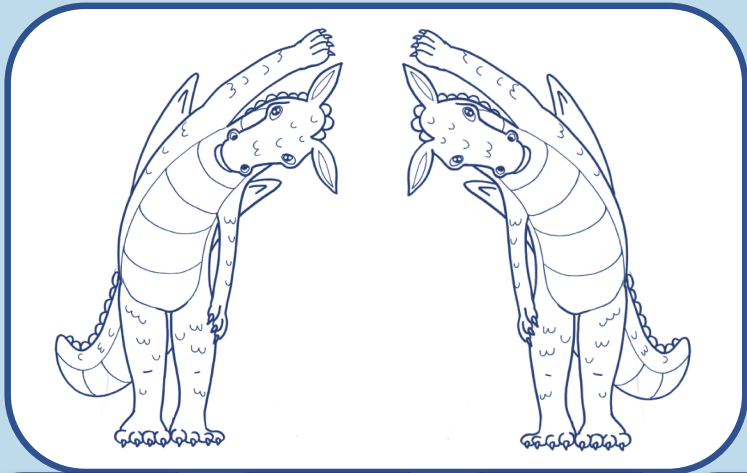
## Engaging Activity: Chair Sunrise Twist



1. Sit in Seated Mountain.
2. Inhale, stretch arms overhead for Chair Sunrise.
3. Exhale, twist to the right, placing left hand on right knee and right hand on right hip or back of the chair. Keep right shoulder relaxed. Take a few breaths here.
4. Inhale, back to Seated Sunrise.
5. Exhale, twist to the left, placing right hand on left knee and left hand on left hip or back of chair. Keep left shoulder relaxed. Take a few breaths here.
6. Inhale back to Seated Sunrise.
7. Exhale to Seated Mountain.



## Engaging Activity: Standing Half Moon



1. Begin in Mountain Pose.
2. Inhale, take feet slightly apart. Lift left arm overhead alongside left ear, press right arm into right side.
3. Exhale, lean to the right. Gaze straight ahead or down towards the feet.
4. Inhale, return to the center.
5. Exhale, lower left arm.
6. Inhale, lift right arm overhead alongside right ear, press left arm into left side.
7. Exhale, lean to the left. Gaze straight ahead or down towards the feet.
8. Inhale, return to the center.
9. Exhale, lower right arm and step feet together into Mountain Pose.
10. Repeat as required.

\*Use this sequence to awaken in the morning or to revive after lunch.



## Engaging Activity: Taking in the Good

1. Think of one thing from the day that you feel good about, and be specific—for example, you listened, you were more creative, you lent a helping hand, or someone smiled at you, etc.
2. Hold on to that memory for the next 30 seconds. Remember it in as much detail as you can.
3. Allow the feeling associated with the memory to sink in your mind. Act as a sponge, absorbing the memory and the feeling together.



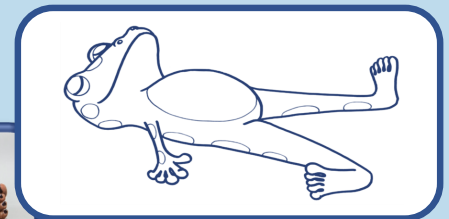
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# Engaging Activity: Guided Rest / Body Scan

1. Lie down on the floor on your back. Spread your feet apart. Turn your palms up to face the ceiling and close your eyes.
2. Put your attention on your forehead. Feel your forehead relax.
3. Put your attention on your eyes. Feel your eyes relax.
4. Put your attention on your cheeks and jaw. Feel your cheeks and jaw relax.
5. Put your attention on your neck. Feel your neck relax.
6. Put your attention on your shoulders. Feel your shoulders relax. (Repeat for arms, wrists, hands, fingers.)
7. Put your attention on your chest. Feel your chest relax.
8. Put your attention on your back. Feel where your back touches the floor (or the chair).
9. Put your attention on your belly. Notice how the breath moves the belly softly up and down.
10. Put your attention on your hips. Feel your hips relax. (Repeat for legs, knees, ankles, feet, toes.)
11. Bring your awareness to your breathing and notice where you feel the breath in your body. Maybe you notice it in your nostrils. Maybe you feel it in your chest. Maybe you feel it in your belly.
12. See if you can get really quiet. Maybe you will even feel your heart beating inside your body.
13. Let learners rest in silence for a few moments.
14. Ring chime.
15. Slowly start to wiggle your fingers and toes. Take a deep breath in and stretch your arms overhead. As you exhale, relax.
16. Open your eyes and slowly return to a seated position.
17. Notice how you are feeling.



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