



Thank you for joining us!

Session: The Neuroscience of Stress

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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Website: www.pureedgeinc.org
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Introductions

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*Director of Professional Development
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Introductions



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



Who We Are

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.



Welcoming Activity



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



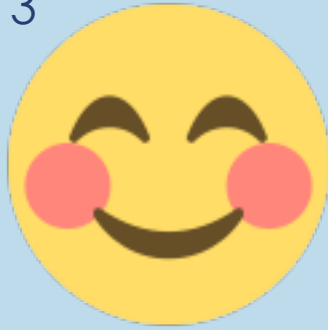
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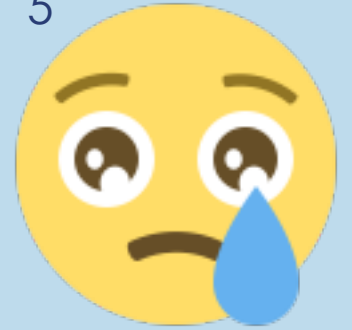
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10





Engaging Activity: Mindful Minute



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Learning Objectives

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



STRESSOR: Pandemic (CDC)



- Health-related fear



- Worsening of chronic health problems



- Sleep problems



- Increased use of alcohol, tobacco, and other drugs



- Eating problems



- Isolation
- 50% of 20K responders reported feeling lonely (Cigna Survey)



- Concentration problems



- Racial and ethnic minority groups

Why Focus on School Stress?

In highly stressed school environments, teachers and learners pay the costs.

Teacher turnover:
\$2 BILLION
each year

“Stress and disappointments”:
49% of teachers
say it isn't worth it.



40-50%
of **new teachers** leave
within first 5 years.

High DAILY levels of stress:
46% of teachers

New principals NOT retained
beyond third year:
50%

When teachers are highly stressed, students show lower levels
of both social adjustment and academic performance.



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Sources (clockwise from 40-50%): Ingersoll, Merrill & Stuckey (2014); Greenberg, Brown, Abenavoli (2016); School Leaders Network (2014); Rentner, Kober, Frizzell, (2016); Alliance for Excellent Education (2014).



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.



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



Breathe

Move

Rest



What we hope to do

Respond

Vs.

React



Benefits of Nasal Breathing

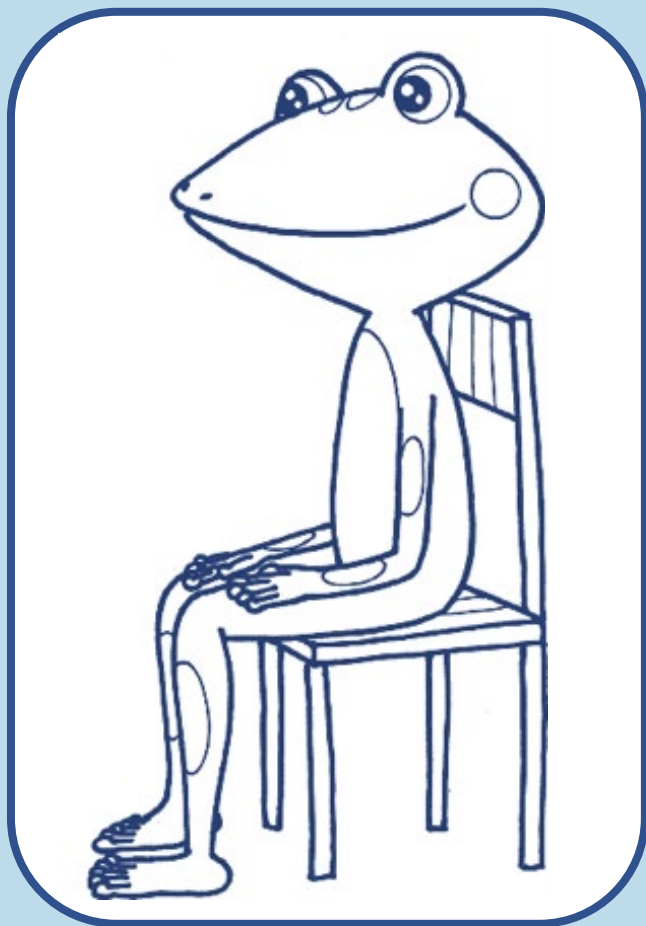


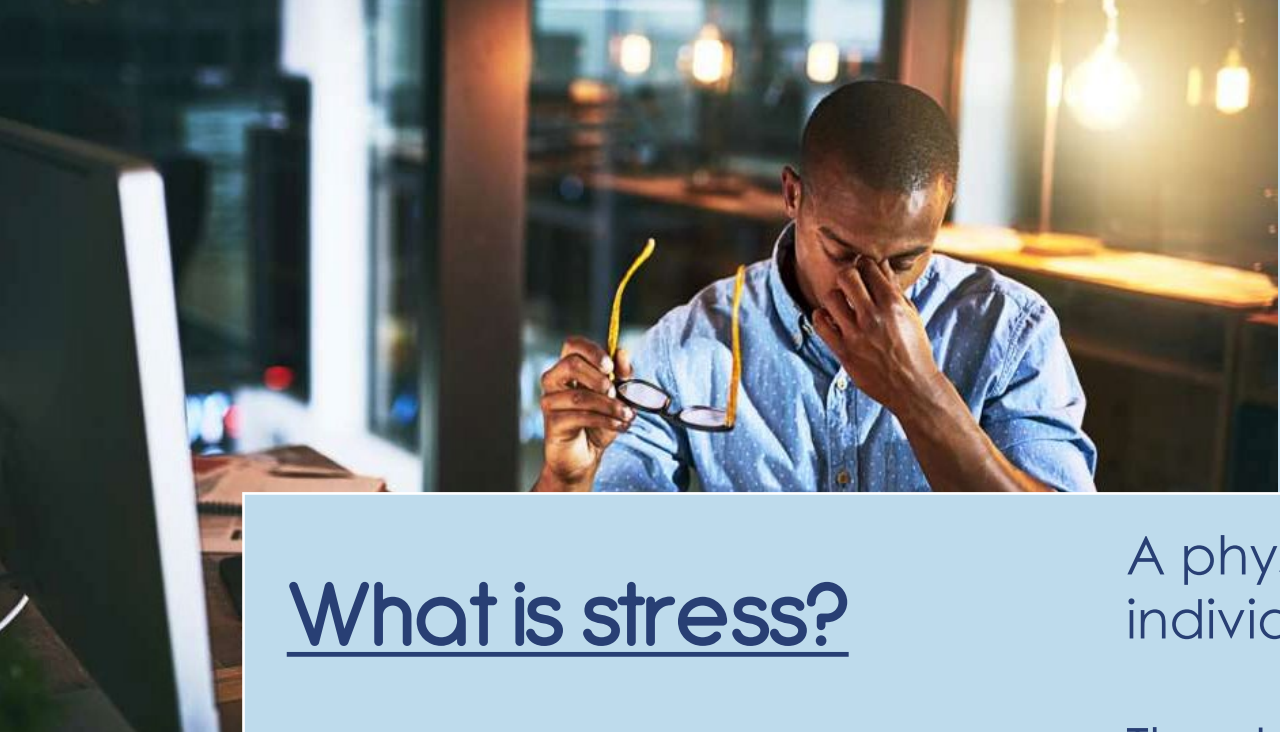
- ❖ Filters dust and impurities from the air
- ❖ Warms the air to body temperature
- ❖ The diaphragm is more easily controlled, which supports the development of internal core strength
- ❖ More control over lengthening the breath (extended exhalations help activate the parasympathetic nervous system)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





Engaging Activity: Even In – Even Out





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



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.



Impact of Stress & Trauma on the Heart

After his death, Dr. Martin Luther King Jr.'s autopsy found that while he was just 39 years old, he had the heart of a 60-year-old.



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.

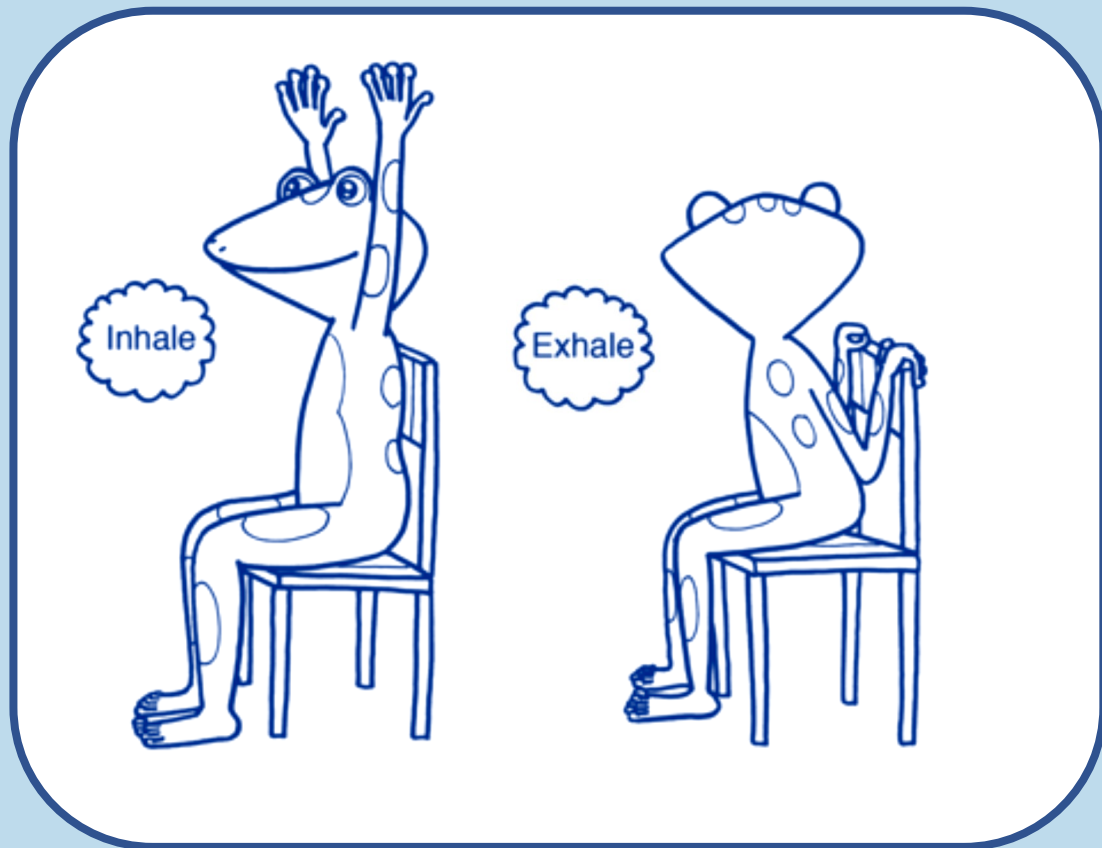
Dr. Kate Gallagher
Director of Research and Evaluation,
Buffett Early Childhood Institute, University of Nebraska



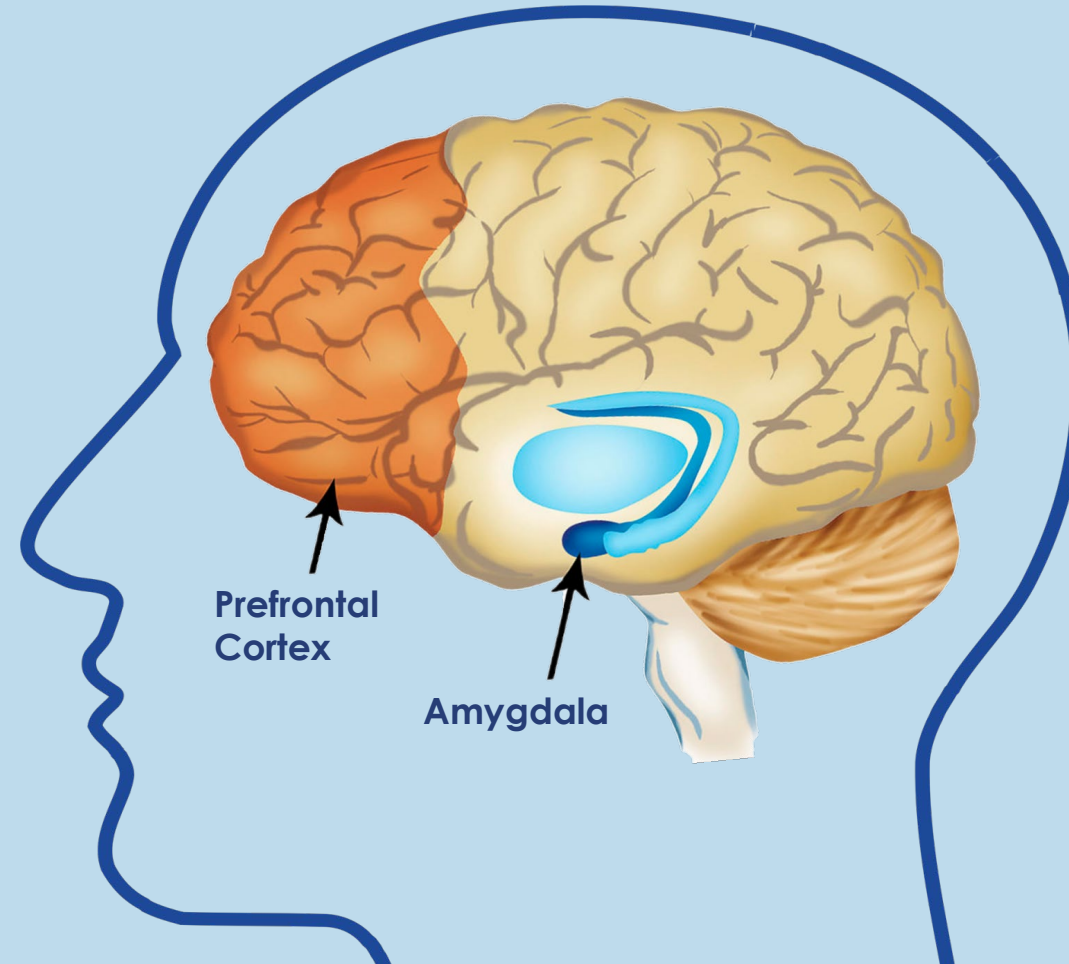




Engaging Activity: Chair Sunrise Twist



Self-Regulation & the Brain



Neuroscience: Self-care & Vagal Tone



THE VAGUS NERVE

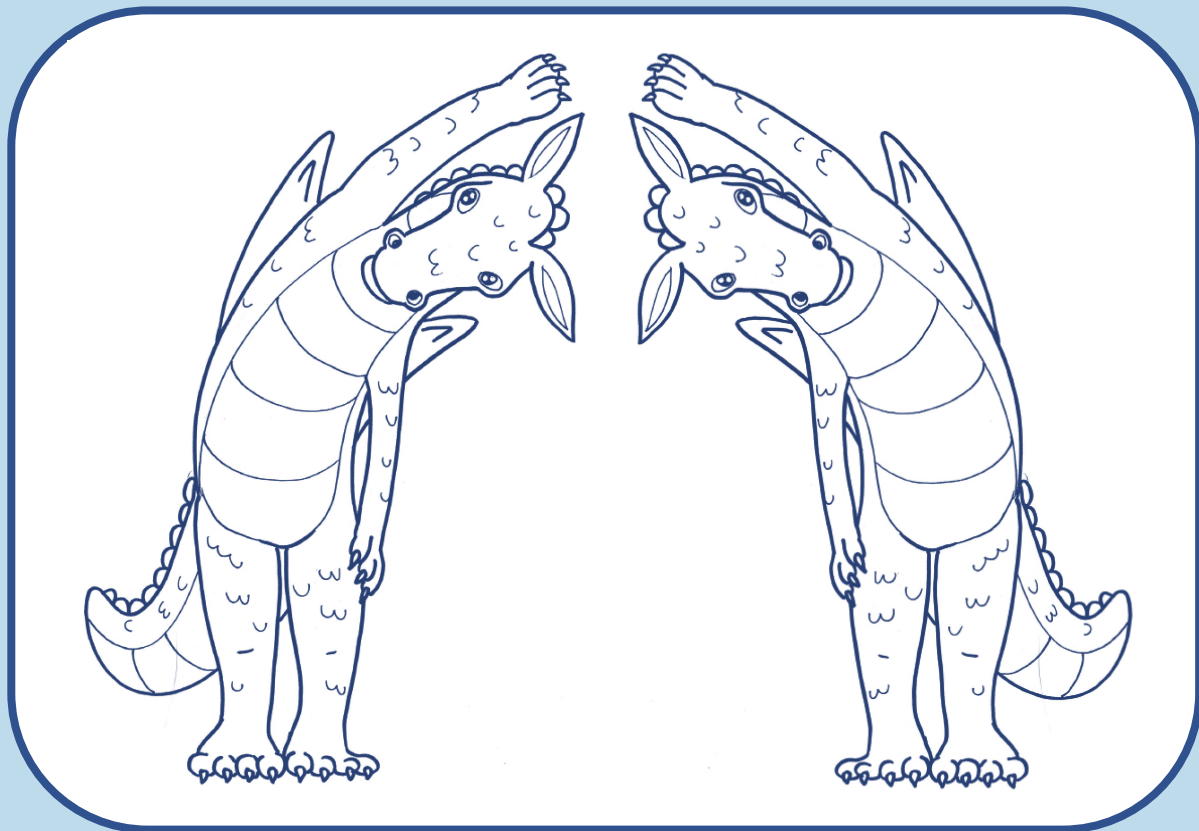
How to Hack Your Nervous System

The vagus nerve, the tenth cranial nerve, is the superhighway of the nervous system that connects the body and brain. We can tone the **vagus nerve** through deep breathing exercises.





Engaging Activity: Standing Half Moon



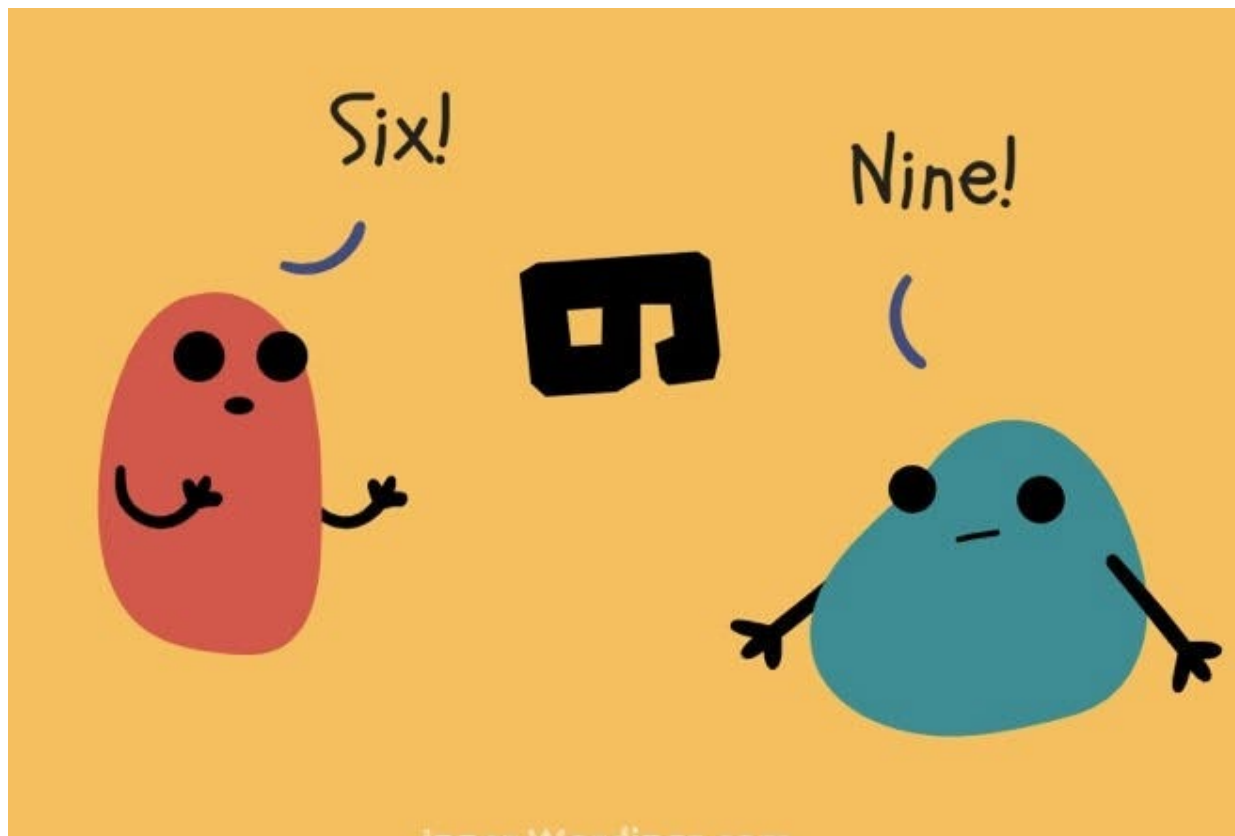
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Bias

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

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**.



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

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.



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

Negativity Bias

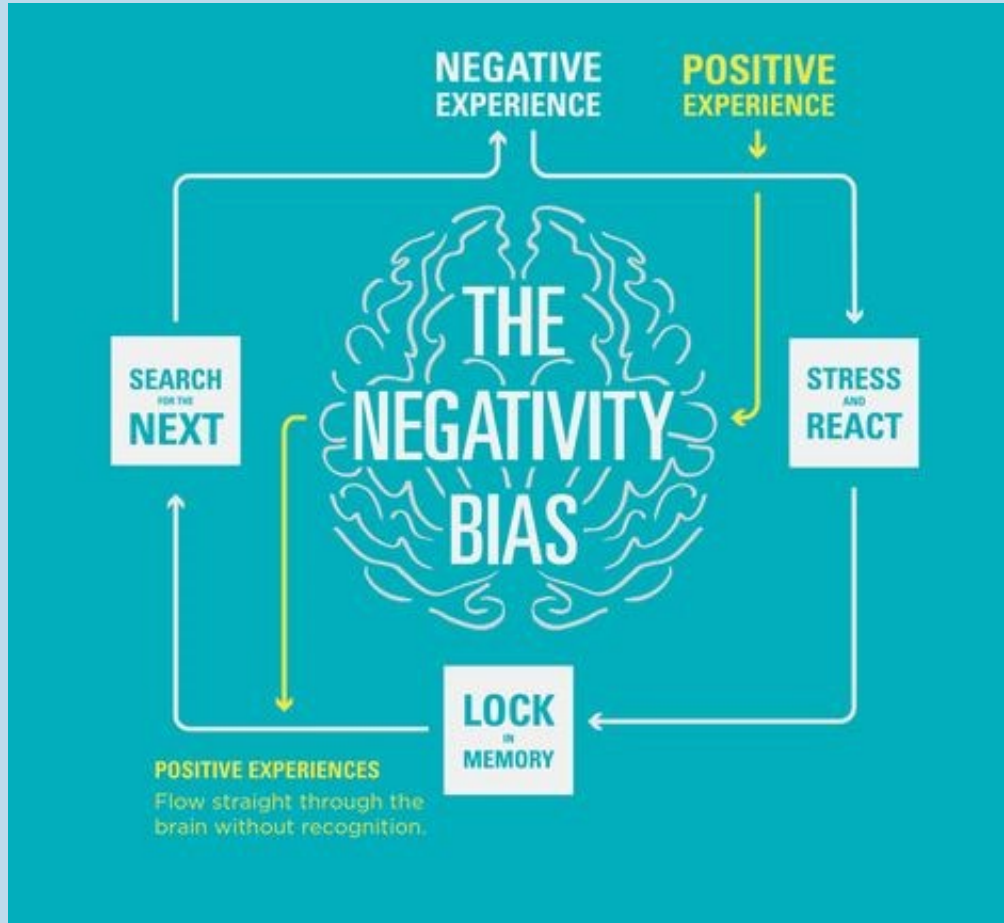
For example, studies have found that:

- **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.¹



1: Hanson, Dr. Rick, Take in the Good, May 5, 2020.

Taking in the Good



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

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



“

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

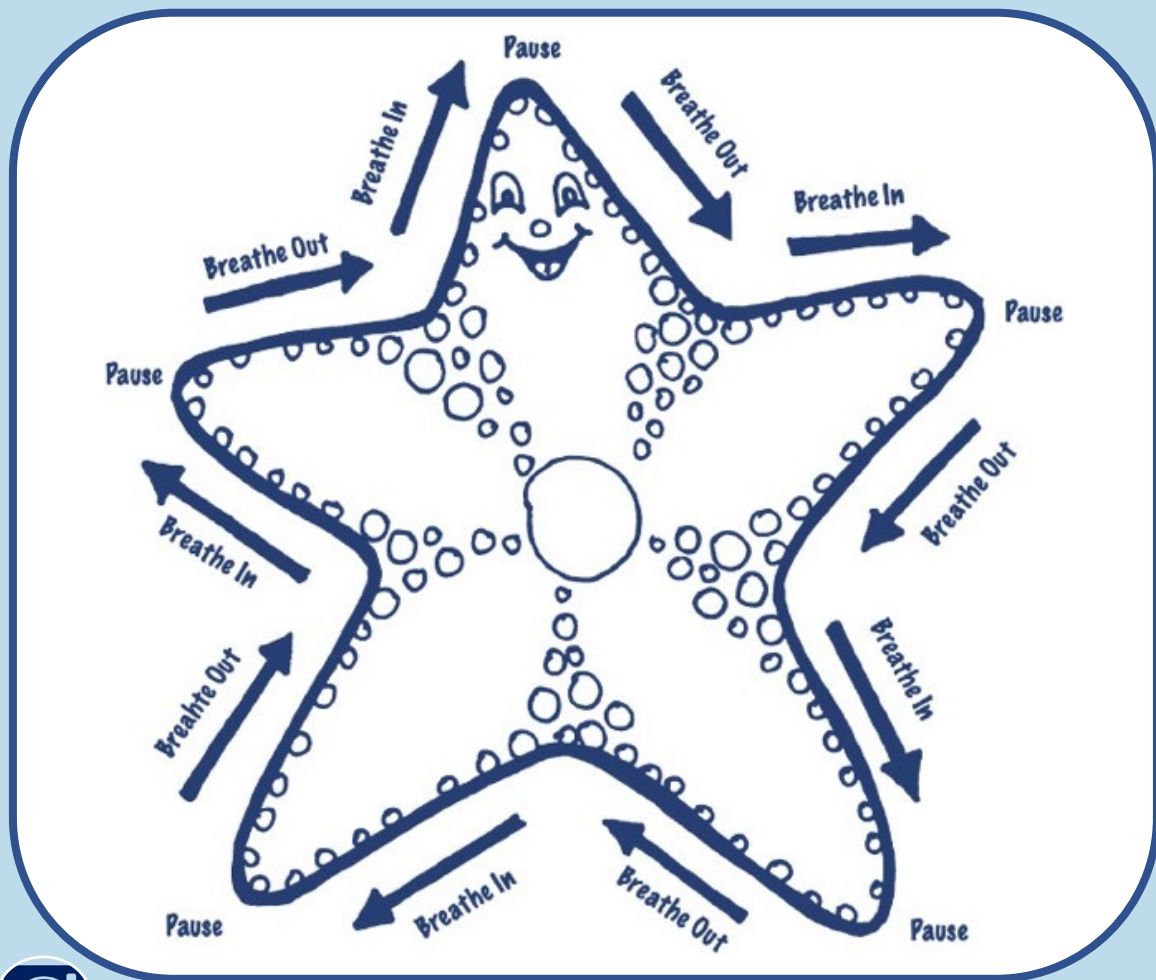
Marc Brackett

”



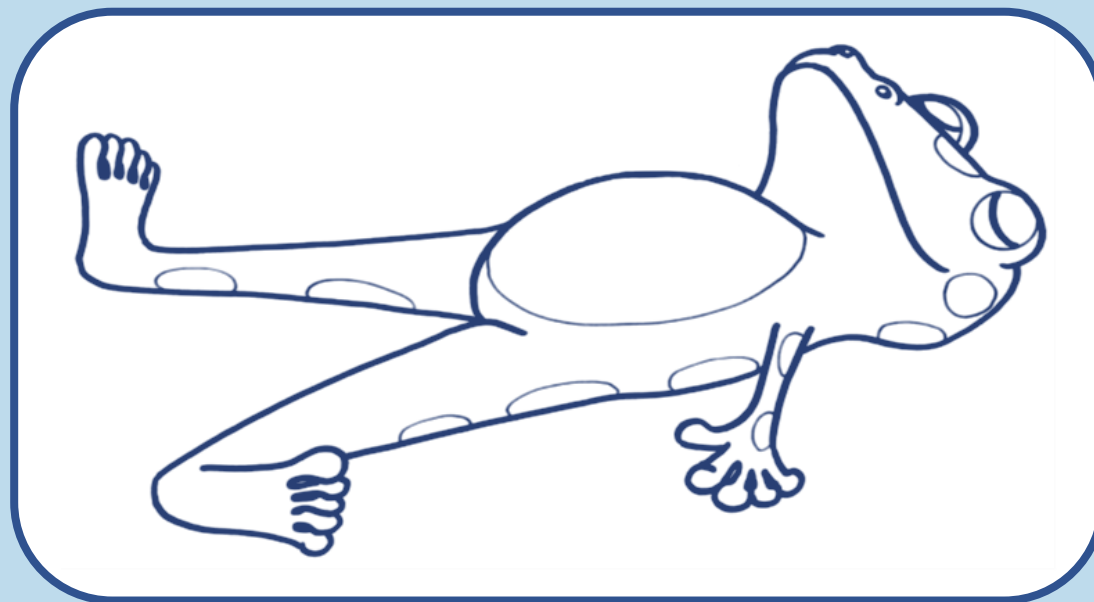


Engaging Activity: Starfish Breathing or Take Five





Optimistic Closure: Guided Rest or Body Scan



Brain Breaks Review



Breathe

- ❖ Even In – Even Out
- ❖ Starfish Breathing or Take Five



Move

- ❖ Chair Sunrise Twist
- ❖ Standing Half Moon



Rest

- ❖ Mindful Minute
- ❖ Guided Rest/Body Scan



Takeaways

- ❖ 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
Curriculum & Training



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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.

•
breathe

•
move

•
rest



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HEADSPACE: Mindfulness On Demand



Headspace is donating their app
to all Educators.

go.headspace.com/pureedge

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Thank you for joining us!

Session: The Neuroscience of Stress

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Appendix

Brain Breaks

Directions





Engaging Activity: Mindful Minute



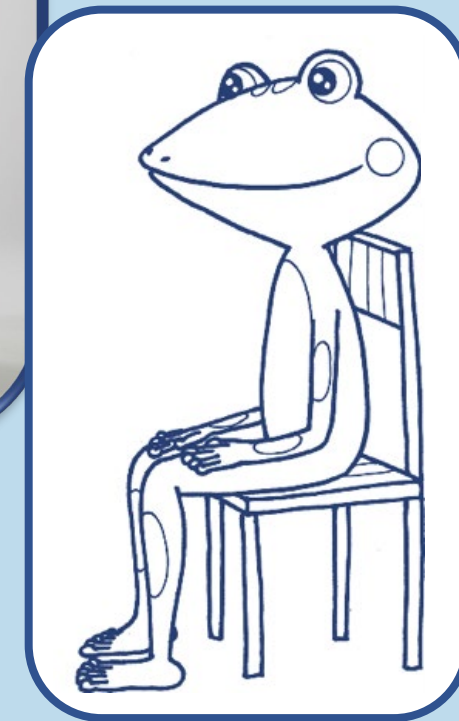
- Start in Seated Mountain.
- Bring your attention to the present moment. We are going to start by taking a Mindful Minute.
- Start bringing your attention to the breath, noticing its qualities (fast, slow, warm, cool, shallow, deep...).
- Continue to focus your attention on the breath, and notice how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





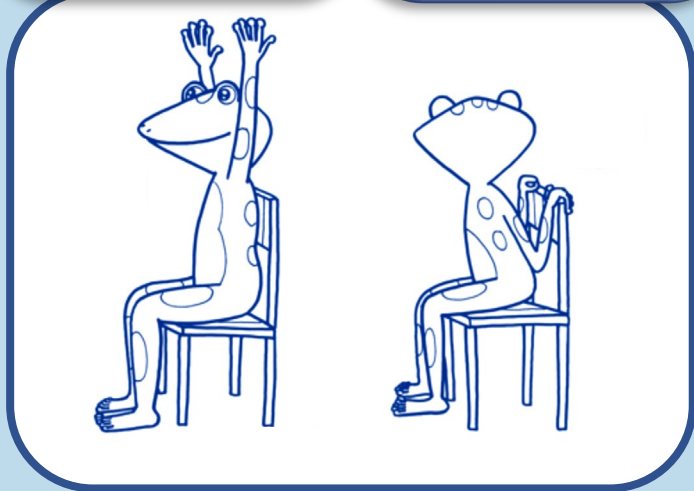
Engaging Activity: Even In – Even Out

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.





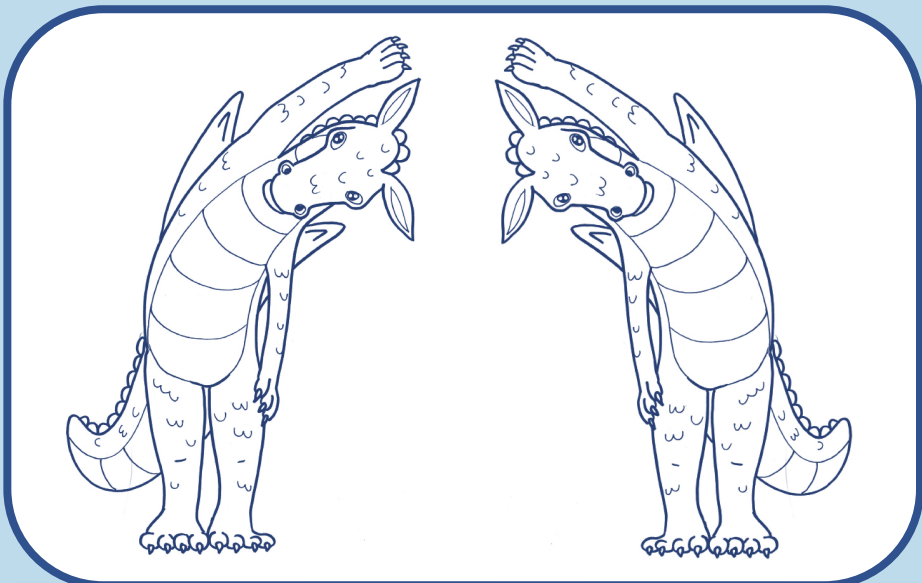
Engaging Activity: Chair Sunrise Twist



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

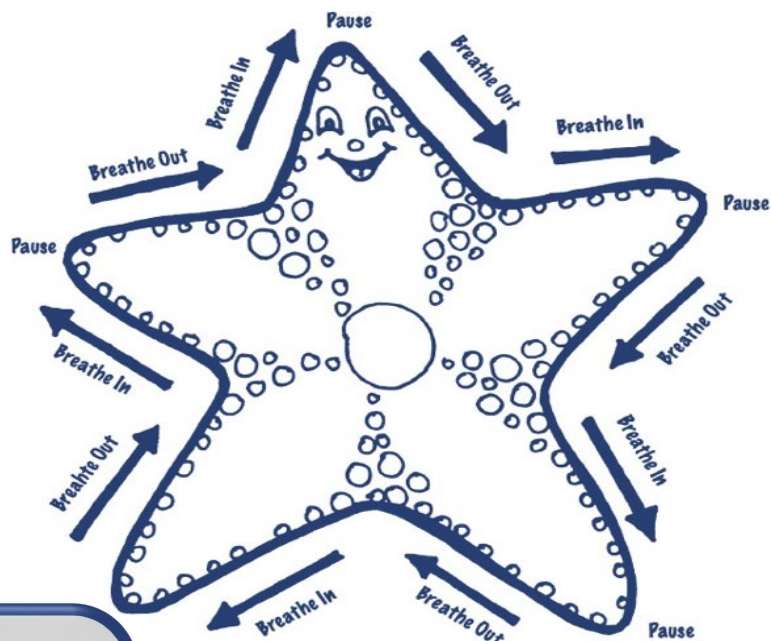


1. Begin in Mountain Pose.
2. Inhale, take feet slightly apart. Lift left arm overhead alongside left ear, press right arm into right side.
3. Exhale, lean to the right. Gaze straight ahead or down towards the feet.
4. Inhale, return to the center.
5. Exhale, lower left arm.
6. Inhale, lift right arm 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: Starfish Breathing or Take Five



1. Make a starfish with one hand, fingers spread wide.
2. Put the index finger from the other hand on the outer base of the thumb.
3. We are going to trace the outline of our starfish hand. Keep looking at your pointer finger while you do your breathing.
4. Inhale (finger traces to top of thumb).
5. Exhale (finger traces down the other side of thumb).
6. Repeat until you have traced the outline of the starfish hand.



**Learners are synchronizing their movement, breath, and gaze. On the inhale, index finger and eyes trace upward along a finger; on the exhale, index finger and eyes trace downward along a finger. Each upward movement is coupled with an inhale, whereas each downward movement is coupled with an exhale.*

**After Starfish Breathing, you can have learners rest their hands on their chest, continuing to breathe mindfully, as they silently recall three things for which they are thankful.*



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.

