



## **Linear Equations: Tracking and graphing our mindful hearts**

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This curriculum unit is recommended for:  
9th Grade Mathematics

**Keywords: Mindfulness, Meditation**

**Teaching Standards:** See [Appendix 1](#) for standards addressed in this unit.

**Synopsis:** Mindfulness and meditation have become popular in American culture in the past few years. Why? What is it that is attracting so many people to a life of mindfulness? We now see schools implementing social emotional learning curriculum into the day-to-day more and more. This unit explores how mindfulness can help reduce the stress that students feel on a daily basis and includes activities to help introduce mindfulness and mediation into a math classroom.

*I plan to teach this unit during the coming year to 50 9th grade students in mathematics in April 2021.*

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### Introduction

#### Rationale

School is stressful. Pressure to perform well is intense. Teachers, parents, and the community are constantly telling students that they must do well in school to be successful. Is that true? It can be. However, that kind of pressure is hurting our children. Students are more stressed than ever. How can we resolve this problem? Less work? Easier work? Not necessarily, we want are students to perform well, we teach them to perform well. So why don't we teach them how to manage stress? By teaching students to "take a step back" or "take a deep breath" could change everything. By including mindfulness into the day-to-day operations of the classroom, we can create a generation of students who perform extremely well and are not stress out over each and every assignment.

#### School/Student Demographics

Data from Breaking the Link, a document released by Charlotte Mecklenburg Schools, states that in the 2017-2018 school year shows that 147,359 students were enrolled in Charlotte Mecklenburg Schools on the 20th day of school, which is the official date used by the state of North Carolina. From that number, approximately 38% of students were Black, 28% were White, 24% were Hispanic, 7% were Asian, 3% were multi-racial, and .4% were Native American. CMS students speak 205 languages in addition to English and are from 186 countries. More than 19,000 of the 147,359 were English Language Learners and 13,000 were Exceptional Children (known in other states as special education). In CMS, there are 96 elementary schools, 27 middle schools, 32 high schools, 14 K-8 schools, 3 6-12 schools, 3 Special Program/Alternative schools, and 1 K-12 school.<sup>1</sup>

Garinger High School (9-12) is a Title 1 high school and is located in East Charlotte on the corner of Sugar Creek and Eastway. Data from the 2019-2020 school year shows there are approximately 1800 students at Garinger High School. The student body of Garinger is made up of students who are 46.9% Hispanic, 40.6% Black, 6.4% Asian, 4.4% White, .1% Pacific Islander, .1% American Indian and 1.5% two or more races. 47% of the student body is female and 96% of the school is eligible for the Free Lunch Program. To graduate from high school in North Carolina students are required to obtain 22 credits. Four credits must be English, 4 math, 3 science, 4 social studies, 1 health/physical education, and 6 credits of electives.<sup>2</sup> The class I

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<sup>1</sup> "Breaking the Link." *Breaking the Link*. Charlotte Mecklenburg Schools, May 2019. <https://4.files.edl.io/612a/06/04/19/194431-a5a8d5ab-3ac2-40a1-902c-f295b0d36a8d.pdf>.

<sup>2</sup> "K-12 Standards, Curriculum and Instruction." Graduation Requirements. Accessed September 20, 2019. <http://www.ncpublicschools.org/curriculum/graduation/>.

teach, Math 1, is a course that is required to graduate in addition to being an End of Course, EOC, tested subject. In the most recent School Report Cards released by the state (2017-2018), Garinger has a score of 59, which is a C. The academic growth, at a score, of 100 (the highest growth score possible) exceed expected growth for the school. According to the report card 8.4% of the incoming freshman came into the school year proficient. Part of these growth scores come from students growth on the EOC tests at the end of each school year. I teach 79 students in three classes throughout the day, all of whom will be required to take an EOC at the end of the year.

## Unit Goals

The goal for this unit is to bring students' attention to mindfulness and meditation. School, and for some particularly math, can be extremely stressful. Students have been taught and conditioned that school is "high stakes;" I want to lessen that feeling for my students. While school is extremely important, the stress that students feel is not always proportionate. By practicing our breathing and learning techniques to calm ourselves students will realize that if they take a step back they can be just as, if not more, successful in the classroom and in life. I hope to show students, over time, what mindfulness can do for them. They will analyze these differences using linear functions and graphs in addition to "feeling" the difference.

## Content Research

What is mindfulness? "Mindfulness can be defined as a process of openly attending, with awareness, to one's present moment experience".<sup>3</sup> It is way to attend to one's experiences in the present moment without judgement. Mindfulness has been show to benefit one's psychological well-being and cognitive functioning. Experts have seen the use of mindfulness practices reduce stress and chronic pain and anxiety and depression. There is also improved cognitive control displayed in attention and working memory.<sup>4</sup> "The simplest and most common form of the practice-mindfulness of the breath- involves following three basic instructions: 1) sit in a comfortable, stable position; 2) focus your attention on your breath, following it as you inhale and exhale, observing it without trying to change it in any way and; 3) whenever you become aware that your attention has wandered away, gently bring it back to your breath again."<sup>5</sup>

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<sup>3</sup> Bakosh, Laura S., Jutta M. Tobias Mortlock, Dawn Querstret, and Linda Morison. 2018. "Audio-Guided Mindfulness Training in Schools and Its Effect on Academic Attainment: Contributing to Theory and Practice." *Learning and Instruction* 58 (December): 34-41. <https://doi.org/10.1016/j.learninstruc.2018.04.012>.

<sup>4</sup> Bellinger, David B., Marci S. DeCaro, and Patricia A.S. Ralston. 2015. "Mindfulness, Anxiety, and High-Stakes Mathematics Performance in the Laboratory and Classroom." *Consciousness and Cognition* 37 (December): 123-32. <https://doi.org/10.1016/j.concog.2015.09.001>.

<sup>5</sup> Fronsdaal, G. 2008. *The Issue at Hand: Essays on Buddhist Mindfulness Practice*. 4th ed.

“The historical, conceptual and praxiological roots of contemporary mindfulness are located firmly within Buddhism.” The word mindfulness has had a meaning in English for centuries; however, it is derived from the Pali words *sati* and *vipassana*. *Sati* implies awareness, attention, and alertness in the Indian Buddhist tradition and *vipassana* means “insight cultivated by meditation”. Similar mindfulness techniques can be found in Tibetan Buddhism and in the Japanese practice of *zazen*. In the traditional Buddhist view, mindfulness is fundamental to the goal of elimination of human suffering.<sup>6</sup> Each of these three practices influence what we know as mindfulness today.

In Asian Buddhist cultures, historically the general population did not practice meditation; it was practiced by monks and nuns “seeking the path to enlightenment.” As trade with Asia increased, the Buddhist teaching of mindfulness became of interest to Westerners learning through pamphlets, books, and journals. In the 1960s, meditation hit the United States when reforms in immigration policy allowed for hundreds of thousands of people from Asia to emigrate. Courses on Buddhism were popping up throughout the country. Buddhist monk, Thich Nhat Hanh was exiled from Vietnam and gained prominence as a promoter of mindfulness and meditation in the 1960s.<sup>7</sup> In his book, *Happy Teachers Change the World*, co-authored by Katherine Weare he discusses the benefits of bringing mindfulness into the schoolhouse.

Thich Nhat Hanh’s belief is that while mindfulness is beneficial in an educational setting, it should not be taught as a tool but as a path. Along the path, we may touch happiness, peace and well-being.

In a talk to teachers in 2014, Thich Nhat Hanh noted:

“Administrators may be attracted to mindfulness because they think it will improve academic performance and prevent teachers from burning out. But the practice of mindfulness can do much more. The practice of right mindfulness can help both teachers and students suffer less; they will be able to improve communication and create a learning environment that is more compassionate and understanding. Students can learn very important things, such as how to handle strong emotions, how to take care of anger, how to relax and release tension, how to restore communications and reconcile with others. What is the use of learning if that learning doesn’t bring you happiness? The practice of right mindfulness can bring about a deep change both in the classroom and in the wider education system, so we can educate people in such a way to be truly happy. If,

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<sup>6</sup> McCaw, Christopher T. 2019. “Mindfulness ‘Thick’ and ‘Thin’— a Critical Review of the Uses of Mindfulness in Education.” *Oxford Review of Education*, October, 1–22. <https://doi.org/10.1080/03054985.2019.1667759>.

<sup>7</sup> “The Mindfulness Movement: How a Buddhist Practice Evolved into a Scientific Approach to Life – Matthew Nisbet.” Matthew Nisbet. May 24, 2017. <https://web.northeastern.edu/matthewnisbet/2017/05/24/the-mindfulness-movement-how-a-buddhist-practice-evolved-into-a-scientific-approach-to-life/>.

while doing so, the students can learn more easily and quickly and educators can avoid burning out, that is also wonderful.”<sup>8</sup>

It has been acknowledged that mindfulness has been derived from a religious context however, “good, clean, secular credentials are a necessity to participate successfully in the institutional and discursive landscape of contemporary education.”<sup>9</sup> In education, the potential of mindfulness’ ability to increase attention and awareness is the draw to include it into the classroom. It is also believed that mindfulness could help counteract the increasing tendency of students to be distracted by social media.<sup>10</sup> “Mindfulness improves the emotional response to anxiety-producing testing situations, freeing working memory resources, and leading individuals to perform at a higher level on academic exams.”<sup>11</sup>

If we look specifically at the influence mindfulness has on mathematics education we learn that there is an increase in engagement in instruction and the number of problems solved correctly.<sup>12</sup> Cavanagh looked at timed mathematics tasks in people with math anxiety. Preliminary evidence suggested that starting class with mindful activities can bring about

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<sup>8</sup> Nhat Hanh, Thich. 2014. Review of *Dharma Talk*. presented at the 21-Day Retreat in Plum Village, France, June 15.

<sup>9</sup> McCaw, Christopher T. 2019. “Mindfulness ‘Thick’ and ‘Thin’— a Critical Review of the Uses of Mindfulness in Education.” *Oxford Review of Education*, October, 1–22. <https://doi.org/10.1080/03054985.2019.1667759>.

<sup>10</sup> Bakosh, Laura S., Jutta M. Tobias Mortlock, Dawn Querstret, and Linda Morison. 2018. “Audio-Guided Mindfulness Training in Schools and Its Effect on Academic Attainment: Contributing to Theory and Practice.” *Learning and Instruction* 58 (December): 34–41. <https://doi.org/10.1016/j.learninstruc.2018.04.012>.

<sup>11</sup> Bellinger, David B., Marci S. DeCaro, and Patricia A.S. Ralston. 2015. “Mindfulness, Anxiety, and High-Stakes Mathematics Performance in the Laboratory and Classroom.” *Consciousness and Cognition* 37 (December): 123–32. <https://doi.org/10.1016/j.concog.2015.09.001>.

<sup>12</sup> Singh, Nirbhay N., Giulio E. Lancioni, Bryan T. Karazsia, Joshua C. Felver, Rachel E. Myers, and Kristen Nugent. 2015. “Effects of Samatha Meditation on Active Academic Engagement and Math Performance of Students with Attention Deficit/Hyperactivity Disorder.” *Mindfulness* 7 (1): 68–75. <https://doi.org/10.1007/s12671-015-0424-5>.

emotional and cognitive benefits.<sup>13</sup> with the high-stakes conditions.<sup>14</sup> “Math anxiety presents an obstacle to learning and persisting” to many students. It has been found that with consistent meditation students feel less and anxious when it comes to being in the math classroom.<sup>15</sup>

## **Instructional Implementation**

Depending on the curriculum required to teach based on your state’s math standards and your school’s preferences you may be able to add activities or you might have to skip some activities from this unit.

### Teaching Strategies

I use many teaching strategies in my classroom, for the purpose of this curriculum unit I will be highlighting the most used for the activities included. Some of the teaching strategies that I will be focusing on for this curriculum unit are visualization, cooperative learning, and inquiry based instruction. Visualization is relating what we are doing in class to a real world context, in this case we will be visualizing during meditation, “seeing” our chest move up and down when we breathe. Cooperative learning is working through activities as a small group or whole class. The desks in my room are typically in groups to promote discussion and collaboration because some students may feel self-conscious due to the novelty of mediation, I will begin by separating the desks so the students will have more difficulty watching one another. I use inquiry-based instruction as often as possible. In inquiry-based instruction, thought provoking questions are asked which lead and inspire students to think for themselves and to become independent learners always wanting to know more. Mindfulness is a very personal practice, students will learn to think independently and learn which method of mindfulness works best for them. After introducing different kinds of meditation, students will have a choice to decide which works best for them as we continue our practice throughout the year. I also use technology every day in my classes. Even before virtual learning, technology was an essential part of my classroom. Our school is 1 to 1 with chromebooks and each child is assigned a chromebook for the year that they can take home. We also provide students without internet access hotspots so they can complete any schoolwork at home. My entire Math 1 curriculum is entirely online. With the exception of

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<sup>13</sup> Cavanagh, Sarah R., James M. Lang, Jeffrey L. Birk, Carl E. Fulwiler, and Heather L. Urry. 2019. “A Multicourse, Multisemester Investigation of the Impact of Cognitive Reappraisal and Mindfulness Instruction on Short- and Long-Term Learning in the College Classroom.” *Scholarship of Teaching and Learning in Psychology*, December. <https://doi.org/10.1037/stl0000174>.

<sup>14</sup> Bellinger, David B., Marci S. DeCaro, and Patricia A.S. Ralston. 2015. “Mindfulness, Anxiety, and High-Stakes Mathematics Performance in the Laboratory and Classroom.” *Consciousness and Cognition* 37 (December): 123–32. <https://doi.org/10.1016/j.concog.2015.09.001>.

<sup>15</sup> Samuel, Tashana S., and Jared Warner. 2019. “‘I Can Math!’: Reducing Math Anxiety and Increasing Math Self-Efficacy Using a Mindfulness and Growth Mindset-Based Intervention in First-Year Students.” *Community College Journal of Research and Practice*, September, 1–18. <https://doi.org/10.1080/10668926.2019.1666063>

when my students take notes in class, every activity/ assignment we do is online. For this unit, I will be using the computers less than I typically do but I will still be incorporating them into the curriculum unit. Movement will also be used as a teaching strategy in this unit. My students are normally in their seats for the entire class period however, I notice how much they want to move. For this curriculum unit I will incorporate movement into my lessons so that students have an opportunity to release some of the energy they hold in all day while sitting in their desks.

## Lessons/Activities

### *Mindful Attention Awareness*

Students will be given, and take, a survey that assess mindfulness. This survey will be given at the beginning of our journey with mindfulness and at the end as a way for students to see how mindful they've become over time, with practice. The survey can be found in [Appendix 2](#)

### *Take 5*

In this activity, the activity I will begin our meditation practice with, students will learn to focus on their breath. Through this activity students will understand to use the breath as a type of centering and re-focus for themselves. Students will need to be in a seated position, either in their chair or on the floor. Students will be instructed to close their eyes or soften their gaze. I will then guide them through five deep breaths. When finished I will encourage students to reflect in their journal.

### *Article*

Students will read the article "Should Schools Teach Mindfulness?" from the New York Times and answer the questions at the end of the article. A worksheet with the questions can be found in [Appendix 3](#).

### *Journaling*

Every time we meditate in class, I will ask that students journal. Prior to their meditation students will take their heart rate; we will count our beats for one minute. Students will record this in their journal with the date. After we meditate, students will again record their heart rate for one minute. This data will be used for an activity that we will be completing at a later date. In addition to recording their heart rates, students will journal about how they feel before, during, and after their meditation time.

### *10 Mindful Movements*

This activity is taken from Happy Teachers Change the World and is used to enhance mind-body connection, cultivate awareness, focus, and attention here and now through movement, decrease stress and anxiety, and increase calm, relaxation, and happiness. For our mindful movements I will ask students to spread out and make sure there is enough distance between them that they won't hit each other as they move. I will also explain to students that they are to move slow and relaxed, not to strain themselves. They should stand with their feet planted on the ground, shoulder width apart with their knees soft, a slight bend. Students will be reminded to coordinate their breathing with each movement. The ten movements we will use are:

1. Arm raises- start with back straight, arms at sides, aware of breath. Breathing in, slowly raise your arms straight out in front to shoulder level. Breathing out, lower your arms to your sides. Repeat two to three times.
2. Stretching the arms, touch the sky- start with back straight, arms at sides, aware of the breath. Breathing in, raise your arms to reach toward the sky. Breathing out, lower your arms to your sides. Repeat two to three times.
3. Opening the arms, arms unfolding- start with fingers touching shoulders, elbows pointed out to the side. Breathing in, open your arms out to each side, palms up. Breathing out, fold your arms in to touch your shoulders again. Repeat two to three times.
4. Circling the arms- start with palms joined in front, arms straight and down. Breathing in, raise your arms in a circle up above your head. Breathing out, circle your arms behind you, down and back, forward together in front. Repeat two to three times, then reverse direction.
5. Circling at the waist- start with hands on hips, legs straight but not locked, bend forward at the waist. Breathing in, circle the upper body to the left and back. Breathing out, complete the circle to the front. Repeat two to three times, then reverse directions.
6. Stretching the body- bend at the waist to touch the ground; relax the neck. Breathing in, come up and reach your arms toward the sky. Breathing out, bend down at the waist to touch the earth. Repeat two to three times.
7. Squats- start with hands on hips, heels together, feet in a V. Breathing in, rise up on the toes, heels still together. Breathing out, stay on the toes and bend the knees to come down, back straight. Repeat two to three times.
8. Stretching the legs- start with hands on hips and shift your weight to the left foot. Breathing in, lift your right thigh, bend the knee, toes pointed to the ground. Breathing out, stretch your right leg out in front, toes pointed forward. Breathing in, bend your knee back toward your body, toes pointed to the ground. Breathing out, lower your right foot back down to the ground. Repeat two to three times, then change legs and repeat.
9. Circling the legs- start with hands on hips and shift your weight to the left foot. Breathing in, lift your right leg, point it straight out in front, and circle to the side. Breathing out, circle your foot around behind your body, back in and forward. Breathing in and out, circle your foot back the other way to return to the starting position. Make two or three more circles with the right leg, then change legs and repeat.
10. Side lunge with arm stretch- start with the right foot stepping to the side, turn out 90 degrees, left hand on hips. Breathing in, bend your right knee, bringing your weight over the right foot, while stretching your right hand out and up to your left. Look up at your raised hand. Breathing out, straighten the knee, lower your right hand back down to your side. Repeat two to three times, then change legs and repeat.
11. End – stand still, feet parallel, shoulder width apart. Breathe three times and allow your body to relax. Thank students for participating in the activity.

When finished, encourage students to reflect in their journal. Examples of journal prompts are:

- How do I feel right now?
- How easy or difficult did I find it?
- How much did my mind wander? If I noticed it wander, was I able to bring it back to my body?
- Did I notice any specific parts of my body that held a lot of tension?



## *Mantras*

Before each assessment (test or quiz) students will choose a mantra to repeat. These mantras will also be taped to their desks to be used as needed throughout the school year. The mantras I supply to students can be found online at <https://www.sclhealth.org/blog/2019/09/16-mantras-to-start-the-day-off-right/>.

- “My mind is brilliant. My body is healthy. My spirit is tranquil.”
- “I create my own path and walk it with joy.”
- “My positive thoughts guide me to new heights.”
- “I am conquering my fears and becoming stronger each day.”
- “I will have a good day, because it’s my choice.”
- “I am not afraid to be wrong.”
- “My potential is limitless, and I choose where to spend my energy.”
- “While I support others, I also ask for help when needed.”
- “I surrender to the flow and have faith in the ultimate good.”
- “I will speak with confidence and self-assurance.”
- “My commitment to myself is unbreakable.”

## *Finger Labyrinth*

For this activity, I will introduce to students what a labyrinth is and show pictures of what they look like. I will explain the steps to complete the labyrinth that I found on <https://educationsvoice.wordpress.com/2016/03/26/mindfulness-in-the-classroom-finger-labyrinth-meditation/>. Each student will have a paper labyrinth taped to their desks that they can trace as I guide them through the labyrinth. I will guide students through this activity every Monday as we start our week and will leave the labyrinth’s taped to students desks so that they can use the finger labyrinth as needed throughout the school year.

## *Mindful Eating*

This activity is taken from *Happy Teachers Change the World* and is used to become mindful of what and how we eat, develop awareness of habit energies around food, eating, and consumption, and to develop a sense of gratitude through awareness of where food comes from. To introduce mindful eating supply each student with a tangerine. Instruct students not to start eating, we will eat together as a class. Remind students that while this activity is taking place that we will practice in silence. Choose and read a Food Contemplation from the list below and then reflect on the elements of the tangerine that brought the tangerine into the classroom, rain, soil, sun, etc. Guide students through the steps of mindful eating:

1. Look deeply- look at the tangerine as if you have never seen one before. Notice color, texture, shape, reflection, etc. Notice the difference between one side and the other. Be aware of reactions in the body; anticipation, salivation, aversion.
2. Smell- notice where you sense: nostrils, palate, throat?
3. Touch and peel – notice how peeling the tangerine feels; examine the peel. Hold it to your ear while peeling to hear the sound of the peel tearing. Take off one segment.
4. Place in your mouth and eat- place a segment on your tongue; try not to chew or swallow it. Notice how your mouth responds: salivation, urge to chew. Roll the segment around

in your mouth – notice the texture, gently bite, notice the flavor, chew, and swallow; bring full awareness to each action.

5. After eating- sit and breathe; experience the aftermath of taste – notice the impulse to eat the next piece.
6. End- eat the rest of the tangerine. Sit quietly, in touch with the breath, with gratitude.

When finished, encourage students to reflect in their journal. Examples of journal prompts are:

- What was my experience at different points in the process, in mind and body?
- Was it different to how I usually eat? In what ways?
- How did it feel to contemplate where the food has come from? Gratitude, connection?
- How was it to eat in silence?
- How was eating with other people in this way?

Six Food Contemplations for Children:

1. This food is the gift of the whole universe: the earth, the sky, the rain, and the sun.
2. We thank all the people who have brought this food to us – the farmers, the people who work in the shops, and the cooks.
3. We only put on our plate as much food as we can eat. We chew the food slowly so that we can enjoy it.
4. We eat in a way that nurtures our compassion, protects other species, and the environment, and heals and preserves our precious planet.
5. This food gives us energy to practice being more loving and understanding.
6. We eat this food in order to be healthy and happy and to love each other.

### *Mandala Coloring Pages*

Mandala coloring pages will not be an activity that I take time out of class to complete, however I will introduce them to students. Mandalas will provide them for students who complete their classwork or tests and quizzes early as a way to relax. Mandala coloring pages can be found online, my favorite pages can be found at <https://mondaymandala.com/m>.

### Assessment

#### *Graphing Presentations*

Students will create a presentation with five graphs of their heart rate before and after mediation. They will be required to make one graph from their first day of mediation, one graph from their last day (a week before due date) of mediation and three other dates of their choosing that they recorded their heart rate. They will be required to find the slope of each graph and explain whether their slope is positive, negative, zero, or undefined. They will also need to create a liner equation that could represent their graph. Along with this activity, students will be asked to write a one page reflection about their experience with mindfulness, which mindfulness activity was their favorite and why, which mindfulness activity was their least favorite and why, and how practicing mindfulness made them feel and if they believe developing a mindful practice helped improve their ability in math. Students will then present their graphs and a summary of their reflections to the class.

## **Appendix 1: Teaching Standards**

**NC.M1.A-SSE.1** Interpret expressions that represent a quantity in terms of its context.

**NC.M1.A-SSE.1a** Identify and interpret parts of a linear, exponential or quadratic expression including terms, factors, coefficients, and exponents.

**NC.M1.A-SSE.1b** Interpret a linear, exponential, or quadratic expression made of multiple parts as a combination of entities to give meaning to an expression.

**NC.M1.A-CED.1** Create equations and inequalities in one variable that represent linear, exponential, and quadratic relationships and use them to solve problems.

**NC.M1.F-IF.4** Interpret key features of graphs, tables, and verbal descriptions in context to describe functions that arise in applications relating two quantities, including: intercepts; intervals where the function is increasing, decreasing, positive, or negative; and maximums and minimums.

**NC.M1.F-IF.6** Calculate and interpret the average rate of change over a specified interval for a function presented numerically, graphically, and/or symbolically.

## Appendix 2: Mindful Attention Awareness Scale

### Day-to-Day Experiences Instructions:

Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

| 1             | 2               | 3                   | 4                     | 5                 | 6            |
|---------------|-----------------|---------------------|-----------------------|-------------------|--------------|
| Almost Always | Very Frequently | Somewhat Frequently | Somewhat Infrequently | Very Infrequently | Almost Never |

|                                                                                                              |   |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| I could be experiencing some emotion and not be conscious of it until some time later.                       | 1 | 2 | 3 | 4 | 5 | 6 |
| I break or spill things because of carelessness, not paying attention, or thinking of something else.        | 1 | 2 | 3 | 4 | 5 | 6 |
| I find it difficult to stay focused on what's happening in the present.                                      | 1 | 2 | 3 | 4 | 5 | 6 |
| I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.   | 1 | 2 | 3 | 4 | 5 | 6 |
| I tend not to notice feelings of physical tension or discomfort until they really grab my attention.         | 1 | 2 | 3 | 4 | 5 | 6 |
| I forget a person's name almost as soon as I've been told it for the first time                              | 1 | 2 | 3 | 4 | 5 | 6 |
| It seems I am "running on automatic," without much awareness of what I'm doing                               | 1 | 2 | 3 | 4 | 5 | 6 |
| I rush through activities without being really attentive to them.                                            | 1 | 2 | 3 | 4 | 5 | 6 |
| I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there. | 1 | 2 | 3 | 4 | 5 | 6 |
| I do jobs or tasks automatically, without being aware of what I'm doing.                                     | 1 | 2 | 3 | 4 | 5 | 6 |
| I find myself listening to someone with one ear, doing something else at the same time.                      | 1 | 2 | 3 | 4 | 5 | 6 |
| I drive places on 'automatic pilot' and then wonder why I went there.                                        | 1 | 2 | 3 | 4 | 5 | 6 |

|                                                        |   |   |   |   |   |   |
|--------------------------------------------------------|---|---|---|---|---|---|
| I find myself preoccupied with the future or the past. | 1 | 2 | 3 | 4 | 5 | 6 |
| I find myself doing things without paying attention.   | 1 | 2 | 3 | 4 | 5 | 6 |
| I snack without being aware that I'm eating.           | 1 | 2 | 3 | 4 | 5 | 6 |

MAAS Scoring: To score the scale, simply compute a mean of the 15 items. Higher scores reflect higher levels of dispositional mindfulness.

Taken from <https://ppc.sas.upenn.edu/resources/questionnaires-researchers/mindful-attention-awareness-scale>

### **Appendix 3: Should Schools Teach Mindfulness?**

1. Do you think every school should teach mindfulness? Should the practice become a core part of the curriculum, like math, science, language arts and social studies? Why or why not?
2. If your school offered a course on mindfulness, mental health or well-being, would you take it? If so, how do you think it would improve your life? If not, why not?
3. How comfortable do you feel talking about mental health? Do you feel that there is a stigma against mental health problems in your school or society at large? What role do you think schools could play in helping to lessen that stigma?
4. One criticism of the plan outlined in the article is that it doesn't do enough to prevent the stressors that students encounter in everyday life, like high-pressure exams and social media. What are the major stressors in your life? Do you think your school could do anything to prevent them? If so, what?
5. What other issues might there be with teaching mindfulness in schools? Over all, do you think the potential benefits of such a program outweigh the pitfalls? Why or why not?

Questions taken from the New York Times article "Should Schools Teach Mindfulness?"

<https://www.nytimes.com/2019/02/07/learning/should-schools-teach-mindfulness.html>

## Materials Needed

- One tangerine per student for eating meditation
- Cleaning supplies (paper towels, hand sanitizer, wet wipes) to clean up after eating meditation
- Graph paper

## Student Resources

Should Schools Teach Mindfulness?

Proulx, Natalie. 2019. "Should Schools Teach Mindfulness? (Published 2019)." *The New York Times*, February 7, 2019, sec. The Learning Network.

<https://www.nytimes.com/2019/02/07/learning/should-schools-teach-mindfulness.html>.

This article by the New York Times was intended to be read by students. It references an article in the New York Times by Iliana Magra "Schools in England Introduce a New Subject: Mindfulness about the mental health of students and how mindfulness could help with prevention.

Schools in England Introduce a New Subject: Mindfulness

Magra, Iliana. 2019. "Schools in England Introduce a New Subject: Mindfulness." *The New York Times*, February 4, 2019. <https://www.nytimes.com/2019/02/04/world/europe/uk-mindfulness-children-school.html>.

This article talks about how mindfulness can help lessen the severity of some of the mental health issues England is seeing in their school-aged students.

## Teacher Resources

Happy Teachers Change the World

Nhật Hạnh, Thích, and Katherine Weare. 2017. *Happy Teachers Change the World : A Guide for Cultivating Mindfulness in Education*. Berkeley: Parallax Press.

This book introduces mindfulness to teachers and give examples of how to incorporating it into the classroom. There are activities in the book that can be used along with teacher testimonies.

Mindfulness in the Classroom – Finger Labyrinth Meditation

<https://educationsvoice.wordpress.com/2016/03/26/mindfulness-in-the-classroom-finger-labyrinth-meditation/>

This website gives teachers a background on labyrinths and how to do a Finger Labyrinth Meditation and provides links to other activities that can be used for a labyrinth activity.

Should Schools Teach Mindfulness?

Proulx, Natalie. 2019. "Should Schools Teach Mindfulness? (Published 2019)." *The New York Times*, February 7, 2019, sec. The Learning Network.

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Schools in England Introduce a New Subject: Mindfulness

Magra, Iliana. 2019. “Schools in England Introduce a New Subject: Mindfulness.” *The New York Times*, February 4, 2019. <https://www.nytimes.com/2019/02/04/world/europe/uk-mindfulness-children-school.html>.

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Nhát Hạnh, Thích, and Katherine Weare. 2017. *Happy Teachers Change the World : A Guide for Cultivating Mindfulness in Education*. Berkeley: Parallax Press.

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