

Dose of Knowledge

High School

**Think It Through:
A choose-your-
own-path experience**



Educator Guide

Overview

Think It Through: A choose-your-own-path experience strives to educate about substance misuse and empower students to make good decisions for the well-being of themselves and their community. Students have the opportunity to step into the role of the main character, a high school student who is faced with everyday decisions that impact their health and well-being. This interactive animation allows students to make decisions and learn how their own unique choices can have positive or negative consequences. Each decision leads students through a personalized learning experience that will allow all students to make independent decisions about the path of the main character.

How the interactive animation works:

1. When students enter the interactive animation, they are introduced to the main character who makes the poor decision to stay up scrolling through social media instead of studying for a history test.
2. Users will be asked to help the main character choose next steps, with the ultimate goal of passing the history test. Each choice will take the user to a unique response for that choice.
3. As users advance through the interactive, they will make choices in three scenarios. In each circumstance, there will be three different options that a student can choose.
4. Each scenario will also introduce a new impact to the health of the main character. In the first scenario, the heart will explain how choices affect heart health. In the second scenario, the brain will chime in. In the last scenario, the lungs will present their own perspective.
5. A combination of the user choices will impact the outcome of how well the main character performs on the history test. Feedback from the decisions will be discussed at the end of the interactive.

Think It Through: A choose-your-own-path experience is tailored for students in grades 9–12, and its primary purpose is to encourage students to think critically and assess the consequences of their decisions. To maximize the educational value, educators should refer to the following guide before, during, and after using the interactive animation with students. This guide serves the dual purpose of deepening educator’s technical understanding of the interactive animation as well as offering discussion prompts to reinforce the significance of decision-making and reflection.

Additionally, this guide includes recommendations for follow-up activities, including resources that are aligned with national standards in mathematics, science, and health to further support and reinforce the learning objectives of the interactive animation.

Key learning objectives:

- **Decision Exploration:** The main character is faced with a range of decisions as well as the consequences that typical teenagers face regularly. Decisions include peer pressure, healthy food choices, and substance misuse and highlight positive and negative consequences of each.
- **Decision Making:** Students actively participate in the decisions made by the main character throughout the animation, making the experience immersive and personal. Each decision encourages critical thinking and problem-solving while recognizing decisions as good, bad, or neutral.
- **Decision Impact:** The animation incorporates the impact of decisions on health, specifically targeting the heart, brain, and lungs. Substance misuse, nutrition, and rest are all addressed throughout the interactive animation. Users are guided towards making a better decision, if a poor decision has been chosen. This helps to educate them and help reinforce that it is never too late to make positive changes.

National School Standards

Science

- MS-LS1-F: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
- HS-LS1.2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
- HS-LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.

National Health Standards

- Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.
 - 5.8.1 Identify circumstances that can help or hinder healthy decision making.
 - 5.8.4 Distinguish between healthy and unhealthy alternatives to health-related issues or problems.
 - 5.8.5 Predict the potential short-term impact of each alternative on self and others.
 - 5.8.6 Choose healthy alternatives over unhealthy alternatives when making a decision.
 - 5.8.7 Analyze the outcomes of a health-related decision.
 - 5.12.1 Examine barriers that can hinder healthy decision making.
 - 5.12.2 Determine the value of applying a thoughtful decision-making process in health-related situations.
 - 5.12.4 Generate alternatives to health-related issues or problems.

- 5.12.5 Predict the potential short-term and long-term impact of each alternative on self and others.
- 5.12.6 Defend the healthy choice when making decisions.
- 5.12.7 Evaluate the effectiveness of health-related decisions.
- Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
 - 7.8.1 Explain the importance of assuming responsibility for personal health behaviors.
 - 7.8.2 Demonstrate healthy practices and behaviors that will maintain or improve the health of self and others.
 - 7.8.3 Demonstrate behaviors that avoid or reduce health risks to self and others.
 - 7.12.1 Analyze the role of individual responsibility in enhancing health.
 - 7.12.2 Demonstrate a variety of healthy practices and behaviors that will maintain or improve the health of self and others.
 - 7.12.3 Demonstrate a variety of behaviors that avoid or reduce health risks to self and others.

National Council for Teachers of Mathematics Standards

- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.
- Develop and evaluate inferences and predictions that are based on data.

Background Information

In this interactive, users take on the role of a student who has a crucial history test on the horizon. The stakes are big for the high schooler as phone privileges will be lost if they do not pass the test. Users will actively make decisions to assist the student as they progress through the day leading up to the big test.

The main character starts the day with a regrettable choice, opting to stay up late scrolling through social media instead of studying for the history test. As the story unfolds, the student, regretting their decision to not study, is presented with three opportunities that could change the course of the day for better or worse.

Throughout the interactive experience, the user takes on the role of making decisions for the main character through three distinct scenarios influenced by the heart, brain, and lungs weighing in as “advisors.” Each scenario’s decision is influenced by the advice of the internal organs and the consequences of the decisions, both positive and negative, are dynamically shaped by the advice given by the heart, brain, and lungs. The user should evaluate each perspective before making the decision for the main character.

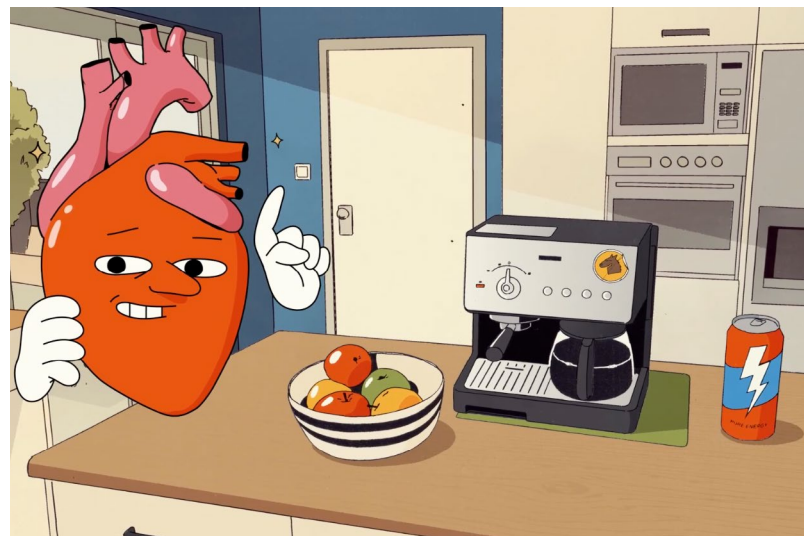
Before

Begin the lesson by discussing with students the time phenomenon of social media. Most will be able to share that they lose track of time and maybe even forget to do important tasks like studying due to the distraction.

- Pass out sticky notes/index cards and have students independently write one consequence of staying up late on social media when they have a big exam the next day.




- Put students in groups of four or five and have them create a continuum from least severe to most severe consequence through discussion.
- Each group will share their continuum. Circle back to the following questions:
 - How serious is this consequence?
 - How might this consequence affect overall physical health?
 - How might this consequence affect overall mental health?

During



Scene 1

In the initial scenario, students will encounter a character who, instead of studying for an exam, accidentally fell asleep while scrolling through social media. Upon awakening and realizing the urgency to pass the exam, they are presented with three choices to rejuvenate their energy to go to school and focus on studying. The Heart appears to help the main character weigh each choice before making the decision.

|  |  |  |
|---|--|--|
| Apples | Coffee | Energy Drinks |
| <p>Opting for apples is the best decision for the teenager. Apples provide a wholesome and invigorating energy boost for kickstarting the day. The Heart is content with this choice.</p> | <p>Coffee represents a more neutral choice for the teenager. The American Academy of Pediatrics suggests that adolescents 12 and older should limit their caffeine intake to no more than 100 mg daily (the equivalent of 2–3 12 oz cans of soda or one cup of brewed coffee).</p> | <p>Selecting energy drinks is the least favorable decision for the teenager. Energy drinks can contain a higher level of caffeine than is recommended for adolescents. According to the CDC, some dangers associated with energy drinks may include:</p> <ul style="list-style-type: none"> • Dehydration • Heart complications • Anxiety • Insomnia |
| <p>Discussion Prompts:</p> <p>Discuss the balance between convenience and health. Why is it important to prioritize health over quick fixes?</p> | <p>Discussion Prompts:</p> <p>While coffee is a common source of caffeine, discuss its potential benefits AND drawbacks. Include moderation and informed choices.</p> | <p>Discussion Prompts:</p> <p>Energy drinks may contain more than the recommended daily limit of caffeine. Discuss potential side effects associated with excessive caffeine consumption.</p> |

Discussion Prompts:

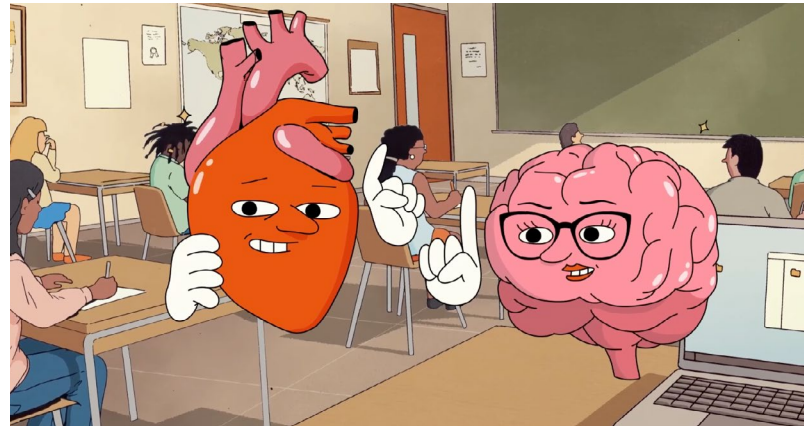
- Discuss the importance of decision-making in everyday life. How do the choices we make, even seemingly small ones, have consequences? Use this scenario as an example of the impact that even little choices have on our well-being. Ask students to predict the poor decision of scrolling instead of studying. (Students will not know the domino effect of poor decisions yet, but allow them to brainstorm.)
- Discuss the concept of balancing health considerations with convenience. What factors should students consider when choosing between healthy options (such as apples) and unhealthy options (such as energy drinks)?
- Discuss the topic of caffeine consumption. What are the potential benefits of caffeine? What are the drawbacks of caffeine? Discuss the importance of moderation, responsible caffeine intake, and the recommended dose of caffeine for adolescents. Ask students if they know how much caffeine is in an 8 oz serving of brewed coffee, energy drink, soda, or boba tea. Which beverages are within the range of the recommended caffeine intake for adolescents?
- Discuss the impact of short-term thinking for immediate effects against the impact of long-term well-being. How can students train themselves to make considerations for long-term consequences, especially in stressful situations?

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- Discuss whether knowledge of unhealthy choices impacts students' likelihood of making those choices. Are students aware of the potential long-term effects of caffeine and energy drinks?

Scene 2

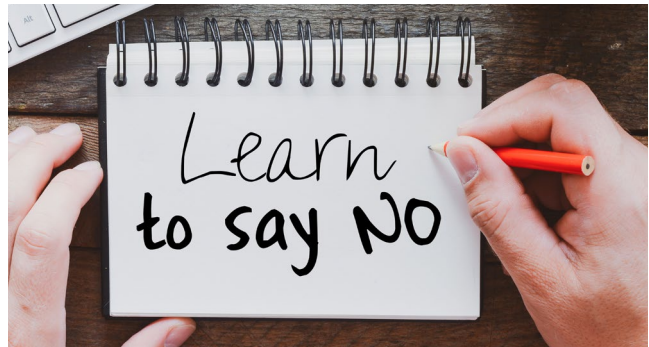
After users choose between an apple, coffee, or energy drink, the animation opens to a high school setting where the student is feeling tired and struggling to focus. The brain joins the heart in offering feedback to help the student be successful even if a poor choice was made in the first scenario. The student has a free period to prepare for the exam and weighs the options available:



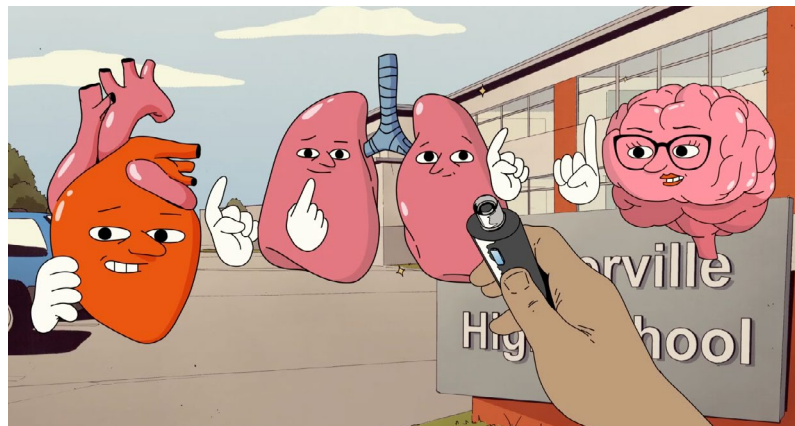
| Study Break | Nap | Unknown Substance |
|---|--|---|
| <p>A well-organized study session in a quiet place could give the student time to absorb some of the information necessary to do well on the exam. This is a good choice for the brain, which needs the information for the exam.</p> | <p>A power nap could give the brain time to consolidate and reorganize information learned previously. This choice gives the student an opportunity to recall learning from prior exposure to the test material.</p> | <p>Taking an unknown substance could have severe consequences. The effects and potential risks of taking an unknown substance may have both short-term and long-term impacts. Even with prescription medications, misusing or sharing with others is illegal and can be very dangerous.</p> |
| <p>Discussion Prompts:</p> <p>What challenges do students face when they are trying to study?</p> <p>What are strategies used to make a study session more effective?</p> | <p>Discussion Prompts:</p> <p>Discuss with students why a short 20–30 minute nap may be more beneficial than a 2–3 hour long nap.</p> | <p>Discussion Prompts:</p> <p>Discuss the importance of seeking help when faced with difficult decisions. Who can students reach out to for guidance?</p> |

Discussion Prompts:

- Ask students to discuss the importance of decision-making when it comes to studying and test preparation. What factors should the teen consider when making choices about how to focus on studying for the exam? A dedicated study time? Ways to maximize focus and retention of information?
- Explore the concept of stress management and its impact on studying. How can stress affect focus and the overall ability to study? What are some techniques to manage stress?
- How can short naps be helpful for someone who is tired? Why can a short nap of 20–30 minutes be better than a 2–3 hour nap? What are the potential benefits of rest on cognitive performance?
- How can peer pressure influence decision making? What strategies can the teen use to resist peer pressure in this situation?
 - Find more information and a digital learning bundle to help students develop and practice refusal skills and exit strategies to overcome peer pressure in the CVS Peer Pressure materials.
 - https://doseofknowledge.com/educators/?keyIndex=G6-8_1#6-8

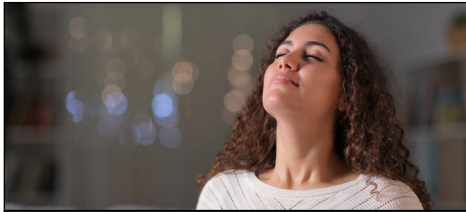
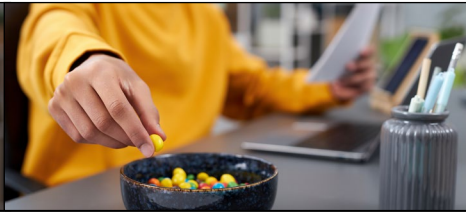



- Discuss the risks of taking unknown substances or medications that were not prescribed to you. What are the potential consequences?
 - Engage students in more information regarding prescription medication misuse with this digital exploration in the [CVS Dose of Knowledge STUDENT MODULE: Prescription Medication Misuse and the Adolescent Brain and Body](#).



Scene 3

It's Test Time! Outside of the classroom, the teen is nervous and knows the consequences of failing the exam. They do not want to lose their phone, so they consider the choices to calm their nerves. The lungs become active in the dilemma as vaping is introduced to the activity. The teen is presented with the following choices:

|  |  |  |
|--|---|--|
| Deep Breathing | Snack | Vaping |
| <p>This is the best choice for the student prior to the exam. Deep breathing increases oxygen flow through the blood and helps manage stress.</p> | <p>This choice gives students the option of snacks for a burst of energy, but there should be an emphasis on nutritious snacks for long-term health benefits.</p> | <p>Vaping will not improve focus or alertness and the chemicals in vapes can be addictive, making this the worst choice for the student.</p> |
| <p>Discussion Prompts:</p> <p>Explore the benefits of deep breathing for stress management. How does it calm nerves and improve focus? What are some other situations where deep breathing can be especially useful?</p> | <p>Discussion Prompts:</p> <p>Discuss the benefits of eating snacks such as popcorn that reduce the stress hormones cortisol and adrenaline. What are other snacks that reduce stress and increase focus?</p> | <p>Discussion Prompts:</p> <p>Focus on the harmful consequences of vaping. What are the potential risks associated with vaping, especially for young people?</p> |

Discussion Prompts:

- Discuss the concept of stress and why the character in the animation is feeling nervous. Why is it essential to have healthy coping mechanisms for managing stress?
- Ask students to reflect on times they have had to make choices to manage stress. Were those choices healthy or potentially harmful? What have they learned from those experiences?
- Utilize sources from the [CVS Health Foundation's Be Vape Free](#) website to leverage discussions around vaping and e-cigarettes. To reinforce the impacts of vaping on the brain, heart, and lungs, the [Be Vape Free: Just the Facts Virtual Field Trip](#) with accompanying Educator Guide is suggested.

After

Encourage students to revisit and repeat the *Think It Through: A choose-your-own-path experience* for different outcomes. Each time, the animation allows students to explore different scenarios, reinforces their understanding, and helps develop critical thinking skills. Here are some tips to facilitate the process:

- Explain to students that attempting the animation again leads to a learning opportunity to gain deeper understanding.
- Discuss how the animation offers multiple pathways leading to different outcomes simulating real-life decision making.
- Encourage students to focus on different goals for each attempt. For example:
 - Predicting the consequences of each choice
 - Exploring ethical dilemmas
 - Identifying support sources for each bad choice

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- Allow students to work in small groups or pairs and assign group roles to facilitate group discussions.
- Compose six-word stories for each outcome to offer advice to the main character.

Utilize the [CVS Dose of Knowledge Mental Health Digital Lesson Bundle](#) to explore the components of overall health, review strategies to support mental well-being, and create awareness of the effects of stress, anxiety, and depression on the brain and body. The [Video](#), [Educator Guide](#), and [Ready-To-Use Activity](#) will inform students about the role of prescription medications in treating anxiety while emphasizing the risks associated with their misuse.

Extension Activities

Create a Plan

Avoid the anxiety and stress that mindless scrolling created for the main character. Discuss strategies to “manage” social media usage. Work with students by suggesting some of the following ideas:

- Declutter the feed: Unfollow/Unsubscribe from accounts that are not providing value or that are a source of negativity.
- Prioritize tasks: Create a to-do list before pulling out your phones. Focus on completing important tasks before indulging in social media.
- Monitor current usage: Use the built-in screen time tracking features or install a third-party app to monitor how much time is spent on social media platforms.
- Set daily limits: Decide on a reasonable daily limit for social media usage. Start with an easy goal and gradually reduce time spent on social media.
- Set rewards: Establish a reward system for meeting goals or marking tasks off the to-do list.

- Find an accountability partner: Share the goals with a family member or friend. Report back to them daily.
- Learn from relapses: If you have a relapse and spend more time than planned on social media, learn from the experience, and recommit to the goals.
- Celebrate success: Create milestones for the positive changes due to reduced social media scrolling and celebrate your achievements!

Math Extension

Students will collect data on drink choices using the table below:

| Category | A. Name of Drink | B. Caffeine (in mg) | C. Sugars (grams) |
|----------------------------|------------------|---------------------|-------------------|
| Energy Drink | | | |
| Diet Soda | | | |
| Regular Soda | | | |
| Plain Coffee | | | |
| Coffee Shop Blended Coffee | | | |

Create a class scatterplot using the information.

- Give students small sticky notes. Students should add the name of their drinks (one per sticky note) and the number of mg of caffeine plus the amount of sugar in grams.
- On a whiteboard or poster paper (or a digital version in appendix), create a single quadrant graph.
- Label the y-axis with the title “Amount of Caffeine (mg)” and number from 0–200 mg in increments of 20. Label the x-axis with the title “Amount of Sugar (g)” and number from 0–100 in increments of 10.

- Students should place their sticky notes on the graph where their example drinks fall on the scatterplot.
- Extension: Determine the strength of a correlation between mg of caffeine and grams of sugar using the idea of “Pearson’s R”:
 - Many correlation calculators exist online. For example, data sets can be input at <https://www.socscistatistics.com/tests/pearson/default2.aspx>.
 - Hand calculations can also be completed if time permits.
 - Interpret the Correlation Coefficient:
 - The correlation coefficient (r) will range from -1 to 1.
 - A positive value of r (between 0 and 1) indicates a positive correlation, meaning that as one variable increases, the other tends to increase as well.
 - A negative value of r (between -1 and 0) indicates a negative correlation, meaning that as one variable increases, the other tends to decrease.
 - An r value of 0 indicates no linear correlation between the variables.
 - Assess the Strength of the Correlation:
 - The closer the absolute value of r is to 1, the stronger the correlation.
 - Values close to 0 suggest a weak or no linear correlation.
 - It is important to clarify that any correlation does not imply causation regardless of strength. For example, a high amount of caffeine is not caused by an increased amount of sugar.

Health Extension

Before an exam, engage students in a calming and immersive experience to help reduce anxiety and promote a state of mindfulness and relaxation. Try this 20–30 minute mindful task with students.

Materials Needed: coloring sheets or books, crayons, colored pencils, markers, calming sounds such as rain or the ocean, and a timer.

1. Encourage students to find a quiet place to sit so they will not feel disturbed during the activity. Cell phones and computers should not be with them. Turn on some calming sounds.
2. Place the coloring materials in front of them.
3. Students should take 2–3 minutes to calm their mind through breathing. Inhale deeply through the nose, hold for a few seconds, and exhale slowly through the mouth.
4. Choose a coloring sheet that is visually appealing like a mandala, geometric pattern, or intricate design.
5. Engage fully in the coloring process. Try not to let the mind wander to distractions. Give students 10–15 minutes. If students seem to struggle, gently remind them to focus on their task.
6. Bring the students back by asking them to slowly stand up and stretch. Take a few deep breaths as they prepare for their exam.

Biology Extension

Deep breathing and meditation impact the biology of stress through the modulation of the autonomic nervous system (ANS), specifically, the interaction between the sympathetic and parasympathetic branches. The sympathetic nervous system (SNS), responsible for the “fight or flight” response, releases stress hormones like cortisol which increases heart rate and blood pressure. The parasympathetic nervous system (PNS), responsible for the “rest and digest” response, promotes relaxation by slowing the

heart rate and lowering blood pressure as cortisol production is reduced.

Deep breathing stimulates the parasympathetic nervous system to shift the body from a stress-inducing state to a more relaxed presence. A deep breathing technique called diaphragmatic breathing engages the diaphragm, activating the vagus nerve, which extends from the brainstem through the neck and the thorax down to the abdomen.

Prepare for the diaphragmatic breathing activity by lowering the lights and allowing students to find a comfortable position to sit or lie down. Instruct students to close their eyes and quietly talk through a deep breathing exercise:

- Place one hand on their chest and another on their abdomen. This helps them become aware of their breathing and ensures that they are engaging their diaphragm.
- Inhale deeply and slowly through the nose, allowing the abdomen to expand. Focus on filling the lungs from the bottom to the top.
- As they breathe in, focus on feeling the diaphragm move downward, causing the abdomen to rise. The chest should only move slightly.
- Exhale slowly through the mouth, allowing the abdomen to fall.
- Continue the slow breathing pattern for a few minutes each day to engage the parasympathetic nervous system in relieving stress.

As deep breathing is involved in the parasympathetic nervous system, meditation to relieve stress focuses on structural changes in the brain, particularly areas associated with stress and emotional processing. The amygdala, a region involved in stress response, can undergo changes leading to reduced reactivity to stress with regular meditation practice. Additionally, regular meditation influences neurotransmitters such as serotonin and gamma-

aminobutyric acid (GABA), which both play key roles in mood regulation and stress response.

Model a guided meditation of your choosing with students. Apps like Calm or Meditation Studio give free options. Search for meditations that are around 15 minutes long and designed to reduce anxiety. An example would be the “Reduce Exam Anxiety” meditation on the Meditation Studio App.

Deep Breathing and Meditation Reflection Questions:

- Ask students to share times when they have had to consciously practice breathing. Perhaps a coach reminded them to breathe during a big game or before a performance. Help students make connections between stress in those situations and the stress or anxiety before an exam.
- Students often report an awareness of their heart beat or lung expansion during deep breathing exercises. Help students understand how focusing on the breathing redirected their thoughts in a healthy manner.
- Describe how your mind felt during the meditation. Were you able to achieve a quiet consciousness? If not, what do you think prevented you from relaxing your mind?
- What would be the benefits of resting the mind?
- The next day, discuss with students how they felt the rest of the day from an alertness perspective.

Scatter Plot – Math Extension

