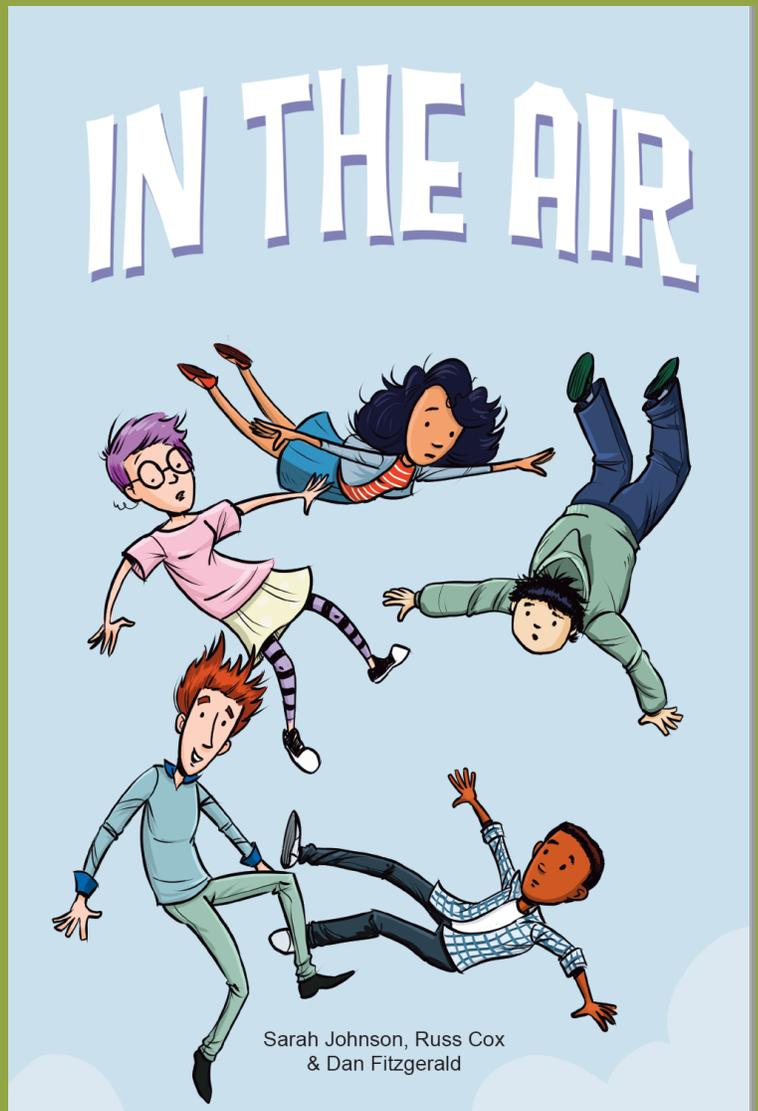


IN THE AIR GRAPHIC MEDICINE IMPLEMENTATION GUIDE

FOR FACILITATORS



New England (HHS Region 1)

PTTC

Prevention Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

Sarah Johnson, Russ Cox
& Dan Fitzgerald

ABOUT THE PROGRAM

- Type of Intervention: Universal
- Audience: Youth in Grades 6-12
- Setting: School or Community Based, available as an informal intervention in casual settings.
- Implementation: 3-5 weeks

ACKNOWLEDGEMENTS

Graphic Medicine as a tool is an evidence and research-based model for communicating health information.

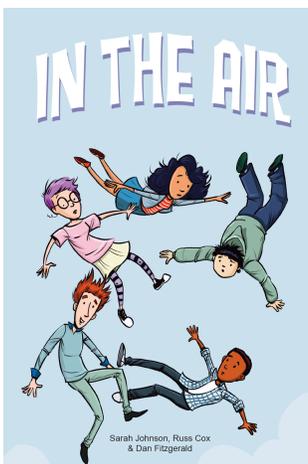
We know using graphics and illustrations along with text helps students understand, connect with, and remember information. Story telling is a known way to communicate ideas. We have created pre and post-surveys and a model to fidelity to evaluate this tool and these resources together specifically.

When communities use the graphic medicine alone, without the supporting resources, they are using evidence and research informed tools. We are welcoming facilitators to help us evaluate this tool specifically, while also getting data from their community that they can use in their work.

You can find more about the evidence and research behind graphic medicines in the Other Resources section.

Please be aware of state and federal guidance around confidentiality, disclosures, and other safety measures when working with minors around issues of substance use and misuse.

This resource is provided through the New England Prevention Technology Transfer Center (New England PTTC) a program funded through the Substance Abuse and Mental Health Services Administration's (SAMHSA). SAMHSA Cooperative Agreement #5H79SP081020-03



"Teens don't make choices about substance use in a vacuum. They are making choices about a lot of things, all at once, and so do these characters."

-Dan Fitzgerald, content expert

TABLE OF CONTENTS

HOW TO IMPLEMENT

Facilitator training

Fidelity

Pre and Post-Surveys

TIMELINES

Full length

Abbreviated length

WORKSHEETS

Conversations

How to use the worksheets

Example page

Chapter 1

Social

Choices

Risk and Protective

Chapter 2

Social

Choices

Risk and Protective

Chapter 3

Social

Choices

Risk and Protective

Chapter 4

Social

Choices

Risk and Protective

OTHER RESOURCES

Tips for implementation

Resources included in the graphic medicine

FACILITATOR TRAINING

A facilitator who implements *In the Air* as a curriculum should have training on **fostering conversation** around the content of the story. The story is designed to offer many inroads of conversation, some more subtle than others, over a variety of topics, including **substance misuse, dating and dating violence, change, grief, puberty, decision making, social pressures, choice and consequences, family values**, and more.

Facilitators should join a [live training](#), or watch a recorded video of a training available at the New England PTTC Youtube channel.

Key understandings for facilitators are:

Risk and Protective Factors

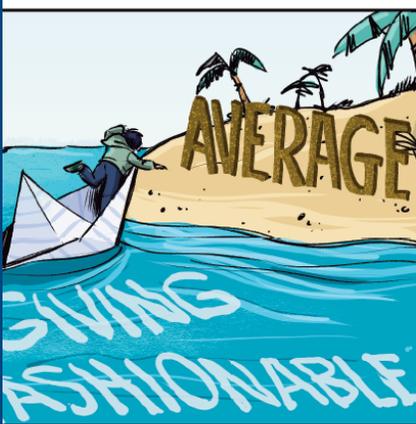
Social Aspects and Supports

Resilience

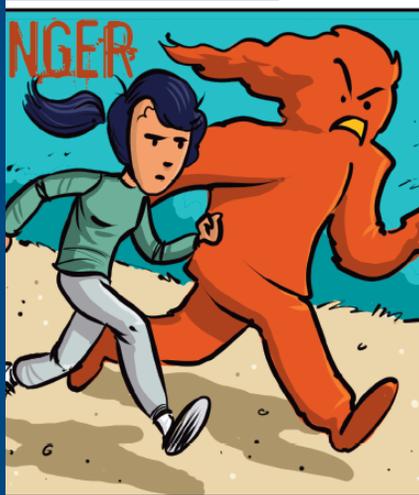
PACES (Positive and Adverse Childhood Experiences)

Substance Misuse Prevention science

Vaping Trends and Risks



FIDELITY



There are two ways which a facilitator could use *In the Air* as a conversational tool.

First, as a partner in the evidence-based process.

This method will assist to further the prevention science framework which the tool is built around. This method includes:

- Taking/Viewing the **Facilitator Training**
- Using the accompanying **worksheets**
- Engaging in **conversation** with young people in grades 7 through 12
- Administering a **pre and post** test to measure outcomes
- Following one of two program **timelines** as outlined in this facilitator's guide.

Second, as an engaged member of the community who wishes to use the graphic medicine as simply a tool to foster conversation. This method will assist in having convenient and accessible community conversations. This method will not be included in the evidence base through evaluation.

PRE AND POST SURVEYS

To assist in evaluating *In the Air*, please use the pre and post-surveys at the links below. Administer the pre survey to students before they begin reading *In the Air*. Administer the post-survey once the students have read the book and you have had conversations around each chapter. **You will need a facilitator code for students to put in their surveys** (e.g. RI001). Please contact the New England PTTC via sjohnson@adcareme.org to receive your code. The facilitator should take the facilitator survey when they finish with a group. This helps us understand unique groups, and provides the facilitator opportunities to give feedback, comments and recommendations:

Student Pre-Survey:

forms.office.com/r/BAPsqvqCXw



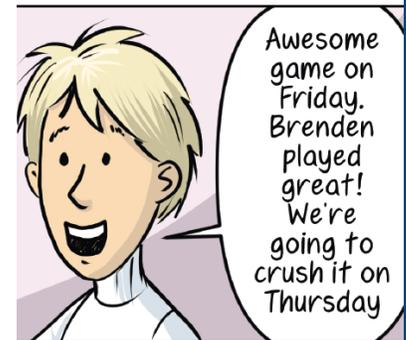
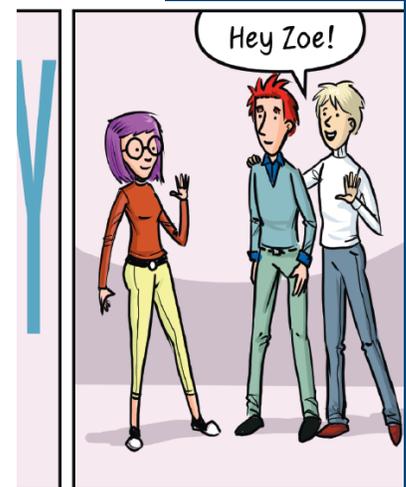
Student Post-Survey:

forms.office.com/r/UfBRHEMypz



Facilitator Survey

forms.office.com/r/cD79AQTa35



TIMELINES

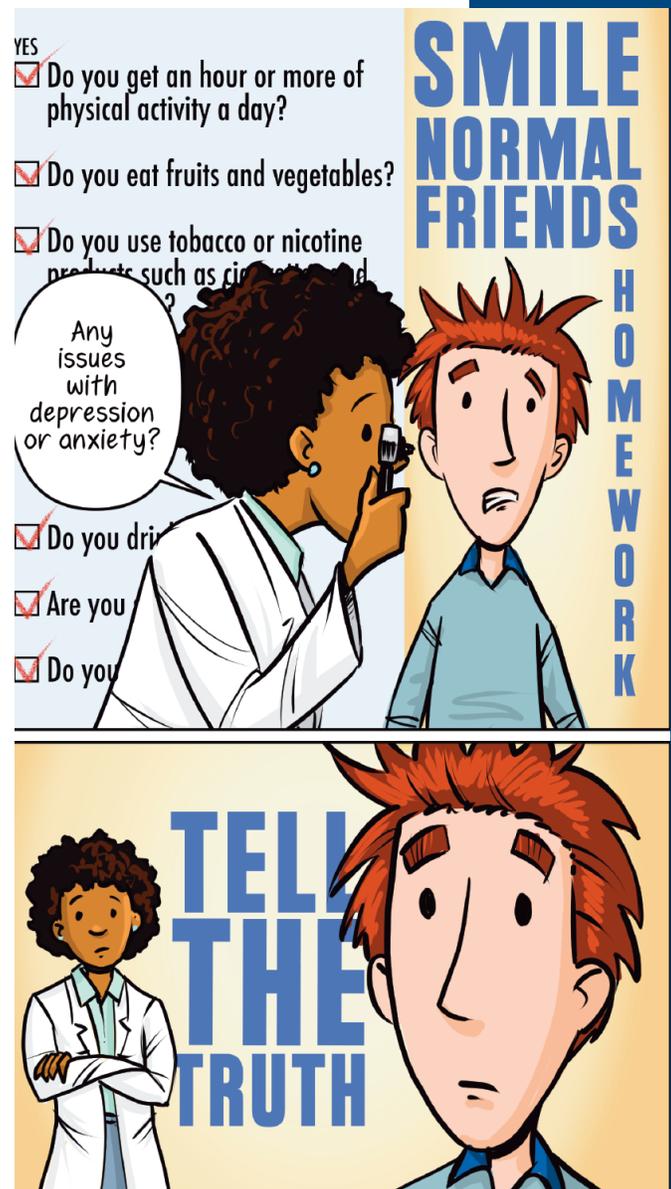
Effective prevention curriculums take place over time so students have an opportunity to **absorb the material and apply learning** in their lives, which is why we recommend this material be taught over 5 weeks, in one (1) to one and a half hour (1.5) sessions.

First, administer the **pre-survey**. Then, each week, have students **read and react to a chapter in the moment in conversations**. Next, have students reflect on the material in the **worksheets independently**. Before beginning a new section, have students **reflect over the material from the prior week**, as they have had time to complete the worksheets and do independent thinking. After the reading is complete, **allow for a final conversation of the material as a whole**. The five weeks to cover the material should be subsequent. Finally, administer the post-survey and complete the facilitator survey.

It's not always possible to space the material out over five sessions spanning five weeks. In this case, a shorter, three-week schedule may be followed, with sessions running from

one and a half (1.5) to two (2) hours. In this abbreviated schedule, facilitators should divide the novel into halves, covering one half at each session. The third session should be used to consider the novel as a whole and reflect back on all materials covered. The Pre, Post, and Facilitator surveys should still be administered for the abbreviated timeline.

See the following pages for the full-length and abbreviated timelines.



FULL-LENGTH

Week 1

- Administer the Student Pre-Survey
- Have students read "Chapter 1: Freshman Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 123 to discuss
- Assign Chapter 1 worksheets for completion prior to the next session

Week 2

- Give students an opportunity to reflect back on Chapter 1 assignments
- Have students read "Chapter 2: Sophomore Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 124 to discuss
- Assign Chapter 2 worksheets for completion prior to the next session

Week 3

- Give students an opportunity to reflect back on Chapter 2 assignments
- Have students read "Chapter 3: Junior Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 124 and 125 to discuss
- Assign Chapter 3 worksheets for completion prior to the next session

Week 4

- Give students an opportunity to reflect back on Chapter 3 assignments
- Have students read "Chapter 4: Senior Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 124 and 125 to discuss
- Assign Chapter 4 worksheets for completion prior to the next session

Follow up

- Give students an opportunity to reflect back on Chapter 4 assignments
- Give the students an opportunity to discuss their overall impressions
- Choose conversation questions from Page 125 of the full story to discuss
- Administer the student Post-Survey
- Facilitators should take the Facilitator Survey



1 - 1.5 hours per session

ABBREVIATED LENGTH

Week 1

- Administer the Student Pre-Survey
- Have students read "Chapter 1: Freshman Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 123 to discuss
- Have students read "Chapter 2: Sophomore Year:"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 124 to discuss
- Assign Chapter 1 and Chapter 2 worksheets for completion prior to the next session

Week 2

- Give students an opportunity to reflect back on Chapter 1 and 2 assignments
- Have students read "Chapter 3: Junior Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 124 and 125 to discuss
- Have students read "Chapter 4: Senior Year"
- Give the students an opportunity to discuss their first impressions
- Choose conversation questions from Page 124 and 125 to discuss
- Assign Chapter 3 and Chapter 4 worksheets for completion prior to the next session

Week 3

- Give students an opportunity to reflect on *In the Air* as a whole
- Give the students an opportunity to discuss their overall impressions
- Choose conversation questions from Page 125 of the full story to discuss
- Administer the student Post-Survey
- Facilitators should take the Facilitator Survey



1.5 - 2 hours per session

CONVERSATIONS

After the students have read the chapters, use the following questions to facilitate a conversation.

You may also let the students lead the conversation.

Chapter 1: Freshman Year

Protective/ Promotive/ Risk:

What risk-factors do the students face as they enter high school or start a new school? Are there other tricky situations students might experience as they enter high school that none of these characters experienced? What supports did the students have in their lives at this time? What types of family structures are represented? What about the environment of the school, or sports, were protective factors for the characters?

Choice and Consequences:

Sean makes choices around vaping. What/who around him might influence those choices? What things in Armina's world are her choices, and what things is she obligated to do? How do these obligations affect her, and how does she deal with that? Do any of the characters make choices that bring negative or unwanted consequences? What choices about self-care and health care do the characters make? Does the word "fixed" mean something different to Brenden at different times?

Social:

What connections do the characters make to other characters? How might the different characters care about reputation differently? What can you infer about the students based on what they do/say? Do you think any of these characters struggle more than others connecting to others, and why?



CONVERSATIONS

Consider the following questions and conversations during your reading:

Chapter 2: Sophomore Year

Protective/ Promotive/ Risk:

In what ways do the relationship between the characters and adults in their lives change? Several of the characters start exploring dating in this chapter. What are signs of healthy relationships, and what are signs of unhealthy relationships?

Choice and Consequences:

What are some goals of the characters, like Sean and Caleb? What makes accomplishing their goals harder, and what do they do to overcome difficulty? What choices do the characters, like Armina and Brenden's teammates, make around vaping? What influenced those choices? What consequences do you notice for the characters around those choices, and what consequences, good or bad, can you think of in real life?

Social:

What different types of communication do you see? Do you see characters navigating the best ways to communicate? What communication didn't work, or was hurtful, and why?

Chapter 3: Junior Year

Protective/ Promotive/ Risk:

This chapter deals with loss, grief, and tragedy. What supports do the students have? Are there any students with less support than others, and how do you think this affects them? How does the school support the students? How do the adults in the lives of the characters support their physical, mental, and emotional health? What other things are going on in the students' lives during this year that they balance with their grief?

Choice and Consequences:

What choices around substance use do the students make in this chapter? For Caleb, do his choices around substance use make things easier or harder for him?



CONVERSATIONS

Consider the following questions and conversations during your reading:

Chapter 3: Junior Year Continued

Social:

How does the loss of a student affect the characters differently? How does resiliency show in the different students? Sean is directly impacted by the loss of the student and by the car crash. How does this affect him? In what ways do people talk to him about the car crash? What expectations do people have on the characters, and how hard or easy is it to live up to them? What expectations do the characters have for themselves? What expectations does Brenden have about his team and his friends in this chapter, and how do they live up to reality?

Chapter 4: Senior Year

Protective/ Promotive/ Risk:

What supports do the adults in this chapter offer the characters? How are the characters encouraged or discouraged about the next chapter in their lives? How do the students support or not support each other's aspirations?

Choice and consequences:

How might the choices of the adults in the lives of these characters impact the choices of the characters, such as Caleb's mom? What worries the students about substance use?

Social:

How do the characters use what they have learned in high school? What traditions do you see in this chapter? Do any characters break from tradition or norms?

Consider the following questions for the story overall:

What choices do students make around substance use? What things happen around substance use that aren't really choices the characters are making? What generational factors may affect the students? What surprised you about the students in this story?



HOW TO USE THE WORKSHEETS

Each week, have students read and react to a chapter in the moment using the questions starting on page 123 of the graphic medicine. These questions are at the top of the worksheets to refresh the students memory of the conversation as they work independently. Give the students space to lead the conversation organically. Then, have students reflect on the material in the worksheets in their own time. (See timeline options on pages 6-8.)

Worksheets are designed to support independent thinking and reflection over the three main substance misuse prevention topics addressed. The worksheets are by chapter around social, choices, and risk & protective factors. (Pages 9-20).

Before beginning a new section, have students reflect over the material from the prior week, as they have had time to complete the worksheets and do independent thinking. Students are not required to turn in their worksheets, but facilitators may chose to review them.

After the book is complete, allow for a final conversation of the material. Resources for vaping cessation are available in the back of the Graphic Medicine, as well as in the resources section of this facilitator's guide. You may have some state, county, or local resources to provide as well.

There is an example page which may help students understand the questions and begin to formulate their own responses.

WORKSHEET EXAMPLES



CHAPTER 1: SOCIAL

What connections do the characters make to other characters?

How might the different characters care about reputation differently?

What can you infer about the students based on what they do/say?

Do you think any of these characters struggle more than others connecting, and why?

The people around us affect our lives in many ways. Think about what you read, the conversation you had around this chapter. Compare your experience with family, school, or friendships to at least one character you relate to in this chapter.

EXAMPLE:

Armina is angry with her parents about getting a divorce. She doesn't say anything to them about it, but she does try to keep up with school and her running. If it were me, I would have told my dad that I needed him to be more understanding that I couldn't do everything I used to do, because it is too much to do all the time. I think my dad would understand, and it would make it easier for me to maintain what I liked and not fight with my parents.

EXAMPLE:

Zoe relied on her friends and teammates a lot. Her team mate told her that she needed to use more deodorant in a nice, private way, and Sean helped her find her way to a new class. I rely on my friends for a lot of things, too. I don't know what I would do if I didn't have my best friends in my life!



CHAPTER 1: CHOICES

Sean makes choices around vaping. What around him might influence those choices?

What things in Armina's world are her choices, and what things is she obligated to do?

How do these obligations affect her, and how does she deal with that?

Do any of the characters make choices that bring negative or unwanted consequences?

What choices about self-care and health care do the characters make?

Does the word "fixed" mean something different to Brenden at different times?

We make choices all day, every day. Think about what you read, and the conversation you had around this chapter. Think about a choice one the characters made in this chapter. What would you do differently, and what might the outcome of your choice look like?



CHAPTER 1: RISKS & PROTECTIVE

What risk factors do the students face as they enter high school or start a new school?

Are there other tricky situations that students experience as they enter high school that none of these characters experienced?

What support did the students have in their lives at this time?

What types of family structures represented?

What about the environment of the school, or sports, were protective factors for the characters?

Making healthy choices can be easier or harder, depending on the circumstances in our lives. Think about what you read, and the conversation you had around this chapter. Write about how you connect to one of the characters in this chapter. What things were harder for them, and what things were easier for them that you can relate to?

EXAMPLE:

I connected with Caleb because he is new to the school, and he had to think about where he would fit in in a new school and all the other parts of being a freshman. When I moved schools, it was hard for me to find friends, too, and I had to think about being myself but also fitting in to a new place.

NAME:

//

DATE:



CHAPTER 1: SOCIAL

What connections do the characters make to other characters?

How might the different characters care about reputation differently?

What can you infer about the students based on what they do/say?

Do you think any of these characters struggle more than others connecting, and why?

The people around us affect our lives in many ways. Think about what you read, the conversation you had around this chapter. Compare your experience with family, school, or friendships to at least one character you relate to in this chapter.

NAME:

//

DATE:



CHAPTER 1: CHOICES

Sean makes choices around vaping. What around him might influence those choices?

What things in Armina's world are her choices, and what things is she obligated to do?

How do these obligations affect her, and how does she deal with that?

Do any of the characters make choices that bring negative or unwanted consequences?

What choices about self-care and health care do the characters make?

Does the word "fixed" mean something different to Brenden at different times?

We make choices all day, every day. Think about what you read, and the conversation you had around this chapter. Think about a choice one the characters made in this chapter. What would you do differently, and what might the outcome of your choice look like?

NAME:

//

DATE:



CHAPTER 1: RISKS & PROTECTIVE

What risk factors do the students face as they enter high school or start a new school?

Are there other tricky situations that students experience as they enter high school that none of these characters experienced?

What support did the students have in their lives at this time?

What types of family structures represented?

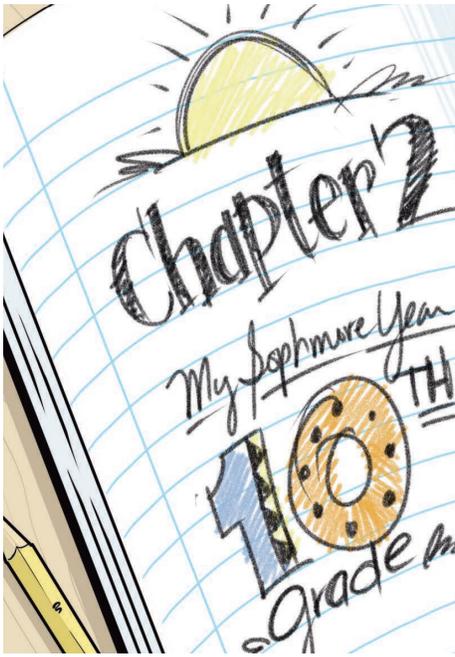
What about the environment of the school, or sports, were protective factors for the characters?

Making healthy choices can be easier or harder, depending on the circumstances in our lives. Think about what you read, and the conversation you had around this chapter. Write about how you connect to one of the characters in this chapter. What things were harder for them, and what things were easier for them that you can relate to?

NAME:

//

DATE:



CHAPTER 2: SOCIAL

What different types of communication do you see?

Do you see characters navigating the best ways to communicate?

What communication didn't work, or was hurtful, and why?

The people around us affect our lives in many ways. Think about what you read, the conversation you had around this chapter. Compare your experience with family, school, or friendships to at least one character you relate to in this chapter.

NAME:

//

DATE:



CHAPTER 2: CHOICES

What are some goals of the characters, like Sean and Caleb?

What makes accomplishing their goals harder, and what do they do to overcome difficulty?

What choices do the characters, like Armina and Brenden's teammates, make around vaping? What influenced those choices?

What consequences do you notice for the characters around those choices, and what consequences, good or bad, can you think of in real life?

We make choices all day, every day. Think about what you read, and the conversation you had around this chapter. Think about a choice one the characters made in this chapter. What would you do differently, and what might the outcome of your choice look like?

NAME:

//

DATE:



CHAPTER 2: RISKS & PROTECTIVE

In what ways do the relationship between the characters and adults in their lives change?

Several of the characters start exploring dating in this chapter. What were signs of healthy relationships, and what were signs of unhealthy relationships?

Making healthy choices can be easier or harder, depending on the circumstances in our lives. Think about what you read, and the conversation you had around this chapter. Write about how you connect to one of the characters in this chapter. What things were harder for them, and what things were easier for them that you can relate to?

NAME:

//

DATE:



CHAPTER 3: SOCIAL

How does the loss of a student affect the characters differently?

How does resiliency show in the different students? Sean is directly impacted by the loss of the student and by the car crash. How does this affect him?

In what ways do people talk to him about the car crash? What expectations do people have on the characters, and how hard or easy is it to live up to them?

What expectations do the characters have for themselves? What expectations does Brenden have about his team and his friends in this chapter, and how do they live up to reality?

The people around us affect our lives in many ways. Think about what you read, the conversation you had around this chapter. Compare your experience with family, school, or friendships to at least one character you relate to in this chapter.

NAME:

//

DATE:



CHAPTER 3: CHOICES

What choices around substance use do the students make in this chapter?

For Caleb, do his choices around substance use make things easier or harder for him?

We make choices all day, every day. Think about what you read, and the conversation you had around this chapter. Think about a choice one of the characters made in this chapter. What would you do differently, and what might the outcome of your choice look like?

NAME:

//

DATE:



CHAPTER 3: RISKS & PROTECTIVE

This chapter deals with loss, grief, and tragedy. What supports do the students have?

Are there any students with less support than others, and how do you think this affects them?

How does the school support the students?

How do the adults in the lives of the characters support their physical, mental, and emotional health?

What other things are going on in the students lives during this year that they have to balance with their grief?

Making healthy choices can be easier or harder, depending on the circumstances in our lives. Think about what you read, and the conversation you had around this chapter. Write about how you connect to one of the characters in this chapter. What things were harder for them, and what things were easier for them that you can relate to?

NAME:

//

DATE:



CHAPTER 4: SOCIAL

How do the characters use what they have learned in high school? What traditions do you see in this chapter?

Do any characters break from tradition?

The people around us affect our lives in many ways. Think about what you read, the conversation you had around this chapter. Compare your experience with family, school, or friendships to at least one character you relate to in this chapter.

NAME:

//

DATE:



CHAPTER 4: CHOICES

How might the choices of the adults in the lives of these characters impact the choices of the characters, such as Caleb's mom?

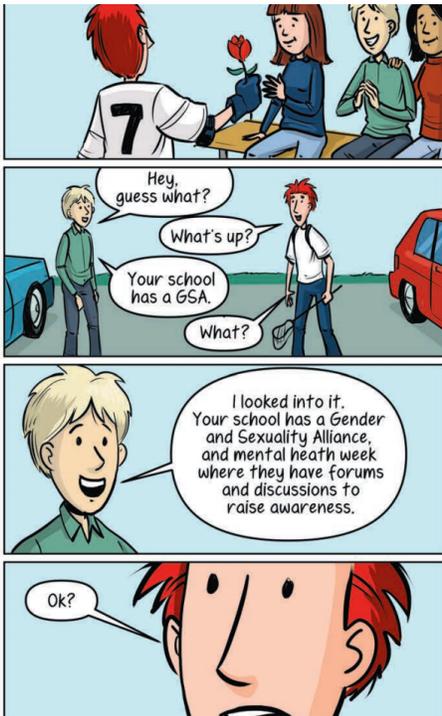
What worries the students about substance use?

We make choices all day, every day. Think about what you read, and the conversation you had around this chapter. Think about a choice one of the characters made in this chapter. What would you do differently, and what might the outcome of your choice look like?

NAME:

//

DATE:



CHAPTER 4: RISKS & PROTECTIVE

What supports do the adults in this chapter offer the characters?

How are the characters encouraged or discouraged about the next chapter in their lives?

How do the students support or not support each other's aspirations?

Making healthy choices can be easier or harder, depending on the circumstances in our lives. Think about what you read, and the conversation you had around this chapter. Write about how you connect to one of the characters in this chapter. What things were harder for them, and what things were easier for them that you can relate to?

OTHER RESOURCES



This section includes other resources which may be useful for facilitating the program. Much of the following information is printed into the back of each graphic medicine, so it is available to those using the graphic medicine as an informal tool to foster conversations. These are reprinted here in the facilitators guide for convenience and consistency.

The conversation-starting questions referred to in the timelines, which are printed into the book, are available in the implementation section as well as at the head of each worksheet page.

To request copies of *In the Air*, please visit our website here:

<https://pttcnetwork.org/centers/new-england-pttc/news/new-prevention-tool-air-graphic-medicine-download-preview-request>

TIPS

- **Fidelity to the program means letting the youth steer the conversation positively and productively. Having conversations that are youth lead helps youth feel like their opinions, experiences, and thoughts matter. This helps youth feel like they matter.**
- **If you're using this tool as a way to have a community conversation, try incorporating ways for students to be ambassadors of the conversation. Example: Have a "book chain," where students can keep the novel or pass it along to a friend they think would enjoy it, so they can discuss it from their perspective. Students can write their name in the back of the book in the "notes" section to see how far it goes! (This tip brought to you by students in Providence, RI)**
- **In your conversations, consider talking to students about perception of harm and perception of use among their peers.**
- **There are many themes other than substance use explored in *In the Air*. Students make choices about a lot of things, all at once, so talking about a variety of subjects can help students see adults as safe places to bring their questions about a variety of subjects.**
- **Give students the option not to hand in their worksheets. This will give them the freedom to reflect more openly. Give them the option to share what they wish to share from their reflections during the following session.**
- **Talking about resilience and building resiliency when facing many challenging choices at once is a strong substance use prevention method, and teens need to be resilient to make the best choices possible.**

VAPING RESOURCES

Vapes and e-cigarettes often include nicotine, THC, or other substances that can be addictive or make stopping use difficult. If you use vaping or e-cigarette products and you're thinking about quitting, there are resources that can help you take the next step.

Quit Resources:

- This Is Quitting (Truth Initiative)
 - The first-of-its-kind program to help young people quit vaping, This is Quitting has helped more than 250,000 youth and young adults on their journey to quit vaping. Learn more about how it works and the additional resources available for parents of teens who vape and for adults who want to quit.
 - Teens and young adults can join for free by texting **DITCHVAPE** to **88709**
 - TheTruth.com

Lung helpline and Tobacco Quitline:

- Talk to experts at the American Lung Association Lung HelpLine and Tobacco QuitLine. The service is free and they are there to help you. You can connect by calling 1-800-LUNGUSA (1-800-586-4872 and press 2), submitting a question or live chat when available.
- <https://www.lung.org/help-support/lung-helpline-and-tobacco-quitline>

Education:

- American Lung Association:
 - [What Teens Need to Know](http://www.lung.org) (www.lung.org)
 - [Alternative to Suspension Program](http://www.lung.org) (www.lung.org)
 - talkaboutvaping.org Get Your Head out of the Clouds
- Truth Initiative / truth Campaign
 - [The Truth about Vaping](http://www.thetruth.com) (www.thetruth.com)

CDC:

- [Electronic Cigarettes](http://www.cdc.gov/tobacco) (www.cdc.gov/tobacco)

OUR PROCESS

We chose graphic medicine as a medium to talk about vaping prevention because we know presenting ideas in a graphic format is helpful to the engagement, retention, and enjoyment of students. Graphic medicine combines those benefits with information about health and medicine. Substance misuse prevention falls under public and behavioral health, and primary prevention seeks to reach a wide variety of people, so graphic medicine is an effective tool for discussion around vaping prevention. This graphic medicine was created with two driving goals:

1: To be used as a tool for substance misuse prevention, specifically for vaping prevention.

2: To be read and enjoyed as relatable glimpses into the lives of five young people in New England.

To do this, it was vital to have a content expert on the team to guide the prevention messaging overall throughout the story, and to include youth voices from its conception to be sure the story would be something worth a teen's time to read.

The students wanted to see character progression and characters that don't always make the "right" choice. They wanted to see characters that made mistakes sometimes, and figured out ways to fix them or move past them. They wanted to see characters that didn't fall into gender, race, socioeconomic, and sexual stereotypes. They wanted to see characters at different stages in their lives.

Taking their lead, we set out to write the characters blind. Each chapter looks at a different year in high school, and each year bringing new themes. Under these themes, we created story lines for "Character 1," through "Character 5." We didn't assign gender, race, or names to the characters until we had created their story lines with the intention to remove some degree of internal bias of our team.

OUR PROCESS

Continued

The artist created character sketches of about 20 students, which were narrowed down to the five main characters in the story, which we then assigned to story lines. The stories were then presented to the steering committee of young people again for their approval, and then it was time to write.

Vaping Prevention is the focus of this story. The effects of vaping on a person's body, long-term outcomes, and overall health are not fully known. We have some good data, but our knowledge of vaping is growing all the time. To make this story a little more timeless and prevent putting into print a story that will be outdated before the characters within it make it to graduation, we chose to highlight risk and protective factors within the story that we know are associated with vaping and other substance use. Risk, protective, and promotive factors drive prevention work. We know that taking a universal approach to this story, as well as focusing on the social rather than scientific elements around vaping, we would be able to create a tool that can be used to drive conversations for a longer time, and hope to create a more lasting impact in the world of substance misuse prevention.

It's important to keep in mind that a person's risk or protective factors are not definitive in determining whether a person will misuse substances. Many other factors come into play, such as genetics, major life changes and disturbances, and resiliency. Your risk factors do not define you!

To learn more about risk and protective factors, go to the SAMHSA website at the link below:

<https://www.samhsa.gov/sites/default/files/20190718-samhsa-risk-protective-factors.pdf>

YOUTH DRIVEN

A team of 10 students from the Tobacco Free Rhode Island Youth Ambassadors helped inform the writing of this graphic medicine. The students identified a variety of themes they found readable and interesting, but the themes that carried over between genres and personal preference were:

- Relatability
- Anti-Stereotypes
- Fantasy + Reality
- Character Development
- Likeable characters that don't always make the "right" choice

Some elements of the story are drawn directly from the stories the group spoke to. Trying vaping to impress a boy, bathrooms in schools being a place to hide and vape, thinking vaping products are harmless because they smell good or don't have tobacco in them.

We also tackled issues the group felt needed to be addressed that don't have to do with vaping directly, but do affect a teen's life, including:

- Letting men and boys be vulnerable with their thoughts and feelings
- Getting stuck and getting help
- Being subtle but clear about substance misuse prevention
- How grief changes us and throws off our routines
- Connections between people

We wanted to create a story with prevention messages that teens could read and discuss, so the story had to be driven by teens to reach that goal.

The characters are named after the team of students who lead the creation of the story, with their permission.

PREVENTION IN PICTURES

Research Base

Josh Elder, founder and president of Reading With Pictures, sums up the strengths of comics as educational tools with his “Three E’s of Comics.”

Engagement: Comics impart meaning through the reader’s active engagement with written language and juxtaposed sequential images. Readers must actively make meaning from the interplay of text and images, as well as by filling in the gaps between panels.

Efficiency: The comic format conveys large amounts of information in a short time. This is especially effective for teaching content in the subject areas (math, science, social studies, etc.).

Effectiveness: Processing text and images together leads to better recall and transfer of learning. Neurological experiments have shown that we process text and images in different areas of the brain: known as the Dual-Coding Theory of Cognition. These experiments also indicate that pairing an image with text leads to increased memory retention for both. With comics, students not only learn the material faster, they learn it better.

In addition, **visuals support english as a second language:** “The students, primarily English-language learners, were able to make use of this medium [comics] in order to learn new reading practices. The teacher used the comics to teach multiple aspects of various reading processes...[this] demonstrates their use as instructional texts, because comics provide interesting and motivating material as well as visual support for literacy learning.”

Incorporating visual rhetoric into your curriculum supports students because the reading of both visuals and text together necessitates **inference skills** and a synthesis of a number of clues presented both on the page and as a pattern throughout the book. And, studies find that verbatim **recognition of information and test scores are higher with graphic novel texts** compared to traditional textbooks.

See www.graphicmedicine.org for more on the graphic medicine format.

RESEARCH BASE / SOURCES

Cohn, Neil, et al. "The Impact of Structure and Meaning on Sequential Image Comprehension."
[Http://Www.visuallanguagelab.com/](http://www.visuallanguagelab.com/),
www.visuallanguagelab.com/P/NC_pn&b_abstract.pdf.

Early Childhood." Northwestern Center for Talent Development, 13 Apr. 2017, www.ctd.northwestern.edu/blog/research-behind-graphic-novels-and-young-learners.

Hosler, Jay and Boomer, K. B. "Are Comic Books an Effective Way to Engage Nonmajors in Learning and Appreciating Science?" 2011.

Jun Liu. "Effect of Comic Strips on L2 Learners' Reading Comprehension." TESOL Quarterly, 2004.

Morrison, Leslie. "The Research Behind Graphic Novels and Young Learners." Northwestern Center for Talent Development, 13 Apr. 2017, www.ctd.northwestern.edu/blog/research-behind-graphic-novels-and-young-learners.

Ranker, Jason. "Using Comic Books as Read-Alouds: Insights on Reading Instruction From an English as a Second Language Classroom." *The Reading Teacher*, vol. 61, no. 4, 2007, pp. 296–305., doi:10.1598/rt.61.4.2.

CREATIVE TEAM

PRODUCTION : NEW ENGLAND PTTC

The New England Prevention Technology Transfer Center (PTTC), administered by AdCare Educational Institute of Maine, Inc., provides training and technical assistance services to the professional and volunteer prevention workforce within the New England states. The New England PTTC is developing a diverse program with multiple modes of training and instilling science into the practice of prevention, including this Graphic Medicine. This also includes collaboration with states to hold live, in-person trainings featuring the latest prevention science, but also multiple opportunities for distance learning to maximize the reach of technical assistance in the region. The New England PTTC also puts a focus on workforce development initiatives, to include a year long Mentorship Program and Fellowship Program. The New England PTTC serves as a hub of specialty expertise in providing training and technical assistance in the area of marijuana risk education and prevention.

Sarah Johnson, New England PTTC Training Project Coordinator, authored the story.

ARTIST : SMILING OTIS STUDIO

Russ Cox was raised by a pack of crazed hillbillies in the back woods of Tennessee. Without much in the way of modern conveniences, like a television set or running water, he spent his time drawing, whittling, and throwing dirt clods at his cousins. With the bulk of his life spent in Pennsylvania, he met his wife; became a graphic designer; played in punk, alternative, and surf bands; had two kids; and started his own illustration studio, Smiling Otis Studio (named after one of their very large cats). Russ creates his art the old school way using paper, pencil, gouache, and watercolor. Using traditional tools gives Russ an opportunity to explore and experiment. He also works digitally if deadlines are tight or the style is better suited for the project. Russ lives in Maine with his wife and four cats.

CREATIVE TEAM

CONTENT EXPERT : DANIEL FITZGERALD, MPH, ICPS

Daniel Fitzgerald, MPH, ICPS is the National Senior Manager of Advocacy for the American Lung Association and serves as the advocacy lead for the State of Rhode Island. Dan's educational background is in prevention science, social marketing, nonprofit management, and public health. Dan began his journey in substance use prevention and tobacco control at the age of 12 as a youth advocate in his community. Dan has worked at the state, local, and national levels with nonprofits and state and federal agencies working to address tobacco use as a public health and as a social justice issue. Recently, Dan was recognized for his impact in the world of tobacco control and received the 2019 C. Everette Koop Unsung Hero Award in honor of the late United States Surgeon General. In addition to Dan's role at the Lung Association, he serves as the Executive Director for the Chariho Youth Task Force which is the substance use prevention and mental health promotion coalition working in Charlestown, Hopkinton, and Richmond, RI. Dan played a pivotal role in editing the story creatively as well as for prevention content.

STEERING COMMITTEE : TOBACCO FREE RHODE ISLAND YOUTH AMBASSADORS

The TFRI Youth Ambassadors are students from around Rhode Island who collectively work to reduce the impact of tobacco use and nicotine addiction in Rhode Island. These students bring their lived experiences and passion for impacting positive change to a variety of prevention initiatives including school-based education and policy change. In recent years, this group worked to assist the State of Rhode Island build a strategic plan inclusive of ways to address youth e-cigarette use. As a result they worked to launch an e-cigarette text-based quit resource for all RI youth and young adults. Members of this group have used the experience of being a TFRI Youth Ambassador to go serve in leadership roles with national organizations such as Truth Initiative and SADD as well as being appointed by Governor Gina Raimondo to serve on the RI Vaping Advisory Board and impacted state-wide e-cigarette policy change.

CONTACT US

PRODUCTION : NEW ENGLAND PTTC

Sarah Johnson
Sjohnson@adcareme.org
Training Project Coordinator
New England Prevention Technology Transfer Center (PTTC)
AdCare Educational Institute of Maine, Inc.
pttcnetwork.org

ARTIST : SMILING OTIS STUDIO

Represented for books by:
Jennie Kendrick Red Fox
Literaryjennie@redfoxliterary.com
www.redfox.com
209-505-8686

For all other projects:
russ@smilingotis.com

CONTENT EXPERT : DANIEL FITZGERALD MPH, ICPS

Daniel Fitzgerald, MPH, ICPS American Lung Association
in Rhode Island
Daniel.Fitzgerald@Lung.org
401-533-5176
Lung HelpLine:
1-800-LUNGUSA | Lung.org

STEERING COMMITTEE : TOBACCO FREE RHODE ISLAND YOUTH AMBASSADORS

www.tobaccofree-ri.org
Zoe.Moreau@lung.org
Daniel.Fitzgerald@Lung.org