CATCH® MY BREATH

Refuse to Lose: E-cigarette Realities Digital Lesson Educator Guide

MIDDLE SCHOOL | SUPPLEMENTAL LESSON BUNDLE

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Background Info

Why is learning about cigarettes and e-cigarettes important?

While most people today are informed about the risks of cigarette smoking, there are many misconceptions about e-cigarettes and the danger they pose to a person's health and well-being. Many people assume that e-cigarettes are a harmless alternative to cigarettes and do not include nicotine. While it is true that e-cigarettes do contain fewer toxic chemicals than cigarettes, many include nicotine and there is still much that is unknown about the long-term effects of vaping on a person's health. The vapor released by most e-cigarettes is not harmless water vapor, as many believe, but instead is an aerosol containing chemicals that are typically damaging to a person's health. And the nicotine in these e-cigarettes can lead to addiction. Some types of e-cigarettes contain as much or more nicotine than regular cigarettes.

The growing use of e-cigarettes, especially by young people, is a serious public health threat. While there are laws to keep teens and middle school-age students from buying and using cigarettes, laws to prevent the sale of e-cigarettes to minors have only recently been passed. In the 2020 National Youth Tobacco Survey, 3.57 million middle and high school students reported current e-cigarette use.[1] It is imperative that students learn about nicotine addiction and the serious health risks associated with e-cigarettes. They must practice saying no to using cigarettes and e-cigarettes and encourage their peers to do the same.

How will my students learn about the dangers of cigarettes and e-cigarettes?

In these four sessions, students will learn that e-cigarettes produce aerosols composed of potentially harmful chemicals, including nicotine, and about the damage that nicotine can do to the brain and body. Through a series of activities, students will discover how e-cigarettes produce this aerosol and deliver nicotine to the body. They will use this information to create and practice refusal skills and exit strategies when faced with pressure from peers to experiment with e-cigarettes. In the final challenge activity, students will look at advertisements potentially targeting young people that encourage the use of e-cigarettes and spread false information. The reflect portion of the lesson bundle is intended to be used as a closing activity.

How do the sessions work?

Instructional sequence: The Educator Guide provides details to help educators facilitate a series of four 45-minute sessions designed to be taught in sequence to middle school students. This guide was created to give educators ideas and strategies for presenting the content in the digital lesson. It provides slide-by-slide details to assist educators in engaging with students as they explain and facilitate discussion of the content in each of the sessions.

In addition to the Educator Guide, the sequence includes a presentation that can be used in a variety of classroom settings. If you are using a laptop with a projector, simply progress through the PowerPoint by clicking to advance. All of the interactive aspects of the presentation are set to occur on click. The corresponding videos link to the slides. Click on the images to play the videos. If you are using an interactive whiteboard, tap each slide with your finger or stylus to activate the interactive aspects of the presentation. It doesn't matter where you tap, but you can make it appear as if you are making certain things happen by tapping them. Each slide includes teacher notes with information on how to proceed.

1 Wang TW, Neff LJ, Park-Lee E, Ren C, Cullen, K, King BA. E-cigarette Use Among Middle and High School Students — United States, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1310–1312. DOI: http://dx.doi.org/10.15585/mmwr.mm6937e1

Session Structure:

Each session provides the following information to guide the teacher through its implementation and teach the necessary skills and content:

- **Learning Objectives:** Each session includes its overall goals as well as specific behavioral and cognitive objectives for students.
- **Materials:** Materials necessary for the session are clearly outlined, and included when possible, to facilitate easy implementation.
- **Educator Prep:** Describes preparation of materials.
- **Key terms:** Words that can be used as vocabulary words are defined.
- **Key talking points:** To help the teacher guide discussion and reinforce key concepts, key points are listed next to the corresponding slides.
- **Potential student responses:** Sample student responses to activities and questions are provided next to corresponding slides.
- **Summary/wrap-up:** A summary or wrap up is provided at the end of each session to help reinforce the key concepts and objectives of each session.

Session 1: Engage and Explore

Learning Objectives

Students will be able to:

- Define "vapor" and "aerosol"
- Examine the difference between a physical and a chemical change
- Discuss the misconceptions that people have about the aerosol produced by e-cigarettes

Overview

Students will be asked to consider the following statement, "E-cigarettes release harmless water vapor." They will use a Consensogram to capture their initial ideas. Next, students will observe a demonstration to compare and contrast burning a popsicle stick and heating water on a hot plate.

Students will discover that burning is a chemical reaction or a chemical change while heating, which raises the temperature of a material, is a physical change. They will also discover that the burning of cigarette ingredients is not a clean process and releases a strong odor. The heating of materials, even turning e-liquid into an aerosol using a battery, may appear to be a clean process, but it can release some of the same harmful chemicals that are more obvious in cigarette smoke.

In a second demonstration, students will observe oil being heated and the products created by heating the oil. They will compare this process to the heating of e-liquid in an e-cigarette to discover that e-cigarettes do not produce water vapor, but instead produce an aerosol containing potentially harmful particles. This is meant to spark inquiry and does not fully demonstrate aerosol formation, as the oil is not under pressure when heated.

This session contains activities to engage students in understanding that what a person inhales and exhales from an e-cigarette is not harmless water vapor as many people think. It allows them to discover that e-cigarettes actually create a chemical change by heating various chemicals found in e-liquid. The aerosol produced by e-cigarettes can have potentially harmful effects on a person's health.

Materials

- Consensogram chart, one per class
- Sticky notes, one per student
- Beaker (400 ml), 2
- Hot plate
- Water (100 ml)
- Matches
- Wooden craft stick
- Vegetable oil (50 ml)
- Fume hood (if available)

Educator Prep

- Create a Consensogram chart to be displayed on the front board of the classroom or on a classroom wall. The chart should look similar to the example below. A template is also included as a slide for students to use with a smartboard to indicate their responses. If using a smartboard, display Slide 18 and invite students to use digital stamps to mark their selections or to draw check marks.

Statement: E-cigarettes release harmless water vapor.				
1	**2**	**3**	**4**	**5**
Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

- Obtain materials and set up equipment. It is highly recommended you practice the demonstrations before sharing them with students. Relevant MSDS information should be reviewed ahead of time.
- Preheat 100 ml of water in a 400 ml beaker to just below boiling. Water boils at 212°F, so somewhere in a range of 160–180°F is sufficient.

Key Terms

- **E-cigarette:** a battery-powered device that heats an e-liquid to make an aerosol that is inhaled. It may also be called an e-cigarette, vape, or Electronic Nicotine Delivery System (ENDS).
- **Vapor:** a substance diffused or suspended in the air
- **Aerosol:** the tiny particles or droplets that are inhaled and exhaled by an e-cigarette user after the flavored e-liquid is heated
- **Physical change:** a change in the size, shape, or state of matter
- **Chemical change:** a usually irreversible chemical reaction involving the rearrangement of the atoms of one or more substances and a change in their chemical properties or composition, resulting in the formation of at least one new substance

Slide 1 | Title Slide

Slide 2 | Engage

- Open by displaying the statement, "E-cigarettes release harmless water vapor," on the screen or front board of the classroom. Ask students to think about this statement and what they know about e-cigarettes.
- Reveal a Consensogram chart on the front board or wall of the classroom. Give each student a sticky note; ask the students to reflect on the statement and determine to what degree they agree with it.
- Ask students to record their opinions on the sticky note, using a scale of 1–5, with 1 being "strongly disagree" and 5 being "strongly agree." Next, ask students to place their sticky notes in the numbered column that best represents their feelings about the statement.
- Once all students have placed their sticky notes, use the slide to engage students in a class discussion about the initial results of the Consensogram. Allow students to share why they chose to place their sticky notes where they did and what information they already know about e-cigarettes and the vapor the produce.
- Discussion Questions
    - **What is in e-cigarette vapor?**
    - **Are e-cigarettes harmless to a person's health?**
    - **What might make someone think the vapor is harmless?**

Slide 3 | Explore

- Ask students to describe what comes to mind when they think of the word "vapor." Students should indicate that a vapor is a substance in a gaseous state, a form it usually takes as a result of heat or pressure.
- Direct students to a beaker of water on a hot plate and turn the temperature up to 212 degrees Fahrenheit. The water will begin to boil. Ask:
    - **What is happening to the water as it is being heated?**
    - **Is it still water or is it a different substance now?**
    - **What observations can you make using your senses?**
    - **What do they see or smell as the water boils?**
    - **Can water be turned into ice and then back into water?**
- Students should note that the liquid water is vaporizing and becoming a gas as heat is added and that the liquid is transitioning to a gas or vapor. Explain that this demonstrates a physical change in the water—not a chemical change, as the substance is indeed still water, a molecule composed of two hydrogen atoms and one oxygen atom.
- Next, use a match or lighter to light the end of a wooden craft stick. Allow the stick to burn and ask students to observe it. If a fume hood is available, you may want to burn the stick in the fume hood.
- Ask the students to think about what is happening to the craft stick:
    - **Is it still wood after it burns?**
    - **What sensory observations can they make?**
    - **Can the stick be burnt and then turned back into the stick?**
    - **How is this process different from what they observed when water boils?**
- Explain that burning the wooden stick demonstrates combustion, a chemical change rather than a physical change. As the stick burns, the molecules recombine to make new types of molecules, resulting in smoke. Students should also notice a smell as the wood burns.

KEY TALKING POINTS

- **A vapor is a substance in a gaseous state.**
- **Vaporization of water is a physical change while the burning of wood is a chemical change.**
- **Many physical changes are reversible whereas chemical changes are often irreversible or only reversible with an additional chemical change.**

Slide 4 | Explore, Cont.

- Disclaimer: For demonstration purposes, clarify that aerosol is a substance enclosed under pressure, but the oil here is not under pressure when heated.
- Direct students to look back at the opening statement for the lesson: "E-cigarettes release harmless water vapor." Ask them to reflect on their initial thoughts about the validity of the statement in the Consensogram; do they think that an e-cigarette works more like boiling water or burning wood?
- Explain to students that they will learn more about how an e-cigarette works in the next part of the lesson and that e-cigarettes deliver nicotine to a person's body by heating "e-liquid" or "e-juice," which contains various ingredients, including glycerol and propylene glycol. Glycerol and propylene glycol are oils that can be found in packaged foods, antifreeze, and brake fluid. Since the substance being heated in an e-cigarette doesn't contain water, can the product that the user inhales contain only water vapor?[2]
- In a fume hood, or in accordance with your district's laboratory safety guidelines, pour 50 ml of vegetable oil into a 400 ml glass beaker. Place the beaker on a hot plate and heat to a high temperature (400–450°F). Explain that the vegetable oil represents the glycerol found in e-liquid. As the oil heats, students should see that it is producing smoke—showing that it is creating an aerosol, not a vapor..
- Ask students the following questions to guide their observations:
  - **Is it a physical or chemical change?**
  - **What could be in the aerosol that is produced by heating the oil?**
  - **What about the e-liquid that is heated in an e-cigarette?**
- Following discussion, explain that smoke is an aerosol, a suspension of various types of fine particles in the atmosphere.
- Students should conclude that e-cigarettes actually produce an aerosol—not water vapor. Explain that while the aerosol from e-cigarettes may not contain all of the harmful chemicals produced as a cigarette burns, certainly the heating of oils in e-liquid produces some dangerous chemicals and therefore is not harmless as the e-cigarette industry may lead consumers to believe.[3]

KEY TALKING POINTS

- **E-cigarettes work by heating e-liquid that contains chemicals.**
- **E-cigarettes do not produce water vapor, but instead produce an aerosol containing potentially harmful particles.**

2 https://www.ncbi.nlm.nih.gov/books/NBK507184/

3 https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html

Slide 5 | Explore, Cont.

- After seeing the demonstrations and learning about e-cigarettes, ask students to think about where they initially placed their sticky notes in the Consensogram. Give students the opportunity to move their sticky notes to a new column and allow them to discuss why they moved their sticky notes and what new information they learned from this part of the lesson.

KEY TALKING POINTS

- **Tobacco smoke is generally understood by the public to contain harmful chemicals, but there are many misconceptions about what is in e-cigarette aerosol; this aerosol can also be harmful.**

Slide 6 | Summary/ Wrap-up

Summary/Wrap-Up:

- Ask students:
  - **What is the difference between "vapor" and an "aerosol"?**
  - **What is the difference between a physical and a chemical change?**
  - **Do e-cigarettes release harmless water vapor? Use evidence from the investigation to support your response.**
- Summarize that e-cigarettes create a chemical change in the e-liquid that is heated to produce aerosol. It is common to have misconceptions about what is produced by an e-cigarette but together we have learned that there are dangerous chemicals in e-cigarette aerosol.

Session 2: Explain

Learning Objectives

Students will be able to:

- **Understand** that the design and use of e-cigarettes poses risks for a person's health
- **Recognize** that nicotine is the chemical in e-cigarettes that causes people to become physically dependent or addicted to smoking and vaping
- **Discover** how nicotine negatively affects the brain, especially of young people

Overview

Students will investigate the myths surrounding e-cigarettes by visiting two discovery stations. At one station, students will examine how e-cigarettes convert nicotine liquid into an aerosol to inhale and how chemicals are used to mask the flavor. Another station will guide students as they investigate how nicotine enters the bloodstream and travels to the brain and other parts of the body. Students will summarize the overall impact of nicotine on a growing brain and body.

This session contains activities to engage students in understanding how e-cigarettes work to create aerosol and deliver nicotine to the bloodstream while using design to appeal to users. They will also learn about the effects of nicotine on the brain and the health issues that can come from use of nicotine, especially by young people.

Materials

- D&H Teen Blog: Is Vaping Liquid Safe? (https://www.youtube.com/watch?v=I8mtt66U33c)
- Vaping: The Hit Your Brain Takes (https://www.youtube.com/watch?v=aasKIDz9ZX4)
- D&H Teen Blog: What Are the Health Risks of Vaping? (https://www.youtube.com/watch?v=IN7iCZJ3H6w)
- Cotton Candy Sewer Water: *What's in vape juice and the nasty things it does to you*.
- **Session 2a: Partner Jigsaw capture sheet**, one per student
- Student devices (laptop, tablet), one per student
- **Session 2b: Exit Ticket**, one per student

Educator Prep

- Print out one copy, per student, of the:
  - **Session 2a: Partner Jigsaw capture sheet**
  - **Session 2b: Exit Ticket**.
- Set up four digital stations for students to visit. Two stations should be designated as "Station A: Inside the Vape" and two stations as "Station B: Your Brain on Vapes." Each station should include one device with Internet access displaying the links listed below for students to launch and view.
  - **Station A:** Inside the Vape should have the following video links:
    - Cotton Candy Sewer Water: *What's in vape juice and the nasty things it does to you*.

    - D&H Teen Blog: Is Vaping Liquid Safe? https://www.youtube.com/watch?v=I8mtt66U33c
  - **Station B:** Your Brain on Vapes should have the following video links:
    - Vaping: The Hit Your Brain Takes https://www.youtube.com/watch?v=aasKIDz9ZX4
    - D&H Teen Blog: What are the Health Risks of Vaping? https://www.youtube.com/watch?v=IN7iCZJ3H6w
- Students should divide into two groups, Group A and Group B, and form pairs or smaller groups to conduct the research portion of the activity using classroom devices with Internet access. If devices are not available, view the videos listed above as a large group. Then, supply printed information from the following sites. Half the students will need Group A information and the other half will need Group B information.
- **Credible research sites**
  - **Group A:**
    - Drug Facts: Vaping Devices drugabuse.gov/publications/drugfacts/vaping-devices-electronic-cigarettes
    - Know the Real Cost of Vapes therealcost.betobaccofree.hhs.gov/vapes
  - **Group B:**
    - Surgeon General's Advisory on E-cigarette Use Among Youth https://www.cdc.gov/tobacco/basic_information/e-cigarettes/surgeon-general-advisory/
    - Know the Risks: E-cigarettes and Young People https://e-cigarettes.surgeongeneral.gov/knowtherisks.html

Key Terms

- **Nicotine:** a highly addictive drug found in tobacco
- **Cessation:** the process of discontinuing tobacco smoking or e-cigarette vaping
- **Vaping:** the act of using an e-cigarette
- **JUUL:** a popular brand of e-cigarette
- **Disposable e-cigarettes:** an e-cigarette device that cannot be re-used once the e-liquid has run out; disposable e-cigarettes can have a dangerous dose of nicotine or other drugs

Slide 7 | Explain

- To begin, distribute the Session 2a: Partner Jigsaw capture sheet and divide students into two groups, Group A and Group B.
- Explain to students that they will be participating in a paired jigsaw activity, where they will work together to learn more about ingredients in e-cigarettes and how using e-cigarettes can cause harm to a person's brain and body.
- Each group will travel to a station and gather information to complete its portion of a capture sheet. Each station should include a device displaying the links below for students to launch and view.
- Group A will travel Station A: Inside the Vape and view the following videos:
  - Cotton Candy Sewer Water: *What's in vape juice and the nasty things it does to you*.
  - D&H Teen Blog: Is Vaping Liquid Safe? https://www.youtube.com/watch?v=I8mtt66U33c
- On side A of the capture sheet, students in Group A will identify ingredients in e-cigarettes and take notes on how each

can be harmful to the brain and body as they watch the videos. Students in Group A should record their findings on the capture sheet and collaborate with others in Group A as they complete their research.

- Group B will travel to Station B: Your Brain on Vapes and view the following videos:
    - Vaping: The Hit Your Brain Takes https://www.youtube.com/watch?v=aasKIDz9ZX4
    - D&H Teen Blog: What Are the Health Risks of Vaping? https://www.youtube.com/watch?v=IN7iCZJ3H6w
- On side B of the capture sheet, students in group B will watch the videos, which introduce them to the dangers that e-cigarettes pose to the brain.
- Students in group B will work together to research specific ways that nicotine changes the teenage brain. Students should use their devices (laptop, tablets, etc.) to research what is happening in the brain when nicotine is introduced through smoking or vaping and how nicotine addiction can occur. They should also look for ways that brain development is altered or conditions like depression can be affected by nicotine use in teens.
- **Credible research sites:**

    Group A

    - Know the Risks: E-cigarettes and Young People https://e-cigarettes.surgeongeneral.gov/knowtherisks.html
    - Drug Facts: Vaping Devices drugabuse.gov/publications/drugfacts/vaping-devices-electronic-cigarettes

    Group B

    - Surgeon General's Advisory on E-cigarette Use Among Youth https://www.cdc.gov/tobacco/basic_information/e-cigarettes/surgeon-general-advisory/
    - Know the Real Cost of Vapes therealcost.betobaccofree.hhs.gov/vapes
- The students should add facts and notes in the brain diagram on the capture sheet and may collaborate with others in the group to complete their research.

KEY TALKING POINTS

- **E-liquid contains appealing flavorings, but also many toxins.**
- **Nicotine use can cause damage to a person's brain, leading to addiction and disrupting neurological development in teens.**

Slide 8 | Explain, Cont.

- Now that students have completed their portions of the capture sheet, ask each to pair up with another student in the opposite group.
- In this paired jigsaw, students should share with their partners the information they learned about their topic, as their partners record the information on their own capture sheets.

KEY TALKING POINT

- **Although adults may use e-cigarettes as a replacement for combustible cigarettes as a way to help them quit, e-cigarettes are not safe.[4] They pose many serious health risks, especially for young people who are still developing.**

Slide 9 | Summary/ Wrap-up

- Summary/Wrap-Up:
  - Hand out a **Session 2b: Exit Ticket** sheet to each pair of students and ask the students to use their notes and what they learned from the partner jigsaw to complete it.
  - If time allows, give student pairs a chance to choose a spokesperson to share their answers with the class.

KEY TALKING POINTS

- **Because children and young people are still developing, they are at a higher risk of health problems, addiction, and disrupted brain development from vaping.**
- **Although many types of e-cigarettes are designed to appeal to young people, they should choose not to use them because of the lifelong addiction and many health problems they can cause.**

4 https://smokefree.gov/quit-smoking/ecigs-menthol-dip/ecigs

Session 2a: Partner Jigsaw

Group A: Inside the Vape

Question: What can the ingredients in e-juice do to the developing brain and/or body?

Instructions: View the introductory videos to complete the table below.

Name of Substance	Description of how it can harm your developing brain or body

Session 2a: Partner Jigsaw

Group B: Your Brain on Vapes

Question: How does nicotine from e-cigarettes affect a young person's brain?

Instructions: View the introductory videos and do research on your device to discover how nicotine use by young people can impact the brain. Add your findings inside the brain graphic below.

Session 2b: Exit Ticket

Instructions: Now that you have completed the partner jigsaw, answer the following questions. Support your answer with evidence from your notes.

- Why is it important that teens know the ingredients of things they put into their bodies?

- What did you learn from the partner jigsaw that supports your answer?

- Why is it important that teens understand the impact of nicotine and e-cigarette use on their growing brains and bodies?

- What did you learn from the partner jigsaw that supports your answer?

Session 3: Explore

Learning Objectives

Students will be able to:

- **Practice** strategies that will help students to refuse cigarette and e-cigarette use
- **Describe** the health risks that come from the use of cigarettes and e-cigarettes
- **Use** facts, statistics, and images to **encourage** peers to make the healthy choice of avoiding the use of cigarettes and e-cigarettes

Overview

The teacher will explain that using exit or refusal strategies when students find themselves in a situation where others are using or offering e-cigarettes is one of the best ways to reduce their risk of the negative effects of vaping and smoking. Student groups will work together to create scenarios in which a student may be faced with the choice to try smoking or vaping. Students will exchange their scenarios with one another and role-play the scenarios, using exit strategies or refusal skills to help them say no.

This session contains activities to engage students through role play in discovering ways to avoid and refuse using cigarettes and e-cigarettes.

Materials

- Infographic from the FDA, one per group of 2–3 students (or can be displayed using Slide 9) (https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey)
- **Session 3 Exit Strategies and Refusal Skills Scenario** capture sheet, one per student

Educator Prep

- Print out copies, one per student, of the infographic from the FDA.
- Print out copies, one per student, of the **Session 3: Exit Strategies and Refusal Skills Scenario** capture sheet.

Key Terms

- **Exit strategy:** a thoughtful way to get out of an uncomfortable situation
- **Refusal skill:** something that can help you say "no" in a creative way

Slide 10 | Explore

- Explain to students that while cigarette use has been decreasing, newly developed e-cigarettes have been attracting teen users.
- Display or share the link to the infographic (https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey) or make hard copies of the infographic and hand them to the students.
- Ask students to take a few minutes to study the infographic and share anything that is surprising or interesting to them with the whole group.
- Finally, ask students to speculate on why young people might choose to use nicotine or try e-cigarettes and share their ideas. Explain to students that there are many reasons why their peers might try vaping: attractive flavors, the misconception that vaping can help with stress and anxiety, and pressure from peers and advertising.

KEY TALKING POINTS

- **Although cigarette use by teens and young people is declining, the use of disposable e-cigarettes is increasing quickly.**
- **Reasons why young people might try or begin using e-cigarettes include: marketing strategies that target them with appealing flavors, their own desire to reduce stress, and peer pressure and their desire to fit in with their friends who are vaping.**

Slide 11 | Explore, Cont.

- Instruct students to form pairs or small groups and explain to them that it is important to practice ways to say "no" to offers from their peers to try e-cigarettes and that ways to say no are called "exit strategies" and "refusal skills." Click to display the example exit strategies and refusal skills on the slide.
- Inform students that each group will work together to complete the **Session 3 Exit Strategies and Refusal Skills Scenario** capture sheet with a detailed and realistic scenario in which a student might be asked or tempted by friends or peers to try an e-cigarette. The groups should include information about where the students are, what they are doing, who they are with (they should not use real names), and why they might feel pressure to try an e-cigarette.
- Give students 5–10 minutes to write out their scenarios. They may add drawings to help explain the scenarios.

Slide 12 | Explore, Cont.

- When groups finish creating their scenarios, each group should crumple up the sheet like a paper snowball and toss it into the middle of the classroom. Each group should then send a representative to retrieve a new "snowball" scenario from the pile.
- Groups should read the scenario they retrieved (it should not be their own) and come up with an ending in which the student in the scenario uses a refusal skill or an exit strategy to avoid the use of e-cigarettes. They may use one provided on the capture sheet or come up with their own. They also should highlight the health risks of using nicotine or e-cigarettes.
- Give students 5–10 minutes to create and practice their completed snowball scenarios and then invite the groups to act them out. Students can either pair up with other groups and trade off acting out their scenarios or act out their scenarios for the entire class.

KEY TALKING POINTS

- **It is important that teens learn and practice exit strategies and refusal skills to help say "no" when they feel pressure from peers to make potentially harmful decisions.**
- **Because some teens don't see e-cigarette use as harmful, it is important to help inform young people about nicotine addiction and the danger to their long-term health.**

Slide 13 | Summary/ Wrap-up

Summary/Wrap-Up:

- Using the discussion questions, ask students to reflect on their peers' scenarios and which of the strategies would be successful in real life.
    - **Which of the strategies would be most successful in your life?**
    - **Are there any ways you might revise your own scenarios after seeing the other ones?**

KEY TALKING POINTS

- **It is important to support peers who are making good decisions. Suggesting exit strategies and refusal skills to friends can be helpful.**

Session 3: Exit Strategies and Refusal Skills Scenario

The Scene:

In the box below, write out and/or draw a detailed and realistic scenario in which a student might be pressured by a peer to try smoking or vaping.

Include details about where the students are, what they are doing, and who they are with and background about why a student might feel pressured to say "yes."

Session 3: Exit Strategies and Refusal Skills Scenario

Below are refusal skills and exit strategies you may consider as you think about your group's conclusion to this scenario. Include in your exit strategy information about the health risks of smoking and vaping.

1. "I" Statements
   a. I don't smoke.
   b. I don't want to start that habit.
2. State a reason
   a. Health or personal reason: "It's not a good idea for me because I have asthma or I'd better not because I've got a soccer/basketball game on Friday."
   b. Possible consequence: "If my parents found out, I could . . . or The coach might bench me if . . .," I need a clear head to make music, I need to keep my lungs healthy to play my instrument.
   c. Excuse: "I have to get home" or "Sorry, I'm late to meet someone."
3. No-Statement that's clear
   a. No.
   b. Thanks, but no, thanks.
4. Options
   a. Make a joke.
   b. Ignore the suggestion/offer.

Session 4: Explain and Evaluate

Learning Objectives

Students will be able to:

- **Practice** strategies that will help students refuse cigarette and e-cigarette use.
- **Describe** the health risks that come from the use of cigarettes and e-cigarettes.
- **Use** facts, statistics, and images to encourage peers to make healthy choices to avoid the use of cigarettes and e-cigarettes.

Overview

This session contains activities in which students will be given a choice of mock advertisements. They will annotate their chosen advertisement to reimagine the marketing messages and visuals to dispel common misconceptions with factual information.

Materials

- Mock e-cigarette advertisements
  one per group
- Sticky notes
  one pad per group
- Markers
  one set per group
- **Session 4: Your Life. Your Choice.** capture sheet one per student

Educator Prep

- Give each group of 3–4 students a printed copy of each advertisement the group has selected or assign one advertisement to each group and provide a copy. Online platforms are available for students to annotate directly onto a virtual document, if needed.
- Determine a location for students to gather sticky note and marker supplies.
- Print out copies, one per student, of the **Session 4: Your Life. Your Choice.** capture sheet.

Key Terms

- **Marketing campaign:** promotion of products through different types of media, such as television, radio, print, and online platforms

Slide 14 | Explain

- Introduce the following problem scenario to students by reading aloud:
  - *E-cigarette manufacturers are promoting their products via misleading advertisements and marketing campaigns targeted towards teens and adults. Your community is concerned that this information is promoting false health claims with deceptive messaging. Your job is to correct the advertisements you see in your community by modifying the information presented in them to be scientifically accurate.*
- Click to display the mock advertisements on the screen.

Slide 15 | Explain, Cont.

- Ask students to form groups of 3–4 and explain that each group will choose one or more of the four mock advertisements. Each group should work together to identify misleading health claims in the ads or ways the products are falsely marketed. They will then be asked to share their changes with the class.
- Groups should get a copy of each advertisement they have chosen, along with a pad of sticky notes and set of markers. They should use the sticky notes to replace misconceptions and misleading information with facts by writing down ways they would change the ad.
- Guide students to place the sticky note on the section of the ad they want to modify. For example, they may use a different model or subject in the ad, or they may change the text to inform the reader about the health risks that e-cigarettes pose to users.

KEY TALKING POINTS

- **It is important to be informed about the risks and dangers of nicotine and e-cigarette use.**
- **Marketing campaigns for e-cigarettes may target inappropriate audiences for their products.**
- **Consumers should be critical about products they choose to buy and use.**

Slide 16 | Evaluate

- Groups should take turns presenting their annotated ads to the whole class, explaining the changes they would make and the information they feel is important to include on the advertisement. Alternatively, groups can display their annotated ads around the classroom and the class can do a gallery walk to view the corrected advertisements.

Slide 17 | Summary/ Wrap-up

Summary/Wrap-Up:

- To conclude this lesson, ask students to make a choice about e-cigarettes based on the information they have learned. Give each student a copy of the **Session 4: Your Life. Your Choice.** capture sheet.
- Ask students to thoughtfully complete the sheet, using information they have learned to support their decision, and to make a promise to themselves about their choices when it comes to cigarettes and e-cigarettes.

References

Electronic Cigarettes (E-cigarettes) https://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes

Vaporizers, E-Cigarettes, and other Electronic Nicotine Delivery Systems (ENDS) https://www.fda.gov/tobacco-products/products-ingredients-components/vaporizers-e-cigarettes-and-other-electronic-nicotine-delivery-systems-ends

Surgeon General's Advisory on E-cigarette Use Among Youth https://www.cdc.gov/tobacco/basic_information/e-cigarettes/surgeon-general-advisory/index.html

Know the Risks: E-Cigarettes and Young People https://e-cigarettes.surgeongeneral.gov/knowtherisks.html

Youth E-Cigarette Prevention Infographic https://www.fda.gov/media/132519/download

National Standards

PS1.A: Structure and Properties of Matter

- Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it.

PS1.B: Chemical Reactions

- Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.

LS1.A: Structure and Function

- In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions. (MS-LS1-3)

LS1.D: Information Processing

- Each sense receptor responds to different inputs (electromagnetic, mechanical, chemical), transmitting them as signals that travel along nerve cells to the brain. The signals are then processed in the brain, resulting in immediate behaviors or memories. (MS-LS1-8)

Session 4:
E-cigarette Advertisements

AD 1

Session 4:
E-cigarette Advertisements

AD 2

Session 4:
E-cigarette Advertisements

AD 3

AD 4

Session 4: Your Life. Your Choice.

Your Life. Your Choice.

Directions: Use this page to develop a choice and a promise to yourself about your decisions when it comes to using e-cigarettes.

Remember—it is your life, and you have the power to choose.

What is your choice regarding e-cigarettes?

What are your reasons for your choice?

Think about situations in which you might need to hold strong to your choice and plan how you will react to that situation.

(Example: *If I am offered an e-cigarette by a friend, then I will be able to say, "Nah, I'm good," and walk away*.)

If, Then,

If, Then,

If, Then,

Signature: _____

Date: _____