



## OVERVIEW

Electronic cigarettes, or e-cigarettes, are now the most commonly used tobacco product among U.S. middle and high school students. The latest U.S. Surgeon General's report about e-cigarette use concludes that the use of products containing nicotine in any form among youth—including in e-cigarettes—is unsafe. Nicotine exposure during adolescence can cause addiction and can harm the developing adolescent brain.

Join the U.S. Surgeon General and Discovery Education on April 25<sup>th</sup> as we introduce students to the health risks of e-cigarettes among young people and explain the science behind their effects on the body and brain. In this 45-minute Virtual Field Trip (VFT) called *Know the Risks*, students will be introduced to the Surgeon General's report findings, evaluate information to help dispel misconceptions, learn about the impact of using e-cigarettes on young people's health and well-being, and explore ways that these products are being marketed.

The activities in this companion guide have been designed to connect and extend the learning from the Virtual Field Trip to classroom concepts.

### Students will:

- evaluate their existing knowledge and questions about e-cigarettes.
- examine the health risks—particularly to teens—of using e-cigarettes.
- support or refute claims about e-cigarettes, using evidence.
- develop a project to communicate the risks of using e-cigarettes to peers, using evidence.

## PRE-VFT ACTIVITY: SILENT CONVERSATION

This activity can be conducted prior to the Virtual Field Trip

Time: 20–30 minutes

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### MATERIALS

- Several large sheets of butcher paper (one per group) and markers
  - Timer
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*In this pre-VFT activity, students will build a “silent conversation” about what they know and what they are curious about related to e-cigarettes. Building a silent conversation is a discussion strategy that helps engage all students as they explore a topic alongside their peers.*

1. Divide students into groups of 3–4. Distribute one large sheet of butcher paper and several markers to each group.
2. Explain to students that you will write a prompt on the board that they will discuss in their groups. Their discussion, however, must take place on the paper only and in silence. They can use words or illustrations to discuss the prompt and to ask each other questions, but they may not speak. Students can draw lines connecting comments, questions, or answers. Ensure that students understand the directions. Write the following prompt on the board: The U.S. Surgeon General recently released a report about e-cigarettes and youth. What do you think the report revealed? What do you know about e-cigarettes? What are you curious about? What are your thoughts about e-cigarettes?
3. Tell students when the silent conversation will begin. You can guide all students to discuss the entire prompt at the same time or they can divide up the questions. After 5–10 minutes, give students time to walk around to read the other silent conversations. This must also be done in silence. They are permitted to add their own thoughts or answers to the other papers.
4. When time is up, invite students to go back to their original papers. Direct them to organize the silent conversation on their papers into buckets such as predictions, comments, facts, misconceptions, questions, and answers.
5. Ask each group to report out the information from the conversation and invite students to draw conclusions about consistent or conflicting information, predictions, and questions.
6. Explain that they will have an opportunity to revisit their silent conversations after the Virtual Field Trip.

## POST-VFT ACTIVITY 1: FACT CHECK

This activity can be conducted after the Virtual Field Trip

Time: 40–50 minutes with possible research time outside of class

### MATERIALS

- Papers from the Silent Conversation Pre-VFT activity (see above)
- Evaluating Claims about E-Cigarettes evidence capture sheet (one per student)
- Computer with Internet access

*After watching the VFT, students confirm or correct their predictions, and answer their questions from the Pre-VFT activity. They then select a claim about e-cigarettes and collect evidence from the VFT and additional research to support or refute that claim.*

1. Invite student groups to refer to their papers from the silent conversation activity. Challenge them to confirm or correct any facts, and ask if they are able to answer the questions using information from the Virtual Field Trip.
2. Discuss this activity as a class. What facts about e-cigarettes were students able to confirm or correct? What misconceptions were debunked? What questions were they able to answer? What questions remain?
3. Explain to students that, in this activity, they will prove or refute a claim about e-cigarettes, using evidence from the VFT or from additional research.
4. Distribute the “Evaluating Claims About E-Cigarettes: Evidence Capture Sheet.”
5. Invite each group to select one of the claims to support or refute. Explain that they must find at least five pieces of evidence that support or refute their claim. At least one piece of evidence must relate to the effect e-cigarettes have on the body or brain. Their evidence can come from the Virtual Field Trip or from additional research. Evidence can include statistics, facts, and quotes. All evidence must be sourced.
6. Give each group ample time to collect evidence. You may want to share the websites below to help students conduct their research.  
<https://e-cigarettes.surgeongeneral.gov/>  
[https://www.cdc.gov/tobacco/data\\_statistics/sgr/e-cigarettes/index.htm](https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/index.htm)
7. Invite groups to share out their claims and evidence to the class.
8. Challenge students to identify the key takeaways they think other teens should know, based on their research.

## POST-VFT ACTIVITY 2: PEER TO PEER

This activity can be conducted after the Virtual Field Trip

Time: 30–40 minutes with time outside of class for project completion

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### MATERIALS

- Sticky notes
  - Access to the Internet
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*In this activity, students will evaluate how much they think their peers know about the risks of e-cigarettes and create a project that communicates these risks and persuades people their age not to use e-cigarettes.*

1. Place a number “1” at one end of the board or room and a number “10” at the other end. Challenge students to make a human barometer, using this question: “How informed do you think people your age are about the risks of using e-cigarettes?” The number “1” represents “highly unaware” and the number “10” represents “highly aware. Challenge students to stand at the place on the barometer that represents their opinions. Once all students are in place, discuss responses. Are students able to reach consensus about whether their peers are aware of the risks? Do they think they should be aware? Justify answers.
2. Invite students to sit back down. Distribute a sticky note to each student, and challenge them to write the most compelling piece of evidence from the Virtual Field Trip that they think their peers should know about the risks of e-cigarettes?
3. Invite students to place their sticky notes up on the board or a wall.
4. Give students time to review each other’s ideas, and challenge them to identify patterns in the answers and/or to make connections between pieces of evidence that relate to one another.
5. Explain to students that one of the most powerful voices in the conversation about e-cigarettes takes place from peer to peer. Ask them how they think they can use these pieces of evidence to better inform their peers about the risks of e-cigarettes and/or to persuade them not to use e-cigarettes.
6. Challenge students to create one of the projects below to communicate to their peers the risks of e-cigarettes and to persuade them not to use them. Remind students that all facts must be sourced and that creativity in communicating that information is encouraged.
  - a. **Video/Public Service Announcement (PSA):** Create a :30–:60 second video that explains one or more of the health risks of teens using e-cigarettes and persuades them not to use them.
  - b. **Blog post:** Create a 100–250-word blog post that explains one or more of the health risks of teens using e-cigarettes and persuades them not to use them.

- c. **Digital presentation:** Create a digital presentation (infographic, PowerPoint or Keynote presentation, or social media campaign) that explains one or more of the health risks of teens using e-cigarettes and persuades them not to use them.
  7. Give students ample time to complete their projects and, if time allows, encourage a showcase of all projects to the entire school community.
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## EVALUATING CLAIMS ABOUT E-CIGARETTES

### Evidence Capture Sheet

1. Select one of the claims below.
2. Collect five pieces of evidence from the Virtual Field Trip and additional research to support or refute the claim. At least one piece of evidence must relate to how e-cigarettes affect the body or brain. All evidence must be sourced.

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#### **Claim 1: E-cigarettes contain only harmless water vapor.**

Support or Refute:

Evidence from Virtual Field Trip:

Evidence from Additional Research:

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#### **Claim 2: E-cigarettes are safe for young people to use.**

Support or Refute:

Evidence from Virtual Field Trip:

Evidence from Additional Research:

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#### **Claim 3: Nicotine use can lead to addiction.**

Support or Refute:

Evidence from Virtual Field Trip:

Evidence from Additional Research:

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**Claim 4: There is no risk to being around others when they're using an e-cigarette.**

Support or Refute:

Evidence from Virtual Field Trip:

Evidence from Additional Research:

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**Claim 5: Nicotine exposure can harm the developing adolescent brain.**

Support or Refute:

Evidence from Virtual Field Trip:

Evidence from Additional Research:

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## CORRELATING STANDARDS

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### Science

#### [Next Generation Science Standards](#)

##### **LS1.A: Structure and Function**

- Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level. (HS-LS1-2)
  - Feedback mechanisms maintain a living system's internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system. (HS-LS1-3)
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### Health

#### **National Health Education Standards**

- 1.12.7 Compare and contrast the benefits of and barriers to practicing a variety of healthy behaviors.
- 2.12.2 Analyze how the culture supports and challenges health beliefs, practices, and behaviors.
- 2.12.7 Analyze how the perceptions of norms influence healthy and unhealthy behaviors.
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### Common Core

#### [Common Core](#)

##### **Common Core State Standards: ELA Anchor Standards** (CCSS.ELA-LITERACY)

CCRA.W.1 Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

CCRA.W.8 Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

CCRA.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCRA.R.1 Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

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