

TOPIC
Vaping

AUDIENCE
High school students

TIME NEEDED
60 minutes

HEALTH EDUCATION STANDARDS

- 5.12.5 Predict the potential short-term and long-term impact of each alternative on self and others.
- 7.12.3 Demonstrate a variety of behaviors to avoid or reduce health risks to self and others.

LEARNING OBJECTIVES

By the completion of the program,

1. At least 50% of participants will be able to name two negative health outcomes of vaping on a post-test.
2. At the completion of this lesson, participants will be able to define what e-cigarettes are and list two risk factors of vaping on a post-test.

MATERIALS NEEDED

- PowerPoint Presentation
- Internet with Wifi connection
- Access to Zoom with breakout rooms & chatbox enabled
- “E Cigarettes and Vaping” Video
- “Vaping is an Epidemic” Video
- “Teen had to fight for her life after vaping a cartridge everyday” Video
- Appendix A Pre-Test Questions
- Appendix B Post-test questions.

PREPARATION

Prior to the session set up a zoom meeting and send out the zoom link to the intended audience. Next, load PowerPoint slides on to the computer, have breakout rooms set up for the start of the lesson. Check to be sure chat boxes are enabled and internet connection is strong.

PROCEDURE:

1. Introduction (5 minutes)

PowerPoint Slides 1 & 2

1. Introduce yourself to the audience and state that we will be discussing the topic of vaping and its harmful effects.
 - a. State the two general objectives for the lesson.
 - i. Participants will be able to name two negative health outcomes of vaping.
 - ii. Participants will be able to define what e-cigarettes are and name at least two risk factors of vaping.
1. Share document Appendix A, Pre-test Questions.
 - a. Present four questions about vaping to test students' knowledge on what vaping is. After stating the questions, wait three minutes for students to complete the document.

2. Definition

PowerPoint Slides 5, 6, 7 (5 minutes)

1. What is Vaping?
 - a. Vaping is the use of an ENDS device to vaporize liquid nicotine or marijuana oil into an inhalable vapor form.
 - b. Many people use ENDS or vapes
2. Introduce the first video, “E Cigarettes and Vaping” by The David Geffen School of Medicine (4:34) https://youtu.be/O4_1-klxqCQ
 - a. Introduce by telling students that this video is a short cartoon, and discusses the risk factors and history of e-cigarettes.
3. Here are various brands and types of ENDS or vape devices
 - a. Juul
 - b. Blu
 - c. Pax
 - d. Generic vapes

3. Importance & Health Concerns

PowerPoint Slides 8 & 9 (13 minutes)

1. Why are we talking about them with you? (Risk factors)
 - a. How some companies create ad campaigns targeting youth
 - b. The addictive qualities of nicotine found in some vape juices

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- c. Negative Health Outcomes such as vaping related diseases (John Hopkins Medicine, 2020) will be further discussed in the next slide
 - i. <https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-does-vaping-do-to-your-lungs>
2. Why is vaping bad for your health?
 - a. Vaping related illnesses
 - b. Possible transition to traditional tobacco products
 - c. It's illegal for underage use
 - d. Belief that it is relative safer compared to traditional cigs

4. Anti -Vaping Ad

PowerPoint Slide 10 (1 minute)

1. Introduce the second video, "Vaping is an Epidemic" by The Real Cost (30 secs)
 - a. Tell students that The Real Cost, a campaign that promotes being tobacco free released an anti-vaping ad in 2018, expressing the harmful effects of vaping and the widespread use of e-cigarettes claiming that it's a vaping epidemic across the nation.

5. Group Activity 1

PowerPoint Slides 11 & 12 (10 minutes)

1. In breakout groups
 - a. Write at least three pros and three cons in a pro/con list of why peers may/may not enjoy vaping.
 - b. This activity is to better understand why students choose to use ENDS devices or what dissuades them from using ENDS devices but also creates an understanding between all students on the topic

6. Video

PowerPoint Slide 13 (8 minutes)

1. Introduce the third video, "Teen had to fight for her life after vaping a cartridge everyday" by the American Broadcasting Company [ABC] and play it - (7:34)
 - a. Tell students that this video will discuss a teenager named Simah Herman who almost died from vaping. Simah started vaping at the age of 16 in high school. Simah expresses the social peer pressure of vaping and that most of her friends are doing it. Vaping affected Simha's ability to dance and be free, and she stated that she lost weight drastically. Simah is now an anti-vaping advocate and

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promotes being tobacco free. Several health risk factors of vaping, what vaping is, and the prevalence among high school students and college students, is discussed in the video.

- b. The video examines the dangers of vaping and the long term health effects. The video identifies one risk factor called the popcorn lung. Popcorn lung or (bronchiolitis obliterans) is the inflammation of small airways in the lung called bronchioles.

7. Open Class Discussion

PowerPoint Slide 14 (8 minutes)

1. Read each question and allow students to answer verbally, by turning on their mics. Lead discussion for 8 minutes and give correct answers if students fail to answer correctly.
 - a. What did Simah do to cause her lungs to fail?
 - i. **Possible answers:** Vaped every day, including THC, and nicotine(equivalent to one pack of cigarettes everyday)
 - b. How did this affect Simha's academics and social life?
 - i. **Possible answers:** Simha's ability to dance disappeared and she stopped going to school. She also lost 50 pounds in one year.
 - c. Why do you think health professionals did not advise Simah to stop vaping?
 - i. **Possible answers:** Overlooked that she was vaping; Not informed about vaping
 - d. Why do you think companies are allowed to incorporate harmful substances in their products?
 - i. **Possible answers:** brings in revenue/money;
 - e. Should E-cigarettes be banned and why?
 - i. **Possible answers:**
 1. No, because more people would be led to traditional cigarettes and not enough research/evidence on long term effects on e-cigs to fully ban them.
 2. Yes, because of the known harmful chemicals and how addictive they can be for the average person

8. Group Activity 2

PowerPoint Slide 15 (5 minutes)

1. In groups, research 4 or 5 products that contain the dangerous chemical found in vapes.
 - a. These are a list of chemicals that are found in ENDS devices (American Lung Association, 2020)

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- i. Nicotine & Propylene glycol
- ii. Carcinogens-acetaldehyde and formaldehyde
- iii. Acrolein Diacetyl
- iv. Diethylene glycol
- v. Heavy metals such as nickel, tin, lead
- vi. Cadmium
- vii. Benzene

9. Conclusion/Post-Test Questions

PowerPoint Slide 16, 17 (5 minutes)

1. Conclusion- Ask students to answer post-test questions
 - a. State each key point to the class to sum up the lesson.
 - b. E-cigarettes are targeted to young teens & adolescents.
 - c. E-cigarettes have harmful substances such as nicotine, metals, and chemicals.
 - d. E cigarettes have been found to be addictive, and increases the risk of moving to traditional cigarettes.
 - e. Vaping can cause death, lung related illnesses, and changes in the brain.
 - f. There is little evidence showing the long term effects of E-cigarettes.
3. Thank the class for their participation.

References

American Lung Association. (2020, July 13). *What's in an E-Cigarette?*

<https://www.lung.org/quit-smoking/e-cigarettes-vaping/whats-in-an-e-cigarette>

Centers for Control for Disease and Prevention. (2020) *Chapter 1 Introduction, Conclusions, and Historical Background Relative to E-Cigarettes.*

https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/pdfs/2016_SGR_Chap_1_508.pdf

David Geffen School of Medicine University of Los Angeles, California. (2017). *Electronic Cigarettes and Vaping* [Video]. YouTube. https://youtu.be/9dZS_Rniak0

Edwards, E. (2019, November 19). *Juul hit with another state lawsuit for allegedly targeting kids.* NBC News.

<https://www.nbcnews.com/health/vaping/juul-hit-another-state-lawsuit-allegedly-targeting-kids-n1085901>

John Hopkins Medicine. (2020). *What Does Vaping Do to Your Lungs?*

<https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-does-vaping-do-to-your-lungs>

The Real Cost. (2018). *Vaping is an Epidemic* [Video]. YouTube. <https://youtu.be/zYuyS1Oq8gY>

Appendix A Pre-Test Questions

1. An E cigarette is an e-liquid that emits water and different flavors. T or F
2. In general, vaping is safe for teens and young adults? T or F
3. Electronic Cigarettes have been shown to be as effective as the nicotine patch or nicotine gum in helping people to quit smoking. T or F
4. Consumers must show proof of age when purchasing electronic cigarettes. T or F

Appendix A Pre-Test Questions Answers

1. Answer #1: False. E-cigarettes contain and release a number of potentially harmful substances including metals, chemicals, organic compounds which have been linked to cell & DNA damage such as aerosol and nicotine.
2. Answer #2: False. Vaping is not considered safe for young adults because the harmful substances found in e-cigarettes can affect the maturing of the adolescent brain.
3. Answer #3: False. E-cigarettes have limited evidence in research that it has helped people to fully quit smoking. In fact, vaping has shown to be as addictive as cigarettes because of the nicotine found in e-cigarettes.
4. Answer #4: True. In order to purchase e-cigarettes, you must be 18 years old or older in most states.

Appendix B

Post-Test Questions

1. What are ENDS (Vape) devices?
2. What are 2 risk factors of vaping?
3. What is a negative health outcome of vaping?
4. What is another negative health outcome of vaping?

Appendix B

Post-Test Questions Answers

1. What are ENDS (Vape) devices?

Answer: An electronic device that contains a liquid that is heated to create an inhale-able vapor.

2. What are 2 risk factors of vaping?

Answer: Age; Peer pressure

3. What is a negative health outcome of vaping?

Answer: Lung Cancer

4. What is another negative health outcome of vaping?

Answer: Switch to traditional tobacco.