**Slide Notes: Teacher Talking Points**

**SLIDE 1:** No teacher notes

**SLIDE 2:** There will be various reasons. Talk through them.

**SLIDE 3:** No teacher notes

**SLIDE 4:**

* E-cigarettes are made of a battery, (*click)* an atomizer with a heating coil, (*click)* and an absorbent material (*click)* that absorbs a liquid that can contain nicotine, flavoring and chemicals. (*click*)
* The battery allows the atomizer to heat the liquid, called e-juice, which creates an aerosol that is breathed into the lungs and breathed out into the air repeatedly.
* Some of these devices are pre-loaded with the e-juice that comes in bottles like these (*click*) and others where the users add it themselves.
* The original e-cigarettes looked like a cigarette, came pre-loaded and were disposable.

**SLIDE 5:**

* All of these chemicals have been found in in the E-Cig Aerosol
* And while we did not know this at first, Many of these are the same chemicals found in traditional cigarettes
* E Cigs produce a vapor/aerosol that often contain propylene glycol, glycerin, flavorings, and nicotine and many other harmful chemicals and toxins, some known to cause cancer
* Nicotine itself is a highly addictive compound
* And while not all contain nicotine, all have many of these chemicals and toxins .

**SLIDE 6:**

* Although the chemicals that have been found in e-cig aerosols might seem unrecognizable, you are familiar with other places some of those same chemicals can be found.
* (*click)* For example, Propylene glycol can be found in antifreeze products or also used to winterize plumbing systems.
* (*click)* Acetone is commonly found in nail polish remover and as a paint thinner
* (*click)* Ethylbenzene is often used to make other chemicals. It’s also found in other products, including pesticides, synthetic rubber, varnishes paints, and inks.
* (*click)* Formaldehyde based solutions are also used in embalming to disinfect and temporarily preserve human and animal remains.
* *(click)* Rubidium is a chemical that can be used to give fireworks their bright colors.
* (*click)* Maybe the most important ingredient here is nicotine. Nicotine is a drug that's highly addictive in moderate doses and is the reason why smokers smoke even after they start getting sick. Of course, in high doses, it's a poison--in fact, plants make it to keep insects from eating them. It's a funny drug that has a lot of effects.

**SLIDE 7:** No teacher notes

**SLIDE 8:**

* Nicotine is a drug that is a stimulant, meaning it raises levels of physical or psychological activity in the body, and it is toxic at high doses.
* It is highly addictive since it causes changes in brain chemistry quickly and leaves the brain craving more.
* Nicotine is found in tobacco products and nicotine exposure during fetal development has lasting adverse consequences for brain development as it can affect maternal and fetal health during pregnancy.
* Data from studies of mice suggest that nicotine exposure during adolescence may have lasting adverse effects on brain development.
* (*Click*) If nicotine is unsafe, why do you think people still choose to use products that have nicotine?

**SLIDE 9:**

* Nicotine is highly addictive. What that means is, the human brain can develop such a strong dependence on the drug that the nicotine user can no longer control their desire or smoking behaviors.
* (*Click)* The cycle of nicotine addiction starts with bringing nicotine into the body.
* (*Click*) Nicotine enters the brain and activates the pleasure centers of the brain.
* (*Click*) After, the level of nicotine in the body wears off quickly.
* (*Click*) This drop in nicotine levels causes the body to have a strong craving for nicotine that is satisfied by bringing more nicotine into the body.
* This cycle is powered by the body’s biological reaction to nicotine and isn’t controlled by the person vaping.
* Based on this information, what could you say to someone who says they won’t let themselves get addicted to nicotine?

**SLIDE 10:** No teacher notes

**SLIDE 11:**

* (*Click*) Nicotine rewires and changes a young person’s brain, making a person anxious when their brain is going through nicotine withdrawal. Nicotine doesn’t just affect your brain since there are “acetylcholine” receptors all over your body.
* (*Click*) For example, using nicotine can make your heartbeat faster because it activates your “fight or flight response.”
* Nicotine salt solutions in particular produce a faster and higher heart rate than other aerosolized nicotine solutions, which can put stress on the heart.
* (*Click*) Outside of all the chemicals and toxins already in e-cigarettes, nicotine can independently cause trouble breathing and damage to the lungs. The lungs generally produce mucus and cough in response to the harmful chemicals inhaled.
* (*Click*) Nicotine can also cause increased acid reflux, which leads to heartburn.
* Nicotine can even negatively impact your reproductive organs.

**SLIDE 12:**

* There has been recent research into E-cigs that have shown how dangerous vaping can be.

**SLIDE 13:**

* In August of 2019, adverse health effects began to happen. People were hospitalized for injured lungs from vaping. This outbreak was later named EVALI which stands for E-cigarette or Vaping product use-Associated Lung Injury.
* Most EVALI patients reported using THC-containing products and most said they got their products only from informal sources. THC is the chemical found in cannabis/marijuana that gives users a “buzz/high.”
* Scientists found Vitamin E Acetate, an oily chemical found in some THC-containing e-liquid, in the lungs of EVALI patients and in e-cigarette/vape products that the patients said they used. Vitamin E Acetate was mostly likely the cause of the outbreak. Breathing in Vitamin E Acetate can cause inflammation of the airways and interfere with normal lung functioning.
* What are some of your main takeaways after hearing about EVALI? (*Wait for responses.)*
* To add to or summarize what you already said, some main takeaways for EVALI include:

1. (*Click*) This is the first time we’ve seen a vaping device cause sudden, immediate, serious, and sometimes fatal damage to the lungs.
2. (*Click*) The Centers for Disease Control and Prevention, better known as the CDC, recommends to not use THC-containing e-cigarette/vape products particularly from informal sources like family/friends, dealers, online or other sources.
3. (*Click*) Since these products are not regulated by the government, there is no guarantee that any part of an e-cigarette is safe for your health. Something you can always be sure of is that your lungs are the most happy and safe when you only breathe in oxygen and clean air.

**SLIDE 14:**

* We know that e-cigarette aerosol damages the lungs and increases the chances of developing a lung disease later in life. What if the aerosol or one chemical from vaping caused severe damage to the lungs after a few hits?

**SLIDE 15:**

* *(Click)* You may be familiar with the concept of secondhand smoke. How would you define secondhand smoke?
* Secondhand smoke is smoke from burning tobacco products, such as cigarettes, cigars, or pipes and is toxic when inhaled.
* Secondhand aerosol, like secondhand smoke, is the plume of chemicals released into the environment directly from the e-cigarette/pod-based devices and from the lungs of the user.
* Common places for exposure to secondhand aerosol include restaurants, parks, vehicles, and designated smoking areas.
* Chemicals that are released (*click*) include harmful substances such as (*click*) nicotine, (*click*) heavy metals, (*click*) ultrafine particles that fall deep into the lungs, (*click*) cancerous chemicals, and (*click*) volatile organic compounds aka VOCs.
* Exposure can lead to cancer, respiratory infections, and make someone’s asthma worse among other problems.
* The aerosol has also been shown to damage specific parts of your circulatory system or blood network, increasing your risk for heart disease.
* Ear, eye and throat irritation is common among e-cigarette/vape pen users.
* Scientists are still studying how these aerosol chemicals impact the brain.
* We wish we could tell you all the ways that e-cigarettes are harmful, but the truth is we can’t. Since they are so new and researchers can’t fast forward into the future, all of the long-term consequences of these products are impossible to predict.
* Someone might think that the individual using an e-cigarette or vape is the only person at risk for breathing in nicotine, heavy metals, and cancerous chemicals from the aerosol. That is not true though. There are other ways that aerosol from e-cigarettes can spread into the air and affect the health of others.

**SLIDE 16:**

* Another way that e-cigarettes/vape pens pose a danger to people other than the user is through thirdhand aerosol.
* *(Click)* Thirdhand aerosol is the mixture of chemicals in e-cigarette/vape pen aerosol that remain on surfaces and in dust, even after the aerosol is gone, and react with other chemicals in the environment to form toxic chemicals.
* These potentially harmful chemicals can be exposed to other people or animals through the respiratory system, through ingestions, and through skin exposure.
* *(Click)* Small children are especially at risk for thirdhand aerosol exposure because they tend to put things into their mouths, and they have more vulnerable skin.

**SLIDE 17:**

* We are going to talk about the marketing and appeal of e-cigarette/vape products*. (This is a good time for the teacher to ask for answers.*

**SLIDE 18:**

* Some of the brands behind these new products are from the same corporations that produced traditional cigarettes.
* The company that sells Newport sells Blu, Marlboro used to sell Mark Ten, and Camel sells Vuse. They have kept up with products like JUUL, by releasing their own pod-based e-cigarettes (*click*).
* Cigarettes are not allowed to have flavors other than menthol, but e-cigs are marketed with all sorts of flavors.
* Who do you think they see as the ideal customer?
* Taking that into consideration, how is the e-cigarette industry using your generation as test subjects? *Possible answers*: 1. the companies don’t even know the long-term effects of their products, but are still selling them, 2. the companies market these products as a healthier alternative, even though they don’t have the science to prove it, 3. they have created e-cigarettes with higher levels of nicotine than any other tobacco/nicotine products.
* Basically, these Big Tobacco corporations are replacing their old cigarette customers with new customers around your age that they hope to keep for a lifetime by promoting a new product.

**SLIDE 19:**

* The e-cigarette/vape pen industry knows that many of their customers are getting older and need to be replaced with new customers so they can make more profits.

**SLIDE 20:**

* Who is going to replace old smokers?
* *(Click)* Young people like you!
* The e-cigarette/vape pen industry sees young people as the perfect replacement customers.
* They know if young people get hooked to their products early in life, they’ll have them as customers for years to come.
* It’s well-known by health professionals and the e-cigarette/tobacco industry alike, many current smokers started smoking before adulthood.
* So if you take a closer look at e-cigarette/vape pen marketing, you’ll notice the industry’s attempts to make e-cigarettes/vape pens trendy and appealing to youth.

**SLIDE 21:**

* What do you think tobacco companies would say about e-cigs and vaping?
* Let’s look at some actual quotes from the tobacco industry that shows how the really see people your age.
* (*Click)* *T*oday's teen-ager is tomorrow's potential regular customer and the overwhelming majority of smokers first begin to smoke while in their teens.
* (*Click)* At least a part of the success of Marlboro Red during its most rapid growth period was because it became the brand of choice among teenagers who then stuck with it as they grew older.

**SLIDE 22:**

* (*Click)* The ability to attract new smokers and develop them into a young adult franchise is key to brand development.
* (*Click)* They represent tomorrow's cigarette business. . . As this 14-24 age group matures, they will account for a key share of the total cigarette volume -- for at least the next 25 years.
* How do you feel about you and others your age being talked about in this way?

**SLIDE 23:**

* Flavored cigarettes have been banned since 2009, but Big Tobacco fought to keep menthol as a flavor.
* Historically, the Tobacco companies reinforced the popularity of menthol tobacco products by exploiting vulnerable communities. For example, in the African-American communities, a tobacco company would drive a van through districts and give away free cigarettes.
* And recent studies have concluded that menthol cigarettes lead to increased smoking initiation among youth and young adults, greater addiction, and decreased success in quitting smoking.
* Removal of menthol cigarettes from the marketplace would benefit public health in the United States, especially among communities of color and other vulnerable groups of people.

**SLIDE 24:** No teacher notes

**SLIDE 25:**

* Teachers be sure to discuss the stress and anxiety triggers, how to recognize these, and other ways to alleviate the stress. Have students share  their own ideas. Discuss other healthy ways to cope.

*Examples: go for a walk, call a friend, read a book, exercise, listen to music, talk to a trusted adult*

**SLIDE 26:**

* Best way to not struggle with vaping, is to not start! How can we say “no”?

*Interactive Activity:* Hand out “Creative Ways to Say No to E-cigs” and “Your Influences” worksheets to students. Have the students do them together. (Worksheets attached in email or at this link: <https://med.stanford.edu/tobaccopreventiontoolkit/activity-pages/Creative_Ways_to_Say_No_to_E-Cigs.html>)

**SLIDE 27:**

* If you have already started vaping, there are ways that you can quit.

 (Click on links to show resources)

**SLIDE 28:** No teacher notes

**SLIDE 29:** No teacher notess