Grade 10 Lesson Plan
Unit 29 – Don’t Halt Your Heart By Using an Alt(o)

SOLs
● 10.1.M) Identify health-related social issues, such as organ donation, homelessness, the spread of infectious diseases, underage drinking, substance abuse, and violence, and their impact on the community.

*Alto is another popular e-cigarette brand among youth.*

Objectives/Goals
1. Student will be able to identify the health risks associated with e-cigarette use.

Materials
● Crossword Puzzle Review
● Don’t Halt your Heart By Using an Alt(o) PowerPoint or Prezi
● Exit Slip

Procedure

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
<th>Objective # Addressed</th>
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<tbody>
<tr>
<td>Step 1</td>
<td>Essential Questions:</td>
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<td></td>
<td>● What are the risks of e-cigarette use?</td>
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<td>Step 2</td>
<td>Students will complete a crossword puzzle review as they come in and find their seat.</td>
<td>#1</td>
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<td>Step 3</td>
<td>Begin the PowerPoint or Prezi with Guided Notes</td>
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<td>● E-Cigarettes affect on the body</td>
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<td>● Guided Notes provided below</td>
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<td>Step 4</td>
<td>Exit Slip</td>
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<tr>
<td></td>
<td>● Provided below</td>
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</tbody>
</table>

Assessment Ideas
● Crossword Puzzle Review
● Exit Slip Provided Below
References
  ● Marie Leake, M.A.T. Albemarle County Public Schools

Handouts
  ● Crossword Puzzle Review
  ● Guided Notes
  ● Exit Slip
E-Cigarette Review

Use your past guided notes and web scavenger hunt for the answers.

ACROSS
4 Some research suggests that e-cigarette use may serve as a ________________ or introductory product for youth to try other tobacco products, including regular cigarettes.
7 The age to purchase nicotine products in Virginia has ________________ from 18 to 21 years old.
8 The aerosol from e-cigarettes contain varying amounts of ________________ chemicals.
9 When nicotine enters the body, it initially causes the ADRENAL GLANDS to release a hormone called ________________.

DOWN
1 What is the chemical that leads to addiction in e-cigarettes?
2 Formaldehyde is linked to ________________, particularly of the nose and throat.
3 Nicotine causes people to use e-cigarettes again for more of that good feeling, which can lead to ________________.
5 What do e-cigarettes produce?
6 What hormone in the BRAIN is released when we enjoy something?
*alien voice from Toy Story* The Brainnnnnnnn

The area of the brain responsible for emotions and controlling our impulses is known as the ___________________ ___________________.

It’s very vulnerable to nicotine’s effects. This is especially true for young people. The reason: This part of the brain doesn’t finish developing until about age ________.

The brains of teens who smoke or vape may create ______________ receptors to handle the flood of nicotine they have come to expect. As the number of receptors increases, teens will need more nicotine to get the same feeling. That makes nicotine users seek hit after hit, resulting in ________________.

The Brain and Nicotine

The increase of nicotine receptors in the brain can result in teens having a more difficult time focusing.

It can also result in _______________ and ________________.

E-Cigarettes and the Heart

Daily use of e-cigarettes ______________ your risk to having a ______________ ______________.

Daily use of tobacco products and e-cigarettes makes you _____ ___________ as likely to have a heart attack.

(E-Continued on next page)

E-Cigarettes and the Lungs

Even though we know that ______________ causes ______________ ______________, this chemical is found in many e-cigarette flavors. It is added to "e-juice" liquid by some e-cigarette
companies to complement flavorings such as vanilla, maple, coconut and more.

When inhaled, diacetyl causes bronchiolitis obliterans (a.k.a. Popcorn Lung) a scarring of the tiny air sacs in the lungs resulting in the _________________ and _______________ of the airways. It's a serious lung disease that causes coughing, wheezing and shortness of breath.

E-cigarettes produce a number of toxic chemicals such as acetaldehyde, acrolein, acrolein, and formaldehyde. These chemicals have been found to cause ___________ ____________, ________________, and __________ ____________.
E-cigarette use can double your risk of a heart attack.

True  
False

Some chemicals found in e-cigarettes can result in:
Asthma
Lung Disease
Lung Cancer
All of the above