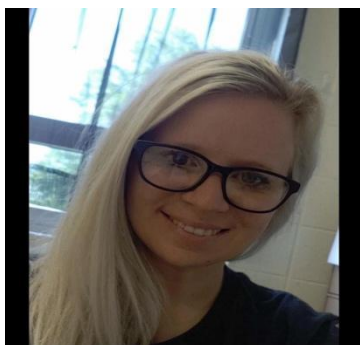


Vaping: Is it Worth it?

JuliAnna Yardley



Teacher Bio

I teach middle school science 6th-7th grade. I teach at Houston Middle School district in Houston, MO. I have a Bachelor's degree in Elementary Education and a Master's degree in Administration and Curriculum development.

Unit description:

This unit helps students understand the importance of their heart, and what affects vaping has on their hearts and bodies. The unit will incorporate Literacy and Science to help build understanding of Claim-Evidence-Reasoning.

I implemented this text set with 7th grade students in seat class. There are different scaffolds to help with diverse learners including text-to-speech, guided questions, partner reading, sharing ideas from partners.

Multimodal Text Set

Source	Title	Type	Grade Level/ Lexile
ANCHOR			
Linking Science and Literacy for All Learners	<u><i>Vaping: Not for the Young of Heart</i></u>	Anchor text	6-8
SCAFFOLDS			
Heart picture/Png Item	<u>https://www.pngitem.com/middle/iRwJmoh_real-diagram-of-heart-hd-png-download/</u>	Picture	4-8

Edpuzzle-	How the heart Works https://edpuzzle.com/media/60e85e98f76151417040264c A video with questions to help with the understanding of how the heart works, and why its important to be "heart healthy."	Video/questions	6-8
Developed by Julianna Yardley	Intro to Vocabulary https://jamboard.google.com/d/1Mv4JP7J4AYEbg1BiHrvLKKZy7b3flsCljEpd2KJk4-w/edit?usp=share_link	Graphic organizer	6-8
Developed by Julianna Yardley	Heart Rate Discovery https://docs.google.com/document/d/1n3cFMQUfUECNXYuWs-D24V1JB-2m4NjJMXthe1RX-wY/edit?usp=sharing	Lab	6-8
Youtube- SciShow Kids	How to feel your heartbeat How to Feel Your Heart Beat	Video	4-8
Youtube Kids	How graph your data on Google Sheets https://www.youtube.com/watch?v=VmDZF95BGcg	video	6-8
Developed by M. Greene	Claim,Evidence, Reasoning https://docs.google.com/document/d/1UP48oUmd_BKYvA5Kg6wOLQPOxAfEbOmIEedXDs_QyzA/edit	Graphic organizer	6-8
Model Teaching.com	Claim, Evidence, Reasoning https://www.modelteaching.com/education-articles/writing-instruction/claim-evidence-reasoning-cer	video/interaction	6-8
CER Worksheet-developed by M. Greene	Claim-Evidence-Reasoning https://docs.google.com/document/d/1LBFYF8SZqXayoVOGL6ycVmFZIH2TMq3CtwhFJokPpTk/edit?usp=sharing	Graphic organizer	6-8
Model Teaching.com	Ads-Claim, EvidenceReasoning	Website	6-8

	https://www.modelteaching.com/education-articles/writing-instruction/claim-evidence-reasoning-cer		
Developed by JuliAnna Yardley	C-E-R Summary Jamboard https://jamboard.google.com/d/1qJ6LHNYdPW8FJV4Z5FTgs7wyN52uzRrWcPGx8TSNU6A/viewer	jamboard /interaction	6-8
Developed by Alice Keller	Claim-Evidence-Reasoning - The Office Video- https://alicekeeler.com/2019/10/05/the-office-is-on-fire-claim-evidence-and-elaboration/	Video/Interaction	6-8
Developed by Courtney Clark	C-E-R- Summative Quiz https://quizizz.com/admin/quiz/5e4607ae7918e9001eb5adf8/claim-evidence-reasoning	Summative	5-8
Linking Science and Literacy for All Learners	Anchor text-Vaping Not for the Young at Heart- Vaping Anchor Text	Reading	6-9
Developed by: Wyntey Steelman	Google Slides- Vocabulary Concept Map https://docs.google.com/presentation/d/19DFHHZSXo61od9OdIlpAskHRR_7RaelbkorRTHewnDA/edit?usp=sharing	Vocab Review	6-8
Developed by JuliAnna Yardley	Google Slides Chat Stations https://docs.google.com/presentation/d/1VgT3vJc1obc5qVvuGN_Jw5soyg1oWysV-KOufNnF0qA/edit?usp=sharing	Reading Comprehension	6-8
Linking Science and Literacy for All Learners	Anchor Text: https://scienceandliteracy.missouri.edu/resources-materials/	Reading/highlighting	6-8
Developed by Wyntey Steelman	Concept Map: Vocabulary https://docs.google.com/presentation/d/1vdC11GB-UcZMM9oQj_kKwXnz9SE49_rr26unP72x8DE/edit?usp=sharing	Definitions	6-8


Developed by William Folk	Dr.William Folk- Planarian Lab https://www.youtube.com/watch?v=QEG0Qkd0H20 https://www.youtube.com/watch?v=X1PD0ZUm6Lo https://www.youtube.com/watch?v=IOX1vc7bITc	Observing	6-8
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Unit Overview

Lesson	Outcome(s)	Connections to Standards (MLS, CCSS, NGSS)
1	Students will learn the different parts of the heart and come up with important vocabulary words. Students will be able to create data from the “Heartbeat Lab.”	<p>1 Comprehend and Interpret Texts (Approaching Texts as a Reader) 7.1.A Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.</p> <p>CCSS.ELA-LITERACY.W.7.1.B Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.</p> <p>MS-LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells</p> <p>NGSS 6-8.LS1.A.3 Develop an argument supported by evidence for how multicellular organisms are organized by varying levels of complexity: cells, tissue, organs, and organ systems</p>
2	<p>Students will be able to state claims based on observations and reasoning.</p> <p>Students will draw conclusions based on scientific information they gathered from their data.</p>	<p>MLS</p> <p>CCSS.ELA-LITERACY.W.7.1.A :Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically</p> <p>ELA-LITERACY.W.1.B Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.</p>

		<p>NGSS 6-8.LS1.A.3 Develop an argument supported by evidence for how multicellular organisms are organized by varying levels of complexity: cells, tissue, organs, and organ system</p>
3	Students will read and comprehend different types of reading.	<p>CCSS. ELA-LITERACY.RI.7.1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. ELA-LITERACY.W.7.1.A Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically. NGSS 6-8.LS1.A.3 Develop an argument supported by evidence for how multicellular organisms are organized by varying levels of complexity: cells, tissue, organs, and organ system</p>
4	Students will see how vaping affects the body, and brain using the planaria.	<p>MLS 6-8.ETS1.B.3 <u>Developing Possible Solutions</u> Develop a model to generate data for iterative testing (tweaking and repeating) and modification of a proposed object, tool, or process such that an optimal design can be achieved. 6_R_4_C: Explain the central/main idea(s) of a text and cite evidence of its development; summarize the text. [Summarize/Claim] (6.RI.1.D) (CCSS RI.6.2) 6_R_2_B: Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials. NGSS 6-8.LS1.A.3 Develop an argument supported by evidence for how multicellular organisms are organized by varying levels of complexity: cells, tissue, organs, and organ system</p>

Unit Lesson #1

Guiding Questions	How does your heart work? Why is it important? What affects your heart?	
	Key Idea	Learning Activities
Engage	To introduce what the heart is, how it works in our body and why it's important.	<p>-Using think-pair-share, students will think about what they already know about it. Pair with a partner and share their ideas to each other and the whole class. students will look at the in-class diagram and think about what they already know about the heart and have good group discussions. Create an anchor chart over students' discussions.</p> <p>- Model good group discussions</p> <p>-Watch Edpuzzle (You can login through google, but the website is free. Search Heartbeat video over the heart, It's called Heart, part 1 under pressure by Donnell Cornwell)</p> <p>-Using think-pair-share, discuss what we now know about the heart- we will add onto our chart. Have them create important vocabulary words on Jamboard. Each student will use a page to create important vocabulary words to share with the class.</p>
Explore	Heartbeat lab	<p>Students will get to see a cow heart and dissect it to see each part of the heart.</p> <ol style="list-style-type: none"> 1. They will put gloves on- first feel the heart and see the different parts 2. We will cut open the heart to show each part of the inside of the heart. 3. Students will use toothpicks to identify the different parts of the heart (they can use their computers to help them identify the different aspects of the heart) <div data-bbox="590 1060 756 1386">  </div> <p>In the Heartbeat Lab you will investigate what happens to your heart when you increase your activity:</p> <ol style="list-style-type: none"> 1) Students will compete in different activities to help them measure their own heart rate. 2) Using the Google link Heart Rate Lab students will complete the charts. <p>Watch this heartbeat video to learn how to take your own pulse.</p>

Explain	Investigating the effects activities have on the heart.	<p>Gathering a hypothesis:</p> <ol style="list-style-type: none"> 1. Students will use their background knowledge to come up with a hypothesis of the activity. 2. Experiment: Students will use the heart lab journal to complete each activity- they will work in groups to complete each step of the activity. <p>Materials:</p> <p>Stopwatch Heart Rate Lab data sheet https://docs.google.com/document/d/1FNTduz7zJVgzYrRWVv2sGMp67qc87kAj8jeO9BBbTc0/edit?usp=sharing</p> <p>Procedures:</p> <ol style="list-style-type: none"> 1. Find your heartbeat by placing two fingers on your wrist. 2. Ask an adult for assistance if you experience any difficulty with this task. 3. Count each thump as one beat. 4. Set your timer for 15 seconds. Sit calmly with your eyes closed. 5. Count the number of beats (thumps) for 15 seconds. 6. Multiply the number of beats by four. This is how much your heart beats in a minute while you are resting (your resting heart rate).
Elaborate	Graphing heart rate	Students will watch this clip to show them how to create a google sheet to graph their data. Using their data they will construct a graph to represent their data.
Evaluate	Drawing conclusions	<p>Using their data students will use their science notebooks to answer these following questions:</p> <ol style="list-style-type: none"> 1. Analyze your data table- What conclusion can you draw based on the information from your data table? 2. Thinking back to when you were doing the activities, how were you feeling when you were doing each activity? Physically, emotionally? 3. Explain when your heart was beating the fastest, and the slowest?

Unit Lesson #2

Guiding Questions	How can finding Claim, Evidence and Reason help with comprehension of a text?	
	Key Idea	Learning Activities
Engage	Introduction to C-E-R	<ul style="list-style-type: none"> -Give students the handout about Claim, Evidence, Reason. Have students use different color markers and highlight what the definitions are for each. -Have students read out loud the different definitions. -Watch the following Video, posing the question “What happened to the Cat?” -Using marker boards (provided in classroom) students will first write their claim, then they will write their evidence. Students will share their thoughts to the class. -Using Jamboard students will create a summary about C-E-R
Explore	Practice w/ C-E-R Magic School	<ul style="list-style-type: none"> -Students will go through the Magic School Bus-Inside the human heart. They will look for vocabulary words they are unfamiliar with. Students will create a list of words- then we will create a vocabulary wall. Using a jamboard template to help with the understanding of the different vocabulary words. - Alternative/additional activity: Used newspaper clippings to enhance the understanding of the claim-evidence-reasoning.
Explain	Read/C-E-R Magic School bus	We will first read the 1st page together. They will come up with the Claim, Evidence- Reasoning to place on the board. Students will then read on their own and complete the following Document .
Elaborate	C-E-R	<p>Students will watch a quick Video. They will come up with C-E-R from watching the video- Students will find an AD-Video to show their group so they can work on quizzing their teammates over C-E-R.</p> <p>Using Newspaper clippings- Give them random headings, subtitles, and articles to read to pull out the Claim, Evidence, Reasoning.</p>
Evaluate	Develop a quiz	Give a quiz to ask summative questions about C-E-R.

Unit Lesson #3

Guiding Questions	How can vaping affect teenagers? How can it affect your heart, and your body?	
	Key Idea	Learning Activities
Engage	Identify prior knowledge /misconceptions.	Hand sticky post-it notes to students: Have them write down all the things they think they know about vaping. Have them discuss with their teammates what they think is true or not. They will place Sticky notes on one side of the table if they think they are true, the other side will be false. We will place these on my board to keep for later.
Explore	“Vaping: Not for the Young at heart”	Students will get a copy of Vaping: Not the young at heart , they will skim through the reading and highlight words they may not know or understand. We will place these words on a chat wall- Students will look up words they don't know, and create a vocabulary Concept Map . They can go back and look at the vocabulary words when needed. (Yellow Highlighter)
Explain	Reading for understanding	Students will use a highlighter (green) to highlight the different claims they found. Students will use pink highlighters to highlight evidence. We will read together as a group Summary & Introduction . Students will read Study - highlight claims and evidence. Students will read Discussion - highlight claims and evidence. Students will go back through their claims and evidence. They will discuss with their groups how and why they came up with their claims.
Elaborate	Chat stations	In pairs, students will create Chat Stations over their claims and each student will rotate through the different stations. Using Anchor Text students will read the claims-evidence they came up with, and come up with reasonings to go along with their Claims/Evidence.

Evaluate	Develop a quiz	Evaluate student learning and understanding of vaping.
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Unit Lesson #4

Guiding Questions	What are the effects of vaping?	
	Key Idea	Learning Activities
Engage	Research the similarities between planaria and humans.	Students will research (using computers, magazines) what a planaria is, and how it is like the human body. They will create a quick write and share with their “high five” partner. A high-five partner is where they stand up, hand up, and they must pick someone from another table with their hand up, give a quick high five, and share what they learned.
Explore	Students will investigate what planaria look like, how they move, and how they eat.	<ol style="list-style-type: none"> 1. Watch all (or at least 2) of the videos from the list below. Watch them as a pre-lab activity with the high-five partner. How to analyze planaria behavior Planaria up and close! Planaria feeding time 2. Take notes in your science notebook (writing tab) to understand how and what planaria are. 3. Go find another group and share your findings.
Explain	Students will examine what effects/causes of nicotine	<p>For each video students will be taking rolling notes to go along with the videos. Student will use this document to answer the questions</p> <p> The effects of nicotine on planaria Effects of drugs on planaria Measuring planaria movement Final Study-Holly R. Middlekauff </p>

Elaborate	Listen/Learn	Students will come up with questions from the reading, videos and do a fishbowl cooperative learning strategy. After watching the video they will come up with questions from their research or the videos. They will write them on a piece of paper and place them in the bowl. The teacher takes the bowl around and students draw questions. They can answer or pass if they don't know the answer. Go around the room and have good discussions about the questions.
Evaluate	Reasoning/Evidence	<ol style="list-style-type: none"> 1. After watching videos/reading articles students will use 2 truths and a lie to evaluate their understanding of the effects of nicotine to the body. 2. They will complete 2 truths and lie paper (Note, you change it from yourself to about the topic you are teaching.)

This text set was created by Julianna Yardley, of the *Linking Science & Literacy for All Learners* team.

<https://scienceandliteracy.missouri.edu/>

[with funding from](#)

