

<b>Lesson Title</b>	<b>9. A Nutritionist's Concern: Vitamin D Deficiency</b>
<b>Lesson Designer</b>	Catherine Piscitelli
<b>Standards</b>	<input checked="" type="checkbox"/> CCSS <input checked="" type="checkbox"/> NGSS <input type="checkbox"/> ASCA <input type="checkbox"/> Other <a href="#">CCSS.ELA-LITERACY.RST.9-10.9</a> Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. CCSS.ELA-LITERACY.RST.11-12.2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
<b>Learning Objectives</b>	Students will be able to: <ul style="list-style-type: none"> <li>• Describe the importance of Vitamin D</li> <li>• Describe sources of Vitamin D</li> <li>• Explain how the skin makes Vitamin D</li> <li>• Identify signs, prevention, and treatments for Vitamin D deficiency</li> <li>• Describe the informational role of nutritionists and healthcare workers</li> </ul>

<b>Timeline</b>	<b>Duration</b>
Opening Activity Learning Activity Application Learning Task	3-4 60-minute lessons

<b>Teaching Strategies/Student Actions</b>	<b>Monitoring</b>
1. Opening Activity: Teacher asks opening question to assess prior knowledge. Students brainstorm reasons for Vitamin D deficiency. 2. Learning activity: Students complete the WebQuest to research important information about Vitamin D and deficiency. 3. Application: Students create an informational video or pamphlet for nutritionists or healthcare providers to use about Vitamin D and deficiency.	<ul style="list-style-type: none"> <li>• Teacher monitors student progress</li> <li>• Teacher facilitates discussion of correct answers to WebQuest</li> <li>• Teacher questioning during review</li> <li>• Teacher monitors student progress on application task</li> </ul>

<b>Product Description</b>	Students will use their application skills and new knowledge to create an informational video or pamphlet on vitamin D for nutritionists and healthcare workers to use for their patients.
<b>Evaluation</b>	Teacher evaluates the application project to assess that the student understands the importance of Vitamin D and the role of nutrition and skin as sources of Vitamin D

<b>Resources and Materials</b>	<b>Additional Notes</b>
<ul style="list-style-type: none"> <li>• WebQuest</li> </ul>	

# Teacher Resource Guide

## Introduction

Nutritionists and healthcare workers are seeing the number of cases of Vitamin D deficiency increase over the past several years. There are currently over 1 billion people worldwide that are deficient in Vitamin D.

## Opening Activity

1. Teacher poses the following question: *What are sources of vitamin D?*
2. Students brainstorm some reasons why people may be deficient in vitamin D.

## Learning Activity

1. Students complete WebQuest to answer questions.
2. Students revise knowledge from opening activity, based on research.

## Application

Students create a 2-3 minute video OR an informational pamphlet for nutritionists or healthcare professionals to use for their patients that details:

- The importance of vitamin D
- Symptoms of deficiency
- How to avoid deficiency
- Potential treatments for deficiency

## Vitamin D WebQuest

Use several online resources to respond to the following:

Prompt	Information	Source
What is Vitamin D and why is it important to humans?		
Describe the symptom of someone with Vitamin D deficiency.		
List some of the treatments for Vitamin D deficiency.		
Anatomy and Physiology Connection		
What are the three layers of the skin?		
Which layer is responsible for Vitamin D production?		
How does this layer make Vitamin D?		
What is the recommended amount of UV exposure for the average person?		

After doing the above research, reexamine your initial list of reasons that someone may become deficient in Vitamin D. Add any new findings.

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## Vitamin D Instructional Pamphlet/Video Rubric

Element	Value	Earned
Importance of Vitamin D are covered and accurately stated.	5	
Several symptoms of deficiency are discussed and are accurate.	5	
Multiple ways to avoid deficiency are presented and correct.	4	
Potential treatments for deficiency are explained and valid.	4	
List of at least three sources is provided. Sources are reliable.	3	
<i>Video only:</i> Video is professional. Sound is clear.	(5)	
<i>Pamphlet only:</i> Pamphlet is professional and aesthetically pleasing. Correct grammar and spelling are used.	(5)	
<b>Total</b>	<b>26</b>	

