

## Daily Lesson Plan

<b>Course Name:</b>	
<b>Unit Title: Radioactivity and the Body</b>	<b>Day: 5 of 15</b>
<b>Relevant NC Standard Course of Study Goal(s):</b> <ul style="list-style-type: none"> <li>● EEn.2.2.2 Compare the various methods humans use to acquire traditional energy sources (such as peat, coal, oil, natural gas, nuclear fission, and wood).                     <ul style="list-style-type: none"> <li>○ Compare the methods of obtaining energy resources: harvesting (peat and wood), mining (coal and uranium/plutonium), drilling (oil and natural gas) and the effect of these activities on the environment.</li> </ul> </li> <li>● EEn.2.7.3 Explain how human activities impact the biosphere.                     <ul style="list-style-type: none"> <li>○ Summarize ways to mitigate human impact on the biosphere.</li> </ul> </li> <li>● EEn.2.8.1 Evaluate alternative energy technologies for use in North Carolina                     <ul style="list-style-type: none"> <li>○ Critique the benefits, costs and environmental impact of various alternative sources of energy for North Carolina (solar, wind, biofuels, <b>nuclear fusion</b>, fuel cells, wave power, geothermal).</li> </ul> </li> </ul>	
<b>Specific Lesson Objectives</b>	
<b>Students will understand:</b> <ul style="list-style-type: none"> <li>● the complexity of how each nation uses and harvests energy</li> <li>● how energy use by nation relates to their daily lives and has differential impacts on the environment</li> </ul>	
<b>Students will know:</b> <ul style="list-style-type: none"> <li>● Vocabulary Part I (physical science portion)</li> <li>● Different energy use data by nation and how these data change by global region/country/etc.</li> </ul>	
<b>Students will be able to:</b> <ul style="list-style-type: none"> <li>● Define key terms to build on their knowledge of radiation/radioactivity/energy transfer</li> <li>● use a website to obtain energy data which environmental scientists use</li> </ul>	

<b>Key Vocabulary/Formulae for this Lesson</b>
<ul style="list-style-type: none"> <li>● energy, nuclear energy, fossil fuels, radiation</li> </ul>
<b>Materials</b>
<ul style="list-style-type: none"> <li>● vocabulary quiz copies, Energy Use By Nation handouts, Guided notes optional</li> </ul>
<b>Technology Needs</b>
<ul style="list-style-type: none"> <li>● Laptops and internet access: access to Google energy data</li> </ul>

<b>LESSON ACTIVITIES</b>
<b>Opening (Hook, Warm-Up, Anticipatory Set, Review, etc.)</b>
<p><i>Describe activity to elicit active involvement of students or refer to previous learning:</i>            Students will individually review their vocabulary flash cards they created earlier in the unit before their quiz.</p>

<b>Procedure: Include all sections that apply to this lesson; combine as necessary.</b>			
<b>Section</b>	<b>Time</b>	<b>What the Teacher will do:</b>	<b>What the Students will do:</b>
<b>Statement of Objective &amp; Purpose</b>	5 min	<p>Discuss objectives for the day with students. Teacher has already written an essential question for the day on the board, which students must answer as part of their homework (due each Friday).</p> <p>Introduce this part of the unit as radioactivity and how it relates to the environment, and remind students to use warm-up time to review their flashcards for the quiz today.</p>	<p>Students will listen and copy down their essential question of the day. Students will use warm-up time to review vocabulary flashcards briefly before Vocabulary Quiz Part 1.</p>
<b>Check for Understanding</b>	20 min	<p>Distribute vocabulary quiz and direct students to mark answers neatly, turn in quiz to the front when finished.</p>	<p>Students will complete vocab assessment and quietly return to seat when finished.</p>
<b>Input</b>	25 min	<p>Teacher introduces traditional v. nontraditional energy use by asking students to volunteer types of energy they already know. Teacher keeps list on board to add to during guided notes.</p> <p>Teacher lectures and fields questions/poses questions to students about their own experiences with different types of energy (fossil fuels, hydropower, nuclear, etc.)</p>	<p>Students volunteer examples of energy sources of which they are already aware. Students take notes on Introduction to human energy use.</p>
<b>Guided Practice</b>	40 min	<p>Teacher will pass out handout/table for Google Data on Energy Use by Nations. Teacher will distribute laptops to students. Teacher will model obtaining information/data from the Google Energy Data for the students (laptop actions projected on board as students navigate site with teacher).</p> <p>Teacher assigns each team (3-4 students) their 3-5 assigned nations which they must find information for on the site. Teacher circulates to assist students with research.</p>	<p>Students break into groups of 3-4 and navigate to website. Students follow along with teacher as he/she models how to find information from the data compiled on the site by nation. Students work in teams to find information for their 3-5 assigned nations.</p>

<b>Closing/ Summary</b>	2 min	Teacher instructs students to return laptops and return to normal seats to pack up. Teacher announces that class will continue energy stations tomorrow if class is not finished	Students return laptops.
<b>Assessment of Student Learning</b>			
<i>How &amp; when will you know that the students have learned this material?</i>			
<b>Differentiation Strategies*</b>			
<i>How will you adjust aspects of the lesson to accommodate student READINESS?</i>			
<b>Struggling Students:</b>	<b>Gifted/Advanced Students:</b>	<b>English Language Learners:</b>	
<i>How will you adjust aspects of the lesson to accommodate students' LEARNING PROFILES?</i>			
<i>How will you adjust aspects of the lesson to accommodate students' INTERESTS?</i>			