

## Daily Lesson Plan

<b>Course Name:</b>	
<b>Unit Title: Radiation and the Human Body</b>	<b>Day: 8 of 15</b>
<b>Relevant NC Standard Course of Study Goal(s):</b> <ul style="list-style-type: none"> <li>● EEn.2.2.1 Explain the consequences of human activities on the lithosphere past and present.                             <ul style="list-style-type: none"> <li>○ Explain ways to mitigate detrimental human impacts on the lithosphere and maximize sustainable use of natural resources.</li> </ul> </li> <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>● nuclear power is a highly efficient and “cleaner” energy source in that it does not produce carbon emissions, but there are many controversies over the long-term nuclear waste disposal from these power plants.</li> </ul>	
<b>Students will know:</b> <ul style="list-style-type: none"> <li>● <b>the definitions of nuclear waste and the nature of the radioactivity of uranium</b></li> <li>● the standard methods for containing and managing nuclear waste in the United States, which a regional example from North Carolina</li> </ul>	
<b>Students will be able to:</b> <ul style="list-style-type: none"> <li>● describe methods for obtaining uranium and for disposing of nuclear waste</li> <li>● create a study material for the pros and cons of nuclear waste, as well as locate nuclear power plants on a map of North Carolina</li> </ul>	
<b>Key Vocabulary/Formulae for this Lesson</b>	
<ul style="list-style-type: none"> <li>● radioactivity, nuclear waste, uranium, mutagenesis</li> </ul>	
<b>Materials</b>	
<ul style="list-style-type: none"> <li>● notes handouts, printer paper or colorful paper for foldables</li> </ul>	
<b>Technology Needs</b>	
<ul style="list-style-type: none"> <li>● PowerPoint (teacher)</li> </ul>	

<b>LESSON ACTIVITIES</b>			
<b>Opening (Hook, Warm-Up, Anticipatory Set, Review, etc.)</b>			
<i>Describe activity to elicit active involvement of students or refer to previous learning:</i>			
<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	Teacher will introduce topic of nuclear management and waste disposal. Teacher will guide students to copy down homework and essential question of the day before beginning lecture.	Students will listen, and copy down homework and essential question of the day into their notebooks.
<b>Input, Modeling, &amp; Check for Understanding</b>	25 min	Lecture/discussion on radioactive waste and Nuclear Waste Disposal/Management	Students take notes and ask questions concerning nuclear waste management.
<b>Guided Practice</b>	30 min	Teacher guides students in making a quick-reference study material in the form of a foldable for Nuclear Energy and Radioactivity. Teacher circulates as students use notes to find relevant information for study foldables.	Students listen to directions and follow along with teacher modeling example for Nuclear Energy and Radioactivity Foldable. Students use notes to complete study material.
<b>Independent Practice/ Homework</b>	15 min	Teacher distributes two brief opposing articles on nuclear energy use in the United States (North Carolina) and explains directions for summaries.	Students begin to read opposing articles and write summaries following printed instructions. Continue for homework.