


# Three Dimensional Learning Plan: **HS-PS1-8**

Grade Level: **High School**






Title	<b>Fission/Fusion/Radioactive Decay</b>	Phenomenon/Problem	<b>The decision has been made to shut down Indian Point Nuclear Power Plant</b>
Designed by	<b>Jennie and Suzie</b>	Course(s)	<b>Regents Chemistry</b>
Brief Learning Description			
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Desired Results			
Performance Expectation(s)			
<b><u>HS-PS1-8: Fission, Fusion, and Radioactive Decay</u></b> Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. (Energy and Matter)			
Summative Assessment			
<u>Mars Rover Power</u>			
What skills (practices) will students need to learn?	What thinking concepts will students need to learn?	What science concepts will students need to learn?	What relevant or local phenomenon can be used to teach these concepts?








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Activity 1			
 <p>Phenomenon or Problem</p>	 <p><b>What will they do?</b> The three dimensions woven together into a single learning performance.</p>	 <p><b>Why is this important?</b> How does this activity help build understanding of the anchoring phenomenon.</p>	 <p><b>How will they do it?</b> Graphic organizers, protocols, scaffolds, labs, mini-lesson, student discourse, etc.</p>
 <p><b>Formative Assessment</b> What information are you collecting to know that they met the target?</p>		•	

Activity 2			
 <p>Phenomenon or Problem</p>	 <p><b>What will they do?</b> The three dimensions woven together into a single learning performance.</p>	 <p><b>Why is this important?</b> How does this activity help build understanding of the anchoring phenomenon.</p>	 <p><b>How will they do it?</b> Graphic organizers, protocols, scaffolds, labs, mini-lesson, student discourse, etc.</p>
 <p><b>Formative Assessment</b> What information are you collecting to know that they met the target?</p>		•	

Activity 3			
 <p>Phenomenon or Problem</p>	 <p><b>What will they do?</b> The three dimensions woven together into a single learning performance.</p>	 <p><b>Why is this important?</b> How does this activity help build understanding of the anchoring phenomenon.</p>	 <p><b>How will they do it?</b> Graphic organizers, protocols, scaffolds, labs, mini-lesson, student discourse, etc.</p>
 <p><b>Formative Assessment</b> What information are you collecting to know that they met the target?</p>		•	



Activity 4			
 <p>Phenomenon or Problem</p>	 <p>What will they do? The three dimensions woven together into a single learning performance.</p>	 <p>Why is this important? How does this activity help build understanding of the anchoring phenomenon.</p>	 <p>How will they do it? Graphic organizers, protocols, scaffolds, labs, mini-lesson, student discourse, etc.</p>
 <p><b>Formative Assessment</b> What information are you collecting to know that they met the target?</p>		•	

Activity 5			
 <p>Phenomenon or Problem</p>	 <p>What will they do? The three dimensions woven together into a single learning performance.</p>	 <p>Why is this important? How does this activity help build understanding of the anchoring phenomenon.</p>	 <p>How will they do it? Graphic organizers, protocols, scaffolds, labs, mini-lesson, student discourse, etc.</p>
 <p><b>Formative Assessment</b> What information are you collecting to know that they met the target?</p>		•	
 <p><b>Summative Assessment</b> What information are you collecting to know that they met the target?</p>		•	

Materials / Resources
<p><b><u>Vocabulary</u></b></p> <p>Nuclear processes</p> <p>Nucleus</p> <ul style="list-style-type: none"> <li>- Neutrons</li> <li>- Protons</li> </ul> <p>Atom</p> <p>Energy and Matter</p> <p>Fission</p>



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Fusion  
Radioactive decay

**Graphic Organizers**

[Phenomena Observation Graphic Organizer](#)

[Questioning Graphic Organizer](#)

[Modeling Graphic Organizer](#)

[Planning an Investigation Organizer - Experimental](#)

[Planning an Investigation Organizer - Observational](#)

[Investigation Evidence Organizer](#)

[Engaging in Argumentation Organizer](#)

Differentiation / Modifications



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