


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

Grade Level: **High School**

Title		Phenomenon/Problem	
Designed by		Course(s)	
Brief Learning Description			
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Desired Results		
Performance Expectation(s)		
HS-PS1-8: Fission, Fusion, and Radioactive Decay 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		
Mars Rover Power		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<input type="checkbox"/> Analyzing & Interpreting Data <input type="checkbox"/> Asking Questions <input type="checkbox"/> Constructing Explanations <input type="checkbox"/> Defining Problems <input type="checkbox"/> Designing Solutions <input checked="" type="checkbox"/> Developing & Using Models <input type="checkbox"/> Engaging in Argument from Evidence <input type="checkbox"/> Mathematics & Computational Thinking <input type="checkbox"/> Obtain, Evaluate, Communicate Information <input type="checkbox"/> Planning & Carrying Out Investigations	<input checked="" type="checkbox"/> PS1.C: Nuclear Processes	<input type="checkbox"/> Cause & Effect <input checked="" type="checkbox"/> Energy & Matter <input type="checkbox"/> Patterns <input type="checkbox"/> Scale, Proportion & Quantity <input type="checkbox"/> Stability & Change <input type="checkbox"/> Structure & Function <input type="checkbox"/> Systems & System Models








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Required Elements			
What new skills (practices) will students need to learn?	What thinking concepts will students need to learn?	What science concepts will students need to learn?	What local phenomenon can drive the inquiry?

Activity 1			
 Phenomenon or Problem	 What will they do? The three dimensions woven together into a single learning performance.	 Why is this important? How does this activity help build understanding of the anchoring phenomenon.	 How will they do it? Graphic organizers, protocols, scaffolds, labs, mini-lesson, student discourse, etc.
 Formative Assessment What information are you collecting to know that they met the target?	<ul style="list-style-type: none"> 		













Activity 2			
 <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>Formative Assessment What information are you collecting to know that they met the target?</p>		<ul style="list-style-type: none"> 	






Activity 3			
 <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>Formative Assessment What information are you collecting to know that they met the target?</p>		<ul style="list-style-type: none"> 	

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>Formative Assessment What information are you collecting to know that they met the target?</p>		<ul style="list-style-type: none"> 	



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>Formative Assessment What information are you collecting to know that they met the target?</p>	<ul style="list-style-type: none"> 		

Activity 6			
 <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>Formative Assessment What information are you collecting to know that they met the target?</p>	<ul style="list-style-type: none"> 		






Activity 7			
 <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>Formative Assessment What information are you collecting to know that they met the target?</p>	<ul style="list-style-type: none"> 		







Activity 8



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 <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>Formative Assessment What information are you collecting to know that they met the target?</p>	<ul style="list-style-type: none"> 		

Activity 9			
 <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>Formative Assessment What information are you collecting to know that they met the target?</p>	<ul style="list-style-type: none"> 		
 <p>Summative Assessment What information are you collecting to know that they met the target?</p>	<ul style="list-style-type: none"> 		

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



Differentiation / Modifications



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