

Core Idea, Topic and Title	Established Goals	Understanding of Concepts	Essential Questions	Student Outcomes
GRADE ONE				
<p>Core Idea: Electromagnetic Radiation PS4B</p> <p>Topic: Properties of Light</p> <p>Title: <i>The Lights On</i></p>	<ul style="list-style-type: none"> Describe that objects can be seen only when light is available to illuminate them. 	<ul style="list-style-type: none"> Light is a form of energy. Light travels in a straight line until it hits an object, allowing all or some light to pass through or be blocked. 	<ul style="list-style-type: none"> What is light? Where does light come from? What are some objects that light passes through that some light passes through or, no light passes through? 	<ul style="list-style-type: none"> Name two objects: that light can pass through (transparent); allow some light through (translucent); block light (opaque).
<p>Core Idea: Electromagnetic Radiation PS4B</p> <p>Topic: Properties of Light</p> <p>Title: <i>Me and My Shadow (Part 1 and Part 2)</i></p>	<ul style="list-style-type: none"> Investigate that some materials block all the light and create a dark shadow. Investigate that shadow, size and shape can change. 	<ul style="list-style-type: none"> Light travels in a straight line until it strikes an object. You need light to make a shadow. The position of the light affects that size and shape of the shadow. 	<ul style="list-style-type: none"> What is a shadow? How do you make a shadow? Can a shadow change? 	<ul style="list-style-type: none"> Demonstrate how shadows are formed when your body blocks light from the sun or another source. Make shadows of different shapes and sizes. Ask other students how this was done.
<p>Core Idea: Engineering Design ETS1</p> <p>Topic: Engineering Design Process</p> <p>Title: <i>What is an Engineer?</i></p>	<ul style="list-style-type: none"> Engineers are community helpers who design and build things. Engineers take a problem and try to solve it by creating a solution using math and science. 	<ul style="list-style-type: none"> An engineer designs things using science and math, and makes things work more easily. 	<ul style="list-style-type: none"> What is an Engineer? What does an Engineer do? 	<ul style="list-style-type: none"> Create a tower and explain why you used the materials the way you did.