

**McKinley Presidential Library & Museum  
Planetarium Show Ohio Science Standards  
High School**



MCKINLEY PRESIDENTIAL  
Library & Museum

Course		
<b>Physical Science</b>	<b>The Universe</b>	History of the universe <ul style="list-style-type: none"> <li>• Galaxy formation</li> <li>• Stars               <ul style="list-style-type: none"> <li>• Formation; stages of evolution</li> <li>• Fusion in stars</li> </ul> </li> </ul>
<b>Physics</b>	<b>Energy:</b> Gravitational potential energy <ul style="list-style-type: none"> <li>• Nuclear energy</li> <li>• Work and power</li> <li>• Conservation of energy</li> </ul>	<b>Wave properties</b> <ul style="list-style-type: none"> <li>• Conservation of energy</li> <li>• Reflection</li> <li>• Refraction</li> <li>• Interference</li> <li>• Diffraction</li> <li>• Light phenomena</li> <li>• Ray diagrams (propagation of light)</li> <li>• Law of reflection (equal angles)</li> <li>• Snell's law</li> <li>• Diffraction patterns</li> <li>• Wave – particle duality of light</li> <li>• Visible spectrum and color</li> </ul>
<p><i>During the years of grades 9 through 12, all students must use the following scientific processes with appropriate laboratory safety techniques to construct their knowledge and understanding in all science content areas:</i></p> <ul style="list-style-type: none"> <li>• <i>Identify questions and concepts that guide scientific investigations</i></li> <li>• <i>Design and conduct scientific investigations</i></li> <li>• <i>Use technology and mathematics to improve investigations and communications</i></li> <li>• <i>Formulate and revise explanations and models using logic and evidence (critical thinking)</i></li> <li>• <i>Recognize and analyze explanations and models</i></li> <li>• <i>Communicate and support a scientific argument.</i></li> </ul> <p style="text-align: right;">(Ohio Dept. of Education, adopted 2011)</p>		