



**Science  
Advanced Placement  
Physics**

<b>Unit Name: Waves and Optics</b>			<b>First 9 Weeks, Days to Teach: 11</b>
<b>Date Taught</b>	<b>TEKS and AP Required Elements</b>	<b>Content/Vocabulary</b>	<b>Guiding Questions</b>
	<p>AP Physics Connections:</p> <p>XIII. Harmonic Motion Waves</p> <p>C. Transverse and longitudinal waves</p> <p>D. Reflection, refraction, diffraction and interference of waves</p> <p>E. Standing Waves</p> <p>F. Sound</p> <ol style="list-style-type: none"> <li>1. Doppler effect</li> <li>2. Resonance</li> </ol>	<p>Wave, medium, constructive and destructive interference, nodes, antinodes, amplitude, velocity, frequency</p>	<p>How do frequency and wave speed relate to one another?</p> <p>What is the role of the medium in wave propagation and speed?</p>
	<p>AP Physics Connections:</p> <p>XIII. Harmonic Motion Waves</p> <p>G. Transverse and longitudinal waves</p> <p>H. Reflection, refraction, diffraction and interference of waves</p> <p>I. Standing Waves</p>	<p>Nodes, antinodes, diffraction, Snell's law, interference, diffraction, spectrum</p>	<p>What happens to a wave at a boundary?</p> <p>Why are some objects transparent?</p>



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	<p>AP Physics Connections:</p> <p>XIV. Light I</p> <p>C. Reflection D. Refraction E. Color</p>	<p>Convex, concave, refraction, focal length, plane mirror, image, converging and diverging, virtual and real images</p>	<p>How does eyesight work?</p> <p>How do glasses affect the focal point?</p>
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