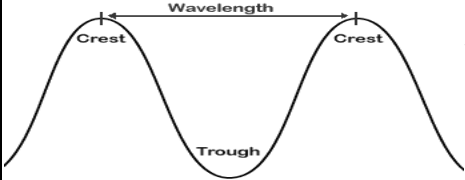
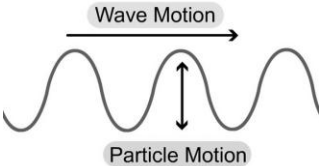
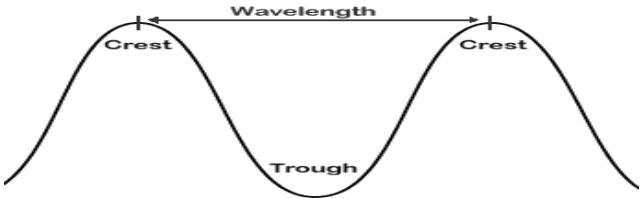
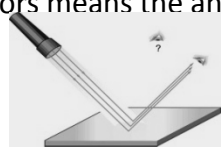
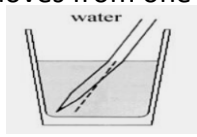
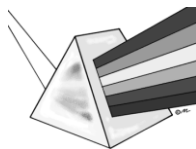
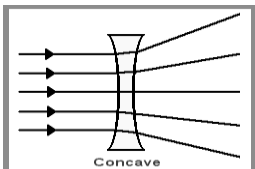


Light Study Guide

<p>What is light?</p>	<p>Light is fast moving electromagnetic radiation that travels in straight paths and is made of tiny photons.</p>
<p>How is the size of a light wave measured?</p>	 <p>The size of a light wave is determined by its wavelength.</p>
<p>What are transverse waves?</p>	<p>Waves that oscillate (move up and down) in a way that is opposite to the direction of energy travel.</p> 
<p>How does the frequency of a wave affect the amount of energy it has?</p>	<p>Frequency is the # of waves passing a given point each second. High frequency light has high energy and low frequency light has low energy.</p>
<p>Sort the following from most energy to least energy (see electromagnetic spectrum): Infrared, Visible light, Radio waves, X-ray, Gamma ray</p>	<p>Gamma, X-ray, Visible light, Infrared, Radio</p>
<p><i>Sort the colors</i> of visible light in order from least energy to most energy.</p>	<p>Red, Orange, Yellow, Blue, Violet (ROYGBV)</p>
<p>What are the parts of a transverse wave?</p>	
<p>What is the electromagnetic spectrum?</p>	<p>Its shows the entire range of electromagnetic radiation from high energy to low energy.</p>
<p>Are <i>black and white</i> spectral colors?</p>	<p>No. Black is when a material absorbs all visible light and white is a reflection of all visible light.</p>

<p>What is reflection of light?</p>	<p>Reflection is when light bounces off the surface it encounters. Reflection off mirrors means the angle of incidence=angle of reflection.</p> 
<p>What is refraction of light?</p>	<p>Refraction is when a light wave is bent resulting from a change in velocity as it moves from one area to another (air to water)</p> 
<p>The <i>amount</i> of bending of light (refraction) depends on which 3 things?</p>	<p>The density of the material it enters, the wavelength of the light wave, and the angle at which the original light wave enters.</p>
<p>What is dispersion of light waves?</p>	<p>When light is separated into a display of colors (<i>light entering a prism</i>)</p> 
<p>How are transparent/translucent/opaque materials <i>different</i> from one another?</p>	<p>Transparent- light passes through easily (clear glass)</p> <p>Translucent- light passes through partially (frosted glass)</p> <p>Opaque- light doesn't pass through at all (brick)</p>
<p>What is a concave lens?</p>	<p>A lens that curves inward and <i>causes a beam of light to spread out</i>.</p> 
<p>What is a convex lens?</p>	<p>A lens that curves outward and <i>causes a beam of light to meet at a focal point</i>.</p> 