

Florida Sunshine State Standards
Grades 6 through 8
Light, Sound, and Waves Series
Visual Learning Company
1-800-453-8481

Sunshine State Standards	Video Title with Concepts and Vocabulary	Teacher's Guide Activities	Assessment Tools
<p><i>The Nature of Light:</i></p> <p><i>The Nature of Matter</i> Standard 2: Benchmark SC.A.2.3.3 The student knows that radiation, light, and heat are forms of energy used to cook food, treat diseases, and provide energy</p> <p><i>Energy</i> Standard 1: Benchmark SC.B.1.3.3 The student knows the various forms in which energy comes to Earth from the sun (e.g., visible light, infrared, and microwave).</p> <p>.</p>	<p><i>The Nature of Light Video:</i></p> <p>This video describes the characteristics and principles of light. The program discusses the electromagnetic spectrum, including radio waves, infrared rays, ultraviolet rays, x-rays, and gamma rays.</p> <p>Concepts and vocabulary include: wavelength, frequency, light-years, longitudinal waves, transverse waves, gamma rays, ultraviolet rays, X-rays, visible rays, infrared waves, electromagnetic spectrum, and particles.</p>	<p><i>The Nature of Light Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Electromagnetic Waves- p. 25 • Types of Waves- p. 26 • Light Travel- p. 27 • Electromagnetic Magic- p. 28 • Destination: Barrow- p. 29 	<p><i>The Nature of Light Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Preliminary Test- p. 20-21 • Video Review- p. 22 • Post Test- p. 23-24 • Vocabulary of <i>The Nature of Light</i>- p. 30

<p>Visual Learning Company Light, Sound and Waves (continued)</p>			
<p><i>Using Light:</i></p> <p><i>The Nature of Matter</i> Standard 1: Benchmark SC.A.1.3.1 The student identifies various ways in which substances differ (e.g., mass, volume, shape, density, texture, and reaction to temperature and light).</p> <p><i>Energy</i> Standard 1: Benchmark SC.B.1.3.6 The student knows the properties of waves (e.g., frequency, wavelength, and amplitude); that each wave consists of a number of crests and troughs; and the effects of different media on waves.</p>	<p><i>Using Light Video:</i></p> <p>This video examines the various uses of light. The concepts of reflection and refraction are defined and illustrated.</p> <p>Concepts and vocabulary include: reflection, refraction, law of refraction, transparent, angle of incidence, diffraction, translucent, opaque, concave, convex, and polarizing.</p>	<p><i>Using Light Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Reappearing Pennies- p. 25 • Flashlight Physics- p. 26 • Understanding Optics - p. 27-29 	<p><i>Using Light Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Preliminary Test- p. 19-20 • Video Review- p. 21 • Post Test- p. 22-23 • Vocabulary of <i>Using Light</i>- p. 30

<p>Visual Learning Company Light, Sound and Waves (continued)</p>			
<p><i>Sound:</i></p> <p>Energy Standard 1: Benchmark SC.B.1.3.6 The student knows the properties of waves (e.g., frequency, wavelength, and amplitude); that each wave consists of a number of crests and troughs; and the effects of different media on waves.</p> <p>Force and Motion Standard 1: Benchmark SC.C.1.3.2 The student knows that vibrations in materials set up wave disturbances that spread away from the source (e.g., sound and earthquake waves).</p>	<p><i>Sound Video:</i></p> <p>This video explains how sound is produced, how it travels, and defines its specific properties. The video illustrates that sound waves must travel through a medium and identifies the three major factors that affect sound: temperature, elasticity, and density.</p> <p>Concepts and vocabulary include: vibration, pitch, frequency, Intensity, doppler effect, ultrasonic, and infrasonic.</p>	<p><i>Sound Teacher's Guide:</i></p> <ul style="list-style-type: none"> • A Sound Journey- p. 24-25 • Homemade Music- p. 26 • Seeing Sound- p. 27 • Whales and Sound- p. 28-29 	<p><i>Sound Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Preliminary Test- p. 19-20 • Video Review- p. 21 • Post Test- p. 22-23 • Vocabulary of <i>Sound</i>- p.30

Visual Learning Company Light, Sound and Waves (continued)			
<p><i>Waves:</i></p> <p>Energy Standard 1: Benchmark SC.B.1.3.6 The student knows the properties of waves (e.g., frequency, wavelength, and amplitude): that each wave consists of a number of crests and troughs; and the effects of different media on waves.</p> <p>Force and Motion Standard 1: Benchmark SC.C.1.3.2 The student knows that vibrations in materials set up wave disturbances that spread away from the source (e.g., sound and earthquake waves).</p>	<p><i>Waves Video:</i></p> <p>This video defines and illustrates the different characteristics of waves, including velocity, amplitude, and frequency. The program highlights the four basic interactions between waves and matter: reflection, refraction, diffraction, and interference.</p> <p>Concepts and vocabulary include: vibration, amplitude, trough, wavelength, frequency, reflection, refraction, diffraction, interference, longitudinal waves, and transverse waves.</p>	<p><i>Waves Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Anatomy of a Wave- p. 24 • Wave Speed- p. 25 • Everyday Waves- p. 26 • Rogue Waves- p. 27-28 • Wave Interaction- p. 29 	<p><i>Waves Teacher's Guide:</i></p> <ul style="list-style-type: none"> • Preliminary Test- p. 19-20 • Video Review- p. 21 • Post Test- p. 22-23 • Vocabulary of <i>Waves</i>- p. 30