

Planned Course: Physical Science	Course Number: 400	Department: Science	
Unit 5: Waves, Light and Color	Grade Level: 9th		
Estimated Time: 2 weeks	Level/Track: General	Date Approved: 9/25/2014	
PA Academic Standards	▶ Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>3.2 Physical Sciences: Chemistry and Physics</p> <p>3.2.10.B5</p> <ul style="list-style-type: none"> Understand that waves transfer energy without transferring matter. Compare and contrast the wave nature of light and sounds. Describe the components of the electromagnetic spectrum. <p>Biology Keystone Anchor BIO.A.3 Bioenergetics</p> <ul style="list-style-type: none"> BIO.A.3.1.1 Describe the fundamental roles of plastids (e.g. chloroplasts) and mitochondria in energy transformations. BIO.A.3.2.1 Compare the basic transformation of energy during photosynthesis and cellular respiration. 	<p>▶ How does energy affect the world around you?</p> <ul style="list-style-type: none"> The student will be able to label the parts of a wave The student will be able to distinguish between transverse and compressional waves The student will be able to define refraction, reflection, absorption, and visible light. The student will be able to identify and describe the kinds of waves that make up the electromagnetic spectrum The student will be able to identify that the colors of objects are due to the wavelengths of light they reflect The student will be able to list the primary colors of light and primary colors of paint 	<ul style="list-style-type: none"> lab on refraction of light demonstration on separating white light by using a prism demonstration on a three way lamp is used to show the resulting colors of light when the primary colors are mixed lab on “Constructing a color wheel to understand the primary pigments” lab on “constructing glasses that work by refraction” demonstrations - review game 	<ul style="list-style-type: none"> Lab Simulations Assessment (Bending Light Simulation, Additive Color Gizmo, etc.) Quizzes on major concepts Homework to reinforce major concepts Unit Test
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