

# EPSD Curriculum and HMH SCIENCE DIMENSIONS 2018 Alignment TEMPLATE

## GRADE 1

### EPSD Unit 4: Light and Sound (part II) Third Marking Period

<p><b>Overview:</b> In this unit of study, students develop an understanding of the relationship between sound and vibrating materials as well as between the availability of light and the ability to see objects. The idea that light travels from place to place can be understood by students at this level by placing objects made with different materials in the path of a beam of light and determining the effect of the different materials. The crosscutting concept of cause and effect is called out as an organizing concept for the disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations, constructing explanations, and designing solutions. Students are also expected to use these practices to demonstrate understanding of the core ideas.</p>		HMH Science Dimensions Program Resources		
		<p><b>Unit 3: Light</b>  <b>Unit Video</b> (How do the building look as sun shines on them?); <b>Unit Overview</b> p. 79; <b>Vocabulary</b> p. 81 <b>Connecting with NGSS</b> p. 81H; <b>Unit Project</b> p. 81I; <b>Unit Performance Task</b> pp. 132-133; <b>Unit Review</b> pp. 134-136</p>		
		<p><b>Standard for all Units:</b> Interactive Glossary (D); Leveled Readers (D); Beginning-of-Year Test (D/P); Unit Pretest (D/P); Lesson Quizzes (D/P); Unit Test (D/P)</p> <p><b>Note:</b> Refer to the Curriculum Alignment Common Language (CACL) Guide to decipher acronyms.</p>		
		<p><b>Lesson 1:</b> How Does Light Help Us See? pp. 82-97</p> <p>D/P- CYEI (video) Fireworks in a dark sky p. 83</p> <p>D/P- CYEI Students identify how they can see fireworks in a dark sky? p. 83</p> <p>D/P- All About Light (Students watch videos and explore online to</p>	<p><b>Lesson 2:</b> How Do Materials Block Light? pp. 98-111</p> <p>D/P- CYEI (video) Puppet show in the dark p. 99</p> <p>D/P- CYEI How does the artist make the shapes? p. 99</p> <p>D/P- How Much Light? (Students explore online to discover more about how different materials allow different amounts of light</p>	<p><b>Lesson 3:</b> How Does Light Travel? pp. 112-131</p> <p>D/P- CYSI (video) Light in a student's eyes p. 113</p> <p>D/P- CYSI Students identify how they could point light away from their eyes. p. 113</p> <p>D/P- Straight On (Students explore online to learn about how light travels in a straight line; student view video to find out more</p>
<p><b>Standards:</b> (1-PS4- 2) Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated. (1-PS4-3) Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light. (1-PS4-</p>	<p><b>Instructional Days:</b> 20-25</p>			

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<p>1) Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.</p>		<p>discover more about light.) pp. 84-85 D/P- DTM Tell Time (Students respond to a question about daylight time.) p. 85 D/P- Students watch video and explore online to find out more about how the amount of light in a room affects what can be seen. p. 86 P- AWYK Read, Write, Share! Students make observations while being in a darkroom with a flashlight turned on; students talk with peers about observations. p. 86 D/P- HO Activity Make Observations in Different Light (Students make observations in different amounts of light and record observations under bright light, some light and low light; students can view video online about how to set up and perform activity.) pp. 87-88 P- CER Students make a claim about the different</p>	<p>to pass through them.) p. 100 D/P- HO Activity Test How Light Passes Through Materials (Students investigate what happens when different materials are placed in the path of light; students can go online to view video about how to set up and perform the activity.) pp. 101-102 P- CER Students write a claim that describes how light travels through different objects and provide evidence to support their claim. p. 102 P- AWYK Students locate objects in the classroom and categorize them as: All Light, Some Light, and No Light; students count and identify how many objects in each group. p. 103 D/P- Shadows (Students explore online to find out more about shadows and how they are made; students view video to discover how the size of shadows can change.) pp. 104-105</p>	<p>about what happens when light hits an object.) pp. 114-117 P- AWYK (ENB) Students work with a group to show how light travels in a straight line; students provide evidence to support their claim and record results in their ENB. p. 117 D/P- A New Direction (Students view video and explore online to find out more about how a mirror can redirect light.) pp. 118-120 D/P- HO Activity Test What Happens to Light (Students make a claim about how smooth, shiny surfaces affect a beam of light and support their claim with evidence and data from their observations during the exploration; students can go online to view a video about how to set up and perform the activity.) pp. 121-122 P- CER Students make a claim that shows their understanding that an</p>
<p><b>Objective 1:</b> Students will be able to identify different light sources.</p> <p><b>Objective 2:</b> Students will discover that objects need light to be seen.</p> <p><b>Objective 3:</b> Students will plan and construct an investigation of sound.</p> <p><b>Objective 4:</b> Students will experiment with different items to categorize them by ability of light to pass through them.</p>				
<p><b>Topics:</b> Light and Sound Twenty-First Century Themes and Skills include: Environmental Literacy • The Four C's</p>				
<p><b>Essential Questions:</b> How can you prove that you can only see something when someone shines a light on it or if the object gives off its own light?</p>				

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	<p>amounts of light shining on an object and provide evidence to support their claim. p. 88</p> <p>D/P- See in the Dark (Students view videos and explore online to find out more about objects that give off their own light.) pp. 88-90</p> <p>D/P- Students watch video and explore online to learn about what they can see in a cave when light shine in it. p. 91</p> <p>P- AWYK (ENB) Students work in a small group to design a simple test that identifies how students can see some objects in the dark; students use evidence to answer the question and record findings in their ENB. p. 92</p> <p>D/P- TIF (enrich) People in Science and Engineering: Thomas Edison; Animals That Glow pp. 93-94</p> <p>D/P- Lesson Check p. 95</p> <p>D/P- Self Check pp. 96-97</p> <p>D- Lesson Quiz</p>	<p>P- AWYK (ENB) Students work with a group and design a test using paper and light to investigate how the shape of an object affect its shadow; students use evidence to answer the question and record findings in their ENB. p. 106</p> <p>D/P- TIF (enrich) Prisms; Make a Sundial pp. 107-108</p> <p>D/P- Lesson Check p. 109</p> <p>D/P- Self Check pp. 110-111</p> <p>D- Lesson Quiz</p> <p>P- DI (ELL/RTI) p. 81G</p> <p>P-Extension p. 81G</p> <p>P- COLLAB p. 81H</p> <p>P- Connecting with NGSS p. 81H</p> <p>D- Science Safety HB</p> <p>D- CCC-HB</p> <p>D- ELA-HB</p> <p>D- M- HB</p> <p>D- SEP-HB</p> <p>D- ScienceSarurs</p> <p>Reference HB</p>	<p>object's type of material determines if light will reflect off the object. p. 122</p> <p>D/P- DTM Solve Word Problems (Students identify how many feet a beam of light travels.) p. 123</p> <p>P- AWYK (ENB) Students work with a partner to conduct a test and collect data to explore how to reflect light so it hits a certain spot; students explain if their test worked and write and draw their findings in their ENB. p. 123</p> <p>D/P- Communicate with Light (Students watch videos and explore online to learn more about how people use light to communicate.) pp. 124-126</p> <p>D/P- TIF (enrich) Careers in Science and Engineering: Camera Engineer; Art with Light pp. 127-128</p> <p>D/P- Lesson Check p. 129</p>
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	<p>P- DI (ELL/RTI) p. 81G  P-Extension p. 81G  P- COLLAB p. 81H  P- Connecting with NGSS p. 81H</p> <p>D- Science Safety HB  D- CCC-HB  D- ELA-HB  D- M- HB  D- SEP-HB  D- ScienceSarurs  Reference HB</p> <p>D- YSI Simulation Message Projector</p>		<p>D/P- Self Check pp. 130-131  D- Lesson Quiz</p> <p>P- DI (ELL/RTI) p. 81G  P-Extension p. 81G  P- COLLAB p. 81H  P- Connecting with NGSS p. 81H</p> <p>D- Science Safety HB  D- CCC-HB  D- ELA-HB  D- M- HB  D- SEP-HB  D- ScienceSarurs  Reference HB</p> <p>D- YSI Simulation Message Projector</p>
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Curriculum Alignment Common Language (CACL) Guide K-5		
Acronym	Word/Phrase	Description
<b>AWYK</b>	Apply What You Know	Hands on opportunities for students to apply learning.
<b>CER</b>	Claims Evidence Reasoning	Students make a claim and gather evidence along the way (during EXPLORATORY activities) to support claim.
<b>CYEI</b>	Can You Explain It	Lesson phenomenon used to ENGAGE students in learning at the beginning of the lesson.
<b>CYSI</b>	Can You Solve It	Lesson phenomenon used to ENGAGE students in learning at the beginning of the lesson.
<b>D</b>	Digital	Program resources and features in interactive digital form.
<b>DI (ELL/RTI)</b> <b>Extension</b> <b>COLLAB</b> <b>Connections to Science</b>	Differentiated Instruction (English Language Learner/Response to Intervention)  Collaboration  Connections to Science	A page that lists all learning activities used to differentiate learning, engage students in collaborative activities and connect learning to other subjects.
<b>DTM</b>	Do the Math	Integrated subject learning.

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<b>ENB</b>	Evidence Notebook (prompt)	Student notebook or journal used to gather evidence during EXPLORATORY learning activities to support their claims.
<b>ENGIT</b>	Engineer It	Integrated subject learning.
<b>HB</b> <b>CCC-HB</b> <b>ELA-HB</b> <b>M-HB</b> <b>SEP-HB</b>	Handbooks Crosscutting Concepts English Language Arts Math Science and Engineering Practices	Students who need extra support in grasping concepts or to refresh student knowledge of skills.
<b>HO</b>	Hands-On (Activity)	Student collaboration activities.
<b>LS</b>	Language Smarts	Integrated subject learning.
<b>P</b>	Print	Program resources and features in print form.
<b>TIF</b>	Take It Further (enrich)	Enrichment activities for students in print or digital.
<b>YSI</b>	You Solve It (Simulation)	Open-ended simulation-based learning with multiple answer options.