

# EPSD Curriculum and HMH SCIENCE DIMENSIONS 2018 Alignment TEMPLATE

## GRADE 1

### EPSD Unit 4: Light and Sound (part I) 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>		<p><b>HMH Science Dimensions Program Resources</b></p>	
		<p><b>Unit 2: Sound</b>  <b>Unit Video</b> (paint bouncing); <b>Unit Overview</b> p. 39; <b>Vocabulary</b> p. 41; <b>Connecting with NGSS</b> p. 41H; <b>Unit Project</b> p. 41I; <b>Unit Performance Task</b> pp. 74-75; <b>Unit Review</b> pp. 76-78</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> What Is Sound? pp. 42-57</p> <p>D/P- CYEI (video) Glass of water next to a speaker p. 43</p> <p>D/P- CYEI Why does the water move? p. 43</p> <p>D/P- Make a Sound (Students watch video and explore online to find out more about the causes of sound.) pp. 44-45</p> <p>P- AWYK Students work with a group to perform a simple test to gather evidence about the effect of causing a metal ruler to vibrate; students also identify what causes the sound to change.) p. 45</p>	<p><b>Lesson 2:</b> Engineer It: How Can We Communicate with Sound? pp. 58-73</p> <p>D/P- CYEI (video) Dolphins swimming in water p. 59</p> <p>D/P- CYEI Students identify how they could use sound to send a message over a distance. p. 59</p> <p>D/P- Communicate with Sound (Students explore online to learn more about how people communicate with sound.) pp. 60-61</p> <p>P- AWYK Students work with a partner or small group and take turns naming and</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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1) Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.		D/P- Volume and Pitch (Students explore online to find out more about volume and pitch.) pp. 46-48 D/P- DTM Compare Numbers (Students compare numbers using symbols.) p. 49 P- AWYK Read, Write, Share! (Students work with a partner to list objects in the classroom that make sounds with a high pitch and objects that make sounds with a low pitch; students talk with other student pairs about their list.) p. 49 D/P- What Makes It Move (Student watch video and explore online to learn more about how sound can make objects move.) p. 50 P- AWYK (ENB) Students work with a partner to explore sound and plan a test to show that sound can make materials vibrate; students use evidence to explain what happened and record findings in their ENB. p. 50 D/P- HO Activity Make Something Move with Sound (Students work in small groups to answer the question, Can sound make rice move? Students can go online to view a video about how to set up and perform the activity.) pp. 51-52 P- CER Students make a claim about whether sound can make rice move and provide evidence. p. 52	showing a way to communicate with sound. p. 61 D/P- Communicate over Distances (Students explore online to find out more about how people communicate over distances.) p. 62 D/P- HO Activity Engineer It: Communicate over Distance (Students design and construct a device to enhance communication with sound over distance; students can watch video online about how to set up and perform the activity.) pp. 63-64 P- CER Students make a claim that explains how they used materials provided in the activity to help them communicate with sound and provide evidence to support their claim. p. 64 P- AWYK Students work with a small group to estimate the distance they think sound will travel and use their feet to measure the distance. p. 65 D/P- Send a Message (Students explore online to discover more about the differences between older communication technologies versus newer communication technologies; students also find out more about how technology is used to communicate.) pp. 66-67 P- AWYK (ENB) Students work in small groups to list ideas to solve a problem by communicating with sound over a
<b>Objective 1:</b> Students will be able to identify different light sources.			
<b>Objective 2:</b> Students will discover that objects need light to be seen.			
<b>Objective 3:</b> Students will plan and construct an investigation of sound.			
<b>Objective 4:</b> Students will experiment with different items to categorize them by ability of light to pass through them.			
<b>Topics:</b> Light and Sound Twenty-First Century Themes and Skills include: Environmental Literacy • The Four C's			
<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?			

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	<p>D/P- TIF (enrich) People in Science and Engineering: Ludwig van Beethoven; Pitch In pp. 53-54</p> <p>D/P- Lesson Check p. 55 D/P- Self Check pp. 56-57 D- Lesson Quiz</p> <p>P- DI (ELL/RTI) p. 41G P-Extension p. 41G P- COLLAB p. 41H P- Connecting with NGSS p. 41H</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 Getting the Band Together</p>	<p>distance; students draw one of their solutions and use evidence to tell why their solution will work. Scenario: The clock in the next classroom is broken. Students want to tell that class what time it is, but they cannot leave their room. Students list ideas for solutions in their ENB. p. 68</p> <p>D/P- TIF (enrich) Careers in Science and Engineering: Sound Engineer; Morse Code pp. 69-70</p> <p>D/P- Lesson Check p. 71 D/P- Self Check pp. 72-73 D- Lesson Quiz</p> <p>P- DI (ELL/RTI) p. 41G P-Extension p. 41G P- COLLAB p. 41H P- Connecting with NGSS p. 41H</p> <p>D- Science Safety HB D- CCC-HB D- ELA-HB D- M- HB D- SEP-HB D- ScienceSarurs Reference HB</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.