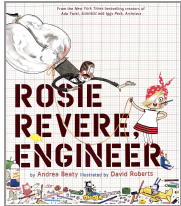






## Unit 4: Communicating with Sound and Light WEEK 6 At a Glance

Weekly Question: <b>How do people use light?</b>			
<p><b>Texts</b></p>   	<p><b>Vocabulary and Language</b></p> <p>Day 1: Introduce Weekly Words: warn, reflect, transparent</p> <p>Day 2: Introduce Weekly Words: opaque, translucent, dim (adj., v.)</p> <p>Day 3: Prefixes</p> <p>Day 4: Prefixes</p> <p>Day 5: Carousel Brainstorm</p>		
	<p><b>Text Talk</b></p> <p>Day 1: Introducing the Look and Listen! Project slides</p> <p>Day 2: <i>Rosie Revere, Engineer</i>, Read 1</p> <p>Day 3: <i>Rosie Revere, Engineer</i>, Read 2</p> <p>Day 4: “Inventors” slides</p> <p>Day 5: “Lewis Latimer and the Long-Lasting Light Bulb” slides</p>		
	<p><b>Stations</b></p> <p>Shared Reading: “The Lighthouse”</p> <p>Independent and Partner Reading</p> <p>Listening &amp; Speaking: Talk, Draw, Talk; Listen &amp; Respond (<i>Rosie Revere, Engineer</i>)</p> <p>Science Literacy: What can be seen with no light?</p> <p>Vocabulary: Draw for Meaning</p> <p>Word Work: align with phonics program</p>		
<p><b>Mentor Texts</b></p>  	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>Science and Engineering</b></p> <p>Lesson 1: Making Rainbows</p> <p>Lesson 2: Communicating with Light</p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>Studios</b></p> <p>Children refine their plans for designing communication tools using sound and light for use by children in K1, gather materials, and begin building.</p> </td> </tr> </table>	<p><b>Science and Engineering</b></p> <p>Lesson 1: Making Rainbows</p> <p>Lesson 2: Communicating with Light</p>	<p><b>Studios</b></p> <p>Children refine their plans for designing communication tools using sound and light for use by children in K1, gather materials, and begin building.</p>
<p><b>Science and Engineering</b></p> <p>Lesson 1: Making Rainbows</p> <p>Lesson 2: Communicating with Light</p>	<p><b>Studios</b></p> <p>Children refine their plans for designing communication tools using sound and light for use by children in K1, gather materials, and begin building.</p>		
	<p><b>Writing: Explanation</b></p> <p>Day 1: Research</p> <p>Day 2: Individual Construction: Explanation Steps</p> <p>Days 3-5: Individual Construction, Deconstruction, and Revision</p>		

At a Glance U4 W6

Unit 4: Communicating with Sound and Light

WEEK 6 Days 1 & 2

**Vocabulary & Language**  
Weekly Words

<b>Weekly Question</b>	How do people use light?				
<b>Language Objectives</b>	I can talk with my classmates about words. (SL.1.1) I can connect words to my own real-life experiences. (L.5.1.c)				
<b>Vocabulary</b>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #cccccc;"><b>Day 1</b></td> </tr> <tr> <td> <p><b>warn:</b> to signal a possible danger</p> <p><b>reflect:</b> to throw back (heat, light, or sound) from an object</p> <p><b>transparent:</b> allowing light to pass through so objects behind can be clearly seen</p> </td> </tr> <tr> <td style="background-color: #cccccc;"><b>Day 2</b></td> </tr> <tr> <td> <p><b>opaque:</b> not allowing light through, not able to be seen through</p> <p><b>translucent:</b> allowing some light through</p> <p><b>dim:</b> (adj) not shining brightly; (v) to become or make less bright</p> </td> </tr> </table>	<b>Day 1</b>	<p><b>warn:</b> to signal a possible danger</p> <p><b>reflect:</b> to throw back (heat, light, or sound) from an object</p> <p><b>transparent:</b> allowing light to pass through so objects behind can be clearly seen</p>	<b>Day 2</b>	<p><b>opaque:</b> not allowing light through, not able to be seen through</p> <p><b>translucent:</b> allowing some light through</p> <p><b>dim:</b> (adj) not shining brightly; (v) to become or make less bright</p>
<b>Day 1</b>					
<p><b>warn:</b> to signal a possible danger</p> <p><b>reflect:</b> to throw back (heat, light, or sound) from an object</p> <p><b>transparent:</b> allowing light to pass through so objects behind can be clearly seen</p>					
<b>Day 2</b>					
<p><b>opaque:</b> not allowing light through, not able to be seen through</p> <p><b>translucent:</b> allowing some light through</p> <p><b>dim:</b> (adj) not shining brightly; (v) to become or make less bright</p>					
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>● Week 6 Weekly Words cards</li> <li>● chart paper</li> </ul> <p>Create the week’s Weekly Words chart by writing out the Weekly Words and their definitions. Add icons, sketches, or images as needed.</p>				
<b>Opening Day 1</b>	<p><i>Today we’ll start a new list of Weekly Words. These words come from the books that we read and the big ideas from our study, Communicating with Sound and Light. Today’s words are <b>warn</b>, <b>reflect</b>, and <b>transparent</b>.</i></p>				

Day 2	<i>Let's continue learning our words for this week. Today's words are <b>opaque, translucent, and dim.</b></i>
<b>Discussion</b> Day 1	<p>Follow the steps of the Weekly Words routine. Refer to the chart and explain each step as needed. Hold up the appropriate word card as each word is taught.</p> <hr/> <p><b>warn</b>  Elaboration:  <i>At crosswalks we sometimes see signs with blinking lights to warn cars that people are about to cross the street. This tells them to slow down and stop.</i></p> <p>Think, Pair, Share prompt:  <i>In what other ways can lights warn people?</i></p> <hr/> <p><b>reflect</b>  Elaboration:  <i>After it rains, the water on the pavement creates a mirror-like surface. It reflects cars, bicycles, and people.</i></p> <p>Think, Pair, Share prompt:  <i>Share a time when you noticed that a surface was reflecting your image.</i></p> <hr/> <p><b>transparent</b>  Elaboration:  <i>The glass in our windows is transparent—we can see right through it to the outside. Sometimes we drink out of a transparent cup, and we can see the liquid that's inside it.</i></p> <p>Think, Pair, Share prompt:  <i>Why do you think many stores have transparent walls in front?</i></p>
Day 2	<p><b>opaque</b>  Elaboration:  <i>When you put a drink in an opaque cup, you cannot see the liquid from the side.</i></p> <p>Think, Pair, Share prompt:  <i>What opaque materials do you know? What are they used for?</i></p> <hr/> <p><b>translucent</b>  Elaboration:</p>

	<p><i>Looking at a translucent wall we can see the shape of things, like this person going up the stairs—but we cannot see all the details, as we would through a transparent wall.</i></p> <p>Think, Pair, Share prompt: <i>Why do you think people might choose to build a translucent wall in an office?</i></p> <hr/> <p><b>dim</b> Elaboration: <i>Dim can be both an adjective and a verb. “The lights are dim:” This describes the lights. Also, “Let’s dim the lights:” This describes turning the lights down low, which we might do to help us feel more relaxed.</i></p> <p>Think, Pair, Share prompt: <i>When do you think it might be helpful to dim the lights?</i></p>
<b>Closing</b>	<p><i>This week, we’re talking about how people use light. The words we’re studying will help us to talk about the different way we use light in our lives.</i></p>
<b>Standards</b>	<p><b>SL.1.1.</b> Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.</p> <p><b>L.5.1.c</b> Identify real-life connections between words and their use (e.g., note places at home that are cozy).</p>
<b>Ongoing assessment</b>	<p>How do children interact with new and familiar words? How do children respond when they discover an error in their understanding or use of a word? How flexible are they when confronted with new definitions? How do children talk with peers about new words—do they use gestures, substitute familiar words, dig for descriptions, tell stories?</p> <p>Make notes about children’s familiarity with various kinds of words and the connections they make to specific words. Use this information to plan for embedded opportunities for teaching and reinforcing words.</p> <p>Use of a strategy such as pulling equity (name) sticks supports the participation of all children. Even with this kind of strategy, some children will benefit from extra turns for verbal participation.</p>

	Maintaining a class vocabulary list will help track children’s vocabulary growth over time.
--	---

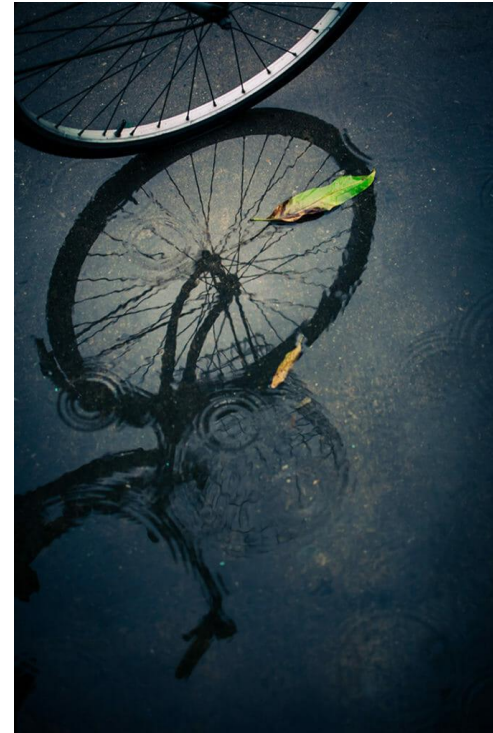
**Notes**

Large empty rectangular box for notes.



warn

<https://www.youtube.com/watch?v=gCSSAzCuGvk>



reflect

<https://www.iphotography.com/blog/reflection-photography/>

Weekly Words U4 W6



transparent

<http://clipart-library.com/free/tea-cup-transparent-background.html>



opaque

<https://www.sfmoma.org/artwork/2011.208.A-B/>

Weekly Words U4 W6

Focus on First/ 1st Grade for ME | Boston Public Schools Department of Early Childhood P-2/  
Maine Department of Education



translucent

<https://www.pinterest.com/pin/121526889914904847/>



dim

<https://www.medicalnewstoday.com/articles/320887>

Weekly Words U4 W6

Focus on First/ 1st Grade for ME | Boston Public Schools Department of Early Childhood P-2/  
Maine Department of Education



Weekly Words U4 W6

Focus on First/ 1st Grade for ME | Boston Public Schools Department of Early Childhood P-2/  
Maine Department of Education

WEEK 6 Day 3

**Vocabulary & Language**  
Prefixes

<b>Weekly Question</b>	How do people use light?
<b>Language Objective</b>	I can determine the meaning of words with prefixes. (L.4.1.b)
<b>Vocabulary</b>	<b>prefix:</b> a word part added to the beginning of the word that changes the meaning of the word
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>Prefixes slides</li> </ul>
<b>Opening</b>	<i>This week we are going to explore <b>prefixes</b>, additions at the beginning of words that change their meaning.</i>
<b>Discussion</b> slide 2	<p><i>“Redirect” is one of our Weekly Words from last week. It means “to change the direction of something.”</i></p> <p><i>“Redirect” begins with the prefix “re,” which means “back” or “again.”</i></p> <p><i>Today we are going to look at more words with the prefix “re” and add it to words to create new words.</i></p>
slide 3	<p><i>The word “reverse” also begins with the prefix “re.”</i></p> <p><i>Similar to the word “redirect,” the prefix “re” shows that something is moving in a different direction.</i></p>
slide 4	<p><i>Let’s read this word together.</i></p> <p><i>What does “pay” mean?</i></p>
slide 5	<p><i>Let’s add the prefix “re” to the beginning of the word. What does the word say now?</i></p> <p><i>What does the word “repay” mean? How do you know?</i></p>

slides 6-11	<p>Follow the same process to introduce words and add “re-” to make new words.          Introduce the word:  <i>Let’s read this word together.</i>  <i>What does _____ mean?</i></p> <p>Make and define a new word with a prefix:  <i>Let’s add the prefix “re” to the beginning of the word. What does the word say now?</i>  <i>What does the word _____ mean? How do you know?</i></p>
<b>Closing</b>	<p><i>Today we added the prefix “re” to the beginning of words to make new words. Tomorrow you will write sentences using these words.</i></p>
<b>Standard</b>	<p><b>L.4.1.b</b> Use frequently occurring affixes as a clue to the meaning of a word.</p>
<b>Ongoing assessment</b>	<p>Reflect on the lesson.          Do children accurately define the root words?          Do they demonstrate understanding of the prefix “re”?</p>

**Notes**



Unit 4: Communicating with Sound and Light

WEEK 6 Day 4

**Vocabulary & Language**  
Prefixes

<b>Weekly Question</b>	How do people use light?
<b>Language Objective</b>	I can write sentences that demonstrate my understanding of the meaning of words with prefixes. (L.4.1.b)
<b>Vocabulary</b>	<b>prefix:</b> a word part added to the beginning of the word that changes the meaning of the word
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>● Prefixes slides, from Day 3</li> <li>● paper and pencil, one for each child</li> </ul>
<b>Opening</b>	<i>Yesterday we explored words with prefixes. Today you will use those words in sentences.</i>
<b>Discussion</b> slides 4-11	Quickly review the definitions for the prefixes and words discussed on Day 3.
slide 12	<p><i>Choose one of the sets of words we discussed. Then, write two sentences that show the meaning of each word in the set. As you write, think about how adding a prefix changes the meaning of the word.</i></p> <p>Send children to write independently or with a partner. Circulate to support them, reviewing definitions as necessary.</p>
	Bring the class back together. Invite a child to share their sentences. As a class, discuss how the sentences demonstrate the meanings of the words and how the meaning changes when a prefix is added. Encourage children to use gestures to demonstrate the different meanings of the words in context. Repeat the process with other children, as time allows.
<b>Closing</b>	<i>Today you wrote sentences that demonstrated the meanings of</i>

	<i>words with and without prefixes.</i>
<b>Standard</b>	<b>L.4.1.b</b> Use frequently occurring affixes as a clue to the meaning of a word.
<b>Ongoing assessment</b>	<p>Reflect on the class discussion.          What do children understand about how prefixes change the meaning of words?</p> <p>Review children’s sentences.          Do the pairs of sentences reflect understanding of the meaning of the prefix “re”?</p>

**Notes**

Unit 4: Communicating with Sound and Light

WEEK 6 Day 5

**Vocabulary & Language**  
Carousel Brainstorm

<b>Weekly Question</b>	How do people use light?
<b>Language Objective</b>	I can talk with my classmates about important vocabulary from our unit texts and big ideas. (SL.1.1)
<b>Vocabulary</b>	<b>warn:</b> to signal a possible danger <b>reflect:</b> to throw back (heat, light, or sound) from an object <b>transparent:</b> allowing light to pass through so objects behind can be clearly seen <b>opaque:</b> not allowing light through, not able to be seen through <b>translucent:</b> allowing some light through <b>dim:</b> (adj) not shining brightly; (v) to become or make less bright
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● chart paper, 4 pieces, with one of the Weekly Words in the center of each, set out around the classroom</li><li>● markers, one for each child</li><li>● timer or stopwatch</li></ul>
<b>Opening</b>	<i>This week as we move through the Carousel Brainstorm, we'll think about our Weekly Words and about some of the ways people use light.</i>
<b>Key Activity</b>	Show the vocabulary cards and review definitions for all of the Weekly Words, highlighting those selected for the Carousel Brainstorm.  Talk briefly about some possibilities for recording understanding about one of the words.  Direct each group to a particular paper and then begin the timer.  Circulate as children work, noting their use and representation of each word.

<b>Closing</b>	In the whole group, share the work from the papers, highlighting different ways of demonstrating word knowledge.
<b>Standards</b>	<b>SL.1.1.</b> Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
<b>Ongoing assessment</b>	<p>As children work, circulate and take notes on the Carousel Brainstorm Assessment Tool to record children’s understanding, misconception, and use of vocabulary words. Use these to plan for reteaching and reinforcement.</p> <p>Listen to children’s conversations as they circulate.  How do children participate?</p> <p>Review each sheet of chart paper.  Do children’s drawings and writing reflect an understanding of the vocabulary words?</p>

**Notes**





WEEK 6 Day 1

**Text Talk**  
**Introducing the Look and Listen! Project (slides)**

<b>Big Ideas</b>	Humans and other animals communicate with light and sound.  People innovate and invent to solve problems.
<b>Weekly Question</b>	How do people use light?
<b>Content Objective</b>	I can describe connections between ideas among a number of texts. (R.6.1.a)
<b>Language Objective</b>	I can apply ideas from texts to discussing designs for a communication tool and representing them in writing and drawing. (SL.3.1.a, W.1.1.a)
<b>SEL (BOSTON SEL Standards)</b>	I can consider the kinds of messages that four year olds might want to send and design a tool for their use. (SR 1.2)
<b>Vocabulary</b>	<b>searchlight:</b> a powerful outdoor electric light with a strong beam that can be turned in a particular direction  <b>convey:</b> to transport or carry to a place
<b>Materials and Preparation</b>	In preparation for this lesson and the project, assign children to groups of three. They will begin in these groups and may shift once ideas for the projects solidify. <ul style="list-style-type: none"> <li>● Look and Listen! Project Introduction slides</li> <li>● projector and screen</li> <li>● Unit texts, for reference</li> </ul> <p>On chart paper or on the whiteboard, create a model of the following parts of the Look and Listen! Project Planning sheet.</p>

	<table border="1" data-bbox="535 149 1325 573"> <tr> <td colspan="3"><u>This message is a:</u></td> </tr> <tr> <td>direction</td> <td>request for help</td> <td>invitation</td> </tr> <tr> <td>announcement</td> <td>love message</td> <td>warning</td> </tr> <tr> <td>other</td> <td></td> <td></td> </tr> <tr> <td colspan="3"><u>It travels:</u></td> </tr> <tr> <td>a short distance</td> <td></td> <td>a long distance</td> </tr> <tr> <td colspan="3"><u>It it conveyed by:</u></td> </tr> <tr> <td>sound</td> <td></td> <td>light</td> </tr> </table> <ul style="list-style-type: none"> <li>● Look and Listen! Project Planning sheets, copies for each child</li> <li>● writing and drawing tools</li> <li>● children’s completed or in-process Light and Sound Messages sheets, from the Library Studio, Week 5</li> </ul> <p>Organize these sheets according to children’s assigned small groups</p> <ul style="list-style-type: none"> <li>● <i>Sending Messages with Light and Sound</i>, Jennifer Boothroyd, books and child copies, one for each small group</li> <li>● chart paper</li> </ul> <p>Prepare the Weekly Question Chart with the question: How do people use light?</p>	<u>This message is a:</u>			direction	request for help	invitation	announcement	love message	warning	other			<u>It travels:</u>			a short distance		a long distance	<u>It it conveyed by:</u>			sound		light
<u>This message is a:</u>																									
direction	request for help	invitation																							
announcement	love message	warning																							
other																									
<u>It travels:</u>																									
a short distance		a long distance																							
<u>It it conveyed by:</u>																									
sound		light																							
<p><b>Opening</b> 1 minute</p>	<p><i>This week we will begin our last big project of the year! This project will be designing tools for communicating with light and sound. The people using those tools will be children in PreK—four year olds!</i></p> <p>Set a purpose for the lesson.</p> <p><i>We’ll begin by reading a short section from the book, Sound and Light, a science resource. The short text is titled “Communicating with Light.” Then we’ll start generating ideas for the tools you will make. You’ll work in partners or groups of three for this project.</i></p>																								
<p><b>Text and Discussion</b> 12 minutes slides 2-5</p>	<p>Using the slides, read through “Communicating with Light.” Ask a few children to respond briefly to the questions in the text. Reinforce knowledge children bring to the text, such as about lighthouses, and highlight any new information.</p>																								
<p>slides 6-10</p>	<p><i>Now let’s remember what we have seen so far in our texts about some ways people use light and sound to send messages to one another.</i></p> <p>On each slide, with the children and referring to the chart, recall the text, and identify the message (or a possible message) being sent, what kind of message it might be, and whether it is conveyed by sound or light. Refer to</p>																								

	<p>the printed texts as useful to support children’s recall.</p>
slide 11	<p><i>For the new project, called Look and Listen! you will be designing tools for communicating. It will be important that four year olds can hold and use these tools, so some of what we have seen so far won’t work. We won’t be giving them lighthouses, for example!</i></p> <p><i>Here are some examples of tools that we can imagine children using. Turn and talk about what you see here. [string phone, horn, and flashlight]</i></p>
slides 12-13	<p><i>As you think about the kind of tools you will design and build, you will need to consider what kind of message you want to send and where the message needs to travel. Let’s think about some of the challenges of sending messages.</i></p> <p>Quickly read the questions on slide 13. <i>These are some of the challenges you might design your tool for. You will need to try more than one idea before you get a good plan.</i></p>
<b>Key Discussion and Activity</b> 10 minutes	<p><i>You will work in teams to design and build your tools, but you will each record your ideas on your own planning sheet.</i></p> <p>Show and walk through the Look and Listen! Project Planning sheet.</p> <p><i>Talk together about ideas you have. See if you can come up with an idea you all agree you want to work on. This can be tricky; make sure to say your ideas clearly and to ask and answer each other’s questions. You have several resources to look at as you talk and plan.</i></p> <p>Distribute Planning sheets, children’s completed Light and Sound Messages sheets, and copies of both <i>Sending Messages with Light and Sound</i> text. Send children to work in groups around the classroom.</p> <p>Children will only begin their planning; this work will move to the Library Studio and to Studios more broadly over the final three weeks of the unit.</p>
<b>Closing</b>	<p><i>While you are beginning to invent your tools this week, we’ll be reading texts about inventors!</i></p>
<b>Weekly Question Chart</b> 2 minutes	<p>Introduce the Weekly Question chart. <i>Throughout this week, we will be asking and answering the question: How do people use light? We can record our ideas here.</i></p> <p><i>Today we have started thinking about tools that children might use for communication. People use light for communication.</i></p>

	<i>We can add more to our chart during the week.</i>
<b>Standards</b>	<p><b>R.6.1.a</b> Describe characters, settings, and major events in a story, including details about who, what, when, where, and how.</p> <p><b>SL.3.1.a</b> Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.</p> <p><b>W.1.1.a</b> Investigate questions by participating in shared research and writing projects.</p> <p><b>SR 1.2.</b> Demonstrate an understanding of thoughts, feelings, behavior and perspectives of oneself and others.</p>
<b>Ongoing assessment</b>	<p>Take note of children’s contributions to the whole group discussion.</p> <p>How do children apply what they have learned to date to the idea of making communication tools with light and/or sound?</p> <p>Review children’s initial Project Planning sheets.</p> <p>What ideas do they have for using light and sound for communication?</p> <p>How do children express their initial ideas with writing and drawings?</p> <p>What collaboration skills do children bring to their small group work?</p> <p>To what extent do they consider their audience, four year olds, in their design?</p>

**Notes**

## Look and Listen! Project Planning

Name: \_\_\_\_\_

Collaborators' names: \_\_\_\_\_

The message we want to send is:

This message is a:

\_\_\_\_ direction      \_\_\_\_ request for help      \_\_\_\_ invitation  
\_\_\_\_ announcement      \_\_\_\_ love message      \_\_\_\_ warning  
\_\_\_\_ other: \_\_\_\_\_

The message will travel:

\_\_\_\_ a short distance      \_\_\_\_ a long distance

The message will be conveyed by:

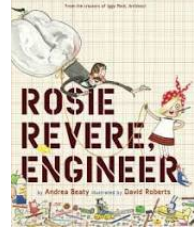
\_\_\_\_ sound      \_\_\_\_ light

We will know the message has arrived when:

**Diagram of Idea 1**

**Diagram of Idea 2**

Unit 4: Communicating with Sound and Light



WEEK 6 Day 2

**Text Talk**  
***Rosie Revere Engineer***  
Read 1 of 2

<b>Big Ideas</b>	People innovate and invent to solve problems.  Humans and other animals communicate with light and sound.
<b>Weekly Question</b>	How do people use light?
<b>Content Objectives</b>	I can identify and describe the major events in a story. (R.6.1.a)  I can identify words in the story that show how Rosie is feeling at different parts of the story. (R.7.1.a)
<b>Language Objective</b>	I can use context clues to determine the meaning of key vocabulary in the story. (L.4)
<b>Vocabulary</b>	<b>invent:</b> to create or design something that has not existed before <b>engineer:</b> someone who designs and builds engines, machines, or structures <b>daring:</b> brave <b>dismayed:</b> upset, distressed <b>fail:</b> to be unsuccessful in reaching a goal <b>failure:</b> lack of success <b>flop:</b> a failure <b>gadget:</b> a small mechanical or electronic device, especially an ingenious one <b>gizmo:</b> a gadget <b>horror:</b> an intense feeling of fear and shock <b>perplexed:</b> puzzled or confused

<p><b>Materials and Preparation</b></p>	<ul style="list-style-type: none"> <li>● <i>Rosie Revere, Engineer</i>, Andrea Beaty</li> </ul> <p>Pre-mark page numbers in the book to correspond with the lesson. Page 1 is the illustrated page that precedes “This is the story of...”</p> <p>On the whiteboard write: Based on the story, what do you think an engineer is? How do Rosie’s feelings change through the story?</p>
<p><b>Opening</b> 1 minute</p>	<p>Introduce the text.</p> <p><i>Yesterday we began thinking about all the ways that people use sound and light, and you began thinking about tools you will design that use light or sound to communicate. Over the next few days we’ll learn about people who have solved problems by inventing with light and sound.</i></p> <p><i>We’ll begin by reading a fictional story titled Rosie Revere, Engineer. This author/illustrator team, Andrea Beaty and David Roberts, also wrote and illustrated Ada Twist, Scientist—we read that book way back in the fall!</i></p> <p><i>Rosie Revere is a character who Andrea Beaty <b>invented</b>, or made up, but she is inspired by a real person. We’ll learn about that person tomorrow. Here in the title and as we read, we’ll hear the word “engineer” many times; let’s see what we think it means when we get to the end of the story. You might remember this word from K2; we can use this story to help us expand our understanding of the word.</i></p> <p>Set a purpose for the read.</p> <p><i>As we read today, we’ll also notice what inspires Rosie to create each of her inventions. We’ll listen for words that help us get to know Rosie and show us how she feels throughout the story. Noticing Rosie’s feelings and how they change will help us identify the story’s most important events.</i></p>
<p><b>Text and Discussion</b> 17 minutes</p> <p>page 2</p>	<p><i>What do we learn about Rosie here on the first page?</i></p> <p>Elicit responses. Reread the line “young Rosie sat shyly, not daring to speak” to support children’s thinking.</p>
<p>page 6</p>	<p><b>Gadget and gizmo</b> are synonyms. They both mean a small mechanical or electrical device or creation.</p> <p><i>Why do you think she hides her creations under the bed? What does this tell us about her?</i></p>



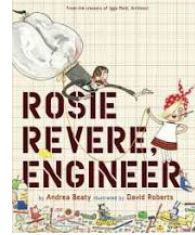
<p>page 12</p>	<p>Before reading the page, remind children to listen for words that reveal how Rosie is feeling.  <i>Put a thumb up when you hear words that describe Rosie’s feelings.</i>  Read the page.</p> <p><i>How is she feeling when she first brings her creation to Fred?</i>  Reread the sentence, “And when it was finished, young Rosie was proud,…”</p> <p><i>How have Rosie’s feelings changed after showing the hat to Fred?</i>  <i>Turn and tell a partner.</i></p> <p><i>Fred laughed at Rosie’s creation. The author uses the words <b>dismayed</b> and <b>perplexed</b> to show that Rosie feels upset and confused.</i></p> <p>Highlight an important story event.  <i>Let’s reread the last line. It reads, “... and after that day kept her dreams to herself.” Why is this an important event in Rosie’s life?</i>  Harvest several responses. Discuss the meaning of “kept her dreams to herself” and connect this to her feelings. [embarrassed]</p>
<p>pages 15-16</p>	<p><i>What is a “daring idea”?</i>  <i>What do you predict might happen?</i>  Harvest a couple of predictions before reading page 16.  <i>How do we know something important is about to happen in the story?</i> [The author said a “daring idea crept into her head” and the question kept Rosie awake all night.]</p>
<p>page 17</p>	<p><i>What does the author mean by writing that the invention might be “a flop”?</i></p> <p>Read to the end of the story with minimal stops.</p>
<p><b>Key Discussion and Activity</b>  6 minutes</p> <p>page 28</p>	<p>Return to and reread page 28 (“They worked till the sun sneaked away...”) Think, Pair, Share.  Prompt 1: <i>Something really important happened here! What happened on this page and why is it an important event in the story?</i>  Harvest several responses. Reread the full page to support children’s interpretation. [Rosie and Aunt Rose work together; Rose gives Rosie her headscarf to let Rosie know she appreciates her effort; Rosie feels encouraged to keep inventing.]</p> <p>Prompt 2: <i>How do Rosie’s feelings change through the story?</i></p> <p>Bring children back to the whole group for a final discussion.  <i>Now that we’ve read the full story, what do you think it means to be an engineer?</i></p>

	Encourage children to cite specific examples from the story to support their thinking. Provide a definition after harvesting multiple ideas (someone who designs and builds engines, machines, or structures).
<b>Closing</b> 1 minute	<i>Tomorrow we'll think more about the qualities an engineer must have to do their work. We'll closely read the pages that led up to this important event and think about the message in the story.</i>
<b>Standards</b>	<p><b>R.6.1.a</b> Describe characters, settings, and major events in a story, including details about who, what, when, where, and how.</p> <p><b>R.7.1.a</b> Identify words and phrases in a text that suggest feelings or appeal to the senses.</p> <p><b>L.4</b> Use context clues, analyze meaningful word parts, and consult general and specialized reference materials as appropriate to determine or clarify the meaning of unknown and multiple-meaning words and phrases from grade level content.</p>
<b>Ongoing assessment</b>	<p>Listen to children's responses during the whole group conversation and Think, Pair, Share.</p> <p>Which words do children identify that signal feelings?</p> <p>Which details do children cite to respond to questions?</p> <p>How do children identify and describe major events in the story?</p> <p>What do children communicate and understand about the work of an engineer?</p>

**Notes**

Unit 4: Communicating with Sound and Light

WEEK 6 Day 3



**Text Talk**  
***Rosie Revere Engineer***  
 Read 2 of 2

<b>Big Ideas</b>	<p>People innovate and invent to solve problems.</p> <p>Humans and other animals communicate with light and sound.</p>
<b>Weekly Question</b>	How do people use light?
<b>Content Objective</b>	I can describe the central message of the story by retelling key details from words and illustrations. (R.5.1.a, R.11.1.a, R.11.1.b)
<b>Language Objective</b>	I can talk, draw, and write to demonstrate the concept of perseverance. (SL.3.1.b)
<b>SEL Objective (BOSTON SEL Standards)</b>	I can talk and draw about a time I showed perseverance in overcoming an obstacle. (L.1.5.c, SM 2.1)
<b>Vocabulary</b>	<p><b>invent:</b> to create or design something that has not existed before</p> <p><b>engineer:</b> someone who designs and builds engines, machines, or structures</p> <p><b>daring:</b> brave</p> <p><b>dismayed:</b> upset, distressed</p> <p><b>fail:</b> to be unsuccessful in reaching a goal</p> <p><b>failure:</b> lack of success</p> <p><b>flop:</b> a failure</p> <p><b>gadget:</b> a small mechanical or electronic device, especially an ingenious one</p> <p><b>gizmo:</b> a gadget</p> <p><b>horror:</b> an intense feeling of fear and shock</p>

	<p><b>perplexed:</b> puzzled or confused</p>
<p><b>Materials and Preparation</b></p>	<ul style="list-style-type: none"> <li>● <i>Rosie Revere, Engineer</i> by Andrea Beaty</li> <li>● “Rosie the Riveter” slides</li> <li>● blank paper</li> <li>● pencils</li> <li>● clipboards</li> </ul> <p>On the whiteboard write:</p> <p>What is Aunt Rose’s message to Rosie?</p> <p>How does Rosie show perseverance?</p> <p>When have you shown perseverance?</p> <p><i>Cover this prompt to reveal for the Key Discussion and Activity.</i></p>
<p><b>Opening</b> 4 minutes  slides 2-4</p>	<p>Review the text. <i>Yesterday we met the fictional Rosie in the story Rosie Revere, Engineer by Andrea Beaty and David Roberts. Although Andrea Beaty invented this character, she was inspired by a real person.</i></p> <p>Show slide 2. <i>Here is the real person, Naomi Parker.</i></p> <p>Give children a moment to look at the image. <i>This photograph was taken in 1942, about 80 years ago. During that time, more women started working in factories. Naomi Parker worked in a factory that put airplanes together. A song was written encouraging other women to take these kinds of jobs; it was called “Rosie the Riveter.”</i></p> <p>Show slide 3. <i>Rivets are parts that hold materials together. Our character Rosie Revere might have used rivets in some of her inventions!</i></p> <p>Show slide 4. <i>Also in 1942, an artist made this poster showing that women could do hard work in factories just like men could.</i></p> <p>Together with the children, read the poster text, “We Can Do It!”</p> <p>Set a purpose for the lesson. <i>Andrea Beaty and David Roberts were inspired by the story of Rosie the Riveter. As we read today, we’ll think about the message the author and illustrator want to send their readers through the characters Rosie and Aunt Rose. We’ll pay close attention to how both the words and illustrations help us understand this message.</i></p> <p><i>At the end of our lesson you’ll talk, draw, and write about a time when you have felt and acted similar to Rosie.</i></p>

<p><b>Text and Discussion</b> 6 minutes page 17</p>	<p>Read pages 17- 28, stopping to analyze the text.</p> <p><i>Here it reads, “She worked and worked till the day was half gone,...” This makes us think she was working really hard with a lot of concentration.</i></p>
<p>page 21</p>	<p><i>Why does Rosie think, “never will I be a great engineer”?</i> Harvest responses. Prompt children to look closely at the illustration.</p>
<p>page 24</p>	<p><i>What does Aunt Rose point out to Rosie that is so important? [“Before it crashed, ... it flew!”]</i> <i>Why is it important and helpful for Aunt Rose to point this out?</i></p> <p>Read to the end of page 28 (“to dream the bold dreams of a great engineer.”)</p>
<p><b>Key Discussion and Activity</b> 16 minutes pages 25-28</p>	<p>Return to page 26 and reread the text.</p> <p>Think, Pair, Share. Prompt 1: <i>What is Aunt Rose’s message to Rosie?</i> To support discussion, ask questions about key lines of text. For example: <i>What does Aunt Rose mean when she says, “Your brilliant first flop was a raging success! Come on, let’s get busy and go on to the next!”?</i></p> <p>Prompt 2: <i>Aunt Rose says, “Life might have its failures, but this was not it. The only true failure can come if you quit.” What is the author’s message here?</i></p> <p>Bring the children back to continue a whole group discussion. <i>We have identified the author’s message that to be an inventor you must keep trying and trying. Last week, reading Keep the Lights Burning, Abbie, we learned a word for this: [allow children time to supply the word] ... perseverance.</i></p> <p>Refer to the second prompt on the board. <i>How does Rosie show perseverance in this story?</i> <i>Let’s look at the illustrations to support our ideas.</i></p> <p>Refer to the illustrations on pages 25-26 and 27-28. Harvest several responses.</p> <p>Uncover and refer to the third question on the board. <i>When have you shown perseverance? Turn and talk with a partner.</i></p> <p>Distribute paper, pencils, and clipboards. <i>Now, draw and write about a time when you kept trying and trying to solve a problem. We’ll start with pencil sketches; you can continue with other drawing media in the Writing and Drawing Studio.</i></p>

<p><b>Closing</b> 1 minute</p>	<p><i>Over the next week you will need perseverance as you design tools for children in K1. Tomorrow we'll learn about some inventors who persevered in inventing with light and sound.</i></p>
<p><b>Standards</b></p>	<p><b>R.5.1.a</b> Retell texts, including details about who, what, when, where, and how; demonstrate an understanding of the theme.  <b>R.11.1.a</b> Use illustrations and words in a text to describe its characters, setting, or events.  <b>R.11.1.b</b> Compare and contrast the experiences of characters in various texts.  <b>SL.3.1.b</b> Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.  <b>L.5.1.c</b> Identify real-life connections between words and their use (e.g., note places at home that are cozy).  <b>SM 2.1.</b> Motivate oneself to overcome obstacles and achieve personal and academic goals.</p>
<p><b>Ongoing assessment</b></p>	<p>Listen to children's responses during whole group conversation and Think, Pair, Share.</p> <p>Which key details do children cite in describing the story's message?  Do children gather details from both words and illustrations?  How do children make meaning of the story's message?</p> <p>Observe children's writing.</p> <p>What experiences do they reflect on?  Do children demonstrate the meaning of "perseverance" through their reflections and connections?</p>

**Notes**



**WEEK 6 Day 4**

**Text Talk**  
**“Inventors!” (slides)**

<b>Big Ideas</b>	<p>People innovate and invent to solve problems.</p> <p>Humans and other animals communicate with light and sound.</p>
<b>Weekly Question</b>	How do people use light?
<b>Content Objectives</b>	<p>I can ask questions and answer questions about key details in the text. (R.4.1.a)</p> <p>I can use key details to identify and describe connections among key ideas in the text. (R.6.1.b)</p>
<b>Language Objective</b>	I can ask questions to clear up confusion and to learn more about a topic. (SL.1.1.c)
<b>SEL Objective (BOSTON SEL Standards)</b>	I can identify which inventors and inventions I am most interested in, and why. (SA 4.3)
<b>Vocabulary</b>	<p><b>warn:</b> to signal a possible danger</p> <p><b>improve:</b> to make better</p> <p><b>field:</b> an area or sub-topic of a subject</p> <p><b>device:</b> a mechanical or electrical tool made for a specific purpose</p> <p><b>efficient:</b> organized and quick; not wasting time</p>
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>“Inventors!” slides</li> </ul> <p>Review the slides, and select the inventors that might most interest the specific classroom community of learners. Plan to spend more time in discussion on these slides while also paying attention to which inventors elicit children’s greatest curiosity. (Children will</p>

	<p>have the opportunity to learn more about specific inventors in the Research Studio.)</p> <p>On the whiteboard write:</p> <p>Why is this inventor important?</p> <p>What else do you want to know about this inventor or their invention?</p>
<p><b>Opening</b> 1 minute</p>	<p>Introduce the text and set a purpose for reading.</p> <p><i>Today we will learn about some people who made important inventions by reading a text in slides titled “Inventors!”</i></p> <p><i>This text just has a small amount of information about each inventor. As we read we’ll ask questions and talk about what else we’re curious to know about the inventors and their inventions. On each slide we’ll consider these two questions: (refer to the whiteboard. Why is this inventor important? and What else do you want to know about this inventor or their invention?)</i></p> <p><i>Be on the lookout for how these inventors used light or sound in their inventions. If you find that an invention involves light or sound, put your thumb up!</i></p>
<p><b>Text and Discussion</b> 17 minutes</p> <p>slide 4</p>	<p>Proceed through the slides, posing the questions on the board in addition to specific prompts below. Encourage children to frame questions that serve to clear up confusion and that indicate curiosity to learn more through additional research.</p> <p><i>You will read more about Garrett Morgan in one of your decodable texts.</i></p>
<p>slide 6</p>	<p><i>What does it mean that Sarah Mather <b>improved</b> her tool?</i></p> <p>Harvest a few ideas, then provide a definition.</p>
<p>slide 7</p>	<p><i>“Science” is a big category that includes different topics of study. A <b>field</b> of science is an area, or sub-topic. Biology is one example: the study of living things. Computer science is another field. Many scientists focus on one field, but JC Bose studied in many.</i></p>
<p>slide 8</p>	<p><i>What does Roberto Moura’s invention remind you of? What is a modern day tool similar to this that we use to send messages with sound? [a megaphone]</i></p>
<p>slide 11</p>	<p><i>What do you think it means that bees communicate <b>efficiently</b>?</i></p> <p>Harvest a few ideas, then provide a definition.</p>



	<i>As you plan your light and sound communication tools for four year olds, you might also be inspired by animals or other parts of nature.</i>
slide 12	Show the video (5 minutes long). Again pose the questions on the board. <i>Ayah Bdeir not only invented something, but her invention is meant to inspire others. What do you feel inspired to build when you see her invention, Little Bits?</i>
<b>Key Discussion and Activity</b> 6 minutes	Think, Pair, Share. Prompt 1: <i>What did some of the inventors and inventions have in common? How are these inventions connected?</i> As children share to the whole group, click back to show slides they refer to or that support their thinking.  Prompt 2: <i>Which inventor or inventions are you most curious about? Why?</i> As children share to the whole group, record the names of inventors and inventions children are interested in learning more about, either on a chart or in notes.
<b>Closing</b> 1 minute	<i>Tomorrow we will read a text to learn more about one of the important inventors we met today—someone who made an important invention using light. Can you figure out who it is? [Lewis Latimer]</i>
<b>Standards</b>	<b>R.4.1.a</b> Ask and answer questions about who, what, when, where, and how. <b>R.6.1.b</b> Describe the connection between two individuals, events, ideas, or pieces of information in a text. <b>SL.1.1.c</b> Ask questions to clear up any confusion about the topics and texts under discussion. <b>SA 4.3.</b> Identify interests, motivators and aspirations. Demonstrate self-efficacy and confidence.
<b>Ongoing assessment</b>	Listen to children’s responses during the whole group conversation and Think, Pair, Share. Do children identify at least one important idea about each inventor? What questions do children ask, and what do these questions reveal about their thinking? What connections do children make among the various inventors and inventions? What specific interests do children express about these inventors and inventions? Do they identify areas of interest?

**Notes**

Large empty rectangular box for taking notes.



WEEK 6 Day 5

**Text Talk**  
**“Lewis Latimer and the Long-Lasting Light Bulb” (slides)**

<b>Big Ideas</b>	<p>People innovate and invent to solve problems.</p> <p>Humans and other animals communicate with light and sound.</p>
<b>Weekly Question</b>	How do people use light?
<b>Content Objectives</b>	<p>I can ask and answer questions about key words and details in the text in order to understand the text’s key ideas. (R.4.1.a, R.7.1.b).</p> <p>I can use nonfiction text features to support making meaning of the text’s key ideas. (R.8.1.b)</p>
<b>Language Objectives</b>	<p>I can use various strategies to determine the meaning of unfamiliar vocabulary in the text. (L.4)</p> <p>I can ask questions during discussion in order to clarify the meaning of the text. (SL.2.1.a)</p>
<b>Vocabulary</b>	<p><b>dim:</b> (adj) not shining brightly; (v) to become or make less bright</p> <p><b>available:</b> to be able to be used</p> <p><b>glow:</b> to give out steady light without a flame</p> <p><b>reduce:</b> to make less</p> <p><b>prevent:</b> to keep something from happening</p> <p><b>anti-racist:</b> a person who actively works to end systems and policies that are racist</p> <p><b>activist:</b> a person who works to bring about social or political change</p>
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>● “Lewis Latimer and the Long-Lasting Light Bulb” slides</li> <li>● a light bulb that is no longer working (that rattles) and a fresh light bulb, optional</li> </ul>

	<ul style="list-style-type: none"> <li>● lamp to accommodate light bulbs, optional</li> </ul> <p>If using the lamp, arrange and plug it in without a bulb in the whole group meeting area.</p> <p>On the whiteboard write:          What have you learned about Lewis Latimer?          What are you wondering about Lewis Latimer or his inventions?</p>
<p><b>Opening</b> 1 minute</p>	<p>Introduce the text and set a purpose.  <i>Yesterday we were introduced to lots of inventors who used light and sound to make a difference in our world. Today we will zoom in on one of these inventors, Lewis Latimer.</i></p> <p><i>The text on slides is titled “Lewis Latimer and the Long-Lasting Light Bulb.” As we read, we’ll stop to ask and answer questions about some of the important vocabulary and key details in the text. At any point while we’re reading today, signal if you have a question about a word or a detail.</i></p> <p><i>We’ll notice some text features such as headings and photographs with captions that will help us make sense of the information in the text.</i></p>
<p><b>Text and Discussion</b> 17 minutes</p> <p>slide 2</p>	<p><i>What does it mean that the candlelight was <b>dim</b>?          How is this different from the light from electric lighting today?</i></p> <p>Harvest a few responses.</p>
<p>slide 4</p>	<p><i>Inventors try to solve problems with the inventions they create.          What problem was Lewis Latimer working to solve?</i></p> <p>Harvest responses. Reread to encourage children to refer to key details from the text.</p>
<p>slide 5</p>	<p>Read the text once through fluently.  <i>This slide has very specific information about light bulbs. The word “filament” is written in bold, which signals that it is an important word to understand. As I read it a second time, see if you can use the words and the diagram to make sense of what a filament is.</i></p> <p>Read the text a second time.  <i>Turn and tell your partner: What is a filament, and why is it an important part of a light bulb?</i></p> <p>Show and shake the non-working light bulb to demonstrate that the filament has broken. Gently shake the fresh bulb to demonstrate that the filament seems to be intact. Try each of the bulbs in the lamp.</p>

	<p>Referring again to the slide, point out the caption, which indicates that the image is a drawing by Lewis Latimer.</p> <p>Read the second paragraph again.  <i>What do you think it means that Lewis Latimer added a coating to the filament? What makes you think this?</i></p>
slide 6	<p><i>What was so important about Lewis Latimer’s invention? Turn and tell a partner.</i></p> <p><i>When we talk about the invention of the light bulb, many people think first of Thomas Edison. In fact, a very large electricity company is named for Edison, so lots of people know his name. During his lifetime, Lewis Latimer was not as famous as Thomas Edison, but without him we wouldn’t have the light bulb as we know it today. Now you know more about important light bulb inventions.</i></p>
slide 7	<p><i>According to the heading, what will we learn about in this next section?</i></p>
slide 9	<p>Read the slide. Give children a moment to look carefully at the photo of the Edison Pioneers and think about the text. Invite children to ask questions and share reactions. (Children might also notice the lack of women in the photo; this is addressed in lessons related to <i>Marvelous Mattie</i> in Week 7.)</p> <p>Provide time outside of the Text Talk lesson to continue discussion of racism and sexism in the sciences and other fields.</p>
slide 10	<p><i>What does the heading tell us about Lewis Latimer?</i></p> <p><i>Take a look at the drawings, photos and the captions. How do they add to what you learned from the words on the slide?</i></p>
slide 11	<p><i>What do you think anti-racist activists are?</i></p> <p>Reread the sentence “He had seen the exclusion of Black inventors...” Prompt children to use this context as well as their knowledge from outside the text to support their meaning making.</p> <p>After harvesting children’s ideas, provide a definition and cite Marley Dias as one example of an anti-racist activist.</p> <p><i>Why do you think that historians turned his house into a museum?</i></p> <p>Harvest children's ideas and connections to other historical monuments with which they may be familiar.</p>
<b>Key Discussion and Activity</b> 6 minutes	<p>Invite children to Think, Pair, Share.</p> <p>Prompt 1: <i>What did you learn about Lewis Latimer?</i></p>

	<p>Prompt 2: <i>What are you wondering about Lewis Latimer or his inventions?</i></p> <p>As children share in the whole group, refer to and show specific slides.</p>
<p><b>Closing</b> 1 minute</p>	<p><i>Today we paid close attention to the words of the text to make sure we understood its important ideas. Next week you'll read and think about parts of this text again as part of our end of unit assessment.</i></p>
<p><b>Weekly Question Chart</b> 5 minutes</p>	<p>Refer to the Weekly Question Chart.</p> <p><i>This week we have been thinking about this question: How do people use light?</i></p> <p>Read the chart together. Add any essential ideas that may be missing. Identify and color-code two or three themes that emerge. Some themes might be: Abbie Burgess used light to keep ships safe; Inventors use light to solve problems and make contributions to our daily lives; Lewis Latimer improved light bulbs so that they could last a long time; we use light to see, to send messages and to warn of danger.</p>
<p><b>Standards</b></p>	<p><b>R.4.1.a</b> Ask and answer questions about who, what, when, where, and how.</p> <p><b>R.7.1.b</b> Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.</p> <p><b>R.8.1 b</b> Determine and use text features (e.g., headings, bold print, indexes, graphics, tables of contents, glossaries, links, icons) that help locate key facts or information in a text.</p> <p><b>L.4</b> Use context clues, analyze meaningful word parts, and consult general and specialized reference materials as appropriate to determine or clarify the meaning of unknown and multiple-meaning words and phrases from grade level content.</p> <p><b>SL.2.1.a</b> Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p>
<p><b>Ongoing assessment</b></p>	<p>Listen to children's responses during whole group conversations and Think, Pair, Share.</p> <p>Do children use key details to answer the questions?</p> <p>What do children communicate about Lewis Latimer and his inventions?</p> <p>What do children wonder?</p> <p>How do children use text features to make sense of information and vocabulary?</p> <p>How do children use context to make meaning of unfamiliar words?</p>

## Unit 4: Communicating with Sound and Light

### WEEK 6

#### Shared Reading “The Lighthouse”

<b>Weekly Question</b>	How do people use light?
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● chart paper and markers Write out the poem for whole group reading</li><li>● “The Lighthouse” slides</li><li>● pointer</li><li>● highlighter tape (optional)</li><li>● <a href="https://www.youtube.com/watch?v=YPgEjVJ810I">Portland Bill Lighthouse and foghorn at night</a> video (https://www.youtube.com/watch?v=YPgEjVJ810I)</li><li>● projector and screen</li></ul>
<b>Opening</b> 1 minute	<p><i>Our Shared Reading text this week is a poem called “The Lighthouse,” which is modified—changed slightly—from a poem written by CJ Heck.</i></p> <p><i>Before we read the poem, we’ll do some work with letters and sounds.</i></p>
<b>Phonological Awareness</b> 6 minutes	<p>Review the Foundations vowel sounds poster and the vowel teams poster.</p> <p>Blend sounds to make a word. <i>Let’s listen to these sounds and blend them together to think of what the word is.</i> <i>The sounds are /ī/.. /l/.. /an/.. /d/.. What’s the word? (island)</i> <i>The sounds are /b/.. /ī/.. /l/.. /t/.. What’s the word? (built)</i> <i>The sounds are /ū/.. /p/.. /ō/.. /n/ . What’s the word? (upon)</i></p> <p>Segment sounds and substitute final blend. <i>The word is “still.” How many sounds do we hear in the word? (4)</i> <i>What word do we get when we substitute the ending bonus letters -ll with -ff? (stiff)</i></p>

	<p><i>The word is "stiff." How many sounds do we hear? (4)</i>  <i>What word do we get when we substitute the beginning blend -st with -sn? (sniff)</i></p> <p>Isolate and listen for long vowels.  <i>The word is "day." Where do you hear the long vowel /a/? (last)</i>  <i>The word is "light." Where do you hear the long vowel /i/? (middle)</i>  <i>The word is "home." Where do you hear the long vowel /o/? (middle)</i>  <i>The word is "spray." Where do you hear the long vowel /a/? (last)</i></p> <p>Add plural -s to multisyllabic words.  <i>The word is "boulder." When we add plural -s to the end, what is the new word? (boulders)</i></p> <p><i>The word is "sailboat." When we add plural -s to the end, what is the new word? (sailboats)</i></p> <p><i>The word is "seagull." When we add plural -s to the end, what is the new word? (seagulls)</i></p> <p>Delete and substitute phonemes.  <i>The word is "high." When we delete the first sound /h/, what word do we have left? (I)</i></p> <p><i>The word is "wings." When we delete the final sound /s/, what word do we have left? (wing)</i></p> <p><i>The word is "notes." When we substitute the first sound with /b/, what's the new word? (boats)</i></p> <p><i>The word is "they." When we substitute the ending sound with /em/, what's the new word? (them)</i></p>
<p><b>Shared Reading</b> 8 minutes</p>	<p>Model reading the full poem while tracking the print.  <i>As we read today, use what you know about compound words, and look for plural -s in the poem.</i></p> <p>Echo read the full poem while tracking the print. Model expression, and emphasize words that will help children understand the meaning of the poem. Use fluency to support comprehension.</p> <p>Connect the poem to unit content.</p>



	<p><i>Our weekly question this week is, How do people use light? One of the ways that people use light is in a lighthouse. How does the poet describe this lighthouse? What do we know about it?</i></p> <p><i>What does the poet mean by “upon the tall lighthouse, who’s asleep during the day?”</i></p> <p><i>How does the poet feel about the lighthouse? What makes you think that?</i></p> <p>Identify and review key letter-sound relationships.  <i>As we are reading today, notice the compound words: two words put together to make a new word. Let’s find them in our poem. (anymore, seagull, sailboat, lighthouse)</i></p> <p>Chorally read the poem multiple times for fluency practice.</p>
<p><b>Closing</b> 5 minute</p>	<p><i>You will continue to practice reading the poem “The Lighthouse” in the Reading Station. Let’s watch a video of what a lighthouse looks like in real life.</i></p> <p>Show the video.</p>
<p><b>Standards</b></p>	<p><b>R.2.1.a</b> Distinguish long from short vowel sounds in spoken single-syllable words.</p> <p><b>R.2.1.b</b> Produce single-syllable words by blending sounds (phonemes), including consonant blends.</p> <p><b>R.2.1.c</b> Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.</p> <p><b>R.2.1.d</b> Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).</p> <p><b>R.3.1.b</b> Decode regularly spelled one-syllable words.</p> <p><b>R.3.1.c</b> Know final -e and common vowel team conventions for representing long vowel sounds.</p> <p><b>R.3.1.e</b> Decode two-syllable words following basic patterns by breaking the words into syllables.</p> <p><b>R.3.1.f</b> Read words with inflectional endings.</p> <p><b>R.12.1.a</b> Read various on-level text with purpose and understanding.</p> <p><b>R.12.1.c</b> Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</p>
<p><b>Ongoing Assessment</b></p>	<p>Listen to children as they engage in phonemic awareness activities.</p> <p>Do children blend and segment phonemes?</p> <p>Do children isolate long vowels?</p> <p>Do children substitute sounds?</p> <p>Listen to children chorally read.</p>

	<p>Do children read with appropriate phrasing and expression? Do children use the correct intonation for punctuation?</p>
<p><b>Daily Practice</b></p>	<p>To reinforce fluency with this text, find five minutes each day for choral or paired reading.</p> <p>Possible extensions in small or whole group:</p> <ul style="list-style-type: none"> <li>● With teacher dictation, children use cubes or chips to delete compound words. For example: <i>sailboat - boat = sail, upon - on = up, seagull - gull = sea, lighthouse - house = light, anymore - any = more</i></li> <li>● With teacher dictation, children use letter tiles or write with markers on whiteboards to build compound words with plural s. (sailboats, seagulls, lighthouses)</li> </ul>

**Notes**

Name: \_\_\_\_\_

## **The Lighthouse**

Modified from a poem by C.J. Heck

There's a lighthouse on an island  
built on boulders in the sea.  
A home to no one anymore,  
but it's beautiful to me.  
Ocean waves come crashing,  
their salty drops send spray  
Upon the still, tall lighthouse  
Who's asleep during the day.  
The lighthouse wakes at evening time,  
Shines its light around and down,  
Welcoming all the sailboats  
As they come into the town.  
I sit and send my wishes  
way up high on seagull wings.  
I know that they'll come true  
on notes the kind lighthouse sings.

Unit 4: Communicating with Sound and Light

WEEK 6

Stations

Station	Activities	Materials Writing tools at each station
Shared Reading	“The Lighthouse”	<ul style="list-style-type: none"> <li>● Shared Reading text on chart and/or slides</li> <li>● pointer</li> </ul>
Teacher Groups	Strategic small group instruction	<ul style="list-style-type: none"> <li>● as needed</li> </ul>
Reading	Independent and Partner Reading	<ul style="list-style-type: none"> <li>● “The Lighthouse” child copies</li> <li>● individual book bags</li> <li>● pencils</li> </ul>
Listening & Speaking	Talk, Draw, Talk	<ul style="list-style-type: none"> <li>● Week 6 image (mirror sculpture)</li> <li>● Week 6 prompt and recording sheet</li> <li>● sand timers</li> <li>● drawing tools</li> </ul>
	Listen and Respond: <i>Rosie Revere, Engineer</i>	<ul style="list-style-type: none"> <li>● audio recording and technology</li> <li>● <i>Rosie Revere, Engineer</i> book</li> <li>● conversation prompts</li> </ul>
Vocabulary	Draw for Meaning <i>radiant, electricity, direction, redirect, reverse, reflection</i>	<ul style="list-style-type: none"> <li>● <b>Unit 4, Week 5</b> Weekly Words cards</li> <li>● Draw for Meaning sheets</li> </ul>
Science Literacy	What happens when you refract light? Filling in weather calendar	<ul style="list-style-type: none"> <li>● Week 6 prompt, printed as stickers or copied and cut apart, with glue sticks</li> <li>● science journals</li> <li>● colored pencils and pencils</li> </ul>
Word Work  (align with phonics program)	Fluent Reader’s Challenge	<ul style="list-style-type: none"> <li>● Week 6 Fluent Reader’s Challenge sheets</li> <li>● sand timers</li> <li>● Fluent Reader’s Challenge directions card</li> </ul>
	Look, Cover, Write, Check	<ul style="list-style-type: none"> <li>● Week 6 Look, Cover, Write, Check sheets</li> <li>● Look, Cover, Write, Check directions card</li> </ul>
	Name It, Write It, Mark It	<ul style="list-style-type: none"> <li>● Week 6 Name It, Write It, Mark It sheets</li> <li>● Name It, Write It, Mark It directions card</li> </ul>
	Sentences	<ul style="list-style-type: none"> <li>● Week 6 Sentences sheets</li> </ul>

		<ul style="list-style-type: none"><li>● scissors</li><li>● Sentences directions card</li></ul>
--	--	--

Name: \_\_\_\_\_

## Fluent Reader's Challenge

**You** can **write** on **the** napkins.

Dad insists that **I do** this **work**.

**She** dislikes that **word**.

**The** athletes jog on **the** path.

Stop disrupting **our** class!

Ben dislikes **my** cat.

Get **the** cupcakes on **the** plates.

**I** insulted **my friends by** mistake.

Dave **is** finishing **the** dishpans in **the** sink.



Minutes:

Skills:

Recognize and read grade-appropriate irregularly spelled words.

Read with sufficient accuracy and fluency to support comprehension.

Word Work Station U4 W6

Focus on First/ 1st Grade for ME | Boston Public Schools Department of Early Childhood P-2/

Maine Department of Education

Name: \_\_\_\_\_

Look	Cover	Write	Check ✓
------	-------	-------	---------

write	<hr/> <hr/> <hr/>	
work	<hr/> <hr/> <hr/>	
word	<hr/> <hr/> <hr/>	
own	<hr/> <hr/> <hr/>	
Mrs.	<hr/> <hr/> <hr/>	
want	<hr/> <hr/> <hr/>	

Skills:  
Recognize and read grade-appropriate irregularly spelled words.

Sentences

sentence 1

cupcake

two

words

small

has

sentence 2

dentist

to

did

the

go

you



sentence 3

wants

she

finish

her

to

work

Name: \_\_\_\_\_

Sentences

On the lines below, write each sentence you built. Add capital letters and punctuation.

1.

\_\_\_\_\_

-----

\_\_\_\_\_

2.

\_\_\_\_\_

-----

\_\_\_\_\_

3.

\_\_\_\_\_

-----

\_\_\_\_\_






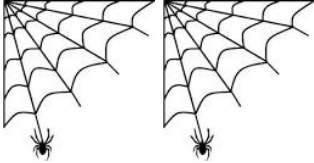


Skills: Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).

Name: \_\_\_\_\_

Name It	Write It	Mark It
---------	----------	---------

Write the word. Mark the syllables.

<b>Word Bank</b>							
napkins	mistakes	tenpins	dislikes	reptiles	sunsets	cobwebs	dishpans

 cupcakes	 _____	 _____
 _____	 _____	 _____
 _____	 _____	 _____

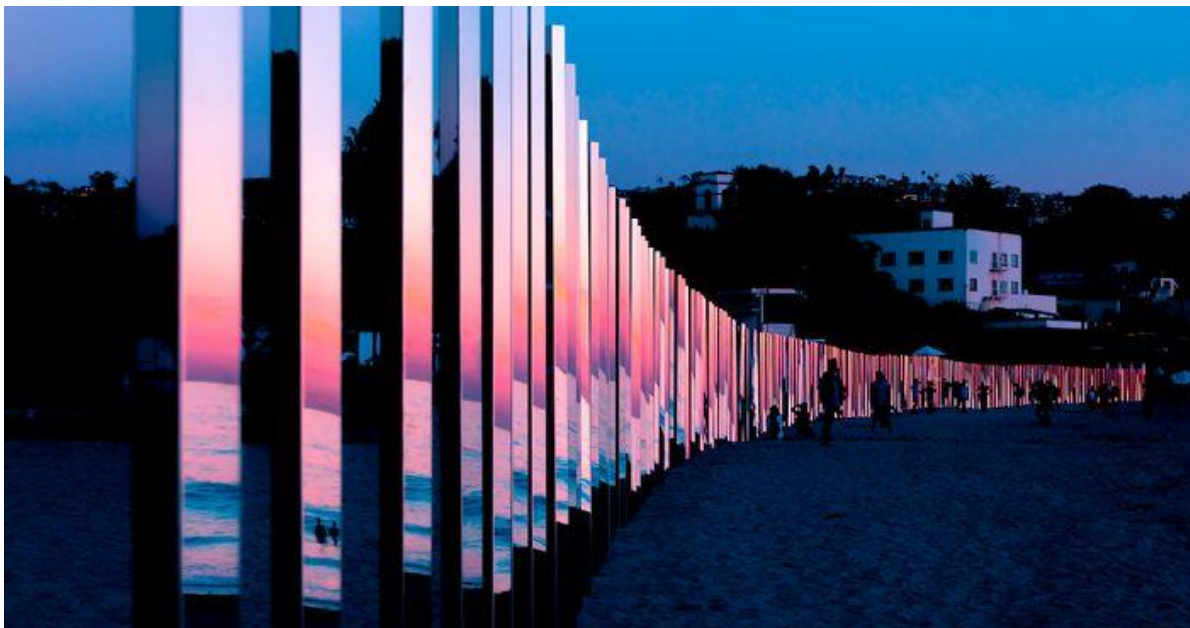
Skills: Know and apply grade-level phonics and word analysis skills in decoding words.

Talk, Draw, Talk Week 6



[https://www.boredpanda.com/mirror-installation-quarter-mile-arc-phillip-k-smith-iii-laguna-beach/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=organic](https://www.boredpanda.com/mirror-installation-quarter-mile-arc-phillip-k-smith-iii-laguna-beach/?utm_source=google&utm_medium=organic&utm_campaign=organic)

---



[https://www.boredpanda.com/mirror-installation-quarter-mile-arc-phillip-k-smith-iii-laguna-beach/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=organic](https://www.boredpanda.com/mirror-installation-quarter-mile-arc-phillip-k-smith-iii-laguna-beach/?utm_source=google&utm_medium=organic&utm_campaign=organic)

Listening & Speaking U4 W6.1



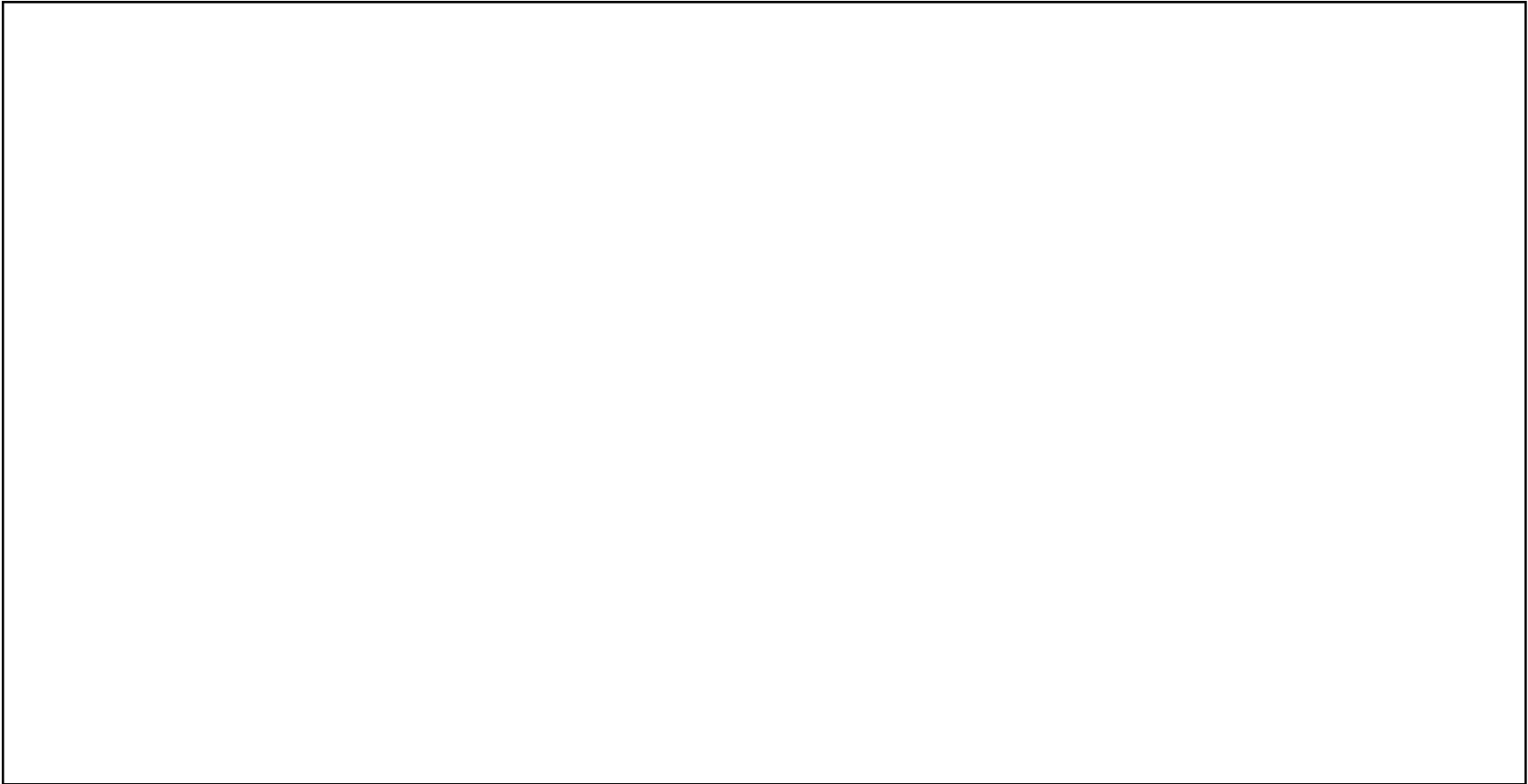
Listening & Speaking U4 W6.1

Focus on First/ 1st Grade for ME | Boston Public Schools Department of Early Childhood P-2/  
Maine Department of Education

Name: \_\_\_\_\_

**Talk Draw Talk**

Look carefully at the image. Talk with your partner about how these poles reflect the sunset.  
After you talk, draw what the poles might reflect at another time of day. Talk with your partner about your drawings.



*Rosie Revere, Engineer* Conversation Prompts: Cut apart and provide with text and audio recording.

### **Question 1**

Where did Rosie find materials for her inventions?  
What are some of the materials she used?

*Rosie Revere, Engineer*

### **Question 2**

How did Rosie feel at school at the beginning of the story?  
How did Rosie feel at school at the end of the story?  
What made this change happen?

*Rosie Revere, Engineer*

WEEK 6 Lesson 1

**Science and Engineering: Making Rainbows**  
Exploring Light

<b>S &amp; E Big Ideas</b>	Light is made of 7 different colors visible to the human eye.
<b>S &amp; E Guiding Question</b>	Why can I see different colors in a rainbow?
<b>Content Objective</b>	I can engage in an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. (1-PS4-3)
<b>Language Objective</b>	I can talk with my peers about how to refract light in order to see a rainbow. (Standard 1)
<b>Vocabulary</b>	<b>prism:</b> a piece of glass or other see-through material that has several flat sides, called faces <b>refraction:</b> when light changes direction, or bends when it moves from one material to another.
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● <a href="https://tinyurl.com/yrdhw2k9">Colossal Questions: How are Rainbows Made?</a> Epic video (https://tinyurl.com/yrdhw2k9)</li><li>● <a href="https://www.youtube.com/watch?v=nCPPLhPTAIk">How is a Rainbow Formed</a> video (https://www.youtube.com/watch?v=nCPPLhPTAIk)</li><li>● plastic cup, one per group</li><li>● water, for each cup</li><li>● small mirror, to be placed in the cup of water Place the mirror in the cup before the investigation.</li><li>● flashlight, one per group</li><li>● white paper, one piece per group</li><li>● chart paper and markers</li></ul> <p>Children will work in small groups of 3-4. Prepare these groups ahead of time, if necessary.</p>



<b>Opening</b> 10 minutes	Ask the children to share what they know about rainbows. Record their thoughts on chart paper. Share the Colossal Questions video. Ask children to share what they learned and what they wonder.
<b>Investigation</b> 10 minutes	Place the children into groups. Tell children they will be making rainbows. Warn children that part of this experiment requires the lights to be off.  Optional step: show the <a href="#">How is a Rainbow Formed</a> video.  Procedure: <ul style="list-style-type: none"> <li>● Provide each group of children a clear cup with water and the mirror placed inside.</li> <li>● Assign each child in each group a role. They will rotate these roles: flashlight operator, paper holder</li> <li>● Shut off the classroom lights.</li> <li>● The flashlight operator will shine the beam of light from the flashlight onto the mirror in the water.</li> <li>● The paper holder will hold the paper at an angle over the glass to capture the refracted light.</li> <li>● Allow the children to switch roles and repeat the process.</li> </ul>
<b>Discussion</b> 8 minutes	Ask: <ul style="list-style-type: none"> <li>● What did it look like when you held the paper over the cup?</li> <li>● What did you notice about the refracted light?</li> <li>● What do you still wonder about?</li> </ul>
<b>Closing</b> 2 minutes	Gather children in a circle on the rug. Ask children what new evidence they have that supports the ideas below. <ul style="list-style-type: none"> <li>● Light is made up of many colors</li> </ul>
<b>Standards</b>	<b>1-PS4-3.</b> Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. <b>Standard 1:</b> Prepare for and participate in conversations across a range of topics, types, and forums, building on others’ ideas and expressing their own.
<b>Ongoing assessment</b>	Check for understanding in the children’s responses.

**WEEK 6 Lesson 2**








**Science and Engineering: Communicating with Light**  
Experimenting with Light

<b>S &amp; E Big Ideas</b>	People use light to communicate.
<b>S &amp; E Guiding Question</b>	How can we communicate using only light?
<b>Content Objective</b>	I can experiment with and create a form of communication with a flashlight. (1-PS4-4)
<b>Language Objective</b>	I can talk with and negotiate with my classmates. (Standard 1)
<b>Vocabulary</b>	<b>signal:</b> a way to communicate or get the attention of a person
<b>Materials and Preparation</b>	<ul style="list-style-type: none"> <li>● flashlight, one per group</li> <li>● <a href="#">Flashlight Code</a> sheet, one per child</li> <li>● <a href="#">The Red and White Striped Lighthouse</a></li> </ul> <p>This poem will be used for the closing. Teachers can project the poem, write it on the board, or simply read it aloud.</p>
<b>Opening</b> 10 minutes	<p>Tell children that they will be experimenting with light.</p> <p><i>Light has been used as a signal for hundreds of years. A signal is a form of communication. Light is a good way of communicating because it can travel over a long distance.</i></p> <p>Engage in discussion:</p> <ul style="list-style-type: none"> <li>● <i>Have you ever seen light used as a signal?</i></li> <li>● <i>Where was it used?</i></li> <li>● <i>How was it used and what did it communicate?</i></li> </ul> <p>If children are unable to draw on a previous experience, prompt them with a clue about driving in a car/walking on the sidewalk and knowing when to stop and go.</p>
<b>Investigation</b>	<i>Today, you will develop your own code, using light.</i>

10 minutes	<p>Distribute the Flashlight Code sheets.</p> <p>Children will develop a way to communicate: What do you want to play at recess? And a selection of response choices such as run, tag, hide and seek, etc). They will develop an on/off code for each phrase/word. An example:</p> <p style="padding-left: 40px;">What do you-On/Off/On  want to-On shine the light up then down  play at recess-Off/On/Off</p> <p>Allow partners to communicate a response then switch roles and have the other partner ask the question.</p>
<b>Discussion</b>	<p>Ask questions about the experiment:</p> <ul style="list-style-type: none"> <li>● How do people use light to communicate?</li> <li>● What are some other ways that light can help us signal or communicate with others?</li> </ul>
<b>Closing</b>	Share the poem <a href="#">The Red and White Striped Lighthouse</a> .
<b>Standards</b>	<b>1-PS4-1.</b> Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
<b>Ongoing assessment</b>	Check for understanding in the children’s responses.

**Notes**

Week 6 Prompt

<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>
<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>
<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>
<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>
<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>
<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>
<p>What happens when you refract light?</p>	<p>Date: _____            Temperature: _____            Daylight Hours: _____</p>	<p>Phase of the Moon  </p>



# Flashlight Code

Word or Phrase	On/Off Sequence

## Unit 4: Communicating with Sound and Light

### WEEK 6 Studios




### How do people use light?

The **Look and Listen! Project** is introduced in the Text Talk lesson on Day 1. Children continue from that lesson to refine their plans for designing communication tools using sound and light for use by children in PreK, gather materials, and begin building. Most studios are open-ended and serve to support this work. Specific materials and work across studios will depend on designs proposed by each small group and the materials needed to realize them.




<b>Big Ideas</b>	Light and sound travel. Humans and other animals communicate with light and sound. People innovate and invent to solve problems.
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● Studios prompts, cut apart and added to each bin</li><li>● Studios Planner</li><li>● Observation sheets</li><li>● Children's Look and Listen! Project Planning sheets in progress</li><li>● Evaluating Our Design sheets, copies for each small group</li></ul> <p>Review children's planning sheets. Gather materials they suggest and others that can support the building of their designs. These will include all of the materials used to date to create sound and light effects. Review the suggested activities, in brief, below. Organize materials in each studio and around the classroom so that children may access those they need. Arrange work areas to encourage small groups to share materials and to consult productively with each other.</p> <p>Distribute children's planning sheets, and encourage or set up children to work in the small groups established during the project introduction (Text Talk Day 1).</p>



	<p><u>For the Art Studio:</u></p> <ul style="list-style-type: none"> <li>● blank paper</li> <li>● writing and drawing tools</li> <li>● examples of invention drawings</li> </ul> <p><u>For the Building Studio:</u></p> <ul style="list-style-type: none"> <li>● Beautiful Stuff</li> <li>● any available building materials</li> <li>● temporary adhesives, such as masking tape, wire, string, yarn</li> </ul> <p><u>For the Library Studio:</u></p> <ul style="list-style-type: none"> <li>● “Inventors!” slides, from Text Talk Day 4</li> <li>● Unit 4 and other texts</li> <li>● technology for conducting online research</li> <li>● blank paper, small books, and/or chart paper</li> <li>● writing and drawing tools</li> </ul> <p><u>For the Science and Engineering Studio:</u></p> <ul style="list-style-type: none"> <li>● white paper</li> <li>● writing and drawing tools</li> </ul> <p><u>For the Writing and Drawing Studio:</u></p> <ul style="list-style-type: none"> <li>● <a href="https://mass.pbslearningmedia.org/resource/buac18-k2-sci-ps-communicatelight/communicating-with-light/">Communicating with Light</a> video (PBS, 2:12, <a href="https://mass.pbslearningmedia.org/resource/buac18-k2-sci-ps-communicatelight/communicating-with-light/">https://mass.pbslearningmedia.org/resource/buac18-k2-sci-ps-communicatelight/communicating-with-light/</a>)</li> </ul> <p>Bring to the whole group meeting those materials that support children’s articulated ideas and provoke them to consider ideas beyond their initial plans.</p>
<p><b>Opening</b></p>	<p><i>You have already been thinking about this challenge: What tool can you build for four year olds to communicate a message using sound or light? In all of the studios you can continue your planning and try out your ideas.</i></p> <p>Describe the different ways children might approach next steps, according to the materials arranged among the studios.</p> <p>Distribute children’s project planning sheets.</p> <p><i>Huddle with your group to review your project plans and decide your next steps for today.</i></p> <p>Ask a couple of children from different groups to share their plans.</p>

	<p><i>You will also need to think about whether your designs will work for the children who will use them. For example, if one part of your tool is quite large, a four year old's hands might not be big or strong enough to use it.</i></p> <p>Show and talk through the Evaluating Our Design sheet. Dismiss all children to begin working.</p>
<b>Facilitation</b>	<p>As children work, circulate and engage them in conversation about their endeavors. Exploit opportunities to highlight children's connections to the Weekly Question and the unit's Big Ideas. Offer support in the form of material and print resources, strategies, adaptive tools, and consultation with peers.</p> <p>Listen in, observe, and take notes about children's interests, experiences with, and questions about light. Use these notes to plan for upcoming Studios sessions.</p> <p>While children work, consider which piece of work to bring to a Thinking and Feedback meeting.</p>
<b>Closing Studios</b>	<p>Support smooth clean up of studios materials and organization of works in progress.</p> <p>Facilitate a short, whole group meeting after Studios to discuss children's activities, discoveries, and questions.</p>
<b>Ongoing Assessment</b>	<p>Review the Evaluating Our Design sheets.</p> <p>Does the central idea of the design draw upon learning about light and sound?</p> <p>Is the plan realistic? Does it use available materials? Can the children build it so that it works in a satisfying way?</p> <p>Will four year olds be able to use the tool? What suggestions will help the group (re)consider this audience?</p> <p>Are all the children in each group working toward the same end? Would any children or groups benefit from reassignment?</p> <p>Copy or digitally capture the small groups' Evaluating Our Designs sheets so that they can be appropriately filed for each child.</p>

<p style="text-align: center;"><b>Art</b></p> 	<p><b>Look and Listen! Project: Drawing Ideas</b> <i>Develops from project planning.</i></p> <p>Children make detailed drawings of their ideas. They refer to <i>Rosie Revere, Engineer</i> (Days 2-3), "Inventors!" (Day 4), and "Lewis Latimer and the Long-Lasting Light Bulb" (Day 5) texts.</p>
---	--



<p><b>Building</b></p> 	<p><b>Look and Listen! Project: Building Models</b>  <i>Develops from project planning.</i></p> <p>Working from their designs, children use any available building materials, including but not limited to Beautiful Stuff, to build initial models of their tool designs. Children attach materials in ways that they can be easily taken apart to allow for multiple trials.</p>
<p><b>Drama</b></p> 	<p><b>Look and Listen! Project: Acting Out Using Communication Tools</b>  <i>Develops from project planning.</i></p> <p>Children play out scenarios which require communication and use of proposed tools as a means of assessing their designs.      What is the situation that requires communication?      Will this tool work? Why or why not? What longer story might evolve from this situation?      In what situations will this tool work best?</p>
<p><b>Library</b></p> 	<p><b>Researching Inventors and Inventions</b>  <u>Objective:</u>      I can research inventors who interest me.</p> <p><u>Introduction:</u>  <i>We have read the text “Inventors!” to learn a little bit about several inventors who used sound and light. Who and what would you like to learn more about? How will you do it?</i></p> <p>Brainstorm research resources, including Unit 4 and other texts and websites.</p> <p><u>Process:</u>      Independently and with classmates, children read to learn about inventors and inventions. They record what they find in writing and drawing on sheets of paper, in small books, or on shared charts.</p> <p><u>Facilitation:</u>  <i>What inventor or invention are you researching?      What interests you about this person/invention?      How will you record what you find?</i></p> <p><u>Ongoing Assessment:</u>      Review children’s writing and drawing. What interests them? Why? How do they record what they learn?</p> <p><u>Thinking and Feedback Possibilities:</u>      Invite a child or pair of children to share what they have learned.</p>

	Classmates might offer questions for further research.
<p><b>Science and Engineering</b></p> 	<p><b>Illustrations of Light</b> Drawing from their learning from the Science and Engineering lessons, children draw a picture of a light signal (a lighthouse or traffic light) or refracted light (a rainbow).</p> <p><b>Look and Listen! Project: Building and testing models</b> Children use the studio to continue work on their communication tools, as needed.</p>
<p><b>Writing and Drawing</b></p> 	<p><b>Look and Listen! Project: Writing Stories</b> <i>Develops from project planning.</i></p> <p>Children write and draw stories or real life scenarios in which communication tools are or could be used.</p> <p>For inspiration, children might begin by watching the PBS video, <i>Communicating with Light</i>, in which children devise a scenario in which they will communicate between tents and write out their light code.</p>
<p><b>Standards</b></p>	<p>Standards addressed will depend upon the studios in which children work. Possibilities include those listed in the Studios Introduction (Part 2: Components) and the following studio-specific standards.</p>

**Notes**



## **Art Studio**

What do I need to show in my drawing?

Will viewers understand my design?

---

## **Building Studio**

What do I need to show in my model?

Will viewers understand my design?

---

## **Drama Studio**

How will we show the scene?

What does this tell me about how our design will work or not work?

---

## **Library Studio**

What is interesting about this person or invention?

How can I record what I find?

---

## **Science and Engineering Studio**

Why is it important to communicate with light?

What else should I add here?

---

## **Writing and Drawing Studio**

What do I need to tell in my story?

Will the audience understand how the tool works by reading the story?

Look and Listen! Project  
**Evaluating Our Design**

Name: \_\_\_\_\_

Collaborators' names: \_\_\_\_\_

Will a PreK student be able to send a message with this tool? How?

Will the message be able to travel as far as it needs to? How?

Will someone be able to receive the message? How?

Will the receiver understand the message? How?

We are choosing:

\_\_\_\_\_ Idea 1

\_\_\_\_\_ Idea 2

\_\_\_\_\_ a new idea

because ...

**Diagram of changes to Idea 1 or Idea 2, or a new idea**

**Diagram of our final idea**

Unit 4: Communicating with Sound and Light

WEEK 6 Day 1

**Writing Explanation**  
Research  
continued from Week 5, Day 5

<b>Content Objective</b>	I can recount and record information found in texts to answer a research question. (R.6.1.a, W.3.1.b, W.2, W.1.1.a, W.1.1.b)
<b>Language Objective</b>	I can use what I learned from a research text to explain how sound travels. (SL.2.1.a)
<b>Vocabulary</b>	<b>research:</b> to get information about something <b>explanation:</b> a genre of writing whose purpose is to explain a phenomenon in sequence <b>revise:</b> to make changes to writing
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● explanation planning chart, from Week 5, Day 4</li><li>● <i>Sound and Light</i> or Explanation Research, part 2 slides</li><li>● Explanation Steps sheet, from Week 5, Day 5, extra copies as needed</li><li>● writing tools</li><li>● children’s writing folders, including Explanation Steps sheets</li></ul>
<b>Opening</b> 1 minute	<i>Today you will continue to research and take notes to prepare for writing your explanation.</i>
<b>Research</b> 28 minutes  <i>FOSS Sound and Light</i> , pages 5-6 and 8-9	Refer to the explanation planning chart. <i>Remember, you will be writing to answer the question, How does sound travel?</i>  <i>I am going to read a few pages from our FOSS Sound and Light book. As I read, think about our research question.</i>  Read pages 5-6 and 8-9.  <i>Think about what you learned from the text that answers the research question,</i>



	<p style="text-align: center;"><i>How does sound travel?</i></p> <p style="text-align: center;"><i>In your own words, explain to your partner how sound travels.</i></p> <p style="text-align: center;"><i>After talking to your partner, you will add to your research notes. Review what you wrote last time during Writing.</i></p> <p style="text-align: center;"><i>If you learned new steps from this book, add sketches or words to help you remember them.</i></p> <p style="text-align: center;"><i>If you learned something that makes you want to change what you already wrote, revise those notes.</i></p> <p>Send the children with writing tools and folders to write research notes. As they write, circulate to support their work. Have the <i>Sound and Light</i> slides available for their reference.</p>
<p><b>Closing</b> 1 minute</p>	<p style="text-align: center;"><i>Today you continued researching for your explanation. Tomorrow you will begin writing.</i></p>
<p><b>Standards</b></p>	<p><b>R.6.1.a</b> Describe characters, settings, and major events in a story, including details about who, what, when, where, and how.</p> <p><b>W.3.1.b</b> Use a combination of drawing and writing to communicate a topic with details</p> <p><b>W.2</b> Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p><b>W.1.1.a</b> Investigate questions by participating in shared research and writing projects.</p> <p><b>W.1.1.b</b> Gather information from provided sources and/or recall information from experiences in order to answer questions with guidance and support from adults.</p> <p><b>SL.2.1.a</b> Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p>
<p><b>Ongoing assessment</b></p>	<p>Review children’s research notes.</p> <p style="padding-left: 40px;">What do they understand about how sound travels?</p> <p style="padding-left: 40px;">What more do they need to learn to develop an accurate understanding?</p> <p style="padding-left: 40px;">What information do children draw from texts?</p> <p style="padding-left: 40px;">Do they represent the information in their own words?</p>

<p><b>Notes</b></p>
---------------------

Unit 4: Communicating with Sound and Light

WEEK 6 Day 2

**Writing Explanation**  
Individual Construction: Explanation Steps

<b>Content Objective</b>	I can use research to write an explanation. (W.1.1.a, W.1.1.b, W.2, W.3.1.b)
<b>Language Objective</b>	I can write using present tense action verbs and general nouns. (L.1.1.b, L.1.1.d)
<b>Vocabulary</b>	<b>research:</b> to get information about something <b>explanation:</b> a genre of writing whose purpose is to explain a phenomenon in sequence <b>explanation steps:</b> the phenomenon explained, in order <b>present tense:</b> happening now <b>action verb:</b> a verb that expresses action <b>general:</b> naming a group; not specific <b>noun:</b> a word that names a person, place, thing, or idea
<b>Materials and Preparation</b>	<ul style="list-style-type: none"><li>● explanation planning chart, from Week 5, Day 4</li><li>● Explanation anchor chart, from Week 4, Day 2</li><li>● Explanation Steps sheet, from Week 5, Day 5, extra copies</li><li>● writing tools</li><li>● children’s writing folders, including Explanation Steps sheets</li><li>● Explanation Observation Tools, from Week 5, Day 1</li><li>● unit texts about sound, available for children’s reference</li></ul>
<b>Opening</b> 5 minutes	<p><i>Today you will use your research notes to begin writing your explanation.</i></p> <p>Refer to the planning chart.</p> <p><i>Remember, you are writing for PreK students to answer the question,</i></p> <p><i>How does sound travel?</i></p> <p>Refer to the Explanation anchor chart. Briefly review the stages and language of explanation.</p>

	<p><i>You will begin by writing the explanation steps. This is the process you will use. First, review your research notes. Add more details to your sketches and turn your notes into complete sentences. Then, review these steps. Are there any missing? Add any missing steps.</i></p> <p><i>You will have plenty of time to write your explanation, so work carefully. Remember to include present tense action verbs and general nouns.</i></p>
<p><b>Individual Construction</b> 15 minutes</p>	<p>Send children with materials to write. As children work, circulate to support them and to assess their work. Take notes about children’s writing using the Explanation Observation Tool. These notes will be used to plan for lessons on Days 3-5 and Week 7, Days 1-3, and for revisions in Week 8.</p> <p>Identify a child to present their writing and receive feedback using Thinking and Feedback.</p>
<p><b>Closing</b> 10 minutes</p>	<p>Have the children put away their papers in their writing folders and bring the class back together. Use Thinking and Feedback for one child’s work. Record suggestions on sticky notes to place in the child’s writing folder. <i>Tomorrow you will continue writing your explanations.</i></p> <p>After the lesson, review the Explanation Observation Tools. Note any trends that are emerging. Plan for individual, small group, and whole group instruction based on these needs, following the guidance outlined on Days 3-5 and Week 7, Days 1-3.</p>
<p><b>Standards</b></p>	<p><b>W.3.1.b</b> Use a combination of drawing and writing to communicate a topic with details</p> <p><b>W.2</b> Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology.</p> <p><b>W.1.1.a</b> Investigate questions by participating in shared research and writing projects.</p> <p><b>W.1.1.b</b> Gather information from provided sources and/or recall information from experiences in order to answer questions with guidance and support from adults.</p> <p><b>L.1.1.b</b> Use singular and plural nouns with matching verbs in basic sentences (e.g., <i>He hops; We hop</i>).</p> <p><b>L.1.1.d</b> Use verbs to convey a sense of past, present, and future (e.g., <i>Yesterday I walked home; Today I walk home; Tomorrow I will walk home</i>).</p>
<p><b>Ongoing assessment</b></p>	<p>Review children’s work using the Explanation Observation Tool, focusing on Explanation Steps, Verbs, and Nouns.</p>

Writing U4 W6 D2

## Unit 4: Communicating with Sound and Light

### WEEK 6 Days 3-5, continued on Week 7, Days 1-3

During Days 3-5, and on Week 7, Days 1-3, children continue to write independently and to receive feedback on their work using Thinking and Feedback (see Day 2 for a detailed lesson). In addition, children's writing is assessed using the Explanation Observation Tool, and individual/small group/whole group lessons are added in response to children's needs.

#### **Preparation:**

Review children's Explanation Observation Tools. Note any trends that are emerging. Plan for individual, small group, and whole group instruction based on these needs. Areas of need may include, but are not limited to, the following.

#### Writing Explanation: (see the attached lessons for recommendations)

- explanation steps
- verbs
- nouns
- images

#### Conventions: (no suggested lessons included)

- writing complete sentences
- including spaces between words in a sentence
- capitalization
- punctuation
- applying rules and strategies taught in Foundations (or similar program)

#### Writing Behaviors: (no suggested lessons included)

- using spelling strategies, such as tapping
- using environmental print and word walls for spelling
- re-reading own writing

Use the following sheet to plan instruction for Days 3-5. (Note that the work will continue on Week 7, Days 1-3, with a planning sheet located in that week.) Make additional copies as needed to plan for multiple individual, small group, and/or whole group lessons.

**Day 3**

Target Students (individual, small group, or whole group?):

Topic:

**Day 4**

Target Students (individual, small group, or whole group?):

Topic:

**Day 5**

Target Students (individual, small group, or whole group?):

Topic:

## Writing Explanation

### Deconstruction and Revision: Explanation Steps

#### Materials:

- Explanation anchor chart, from Week 4, Day 2
- unit texts about sound
- children's explanations

#### Process (small or whole group):

- Show the Explanation anchor chart. Review the stages and language of explanation.
- Remind children that explanation steps include all steps needed to explain the phenomenon, in order.
- Guide children to read their explanations to a partner to identify whether they have included all steps, in order.
- Refer children to unit texts to support their knowledge of how sound travels.
- Guide children to add missing steps or reorder steps, as needed.

## Writing Explanation

### Deconstruction and Revision: Verbs

#### Materials:

- Explanation anchor chart, from Week 4, Day 2
- mentor text for explanation: *From Sheep to Sweater*, *From Cocoa Bean to Chocolate*, or a child's writing that uses present tense action verbs
- children's explanations

#### Process (small or whole group):

- Show the Explanation anchor chart. Review the stages and language of explanation.
- Read the mentor text.
- Together identify the present tense action verbs.
- Refer children back to their own explanations. Have them underline the verbs.
- If children identify verbs that are not present tense action verbs, have them work with a partner or with teacher guidance to choose the appropriate replacement verbs.



## Writing Explanation

### Deconstruction and Revision: Nouns

#### Materials:

- Explanation anchor chart, from Week 4, Day 2
- mentor text for explanation: *From Sheep to Sweater, From Cocoa Bean to Chocolate*, or a child's writing that uses general nouns
- children's explanations

#### Process (small or whole group):

- Show the Explanation anchor chart. Review the stages and language of explanation.
- Read the mentor text.
- Together identify the general nouns. Remind children that they are writing explanations about how sound travels, not just how one particular sound traveled.
- Refer children back to their own explanations. Have them underline the nouns.
- If children identify specific nouns, have them work with a partner or with teacher guidance to change them to general nouns.

## Writing Explanation

### Deconstruction and Revision: Images

#### Materials:

- explanation planning chart, from Week 5, Day 4
- mentor text for explanation: *From Sheep to Sweater, From Cocoa Bean to Chocolate*, or a child's writing with clear images that demonstrate how sound travels
- children's explanations

#### Process (small or whole group):

- Refer to the planning chart and mentor texts to reinforce the importance of images in explanations, particularly for the audience of PreK students.
- Remind children that their explanations show how sound travels.
- Have them illustrate each step of the explanation, showing how sound travels and matching the images to the words in each explanation step.