

Unit 4: Communicating with Sound and Light

WEEK 5 Studios







How does light change?


Children explore and represent light with a variety of media, continuing and building on previous experiences.


Big Ideas	Light and sound travel. Materials interact with light in different ways.
Materials and Preparation	<ul style="list-style-type: none">● Studios prompts, cut apart and added to each bin● Studios Planner● observation sheets <p>Bring to the whole group meeting only those bins needed for introductions.</p> <p><u>For the Library Studio:</u></p> <ul style="list-style-type: none">● a collection of fictional stories, not from Unit 4● Light and Sound Messages sheets● clipboards● writing tools <p><u>For the Math Studio:</u></p> <ul style="list-style-type: none">● folders, to create privacy dividers● geoblocks● solid shapes <p><u>For the Science and Engineering Studio:</u></p> <ul style="list-style-type: none">● Sun and Shadow Challenge cards, cut apart, 2 or 3 sets <p><u>New for the Writing and Drawing Studio:</u></p> <ul style="list-style-type: none">● a variety of writing papers● materials for creating a class book


Studios U4 W5

	<p>Review Studios descriptions below. Decide which studios to introduce explicitly. Prepare the Opening basket and materials accordingly.</p>
<p>Opening</p>	<p><i>Most of this week’s Studio activities are familiar to you. Let’s do a quick review.</i></p> <p><i>At the Library Studio, you can use any of the fictional books in our classroom to keep thinking about how people use light and sound to send messages.</i></p> <p><i>At the Math Studio this week, we will be exploring flat and solid shapes and different things we can make when putting those shapes together.</i></p> <p><i>The Science and Engineering Studio will happen outside! Here are some Sun and Shadow Challenges you can try.</i></p> <p>Explain where children will use these challenge cards (outdoors, or in a cleared and sunny space in the classroom).</p> <p>Describe and model each studio to the extent needed for children to begin their work.</p> <p><i>Turn and tell your partner your plan and your backup plan.</i></p> <p>Ask a couple of children to share their plans, and dismiss all children to begin working.</p>
<p>Facilitation</p>	<p>As children work, circulate and engage children 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>
<p>Closing Studios</p>	<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>

<p style="text-align: center;">Art</p> 	<p>Making Shadow Puppets <i>Continues from previous week</i></p> <p><u>Objective:</u> I can experiment with light to make a shadow puppet.</p> <p><u>Extension:</u> Children make new puppets as needed for stories they and their classmates are developing.</p>
<p style="text-align: center;">Building</p> 	<p>Building a Puppet Theatre <i>Continues from previous week</i></p> <p><u>Objective:</u> I can build a puppet theatre to effectively show a shadow puppet story.</p> <p><u>Extension:</u> Children collaborate to use the theatre to perform plays they are developing and to make changes to its design as indicated by its use.</p>
<p style="text-align: center;">Drama</p> 	<p>Telling, Writing, and Acting Out Stories <i>Continues from previous week</i></p> <p><u>Objective:</u> I can use what I know and am learning about light to tell, write, and act out stories.</p> <p><u>Extension:</u> Children use shadow puppets and the puppet theatre to perform their stories.</p>
<p style="text-align: center;">Library</p> 	<p>Light and Sound Messages</p> <p><u>Objective:</u> I can peruse fictional books to identify ways characters use light and sound as communication.</p> <p><u>Introduction:</u> <i>This week as you look through our books, see if you can find evidence that characters are using light or sound to communicate a message. You can record what you find here.</i></p> <p>Model with a fictional text not from Unit 4. Flip through the pages, thinking aloud about the illustrations and recalling the events of the story. Identify the use of light or sound to send a message. Show the Light and Sound Messages sheet and walk through completing one row.</p>

	<p><u>Process:</u> Independently and with classmates, children read to find, identify, and describe use of light or sound as communication. They record their findings on the sheet provided.</p> <p><u>Facilitation:</u> <i>What light or sound messages are you finding?</i> <i>What message is the light/sound sending?</i> <i>Why do you think the author included this in the story?</i> <i>Can you record your findings with a drawing? With words?</i></p> <p><u>Ongoing Assessment:</u> Review children’s Light and Sound Messages sheets. Note how children record book titles, and what messages they identify. Do children draw on learning so far to identify how people use light and sound to communicate? What might they need to revisit as the Look and Listen! Project launches?</p> <p><u>Thinking and Feedback Possibilities:</u> Invite a research pair to share what they have found. Invite them to show two or three messages they have found in texts and to describe how they identified these. Do their classmates identify these same story elements as communication by light or sound? Highlight the ways this conversation helps all classmates think about light and sound as message-sending tools.</p>
<p>Math</p> 	<p>Match Mine</p> <p><u>Objective:</u> I can compose objects using solid shapes. I can describe the object to a classmate. I can build objects by listening to a description.</p> <p><u>Introduction:</u> <i>We will learn how to play the game Match Mine. One person starts by building something new with shapes and hiding it behind the folder. Then they describe the object to their partner, who tries to match it. Let’s practice; I will describe my object and you can try to match it.</i></p> <p><u>Process:</u> Children work in partnerships. One partner starts by putting shapes together to build something. They work behind a privacy divider so that the other cannot see. They then describe their object to their partner. The partner tries to build the same object/design to match.</p>

	<p><u>Facilitation:</u> <i>What do we know about shapes?</i> <i>What could you say about the sides, vertices, or edges, to help your partner match it?</i> <i>What did your partner say that made it easier to match?</i></p> <p><u>Ongoing Assessment:</u> Observe to ensure children are using descriptive language when describing shapes, especially when talking about the sides, vertices, and edges.</p>
<p>Science and Engineering</p> 	<p>Exploring Light and Materials <i>Note: This activity requires bright sunlight, ideally outdoors.</i></p> <p><u>Objective:</u> I can attempt a variety of challenges to create specific effects with light and shadows.</p> <p><u>Introduction:</u> <i>What can you do with a shadow? These cards have challenges on them. You will work with a partner, and you can try as many of them as you like. As you work, think about what you already know and what you are learning about light and shadows. See how many of these challenges you can meet!</i></p> <p><u>Process:</u> With partners, children choose any of the Sun and Shadow Challenges and attempt them. Encourage them to share ideas, strategies, and resources.</p> <p><u>Facilitation:</u> <i>What are you trying to accomplish?</i> <i>How are you thinking about this challenge?</i> <i>What else could you try?</i> <i>Have you asked anyone to help you?</i> <i>Does this remind you of a situation you have been in before?</i> <i>Can you think of anything we have seen or read about that could help you think about how to accomplish this?</i></p> <p><u>Ongoing Assessment:</u> Observe as children work. How do children organize themselves and the space they are in, respective of the position of the sun, in response to a specific challenge?</p>

	<p>Do they rely on knowledge they have developed so far during this unit? What other resources do they access, if any?</p> <p><u>Thinking and Feedback Possibilities:</u> Children share a challenge they chose and describe how they approached it. Suggest that they share a challenge with which they had to persevere through confusion or frustration to reach success.</p>
<p>Writing and Drawing</p> 	<p>Making Storyboards <i>Continues from previous week</i></p> <p><u>Objective:</u> I can use a storyboard to plan a story featuring light.</p> <p><u>Extension:</u> Following classmate’s storyboards, children record and illustrate each other’s stories, possibly creating a class book.</p>
<p>Standards</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> <p><u>Drama:</u> L.6.1 Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., because).</p> <p><u>Math:</u> 1.G.A Reason with shapes and their attributes 1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. 1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. Students do not need to learn formal names such as "right rectangular prism.</p> <p><u>Science and Engineering:</u> Practice 1. Asking questions and defining problems</p>

	<p><u>Writing and Drawing:</u> W.2 Develop, strengthen, and produce polished writing by using a collaborative process that includes the age-appropriate use of technology. W.2.1.a With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.</p> <p><u>Thinking and Feedback:</u> SL.2.1.b Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.</p>
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