

Unit 3: Connecting Places, Connecting People

WEEK 7 Lesson 1

Science and Engineering: Engineering Design

Designing the Our Town Project Exhibit: Proposing Exhibit Designs

Big Idea	We understand our own identities by thinking about where we are and where we come from.
S & E Guiding Question	How do museums and others exhibit work for audiences to learn about a topic?
Content Objectives	I can propose three different solutions to display an artifact through drawing and writing. (W.1.2.a) I can use the engineering design process to research different ways to create exhibits for our artifacts. (2.K-2-ETS1-3, Practice 8)
Language Objective	I can discuss solutions for displaying an artifact by asking and answering questions about my classmates' and my own ideas. (SL.2.2.b)
Vocabulary	artifact: an object made by a human being exhibit: an object or a collection of objects displayed in a public space for people to look at task: a piece of work to be done
Materials and Preparation	<ul style="list-style-type: none">● Our Town Project Planning chart, from Text Talk, Week 6● Engineering Design Process chart, from Week 6, Lesson 2● Engineering Design Process card, Imagine● glue stick, for attaching card to chart● Museum Exhibits images, from Week 6, Lesson 2● Science and Engineering packets● writing tools
Opening 4 minutes	<i>Today you will begin to imagine possible solutions for the Our Town Project display.</i> Attach the Imagine card to the chart, as follows.

	<div data-bbox="602 212 1278 842" data-label="Diagram"> <p>The diagram is titled "Engineering Design Process" and includes the task: "Create a way to display artifacts in an exhibit". It features five steps in boxes: "Ask" (solid border), "Imagine" (solid border), "Plan" (dotted border), "Create" (dotted border), and "Improve" (dotted border). The steps are arranged in a non-linear fashion: "Ask" is in the center-left, "Imagine" is in the upper-right, "Plan" is to the right of "Imagine", "Create" is at the bottom, and "Improve" is on the left side.</p> </div> <p>Refer to the Our Town Project Planning chart.</p> <p><i>We already know that we will be making and displaying biographies and puppets. We know that we will need some signs to give people information about our artifacts. [Add reminders about other exhibit ideas the group has developed to date.]</i></p> <p><i>Today you will work as a design team with one other person to imagine three possible solutions to display one kind of artifact for our exhibit. First, at the top of your page, write the kind of artifact you are thinking about displaying. Then write a short description and make a sketch of each display idea, or solution. After you do that, you'll decide together which solution you think is the best, and why. You will need to think about properties of different materials as you do this.</i></p> <p><i>When you and your partner have settled on one idea, you'll present it to another design team and talk with them about their idea. Together with that team, you'll decide on one display idea.</i></p> <p><i>During Studios, you'll investigate different materials to test your design.</i></p>
<p>Investigation 25 minutes</p>	<p>Distribute Science and Engineering packets, writing tools, and Museum Exhibits images.</p> <p>Children work in pairs and then in groups of four to consider a particular</p>

	<p>kind of artifact and corresponding display design solutions. Children might refer to the Museum Exhibits images for inspiration.</p> <p>Circulate and join children’s conversations. Make sure that children:</p> <ul style="list-style-type: none"> ● are clear about the kind of artifact for which they are designing a display; ● discuss and evaluate design ideas; ● draw with detail and label their drawings; ● identify one best solution to pursue and articulate why; ● refer to and discuss the self-assessment question. <p>If children are working on standing structures, challenge them to explain how they are ensuring the structure will be stable.</p>
<p>Closing 1 minute</p>	<p><i>You can continue to work on your display designs at the Discovery Studio this week.</i></p>
<p>Standards and Practices</p>	<p>W.1.2.a Investigate questions by participating in shared research and writing projects.</p> <p>SL.2.2.b Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</p> <p>2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</p>
<p>Ongoing assessment</p>	<p>Reflect on children’s work.</p> <p>How do children generate ideas? What resources do they draw on? Are children’s drawings detailed and labeled? What strategies do they use to produce them? What is the quality of children’s conversations? How do children decide which solution to present to their team? What reasons do they provide to justify their choice?</p>

Notes