



# Bridges

Standard Connection:

ELA.RL.PK4.7

ELA.SL.PK4.1a,1b

M.MD.PK4.3

M.G.PK4.5

S.ES.PK4.3

S.ES.PK4.3b

SS.OW.PK4.5

PD.FM.PK4.5

PD.SHS.PK4.5

VA.CR2a.2.PK

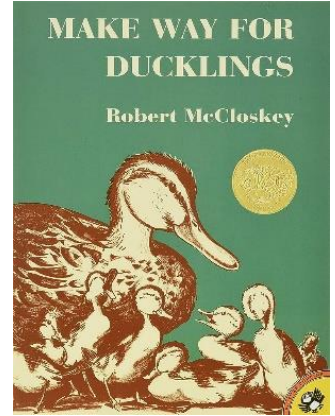
VA.CR2a.3.PK

## Enduring Understanding(s):

- People impact their environments in different ways.

## Essential Question(s):

- How do people impact the environment in positive or negative ways?

Materials	Vocabulary	Books
<ul style="list-style-type: none"> <li>• <i>Make Way for Ducklings</i></li> <li>• Beautiful Stuff (including natural materials)</li> <li>• images of bridges (see Resource)</li> <li>• rope</li> <li>• string</li> <li>• craft sticks</li> <li>• adhesives</li> </ul>	<p><b>blueprint:</b> a picture of an engineer's plans</p> <p><b>engineer:</b> a designer or builder of bridges</p> <p><b>(highway-)(foot-) bridge:</b> a roadway or path that goes over water or land</p> <p><b>stable:</b> strong and sturdy; not moving</p>	

Intro to Centers	
Preparation: Set up materials.	
"In <i>Make Way for Ducklings</i> , Mr. and Mrs. Mallard made nests by the water. What do you notice?"	Show illustrations. <b>Children respond.</b>
"Their first nest was near a large <b>highway bridge</b> - a <b>bridge</b> that connects two cities. Their nest in the Boston Public Garden was near a smaller <b>footbridge</b> - a <b>bridge</b> for people to walk on."	
"Here are images of other <b>bridges</b> . What do you notice?"	Show images. <b>Children respond.</b>
" <b>Bridges</b> are different shapes, sizes, and colors. <b>Engineers</b> - people who design and construct bridges - use <b>blueprints</b> to plan and decide what materials are needed for a <b>stable</b> – strong and sturdy - <b>bridge</b> ."	
"Today in Blocks, you can be <b>engineers</b> and design and construct <b>bridges</b> using these materials. What do you notice?"	Show materials. <b>Children respond.</b>
"You could construct a <b>bridge</b> like the <b>bridges</b> in <i>Make Way for Ducklings</i> or like the <b>bridges</b> in the images."	

### **During Centers:**

Encourage children to create blueprints to plan their bridges. Compare and contrast constructing bridges to constructing block towers. Encourage children to write signs and/or descriptions of their bridges. Compare and contrast their bridges to the illustrations and images. Encourage children to make similar bridges with different materials/numbers of blocks. Encourage children to test the stability/strength of their bridges by putting people, animals, or vehicles on the bridges.

### **Guiding Questions During Centers:**

- How did you use these materials to construct your bridge?
- How is your bridge helpful to people or animals?
- How will you make your bridge stable?
- How is your bridge similar to or different from the bridges in *Make Way for Ducklings/Nana in The City/The Seven Chinese Sisters*/images, etc.?

### **Thinking and Feedback:**

Invite children to share their processes. Encourage children to describe any challenges they might have encountered.

### **Documentation:**

Collect samples of the children's work as well as photographs of their process; use the documentation to launch a discussion during Thinking and Feedback.

### **Provocation:**

Encourage children to create bridges on a smaller scale (using LEGOs, cube blocks, etc.) on a table. Observe and document bridges around the area.

### **Differentiation/Accommodation:**

For Intro to Centers, children with limited verbal skills can use a pre-programmed voice output device to answer questions about the story. (Keep in mind these will likely be closed-ended questions, as those are easiest to program into devices.) This can also be used to help children answer Guiding Questions. During Centers, provide a variety of writing and building materials to meet the children's various fine motor and sensory needs.