



# Sorting Reflective and Non-Reflective Materials

Standard Connection:  
 ELA.SL.PK4.6  
 ELA.L.PK4.4  
 M.MD.PK4.2  
 S.PS.PK4.2  
 S.ES.PK4.3  
 SS.OW.PK4.2  
 PD.SHS.PK4.3

**Enduring Understanding(s):**

- Light affects people, animals, and things.

**Essential Question(s):**

- How does light affect the way things look?

Materials	Vocabulary	Books
<ul style="list-style-type: none"> <li>• <i>Play with Me</i></li> <li>• <i>Raccoon on His Own</i></li> <li>• reflective and non-reflective materials</li> <li>• flashlights</li> <li>• trays</li> <li>• containers for sorting materials</li> <li>• labels: "reflective"/ "non-reflective"</li> </ul>	<p><b>dull:</b> not sharp/not clear</p> <p><b>non-reflective:</b> not capable of reflecting</p> <p><b>reflective:</b> an image that bounces off an object/surface; mirror-like</p> <p><b>shiny:</b> smooth, glossy surface</p> <p><b>sort:</b> arrange according to specific features</p> <p><b>surface:</b> the outside of an object</p>	

Intro to Centers	
Preparation: <i>Set up materials</i>	
<p>"In <i>Raccoon on His Own</i> and <i>Play with Me</i>, the raccoon and the girl saw their <b>reflections</b> in water. What do you notice?"</p>	<p>Show illustrations. <b>Children respond.</b></p>
<p>"When the sunlight shone on the <b>shiny surface</b> of the water, a <b>reflection</b> was created."</p>	
<p>"I want to create a <b>reflection</b> with these materials. What do you notice?"</p>	<p>Show materials. <b>Children respond.</b></p>
<p>"The ____ is <b>shiny</b>, like the <b>surface</b> of water. The ____ is <b>dull</b> - not <b>shiny</b>. If I shine a light on the ____ and the ____, where do you predict would be a <b>reflection</b>?"</p>	<p>Model. <b>Children respond.</b></p>
<p>"Today in Creative Arts, shine the flashlight (or hold up to a light source, like a lamp) on the materials. If you see a <b>reflection</b> on the material, <b>sort</b> it into the tray labeled '<b>reflective</b>.' If you don't see a <b>reflection</b> on the material, sort it into the tray labeled, 'non-reflective.'"</p>	<p>Model.</p>

## **During Centers:**

Support children in using light sources (flashlights, lamps, etc.) to test materials. Encourage children to collaborate (one child shines the light source, and another sorts into the tray). Compare and contrast the reflections on the materials to the reflections in *Play with Me* and *Raccoon on His Own*. Encourage children to count the objects in the groups, record the data, and/or compare which has more/less.

## **Guiding Questions During Centers:**

- How did you sort the materials?
- How can you make the number of items in the two groups equal/the same?
- How are the reflective materials similar to or different from a mirror?
- What do you predict would happen if we hung the reflective materials in the window like when we did the *Color Fading* experiment?

## **Thinking and Feedback:**

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

## **Documentation:**

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

## **Provocation:**

Encourage children to label 'reflective' and 'non-reflective' groups with other names (*shiny, dull, sparkly, matte*, etc.). Encourage children to list other materials in the classroom/around the school into the groups (draw a picture of the front door to add to the 'non-reflective' group).

## **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 students answer Guiding Questions. During Centers, strategically pair children who may need additional support with those who can support them to collaborate in testing materials. Provide manipulatives as needed to help children count objects in groups, as well as a variety of materials to record data.