Shadow Matching Game

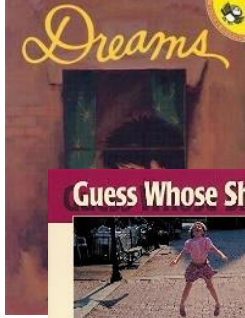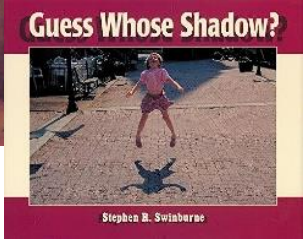**Enduring Understanding(s):**
- Light affects people, animals, and things.

Essential Question(s):
- How does light affect the way things look?

Materials	Vocabulary	Books
- *Dreams* - *Guess Whose Shadow?* - various objects (to cast a shadow) - poster or tag board - flashlight - game cards (see Resource)	**light source:** form of energy, either artificial or natural **match:** the same **shadow:** the dark shape made when something blocks light **surface:** the outer layer of an object **windowsill:** a shelf below a window	

Intro to Centers

Preparation: *Set up materials*	
"In *Dreams*, Roberto's paper mouse fell from the **windowsill**. What do you notice?"	Show illustrations. **Children respond.**
"Why did the mouse's **shadow** scare away the dog?"	**Children respond.**
"The mouse's **shadow** looked like a giant mouse. What do you notice?"	**Children respond.**
"Here are images of **shadows** in *Guess Whose Shadow?* What do you notice?"	Show images. **Children respond.**
"Here is a (object). I will shine a flashlight on its **surface**. What happens when I move the **light source** closer/farther away?"	Show materials. Model. **Children respond.**
"A **shadow's** size changes depending on how close or far the **light source** is to the object, but it still looks similar to the object."	
"Today in Puzzles (Manipulatives), you can match **shadows** to objects using these materials. Why does this **shadow** match this (object)?"	Model. **Children respond.**

During Centers:

Support children in using similar strategies that they use when playing Memory. Encourage children to describe why the shadows match the objects. Encourage children to compare and contrast their shadow/object pairings with their friends' pairings.

Guiding Questions During Centers:

- How do you know that this is the (object's) shadow?
- Why do you think the light source was close to/far from the object?
- How is this shadow similar to or different from the shadows in *Dreams/Guess Whose Shadow*?
- Which objects create similar shadows? Why?

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 process; use the documentation to launch a discussion during Thinking and Feedback.

Provocation:

Take photographs of children's shadows at different times of the day to create a *Guess Whose Shadow?* class book/game.

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, adjust the number of object/shadow pairs according to children's skill/need level.