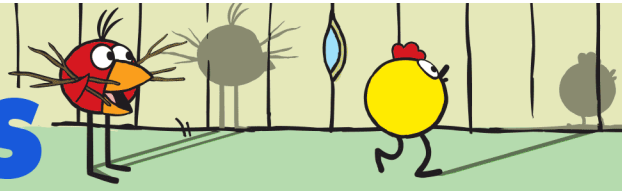




# Explore SHADOWS



## Teaching Strategies Documentation and Reflection

### What is Documentation and Reflection?

- Documentation is the process of recording experiences.
- Using documentation, children and educators can look back on their experiences during an activity and think more deeply about them.

### What are some types of documentation?

- **Child-generated documentation** happens when children record their own learning. It can include:
  - drawing a picture of what they did
  - taking photos of their work
  - explaining what they're doing and what happened while you transcribe their words
- **Educator-generated documentation** can include:
  - creating charts
  - making notes
  - taking photos
  - recording audio
  - shooting video

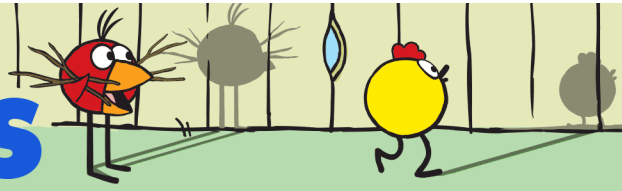
### Why is documentation and reflection important?

- **Children don't learn from their experiences alone.**
  - They need to think about what they have done and talk with others.
  - They will often notice new things about their work the second or third time they review it.
- **It gives children a sense of ownership.**
  - To see their work documented gives children a sense of ownership—making it much more likely that they will remember, apply, and build upon this learning.





# Explore SHADOWS



- **It captures the process of scientific inquiry.**
  - Science is a process that includes predictions, testing, questioning, problem solving, experimentation, and sharing ideas. Documentation helps capture the process of scientific inquiry, not just the outcomes.
  - It allows children to see the steps they took.
  - Children begin to learn that an important part of science is collecting, describing, and recording data.
- **Language skills are strengthened.** Commenting on documentation asks children to:
  - clarify their ideas
  - explain their reasoning
  - communicate their perspectives, both to themselves and to others
  - use and repeat new scientific words and incorporate them into their vocabulary
- **It is an invaluable teaching tool,** allowing you to:
  - develop activities that respond to the needs of each child
  - communicate with parents and share concrete examples of children's work
  - show children the connections between the different activities and ideas they've been exploring
  - understand an individual child's skills, growth, struggles, or misconceptions
  - assess children's thinking and your own teaching

## Teaching Strategy: Encouraging Children to Create Documentation

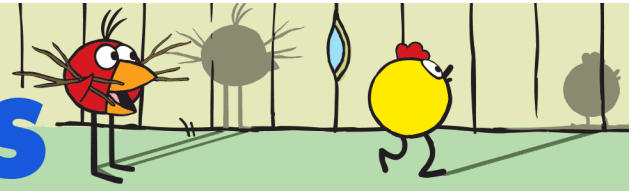
### ***Why is encouraging children to create documentation an effective teaching strategy?***

By helping children document what they are doing, you make it possible for them to reflect on their work and to understand and make sense of their experiences.





# Explore SHADOWS



*Children can be encouraged to document their work in many different ways:*

- **Drawing pictures** is an ideal way for children to make their learning visible.  
**Example:** On a morning trip outside, you might have children trace their shadows with chalk on a sidewalk. Later that afternoon they can return to the exact spot and trace their shadows again. Then have them compare the tracings and talk about ways the shadows changed and why.
- **Charts, graphs, and models** allow children to “see” or visualize their thinking and to compare their results with peers.  
**Example:** A chart can help organize information about shadows that children observe. Make a chart that shows the length of shadows at different times of day to help children make connections about how shadows change during the day based on the location of the sun.
- **Dictating thoughts** for you to transcribe (usually in an abbreviated form) helps children learn about their thought process. Children learn about their thinking through the act of communicating.  
**Example:** An educator might write down what children say as they experiment with shadows under a lamp. Later she can read their words back to them as they reflect upon the experience. Reading the child’s dictation back to her to check for accuracy further cements this process.
- **Recording, videotaping, or photographing** a child’s demonstration or explanation gives children perspective on what they have accomplished.  
**Example:** Two children might demonstrate how they can make their shadows touch hands without them actually touching hands. The teacher might videotape the demonstration and then play it back so that the group can observe and discuss it.

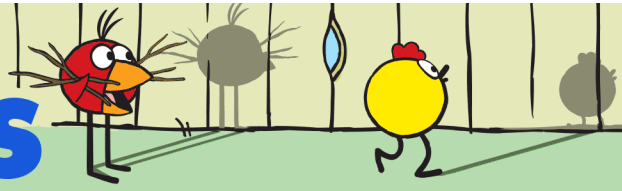
## Your Experiences

- What kinds of documentation do you typically do with children?
- What types of documentation do children seem most interested in creating—do some forms come more naturally to them than others?
- Have you run into any challenges while having children document their explorations? What kind?





# Explore SHADOWS



## Teaching Strategy:

### Using Documentation and Reflection as Teaching Tools (15 min.)

#### *How does using documentation and reflection benefit your teaching?*

Documentation will engage children, deepen their learning, and make connections between the different science activities you've shared together. It will spark conversation and get children to share what they did and learned. It will also help you decide how to support the child's learning.

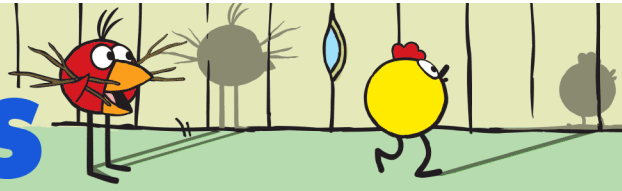
#### *There are many benefits to documenting children's work:*

- **It helps children remember, share, and reflect** on their ideas and experiences. Looking at a photo or chart helps children recall their thoughts and ideas about what they were pursuing.  
**Example:** To document a hand shadow play, you might take pictures of children's hands and of the shadows their hands made. Children can try to match the picture of the hand with the picture of the shadow it created. The photos can help children recall their experience and reflect upon shadows and how they work.
- **It connects ideas and builds on learning.** Documentation helps children see connections between the different activities they've done and encourages them to think more deeply about them. Charts are especially good for this.  
**Example:** Create a chart called "What Is a Shadow?" and add children's insights to it each day after they've completed an activity. At the end of the week, revisit their comments—some of their observations may have changed over the week. For example, children may think "a shadow follows you everywhere" at the beginning of the week, but after completing a few hands-on activities, they may think "a shadow follows you everywhere except where it's shady or when it's night."





# Explore SHADOWS



- **It shows that you take children's explorations seriously.** Recording something gives it importance.  
**Example:** You might photograph children as they move an object to try and change the shape of its shadow. You can display these photographs and ask children to comment on each one by describing what they were doing. You can write children's words on sticky notes and post them below the photos. The very fact that you've photographed their explorations shows children that you consider their explorations valuable.
- **It helps with lesson plans and in understanding the needs of each child.** Documentation is key in helping you plan instruction and future activities. With your notes, transcriptions, and photos, you can see what really catches the children's attention. What do they want to know more about? What was hard for them to grasp? Did they seem to engage more in indoor or outdoor activities about shadows?
- **It enables specific communication with parents or caregivers.** Here are a few activities you can use:
  - Send home children's drawings and transcriptions.
  - Set up a bulletin board with photos, charts, and drawings that children can show their caregivers and talk about when it's pick-up time.
  - Create a portfolio for children that shows evidence of their growth and learning over time.
  - Strengthen the home/school connection by encouraging parents to explore shadows with their children at home.

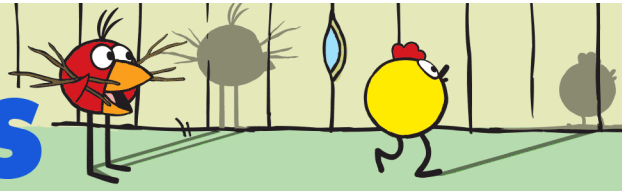
## Your Experiences

- Do you use cameras, video, or audio recording devices when you document? How has technology helped you? Have you encountered any problems with it?
- In what ways do you use "low-tech" resources, such as written notes, to document learning?
- Have you faced any challenges when documenting children's learning? If so, what were they?
- What benefits of documentation have you noticed?





# Explore SHADOWS



## Teaching Strategy: Reflecting Together

### *Why is reflecting together an effective teaching strategy?*

After children document their work, it's essential that they reflect on it: that's where much of their understanding about what they experienced takes place. As you reflect together, you strengthen children's reasoning abilities, help them consider others' perspectives, build their communication skills, and learn to better understand their thinking and learning.

### *There are many ways to promote reflection:*

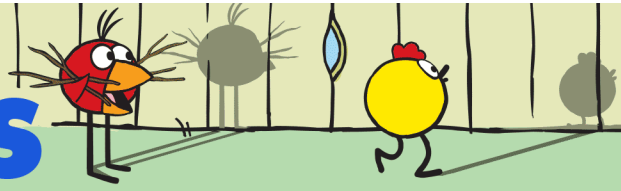
- **Children sharing ideas**
  - Have a child present her documentation in a group and encourage the others to ask questions or comment on something they find interesting.
  - An engaged and receptive audience will make the child who is presenting feel excited and proud to be showing his work, and more confident in expressing ideas and conclusions.
  - The audience also benefits by working on their ability to listen and sustain attention, and by developing social skills in taking turns.
  - Group reflection encourages children to consider new perspectives.
  - Children may become inspired to try something new next time.
- **One-on-one conversations**
  - Not all children will want to share their reflections in a group.
  - Conversations with you during or after a child has created documentation gives you the chance to explore with a child on his or her own terms.
- **Displaying documentation**
  - Post on bulletin boards, poster board, or a tri-fold board.
  - Create a “save it” shelf, where children keep their creations, or a class album full of photos, children's drawings, and children's words.

**Example:** Use a post-it note or index card to write a caption using what children have to say about a shadow they traced.





# Explore SHADOWS



- **Including parents in reflection**

- Consider inviting parents to come and observe as children talk about their creations.

**Example:** You might invite parents to come and observe as children put on a shadow play and then have children teach parents how to make different shadow animals.

## Your Experiences

- What types of documentation have you found most effective for helping children to reflect?
- How would you compare guiding group reflection and reflecting with children individually? Any success stories to share?

## More Resources

### *For more information on documentation and reflection*

There are additional Teaching Strategy PDFs on the PEEP Web site along with instructional videos. These illustrate documentation and reflection related to the other PEEP science units: Color, Water, Plants, Ramps, and Sound.

### *For more videos and information on other topics*

In addition, the Web site offers Teaching Strategies and videos on other professional development topics: Learning Environments, Individualized Instruction, and Science Talk.

