

EVALUATING SCIENCE TEACHING

Teacher(s): _____

Date: _____

Observer: _____

Teacher

Behaviors	Evidence
A. Teacher uses <i>Exploring Water</i> teacher's guide to structure and sequence meaningful science explorations	
1. Follows steps in teacher's guide, using the teaching cycle of engage, explore, and reflect.	
B. Teacher uses environment to stimulate science exploration	
1. Provides materials and tools for explorations as described in <i>Exploring Water</i> teacher's guide.	
2. Provides variety of two- and three-dimensional representational materials.	
3. Displays materials and books for easy access by children.	
4. Arranges furniture so children have enough room to work around the water table and at other water centers in groups of three to five.	
5. Creates displays at children's eye level that provide valuable information, relate to current science interests, and show children's own work.	
6. Provides choice times (thirty to forty-five minutes) with opportunities for children to engage with the science materials.	

EVALUATING SCIENCE TEACHING (CONT'D)

Behaviors	Evidence
C. Teacher gives attention and positive encouragement to help children focus on science explorations	
1. Uses comments and questions to acknowledge activity and elicit ideas. Listens with genuine interest.	
2. Engages with children, modeling curiosity, play behavior, and use of tools. Invites reluctant explorers to play and helps them manage frustration by engaging them in problem solving.	
D. Teacher uses strategies that deepen children's science understanding and engage them in inquiry	
1. Encourages children's inquiry—observation, questioning, data collection, recording, and analysis. Offers new challenges as children are ready.	
2. Provides materials in varied media for children to represent an aspect of their experience or a developing theory and encourages the children to represent.	
3. Finds ways to focus children on science in their play.	
4. Facilitates science talks in which children share their experiences, ideas, theories, and conclusions.	
E. Teacher systematically observes and documents for assessment and teaching purposes	
1. Documents observations and interactions using various media, such as observation records, photos, audiotape and videotape, and collected work samples.	
2. Uses documents as teaching tools to connect day-to-day activities, stimulate and bring thinking forward, and launch new challenges.	

EVALUATING SCIENCE TEACHING (CONT'D)

Children

Behaviors	Evidence
A. Children are engaged	
1. Use varied materials to explore water, gaining a basic understanding of its properties.	
2. Talk to each other and the adults about their science explorations.	
3. Engage in inquiry: observing, questioning, collecting data, recording, reflecting, and constructing explanations.	
4. Represent a part of their explorations—drawing, using collage materials or clay, or using their bodies to represent their work and scientific knowledge.	
5. Use resources (peers, books, Web sites, and so on) to extend their explorations and gain new information.	
B. Children are motivated and persistent	
1. Are eager to use the areas of the classroom that are designed for science explorations.	
2. Bring in items or tell stories from home that relate to their explorations.	
3. Show enthusiasm and interest extending to lunch table conversation, request reading from books and for dramatic play, and so on.	

EVALUATING SCIENCE TEACHING (CONT'D)

Going Deeper

Behaviors	Evidence
A. Teacher helps other adults learn how to support children's science explorations	
1. Supports assistant(s) in developing their ability to encourage children's science explorations.	
2. Finds specific roles for classroom volunteers that support children's science explorations.	
3. When opportunities arise, serves as a mentor to beginning science teachers.	
B. Teacher extends own understanding of science and expands classroom applications	
1. Extends this exploration beyond the steps in the teacher's guide.	
2. Develops explorations of new topics.	
3. Teacher seeks out deeper understanding of science content.	