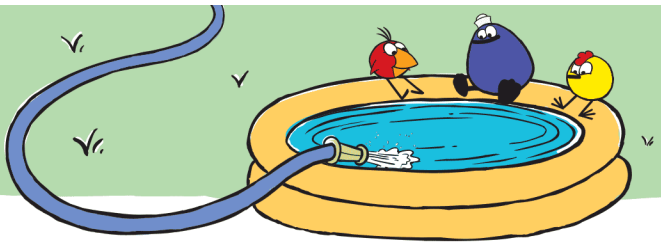


Teaching Strategies

Learning Environments

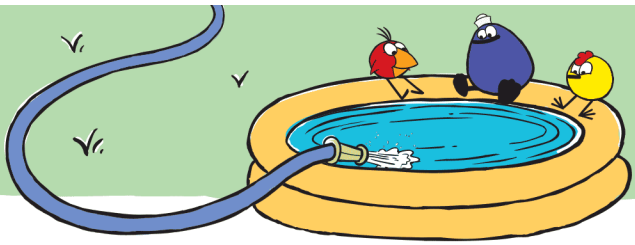
What Is an Effective Learning Environment?

- **A safe and well-organized learning environment** is full of sensory (visual, touch, hearing, and kinesthetic) opportunities.
- **It offers children a variety of experiences**, giving them the freedom to explore what captures their attention. For the family child care educator, it can include spaces in the home, the yard, or local park/outdoor play areas.
- **Traditional learning centers,** like a library corner, block center, or dramatic play area, can be modified or changed so they serve as water exploration centers.
- **Temporary, flexible spaces** can also be created or replaced as needed—whether they are indoor or outdoor areas. A feature of many family child care homes is the flexibility to set up areas that can be changed back to family spaces at the end of the day or week.
- Learning environments for exploring water can be used for **specific guided activities** or opened up for **free exploration.**

How does a learning environment encourage science exploration?

- **Science exploration is about direct experience and hands-on investigation.** Learning centers allow children to:
  - explore on their own time and in their own way.
  - look at, touch, and manipulate objects.
  - build their understanding by repeating an activity many times.

- **A variety of different spaces and materials can** contribute to learning, including**:**
  - open spaces for energetic explorations.
  - quiet spaces for reflection, reading, or time by oneself.
  - yards and playgrounds for outdoor investigations.



Teaching Strategy: Planning a Learning Environment

Why is planning a learning environment an effective teaching strategy?

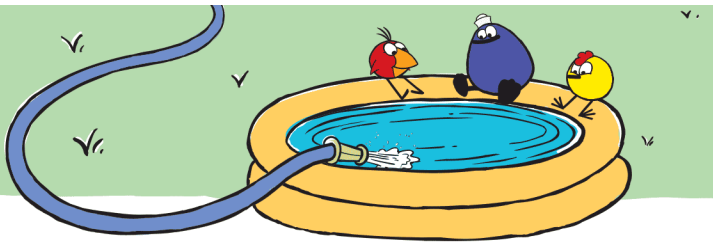
A well-organized, intentionally planned learning environment encourages children to explore with specific materials and learning goals in mind.

- **Modify your permanent learning spaces or create flexible ones.** Your permanent learning centers, such as a block, dramatic play, art, or library center, can be tailored to your science explorations.
  Example: Put boats and a blue cloth in your block area to encourage children to build water related structures. Turn your dramatic play area into a ship using cardboard boxes. Put funnels and basters next to a sink or in a water table to encourage water experiments. In your art area, post up maps of rivers, lakes, and oceans, as well as pictures of different bodies of water, and encourage children to paint what they see. In your library corner, put both fiction and nonfiction books about water.

- **Use learning environments for both guided activities and free exploration.** A learning center can double as a setting for an educator-guided activity that focuses on a specific investigation as well as one that offers free exploration.
  Example: You might give children the chance to sort objects into sink and float piles on their own. Afterward, you can lead them in an activity where they test out each object and add their findings to a sink/float chart.

- **Work with what you have**. Creating a rich learning environment in which to explore water doesn't take a lot of additional materials. After all, water is all around us—a sink, wading pool, or puddle can offer hours of fun and discovery.

- **Organize the space and materials.** To help you create a dynamic environment for science exploration, ask yourself some questions that will help inform the activities you choose, the spaces you set up, and the materials you make available to children:
  - What experiences do I want children to have?
  - What do I want children to learn about water?
  - What and how will I engage the children? What are their interests, abilities, and cultural backgrounds?



  - Do I want children to be sitting, standing, or both?
  - How much space does the activity require?
  - Is the activity messy?
  - Will the activity work differently indoors and outdoors?
  - What other props will support children's learning about water?

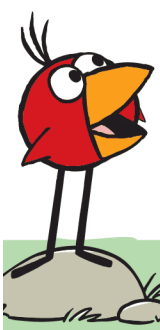
- **Place materials in accessible locations**.
  - If materials such as spray bottles, basters, buckets, funnels, and plastic tubing are easily reachable, in appropriate containers, and at the right height for children, they will feel comfortable working and will be drawn to experiment.
  - Simple rules will help them develop a sense of responsibility for the materials.

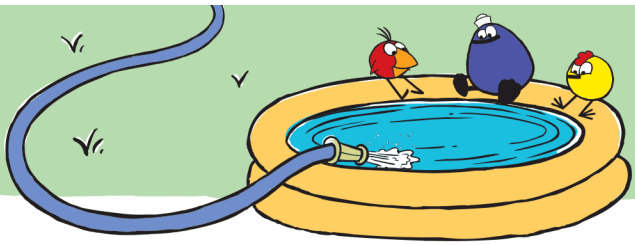
- **Plan for messes—leave materials for cleaning up nearby.**
  - Science can get messy. If children are experimenting with water, spills are inevitable. Have plenty of paper towels ready and allow children to take responsibility for cleaning spills.
  - Children need the freedom to explore materials in a center with as few restrictions as possible. Planning for mishaps helps eliminate some of the warnings and reprimands that can interfere with a young scientist's discoveries.
  - Asking children to help in any cleanup can increase their sense of responsibility.

- **Make the most of your outdoor spaces.** Not all home-based educators have access to a yard, but local parks and other outdoor spaces can provide children with dynamic learning experiences.
  Example: Children can search for dew on grass and puddles in the sidewalk. They can go for a rain walk and listen to the raindrops as they fall on an umbrella. At the park, they can bring along a bucket of water and pour it down a slide to watch how the water moves.

Your Experiences

- What types of permanent indoor learning environments exist in your home child care?
- What is your outdoor space like? What activities seem to work best outdoors?
- What kinds of temporary learning centers have you created—indoors and outdoors?
- Does your space present any challenges? How have you overcome them?





Teaching Strategy: Offering Choices

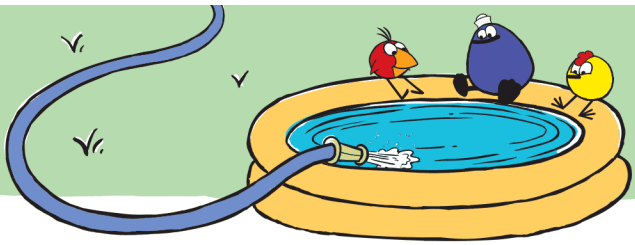
Why is offering choices an effective teaching strategy?

Children appreciate options. Flexibility and choice are key when setting up a learning space. Offer children different and varied experiences, and let them follow their interests. This strategy not only helps address a child's individual needs, it also helps children to become independent learners.

Spaces

You already have learning centers in your home—spaces designed for specific types of exploration. Help children become familiar with what happens there and the different choices available to them. You can use cardboard boxes, rugs, or even chalk or tape to create temporary learning spaces, both indoors and outdoors. Learning areas can also be tables with chairs or just a corner of a room. You can adapt these spaces for learning about water in a variety of ways:

- **Open space:** This learning area (indoors and outdoors) allows children to move their bodies. Outdoors, children can build long rivers or streams.
- **Water area:** The kitchen sink or water table is a great place to conduct sink/float experiments.
- **Rug:** This is where children can get comfortable for read-alouds, looking at maps of rivers and streams, and building boats with blocks.
- **Table:** Tables provide a natural location for spreading out and working on water-related activities like sorting items into sink/float piles.
- **Library area:** In the library area, children can browse through and read more water-related books.
- **Art area:** Here children have access to easels, smocks, paper, crayons, markers, and paints. They can do watercolor paintings and paint pictures of streams and rivers.
- **Quiet area:** Setting aside a quiet area gives children a place to retell stories about water or spend a few peaceful moments listening to the sounds of water.
- **Sensory area:** The sensory area is ideal for hands-on activities. Children can experiment with pouring water into various containers.
- **Display area:** Use a bulletin board, wall, and/or table to display art, photos, charts, and works in progress, such as homemade boats.



Materials

Offer a choice of stimulating and interesting materials. Different types of materials encourage different types of exploration.

- You can create one station where children make boats out of tin foil and another where they move water using cups, sponges, tubes, and other "water tools." They may naturally gravitate to one station or the other. After they've explored both, you'll have a great opportunity for a discussion about what makes something sink and what makes something float.
- For a water art station, be creative in the types of things you set out for children. Provide spray bottles and black paper so that children can watch droplets fall, provide watercolor paints and straws for children to "blow" the paint around the page.
- You can add variety by adding or taking away materials on different days.

Remember to be selective, however—too much choice can be overwhelming for young children. For instance, you might have children focus on funnels at the water table on one day and plastic tubing on another day.

Your Experiences

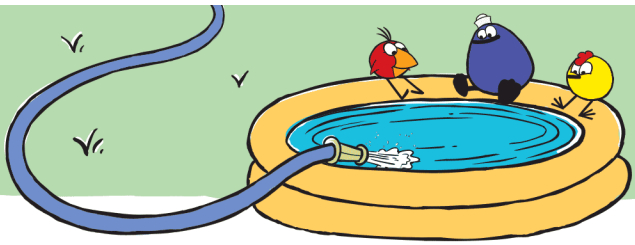
- What types of learning centers have been most effective in your setting?
- What have you done with your space to make it varied and to stimulate the curiosity of children with different interests and abilities?
- What simple materials have you used to define spaces (e.g., a beach towel or a plastic bin)?
- What might you add/change after hearing about these ideas?

Teaching Strategy: Encouraging Exploration Throughout the Day (15 min.)

Why is encouraging exploration an effective teaching strategy?

- Science is all about investigation and discovery; it's hands-on and requires that children learn through experimentation and trial-and-error.
- As you explore water, make sure some of your learning environments support open-ended exploration, so children can follow their own interests, explore further, and make new discoveries. (At other times, you can use this same learning center as the setting for guided activity focused on a specific investigation.)

Explore WATER



The following strategies will help encourage learning everywhere:

- **Allow lots of free exploration.** This may lead children down new and perhaps unexpected paths, and help them become invested in learning about water.
  Example: You may have a learning center outside with lots of tools for digging so that children can make waterways and puddles. Put markers and paper out with the supplies so that children can draw their waterways or plan them out before they build them.

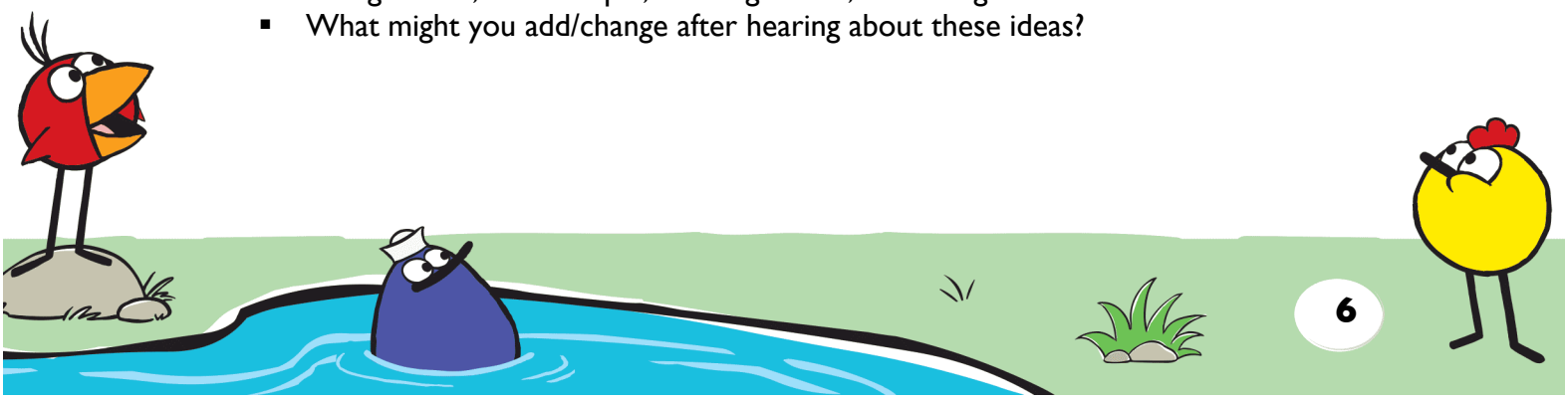
- **Follow children's lead.** Science exploration works best when you are following children's interests and addressing their questions—that guarantees they'll be engaged and motivated. They will also become more confident in their abilities, and develop leadership skills and independence.
  Example: If children are playing outside and a child notices a puddle, call everyone over to investigate. Challenge children to make the water "jump" and flow. Take photos showing the water play and create a gallery in the classroom.

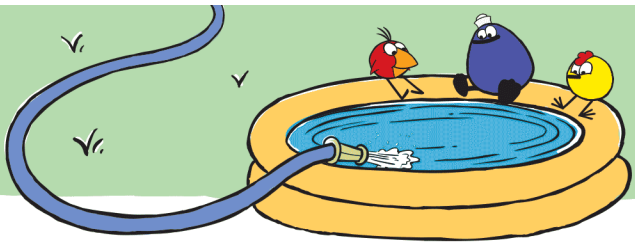
- **Integrate water learning throughout the day**. Everyday routines offer an easy way to explore water.
  Example: During snack time, compare cups to find out which has more water. In the bathroom, investigate pipes and talk about how water goes through pipes to the sink. As you play outside, hunt for puddles, dew, and raindrops. At story time, begin by having children create the sound of falling rain by tapping their fingers.

- **Use the whole space as a palette for learning**. Your environment and the world right outside your door offer opportunities for learning about water.

Your Experiences

- Can you share a time when you followed a child's lead and a spontaneous learning moment occurred?
- In what surprising places have learning moments happened in your program?
- How do you encourage learning and discovery during your daily routines—while taking a walk, for example, washing dishes, or setting the table for lunch?
- What might you add/change after hearing about these ideas?





More Resources

For more information on learning environments
There are additional Teaching Strategy PDFs on the PEEP Web site along with instructional videos. These illustrate learning environments related to the other PEEP science units: Colors, Plants, Shadows, 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: Documentation and Reflection, Individualized Instruction, and Science Talk.