

Teaching Strategies Learning Environments

What is an Effective Learning Environment?

- **A safe and well-organized learning environment** is full of sensory (visual, tactile, hearing, and kinesthetic) opportunities.
- **It offers children a variety of experiences**, giving them the freedom to explore what captures their attention. It doesn't have to be limited to one learning center or the classroom. It can include all areas of the room, meal times, hand washing, outdoor play and observing the world outside.
- **Traditional learning centers**, like a science center, library corner, block center, or dramatic play area, can be modified or changed so they serve as color exploration centers.
- **Temporary, flexible spaces** can also be created or transformed as needed—whether they are indoor or outdoor areas. A “science area” may be a table that is used as a rotating exploration center with tubs that are brought out and journals to record observations.
- Learning environments for exploring the science of color can be used for **specific guided activities** or opened up for **free exploration**.

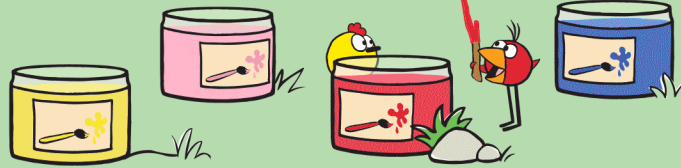
How does a learning environment encourage science exploration?

- **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 alone time.
 - playgrounds for outdoor investigations.





Explore COLOR

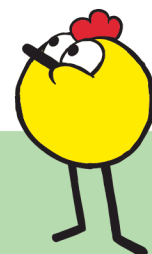
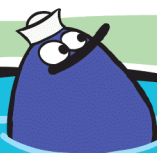


Teaching Strategy: Planning a Learning Environment

Why is planning a learning environment an effective teaching strategy?

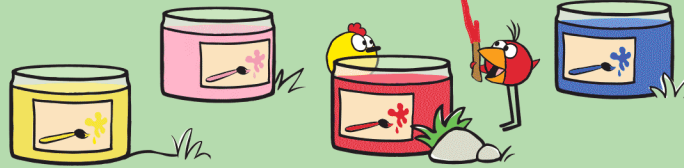
A well-organized, intentionally planned learning environment encourages children to explore with specific materials and learning goals in mind.

- **Modify your permanent learning spaces or create flexible ones.** If your classroom already has a permanent science center, use it as an area to explore color. If you cannot add a permanent science learning center, modify the learning centers you already have, such as your block, dramatic play, art, and library centers, tailoring them to your science explorations.
Example: If you add paint color samples, buttons, and bottle tops to your block center—which already contains many colorful objects—you’ve turned it into a color-sorting center. A window can become a color and light center, with color paddles and transparencies, and perhaps a hanging prism.
- **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 lead a guided activity in which children draw outlines of their hands and use multicultural crayons to match their own skin tones. After the activity, if you leave the crayons and paper out, children can revisit these materials and explore on their own.
- **Work with what you have.** Creating a rich learning environment for exploring colors doesn’t take a lot of additional materials. After all, colors are all around us—every inch of your space holds potential for an adventure with color
- **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:

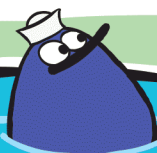




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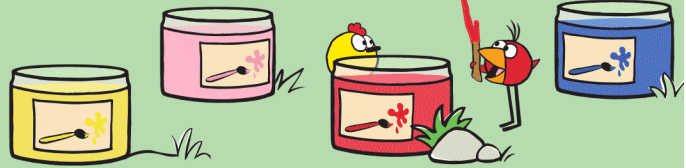


- What do I want children to learn about color?
 - What and how will I engage the children? What are their interests, abilities, and cultural backgrounds?
 - Do I want children to be sitting, standing, or both?
 - Does the activity require a lot of space?
 - Is the activity messy?
 - Will the activity work differently indoors and outdoors?
 - What other props will support the children’s learning about colors?
- **Place materials in accessible locations.**
 - If materials such as paints, food coloring, and water are easily reachable, in appropriate containers, and at the right height, children 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.**
 - Science can get messy. If children are mixing paints or food coloring, spills are inevitable.
 - 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 also increase their sense of responsibility.
 - **Make the most of your outdoor spaces.**
 - Enjoy being outside and observing when you are there. Science is play too!
Example: Children can search for colors in nature or collect green leaves and arrange them from lightest to darkest. You can bring trays with art supplies outside so children can paint what they see.
 - The outdoors is also a great canvas for your more messy adventures.
Example: Children can use chalk, finger paints, food coloring in water, and other drippy substances without worrying about spills.
 - Outdoor activities are also great for children who are kinesthetic learners and need lots of opportunities to move.
Example: You might make the whole playground your learning environment as you say, *I spy something red near the swing set—can you find something red, too?*





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Your Experiences

- What types of permanent indoor learning environments exist in your classroom?
- 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

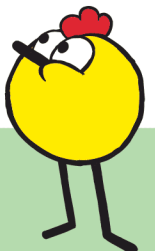
Why is offering choices an effective teaching strategy?

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, but it also helps children to become independent learners.

Spaces

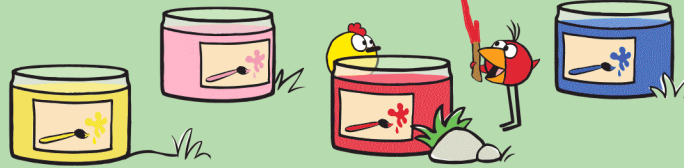
You already have learning centers in your classroom—spaces designed for specific types of exploration. Help children become familiar with what happens there and the different choices available to them. You can use cardboard boxes, rugs, or even chalk to create temporary learning spaces, both indoors 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 color in a variety of ways:

- **Open space:** This learning area (indoors or outside) allows children to move their bodies. Children can play group games like *Red light, Green light* or go on a color hunt.
- **Water area:** The water table is a great place to experiment with food coloring or discover that colors change when wet.
- **Rugs:** This is where children can get comfortable for read-alouds and sorting items by color.
- **Tables:** Tables provide a natural location for spreading out and working on color-related activities.
- **Library area:** In the library area, children can browse through and read color-related books.
- **Art area:** Here children have access to easels, smocks, paper, crayons, markers, and paints.





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- **Quiet area:** Setting aside a quiet area gives children a place to retell stories about colors and/or spend a few peaceful moments looking through and exploring color transparencies.
- **Sensory area:** The sensory area is ideal for hands-on activities using clay, foam, fabrics, and other textured materials in a variety of colors.
- **Display area:** Use a bulletin board, wall, and/or table to display art, charts, and works in progress.

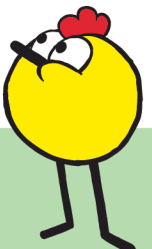
Materials

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

- **To experiment with mixing colors,** you can create one station where children mix paints, and another station where they'll mix colored water, using pipettes or eyedroppers. 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 how mixing paint and mixing colored water are similar and different.
- **For a color sorting station,** be creative in the types of items you set out for sorting: crayons, paint chips, building blocks, small toys, yarn, leaves, pebbles, and twigs. Or set up a sorting station with materials you know children are especially drawn to.
Example: If a child spends the majority of his/her time in the play kitchen, prepare the area with dishes and utensils of different colors to sort.
- You can add variety and focus children's learning by **adding or taking away specific materials** on different days.
- **Remember to be selective, however**—too much choice can be overwhelming for young children. For instance, if your learning center focuses on creating different shades of a single color, set out just one color.

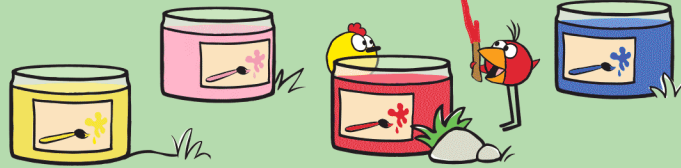
Your Experiences

- 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?





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Teaching Strategy: Encouraging Exploration Throughout the Day

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 colors, 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 a guided activity focused on a specific investigation.)

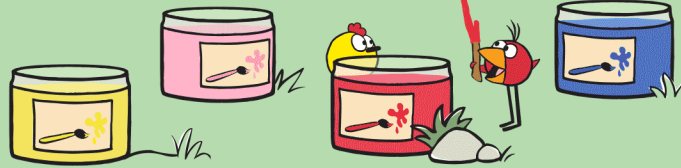
The following strategies will help encourage learning everywhere:

- **Allow lots of free exploration.** This may lead children down new and perhaps unexpected paths, and help them become invested in learning about colors.
Example: You may have a learning center with flashlights and colored water in bottles. One child may decide to experiment by using the flashlight on other objects in the room, testing whether plastic cups or towels let light shine through them the way the bottles do.
- **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: A child notices his shoes are brown and so are his friend's. Take a minute to have all the children report on the color of their shoes. If time allows, make a quick chart to show the results of your impromptu shoe investigation.
- **Integrate color learning throughout the day.** Everyday routines offer an easy way to introduce colors.
Example: During snack time, discuss the colors on each plate. As you line up, do so by the color of children's shirts.





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- **Use the whole space as a palette for learning.** Even the walls, doors, and floors around you offer opportunities for learning about color.
Example: Try color explorations that center on the room children are in. Have them hunt for colors on the walls, use colored tape to make patterns on the floor, and put colored transparencies over the window to create a collage of color and light.

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, or preparing for lunch?

Additional 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: Plants, Water, 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: Learning Environments, Documentation and Reflection, and Science Talk.

