

Creating a Preschool Science Exploration Area

What are the goals of the science area?

- Reflect and nurture children's interests.
- Promote an appreciation of nature and living things.
- Encourage children to manipulate and explore a variety of interesting materials and their properties.
- Allow children to practice scientific skills, such as wondering, observing, comparing, predicting, investigating, classifying, communicating, and recording.
- Provide practice with tools of science such as magnifiers, balance scales, thermometers, measuring tools.

Organizing Your Science Area: Where would be a good place to put your science area? What equipment and materials are needed?

Tips:

- Ideally, locate the science area in a sunny area of the classroom, with a low table and a shelf of materials that invite interaction from the children.
- Make the science area hands-on and interactive. Touching and exploring is to be encouraged!
- Provide materials that support open-ended exploration and problem solving.
- Invite children/families to contribute materials they find or bring from home.
- Involve children in labeling, charting and graphing.
- Change materials often, based on children's interests, to keep things interesting.
- Always remember safety. Make sure all items are non-toxic.
- Observe and evaluate how children are using the science area and experiment with new ideas to keep it engaging.
- Make sure that you are integrating science into all the other areas in the classroom as well. How do the block area, art, dramatic play, and book area offer opportunities for science play and exploration?
- Many activities can be introduced at circle time and then be placed in the science area for children to explore later.

Materials:

- Ask for science material donations from parents of things they may have at home or obtain through their work.
- Have a special tray to display items brought in by the children.
- Keep materials well organized and in good condition.
- Rotate and change materials often.
- Materials kept in the science area should be integrated into other indoor and outdoor spaces too. Science exploration can occur in any area of the classroom.

Basic supplies

- Large and small magnifiers
- Binoculars
- Balance scales
- Tape measurers and rulers
- Stopwatches and egg timers
- Mirrors
- Drawing paper, pencils, (crayons for drawing observations)
- Sorting mats and graphing grids
- Photos documenting children's science activities

Nature and Animals

- Animal models and puppets (can represent themes such as insects, pond life, ocean life, reptiles, dinosaurs)
- Bug viewers
- Collections (sea shells, seeds, feathers, gourds and pumpkins, tree items-acorns, pinecones, bark etc.)
- Specimens (discarded bee hive, animal bones, bird nests, preserved insects)
- Classroom pets (including short term visitors such as snails, ladybugs, caterpillars, tadpoles, ant farm etc.)
- Plants and planting experiments (growing seeds and bulbs, watching roots grow)

Physical and Earth Science

- Magnets
- Prisms
- Thermometers
- Color paddles
- Pulleys
- Gears
- Small machines to take apart
- Balls and ramps
- Wheels, gears, pulleys

Sensory Explorations

- Dry substances such as sand, cornmeal, dry beans, rice, (with funnels, scoops, sifters and containers)
- Water Play
- Playdough and rolling pins, cookie cutters, garlic presses
- Feely box
- Discovery bottles (children can help make these)
- Different fabrics