Cognitive Development COMPONENT 3: SCIENTIFIC EXPLORATION AND KNOWLEDGE

EFFECTIVE STRATEGIES TO SUPPORT CHILDREN'S DEVELOPMENT AND LEARNING cont.

- Do simple experiments with children, such as adding vinegar to baking soda. Investigate other mixtures using water, flour, salt, cornstarch, etc., and ask children to predict what will happen each time.
- Sing with children, asking them to sing very low and then very high, slow and rapid, soft and then loud. Explore vibration by providing instruments that children can play and use to make different types of sounds.
- Provide opportunities for children to learn about light, shadows, and rainbows by playing with prisms, flashlights, crystals, an overhead projector, or sunlight.
- Provide examples of different kinds of plants and animals, talking about their differences and similarities. Provide opportunities to sort plants and animals.
- Observe and compare nonliving and living things. Talk about what living things need in comparison to nonliving objects. Although children at this age cannot always accurately distinguish between living and nonliving things, pointing out differences will help children develop this understanding over time.
- Give children opportunities to show respect for living things and their environments by caring for pets and protecting the environment. *Model* and teach responsible behavior, guide children in the handling and care of pets and plants.

- Take trips to places where children can observe plants and animals: a pet store, playground, backyard, gardens, or farm.
- Provide experiences that invite children to learn that living things have basic needs, such as food, water, and air.
 Plant seeds and observe changes. Experiment by caring for the seeds differently, such as giving one no water, putting another in a dark area, etc. Plant gardens that change over the seasons. Provide various plants and trees that attract wildlife (butterfly bushes, trees for birdhouses, and bird feeders).
- Give children opportunities to explore earth materials such as rocks, soil, sand, water, and snow. Look at and talk about these materials on nature walks or during play.
- Ask children to describe the current weather and keep track of the weather on a chart. Keep these discussions short and interesting. Ask children to make predictions about the future weather. Allow children to take turns as "weather reporters" describing current conditions.
- Play outside during different seasons. Observe and talk about seasonal changes. Play in the leaves and snow.
- Point out technology that we use in our daily lives, including computers, tablets, radios, and electronic toys.
- Talk about how technology helps people find information.
 Model for children how to look up a topic they are interested in or find resources to answer questions related to science topics.