
READY for SCHOOL Parent News:
Scientific Thought in Children

Young children develop the skills necessary for scientific thought while making observations about their world, analyzing and organizing those thoughts, and testing the hypotheses they develop. They use their current knowledge to help understand new ideas and concepts that are presented. By carefully observing children and listening to their explanations of the world, adults gain insight into their thought processes. For example, after a heavy rain, children may begin to notice water running down a hill. A child may comment that the running water makes a river. Through conversations and real explorations with sand, water and dirt, children learn first hand about the properties of flowing water. When shovels and other digging tools are added, children may begin to excavate their own rivers. This process may take several days while the children add water when rain is not available and dig several paths for the water to follow.

In the early education center, teachers support this sort of exploration by providing time for exploration and carefully observing the children as they explore the environment. As children develop concepts, teachers may add tools and materials, in this case shovels and buckets, that support the children's explorations. Later, during a group discussion, the teacher may ask the children about their play and add ideas to the children's explanations. This is an opportunity for the teacher to introduce additional vocabulary words like "erosion" and discuss higher level concepts like the "water cycle." Additional activities may include designing and building rivers of differing grades of steepness, width, and length. Measuring amounts of collected rain in the next storm could provide data for a graph and making comparisons.

At home, parents can encourage this kind of activity by offering opportunities for children to examine their world indoors and out. As children have more experiences with the natural world, they develop an appreciation and curiosity for nature. Help children notice subtle changes in the environment by talking about where shadows fall on the ground at certain times of day, how slowly or quickly the snow is melting, the changes noticed in leaves over time, or what happens when we forget to water house plants. Purchase a small notebook that can become your child's "Science Journal." Encourage him or her to record observations of natural events in the journal by drawing pictures, writing with invented spelling, or copying words with help from you to document his/her observations. Helping children track these changes over time helps them develop a sense of time, space and the natural cycle of life, all important school readiness skills.

Contributed by Susan Kilbourne, Area Manager, Division 2