

The Importance of Science for Young Children

Reading. Writing. Arithmetic. These 3Rs have long been the focus of school during the early childhood years. They have formed the topics of the curriculum and very often the school day is divided into time periods devoted to instruction in each of the areas. There is no question that it is important for children to become skilled readers and writers and for them to become competent in the area of mathematics. The skills they attain in these subjects serve as the basis for all that follows in their school careers. And perhaps even more importantly, reading, writing, and arithmetic are really the foundational tools of life. There is, however, another subject area that should be a central focus of early childhood curriculum: Science.

Young children are natural scientists. Much of what they do in their self-chosen play activities mirrors what takes place in the real world of science. Children observe, explore, experiment, and love to figure out how things in the physical world work. Much like scientists using the scientific method, children have their theories about how the world works (their hypotheses), they test those theories (the experiment), they observe what happens (collect the data), and then try again (revise the theory and conduct another experiment). Watch the child trying to roll a ball across the floor to knock down some blocks, for example. He has stood up three blocks on the other side of the room and is trying to knock them all over with one roll of the ball. On his first try he only manages to knock one of the blocks down. Before rolling a second time, he goes over to the blocks and places them closer together. His initial *theory* was that he could get the results he wanted - all blocks knocked over - by only considering the action of the ball. After observing the results of his *experiment*, he revised his theory to take into consideration the spacing of the blocks. On his second try, his newly revised theory was confirmed and he was successful.

Science also appeals to young children because it can provide them with areas of knowledge that they can master; it gives them a way of being smart. There are children, for example, who can rattle off the names of dinosaurs and tell you which ones are meat-eaters and which ones only ate plants. Other children know a great deal about fossils. You never know what content will connect with which children but the specific content really isn't important; it's what the child can do with the content. Science provides children with the material that appeals to their natural love of collecting and organizing. Dinosaurs, fossils, rocks, plants, and animals can all be

grouped in various ways and although children may not use such terms as *species* and *phylum*, they are doing the work of the scientist when they explain to us the difference between the scary dinosaur and the not so scary one.

Finally, children enjoy science because science contains mysteries. Why did those seeds grow and the other ones didn't? Why did that object sink to the bottom of the water table and the other stayed floating on top of the water? If the two objects look exactly alike, why did one stick to the magnet and the other one didn't? Many "real" scientists do what they do because they are fascinated with such mysteries as the workings of the human body, the solar system, or the hidden depths of the oceans. You just never know when today's mystery loving young child becomes tomorrow's mystery loving scientist.

T.J. Corcoran, JD, MEd
Founder, The Corcoran School