
FAMILY-CENTERED SCIENCE ADVENTURES

Orchard Park Elementary School

Kettering, Ohio

Imagine hands-on science units that culminate with a family field trip. At Orchard Park Elementary School, Family-Centered Science Adventures involve families in curricular activities, offer students real-life experiences with science, and provide opportunities to network with the community. Making connections between classroom lessons and the real scientific world through field experiences develops students' understanding and skills. Some of the science adventure opportunities include: Monarch Butterfly Tagging at a local nature preserve to help scientists track the monarchs' migratory route; Star Night for students and families to crawl into a 20' by 20' inflated teacher-made planetarium to view constellations; Gadget Inventions for students to display and demonstrate how their student-made compound machines solve an important problem; and the end-of-year Fossil Hunt to discover Ohio's early inhabitants.

Two of the motivating forces behind creating this family involvement program were evidence of lower student achievement and the current research strongly supporting parent involvement in education. By scheduling the Science Adventures on weekends and evenings, the program is able to accommodate working parents' busy schedules.

Family-Centered Science Adventures has incorporated the assistance and expertise of a wide network of educators and community members. School administrators, community leaders, noted scientists, and fellow educators have taken part in the Adventures. Tom Johnson, a well-known fossil collector who exhibits his Ohio trilobites in the Smithsonian Institute in Washington, DC, shared with students his early experiences with fossils.

The monarch butterfly tagging project held at a nature preserve connects Orchard Park's junior scientists with researchers from the University of Kansas. One of the tagged monarchs was the first to be recaptured in Mexico, supporting the theory that the monarch population traveling from Canada stops in Ohio before continuing its migratory route to its winter home in Mexico.

Participating family members have included grandparents, aunts, uncles, cousins, siblings, friends, and neighbors. M.A.B. Paints and Wolohan Lumber are two of the local businesses that have provided financial support and have witnessed the fruits of their efforts by visiting the students in the classroom and reading about the Adventures in the local newspaper.

During the Science Adventures, photographs are taken and copies are sent home thanking the families for their participation. The class makes logbooks that house pictures as well as students' descriptions of family events. The logbooks are also sent home to each family for their written comments about the experience.

Ongoing assessment of the program is essential to assure its effectiveness. Attendance and student and parent feedback are monitored. The program enjoys nearly 100 percent participation with an average of seventy active learners of all ages at each outing.

Parents show their continued support by planning trips to the library to conduct informal family research, dusting off old collections to share with their children, and sending related books, news articles, and artifacts to school. "We love third grade," commented one student's mother. A student added, "Science is my favorite subject in the whole world because I get to discover the neatest stuff with my mom and dad." Family-Centered Science Adventures has brought rich rewards to the students, families, teachers, and community of Orchard Park Elementary School.

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