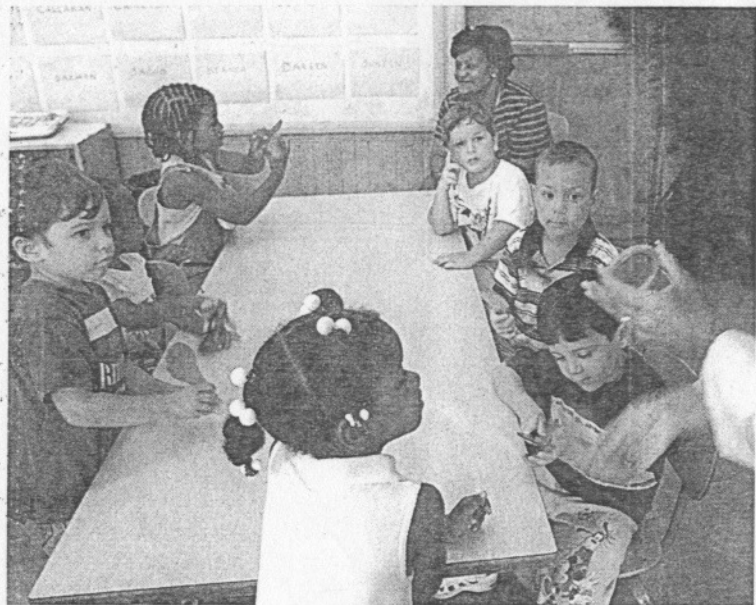


Program Takes Science To Nursery Schools And Makes It Entertaining



By FELICE BUCKVAR

TARRYTOWN

THE 4-year-olds at the Elizabeth Mascia Child Care Center here know about science, even if they cannot define the term.

"I watch the man on television," said a 4-year-old girl who then added that she meant Bill Nye of PBS's "Bill Nye the Science Guy." "He does science."

A boy said: "I have a science toy and a science book at home."

And another boy contributed the term "a science project." He had heard it when Arthur, the aardvark of children's television and book fame, had a project due at school.

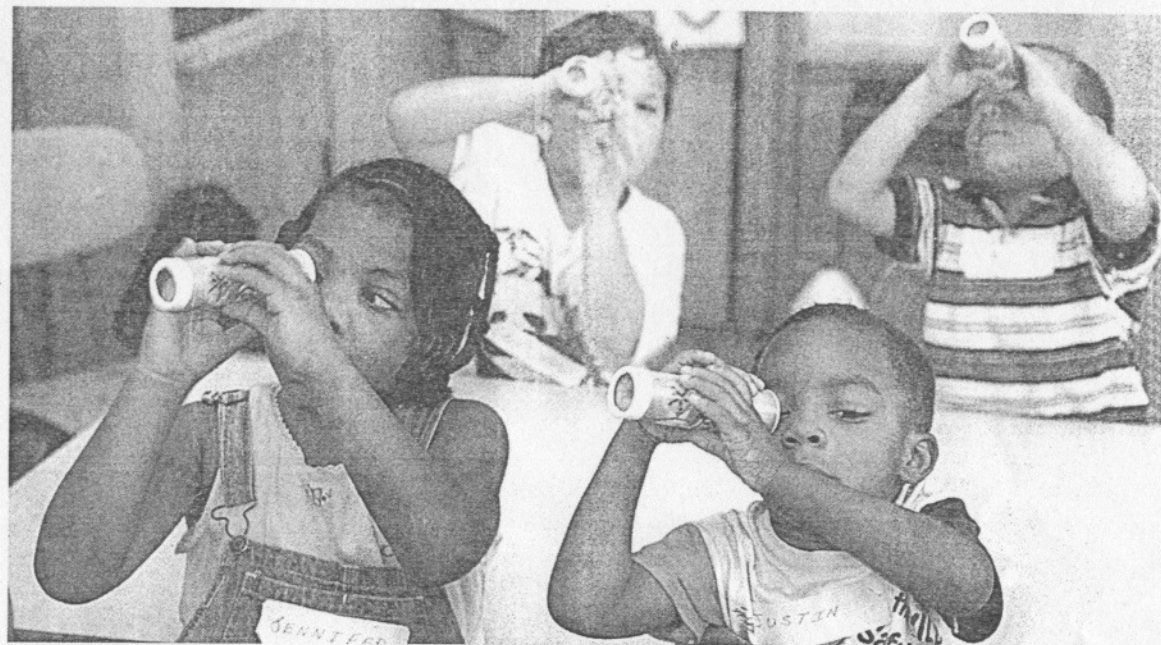
When Nancy Bonafilia of Mount Vernon, an elementary school teacher conducting a special science program at the center, took a magnifying glass and a kaleidoscope out of her box of materials, the children immediately named those objects and demonstrated their familiarity with them.

The special program was an introduction to a unit on the senses, which the head teacher of the class, Lisa Tolbert, was planning for her students. The morning's subject was the eye and seeing, and the children seemed fascinated with the magnifying glass and the different number of reflec-

tions in a side-by-side double mirror depending on the angles used. And, after studying red gelatin in a container through different colored plastic filters to see how mixed colors change, the students were given spoons and began to eat strawberry Jell-O.

Although similar science lessons have been used in school assemblies, classrooms and after-school programs, this time, the child-care center was beginning its newest program, science for nursery school children, said Jocelyn Kenner of New Rochelle, who with Lisa Silver of Cortlandt Manor, runs Mad Science of Westchester, a company that provides entertaining science programs for schools and special events for children 3 through 12 years old. "Just as with the older children, our goal is to spark interest and curiosity in science," Ms. Kenner said. "To capture the children's attention, we mix theater with teaching."

Last year, Ms. Kenner tried out science with prekindergartners at the Oak Lane Child Care Center in Chappaqua. "She donned her Dr. Juicy lab coat, brought out her big box and introduced new concepts to this very young group," recalled Maura Manning, the head teacher of the audience of 4-year-olds. "We paid for it out of our budget for special events. The children were enthralled learning about lasers, dry ice, chemical compounds." The 10 sessions spanned the school year.



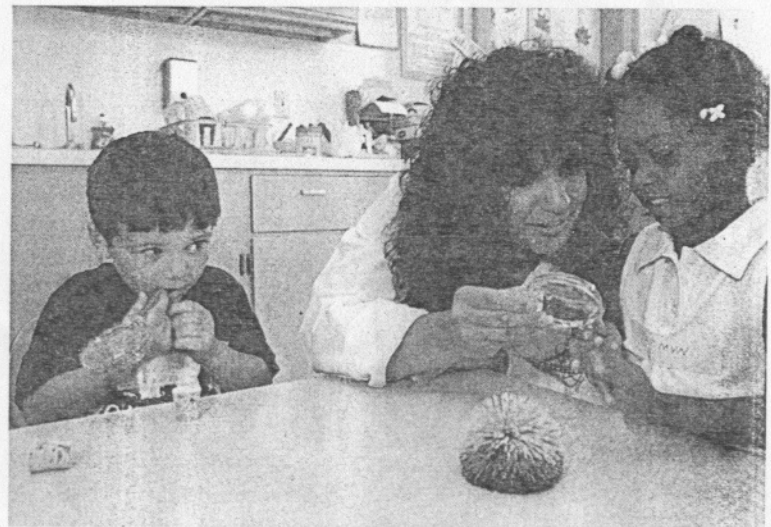
Photographs by Susan Farley for The New York Times

In a science program at the Elizabeth Mascia Center in Tarrytown, above, are Jennifer Onwe, front left, and Justin McFadden, right. In back are Matthew Gideon and Edwin Alejo. At right, Lisa Tolbert helps Jazmyne Michel and William Shampnois. Other children in class, left.

The older children also enjoy tricks that entail scientific principles. Some popular presentations include making pennies shiny again with vinegar and table salt and using large glass bulbs in which the electric current inside can show which materials conduct electricity. A current of electricity flashes when a hand touches the outside of the globe.

Tara Powers, 10, a fifth grader at the Westorchard Elementary School in Chappaqua, attended a workshop in June during a Girl Scout weekend at Camp Rock Hill in Mahopac. She enjoyed watching a miniature rocket shooting off — "That was cool," she reported — and she and the other Scouts were treated to a demonstration of how heat will make a solid sugar crystal change to candy floss, ending with a sample of the cotton candy created.

Ms. Kenner and Mrs. Silver met when they were both teaching at Horace Mann-Barnard Elementary School in the Bronx. Ms. Kenner taught first through sixth grades and Mrs. Silver taught first grade. Ms. Kenner's husband, Adam, is director of technology at Horace Mann. Mrs. Silver's husband, Phil, sells software for transportation companies for Spear Technologies, a company based in San Francisco. Mr. Silver read about Mad Science, an international franchise organization, and suggested that the two couples get together to buy a fran-



chise, which they did in November 1996.

"The Mad Science franchiser tells us where to get things, helps us to put together the kit we use, answers our questions and provides lesson plans," Mrs. Silver said. Two full-time workers, including Ms. Bonafilia, and about a dozen part-time presenters help fill requests for the programs.

All of the in-class workshops are taught by certified teachers, but science clubs and science parties are often led by college graduates with experience in working with children. Robert Diaz of Patterson is a musician and a disk jockey who said he has always been interested in science. He has

also worked in children's recreation. "I especially like the shtick in between experiments," he said. "I do a lot of back and forth conversation with the children," he said.

Another instructor, Amy Beaudry, started last year with Mad Science when she was still in graduate school. Now Ms. Beaudry is a full-time English teacher at Bergen Community College in New Jersey and a poet who has time to do science only at birthday parties. "Being able to improvise and ham things up — that's fun for me," she said.

For more information about the programs of Mad Science of Westchester, the number to call is 948-8319.