



SERF Funds New Elementary Science Club

by Dawn Solowey

The idea for a science club has been percolating in Daniel Garrigan-Byerly's head for years. A third grade teacher at the Josiah Haynes Elementary school, Garrigan-Byerly, affectionately known by students as "Mr. B," first had the idea for a science club two years ago, when talking to parents on a field trip. He and the parents discussed the success of the elementary math club, and wondered aloud about the possibility of a science club. He envisioned a place where kids who are fascinated by science could explore science in a more in-depth way than is possible in the regular classroom. "I wanted to build a club that would allow students to be scientists, without having to worry about a test or the stresses of academics," Garrigan-Byerly explains.

The science club is now a reality, since the Sudbury Education Resource Fund (SERF) awarded Garrigan-Byerly a grant to pilot the club. SERF (www.serfsudbury.org) is a non-profit organization dedicated to funding student enrichment and curriculum enhancement projects in K-12 classrooms in the Sudbury Public Schools (SPS) and Lincoln Sudbury Regional High School (LSRHS).

Almost immediately after he learned he had been awarded the SERF grant, Garrigan-Byerly sent home a flier advertising the club to all Haynes fourth and fifth graders. The bright orange flier was headlined "Calling All Scientists!" and detailed a series of eight science workshops to be held after school. When registration closed, Garrigan-Byerly had 26 students signed up.

"The core of the club is to allow students to be scientists," Garrigan-Byerly explains. "Scientists have a question, figure out how to solve it, and communicate the results," he says. "That is what the students



will do."

Garrigan-Byerly has planned eight sessions: Living the Life of a Scientist; Alternative Energy; Magnetic Energy; Music, Sound and Hearing; Forensic Chemistry; Optics and Light; Biology; and Engineering and Design Challenge. To get ideas for the curriculum, he explored the Boston Science Museum for inspiration, and reviewed programs offered at similar clubs in other districts.

In the first science club session on April 1, students swabbed the Haynes school for germs, seeking to learn which surface was the "germiest." Students then experimented with growing the bacteria.

Haynes school nurse Lisa Nigrelli and Haynes parent Dr. David Rose, Chairman of Radiology at Emerson Hospital, talked to students about how they use science in their work every day.

Future weeks promise to be equally exciting. In the environmental science unit, kids will clean up an oil spill. In the biology session, students will dissect a squid. "The squid is perfect for this age group to dissect," he explains. "There is little blood and guts, and it is a simple dissection where the kids can really see the adaptations." There are practical considerations too: the dissection requires only "a paper plate and school scissors," he says. In the magnet session, kids will build a magnet accelerator. "This will take what they know about magnetic fields from the school curriculum and expand it," Garrigan-Byerly explains. At the end of the club sessions, he plans to record students with a FlipVideo camera presenting their areas of expertise in a kind of "science forum."

Garrigan-Byerly is also planning to invite other members of the Haynes parent community who are doctors or scientists to participate in the club. In addition, he has contacted members of the scientific



community in town to explore ways to involve them in the club.

Garrigan-Byerly plans to continue the club next year and is already thinking ahead to next year's topics. He also plans to share the idea for the club with other elementary schools in the district. "I will have a set of basic lessons, with experiments that are low cost in a box that any teacher who is interested can borrow," he says. In fact, he will invite teachers from other elementary schools to attend any of the sessions to see how they work first-hand. Teachers and parents from other elementary schools have already expressed interest.

"I have always loved science," Garrigan-Byerly confesses. He was inspired by his father, who is a scientist. "I was the kid who takes the stereo apart at home to figure out how it works," he says. In fact, he is considering having kids take apart a speaker for the "Music, Sound and Hearing" session and then try to make a homemade speaker. With this club, Garrigan-Byerly hopes to reach those kids who are drawn to science from a young age, just as he was.

To award grants that bring science into the K-12 classrooms, and to fund other curriculum enhancement, SERF relies primarily on financial contributions from parents and community members. Donations may be made online at www.serfsudbury.org.