James Bryant Conant Award In High School Chemistry Teaching

Recipients are honored for contributions of major significance to chemistry

By Ann M. Thayer

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"You don't learn something unless you can use it and apply it," says Sally B. Mitchell, a high school chemistry teacher at East Syracuse-Minoa High School, in New York. "My students go home every day with knowledge that they are going to use for the rest of their lives." She imparts this information by teaching the high school chemistry curriculum through everyday applications and hands-on experimentation.

Mitchell, 47, is being recognized for her creativity and clarity in engaging students. Few could argue with learning the concepts of molality, saturated solutions, and crystal growth when the result is Mitchell's perfect fudge. "My passion is food science, and that's what I teach in my chemistry classroom," she explains.

Mitchell works actively on volunteer efforts that aid young people or fellow teachers. She frequently gives presentations and holds workshops on food chemistry at state and national conferences. Through initiatives such as Chemagination, ACS's Chemists Celebrate Earth Day, and National Chemistry Week, she exposes students to experiences beyond the classroom. For the past 10 years, she has contributed to the Science Olympiad, serving as a regional coordinator and a state and national supervisor.

In addition, Mitchell brings experience as a research chemist to the table. Soon after starting her teaching career, she shifted gears and spent two years in the department of pathology and laboratory medicine at the University of North Carolina, Chapel Hill, working on AIDS research. "That was probably the most influential experience of my life," she says.

Although ultimately drawn back to teaching—it's not surprising to hear her say she loves it—the time doing research made her appreciate the importance of lab skills, which she now passes on to her students.

Beyond her teaching responsibilities, Mitchell is dedicated to learning as well. During several years when she cared for her young children and helped support her family by working in airline customer service, she read, wrote labs, and developed chemistry games. Today, she attends conferences to keep current on areas of science and technology.

"For more than 25 years, I have seen her efforts toward excellence in chemistry teaching, community service for the sciences, and selfless commitment to students grow exponentially," says professor D. Steven Keller of Miami University, in Ohio. He underscores...
her dedication, enthusiasm, and effectiveness.

"By her exemplary contributions as a high school chemistry teacher and through her service to the community, she has had a significant positive influence on the national chemical community," he adds.

After earning a dual B.S. degree in chemistry and biology from Syracuse University in 1982, Mitchell completed a master's in science education there in 1983. She is currently working toward completing a Ph.D. in science education (again at Syracuse).

Part of her Ph.D. dissertation will focus on another passion: the metric system. "My goal, by Metric Day on Oct. 10, 2010, is to scientifically convince everyone that the only way to improve science education is to have a measurement system that is coherent and internationally known."

Mitchell has won numerous teaching and service awards, including the ACS Northeast Region's Chemistry Teacher of the Year award in 2003 and the National Mole Day Foundation's Mole of the Year in 2001.

Mitchell will present the award address before the Division of Chemical Education.