Vanilla chemist isn't bland
ES-M's Mitchell honored for her teaching and cooking

By Ngoc Huynh
Staff writer

One of the world's largest scientific organizations is recognizing local chemistry teacher Sally Mitchell.

Each year, the American Chemical Society selects eight of its nearly 160,000 members to profile in its annual report. This year, the society chose - among others - a Nobel Prize winner, a pharmaceutical company scientist and Mitchell, of East Syracuse-Minoa High School.

Mitchell was chosen from thousands of teachers in the organization.

"It was very difficult to choose among so many high school teachers," said Nelufar Mohajeri, the society's program manager in the office of industry members. "We selected her because of her active involvement in Science Olympiad and her dedication in teaching students about chemistry."

Mitchell has taught at ES-M for about five years. She is the school's Science Olympiad coach and state regional coordinator for the competition.

She also serves as coordinator in the Syracuse area of "Chemagination," a science essay and poster contest for high school students, conducted by the American Chemical Society.

"This is a thrill and a very exciting thing to happen to a high school chemistry teacher," she said of the society's recognition.
The society is a nonprofit organization founded in 1876. It has members at all degree levels and in all fields of chemistry working as chemists, chemical engineers and teachers.

"It is described as the world's largest scientific society dedicated to one area of science," Mohajeri said.

Last year, Mitchell received the society's Chemistry Teacher Award for the association's Northeast region. She also was named outstanding teacher for 1999-2000 in the Radio Shack National Teacher Awards.

D. Steven Keller, associate professor at the State University College of Environmental Science and Forestry in Syracuse, nominated his colleague for the society's teacher award. He has known Mitchell for more than 20 years. They met as undergraduates at Syracuse University.

"She's personable, she's intellectual, she knows her stuff," he said. "Very rarely do you find someone who understands the nuance of the science and can communicate it with students and young people."

One of the reasons Mitchell is being honored is her involvement in many aspects of chemistry. She doesn't just stand in the classroom trying to explain chemistry to her students.

She is a co-inventor of "Simulator: Development of the Mendeleev Periodic Table," a card game that helps students learn about chemical elements.

She presents workshops on chemistry and its connection to food nationwide during summer breaks. As part of her work with chemistry and food, she investigates the purity of vanilla. She has about 150 samples of vanilla from around the world.

"I found a bottle of vanilla from Bermuda full of rum," she said, "and one from Mexico had antifreeze in it."

It took Mitchell 20 years to perfect her chocolate chip cookie recipe using her knowledge of chemistry. She teaches her students the process of cooking and how food chemistry makes a difference.

She said timing is important.

"Kids think that everything is instant," Mitchell said. "They're not patient anymore . . . the slower it is, the more the process works better."

ES-M senior George Roewer plans to pursue marine biology as a career. He says Mitchell is his biggest influence.

"She offered me a chance to go to Montauk Point, Long Island, to go on a marine biology expedition," he said. "This chance has taken me to a whole new level."

Roewer admires how his teacher goes out of her way to help students. He said she spends her own money to buy materials for Science Olympiad and always is available to help the team.

"It shows me that she really cares about her job," Roewer said. "She wants her students to succeed."

Mitchell credits one of her high school teachers, Paul Cacamise, of Newark, for her interest in chemistry. During her senior year, Cacamise selected her to demonstrate experiments for his class.
"I just knew it right there," Mitchell said, "I always wanted to be a teacher."

Mitchell is working on her doctorate at SU and wants to use her advanced degree to help change the state Regents exam. She said the state has ruined math and science education because the format of the tests does not measure students' knowledge.

"I'm really disappointed," she said. "People have given up on teaching and now it's teaching for the test. Whose fault is it? It's New York state. It's accountability by number. How can you compare apples to oranges? Every kid is different."

ES-M senior Michelle Pede said Mitchell is always excited to teach. Mitchell uses stories and examples from the real world, Pede said.

"She would find articles on court cases," Pede said, "and things that would go on in the news and bring (them) into class."

As part of its efforts to teach and promote the metric system, ES-M each year hosts Mole Day. Mitchell is a key promoter of this event and was featured in a front-page story in the U.S. Metric Association's newsletter for January-February 2004.

"Mole" is a scientific term. One mole of a substance contains 6.022 times 10-to-the-23rd-power molecules.

Mitchell won the 2001 Mole of the Year Award from the National Mole Day Foundation. She plans to get her school to be the first in the country to go metric.

"The rest of the world uses metric except for the U.S.," she said.

And if all this weren't enough, Mitchell has another goal. She wants to succeed with her book "Making Perfect Fudge." "That's going to be my claim to fame," she said.