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Dwyer honored for encouraging kids to do science research

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The Society for Science and the Public (SSP) says Kathleen Dwyer is one of the top high school science teachers in the country.

The society has named the O'Fallon resident, a chemistry teacher at Maplewood Richmond Heights High School in St. Louis County, and nine other teachers from across the U.S. to its 2010 Fellows program. Each was selected for their unique plan to reach students in underserved communities and to inspire excellence in independent scientific research.

Dwyer was recognized specifically for her work to promote science research at the high school level.

Each fellow receives \$8,500 directly for their classroom and community; full support to attend a Fellows Institute in Washington, D.C., in July; and ongoing training and resources. Successful participants can retain their fellowship up to four years.

Dwyer said she was thrilled to receive the award because it will help in her classroom work.

"I am trying to encourage more kids to do science research," she explained.

Describing some of the innovative research her students now carry out, Dwyer said, "This year I had a student who won best education paper at the state science symposium. She did a research project with electronic books and their paper versions and she looked to see if students had improved comprehension, or if they improved their preference for reading, with one version over the other.

"Last year I had a student who tested the amount of contaminants on currency that he obtained from hospitals and fast food restaurants and he found that trace amounts of drugs are everywhere," she noted. "He also took bills he knew were contaminated — they had a positive test for cocaine which is the most prevalent drug found on bills — and then he ran mint bills, never before circulated, through an ATM machine and they picked up traces of cocaine.

"He showed you do not need to have the drugs in your pocket. If the bills just touch each other they become contaminated," she said.

Dwyer said the money she received with her SSP fellowship will be used to help expand science research programs for high school students throughout the St. Louis area.

She explained, "I work with a group of other science teachers from a half-dozen high schools in the St. Louis region called the Missouri Consortium for Science Research (MCSR). And we are trying to get more teachers and more schools involved.

"I am hoping this grant will be part of the impetus to help get more involvement," she said.

The MCSR combines its resources and expertise to find help for students interested in exploring science, Dwyer pointed out.

"If we have a kid interested in astronomy, we work together to find them help," she explained. "Or, for example, my student working on the cocaine project needed to find an ATM machine. Somebody in the consortium knew somebody who could get him the access he needed.

"Every year we also sponsor a symposium where students share their research and learn what a real science symposium is," she said.

Dwyer has been honored before for her science teaching. In 2008, she was named the Pfizer teacher of the year in the St. Louis area. She used the money she received with the award to finance her participation in a global master's degree program offered by Miami University in Ohio in which she is gaining valuable experience through summers studying abroad to help make her a better science teacher.

She spent nine days last July exploring conservation and marine ecology in the Central American country of Belize. This July, she will travel to Kenya to work with the Masai tribe on its conservation programs.

When she is not in her high school classroom, Dwyer also teaches a summer science research class for high school students at the University of Missouri St. Louis, where her students work with university faculty.

Additionally, she conducts professional development education in the sciences — biology, chemistry and physics — for other teachers. And she has been working summers at the Donald Danforth Plant Science Center to help develop a program for educators that will teach them about advances in science and how to pass that information on to students in their classrooms.

The Chicago native earned her undergraduate degree in biology and a graduate degree in education at the University of Illinois at Urbana-Champaign. She has lived in O'Fallon for about 11 years.