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FOR IMMEDIATE RELEASE

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Energizing Science Education in Urban Schools

Pitt partners with the Pittsburgh Public School District

PITTSBURGH Science and math students, as well as their teachers, in the Pittsburgh Public School District (PPSD) will soon benefit from a new partnership with six departments in the University of Pittsburgh's School of Arts & Sciences and Pitt's School of Education. Pitt has been awarded a three-year, \$2 million grant from the National Science Foundation to support selected graduate and undergraduate fellows who will work closely with science teachers in 12 elementary and middle schools in PPSD.

"The most significant challenge in our district and across the nation is to improve student achievement in mathematics and science," said Richard Mathews, PPSD Science Program Officer and senior project partner. "Studies have shown that the most direct route to improving mathematics and science achievement for all students is better mathematics and science teaching."

Funding will support 12 teams of elementary or middle school teachers, Pitt fellows, and math and reading specialists from selected schools. Graduate and undergraduate fellows will be drawn from Pitt's Departments of Chemistry, Biological Sciences, Physics and Astronomy, Geology and Planetary Science, Mathematics, and Neuroscience.

One focus of the partnership is to improve teachers' science content knowledge in grades three through eight. Fellows will work with PPSD science curriculum, the Full Option Science System (FOSS), which addresses two or three science topics, called modules, each year. Fellows will help teachers apply the unifying theme of energy to the entire curriculum, and to emphasize the nature of science as a process instead of a system of facts and figures.

"The unifying theme of energy will allow students to connect what might appear to be diverse and unrelated topics in their curriculum with fundamental theories in biology, physics, or chemistry," said Joseph Grabowski, associate professor in the Department of Chemistry and principal investigator of the project. "The theme will help students relate concepts to things they can see and experience with their own senses on a daily basis. This theme of energy clearly lends itself to an active learning process."

Grabowski expects that teacher-fellow partnerships will result in enhanced student learning of overarching concepts as well as evaluated and improved materials and strategies to assist teachers in their mission. The teams also will design and deliver professional development workshops to other PPSD teachers to disseminate validated approaches.

"A number of different University departments have very successful outreach efforts to the schools, but we have not had a program that combines so many disciplines and that draws in graduate and undergraduate fellows to participate in the outreach," said Grabowski. "Many of our students, at all levels, are interested in the entire scope of the education enterprise. The opportunity for our students to be actively involved during their own education has generated quite a bit of enthusiasm."

Fellows will take courses in teaching methods and theories, led by Jennifer Cartier, assistant professor in the Department of Instruction and Learning in the School of Education and coprincipal investigator of the partnership, during the summer before the school year. During the school year, fellows will work in the schools with teachers to plan and implement tasks and specific learning activities.

“This partnership will provide opportunities for our teachers to have contact and input from experts to sharpen their skills and deepen their subject knowledge,” said Mathews. “On the other hand, the Pitt fellows will gain an understanding of the complexities of urban education. It is exactly this type of collaborative effort between local universities and school districts that may define exemplary models to help improve teaching and result in a more highly qualified workforce within our region and ultimately our nation.”