

## Grants to benefit area students

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HERALD NEWS

North Jersey students will benefit from nearly \$7 million in grants aimed at improving math and science education, said Montclair State University officials Tuesday.

Education advocates have long noted a looming crisis in math and science education: New Jersey and the nation suffer from persistent teacher shortages in those subjects, even as current and future jobs require more technological know-how than ever before. Yet three out of every four fourth-grade math and science teachers have no special training in those subjects, according to the federal education department.



KEVIN R. WEXLER / HERALD NEWS

 Ariana Padilla studies a mock rock, crafted from various minerals, under a magnifying glass at her Washington Park School science class in Totowa. Educators say sciences offer keys to the future.

Improving math and science education is "one of the vital issues facing our state and our nation," state Education Commissioner Lucille Davy said Tuesday. Recent high-school reform efforts have focused on high-level math and science training as a way to make graduates more successful in their adult lives.

The three new programs are designed to modernize teacher training, encourage math and science majors to pursue teaching jobs and bring university researchers into local public school classrooms.

Passaic is one of several local school districts that will participate in the three-year Elementary Creative University School Partnership, or e-CUSP program to help improve math and science instruction at the elementary level. Four teachers will attend workshops with MSU faculty beginning this summer and continuing throughout the school year.

Providence Appell, the district's supervisor for math and science, said integrating math into science will give students more time to learn mathematics and will show them "how math is related to everything we do."

John Vanderbeg, principal at Washington Park School in Totowa, said there are no teachers who specialize in one subject in kindergarten through fourth grade. Three teachers from his school will participate in e-CUSP.

"Hopefully this will help them implement a hands-on approach in science," he said.

Some of the MSU graduate students participating in another program known as Graduate Teaching Fellows in K-12 Education said they and the teachers and students with whom they work should benefit from the collaboration.

"When you are teaching something, you tend to learn it better yourself," said Steven Spero, a master's student in statistics.

Cathleen Dale, a master's student in geosciences, hopes the program will bridge the academic gaps between high school or middle school and college by giving students more sophisticated lab and research experience.

"In my high school, we dissected a worm ... we learned basic stuff," she said. "But science needs to be tangible."

Appell hopes the program in Passaic will help improve math and science instruction as well as student performance.

"It's constantly being pointed out in the press that the U.S. is lagging behind, especially in math and science," Appell said.

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**Following are three grants awarded to Montclair State University to help improve math and science instruction in the state's elementary, middle and high schools:**

**Elementary school:** Elementary Creative University School Partnerships

**The grant:** \$2.4 million state grant for three years

**Who will benefit:** About 10,000 students in 26 school districts, including Alpine, Bergenfield, Englewood Cliffs, Hillsdale, Leonia, Little Ferry, Lodi, Lyndhurst, River Edge, Rutherford, Teaneck, Totowa, Wayne and West Paterson

**The program:** Gives expert training by math and science researchers at Montclair State to local teachers. Teachers attend a two-week summer workshop in math and science education at Montclair State and special workshops throughout the year, and university researchers visit classrooms to ensure that lessons are up to date.

**Reaction:** "Hopefully, this will help them implement a hands-on approach in science," said Principal John Vanderberg of Washington Park School in Totowa, where three teachers will participate.

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## 12 Education

**The grant:** \$2.8 million federal grant for five years

**Who will benefit:** About 3,500 students in Rutherford, East Rutherford, Kearny, North Arlington and Lyndhurst

**The program:** Brings Montclair graduate students into local classrooms to act as resident scientists and mathematicians. Eight graduate students annually will each be assigned a class, where they will include cutting-edge research and introduce hands-on lessons to benefit students learning to speak English.

Reaction: "Science needs to be tangible," said Cathleen Dale, a master's candidate in geosciences.

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**High school:** Prudential Teaching Fellows

**The grant:** \$1.6 million for three years, from the foundation of Prudential Financial

**Who will benefit:** About 13,000 students in Newark

**The program:** Montclair State will recruit and mentor 15 math and science majors each year to become teachers in the Newark Public Schools district each year. The students will receive free tuition and special training as they complete a two-year masters degree in exchange for a three-year commitment to work in Newark.

**Reaction:** "We hope that the outcome of this program will be a compelling model for promoting teacher quality and improving retention rates," said Ada Beth Cutler, dean of Montclair State's College of Education and Human Services.

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**Two other grant awards to the University were announced that will help minority college students or disadvantaged students who are bound for post-secondary education:**

1. \$2.1 million for five years for The National Institutes of Health's Minority Access to Research Careers (MARC) Undergraduate Student Training in Academic Research (U\*STAR). The grant provides support and preparation for minority college students who intend to pursue postgraduate study and careers in biomedical research.
2. \$1.25 million for five years from the U.S. Department of Education for the Montclair State University Upward Bound Project. The grant benefits low-income and first-generation college-bound students in Newark, Paterson and Passaic with summer and academic year college-preparation courses and motivation.

**Source:** *Montclair State University*

