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Diane Irwin, K-12 science coordinator for Ballston Spa Central School District, works on their NASA proposal with fifth graders from left: Tim Dwyer, Caleb Anderson, John Pohlman and Theodore King. Ed Burke/Ballston Spa Life

## **Ballston Spa students drafting experiments that could find** their way into space

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By MAREESA NICOSIA Ballston Spa Life

BALLSTON SPA — A group of fifth-graders at Milton Terrace South Elementary huddled around computers in the library after school, brainstorming proposals for science experiments. But these weren't just any science experiments — their purpose is to test the effect of microgravity, and one of them could end up being part of a 10-day ride on the Space Shuttle Endeavour, when NASA launches the shuttle for its final orbit on Feb. 27, 2011.

The students are among 1,000 fifth-grade, middle school and high school students at the Ballston Spa Central School District participating in the Student Spaceflight Experiments Program (SSEP), which is run by the National Center for Earth and Space Science Education and NanoRacks LLC. They join 20,500 students in 53 schools across the U.S. who are also participating.

Ballston Spa is the only school district in New York state to take part, and its participation was aided with an \$18,000 sponsorship from GlobalFoundries, through the district's Partnership for Innovation in Education. A team of teachers and representatives from GlobalFoundries and the Children's Museum of Science and Technology will review the experiment proposals this month and pick three finalists by Nov. 18 to send to the National Center for Earth and Space Science Education.

Only one experiment from the Ballston Spa district will ultimately be chosen to fly on the shuttle when it launches, currently scheduled for Feb. 27.

It will fly with 89 other experiments created by students in grades five through 12, universities and corporations around the country.

The catch is that the experiments have to fit in a box less than a centimeter in diameter and 1.5 centimeters high, and make it past strict flight safety regulations.

However, the fifth-graders at Milton Terrace South seemed up to the challenge recently, during their fourth after-school work session before their proposals were due this past week.

Providing the human race with nourishment and medicine in the face of disaster seemed to be a theme among the proposals, which included experiments that would test the effect of microgravity on the growth of bacteria, plants and fish eggs.

"If something happened to Earth, we could grow food in space or on another planet where people could live one day," said Kate Yager, 10.

While the younger students are most enthusiastic about sending their experiments into orbit, high schoolers are excited by the prospect of enhancing their resumes as they prepare for graduation, said Diane Irwin, the district's kindergarten through grade 12 science coordinator, who is directing the Partnership for Innovation in Education program in Ballston Spa.

"It gives them the opportunity to learn the scientific method and see the same process that happens in real-world research," said Irwin, adding that they also realize the ethical, safety, health and financial restraints faced by spaceflight scientists.

The emphasis on science and learning real-world skills is part of the district's goal to increase science, technology, engineering and math (STEM) learning opportunities.

For students who are taking part, like fifth-grader Caleb Andersen, it's just about doing something they love.

"If ours went into space I would be amazed," she said.

For more information about the spaceflight program, go to http://ssep. ncesse.org.

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