## **NEWS** from The Savannah River Site



Media contacts: "DT" Townsend

(803) 952-7566

dt-lawrence.townsend@srs.gov

Donald Lehr The Nolan/Lehr Group (212) 967-8200 dlehr@futurecity.org

For Immediate Release

## **Future City Students Confront Urban Disasters and Engineer Hope with Nanotechnology**

AIKEN, S.C. (January 16) Seventh- and eighth-graders in the annual National Engineers Week Future City Competition™ normally create cities with utopia in mind. This year, they're also confronting the world's worst urban disasters and there's no mistaking them for utopia.

From a small Kansas town destroyed last year by a tornado, to the war ravaged Gaza Strip, to Linfen, China, one of the most polluted cities on earth, Future City students across the country are dealing with real problems, determined to prevent them and build a better tomorrow.

Future City, in its 16th year, asks middle school students to create a city, first on computer and then in a large tabletop model. Students present and defend their designs before volunteer engineer judges from the community at regional competitions in January.

More than 30,000 students from 1,111 schools – a record number of registered schools – in 40 regions are participating this year. Working in teams with a teacher and volunteer engineer mentor, they create their cities using the SimCity 3000<sup>TM</sup> videogame donated by Electronic Arts, Inc. of Redwood City, California. They also write a city abstract and an essay on using engineering to solve an important social need – this year's theme asks students to describe how nanotechnology will monitor their city's structures and systems to keep its infrastructure healthy.

Barbara Smoak, Manager, Educational Outreach, Washington Savannah River Company, notes that direct, hands-on experience proves to be among the most successful routes to acquaint young people with engineering. "Through this experience, the children realize the impact engineering has on their lives, and how math and science are highly relevant to their world. This is the ideal age to reach out and influence these students as they begin to consider what types of careers to eventually pursue."

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A sampling of projects from across the country indicates that this year's Future City students are facing some of the most difficult challenges on the globe and engineering solutions.

Students at Westridge Middle School in Shawnee Mission, Kansas, are using the hometown of their fellow Kansans in Greensburg for the basis of their Future City. Last May, a Category 5 tornado destroyed 95 percent of Greensburg and killed 11 residents. "It was blown straight off the map," explains team member Charlie King Hagan, 13, adding confidently, "so we're taking what was left and building into the future."

The Future City 2008 essay theme also plays a major role for the team from Nativity of Our Lord School in Orchard Park, New York, near Buffalo. Those students have adopted Linfen, China, with a population in excess of four million and more than 200 major contaminants in its air and water, as the model for their city.

Nanotechnology involves the creation of materials, devices and systems through manipulating matter less than 100 nanometers in length. A nanometer is one-millionth of a millimeter, so engineers and scientists in nanotechnology work with items smaller than molecules, essentially atoms.

"We're really optimistic," says Stephanie Houser, an 8th-grade member of the team. "Nanotechnology is so small it can filter arsenic from water and it can absorb air pollution, too."

Sponsored in part by the National Engineers Week Foundation, a coalition of more than 75 engineering, professional, and technical societies and some 50 corporations and government agencies, Future City is the largest and most successful education program of its kind. Regional winning teams receive an all-expense-paid trip to the Future City National Finals, hosted by Bentley Systems, Incorporated, in Washington, D.C., February 18-20, 2008 during Engineers Week, February 17-23. National grand prize is a trip to U.S. Space Camp in Huntsville, Alabama. Numerous other prizes are awarded at the regional competitions.

The Washington Savannah River Company (WSRC) and the Ruth Patrick Science and Education Center at the University of South Carolina Aiken are co-sponsoring the South Carolina regional competition. WSRC recognizes the important role played by the Future City Competition in its grass roots effort to encourage middle school students to consider a career in engineering.

The South Carolina Regional Competition will be held at the University of South Carolina Aiken, Jan. 26, 11 a.m.-6 p.m. (Business & Education Building – Gymnasium).

Awards for the top three finalists are provided by WSRC. The first place team receives scholarships from the University of South Carolina Aiken.

WJBF Channel 6's Aiken Reporter Joy Howe will be the master of ceremonies for this year's competition.

"Supporting the school systems in our area is a value we hold dear at SRS," said Smoak. "The WSRC Team devotes an impressive array of resources each year, both monetarily and otherwise, to this effort."

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