



FOR IMMEDIATE RELEASE 3/10/09:

Beacon Institute, Tech Valley HS to construct water sensors to gather data

NORTH GREENBUSH -- It's a partnership that combines the latest in student learning techniques with a unique and innovative environmental curriculum designed by Beacon Institute for Rivers and Estuaries.

On Thursday, officials with Tech Valley High School and Beacon Institute will demonstrate the partnership and the benefits it brings to not only the students, but the entire state.

Media representatives are invited to arrive at Tech Valley High School in North Greenbush starting at 9:15 a.m. on Thursday for an opportunity to witness the SENSE IT initiative in action, as TVHS freshmen build, calibrate and test the data-logging capabilities of their own water sensors.

At 9:45 a.m., TVHS faculty, staff and students will gather with Beacon Institute representatives and funders to discuss the SENSE IT project and how the pilot initiative will benefit students both at Tech Valley High School and statewide.

A leader in combining the latest technology with project-based learning, Tech Valley HS embraced the opportunity to pilot SENSE IT, a unique and innovative environmental curriculum designed by Beacon Institute for Rivers and Estuaries.

Beacon Institute is pioneering the River and Estuary Observatory Network (REON) – a real-time integrated network of sensors, robotics and computational technology distributed throughout the 315-mile river to monitor the health of the river, in partnership with Clarkson University and IBM.

SENSE IT brings REON technology into the classroom with professional development and curricula modules for teachers to implement with their students in constructing prototype water sensors, with the ultimate goal of engaging students in science, engineering and technology career paths.

SENSE IT is funded, in part, by a significant grant from the National Science Foundation and an *Innovation Generation* grant from Motorola Foundation, as well as support from New York State and several regional funders, including the Bender Scientific Fund of the Community Foundation for the Greater Capital Region and Verizon Foundation.

The project involves students integrating studies in environmental science with pre-engineering skills to design, build and test a sensor that will gather information about water temperature in the river. Water temperature is one of several basic hydrology parameters that, when combined with others, can be used to determine the health of the ecosystem.

Once deployed, students will plug the temperature sensors they've created into LEGO® NXT microprocessors for real-time data logging. Students will also write algorithms (mathematical instructions) to measure temperature continuously from the data streaming in from the sensor.

"This is a fantastic opportunity for our students to work with experts in the field to conduct research and learn from real-life activities and scenarios," said TVHS Principal Dan Liebert.

"Our goal is to use the Hudson River and the REON project as learning platforms to demonstrate how science and technology help us view, interpret and interact with the environment," said Liesl Hotaling, Beacon Institute Chief Education Officer, SENSE IT creator and a nationally recognized expert in developing internet-based science curricula for K-12 teachers.

"We congratulate Beacon Institute and Tech Valley High School on the success of the SENSE IT pilot, launched with seed funding from the Bender Scientific Fund," said Roy Stevens, Ph.D. of the Bender Science Fund committee. "SENSE IT perfectly illustrates our desire to support and promote discovery in science and technology and to inspire youth to explore science and math. We look forward to the growing, positive and lasting impact that SENSE IT is having on students in the Capital region and beyond."

"For New York State and the nation to remain competitive in the global economy it is essential we develop math, science and engineering skills in young students," said Beacon Institute Director and CEO John Cronin. "By combining an environmentally-driven purpose—the monitoring and protection of critical waterways— with advanced technological skills, we are preparing a new generation of innovators and leaders who can address one of our most pressing regional, national and global environmental challenges—threatened water resources."

About Tech Valley High School:

TVHS is a state-of-the-art public school in Rensselaer that serves students from approximately 40 public schools in seven Capital Region counties – Albany, Rensselaer, Schenectady, Columbia, Greene, Schoharie and Saratoga counties. The school combines the latest technology with project-based learning – a partnership that is designed to develop students with the skills employers are requiring in today's ever-changing workforce.

About Beacon Institute for Rivers and Estuaries:

Beacon Institute for Rivers and Estuaries, with offices in Beacon and Troy, New York, is a not-for-profit environmental research organization engaging scientists, engineers, educators and policy experts in collaborative work focusing on real-time monitoring of river ecosystems. It aims to make the Hudson Valley a global center for scientific and technological innovation that advances research, education and public policy regarding rivers and estuaries. www.bire.org.

EDITORS -- For more information, contact Tech Valley High School Communications Coordinator Mike McCagg at 862-4973 or 929-0624.

For more information about Beacon Institute or SENSE IT, contact Kathleen Hickey, Beacon Institute Chief Communications Officer, at (845) 325-8243.