

+ Science Made Real in the Classroom

The Issue

Preparing the next generation for life in the 21st century and beyond means giving them a strong foundation in science and mathematics from an early age. Unfortunately many schools lack the resources to provide hands-on science education projects that allow students to work with the same tools used by real scientists and that show them real-world applications of scientific problem solving.

RENCI Projects

RENCI launched its Weather Web project in 2008 with a dual purpose: 1) to give teachers access to data from research-grade weather stations so they can use that data in classroom curricula and special projects in meteorology and environmental science; and 2) to provide more accurate weather data in North Carolina by installing research-grade weather stations in the 34 counties lacking these stations (and therefore lacking accurate weather data). Weather Web started with a call for participation to teachers and schools in these targeted counties asking them to submit curriculum ideas for using weather data in the classroom. A second CFP was issued in February 2009. Submitted curricula must meet the state education system's Environmental Science Competency goal and must include student essays on the importance of learning about weather and letters of support from school or district administrators. The best submissions in the Weather Web Challenge "won" research-grade weather stations for their counties, which can be used for science learning at the schools and by forecasters and scientists for better weather prediction and related research. The State Climate Office at NC State University finds locations for the new weather stations and handles installation and upkeep. MCNC also partnered with the project in year one, providing funding for an additional weather station.

The Expertise

RENCI's education program manager organized the program, promoted it with teachers and worked with the State Climate Office to evaluate winning curricula and to post the curricula on the RENCI website for all teachers to share.

Curricula are available at <http://www.renci.org/focus-areas/education-and-outreach/renci-weather-web>

The Partners

State Climate Office of North Carolina
MCNC

The Impact

Students who maintain an interest in science and math through their school careers will become the scientists and engineers who address critical problems and keep North Carolina's economy healthy. Weather Web is just one way to maintain this interest in science, while also helping out the scientific community by providing more data points. Weather Web focuses on rural and underserved communities and has brought research-grade weather stations to Yancey, Alexander and Hyde counties so far. It is also creating a virtual community of teachers able to share innovative curricula online.