

## RENCI's 2nd Annual Weather Web Call for Proposals

### Teachers: Win a \$12,000 Research-Grade Weather Station for Your County

In 2008, the Renaissance Computing Institute (RENCI), in partnership with MCNC and the State Climate Office of North Carolina, awarded research-grade weather stations to Alexander, Hyde and Yancey counties in RENCI's inaugural Weather Web competition. Once again, RENCI is challenging teachers in NC counties that lack research and operational grade weather stations to develop curricula that would use a weather station and the data it produces in science education programs. Area students are also being asked to research and write essays on the local benefits of weather stations. Proposals will be evaluated this spring by professionals with RENCI and the State Climate Office of North Carolina. One winning proposal will be chosen by June 2009. A research and operational grade weather station, paid for by RENCI and installed and maintained by the State Climate Office, will be installed in the county of the winning proposal in the fall of 2009.



### What is Weather Web?

RENCI is committed to helping North Carolinians through research and educational programs that apply advanced technologies. Many of our programs address better planning and mitigation for natural disasters, including weather disasters, and enhancing educational programs in our schools. The Weather Web project has a two-fold purpose: to improve education related to weather and climatology through hands-on activities and the use of real data; and to provide the state with weather data in areas where data is severely lacking.

### What is RENCI?

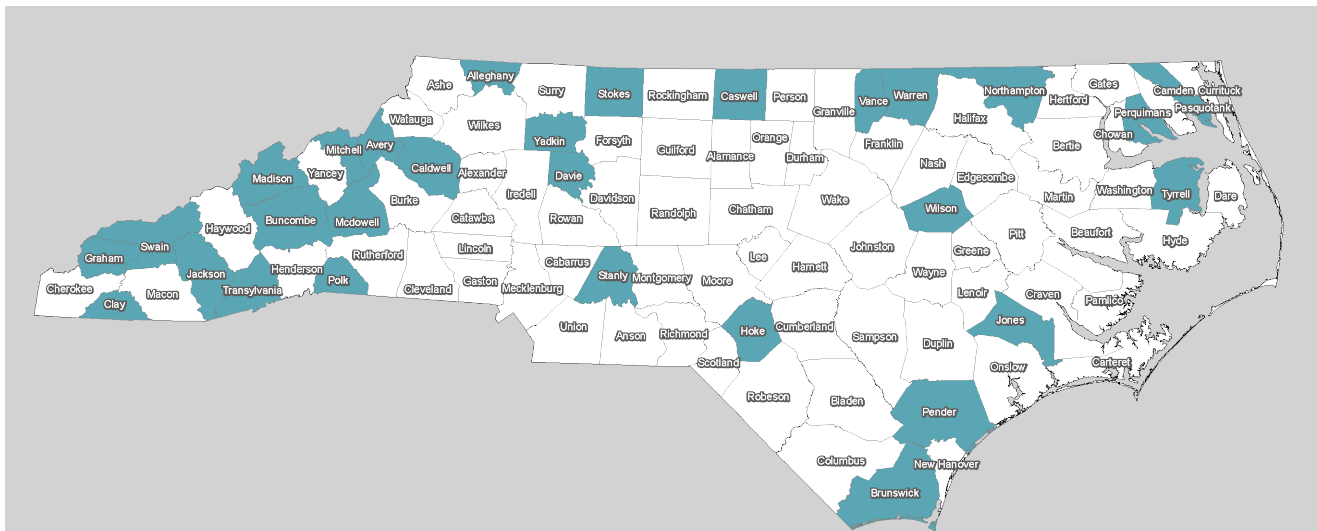
RENCI, a multi-institutional organization, brings together multidisciplinary experts and advanced technological capabilities to address pressing research issues and to find solutions to complex problems that affect the quality of life in North Carolina, our nation and our world. RENCI was launched in 2004 as a major collaborative venture of the University of North Carolina-Chapel Hill, Duke University and North Carolina State University along with the state of North Carolina and communities across the state. RENCI operates engagement centers across the state, which allows it to draw on the expertise of diverse research faculty to build collaborations that address both practical problems and broad research questions. RENCI brings to these collaborations nationally significant capabilities in computing, visualization, collaborative tools, networking and data systems. Our programs span a breadth of fields, but much of our focus is on two critical multidisciplinary issues: how to better predict, plan for, and mitigate disasters and how to

improve healthcare and the overall health of North Carolinians. In all our efforts, we strive to create an atmosphere that embraces innovation and bold approaches to problem solving so that North Carolina will thrive in the 21st century knowledge economy.

### Who is eligible to apply?

Middle and High School science teachers in NC counties that currently lack research and operational grade weather stations are eligible. Those who submitted applications last year but did not win a weather station are encouraged to reapply this year. New applicants are also welcome. Eligible counties are listed below.

Alleghany, Avery, Brunswick, Buncombe, Caldwell, Camden, Caswell, Catawba, Clay, Davie, Graham, Greene, Hoke, Jackson, Jones, Madison, McDowell, Mitchell, Northampton, Pamlico, Pender, Perquimans, Polk, Stanly, Stokes, Swain, Transylvania, Tyrrell, Vance, Warren, Wilson, Yadkin



### How do eligible teachers apply?

The application consists of *two* required parts.

- 1 – An original lesson plan
- 2 – Three student essays that explain the value of a weather station to the community

Letters of support (whether they be from an assistant principal, principal, county science coordinator, or others) are encouraged but not required.

### Lesson Plan Guidelines

Lesson plans may be submitted by individual teachers. More than one teacher at a school or teachers at several schools within a certain county may collaborate on the lesson plans. There is no limit to the number of proposals that may be submitted by teachers within a county; however, no county will receive more than one weather station.

By submitting lesson plans as part of this competition, teachers agree to allow RENCI to edit, make public and distribute plans under the RENCI logo, with full credit being given to the teacher/s and

school/s. Weather Web curricula is made available to all educators on the RENCi website. You may view last year's winning lesson plans at [http://www.renci.org/focusareas/eduoutreach/Weather\\_Web\\_Curriculum.pdf](http://www.renci.org/focusareas/eduoutreach/Weather_Web_Curriculum.pdf)

*Lesson plans should address how data from a weather station would be incorporated into the science classroom.*

All lesson plan submissions will include the following information:

- Lesson Plan Title
- Teacher Information (please include information for each teacher who works on the plan)
  - Name
  - Work Address
  - City, State and Zip
  - County
  - Area code and phone
  - Email
  - Grade level and subjects taught
  - Number of years as a teacher
  - Degrees, professional affiliations, certifications
- School Information
  - Principal/supervisor
  - School name
  - Address
  - City, State and Zip
  - Area code and phone
- A general description of the lesson plan (100 words or less)
- Targeted grade level(s)
- Subject area focus
- History of the lesson: Has it been taught before? If so, in what class? (subject and grade level)
- Objectives of the lesson plan
- Standards the plan will address
- Classroom time required (minutes, hours, class periods, weeks)
- Materials needed
- Pre-activities: What teachers and students need to do or know before beginning the lesson
- Activities: Describe as specifically as possible the hands-on activities in which students will be engaged
- Evaluation and assessment: What measurement tools will be used? How will you determine success?
- Follow-up activities (optional)
- Supplemental information (optional)
- Resources used

### **Student Essay Guidelines**

In addition to the lesson plans, all Weather Web proposals must include three student essays. These should be original essays, chosen from students who are enrolled in middle or high school in the teacher's county. Essays may be chosen through a classroom assignment, a student competition,

submissions from the science club, etc. Essays will be chosen for inclusion in the proposal at the discretion of the teacher.

The essays should address the basic question – “How would a research-grade weather station benefit your county?” Focus areas should address uses beyond the classroom and can include (but are not limited to) crop management, pest management, drought forecast and mitigation, county economic development, public safety and emergency management, energy planning, tourism, and technological disasters.

Essays must be the original work of the student and can be no more than 1,000 words. Essays must include a bibliography (using any one of the recognized formats) and all participants must cite sources used to research their topic throughout their essay. The bibliography will not be included in the total word count.

- Each essay should include the following information about the student:
  - Student Name
  - School
  - Grade Level
  - School Address
  - City, State and Zip
  - County

### **When are proposals due?**

Electronic submissions must be made by midnight on **Monday, March 23, 2009**. Only submissions in Microsoft Word or PDF format will be accepted. Submissions sent through the mail must be postmarked by **Monday, March 23, 2009**. All proposals should be prepared in 12 point type using a standard type font. All applicants will be notified about the status of their proposal by **May 11, 2009**.

### **How do I submit the proposal materials?**

Teachers may submit their plans, along with the three student essays and optional letter/s of support electronically to [jshelton@renci.org](mailto:jshelton@renci.org) or in hard copy to:

Jennifer Shelton  
RENCI  
CB# 7583  
100 Europa Dr, Suite 540  
Chapel Hill NC 27517-7583

### **Where do I find more information?**

All information is included on the RENCI website at [www.renci.org](http://www.renci.org). Questions may be sent to Jennifer Shelton at [jshelton@renci.org](mailto:jshelton@renci.org). Please include “RENCI Weather Web” in the subject line of your email.