Progress Report Title:  Cooperative Institute for Climate Science Professional Development 
Summer Institute in Weather and Climate July 16-20, 2012.

Principal Investigator:  Steven Carson (Princeton Township Middle School Chemistry Teacher)

Other Participating Researchers:  Anne Catena, Program in Teacher Preparation (Princeton)

Task I:  Administration & Outreach

NOAA Sponsor:  Brian Gross (GFDL)

Education/Outreach

NOAA Goals:
Climate Goal:  Understand Climate Variability and Change to Enhance Society’s Ability to Plan and Respond

Objectives:  In support of the Cooperative Institute for Climate Science’s (CICS) intent to educate society about the complexity of understanding and predicting climate and environmental consequences, we designed and delivered professional development for New Jersey teachers to improve their students’ understanding of weather and climate.  This work is a collaboration of Princeton University science and education professors as well as local educators: Dr. Steven Carson, formerly of the Geophysical Fluids Dynamics Laboratory and currently a middle school science teacher in Princeton Township, New Jersey; and Dr. Anne Catena, Ed.D., Program in Teacher Preparation at Princeton University.  The instructional team also included Greg Peters, a middle school teacher in an "urban rim" school district, Ewing, NJ.  Mr. Peters works with students identified as under-represented groups.

Methods and Results/Accomplishments:

The teachers explored the fundamentals of Earth’s climate as a system and the interaction of land, ocean and atmosphere through hands-on activities and demonstrations.  Topics included air pressure, temperature, seasons, the greenhouse effect, humidity, clouds, wind, the Coriolis effect, storms, and colors in the sky.  Discussions focused on understanding climate change and the need to plan remediation in respect to the public’s understanding.  One teacher commented "Knowing more about weather and climate makes us all better citizens and teachers".  Teachers indicated that the material and resources included in this program will impact their own teaching and their students' understanding.

Twelve teachers of grades 3-8 participated in the seminar representing seven different school districts.  In addition two pre-service teachers from Princeton University participated to further their understanding of content and instruction.

Teacher Feedback:

“Knowing more about weather and climate makes us all better citizens and teachers.”

“Any teacher grades 2-12 would benefit from this course.  I enthusiastically recommend this institute!!”

“Great instructor, Steve Carson, with engaging, informative models.”

“I’m now better informed; made me more data-based and provided great models to use.”
Temperature readings outside of Guyot Hall

Teachers conducting wind experiment

Researcher Steve Carson flanked by Quest 2012 Teachers