WATER SPOTTERS: Middle Schoolers explore the water cycle of the Front Range

On a rainy day, students are very aware of the influence that local water has on their daily lives. However, access to experiments and projects about what controls the local water cycle are limited. Scientists and outreach staff from the Cooperative Institute for Research in Environmental Sciences (CIRES) at University of Colorado are developing a free hands-on experimental-driven curriculum designed for middle school students to study the water cycle of the Front Range. The local focus of this project is intended to provide a concrete and relevant experience for students and make them more aware of career options in science.

Beginning Summer 2011:
- Automated Davis Vantage Pro weather stations and precipitation collection vessels will be set-up and maintained at participating schools through the St. Vrain MESA Program.
- Students will learn to operate and analyze the data generated from their local station and compare their results with those from other cooperating schools through real-time access to the data on the internet.
- Students will collect water samples as an integral part of an NSF-funded research project.
- The program will include a 4-6 week unit for use in an after school environment.
- Teacher professional development will take place in coordination with the Summer MESA program.
- Students will interact with CU faculty and graduate students and have the opportunity to visit the other research facilities involved in this project.

Through this project, students will develop a local water budget, which is defined as the balance between water coming into the region from precipitation and water leaving the region through evaporation. During this process, students will explore how the water resources that are naturally available to the region compare to the water demands imposed from irrigation and municipal needs. Further explorations will involve how the balance between water supply and demand might be affected in response to global climate change and population growth.

The weather stations will remain active as part of a long-term monitoring network for the region, which will provide opportunities for students to continue this work as they move on to high school. This program is funded through the generous support of a NSF grant at no cost to participating schools. All weather station set up, maintenance, materials and curriculum will be provided by the project team.

Interested in having your school participate?

Please visit http://climate.colorado.edu/schools for project updates or contact dcn@colorado.edu to learn how to get your school involved.