

## UNC faculty member receives the 2008 College Science Teacher Award from the Colorado Association of Science Teachers



Ann Ratcliffe, a part-time University of Northern Colorado faculty member in the College of Natural and Health Sciences School of Chemistry and Biochemistry, is the 2008 recipient of the Colorado Association of Science Teachers (CAST) College Science Teacher Award. At the CAST annual awards banquet in Denver in November Ratcliffe was cited for her work with middle and high school teachers in teaching laboratory safety and for her course in Green Chemistry for Secondary Educators in which teachers learn “green” methods to apply in their classrooms, not only to minimize hazardous waste and chemical exposure, but also to broaden student understanding of environmental issues.

A long-time proponent of safer laboratories, Ratcliffe previously coordinated the General Chemistry Teaching Laboratories at Oklahoma State University, where she published a laboratory manual for introductory chemistry titled *Chemistry: The Experience*, which uses not only small-scale chemistry techniques to reduce student exposure and hazardous waste, but also changes common experiments to use materials that are less toxic than many currently used in classrooms and laboratories and that do not have to enter the hazardous waste stream. In addition, some experiments are sequential in which the product of one experiment is used in the next, and some chemicals are recycled, thus minimizing cost to the schools. In developing Green Chemistry, Ratcliffe incorporated much of her earlier work into the UNC laboratory/online course, helping teachers learn how to develop their own “green” experiments.

Developed in 2004, Laboratory, Field, and Studio Safety is fully online, and has been offered to scores of Colorado science and art teachers. Both courses are part of UNC’s Master of Arts in Natural Sciences with a K-12 Teaching Emphasis.