

OUTREACH EVENT REPORT AND RECOMMENDATIONS

Attendee and Report Writer:

**Joseph Kerski, Geographer:
Education/GIS**

Other USGS Representatives:

Jen Reisner (RMMC), and 3 from the Central Region Office of Communication: Steve Vandas, Pete Modreski, and Pat Schassburger.

Purpose of Event:

Conduct workshops and operate USGS Exhibit: Colorado Association of Science Teachers (CAST) Annual Conference

Location: Merchandise Mart, Denver, Colorado.

Date: 21 – 22 November 2002

Summary:

The USGS Central Region Outreach Team ran a USGS exhibit at the 2001 Colorado Science Convention. The outreach team also conducted 3 workshops at the conference (see below for list). These workshops generated a great deal of additional inquiry at our exhibit.

This event attracts between 500 and 800 teachers each year, primarily K-12 science teachers, university science and education professors, and the scientific instrument and education vendor community. We took this opportunity to further our relationship with regional and state educational organizations (see below for list).

In our exhibit, we emphasized educational resources and materials for science teachers. We operated in a corner that allowed us frontage on two sides, which was excellent for the maps, posters, leaflets, and vinyl that we gave away at the event. See below for photographs.



This year's CAST conference brought together over 700 science teachers, trainers, and curriculum developers. The conference length was one and a half days.



L-to-R: Joseph Kerski (RMMC), Pat Schassburger, and Steve Vandas (both CR Office of Communications) work at the USGS exhibit. The backdrop featured the soon-to-be-published USGS geologic and shaded relief map of North America, the NED shaded relief map of Colorado, and a biological science poster.



L-to-R: Steve Vandas and Pete Modreski (both CR Office of Communications) and Joseph Kerski (RMMC) with a customer at the USGS exhibit. Jen Reisner also assisted customers at the exhibit (not pictured). We are low on stock on most of the teachers packets, but fortunately had other materials to display and distribute.



The USGS exhibit was crowded during much of the time, especially during breaks between workshops. This year, we remained open on the first day of the conference until the banquet began, but the attendance was best on the second (main) day of the conference.



Marsha Barber, Science Coordinator for Jefferson County School District, in front of the Merchandise Mart, site of the 2002 CAST conference.



Exhibit customers included K12 educators, university professors, university researchers, private companies, and those who provide teacher training and support. We distributed a flyer for the upcoming GIS in education workshop that we are conducting on 7 December 2002 at ESRI's Denver office and supporting documents on the use of GIS in the curriculum.



As usual, the most popular item we distributed was the maps. We brought some miscellaneous topographic maps along with such teachers guidelines as "Map Mysteries" and "Teaching with Topographic Maps" (by Joseph Kerski) and "Topo Bingo" (by Leslie Gordon). We also distributed surplus topographic maps of Mesa Verde National Park on non-tearable material.



Teachers gathering topographic maps that we brought to our exhibit. We also distributed vinyl film-divider sheets that make excellent poster and science fair materials. We distributed Pete Modreski's Central Region Sources of Information, Colorado Rocks, How to Get Info from the USGS, USGS Publications in CO and the USA, Feldspar, and How to Identify a Mineral.



Another popular item at the exhibit was the "Status and Trends of the Nations Biological Resources" publications CD-ROM. We also handed out the publications: Water Quality in the South Platte, the Quality of Our Nation's Water--Nutrients and Pesticides, and Estimated Use of Water in the United States in 1995.



Steve Vandas, left, explains to a teacher how to use one of the water education posters that he has authored over the years. We also distributed: Groundwater and watersheds posters, Our Changing Continent, Collecting Rocks, Dinosaurs: Facts and Fiction, Earthquakes, Finding Your Way With Map and Compass, Landsat historical comparisons, Map Projections, Gold, Denver's Geologic Setting,

Educational Materials from the USGS, stream gages, groundwater, the Colorado fact sheet, Using USGS terraserver images, the Colorado Catalog of Topographic and Other Published Maps, and the Web information sheet.

Presentations

The USGS was well represented at the conference in the program. Besides our exhibit, the USGS Central Region communications team and Joseph Kerski (RMMC) conducted three presentations during the conference. We conducted one of these presentations with our colleagues at the National Park Service (NPS) and the Bureau of Land Management (BLM).

(1) Steve Vandas, Joseph Kerski, Marion Malinowski (BLM), and Linda Lutz-Ryan (NPS)

Geographic Education Magazine of Science (GEMS)

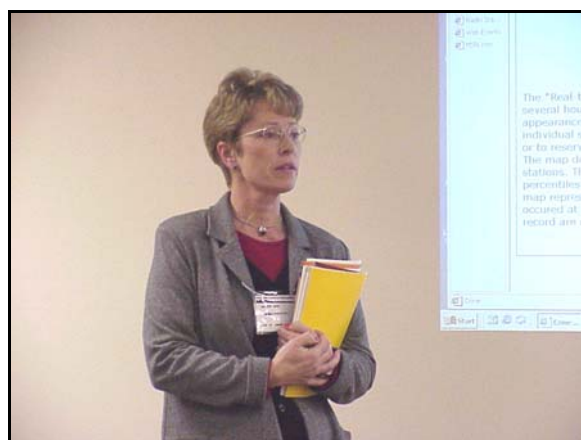


Steve Vandas leads off our workshop on the Geographic Education Magazine of Science (GEMS) project, followed by Linda Lutz-Ryan (NPS), below. Two of us from the USGS, plus representatives from the National Park Service and BLM, applied for and received funding from the Colorado Geographic Alliance (COGA) to establish an

electronic magazine (E-Zine) as an efficient and effective way to communicate federal educational resources to educators.



It is difficult at times for educators to quickly navigate USGS and other federal web pages to obtain the educational content that they need. GEMS will help educators to know about federal education resources quickly by providing easy-to-use template for content providers. We, the content providers, will be able to send GEMS as an HTML-embedded email to educators.



BLM education coordinator Marion Malinowski explains the resources from BLM that will be included in the E-Zine. GEMS could be published weekly, monthly, or quarterly, depending on our schedules and the content that we provide.



Joseph Kerski closes the presentation with a summary of maps, posters, Internet resources, digital spatial data, and books that will be included from the USGS in the GEMS E-Zine. The workshop showed that several agencies are working together on this project, and we might also bring on board NOAA and the Denver Museum of Nature and Science. Attendance was light, most likely because the E-Zine is not online yet. We hope that it will be in early 2003.

(2) Pete Modreski
Water, Rocks, and Minerals



Pete Modreski led a workshop that quickly had the participants working through a variety of hands-on activities involving water chemistry, rocks, and minerals.



The hands-on nature of Pete's workshop was of great interest to the nearly 40 educators who attended.

(3) Joseph Kerski
Best Practices in Teaching Science



I accepted a call for participation by a teacher from the University of Denver High School to conduct part of her "Best Practices" session. This consisted of a panel of educators highlighting successes and ideas for the classroom. I am definitely glad I participated, because the session was very well attended. During my segment, I highlighted the USGS topographic maps and aerial photographs available through terraserver. I illustrated the neighborhood surrounding the site of the CAST conference so that the resolution would be

evident. I also placed the GPS coordinates that Steve Vandas and I had collected the afternoon before on top of the aerial photograph and topographic maps. I was surprised that over 60% of the attendees indicated that they use GPS receivers in their curriculum. I pointed out that the maps and images would be good bases for local studies of wetlands, their school grounds, field trip sites, or examining landforms around the USA.

Acknowledgements

I enjoyed and valued working with the Central Region Outreach Team's Steve Vandas, Pete Modreski, and Pat Schassburger at this event and applaud their "going the extra mile" by conducting workshops as well as operating the exhibit. This is another excellent example of the whole education team coming together for an event. I also thank Jen Reisner for lending us her talents and assistance for this event. I thank Tim Brown (RMMC) for the vinyl that we distributed to the teachers. I appreciated Mark Barber and Carrie Jucht (EDC) for the Landsat bookmarks and historical satellite image comparison books.

Recommendations:

1) We might want to use some of the ideas and materials from this conference, and those that my colleagues in other regions use in their own state science educational events, at the National Science Teachers Association conference during Spring 2003.

2) These are exciting times for science education, with the resurgence of public interest in the subject, and national and state standards in science. Education receives a great deal of publicity. However, teachers face increasing time constraints because of standardized testing on what

they can cover in any science course. Several educators remarked that they could not work with topographic maps in their classrooms, because these skills are not tested.

3) The USGS should continue to pursue educational venues with both an exhibit and a presentation. We simply have so many excellent USGS resources and topics to discuss that a presentation or a workshop is always warranted.

4) GIS and GPS are increasingly used in secondary and even primary schools. The USGS should continue to investigate the educational potential of GIS packages so that we can make informed answers to customers who seek to use our data in a GIS.

5) Once again, the use of workshops at a conference tied in well with our exhibit and I recommend that we continue this practice.

6) I recommend that the GEMS E-Zine project is promoted by all of us involved in education at the USGS.

7) I recommend we continue our participation at this event. One of the prime reasons for attending was to network with other Colorado organizations active in science education. I made a good contact with some western slope educators who might help us with our GIS teacher workshops at Mesa State College during 2003.

We are working with the following organizations, all of which were represented at the CAST Conference:

1. Colorado Association of Science Teachers

2. Cooperative Institute in Research in Environmental Sciences (CIRES)
3. University of Colorado Education Outreach Program.
4. Denver Museum of Nature and Science.
5. Colorado Mountain Club.
6. Colorado Earth Science Teachers Network.
7. NOAA.
8. NCAR.
9. Colorado Department of Natural Resources.
10. BLM educational coordinator.
11. NPS educational coordinator.
12. MCREL—the MidContinent Research and Education Lab.



Altostratus lenticularis clouds and sunset greeted us as we packed up the exhibit after the conference.

end of report