

## Quick Ideas for Teachers and Administrators

Schedule GPS Units for your class or school.

Request a geography expert to speak at your next professional development program.

Borrow the Giant Tile Map of Europe.

Talk with your district about hosting one of the National Geographic Giant Maps of North America.

Visit the Curriculum page on COGA's website to obtain ideas for use in your classroom.

For details on these and more opportunities, email the COGA coordinators at [coga@uccs.edu](mailto:coga@uccs.edu).

## National Geographic Colorado River Basin Poster Coming Soon

Considered a monument to the wonders of nature and human engineering, the Colorado River faces growing challenges associated with increasing population, declining ecosystems, drought, and expected climate change. A new double-sided poster from National Geographic Maps explores the fragile dynamics of this critical American landmark. Contact [coga@uccs.edu](mailto:coga@uccs.edu) for information about how to obtain copies of this great resource.





## Mark your Calendar for November in Denver

In 2010, the National Council for the Social Studies conference is being held in Denver – the first time in forty years. Colorado presenters will include Laredo Middle School teacher Barb Superka talking about why “Timelines are so Yesterday” and Kelly Jones-Wagy, social studies teacher at Brighton High School, discussing “Lessons for Technology: Wikis, Blogging, and Glogster in the Classroom”. Schedule your time now to be in Denver November 12<sup>th</sup> through 14<sup>th</sup>. For elementary teachers,

there will be a special strand of workshops on Saturday, November 13<sup>th</sup>. A reduced registration rate will be available to Colorado residents in August, so look for more information soon. Check the Colorado Council for the Social Studies website for additional information: <http://cosocialstudies.org/main.php>.

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## Congratulations to Knowledgeable Geographers

Isabella Contolini, a sixth grader at Red Rocks Elementary School in Morrison (Jefferson County) was the first place winner of the Colorado Geographic Bee held on Friday, April 9, 2010 at the University of Denver. The winning question: “The island of Rapa Nui is more commonly referred to by what English-language name?” The second place winner was Brennen Kauffman from Laredo Middle School in Cherry Creek School District followed by Evan Smith, third place winner from Preston Middle School of Poudre District in Fort Collins.



Best of luck to Isabella as she goes to Washington DC to compete at the National Geographic Bee on May 25<sup>th</sup> and 26<sup>th</sup>.

The answer to the winning question at the Colorado competition is *Easter Island*. If you are interested in registering your school to take part in the 2011 Geographic Bee or checking out questions from the National Geographic Bee, visit <http://www.nationalgeographic.com/geobee/>. You may also contact Colorado’s Geographic Bee Coordinator, Marianne Kenney, for more information at [marianne\\_kenney@dpsk12.org](mailto:marianne_kenney@dpsk12.org) or <http://coloradogeobee.wikispaces.com>.

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## Connections for GeoMentors

GIS professionals are encouraged to sign up to be a GeoMentor. A GeoMentor “adopts” a school, class, or club and supports the educator/s in working with youth. Using tools of geography (such as maps and globes, atlases, charts, imagery, and field work), the GeoMentor helps the educator and youth develop skills in geographic thinking. One teacher in Colorado has a GeoMentor who visits his class each semester to talk about how she got from high school to her current position. Sponsored jointly by National Geographic Society and ESRI, this program hopes to create partnerships across the country between individuals who have geospatial expertise and educators whose students need to be aware of this important technology. If you are an educator in seek of a partner, or a GIS professional looking to share your expertise, visit: <http://edcommunity.esri.com/geommentor/index.cfm>.

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## Upcoming Workshops in Geospatial Technology

During 2009-2010, teachers across the state learned about geographic information technologies. In addition to being a powerful tool for teaching and learning geography and spatial analysis, geotechnology is a key industry identified by the US Department of Labor for the 21<sup>st</sup> Century. Introducing students to the basics of geospatial technologies provides them with a powerful decision-making toolkit and offers a variety of ways to explore geographic knowledge in



the classroom and on field trips. COGA, in conjunction with ESRI, Inc., is offering two additional introductory workshops. Dates and locations are listed below. If your school or district would be interested in hosting a geospatial technology workshop for a whole or a half day, please contact the coordinators at [coga@uccs.edu](mailto:coga@uccs.edu) to discuss that opportunity. If you are wondering what such an event might look like, contact the coordinators to view a DVD of the workshop conducted at Pagosa Springs to help you decide if this might be of use.

### ***Introduction to Geospatial Technology***

Saturday, November 20, 2010 Colorado Springs

Saturday, January 22, 2011 Denver Metro Area

If you are interested in attending the introductory geospatial technology workshop, email [coga@uccs.edu](mailto:coga@uccs.edu).

### ***Interactive Workshops on Spatial Technologies for Career & Technical Education***

Friday, September 17, 2010 Denver, Lowry Conference Center

Friday, November 5, 2010 Colorado Springs, Pikes Peak Community College

Purpose of the Workshop:

To inform participants about career opportunities and the growing need for geospatial technicians.

To demonstrate, through hands-on activities, interactive lessons that can be used in the classroom

To frame opportunities to create new secondary-to-postsecondary programs in geospatial technologies and/or to infuse geospatial instruction into existing technical programs and STEM courses.

Who Should Attend? CTE Administrators and Secondary STEM Coordinators and/or Instructors

For details on how to register for these free workshops, contact: Jennifer Jirous at [Jennifer.Jirous@cccs.edu](mailto:Jennifer.Jirous@cccs.edu).

# How have teachers been learning about teaching geography in Colorado?

## Census 2010

When April 1, 2010 – Census Day! – rolled around, several teachers from across the state were ready with new perspectives on this civic task. Thanks to Jim Castagneri, geographer and geographic coordinator for the Denver Regional Census Center, teachers learned about the evolution of the census, how analysis is carried out today. Teacher consultant Rick Gindele also provided several lesson plans for incorporating census data in the classroom. Visit the census site on a regular basis for materials and resources to incorporate real information into your students' research experiences. <http://www.census.gov/schools/>



## Joseph Kerski's Perspective Incorporating GIS into the Classroom



While his email address ends with .com, Joseph Kerski well deserves the title of educator. He and Esther Worker, both of ESRI, Inc., have provided material support and expertise for the geospatial technology workshops offered across the state. Use these links to check out his perspective on the time he has been spending with Colorado teachers and what he has learned as a result.

<http://blogs.esri.com/Info/blogs/gisedcom/archive/2010/02/26/lessons-learned-in-bringing-gps-coordinates-and-field-data-to-gis.aspx>

<http://blogs.esri.com/Info/blogs/gisedcom/archive/2010/04/09/10-tips-on-working-with-your-local-school.aspx>

## Climate Change in Rocky Mountain National Park

What is climate change? What evidence of climate change can be identified in Rocky Mountain National Park? How can students use scientific observations about changing distributions of plants and animals or climatic data to understand possible effects of climate change? What might be some good approaches to discussing this topic in the classroom? With increasing debate about climate issues and the interaction of human and physical worlds, it can be helpful to look at the data surrounding within a limited area. The national parks have been addressing concerns about climate change in their jurisdictions over many years, and Rocky Mountain National Park offers a great opportunity in our state to investigate critical questions.

Twenty-six educators from communities as close as Lyons and Berthoud and as far away as Cañon City and Cortez spent Saturday, March 13, 2010 in Rocky Mountain National Park, exploring different ways to talk about climate change in their high, middle, and elementary school classrooms. Their learning experience commenced Friday night with dinner and a lecture at the Estes Park home of long-time Rocky Mountain National Park Volunteers and National Geographic Society members, George and Dorothy Gibbs. Interpretive Ranger Leanne Benton shared the extensive research undertaken during the last several years by researchers from a broad range of organizations as they seek to understand environmental changes in the park and the impacts of those changes on Rocky Mountain National Park. Teachers were provided with information about how to obtain and use resources regarding the subject for use in their classrooms. They expressed enthusiasm about the opportunity to look for underlying consequences of change in the environment.



Saturday morning, led by the Coordinators of the Colorado Geographic Alliance and Education Specialist



Ranger Rainey Kreis, everyone gathered for a session on the basics of climate change, hands-on activities to help students grasp climate change concepts, and approaches to discussing the subject from a variety of viewpoints. After lunch Ranger Kreis took everyone to Bear Lake. The teachers (some for the first time) snow-shoed to a Snotel station to view its snow measuring system, and then dug a snow pit to examine how snow can change over space and time. For most of the participants this was their favorite part of the workshop – just like many of their students, they prefer to be out in the field. One teacher hopes to “use information to create a science / geography interdisciplinary inquiry field study; perhaps for a school professional development workshop.”

As they headed home in the twilight some of the teachers were vowing to bring their students to the park to experience the alpine tundra and to learn from the park rangers. Other teachers were considering how to use their local environments to teach similar concepts. Everyone was inspired to go back to the classroom to share new ideas and approaches. One teacher commented, “I have better plans for how to focus purposeful outings with the kids and will plan with other teachers to do so.”

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## **“Geo Learning”, A column by Daniel C. Edelson, Vice President for Education, National Geographic Society, ArcNews Online, Winter 2009/2010**

“If you want to make students and teachers uncomfortable, ask them to work in a configuration that goes against convention. Ask most American high school students to sit in a circle or to share their work with others in small groups, and they will squirm with discomfort. Ask most American principals to evaluate the quality of teaching and learning in a classroom in which students are moving around the classroom, talking and arguing, and making messes, and they will conclude that the teacher is unable to control the students and that learning is being undermined by the disorder. And yet, these are precisely the kinds of conditions that have been shown to maximize learning.

“Along with traditional views about the conditions that lead to learning, most of us carry around traditional views about what constitutes learning. Most of us were educated in a system that focused very heavily on learning facts, and we still tend to associate the state of being well-educated with knowing a lot of facts. Even as we say that 21st-century citizens and workers need to be able to think critically, solve complex problems, and work in teams, we assess the progress of students in terms of what they know.

“If we are serious about educating a generation of geo-literate citizens, it is important that we break down our own out-of-date views about learning and replace them with new images of how we should educate young people and what kind of knowledge and skills we should be aiming for.”

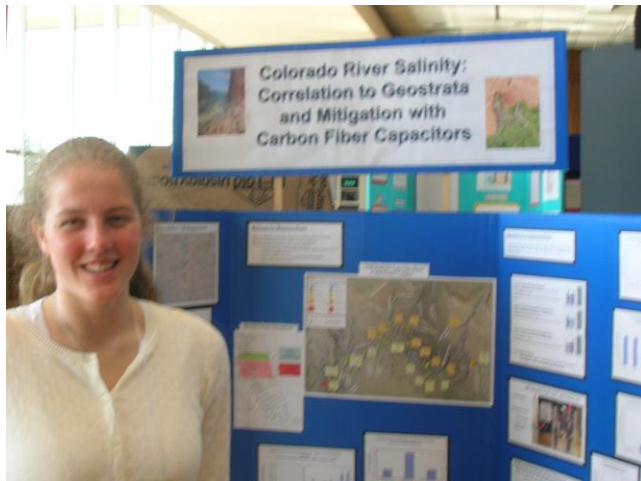
To read the remainder of Danny Edelson’s article on “The Importance of Innovation in Teaching”, visit <http://www.esri.com/news/arcnews/winter0910articles/the-importance-of.html>

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## Good Science!

Among the work of students at the Colorado Science and Engineering Fair in early April (<http://www.csef.colostate.edu/>), several projects were identified that incorporated excellent scientific approach, outstanding creativity, and application of geography. The Colorado Geographic Alliance offers two prizes at the state level each year for students incorporating geography into the science fair projects.

In the junior division, Adam Hofinga (Otis Junior/Senior High School student) explored the dispersal of tumbleweeds based on wind and natural barriers. To find his tumbleweeds once they were released, he incorporated manual searching, tags on each tumbleweed asking for anyone who found it to email him, and a local newspaper article describing his project and asking residents to be on the lookout for neon-colored tumbleweeds. He got high scores in both creativity and application of geography for his analysis of the conditions that helped or hindered the dispersal of the tumbleweeds. The furthest distance a tumbleweed was recovered from a release point was 13 miles. When asked if this was an experiment he would modify and run again, Adam said, "You know, it is really cold chasing tumbleweeds across fields in November and December."



Fairview High School student Tanya Petach's experiment centered on measuring salinity in the Colorado River at various points in a series of raft trips through the Grand Canyon. She then extended the analysis to include an estimate for the most efficient way to remove excess salts, computing the cubic volume of various filters necessary to mitigate the run-off. What was most surprising about the results? She commented, "I had expected that human contributions to the run-off from the South Rim to be the largest source of excess salinity. In fact, the geologic strata had the largest impact in each tributary."

Congratulations to Adam and Tanya for their excellent efforts. And thank you to FedEx Engineer Chuck Theobald for taking on the task of judging these projects in Fort Collins.

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## International Network for Teaching and Learning Geography in Higher Education

Three geographers from Colorado joined sixty professors and graduate students from around the globe – including Australia, South Korea, Latvia, and Ireland – to discuss critical reflection on learning and teaching of geography as part of the 2010 annual meeting of the Association of American Geographers in Washington DC in April. Associate Professor Paul Sutton of the University of Denver, Professor (and former COGA coordinator) Phil Klein of University of Northern Colorado, and Assistant Professor Rebecca Theobald at the University of Colorado at Colorado Springs discussed topics ranging from the employability of geographers to

reassessing the curriculum, to developing international collaborations. This group of people is interested in how geography is being taught at the university level, recognizing implications for the experience of pre-service elementary and secondary teachers as well as for the next generation of geographers.

<http://www.geog.canterbury.ac.nz/inlt/>

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## History Day

History and geography have the tendency to cross paths. In recognition of this confluence, COGA rewards students who participate in History Day State Competition (<http://www.coloradohistoryday.org/>) with two prizes of \$100 each for the Best Use of Geography in a History Day Project. On May 1<sup>st</sup> at the University of Colorado at Denver, Sarah Bergman and Sadie Van Vranken of the Denver School of the Arts won the Junior prize (6-8 grade) for their group exhibit titled *Follow to Freedom: The Underground Railroad*. They did a great job of using maps and linking the Underground Railroad to other events around the world. In the Senior division (9-12 grade), Matt Fouracre from La Junta High School received the prize for his documentary *Communism: The Political Innovation that Defined the 20<sup>th</sup> Century*. He discussed how communism changed as it moved around the Earth. Everyone who was considered for this prize did an admirable job. We encourage students to think about incorporating geography into their History Day projects for next year's competition and applying on the history day website to be considered for this prize. Thanks to COGA Coordinator Steve Jennings for judging this competition.

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## What is happening with the new state academic standards and assessments?



For the latest information, visit

[http://www.cde.state.co.us/cdeassess/index\\_osa.html](http://www.cde.state.co.us/cdeassess/index_osa.html). The CDE website says:

“The Office of Standards, Assessments and Research & Evaluation analyzes the student performance results of the state assessments (CSAP, CSAP-A, CELApro, CO ACT, NAEP). Additionally, this office reviews the Colorado Academic Standards and the current research in both content and pedagogy most effective in helping students and teachers achieve better classroom results. Public conversations and information sessions are conducted with schools, higher education, school boards, policy makers, and the media.”

If you are looking for additional perspective on the standards implementation project, know that state content specialists are working diligently to keep everyone informed through Standards ‘eUpdates’. You may subscribe by visiting <http://www.surveymonkey.com/s/standardsupdateregistration>. When you sign up for eUpdates, you can also sign up to receive content specific updates for the arts, literacy, math, science and social studies.

In partnership with educational leaders from across the state, CDE recently posted standards crosswalk documents. These documents are designed as working tools to compare the previous Model Content Standards to the revised Colorado Academic Standards. The crosswalks can be found at: <http://www.cde.state.co.us/cdeassess/UAS/StandardsImplementation.html>.

The revision of the assessment process is still underway. Look for more details on that later in the year.

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## Take Your Students Outside

Colorado Geographic Alliance global positioning system units have been out and about in the state of Colorado this spring. Not only do participants in COGA workshops get to brush up on their skills, but schools and nonprofit organizations may borrow the units for up to three weeks to use them for educational activities. Brian Brown writes, “Sixth graders from Conrad Ball Middle School recently had the opportunity to learn and have some outdoor fun while using GPS units from COGA. Each class spent a few days learning about the units and how to use them to navigate and mark waypoints. Then groups from each class wrote a “Waypoint Scavenger Hunt” for groups in other classes to follow. Students enjoyed getting outside even though one of the days was quite blustery. They also had a great time learning about and using a new tool.”



Students at Conrad Ball Middle School, Loveland

Lisa Berglund reports that “Gilpin County 4-H kids and leaders met for a 1/2 day GPS Fun Day. Using the COGA’s GPS units, they spent about an hour discovering fundamentals and then headed into the woods to locate 3 waypoints and return for hot cocoa and follow-up. During their trek, members were rewarded for finding their locations with caches of ‘treasure’! They are currently making plans for the next high altitude GPS Adventure. Thanks COGA!”

Through a generous grant from *GIS Colorado*, an organization of GIS professionals, the Colorado Geographic Alliance has purchased a loaner set of eleven eTrex GPS units. We have outfitted the GPS units with rechargeable batteries, battery chargers, and download cables. Depending on your needs, and the demand for the units, we will make loans of the units for one to two weeks. All we ask is that you cover the cost of sending the units to and from your school and provide us with a brief description of how you incorporated the units into your lesson plan. Email us as [coga@uccs.edu](mailto:coga@uccs.edu) to reserve your time.

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## Blueprint Needed for Geography Education, AAG Newsletter, April 2010

On March 13, the Obama Administration released its “blueprint for revising the Elementary and Secondary Education Act (ESEA),” also commonly known as No Child Left Behind. The ESEA was last reauthorized in 2002. The law has been due for Congressional renewal since 2007, but political clashes have prevented action until now. With the debate over healthcare reform – which has been sucking all of the oxygen out of political Washington – finally over, the Administration has started to turn focus to other policy issues – and the ESEA is near the top of the list. ... Our biggest concern is that geography is the only “core academic subject” identified within the law that does not receive a specific funding allocation or implementing programs to further teaching of geography at the K-12 level (see Richardson, “Federal Funding for Geography Education?,” AAG Newsletter, June 2002). AAG staff and members have been working with individual members of Congress as well as the leadership of the Senate Committee on Health, Education, Labor, and Pensions (HELP) and the House Committee on Education and Labor for several years now to respond to their requests for information, and we have gained some traction.

To read the rest of the article follow the link below:

[http://www.uccs.edu/~coga/documents/pdfs/Meridian\\_April%202010\\_BlueprintGeographyEducation.pdf](http://www.uccs.edu/~coga/documents/pdfs/Meridian_April%202010_BlueprintGeographyEducation.pdf).



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## Giant Maps Available for Your School or District!



When the Giant Map of North America visited Colorado Springs in September of 2009, one volunteer during display at a community center observed “No one seems to think of Geography as a “school” activity when you are in your stocking-feet on a giant map. While the appeal of physical geography is that the features appear on the map (lakes, mountains, landforms, states and capitals), with smaller groups or older kids, we could ask more thoughtful questions. "Why is Hawaii way over there? What does it mean that mapmakers

have to compromise?" When a five-year-old at a festival that includes a bounce-castle and cupcakes says the best thing he did there was play on the giant map, you really have something!"

If you are interested in reserving a giant map from National Geographic, please visit the website for details: [www.nationalgeographic.com/giantmaps](http://www.nationalgeographic.com/giantmaps). Then check with the Colorado Geographic Alliance to see how we might help you finance this event. Email the coordinators at [coga@uccs.edu](mailto:coga@uccs.edu). For more details about the map’s visit in Colorado Springs, see a power point at [http://www.uccs.edu/~coga/news\\_events.html](http://www.uccs.edu/~coga/news_events.html).

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## Check out the Curriculum Page on the COGA Website

<http://www.uccs.edu/~coga/curriculum/curriculum.html>

Several lessons developed through workshops have been added to the list of available lesson plans, but we are always looking for more ideas and sample lessons. If you have a particularly exciting idea or example, please contact the coordinators to share your concepts.

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