

Summer Institute  
June 26-June 30

### **“Two Views of Wyoming”**

GOOGLE EARTH is hot...don't you want to know what the satellite imagery represents on the Earth's surface. The summer institute will examine satellite imagery and then go into the field to observe what it looks like on the ground. Following the Wyoming standards for science, math, and social science, the institute will demonstrate ways to incorporate satellite imagery into the classroom. This workshop will be co-sponsored by the National Geographic Society and the UW Planetary and Space Science Center using imagery supplied by NASA. The five-day workshop will be housed in Laramie with field trips to select sites demonstrating satellite imagery of the natural environment, agriculture, resource extraction, and urban-rural development. Basic instruction will focus on: the different types of satellite imagery, how to obtain the imagery, interpretation of either computer or printed images, and classroom materials and exercises following the standards. Scholarships will partially support housing, food, supplies, three graduate-level credit hours and field travel. The cost is \$325. Application deadline is **May 15, 2006**.

The application is on page of this newsletter.

# **GEOWNews**

**Wyoming Geographic  
Alliance  
Volume 16, Issue 1  
Spring 2006**

**2006 Geography Bee  
March 31st  
Laramie, WY**

It's coming up at the end of March- Wyoming will know who the State Geography Bee winner is for 2006. Letters will soon go out to participants selected by National Geographic Society. Students selected were given a written exam scored by NGS personnel. Each participant will receive a congratulatory letter along with a postcard, and this postcard should be returned indicating whether that student will be attending the State Geography Bee competition.

Every year, some of the students participating are repeat school bee winners. Last year, there were twelve returning students out of 85 competitors. The eventual winner was Jamie Mothersbaugh, Park Elementary, Casper, who then competed at the National Geography Bee in Washington, D.C.

Dave Walsh, (The Voice of the Cowboys) will again be the moderating the finals for the Wyoming State Geography Bee at the Trans-Lux Theater that is off-campus. The corporate sponsor for the 2006 Geography Bee competition is JPMorgan Chase & Co. JPM is a leading global financial firm with operations in more than 50 countries.

## **The Benefits of Geographic Literacy**

*“To solve most of the major problems facing our country today -- from wiping out terrorism to minimizing global environmental problems to eliminating the scourge of AIDS -- will require every young person to learn more about other regions, cultures, and languages.”* Former Secretary of State Colin Powell, *Phi Delta Kappan*, November 2004

*“Without geography, knowledge about the earth is fragmented and unsatisfactory.”*  
R. J. Johnson, Professor,  
University of Bristol

## **Job and Career Opportunities**

- Geography provides training in geospatial technologies (remote sensing, geographic information systems, etc.). This high-growth industry is expected to reach \$30 billion in annual revenues by the end of 2005, up from \$5 billion in 2002, and continuing to grow (*Nature*, January 2004).
- Geospatial technologies are one of the three biggest emerging fields identified by the Department of Labor, and they are providing 75,000 new job hires per year (U.S. Dept. of Labor, Employment and Training Administration, 2004).
- Geographic training provides

essential preparation for market researchers, location analysts, and other experts who determine optimum business locations and markets (Association of American Geographers website, 2005).

## **The Real-World Relevance of Geography Education**

- Integration of geography and literacy in elementary school instruction improves student achievement in literacy as demonstrated on a randomized control trial. Statistically significant results showed an average of 5 percentage points greater learning (*What works in Geography Education*, 2005).
- Integration of geography and math in elementary school instruction improves student achievement in math as demonstrated in a matched comparison group study. (*What Works in Geography Education*, 2005).

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# Advanced Placement Human Geography

The Wyoming Geographic Alliance is very interested in the topic of advanced placement with human geography. Following is an introduction to this topic with additional information.

## Introduction

The Advanced Placement Program offers a course and exam in Human Geography to qualified students who wish to complete studies in secondary school equivalent to an introductory college course in human geography. The exam presumes at least one semester of college-level preparation.

Advanced Placement is administered by the College Board and the Educational Testing Service. Reading of the AP Human Geography exams takes place at Clemson University in June of every year.

## The Course

An introductory college course in human geography is generally one semester in length, with some variation among colleges. An AP Human Geography course need not follow any specific college course curriculum. Rather, the aim of an AP course is to provide the student with a learning experience equivalent to that obtained in most college introductory human geography courses.

## Purpose

The purpose of the AP Human Geography course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organizations and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice.

## Goals

The particular topics studies in an AP Human Geography course should be judged in light of the following five college-level goals that build on the National Geography Standards developed in 1994. On successful completion of the course, students should have developed skills that enable them to:

- *Use and think about maps and spatial data.* Geography is concerned with the ways in which patterns on Earth's surface reflect and influence physical and human processes.
- *Understand and interpret the implications of associations among phenomena in places.* Geography looks at the world from a spatial perspective, seeking to understand the changing spatial organization and material character of Earth's surface.
- *Recognize and interpret at different scales the relationships among patterns and processes.* Geographical analysis requires a sensitivity to scale, not just as spatial category but as a framework for understanding how events and processes at different scales influence one another.
- *Define regions and evaluate the regionalization process.* Geography is concerned not simply with describing patterns but with analyzing how they came about and what they mean.
- *Characterize and analyze changing interconnections among places.*

(Continued on

(From Page 3)

At the heart of a geographical perspective is a concern with the ways in which events and processes operating in one place can influence those operating at other places.

### **Teaching the Course**

AP classes require extra time on the part of the teacher for preparation, individual consultation with students, and the reading of a much larger number of assignments than would normally be given to students in regular classes. Accordingly, the AP Human Geography Development Committee strongly urges that any teacher offering such a class be assigned reduced teaching hours. To facilitate the teaching and learning of human geography, the committee also suggest schools enrich the map collection and resources materials available to teachers and students in classrooms and libraries.

Although many schools are able to establish AP courses, some schools with fewer candidates offer qualified students tutorial work associated with a regular course or a program of independent study.

Gloria Edwards of Cheyenne Central High School is the key person in Wyoming regarding AP Human Geography. She was trained at James Madison University under the supervision of the Virginia Geographic Alliance with instructors, Judy Miller and Joe Eney.

WGA is interested in creating more interest in AP Geography with Wyoming secondary teachers. Two methods being investigated are online-instruction for AP students or out-of-state training for teachers funded by WGA. Get in touch with Sherry at 1-888-831-7794 or e-mail [wga@uwyo.edu](mailto:wga@uwyo.edu) to indicate your interest in this fascinating topic.

## **Globe at Night**

### **Get Out and Observe the Night Sky**

**March 22-29, 2006**

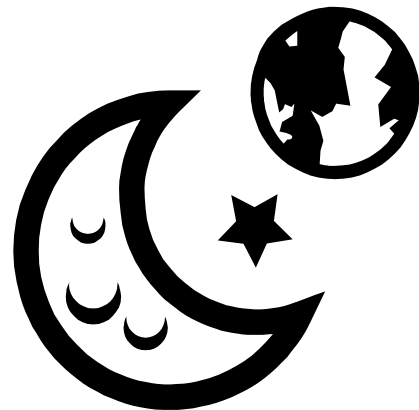
Engage students worldwide in observing the nighttime sky

Encourage citizen and family science with a hands-on learning activity outside of the classroom.

Gather light pollution data from an international perspective

Help us reach our goal of 5000 observations across the globe

[Www.globe.gov/globeatnight](http://www.globe.gov/globeatnight)



USGS: Science for a Changing World

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Registration for the following GIS/GPS/  
Remote Sensing summer event is now  
available online!

SUMMER RESIDENTIAL INSTITUTE in  
the ROCKIES  
20 mi NW of Boulder in Jamestown CO  
29 July - 3 August 2006

Learn GIS, GPS, and Field Studies on a  
1,000 acre camp in the beautiful Colorado  
front range. \$995 includes room, board,  
accommodations and three books of  
curriculum. Audience: 6 –16 grade science,  
environmental, social studies, math &  
technology educators. Great introduction to  
GIS use in your curriculum! Thorough and  
special topics approach to meet the needs of  
all levels of users. Grad Credit available.

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For more information on these and other  
institutes, contact Anita Palmer at  
anita@gisetc.com or register at www.gisetc.  
com/training\_reg.html

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**2006 NCSS Conference**  
**Washington, DC Dec. 1,2 and 3**

In 2006, the Annual Conference will again  
be held in our nation's capital. For more  
information:  
www.socialstudies.org/conference

The NCSS Conference will be held inside the  
Washington Convention Center. It is  
located in the heart of DC, and is a few short  
steps from museums , great restaurants and  
attractions.

## Inspiring Conservation

Make plans now to attend the 91st  
Annual Meeting of the

## National Council for Geographic Education (NCGE)

### Field Trips:

- Around Lake Tahoe Tour
- Virginia City, Nevada
- Donner Pass & the Emigrant Trail
- Kayak Emerald Bay on Lake Tahoe
- Local High School GIS Programs
- Hike to Fallen Leaf Lake
- Learn blackjack and more in Harvey's  
Casino

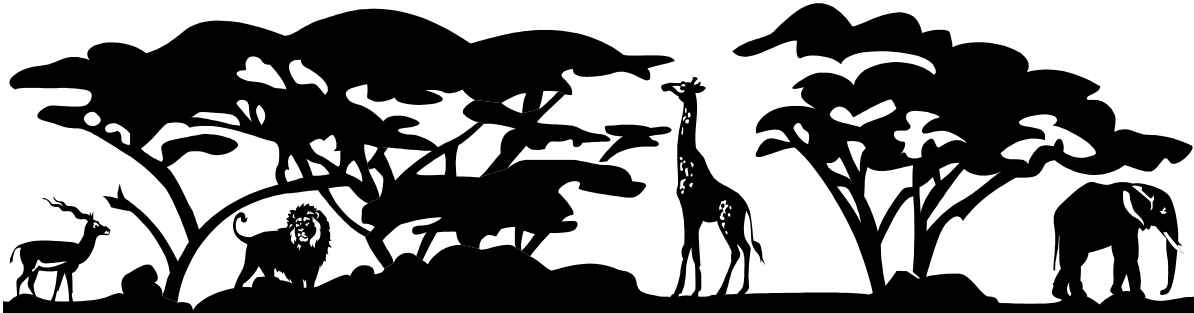
**October 5-8, 2006**

### Lake Tahoe

### Harvey's Resort & Casino

Central Reservations at 1-800-455-4770.  
Use group code: S10NFG.  
Hotel rates \$109 and \$129





## **AFRICA**

Explore one of the most diverse continents on the planet:  
**AFRICA!!**

From its spectacular landscapes to its unique wildlife  
To its varied, rich cultures—  
Africa's natural and human history affects the world.

### **National Geographic Society**

For more than a century, the National Geographic Society has fostered awareness of the world's diverse cultures and environments. The tradition continues with

### **Geography Action!**

This annual conservation and awareness program designed to educate and excite people about our natural, cultural, and historic treasures.

**The Geography Action! Community is at  
[ngsednet.org/ga](http://ngsednet.org/ga)**

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Genographic is a research partnership between National Geographic and IBM, with field science support by the Waitt Family Foundation, is analyzing DNA contributed by hundreds of thousands of people to map how Earth was populated.

[nationalgeographic.com/genographic](http://nationalgeographic.com/genographic)

This is fascinating!

# Earthcaching: K-12 Schools NGS Education Foundation Project

Earthcaching is a program being undertaken by the Geological Society of America (GSA) and its partners including the National Park Service (NPS), Forest Service (FS), Bureau of Land Management (BLM), USGS, Subaru America and Leave No Trace

*The purpose of this project is to test the potential use of Earthcaching as a teaching tool to raise geographic literacy in school students.*

The following questions need to be addressed:

1. Where does Earthcaching fit into school curriculum-both subject and level, and variations across states?
2. What classroom materials (teacher guides, student materials, equipment) are most appropriate for the introduction of Earthcaching?
3. How responsive are teachers to Earthcaching as a teaching tool (what is the potential demand)?
4. Do students increase their geographic literacy through using Earthcaching?

## **Proposed project plan**

- A. Undertake an audit of school curriculum at the national and state level to map the potential use of Earthcaching in disciplines and year level. (Q1)
- B. Conduct a needs assessment through focus groups with master teachers in order to get a sense of the appropriate grade levels, disciplines, and format of the Earthcaching lessons. (Q2,Q3)
- C. Co-develop with master teachers sample materials/kits and train pilot-test teachers in using the materials. (Q2,

Q3, Q4)

- D. Conduct a formative and summative assessment of the Earthcaching lessons through a teacher survey, teacher interviews, a student pre-post skill and interest assessment, a site observation, and focus group with a sample of students. (Q4)
- E. Compile a report outlining results, recommendations and possible future directions.

## **Future Program**

Obtaining this information will assist GSA and its partners to seek and obtain some longer term funding for Earthcaching.

A future program would need to be staged over three to five years and include:

- Modification of the teaching materials to address issues
- Development of additional GPS kits for schools
- Comprehensive teacher training
- Development of a student award system
- Ongoing evaluation of the program to ensure its fulfilling its aims

Ira Roadifer of the Veterans' Home is working with the residents on Earthcaching. This group is providing prizes and clues for many children participating at the Johnson County Y.M.C.A under the supervision of T.J. Tavegie.

