

National Association of Geoscience Teachers 2010 Annual Report

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President's Report

Mike Taber

My activities from October 2009 to October 2010 focused on the following major areas:

- Building new Collaborations
- Transitioning JGE to AIP online delivery
- Conducting business matters for NAGT
- Serving on two advisory boards on behalf of NAGT

As Vice President, I attended the GSA annual meeting in Portland, Oregon in October 2009. My activities as President really began in earnest during November, when I met with Senator's Bennett and Udall from Colorado and with Andrea Beard from the Department of Education (program officer for teacher preparation). These meetings were partly reconnaissance and partly ambassadorial. I spoke with the Senators about the importance of ensuring funding for teacher preparation, particularly in the preparation of geoscience educators. I mentioned the erosion of geoscience departments as Universities look to budget cuts. Both Senators agreed that geoscience education was important, as President Obama moved forward with his energy policies.

I also met with Dr. McNutt, the new USGS Director. Dr. McNutt was well aware of the USGS-NAGT Cooperative Field Training Program. We discussed strategies of how we could enhance the program to include more minority representation, as well as more opportunities for regional field training programs that expand beyond the summer experience. I hope to continue this conversation with her (and Bob Ridky) in the upcoming year.

Much of my NAGT business efforts, besides conducting three virtual meetings and the annual Spring budget meeting, as dedicated to working with the JGE editors, the Executive Director, and the Treasurer on obtaining bids for online JGE and working with AIP to deliver Online JGE.

Throughout the year, I wrote numerous letters of support for NSF and DOE proposals, including

- On the Cutting Edge: A Community Resource Transforming Geoscience Education (funded),
- Collaborative Research: Type II Web-based Interactive Landform Simulation Model (WILSIM),
- CCEP Phase 1 proposal: Exploring Midwestern Urban Climate Mitigation Scenarios for Fun, Understanding, and Action,
- Project Kaleidoscope (funded), and
- Real World Guide.

I am looking forward to the collaboration between NAGT and the funded and (hopefully) funded projects.

In early May, I attended the European Geosciences Union Annual meeting. My intent was to again conduct some reconnaissance, but then engage in conversations with International Geoscience Education Colleagues. I attended a forum discussion on "building collaborations,"

which was lightly attended, but quite informative. There seems to be a strong desire among Australian and German colleagues to build similar collaborative models, many of which are part of the NAGT sponsored programs.

Finally, as NAGT's President, I sit on two important geoscience Advisory Boards: Cutting Edge and the Climate Literacy and Energy Awareness Network (CLEAN) Pathways; both are NAGT sponsored programs.

Vice-President's Annual Report

Janis Treworgy

My NAGT activities this year have included attendance at the October 2009 GSA Meeting in Portland and the NAGT Annual Executive Council Meeting and many related meetings held in conjunction with that. I also attended the Midyear NAGT Executive Council Meeting in March 2010 in Salt Lake City, UT. I participated in two virtual meetings (teleconferences) of the Executive Council between in-person meetings.

NAGT Representative to GSA Associated Societies

As the liaison to the GSA Associated Societies I attended their meetings in Portland and in Denver in March 2010. It was an opportunity to discuss how the Associated Societies can work more closely with GSA and GSA can better serve the societies. We also discussed challenges facing our various societies. Discussions focused on how to retain and grow membership by focusing on the value of the membership – what a member gets. This is a challenge for societies, like NAGT, who are shifting their publication to a more accessible on-line format. We also discussed the importance of mentoring young scientists in our organizations, giving them significant roles on boards and committees, and listening to them. This is especially helpful as we develop ways to communicate about our organizations – designing web sites, etc.

Community Colleges and Other Lone Rangers

As the only faculty member at my college, I am interested in building a support network among “lone rangers” within the NAGT membership. This year at GSA in Portland Laura Guertin and I co-convended a session entitled “Teaching and Research Challenges and Successes for Solitary Geologists in Academia.” Heather Macdonald kicked off the session with a talk summarizing some of the issues faced by solitary geologists. We had a full half-day program of speakers, and a reasonably sized audience. The speakers and others in attendance were delighted to have a forum for sharing ideas and concerns about teaching as the lone geologist in their institution. We collected names and contact information of 41 people.

We are convening another theme session on undergraduate research for this same target group at the Denver GSA 2010: T50. Undergraduate Student Research with Solitary Geoscience Faculty. There is also at least one session for community college faculty. This group of faculty, solitary faculty and community college faculty, is a group that we (NAGT) are beginning to try to serve more specifically. I welcome ideas on how NAGT can better serve this group of members.

Other GSA Activity

I am co-convending a session at GSA in Denver on teacher research and instruction abroad: T48. Teacher Research and Instruction Abroad: A Pathway to Improved Geoscience Education. I have taken students (non-majors) to Mongolia to teach them geology in the field while they are immersed in another culture.

Liaison to Central Section of NAGT

I continue to keep in touch with the officers of the Central Section of NAGT. They are continuing as an active section, needing little guidance on my part. One issue they are working

on is better defining the role of the state representatives. Ideas on this from other sections would be welcome. Here is my report in their newsletter:

**Report from NAGT
Executive Committee Liaison**

The Executive Committee of NAGT has just had its mid-year meeting in conjunction with the NAGT Southwest Section's field conference in Salt Lake City. I continue to be impressed with the leadership of this Executive Committee and its Executive Director, Cathy Manduca.

Beginning in January of next year, under the guidance of the co-editors of The Journal of Geoscience Education, Julie Libarkin and Joe Elkins, we are moving the journal to a subscription-based on-line version with the long-term goal of going to an open-access on-line journal. We will continue to make the journal available in print, but at an additional charge. Many members have expressed support of this transition, welcoming the opportunity to download a pdf of their favorite article, as well as saving shelf space and saving trees. We have been using an electronic manuscript review system for about a year. This has worked well for authors, reviewers, and the editors. Please feel free to give me your thoughts about these changes. We want to hear from our members.

As we move toward an open-access journal, we will necessarily be decoupling membership from a journal subscription. We want to maintain the value of a membership. One idea is to expand our recently revamped e-newsletter, available only to members, to include columns, reviews, teaching activities, and possibly summaries of articles in JGE or select articles reprinted from JGE. We welcome your ideas about this and other means of adding value to a membership.

Financially we are operating in the black, and our endowment has weathered the financial crisis in excellent fashion, having returned to its value before the market began to drop.

Finally I would like to report that the association considers Central Section to be one of their most active sections and a model for other sections. Congratulations! Your program for the North-Central GSA meeting in Branson, MO, is outstanding. Keep up the good work.

Janis Treworgy
Vice President, NAGT
Liaison to Central Section

Elizabeth Wright, 2nd VP
Annual Report, 2010

Meetings

I attended 2009 Fall GSA as incoming 2nd VP, including NAGT Executive Committee/Council meetings, the NAGT/GED Educators Luncheon and Awards Ceremony, and the Geoscience Educators Reception. I also participated in the ExComm midyear meeting in Salt Lake City, and the field trip before it. I participated in virtual meetings for ExComm and In the Trenches planning.

Joint Technical Program Committee

In January I worked with Paul Baldauf from the Geoscience Education Division of GSA and those proposing geoscience education-themed sessions for the 2010 GSA Annual Meeting to identify sponsorship, as a member of the JTTC. NAGT ended up sponsoring 15 topical session proposals, three courses.

In the final meeting program, NAGT co-sponsored some 14 topical sessions, two disciplinary oral sessions and one disciplinary poster session. Paul and I will be chairing one of the disciplinary sessions, *Cognition and Learning in the Geosciences* at the Fall Meeting. We also identified and invited session chairs for the other disciplinary oral session.

NAGT Past President

David Steer

My duties as Past President for NAGT centered primarily on duties associated with organizing the Distinguished Lecturer slate and preparing to launch a new NAGT publication. The new Distinguished Speakers add expertise in areas of on-line teaching, teaching and learning in large classes and geocognition. More recently, I began work on the new publication called *In the Trenches* that we plan to launch in 2011. The purpose of this publication is to provide a forum for description and dissemination of teaching-related content directly relevant to practicing K-16 teachers. For instance, we plan to include a 2-3 page feature article of broad interest, several recurring columns related to more specific audiences (e.g. K-12, field-based, large class settings) and other features such as commentaries and letters to the editor that presently do not have an outlet. I also continued my editorship of the recently launched NAGT e-News that is expected to transition to a more time-sensitive document with some of the existing content appearing in *In the Trenches*. As part of my duties, I participated in ESS perception and teacher preparation working groups that were organized during that summit organized by the American Geological Institute. Separately, I continued work on the update and development of the NAGT strategic plan. Other duties on behalf of NAGT included chairing the nominating committee, participating in quarterly NAGT virtual meetings, providing input regarding NAGT and JGE web-based developments and organizing a Cutting Edge workshop for the joint North-Central/South Central GSA meeting. Lastly, though not directly and NAGT responsibility, I became a representative on the Ohio science standards development and review committee. In that capacity I have had the chance to champion NAGT goals and objectives in a state where core values of science education have recently been under attack.

Executive Director's Office Report October Annual Meeting 2010 Cathy Manduca

In the period since our spring meeting, the Executive Director's office has focused on

- Putting new JGE publishing contracts in place to enable on-line subscriptions and streamline print publication, mailing, and backorder management
- Putting contracts and processes in place to support publication of *In the Trenches* as a quarterly print magazine while continuing to support E-News.
- Supporting collaborations with AGI particularly around *Living with Earth* and the Education Summit and initiating collaborations with AGU
- Supporting discussion and comment of the NRC 'Conceptual Framework for New Science Education Standards' document
- Ongoing support for programs and society operations

In addition, Cathy represented NAGT at the IGEO meeting in Johannesburg attending the organizational meeting and staffing a booth; and addressed the opening of the Trail of Time at the Grand Canyon on NAGT's behalf.

Jon and Linda have now been through a calendar year in the Executive Director's office and I am happy with the way they are working together, with John and with me. One of the best things is that they frequently have things organized before I ask for help. Linda has taken the bulk of work supporting the Ex Comm and NAGT programs. Jon is doing the bookkeeping and managing things like obtaining new mailing permits, handling back issue requests, managing requests for information about the society, journal or copyright. Most regularly occurring events are now being managed in a routine way. We just completed an update to the archive based on our record keeping policy. This included documents from the end of Bob Christman's term as executive director to the present date.

We identify these areas as needing more attention in management this year

- Awards – we need clear identification of responsibilities and a schedule that we can stick to that ensures that awardees and nominators are contacted in a timely fashion. Then we will need a routine that allows the office to gracefully collect materials for the GSA hall of fame and luncheon brochure in a timely fashion.
- Communication of organizational news to sections and committee chairs. – We need a plan for getting minutes, meeting announcements and other news of organizational matters to the section officers and committee chairs.

JGE Publishing Contract: We solicited and received bids from four publishers for JGE. AIP was selected for the contract on the basis of comparable cost and more advanced on-line publishing capability, particularly in the direction of social networking, which is of high interest to the Editors and the Executive Committee. A fee schedule serves as the basis of our contract with AIP. JGE will be published four times per year in February, May, August, and November. We have the style guide in place for the print publication and a time table for producing the journal. AIP is currently working on the design of the on-line version and associated website in consultation with Sean Fox and me. I just reviewed a draft. They will move two years of

backfile onto this site with a launch in January. The backfile references will be linked. This has been a major work effort for the Executive Director's office.

In the Trenches: An editor (David Steer) and a managing editor (Nancy Ashmore) have been named. A story board of the journal is completed that serves as the style guide for the first issue. A theme for the first two issues is established and content is being solicited. Mailing permits and a printer have been secured. E-news was published on a quarterly basis. Many strategies developed for generating e-news content will be transferred to In the Trenches. In addition the regular monthly email announcements will continue.

Collaborations with AGI, AGU, IGEO: We are participating fully in the run out from the Education Summit. Cathy collaborated with Ann Benbow and other committee members on the design and delivery of a survey to collect information on the number and nature of programs preparing Earth Science teachers. This is currently underway by mail. Living with Earth has been published but sales are lower than anticipated. Cathy and Janis are in communication with both AGI and the publisher to see how we can assist in advertising the text. Cathy had an initial conversation with Ann Cairnes, Outreach Director at AGU about collaborations. Pranoti Asher, a former NAGT Councilor is now the Education officer at AGU. IGEO was pleased to hear that we would like to be helpful. No specific action was taken. Most participants in the conference who were publishing research were well aware of JGE and NAGT. There is some interest in a section for India.

Framework Review: NAGT was asked by the National Research Council, Board on Science Education to provide a review of the 'Conceptual Framework for New Science Education Standards.' An on-line discussion and virtual focus group process was completed and comments were submitted in early August. The focus group was managed and the report written by Ellen Iverson in the Executive Directors Office using a protocol provided by the NRC. The NAGT Literacy e-mail list is used for regular updates to members interested in this topic. It has 95 members, who were invited to participate first in online discussion and then in the focus group. The focus group had 10 participants. This issue was used as a test for using specialized email lists and discussion boards to support special interest groups. The email list was a success; the discussion board was little used.

In addition, we are now holding regular virtual meetings of the Ex Comm and special meetings as needed. The Ex Comm met in May (special meeting), June and September.

Recurring Activities:

- Supporting program implementation for Distinguished Speakers, Field Camp, OEST, USGS Internships and Awards.
- Completing the election of new officers, updating new and former officer pages and updating officer e-mail lists
- Organizing activities at GSA including booth, education reception, annual report and officers meetings
- Preparation for, and organization and execution of, virtual and spring officers meetings
- Membership renewal notices

- Acknowledgement letters for donations
- Bookkeeping, bill paying, budgeting for new year, management of finances, and interactions with accountant regarding books and taxes
- Management of community advertisements, JGE page charges and advertisements
- Publication of e-Newsmagazine and management of blast e-mails.
- Addressing requests for JGE back issues and other questions regarding JGE (subscriptions, printing)
- Section support regarding insurance issues and meeting logistics and registration payments, as well as annual section fund dispersals

FY '10 Activities

- Election: The election for the slate of 2010-2011 NAGT officers was held in May 2010.
 - This election, like previous elections, was managed by AIP. All members that have submitted an email address to the AIP database were invited to cast an online ballot. Members without an email address were sent a paper ballot. Members were given a link to a page on the NAGT website where they could view photos and bios of the candidates. A total of 277 members cast a ballot. The election results were posted on the NAGT website.
- Membership Management / AIP services:
 - Membership renewal requests for calendar year 2011 were sent out in early October. The table below compares membership numbers between the previous year-ends and August 31, 2010 (we do not have reliable membership statistics for years proceeding 2006).

Type of Membership	Members number as of 12/31/2007	Members number as of 8/31/2008	Members number as of 8/31/2009	Members number as of 8/31/2010
Regular	1243	1122	1015	921
K-12 Teacher	122	180	193	195
Student	122	131	124	129
Life Member	17	17	17	16
Retired	124	130	122	116
Total	1618	1580	1476	1377

- JGE subscription Statistics:
 - There are a total of 473 subscriptions to the Journal of Geoscience Education as of August 2010. This represents a decline of 5.9% as compared to 410 in August 2009. The renewal rate, comparing August 2010 to December 2009 subscription, data is 92.7%; down from 94.8% for the same period last year.
- Promotion/Advertising
 - Updated the NAGT Membership brochure with the new membership level choices
 - Updated Distinguished Speakers Program brochure: This new brochure has been

mailed to over 1,000 Heads and Chairs of two and four year institutions and will be disseminated at NAGT's GSA'10 booth. The new brochure features the 3 new speakers in addition to the 9 returning speakers.

- NAGT Booth
 - During FY '10 NAGT set up a display booth at the following events
 - GSA: Portland, OR; October 18-21, 2009
 - AGU: San Francisco, CA; December 14-18, 2009
 - NSTA: Philadelphia, PA; March 18-21, 2010
 - IGEO: Johannesburg, South Africa; August 31-Sept 2, 2010

For the year ahead we have plans to set up the booth at GSA, and AGU.

- Preparation for *In the Trenches*
- Establishment of new publishing services and the beginning of the transition to the electronic JGE
- Submission to the Library of Congress or an ISSN for the electronic version of the JGE.
- Application for a Wells Fargo NAGT credit card application to facilitate more efficient bill paying and record keeping
- Renewal of our non-profit status in Washington D.C.
- Clearer and more accurate fund definitions on the donations portion of the website
- Acquisition of a non-profit mailing permit for less expensive bulk mailing for brochures and *In the Trenches*
- Establishment of new membership levels on website, in renewal notices and in the membership brochure
- Completion of project to bring the archives up to date
- Preparation for the adoption of a number of new policies by the Executive Committee

Secretary/Treasurer
Gene Pearson

During the 2009-10 budget year I was involved in the following activities:

Participated in, compiled and posted minutes for the October 17, 2009 Annual Council Meeting and Executive Committee meetings in Portland, Oregon; the January 29, 2010 virtual meeting of the Executive Committee; and the March 20, 2010 Executive Committee midyear meeting in Salt Lake City, Utah; the May 25, 2010 virtual meeting of the Executive Committee meeting; and the June 9, 2010 virtual Meeting of the Executive Committee.

Worked with the Executive Director and the Executive Director's staff on matters pertaining to budget and endowment management.

Worked with the Executive Director on revisions of the NAGT Gift Acceptance, Records Retention, Conflict of Interest, and Suspected Misconduct policies.

NAGT Website and News Report

Fall 2010

John McDaris

The NAGT website continues to receive new content from the organization and membership. In the period from October 1, 2009 to September 30, 2010, the website was used to collect applications for programs, nominations for awards, and teaching activities for using online data streams in the college classroom. The successful eNews Magazine, the NAGTNews emails, and website news have been used effectively to keep the membership informed of important events and opportunities to be involved. The website will continue to have a presence in our membership communications with the roll out of the In the Trenches member publication in early 2011, which will have an online component.

Overall site use saw a 13% increase this period compared to the previous 12 months. For more specific information on accomplishments, work in progress, and specific data on usage, see below.

Accomplishments since March 2010

- Three NAGT e-Newsletter issues: March, June, and September
- Four NAGTNews email issues: April, May, July, October
- Three issues of JGE added to the live website: January, March, May. September issue of JGE has been prepared for posting, but is on hold until the publication of the physical issue. Pending the shift of publication to AIP, the full text of articles is currently available via the website.
- 12 OEST nominations received through the website and forwarded to appropriate Section liaisons.
- 2010-11 Distinguished Speaker Series posted on the website.
- Volcano Exploration Project: Pu'u O'o workshop successfully supported in use of the website to gather teaching activities – July
- Geoscience Teachers in Parks (GTIP) program pages updated with materials from the last several summers' activities. Additions include listing of current and previous interns, a photo gallery, and links to trail guides created by the interns. Plans are underway to contact the current and former interns to solicit submission of teaching activities derived from their experiences with the program.
- New Department Resources page linking to sponsored projects and programmatic resources of interest to Geoscience departments.
- New publications information for the upcoming In the Trenches member publication.

Website Use

From October 1, 2009 to September 30, 2010, the NAGT website received nearly 69,600 visits from more than 40,500 unique users of which some 44% were repeat visitors. The most popular parts of the site for this period (in descending order) were JGE (43% of traffic), Programs (20%), Teaching in the Field (6%), Organization (5%), and VEPP (5%). (NB: All section websites hosted at SERC are part of the Organization area. VEPP is the Volcano Exploration Project: Pu'u O'o' site associated with the workshop that took place in July.)

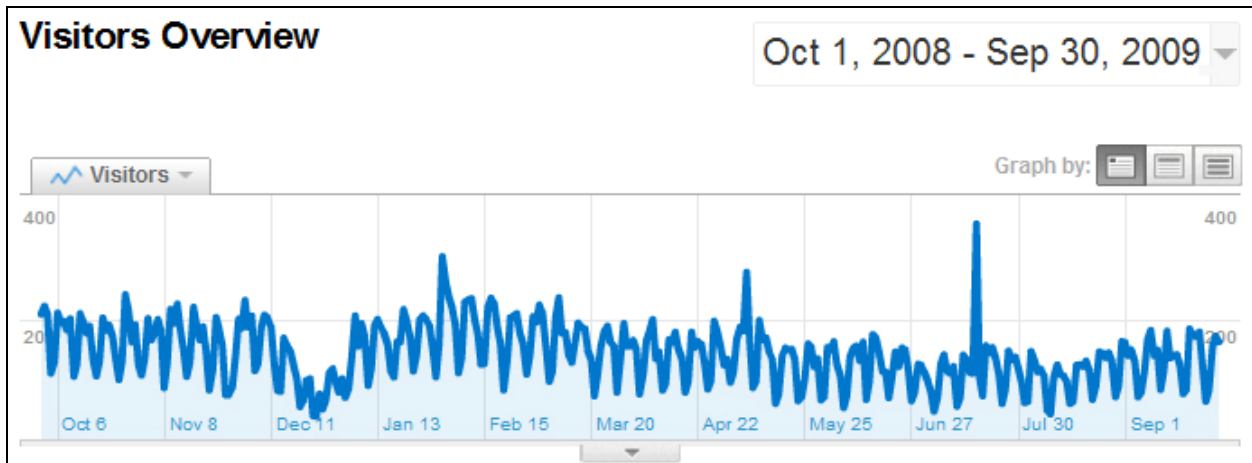
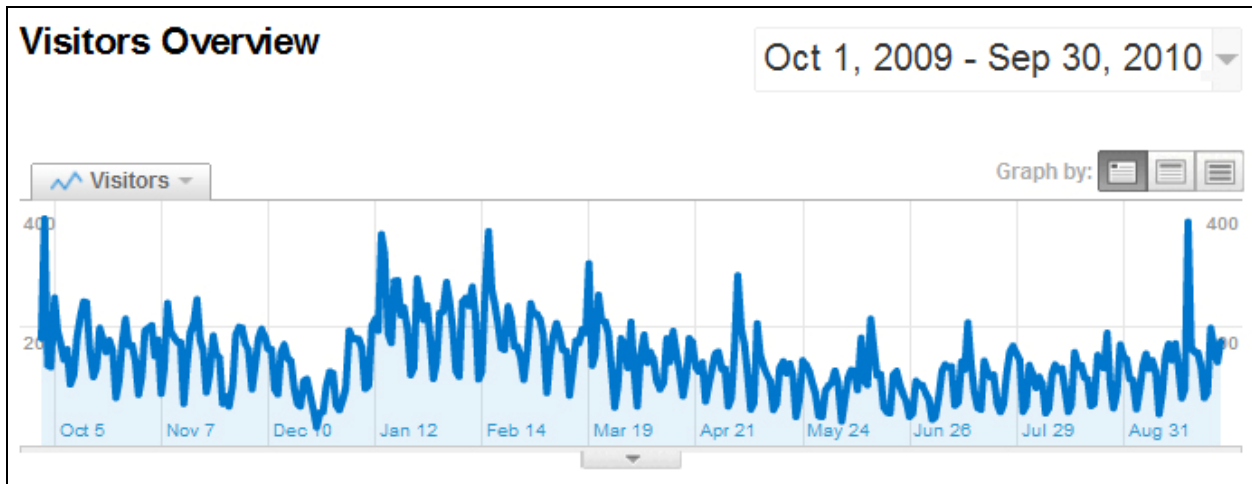
By comparison, during the same interval 2008-09, there were 61,650 visits from 42,750 unique users of which 33% were repeat visitors. The most popular parts of the site were JGE

(57% of traffic), Programs (18%), Organization (6%), Teaching in the Field (6%), and Membership (1%). The reduced percentage of traffic to JGE, year over year, reflects both increased site use overall and a 12000 visit decrease traffic to JGE in the current period.

Though the eNews Magazine webpages have not broken into the top five either this year or last, usage has increased almost 6-fold year over year (1050 unique pageviews in 08-09 compared to 6000 in 09-10). Part of this effect is the differential in the number of issues published in the two time periods (2 in 08-09, 5 in 09-10). The increased use can also be attributed to the increased content in later issues compared to earlier ones. The substantial increase in repeat visitor use of the whole website points to the likely success of the eNews in stimulating return visits by members over the course of time as well as helping to move visitors around to various parts of the website.

Section Website Usage (for those hosted at SERC)

Traffic to the section websites held steady or increased for all sections hosting their sites at SERC with the exception of New England. Pacific Northwest (1250 visits, up 250 from 08-09) and Southwest (520 visits, up 450 from 08-09) increased by the largest margins. New England received 140 visits (down 100 from 08-09). The other sections remained basically steady year over year. As a reminder, the sections who maintain websites at SERC are: Central, New England, North Central, Pacific Northwest, and Southwest.



Councilor's Report

Aida A. Awad

- GSA Annual Meeting, Portland, October 17-21, 2009
 - Attended Executive Committee Meetings
 - Attended NAGT / GSA Education Division Luncheon and Awards
 - Volunteered in NAGT booth
 - Attended GSA Education Committee Business Meeting
 - Met with NESTA president, Michael Passow to discuss his ideas regarding areas where NESTA and NAGT should work collaboratively
 - Co-sponsored poster session: GIS in K-16 Geoscience courses: Constructing knowledge using GIS in Geoscience courses
 - Presented Paper: Investigating Watershed Dynamics in the Classroom
- ESRI EdUC, San Diego, CA, July 2009 – presentation, Teaching Science Content and GIS Skills with My World GIS
- Technology & Learning, NSBA conference, Denver, October 27-30, 2009
 - Presented session on Visual Literacy – focus on geospatial literacy tools and skills
- IETC conference, St. Charles, IL, February 23-26
 - Presented session on geospatial literacy for K-12 teachers – focus on Google Earth My World GIS and ArcGIS Explorer
- ICE conference, St. Charles, IL, February 23-26
 - Presented full day workshop for K-12 teachers on visualization with a half-day focus on integrating geospatial technologies in K-12 classrooms
- Currently serving as a JGE AE – term beginning January 2010
- PBL / Oakton College – Division 1 presentation – PBL implementation in a dual credit Physical Geology classroom
- Teacher Friendly Guides, Museum of the Earth – Midwestern edition advisory panel member
- GLOBE / NWU / National Geographic Fieldscope – Watershed Dynamics teacher professional development provider – February – March 2010
- Attended phone conference meeting, January 2010
- Access Data workshop participant – June 2009 & February 2010
- Currently serving as committee chair for the rewrite of the GSA position statement on the importance of teaching Earth Science
- Established a pilot program for a dual credit Physical Geology course with Oakton College pilot run during the 2009-2010 school year
- Attended mid-year NAGT Executive Committee meeting March 20 – Salt Lake City, UT
- GLOBE Annual Meeting – July-August 2010 – PD provider for National Geographic Fieldscope GIS / Water shed Dynamics project and fieldwork experience day for GLOBE Partners
- NWU Summer Fellowship – June – August 2010 – created new iLabs curriculum focused on student fieldwork and analysis of the environmental condition of their local area, “How Healthy is My Backyard” including ICP-AES heavy metal analysis of student collected water samples

Upcoming:

- T & L / NSBA presentation – October 2010 – Geospatial Literacy in K-12 classrooms
- IETC presentation – November 2010 – Geospatial Literacy in K-12 classrooms
- NEBHE STEM PBL Project – participant on co-op team with Oakton College
- ICE – IL Computing Educators – February 2010 – presenting full day workshop Google Apps for Education, including Google Earth

Thank you for the opportunity to serve NAGT and geoscience educators during the past year. I look forward to continuing to work on NAGT initiatives during the upcoming year.

Councilor's Report

Bob Blodgett

- **GSA Annual Meeting 2009 (Portland, OR)**
 - Attended the NAGT Executive Committee and Council Meetings in Portland, Oregon
 - Attended the NAGT/GSA Education Division Luncheon
 - Worked at the NAGT Exhibit Booth
- **NAGT Executive Committee 2010 Meetings**
 - Attended the mid-year meeting and field trip in Salt Lake City, Utah
 - Participated in the June and September telephone meetings
- **Eastern-Section Liaison**
 - Sent emails introducing myself to all of the NAGT Eastern Section officers
- **2-Year College Initiative**
 - Attended a NSF-sponsored 2-Year College Focus Group at Portland Community College on October 19, 2009
 - Submitted a content outline for a NAGT 2-Year College Web page to the Executive Director
 - Compiled a spreadsheet listing the 57 two-year colleges in Texas that offer geoscience courses for Heather MacDonald's effort to assemble a national database of 2-year college geoscience faculty
 - Represented NAGT at "The Role of Two-year Colleges in Geoscience Education and in Broadening Participation in the Geosciences: A Planning Workshop" held at the Annandale Campus of Northern Virginia Community College on June 24-27, 2010
 - Serving as a leader of a nine-member committee established at the Annandale workshop to organize a permanent 2-year college interest group within NAGT

Councilor at Large
Andy Buddington
Pacific Northwest Liaison

For the year 2010, I participated in the following NAGT-related activities and/or events:

- Attended the mid-year Ex Comm meeting in Salt Lake City
- Participated in quarterly Ex Comm teleconferences
- Worked on Climate Change task force; attempted to create a survey for members regarding climate change education
- Helped organize and execute Pacific Northwest Section Officers election
- Communication with Pac NW Section officers regarding national Ex Comm activities and initiatives
- Submitted to the Pac NW Section newsletter, updates and announcements
- Co-chaired the following NAGT sponsored, GSA sessions:

2009 GSA Portland: *Crisis In The Cryosphere: Impacts of Planetary Meltdown*, #269 Pardee Keynote Symposia.

2010 GSA Denver: *Impacts of Ocean Acidification: The Other CO2 Crisis*, #279, Pardee Keynote Symposia.

2010 GSA Denver: Exposing Myths and Misrepresentations of Climate Change and Evolution Science: Strategies and Case Studies for Geoscientists, Educators, Policy Makers, and the Press, Technical Session #154.

- Contacted & communicated possible “lead article” authors for “*In The Trenches*”.

Councilor's Report

Jeff Knott

Meetings:

- June 2010 – Executive Committee virtual meeting
- September 2010 – Executive Committee virtual meeting

Activities

- Completed revisions to Far Western section scholarship applications with Mike Martin. The revised application emphasizes and prioritizes students who express an interest in a teaching career and eliminates the need for official transcripts and allows for unofficial, computer-generated transcripts.

Councilor-at-Large

Annual Report: Jeff Ryan

Activities of Note:

- **Major NSF Education Grants received:**
 - “USF Robert Noyce Teacher Scholars Program” (NSF Robert Noyce Teacher Scholarships, \$1.2 M)
 - “Coastal Areas Climate Change Education (CACCE) Partnership” (NSF Climate Change Education Partnership Program, Phase 1 Planning grant, \$974,400)

- **Workshops and Outreach Efforts:**
 - “Planning the Future of GeoCyberEducation” (Convened NSF-NSDL funded workshop focused on cyberlearning and cyber-education: Jan 6-8, 2010)
 - “Teaching Geochemistry in the 21st Century Workshop (NAGT/On the Cutting Edge program) June 2010 (associated with the Goldschmidt Conference) – Live demonstration of the remotely operable Electron microprobe system, and presentations on the “MARGINS Data in the Classroom” project
 - CUR Conference, Weber State University - facilitated a workshop on remote instrument usage in the classroom with a live, interactive demonstration of the instrumentation.
 - “Geoinformatics Workshops on Interoperability and Education/Outreach” (September 2010) Presented on the “Planning the Future of GeoCybereducation” workshop I ran in January and participating in discussions.

- **Other Education-related activities:**
 - Program Reviews and Site Visits:
 - Furman University Earth and Environmental Sciences Department,
 - Northern Arizona University (focused on their undergraduate research program development)

- **Presentations at Professional Meetings:**
 - Ryan, J.G. (2010) Facilitating the transition from student to researcher using remotely operable research instruments in lab and class projects. GSA NE/SE Section Meeting, Abstracts with Programs, v. 42, p 75
 - **Joseph, M.** and J.G. Ryan (2010) Metamorphic history and assemblages of matrix rocks in the Cullowhee olistostromal terrane. GSA NE/SE Section Meeting, Abstracts with Programs, v. 42, p. 76
 - Ryan, J.G. (2010) Integrating microbeam instrumentation into the classroom to teach mineralogy and petrology: outcomes. Presented at the 2010 Goldschmidt Conference, Knoxville, TN.
 - Ryan, J.G. (2010) Engaging geoscience majors in research and enticing undergraduates into geoscience degree programs by integrating real rock analysis experiences into geoscience courses: successes and challenges. For the 2010 GSA Annual Meeting, Denver, CO.

President's Report – Eastern Section

Michael J. Smith

President: Michael Smith, Wilmington Friends School, 101 School Road, Wilmington, DE 19803; (302) 543-6379 (H).

Vice-President: Stephen R. Lindberg, Westmont Hilltop High School, 200 Fair Oaks Drive, Johnstown PA 15905; 814-539-7723(H); email <minerlight@atlanticbb.net> [09-12].

Treasurer: Frank Revetta, Dept. of Geology, SUNY Potsdam, Potsdam, NY 13676-2294; 315-267-2289; email <revettfa@potsdam.edu>.

Editor: Martin F. Schmidt, Jr., 2718 Applesseed Rd., Finksburg, MD 21048; (H) 410-526-6685, (W) 410-581-4757; Fax: 410-581-4777; email <mschmidt@umbc.edu>.

Archivist: Jim Hensel, 196 Calvert Blvd., Tonawanda, NY 14150; 716-866-3790; email <henselj@roadrunner.com>.

Past President: Rich Gottfried, Dept. of Science, Frederick Community College, 7932 Opossumtown Pike, Frederick, MD21702; 301-846-2581(W), 540-822-5561(H); email <RGottfried@frederick.edu>.

2nd Vice-President: Deb Hemler, Coordinator of Geoscience Education, Fairmont State University, 1201 Locust Avenue, Fairmont, WV 26554; 304-367-4393; email <dhemler@fairmontstate.edu>.

Secretary: Anne Nall, 1120 Forest Lane, Spring Grove, VA 23881; (H) 757-866-8272; email <banall@earthlink.net>.

Publicity Chairperson: Rich Gottfried; contact info in Past President listing above.

Councilors

(For all, years of office are in brackets; terms begin and end at the spring section meeting.)

Delaware

Conrad Rice, The Charter School of Wilmington, 100 North DuPont Road, Wilmington, Delaware 19807; (W) 302-651-2727x310, (H) 410-398-6507; email <crice@charterschool.org> [08-11].

Maryland

Steven Lev, Dept of Physics & Geoscience, Towson University, 8000 York Rd., Towson, MD 21252; 410-704-2744; email <slev@towson.edu> [08-11].

Rich Gottfried; contact info in Past President listing above [10-13].

New Jersey

Margaret (Missy) Holzer, Chatham High School, 255 Lafayette Ave., Chatham, NJ 07928; (W) 973-635-9075; (H) 732-868-0901; email <mholzer@monmouth.com> [09-12].

Lisa Serfling, 401 Pimlico Way, Mount Laurel, NJ 08054; 856-642-1679 (H); email <lserfling@comcast.net> [08-11].

New York

Renee Aubry, Port Chester HS, Port Chester, NY 10573; (914)934-7952(W), (914)245-9661(H) email <raubry@portchesterschools.org> or <raubry@otunet.com> [09-12].

Don Duggan-Haas, Paleontological Research Institution, 1259 Trumansburg Rd., Ithaca, NY 14850; 607-821-0910; email <dugganhaas@museumoftheearth.org> or <dugganhaas@gmail.com> [10-13].

Ontario No Councilors at present; volunteers welcome.

Pennsylvania

Stephen R. Lindberg, Westmont Hilltop High School, 200 Fair Oaks Drive, Johnstown PA 15905; 814-539-7723(H); email <minerlight@atlanticbb.net> [09-12].

*Second Councilor needed for PA, volunteers welcome.

Virginia

Callan Bentley, Assistant Professor of Geology, Northern Virginia Community College, 8333 Little River Turnpike, Annandale, VA 22003; (W)703-323-3276; email <cbentley@nvcc.edu> [09-12].

Eric J. Pyle, Department of Geology and Environmental Science, James Madison University, MSC 7703, Harrisonburg, VA 22807; 540-568-7115 (W); email <pyleej@jmu.edu> [09-12].

West Virginia

Deb Hemler - see 2nd Vice-President listing given above [09-12].

Debra Rockey, 141 Green Acre Drive, Wellsburg, WV 26070; (304)737-3587 (H), (304)737-2922 (W); email <debrarockey@yahoo.com> [09-12].

Award Chairpersons

- Distinguished Service Award - Steve Lindberg; see Councilor listing given above.
- John Moss Award - Jim Hensel - see Archivist listing given above.
- Outstanding Earth Science Teacher Award - Deb Hemler; see 2nd Vice President listing given above.
- Ralph Digman Award - Steve Lindberg; see Councilor listing given above.
- James O'Connor Memorial Geology Field Course Scholarship - Steve Lindberg; see Councilor listing given above.

Eastern Section NAGT Internet website address:

<http://sites.google.com/site/nagtes>

Annual Activities

Awards

- **Digman Award:** Bill Burton

- **OEST Awardees:**

- **Eastern Section Winner/NY State:** Heather McArdle, Mahopac High School, Mahopac, NY.
- **MD:** Mona Becker, Sykesville Middle School, Sykesville, MD.
- **NJ:** Peter Dorofy, Burlington County Institute of Technology in Medford, New Jersey.
- **PA:** Karen E Aucker, Jersey Shore Area Senior High School, Jersey Shore, PA.
- **WV:** Andrea Anderson, Weir High School, Weirton, WV.

James O'Connor Memorial Field Camp Scholarship

The 2010 recipient of the eastern section field camp scholarship was geology major Frank Karmanocky of the University of Pittsburgh at Johnstown.

Annual Meeting

The Eastern Section convened its annual in Wilmington, Delaware May 20-23, 2010. Situated along the juncture of the eastern Piedmont and the Atlantic Coastal Plain, northern Delaware and southeastern Pennsylvania offered outstanding geology for members of our section and a full range of activities for their families. The meeting began Thursday evening with a social and lecture by Dr. Phil Manning of Manchester, University entitled "Hunting Dinosaurs in the 21st Century". On Friday, Dr. Jane Dmochowski of the University of Pennsylvania led a geology field trip to the Wissahickon Valley and Valley Forge National Park, giving participants an impressive overview of the geology of the Philadelphia region. On Friday evening, at our annual Awards Banquet, Dr. John Madsen, Professor of Geology at the University of Delaware, presented his research in a keynote address entitled: Mapping the Bottom of the Delaware Bay: Sediments at the Forefront of Major Coastal Policy Decisions. Saturday morning will featured workshops on geospatial technology, geologic cross sections, using online weather databases for student research, and mineral studies. In the afternoon, members traveled to Newark, Delaware for tours of the magnificent collection of minerals at the Mineralogical Museum of Delaware and stopped at Iron Hill Museum. Saturday evening featured the annual geoauction and social. The meeting ended on Sunday morning with our annual business meeting.

Future Conference

May 19-22, 2012, University of Pennsylvania, Johnstown, Steve Linberg

NAGT-FWS 2002-2010 Annual Report

Mark Boryta

Officers

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Membership: 243

Conferences

Spring 2009 conference:

Mt. San Antonio College, April 17-19, 2009. Report by Dr. Mario Caputo.

Eleven years later, the Department of Earth Sciences & Astronomy at Mt. San Antonio College (Mt. SAC) hosted another spring field conference in April, 2009 for the Far Western Section of NAGT (FWS-NAGT). Among the sixty-four conferees were students, spouses, engineering and environmental geoscientists, emeritus professors, and high school, college, and university geoscience instructors.

The first day of the conference, Friday, April 17th, opened with a late afternoon workshop, "Teaching College-Level Earth Science to High School Students" prepared and presented by Wendy Van Norden (Harvard-Westlake School) for high school teachers. From 5:00 until 8:00 p.m., all conference attendees were then welcomed with a reception in the new lab science building on the south side of M. SAC campus. Inside, they retrieved their official name tags, conference guidebook, field trip assignments, banquet passes, and general program. They were further able to wander through the 3 open lab classrooms where they socialized with food and refreshments, and gathered souvenir literature and watched demonstrations presented by the Southern California Earthquake Center and W. W. Norton and Wiley and Sons publishers. The

Far Western Section provided a selection of past conference guidebooks for sale and applications for membership in national NAGT. The evening culminated with a tour of the new planetarium and a meeting of current FWS-NAGT officers and conference organizer.

Events on Saturday, April 8th, the main field trip day of the conference, began at 6:00 a.m. in the lab science building with a variety of foods and drinks to eat immediately for breakfast and to pack for lunch to be eaten during the field trips. At 7:30 a.m., vans loaded with field trip registrants departed Mt. SAC for different destinations in the Los Angeles area and vicinity. The five field trips included: 1) Evidence for Tertiary Floodplains, Oceans, & Volcanoes in the Santa Monica Mountains led by Gene Fritsche (emeritus professor of Geology, CSU Northridge), 2) Martian Analogs in the Mojave Desert led by Nathan Bridges (formerly of Jet Propulsion Laboratory, Pasadena), 3) Geology of the Conejo Valley & Western Santa Monica Mountains, Ventura County led by Bill Bilodeau (California Lutheran University), 4) Natural Hazards, Past and Impending, in the Eastern San Gabriel Mountains led by Jon Nourse (California Polytechnic University, Pomona), and 5) Engineering Geology on the Palos Verdes Peninsula led by Ed Steiner (Leighton and Associates, Irvine). When all the field-trippers returned to Mt. SAC at about 5:00 p.m., they followed arrows and signs to the banquet area in elegant Founders Hall, where the office of the college President is located. After stimulating an appetite at the no-host bar, conferees then dined on a sumptuous meal prepared by Wendy Rey, the head Chef of Mt. SAC Dining Services and served in the patio area decorated with a geoscience theme. Following desert, an audience of eager listeners moved into an adjoining conference room to hear Keynote Speaker, Ray Ingersoll (University of California, Los Angeles), share his geologic reconstructions of Southern California through time.

Sunday, April 19th, the final day of the conference was highlighted by morning events which followed another early breakfast in the lab-science building and included 1) a presentation on the Science of Global Warming by JoBea Holt (Al Gore Climate Project) from 9:00 to 10:00, 2) a teacher workshop (including lunch), "When the Classroom Shakes: Strategies for Teaching K-12 Students About Earthquakes in Their Area," prepared and presented by Kris Weaver-Bowman (CSU Fullerton), and Becca Walker and Annie Scott (Mt. SAC) from 10:00 until 2:00, and 3) local field trip, "Walking Tour of the Wildlife Sanctuary at Mt. Antonio College: Biologic, Ecologic, & Geologic Features" led by Kat Sanchez and Dave Muñoz (Mt. SAC) from 10:00 until noon. The spring field conference, 2009 ended officially by 2:00 p.m.

With generous compliments to the organizer from the conference speakers, workshop conveners, field-trip leaders, current president of FWS-NAGT, and veteran attendees of FWS-NAGT field conferences, this conference was considered another success. It netted over \$2000 from the proceeds after expenses. This spring field conference benefited from monetary contributions from: Costco Marketing, Freeman and Company, W. W. Norton, In., Cengage Learning, Mission Geoscience, Inc., Southern California Earthquake Center, and the Mt. SAC Foundation.

Fall 2009 conference: The Far Western Section did not hold a Fall 2009 conference.

Organizer of the scheduled conference was forced to cancel.

Spring 2010 conference: Mt. San Antonio College, April 17-19, 2009. Report by Dr. Mark Boryta.

At the prospect of having an entire year with no conference, it was decided among officers of the section that we could have a “sequel” conference, which in this case would be a re-issue of the Bishop conference of 1009, organized by Mario Caputo. Since Dr. Caputo had just organized the previous conference, I offered to run the Spring 2010 conference. Part of the thinking here was that our conferences have of late been rather complex affairs, perhaps appearing as daunting to would-be organizers, thereby lowering our prospects of luring volunteers. This conference became a no- or low-frills, simple event, modeled somewhat after the Lava Beds conference of August, 2007, organized by the great Conference Master, Garry Hayes. Then at the annual GSA meeting of 2009, I met up with Wendy Van Norden, and a Joint Conference plan was hatched, merging the members of the Far Western Section with the newly-formed California Earth Science Teachers Association.

The conference was based at the Pleasant Valley Campground, although many of the 3-dozen attendees preferred the luxury of various hotels in downtown Bishop. Wendy led about half the participants on a no-holds-barred, no-stone-untuned whirlwind tour of the geological high points of the Owens Valley. Her group began at the world-famous Erik Schat’s Bakery in downtown Bishop and stopped at the Chalfant Quarry Pumice Mine, the tufa towers of Mono Lake, Panum Crater, Casa Diablo Geothermal Power Station, Hot Creek hot springs, Convict Lake, the wondrous Big Pumice roadcut, and Owens George. On Sunday she took her entourage to Crater Mountain, then to the American Perlite Mine, the fault scarp and grave of the victims of the great 1872 Lone Pine Earthquake, Movie Flat Road, Carroll Creek and Owens Lake, Charcoal Kilns, the must-see Fossil Falls and the red cliffs of Red Rock Canyon.

The less physically demanding trip that I led was perhaps equally energetic in the discussions that occurred at each of the stops. While I had borrowed heavily from the excellent field guide provided by the late Raymond “Bud” Burke, first published in the 1998 guidebook, my trip might have been a complete disaster were it not for the willingness of Dee Trent to step in and share some of his vast knowledge of the area. Dee had also helped immensely with my preparations for the trip. We visited the Pine Creek Moraines and outwash at Rovanna, then continued up Pine Creek to the Tungstar Mine, where we looked over tailings as Dee told us the history of the mine. We also took the chance to get up close to the sharp contact between an enormous roof pendant and the intruding granitic magmas. We then proceeded to our own viewing of Big Pumice roadcut, then ventured out to the Hot Creek hot springs. On the return leg we were treated to a view and discussion of Stream Piracy at the south end of Convict Lake, and then we were on to the awe-inspiring “rosette” style columnar jointing of the Bishop Tuff at Owens River Gorge. On Sunday the rest of the southbound geohounds were thrilled to find petroglyphs on the basaltic lava flows that emanated from Crater Mountain; these seemed to predate the 1872 Lone Pine earthquake along whose scarp they are found. More discussions and sample collecting occurred at the Fish Springs cinder cone immediately to the south. We then continued on to the American Perlite Mine and then the scarp of the 1872 quake near Lone Pine; our last stop was at Fossil Falls.

All participants agreed that one can never get enough field experience in and around Bishop! My most sincere thanks to the people who made it possible: Dee Trent and Wendy Van Norden went well beyond the call by bearing with me during my introduction to hosting conferences.

GSA/Cordilleran Section Spring 2010 conference: Anaheim

The Far Western Section was granted a booth by the organizers of the GSA/Cord conference – a whole-hearted THANK YOU to them for allowing us to spread the word about the NAGT and the Far Western Section.

FUTURE CONFERENCES

Fall 2010 conference: Host will be Csu-Fresno, to be held October 8-10.

Spring 2011: Host will be Caltech's Tectonics Observatory, March 25-27; venue will be in the eastern Sierras

Fall 2011 conference: Host will be Copper Mountain College, to be held in and around Joshua Tree NP.

Spring 2011: Host will be El Camino College; venue will be the Mojave Desert, Zzyzx, California

SCHOLARSHIPS

The Far Western Section provides three \$1000 scholarships, which are funded by interest generated from our CD, sales of publications (both online and during conferences) as well as the profit generated by our conferences. The 3 awardees for 2010 are:

Graduate Scholarship

Lucas Moxey, originally from Argentina but now a U.S. citizen, is in the middle of his pH. D. at the University of Hawaii at Manoa. He is using low spatial-resolution thermal images from the GOES satellite to study short timescale changes in the ongoing Kilauea eruption. Lucas graduated from the University of Florida, and has worked with the Goddard Space Center and with NOAA. He has been published twice in the Journal of Science Education and Technology, writing both articles about his field of remote sensing.

Field Camp Scholarship

Jennifer Tarnowski is an undergrad at Cal State Fullerton. According to Jeff Knott at CSUF, she has known she wants to be a geologist since an early age. She is one of the top undergrads in her department, and will be doing her field camp with CSUF in Montana during the summer of 2010.

Transition Scholarship

Shelby Jones is graduating from Mt. Carmel High School and plans to attend Fresno State in the fall to study geology. She is one of the top students in her class, and is excited about starting her college undergraduate career.

OEST AWARD

Nick Crooker, an earth science teacher at Modesto High School in Modesto, California, is the Far Western Section OEST award winner for 2010. Nick came out of a background in biology and returned to school for an education in earth science so he could develop a well-rounded program at his school.

Nick has been a member of the NAGT for a number of years, attending conferences and field trips in the Far Western Section. He helped prepare the guidebook for the FWS Lava Beds National Monument conference in 2007.

Nick describes several important traits in a good teacher: Steadfastness helps in the teaching profession when the political environment tends to erode quality support in the classroom. Patience with each student helps him make the best they can be. Flexibility enables him to handle unexpected problems and teaching situations in the classroom. Humor helps keep the instructor sane and the students interested in the subject matter. All of this is under the umbrella of a broad science background in the physical, environmental, and biological science. He is able to draw upon years of experience and incorporate this in classroom instruction.

Nick's room has rock displays and pictures coordinating with the State Standards. With tight budgets, field trips are an impossibility. With document cameras and LCD projectors, he shares with his students exciting places of geological interest via the internet and from his own personal travels.

Currently, he participates with the A.V.I.D. program at Modesto High School. This program takes selected students who will be the first to go on to a college education in their family, and engage them in a rigorous academic program throughout their four years in high school. He has also taught the natural and physical sciences for the local Adult School for the past 23 years.

GUIDEBOOKS

Our publications are available for purchase and a list can be found on the section website at <http://nagt-fws.org>. Out sales occur at conferences and by mail-in requests.

FINANCIAL REPORT

FINANCIAL REPORT AS OF 4/15/09

Respectfully submitted by Leona Fisher, Treasurer, Far Western Section

Balance on hand (April 13, 2009)		\$11,980.12
INCOME		
Interest	\$13.08	
Publications	\$1991.85	
Refund Fall Conference	\$174.10	
Refund Spring Conference	\$3000.00	
Membership (243 members)	\$607.50	+\$5786.08
EXPENSES		
Postage (Paul Troop)	\$146.43	

Scholarships	\$3000.00	
Publication refund	\$31.00	
Reprint publications	\$196.62	
Franchise Tax Board (sales Tax)	\$144.00	
Webmaster (Garry Hayes)	\$130.69	-\$3648.74
Balance on hand (April 28, 2010)		\$14,117.91
CD (TriCounties Bank, matures (April 2011)		\$28,436.62

New England Section NAGT Annual Report 2010
Karen Kortz

Officers

President

Karen Kortz, Community College of Rhode Island, Lincoln, RI
kkortz@ccri.edu

1st Vice President

Cristin Ashmankas, Lesley University, Cambridge, MA
cashmank@lesley.edu

2nd Vice President

Bruce Rueger, Colby College, Waterville, ME
bfrueger@colby.edu

Treasurer

Julia Daly, University of Maine, Farmington, ME
dalyj@maine.edu

Newsletter Editor

Richard Little, Easthampton, MA
rdlittle2000@aol.com

Past Presidents

Christine Witkowski, Middlesex Community College, Middletown, CT
CWitkowski@mxcc.commnet.edu

Tom Vaughn

tvaughn17@comcast.net

Report on Activities in the Past Year

Our annual meeting was held in conjunction with the New England Intercollegiate Geological Conference (NEIGC) in Lyndon, Vermont. Jennifer Judkins is the New England Section's Outstanding Earth Science Teacher Award (OESTA) winner for 2010. Jennifer teaches earth and other sciences at Wilmington Middle School, Wilmington, Massachusetts. Her classroom is an active learning environment where students use real data to solve problems and she also emphasizes relationships to students' lives. She has developed an excellent class web site, and community involvement includes being a volunteer case reviewer for children in foster care. The award will be presented at our upcoming Annual meeting.

Activities Planned for the Upcoming Year

Although our annual meetings are frequently held in conjunction with NEIGC because the partnership reaches a large audience and adds a "generalist" field trip to their slate of field trips,

none of the officers were able to attend NEIGC in Orono, Maine this year. Therefore, we will hold our 2010 Annual meeting at the Weston Observatory in Boston College. Our keynote speaker will be Dr. Alan Kafka, who runs the Boston College Educational Seismology Project (BC-ESP), and he will tie that in with a discussion of earthquakes in New England.

Financial Report

Treasurer Julia Daly reports that the New England Section remains financial viable with a total of \$5014.90 in the bank. The treasurer's report with the balance and activities is given below.

Non-Profit Business Now account

Starting balance (9/2009): \$53.91

Interest rate: 0.100 %

Interest accrued: \$ 0.05

Ending balance (9/2010): \$53.96

One-to-One Business Savings account

Starting balance (9/2009): \$4951.82

Interest rate: 0.2000 %

Interest accrued: \$ 9.12

Ending balance (9/2010): \$4960.94

North Central Section Annual Report 2010

Suki Smaglik

Officers:

President - Suzanne M. (Suki) Smaglik, Central Wyoming College, Riverton, WY
ssmaglik@cw.edu

Vice-President - None

Secretary/Treasurer - Katherine (Kata) McCarville, Ph.D., Upper Iowa University, Fayette, IA
mccarvillek@uiu.edu

Recent Past-President - Sheila Roberts, University of Montana-Western, Dillon, MT

Past-Year Activities:

We made another attempt at having a regional sectional meeting this past year, in Lander, WY, which was again cancelled due to poor registration. This year, our advertising was much better and we had a good response of “interested but dates conflict so, maybe next year” so we will try again. Third time’s a charm?

One of the two folks who signed up, Brett Jensen, from southern Alberta, still came to Lander (with his wife) and we made a few field trips to areas that interested him and his family. We did an overview of the local Sinks Canyon geology and then we went out to the “Blue Forest” 100 miles south of Lander to collect opalized/petrified wood. We had a good time and Brett is willing to organize a meeting in southern Alberta in 2012. He couldn’t be talked into being our section President or VP tho.

Planned Activities:

Our next attempt at a section field trip and meeting this summer will be sometime between July 20-30 at the University of Missouri Branson Geological Field Laboratory in Sinks Canyon, ~12 miles south of Lander, Wyoming.

We will continue to build our database of contact information, and make an attempt to get a section board representative from each state and province. We will make a better effort to nominate some awards from our section.

Future Meetings:

2011 Lander, WY

2012 Southern Alberta

2013 Black Hills, SD

Treasurer’s Report:

submitted by Kata McCarville

The NAGT North Central Region is solvent, and has available funds totaling nearly \$3000 at this time.

Pacific Northwest Section of NAGT 2009-10 Annual Report

Ron Metzger

A. 2009-10 Section Officers

a. Executive Office

President

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Vice-President

Cassandra Strickland – Columbia Basin College, 2600 N 20th Avenue, Pasco, WA 99301, CStrickland@columbiabasin.edu

Secretary-Treasurer

Robert Christman - Department of Geology, Western Washington University, Bellingham, WA 98225, Bob.Christman@wwu.edu

Past President

Ralph Dawes - Wenatchee Valley College, 1300 Fifth Street, Wenatchee, WA 98801, rdawes@wvc.edu

b. Communications

Newsletter Editor

Cassandra Strickland – Columbia Basin College, 2600 N 20th Avenue, Pasco, WA 99301, CStrickland@columbiabasin.edu

Website Coordinator

Jenny Thomson, Department of Geology, SCI 130, Eastern Washington University, Cheney, WA 99004, Jennifer.Thomson@mail.ewu.edu

c. State-Province Councilors

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Michael Collins, Geologist, Epoch Well Services, Anchorage, collins_micha20@hotmail.com

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Brett Gilley, University of British Columbia, bgilley@eos.ubc.ca

Tark Hamilton, Camosun College, Victoria, B.C., thamilton@cmosun.bc.ca

d. Awards

OEST Awards Coordinator

Deron Carter, Linn-Benton Community College, 6500 Pacific Blvd. SW, Albany, Oregon 97321, (541) 917-4745423, carterd@linnbenton.edu

B. Reports

a. Annual Business Meeting

The annual business meeting of the Pacific Northwest Section NAGT was held on June 23rd during the Pacific Northwest Section annual meeting at the College of Southern Idaho in Twin Falls, Idaho.

OEST winners were announced. Nominations for next year are due by January to Deron Carter, the OEST awards coordinator, (541) 917-4745423, carterd@linnbenton.edu.

President Ralph Dawes announced the changes in executive officers.

b. 2010 OEST Awards

- Section Winner:
 - Christopher D. Hedeem, Oregon City High School, Oregon City School District
- State Winners:
 - Alaska: David Gillam, Nicholas J. Begich Middle School, Anchorage School District
 - Oregon: Mike Rockow, Leslie Middle School, Salem-Keizer Public Schools-Oregon School District 24J
 - Washington: Kareen Borders, Key Peninsula Middle School, Peninsula School District

C. Annual Activities/Functions

a. Events Sponsored by Pacific Northwest Section NAGT 2009-10

PNW NAGT Annual Meeting, June 22-26, 2010, College of Southern Idaho, Twin Falls, Idaho, hosted by Shawn Willsey:

- Pre-meeting field trip (6/22) to City of Rocks National Reserve and Albion Range (35 participants).
- Conference day (6/23), The conference day was a fine mixture of professional geology (John Shervais made an outline of an argument for the Snake River Plain as a probable mantle plume or hot spot track) and the pedagogy of teaching earth science (for example, the students and the instructor from University of Southern Indiana, who were to some extent trying to measure the efficacy of their teaching models in statistically valid ways, though statistical validity was not yet attained in every case). 34 participants.
- Post-meeting field trips (6/24 & 6/25) to Snake River Plain volcanism/Bonneville Flood. 28 participants day 1 and 26 participants day 2.
- Post-meeting field trip (6/26): to Hagerman Fossil Beds National Monument and afternoon river trip on Snake River. 30 participants.

b. Planned 2010-11 Activities

- Annual PNW NAGT meeting at Malheur Field Station, Oregon, tentatively scheduled for June 22-26, 2011. Leader-Michael Cummings, Portland State University.

D. Pacific Northwest Section Treasurer's Report (Robert Christman)
Financial Report, Pacific Northwest NAGT Section
 Savings account with Whatcom Educational Credit Union
 Submitted by Bob Christman, Sept 15, 2010

Previous report of Sept 15, 2009

Savings	6555.87
Kahle fund	<u>2500.00</u>
	9055.87

Bank statement, Sept 15, 2010

Savings	6819.87
Kahle fund	<u>2100.00</u>
	8919.87

Explanations

Income 9/15/09 to 9/15/10

Rebate	282.50
Guidebooks	90.00
Interest	<u>81.50</u>
	463.00

Expenses 9/15/09 to 9/15/10

Exhibit	100.00	Booth at WSTA Conference
Newsletter	100.00	May newsletter; printing and stamps
Kahle awards	<u>400.00</u>	Two awards
	600.00	

Southwest Section Annual Report

Merry Wilson

Officers

President
Merry Wilson
Scottsdale Community College
9000 E. Chaparral Rd.
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Treasurer
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Arizona State University
Tempe, Arizona 85287-1404
semken@asu.edu

Secretary
Laura Lukes
Somewhere in Greenland...or D.C...but at least we have a treasurer now!!!

OESTA Coordinator
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Mesa Community College
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480-423-6392 Mesa, AZ 85202
Katrien.kraft@mccmail.maricopa.edu

Treasurer's Report

Submitted by Steve Semken
Financial Report FY 2010
FUNDS ON HAND 01 September 2009
Wells Fargo Bank NA business checking account (number available upon request) \$1,524.20

INCOME

FY 10 membership revenue from NAGT National \$252.50
Section meeting registration fees forwarded by NAGT National \$793.00
Section meeting registration fees paid by individual members \$150.00

Field Station deposit returned by Utah Valley University after Section meeting field trip \$235.00
Interest on account \$0.45

EXPENSES

Check 1006 to Utah Valley University for Field Station lodging and deposit (Section meeting); Invoice cr002010 -\$935.00
Check 1007 to Meredith Wilson to reimburse for van rental and purchases made for section meeting -\$238.28
Check 1041 to Kaatje Kraft to reimburse for purchases made for section meeting -\$148.77

FUNDS ON HAND 31 August 2009 \$1,633.10

OEST Award Recipient

Section Winner: Laura Lukes, AZ

Laura Lukes is a teacher who approaches her Earth Science classrooms with an infectious enthusiasm, challenging curriculum, and dynamic environment. She uses an inquiry-approach to learning, and encourages students to reflect on their learning; enhance their writing skills, and develop skills that are often neglected in science classrooms. She raises the level of expectation for each student, and her students perform at a level beyond what they thought they were capable.

One illustration of her approach to teaching is her Earthquake unit. She begins with an activity where students need to determine Mercalli values for different regions; students negotiate meaning with one another; and then a full class discussion emerges. From that discussion, students begin to determine what hazards exist from earthquakes, which leads into a brief lecture burst; a video clip further illustrates these ideas. Students then move on to a reading where they determine what happened during the earthquake and start to put the different pieces from what they have been learning together into one; lastly, they write a brief description consolidating these concepts. All of this work is done in student notebooks, which allow her to collect them and gain insight into each individual student's learning and can provide specific feedback as she determines how students are progressing and putting ideas together.

Laura also serves as a leader at Saguaro High School in Scottsdale, Arizona. She has helped her fellow faculty, she has developed a college level Geology class for which her students earn dual credit (High School and College), and she also spends her evenings teaching at the local community college. In addition to serving in a local leadership capacity, she has been selected to spend the upcoming year as a National Science Foundation Einstein Fellow in the Office of Polar Programs.

Meetings and Activities

Spring Field Trip and Annual Business Meeting: March 19-21, 2010: UT.

We had a very successful spring meeting, which was held in two parts. The first part was in Salt Lake City on Friday March 19th. There was a free field trip to see the geology to the North and East of Salt Lake City. This trip followed a syncline from City Creek Canyon to Cephalopod Gulch through to Red Butte Canyon and Emigration Canyon. There were beautiful exposures of Late Paleozoic and Mesozoic sedimentary strata for us. Fifteen Southwest section

and Executive Committee members attended the trip, which was led by Dr. Dan Stephen of Utah Valley University.

Our business meeting was held that evening, where we elected a Vice President and Secretary by a unanimous vote. Congrats Dan and Laura! We discussed future field trips. Since we didn't have a secretary until the end of the meeting, unfortunately we have no notes.

Our meeting continued on to Capitol Reef, UT, where we stayed at the beautiful Utah Valley University Field Station March 20th-21st. We spent two days geologizing, again led by Dr. Dan Stephen. Over 20 people attended this field experience. We were very encouraged by this, due to the remoteness of the location. We decided that geologic coolness far outweighs travel time. We had attendees from the Far West Section, as well as a number of undergraduates that we hope to recruit to our ranks.

After the raging success of our trip (people actually came!), we set up a Facebook account in order to share pictures. Due to the great distances between major cities in the southwest, we have difficulty engaging our membership. We hope this social networking tool will help us in the future. I strongly encourage you to see our pictures from our trips, posted on facebook so you can see what you missed and be the first to join us next year.

Future Meetings/Hosts

2011 – Colorado (Mike Taber)

2012 – New Mexico (Haven't found a sucker yet)

2013 – Arizona (Brian Gootee, AZGS)

2014 – Utah (Randy Skinner, BYU)

OEST COMMITTEE ANNUAL REPORT

Greg Wheeler

Constitutionally, the OEST Committee consists of the 10 OEST section coordinators, the chair and two at-large members. I began my term as OEST Committee Chair on January 1, 2010. John Wagner did a fantastic job during his 10 years of service as OEST Committee Chair. He went way beyond the call of duty to encourage the sections to find and reward excellent teachers through the OEST program. During the transition, John was faithful to provide all the help required.

One of the first tasks was to relocate the plaque provider to Sacramento, where I could have more direct oversight and receive quicker service. Our new plaque provider is Classic Awards, in Sacramento California. They are able to do timely and excellent work. Recent plaque orders have been completed in two weeks, from the time I receive the order to delivery at the desired location.

The biggest challenge has been to contact and receive winners from the North Central, Texas, and Midcontinent sections. These sections seem to have no functioning OEST program. I will continue to strive to get awards from all the sections.

LIST OF OEST WINNERS FOR 2010

SECTION WINNERS

Central =none
Eastern=Heather H. McArdle
Far Western Section = Nick Crooker
Midcontinent = none
New England =Jennifer Judkins
North Central = none
Texas = none
Pacific Northwest = Chris Hedeem
Southeastern = Bryan E. Freeman
Southwestern = Laura Lukes

STATE WINNERS

Alabama = Kim Ouderkirk
Alaska = David Gillam
Florida = Minerva (Mickey) Santerre
Georgia = Michael McClain
Louisiana = Chris Campbell
Maryland = Mona Becker
Mississippi = Brittany Brewer
New Jersey = Peter Dorofy
New York = Heather McArdle
North Carolina = Josh Roberts

Pennsylvania = Karen Aucker
South Carolina = Jeanne Hartley
Tennessee = Bryan E. Freeman
Washington = Kareen Borders
West Virginia = Andrea Anderson

Distinguished Speaker Program

David Steer and Linda Goozen

September 2010

The NAGT Distinguished Speaker Series is one of the most visible and direct services of the Association. Members at colleges, universities and other institutions can apply to have one of our featured speakers visit their institution to deliver seminars, workshops, and in-person consultation with researchers and geoscience departments. Speakers and their topics are as diverse as our membership, and we update offerings every year to reflect the latest developments in the field and the concerns of our membership.

Linda Goozen managed logistics of the program during the 09-10 year; David Steer began his new term as chair of the DS committee. During this period NAGT received 12 requests for funded speaker visits (down from 16 in 08-09). All 12 requests were approved, with one rescinded request. At this time, only 5 visits have taken place. We anticipate that 5 of the '09-'10 approved requests will be completed in '10-'11.

During '09 -'10 speakers visited the following institutions:

- University of Montana Western
- University of Akron
- The Community College of Baltimore County
- Hofstra University
- Western Michigan University

Total costs of the 2009-2010 program, including speaker travel, honorariums, publicity, were 7,777.80 (down from last year's \$11,142.01). The Consortium for Ocean Leadership (previously JOI) reimbursed NAGT for a portion of these costs. NAGT budgeted \$12,000 for '09-'10 costs so we were under spent by \$4222.20. We expect that The Consortium for Ocean Leadership has continued to support the program by naming Kristen St. John as a speaker and providing \$1,000 for this year.

The current speaker roster is:

- Susan DeBari *
- Thomas Hickson
- **Karin Kirk**
- Thomas Koballa
- **Heather Petcovic**
- aWayne Powell *
- Eric Pyle*
- **Leslie Reid**
- Linda Reinen
- Kristen St. John – *Consortium for Ocean Leadership speaker*
- Barbara Tewksbury
- Michael Wyession*

An asterisk means this is the speaker's last year of the three-year term. Bold names are the new speakers this year.

An updated printed color program flyer was mailed September '09 to 891 geoscience departments to promote the program. Approximately 500 copies of this flyer were distributed from NAGT booth displays (GSA, AGU, NSTA) during the year. In September 2010 this flyer was updated with new speakers and has been mailed to 1,037 geoscience departments. The program is also featured on the NAGT website at:

<<http://www.nagt.org/nagt/programs/dsp.html> >

During the course of the past year small updates have been made to the NAGT website to support this program to facilitate use.

During '09-'10 we received post visit evaluation reports from 3 institutions. All speakers seemed to meet or exceed the expectations of the host institution. The kinds of impact cited were as varied as speaker topics and event types.

VALUE

"It was very valuable. Seven colleagues attended from CCBC, and in all of their workshop evaluations they indicated that they will use the exercises and concepts presented in information literacy task forces, environmental science labs, and climate change activities in class."

" (Value) Very much so. ... We have a minority of students who are very religious and have difficulty with the evolution-creation 'divide'. These students responded very well to Dr. Kelley's presentation and recognized the unique nature of it."

"Yes, it was clearly valuable for our School and for colleagues from other ASU units. Outcomes included:

(1) The Speaker shared his expertise and provided valuable recommendations on urban place-based geoscience teaching during 1:1 meetings with 10 SESE faculty, 20 SESE graduate students, and 1 faculty member and 1 graduate student in Science Teacher Education from the ASU Graduate School of Education.

(2) The Speaker provided a great service to the faculty host as a further advocate of place-based geoscience education in urban settings.

(3) The faculty host and Speaker are working on plans for further collaboration in place-based geoscience education research and practice."

OUTREACH

" An e-mail invitation was circulated to colleagues in local K-12 districts and the Maricopa Community College system. We estimate that at least 10 people from outside ASU attended the talk."

"The visit was publicized in all of the area community college, university and public and private high school science departments."

- “1. We have a list of about 30 schools and individuals that we notify regarding such talks. These were sent out a week in advance.*
- 2. We had a press release in the local newspaper and the talk was announced on our College website.*
- 3. I sent an announcement to the science chair at the local high school.”*

SUGGESTION

One institution would like to have had a full day engagement.

FORMAT

There were a wide variety of formats for speaker events. These included:

- Talks
- Office visits with faculty
- Outreach meeting with faculty
- Lunch/dinner with graduate students, faculty, and undergraduates
- Climate Change workshop
- Public lecture on Evolution & Creationism +70 in attendance
-

Number of events associated with each visit and number of participants are shown in the table below. The current on-line form makes it more difficult to know what the total number of participants is.

Number of events per speaker visit	Total Number of participants
3	155
3	210
3	75

Submitted by: David Steer and Linda Goozen

Field Course Scholarships Annual Report

Pranoti Asher

The Committee consisted of two other members Eric Riggs (Purdue University) and Laurel Goodell (Princeton University). The committee received 82 applications for consideration this year (compare with the 58 received in 2009). Of these only 76 were complete and were considered for ranking by the committee. The committee selected nineteen winners amongst which there were two AWG Crawford awardees and one minority student. Many thanks to John McDaris, Jon Lee, Linda Goozen, and the rest of the SERC staff for all their help. Their hard work in making the application process 100% digital has made it very easy for the committee to not only handle the large number of applications, but also process the award letters and awards in a timely manner.

As I mentioned in my report last year, NAGT must continue to increase awareness of this scholarship and further increase the number of applicants. The reason I mention this again has to do with the fact that I continue to get inquiries about the scholarship from spring until the middle of the summer. Often these emails are from faculty who are sending an email about the scholarship stating that they were delighted to find that such a scholarship does exist!! NAGT should print the call for applications in the Fall rather than the January issue of JGE. Multiple reminders for the scholarship can be sent out via email news and flyers available at the NAGT booth at regional (if applicable) and national GSA meetings. Another suggestion is that NAGT might spread the word out about this scholarship and deadlines via GSA campus reps meetings held at regional and national GSA meetings. Listservs such as GeoDept chairs and Chairs net can also be used to further advertise the scholarship. If any of the awardees are attending the National GSA meeting, perhaps they can be invited to the NAGT luncheon and be recognized.

Below is the list of the 2010 award winners:

Rice, Meghan	Slippery Rock University of Pennsylvania	AWG winner
Sprain, Courtney	University of Minnesota-Twin Cities	AWG winner
Almeido Danielle	Florida Atlantic University	
Bayer Emma	Wheaton College	
Bernadino, Melissa	California State University Long Beach	
Boal, Elizabeth	Iowa State University	
Broda Robert	East Carolina University	
Fearon, Jamie	Olivet Nazarene University	
Graupner, Melanie	University of Mississippi	
Hill John Robert	East Carolina University	
Kane Molly	University of Pittsburgh	
Krans, Susan	University of Wisconsin Milwaukee	
Lisenby, Peyton	Sam Houston State University	
Runyon, Simone	Illinois State University	
Schaefer Ethan	Colorado State University	
Schmitz, Nathan	Northwest Missouri State University	

Shaifula, Tengku
Tarnowski, Jennifer
Tessin Allyson

Texas A&M University, College Station
California State University, Fullerton
University of Pittsburgh

Climate Literacy and Energy Awareness Network (CLEAN) Pathway **<http://cleanet.org>**

NAGT Report, October 2010
Tamara Shapiro Ledley

Partners: TERC, CIRES at the University of Colorado, NOAA/UCAR, National Renewable Energy Laboratory, SERC at Carleton College

The Climate Literacy and Energy Awareness Network (CLEAN) Pathway will steward a broad collection of educational resources that facilitate students, teachers, and citizens becoming climate literate and informed about “the climate’s influence on you and society and your influence on climate.” The focus of our efforts are to integrate the effective use of the resources across all educational levels – with a particular focus on the middle-school through undergraduate levels (grades 6-16) as well as to citizens through formal and informal education venues and communities.

In the first six months of the project we have moved toward our initial goal of having a live collection by Nov 1, 2010. This has involved a range of activities. The most important of which include:

1. Establishment of the review criteria for resources to be included in the first review round.
2. Establishment and implementation of the review process.
3. Website development
 - o CLEAN Pathway Portal – live site: <http://www.cleanet.org>
 - o Climate Literacy Network – live site: <http://www.cleanet.org/cln>
 - o Development of online Review Tool, CLEAN Pathway and Advisory Board workspaces

1. Establishment of the review criteria for resources to be included in the first review round

The establishment of the review criteria for the CLEAN Pathway Collection began with an examination of the review criteria applied to educational resources in various other digital libraries and collections. These included the review criteria for the NSDL SERC, and Merlot collections. We integrated these review criteria into our first draft review criteria. These were then customized to directly address the special aspects of our collection process. This included an initial alignment of resources with either the Climate Literacy: Essential Principles of Climate Science or the Energy Awareness Principles (developed by CLEAN project members). In addition, in order to simplify our first round of review (three rounds are planned under the current funding), while we are establishing the review criteria and the review and cataloging processes, we are vetting only educational activities. For our purposes an educational activity is defined as a relatively brief set of instructional materials that is presented as a whole, where all the parts and ideas are linked and part of the same activity. In review rounds 2 and 3 we will broaden the scope (e.g. Podcasts, Videos, Demonstrations, Courses, Curriculum.)

The Review Questionnaire contains all the review criteria established for the CLEAN Collection. This questionnaire has been built into the online review tool used by the reviewers,

which is described later. It covers three major areas including 1) scientific accuracy, 2) pedagogical effectiveness, and 3) technical quality and ease of use.

2. Establishment and implementation of the review process

The review process began with the identification of online pools of potential resources through conversation with project staff, the advisory board, the Climate Literacy Network, and posting the opportunity for anyone in the community to suggest a resource. Eight members of the CLEAN Pathway project staff have served as Resource Collectors whose main responsibility has been to shepherd resources through the review process. The first step in the review process was an informal and formal triage process. In the informal triage process the Resource Collectors would examine resources in the various online resource pools and determine whether a resource might be appropriate for the CLEAN Pathway collection. Those that passed this stage were entered into the online review tool. Those that did not were lost to further consideration and were not tracked.

For those resources that were entered into the review system a more formal triage review was conducted. In this round Resource Collectors answered, in the review tool, questions about what primary principles (either Climate Literacy Essential Principle or Energy Awareness Principle) were addressed by the resource; the type of resource (e.g., activity, video, reference, curriculum, course); the audience level as stated by the resource; and whether the Resource Collector recommended either 1) the resource be reviewed; 2) the resource be held for consideration in a later round of review; or 3) the resources is not appropriate for the CLEAN collection. In the first round of review the Resource Collector who entered a resource into the online review tool was responsible for conducting the first formal review. In the formal review, three areas were addressed—Scientific Accuracy, Pedagogical Effectiveness, and Technical Quality/Ease of Use with both Likert scale questions and comment boxes.

Each resource that achieved an overall recommendation of high or medium priority in the first round of review underwent a second round of review. Both reviews are available online in the review tool.

In addition to the review conducted by the Resource Collectors, we are conducting an additional science review by a scientist with sufficient scientific expertise on the topic of the resource. To date we have explicitly limited our science reviewers to those who have science PhDs. Resources that were recommended at the high or medium priority level in both reviews were moved on to the Review Camp. The Review Camp was held July 26-28, 2010 and involved 10 external reviewers (educators and scientists) and 14 CLEAN staff. At the Review Camp, six teams (each made up of four participants and each having at least one of the following areas of expertise: educator, scientist, and Resource Collector) each worked together to determine which of their ~24 assigned resources should be cataloged into the CLEAN Pathway collection. The teams finalized annotations for each resource based on the comments of all reviewers and the team discussions and noted the reasons a particular resource did not make the cut.

It is estimated that the Resource Collectors considered over 1000 resources. 519 of these were entered into the review tool. Following the first and second round of review 142 were moved forward to the Review Camp. Of the 142 considered at the Review Camp 99 passed the review,

18 were passed for further consideration to an editorial team (the CLEAN PI's), and 32 did not pass the review.

3. Web Developments

The CLEAN Pathway portal is housed on the Science Education Resource Center's (SERC's) Content Management System (CMS). We have created two live sites (CLEAN Pathway Portal: <http://www.cleanet.org> and the Climate Literacy Network: <http://www.cleanet.org/cln>), two workspaces (CLEAN Pathway project staff workspace and the CLEAN Pathway Advisory Board workspace), and the online review tool.

The CLEAN Pathway Portal live site. This site currently indicates that it is a placeholder for the collection which is expected to go live in November 2010. It also includes links to 1) more information about the project, 2) the Climate Literacy Network website and the Climate Literacy: Essential Principles of Climate Science, and 3) a form to allow community members to suggest resources to be considered for the CLEAN Pathway collection.

The Climate Literacy Network site. The Climate Literacy Network site was moved to the cleanet.org servers and domain when the CLEAN Pathway project was funded. This site provides 1) the content of the published Climate Literacy: Essential Principles of Climate Science; 2) descriptions of the 38 Climate Change Education Projects funded by NSF, NASA, and NOAA collected from the participants at the NSF Climate Change Education PI meeting in March 2010, and the NASA Global Climate Change Education PI meeting in April 2010 along with a form to allow other such projects to submit their information to be included; 3) a teleconference schedule with agendas; and 4) a section for online discussions. The Climate Literacy Network meets by teleconference weekly to share information on climate science and climate literacy, with a focus on educational contexts (formal and informal) but also including discussions about impacts on community groups and ordinary citizens. The Listserv currently has over 190 individuals and the teleconference regularly has 15-25 participants. We continue to get input on the CLEAN Pathway project from this group.

Earth Exploration Toolbook <http://serc.carleton.edu/eet>

NAGT Report, October 2010
Tamara Shapiro Ledley

The Earth Exploration Toolbook (EET, <http://serc.carleton.edu/eet>) is a collection of educational resources called chapters that feature Earth science datasets and data analysis tools. The EET provides step-by-step instructions for using Earth science datasets and software tools in educational settings. Each chapter in the EET is written to the educator with the purpose of making them familiar enough with the tools and data to customize it for their own students and curriculum needs. Thus while the analysis described in an individual chapter may directly address the high school level, the educator can see how to adapt use of the data and tools in for students at the middle school and undergraduate levels.

EET chapters walk users through an example—a case study in which the user accesses data and uses analysis tools to explore issues or concepts in Earth system science. In the course of completing a chapter, users produce and analyze maps, graphs, images, or other data products. The ultimate goal of each activity is to build user's skills and confidence so they can use data to conduct their own investigations of the Earth system. There are currently 31 live EET chapters and ~12 more in development.

Each EET Chapter Includes...

- Chapter Description: An overview of the data analysis techniques and science content of the chapter
- Teaching Notes: An example of the data product, suggested grade/age level, learning goals, teaching standards addressed, and time required
- Case Study: A compelling storyline that provides context for the technology procedures
- Step-by-Step Instructions: Text and images that guide the users through the process of accessing data and analysis tools, then manipulating them to draw conclusions and report results
- About the Tool and Data: Background information on the analysis tool and sources of data
- Going Further: Ideas for exploring different aspects the data or using the tool in new situations

Development of New EET Chapters

New EET chapters are developed through a number of avenues – ranging from individuals to partnerships with large research programs. Data providers, tool developers, and data-using educators can contribute chapters to the EET in collaboration with the EET team. Using a template, authors enter instructions and images into clearly described fields to generate chapters in the EET format. Support documents, including the *EET Chapter Author's Guide* and the *EET Chapter Template Field Descriptions*, are available to guide the EET chapter development.

The main avenue for new EET chapter development is through the efforts of the AccessData project (<http://serc.carleton.edu/usingdata/accessdata>). The AccessData program facilitated workshops that brought together ~10 teams per year, each focused around different datasets. Each team had the expertise of a data provider (who know the data in a specific data archive and

how to get it), a tools specialist (who knows how to use an analysis tools that works with that data, a scientist (who knows the scientific context of the data), a curriculum developer (who completes the EET chapter after the workshop), and an educator (who will provide the educational expertise to focus the chapter). There were 6 of these workshops between 2004 and 2009. We have also used the model of the workshops to facilitate teams focused on the datasets of specific ongoing scientific research programs. We are working to develop a sustainable model for this activity.

Teacher Professional Development

We have been two avenues of teacher professional development for use of the EET; the EET Workshops (<http://serc.carleton.edu/eet/workshops.html>) and the DataTools program (<http://serc.carleton.edu/eet/msdatatools>).

The EET Workshops teleconference-online workshops. Science and technology teachers participate in a pair of two-hour distance-learning workshops. Participants must have an Internet-connected computer and the ability to talk on the phone at the same time. We use a web conferencing tool, Elluminate, to facilitate these workshops. During the first workshop participants work through an EET chapter to produce a data product, and discuss ways to teach and learn using Earth science datasets and analysis tools. Participants come back to a second workshop after implementing the activities with students to discuss successes, obstacles and how to overcome them. The schedule of these workshops and the registration information is available on the front page of the EET website.

The DataTools program was our second avenue of professional development. This was a year-long program which utilizes the EET chapters to help teachers learn how to use various data analysis tools and integrate the use of those tools with data relevant to their curriculum with their students. While the DataTools program has ended the materials developed by the teachers using the technology tools in the Earth Exploration Toolbook are available for others on the DataTools web sit.

Earthlearningidea

The Earthlearningidea team

Chris King, Professor of Earth Science Education, Keele University

Peter Kennett, Earth Science Education Unit, Keele University

Elizabeth Devon, Earth Science Education Unit, Keele University

Recent Earthlearningidea blog quotes:

"Earthlearningidea: you know what mate, that IS brilliant" - referring to soil erosion.

"This blog is truly one of my few favorites - it is rare to see activities that will teach you how to weigh a dinosaur! Thanks for this!"

The free website www.earthlearningidea.com has been running for over three years, offering Earth science activities for teachers to use with their classes right across the world. It was initially developed for the UNESCO's International Year of Planet Earth, 2007-2009, but has proved so successful that it has been continued through 2010 and maybe beyond.

The initial focus was on the provision of simple activities which could be taught in any situation, no matter how poorly equipped the school – indeed, some activities involved going outside the classroom and using the local environment, or simply looking through the window and imagining what would happen if a particular geological event occurred – usually a disastrous one!

During 2010, the emphasis has shifted slightly and the activities have mostly been on a plate tectonics theme, where a little more equipment and more abstract thought are sometimes needed.

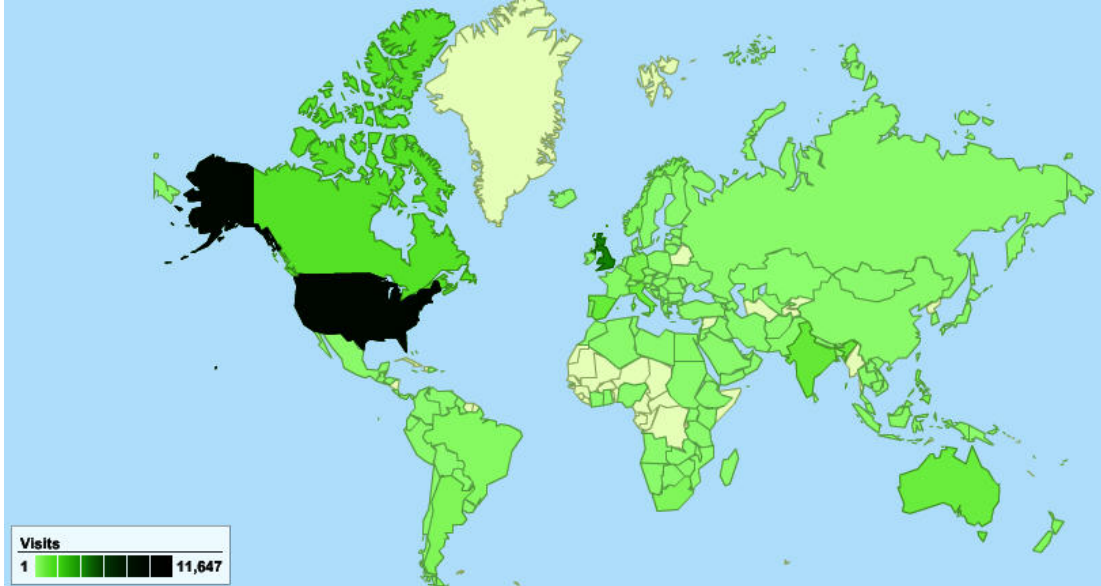
The frequency with which activities have been posted has varied from weekly to monthly, but in 2010 they have been published at regular fortnightly intervals. All the activities are live on the website and, to date, around 90 activities have been published. Users are encouraged to contribute their experiences, via an associated blog, which in turn may be useful to other teachers or educators of teachers. Completely fresh ideas are welcomed and several contributors have been invited to amend their activity to fit the Earthlearningidea format so that it can be posted in due course.

Some activities are translated into other languages as they appear: others are being translated on a selective basis. So far, activities have been translated into Spanish, Italian, Norwegian, Chinese (Cantonese) and Tamil, some being on the www.earthlearningidea.com website itself, whilst others are obtainable via links.

The website is being run by three experienced teachers of Earth science, almost entirely without funding, so we are particularly proud to have reached 160 countries and to have heard from delegates to the International Geoscience Education Conference in Johannesburg this September how much the activities are being used and appreciated. The maps show the countries reached and the most “popular” cities across the globe.

Please continue to help us by sending contact details of any teacher trainer establishments that you know and details of any schools in which you think our activities would be useful. Our email address is info@earthlearningidea.com . In this way, we can spread Earthlearningideas across the globe.

Earthlearningidea has reached 160 countries as shown on the map below.



By the end of August 2010, we had reached 6564 cities, as shown below.



The Role of Two-year Colleges in Education and Broadening Participation in the Geosciences: A Planning Workshop

<http://serc.carleton.edu/geo2yc/workshop2010/index.html>

**NAGT Report, October 2010
Heather Macdonald**

We offered a workshop on *The Role of Two-Year Colleges in Geoscience Education and Broadening Participation in the Geosciences* on June 24-27, 2010 at Northern Virginia Community College, Annandale. The planning workshop was designed to consider how to better support 2YC geoscience programs, faculty, and students, to discuss strategies to broaden participation in the geosciences in ways that involve 2YC, to establish networks among 2YC geoscience faculty, and to consider how professional societies and organizations can support 2YC faculty, students, and programs. The workshop was led by Bob Filson (Green River Community College), Laura Guertin (Penn State Brandywine), Kaatje Kraft (Mesa Community College), and Heather Macdonald (College of William and Mary); attendees include 31 participants from two-year colleges and representatives from several geoscience organizations.

The workshop program included sessions on the following topics.

- Teaching General Education: Strategies for Supporting All Students to be Successful
- Broadening Participation in the Geosciences
- Preparing Geoscience Students for the Future: Concurrent Sessions
 - Recruiting and Retaining Students in the Geosciences
 - Career Preparation and Workforce Development
 - Transfer, Collaborations, and Partnerships
- Professional Organizations and Two-year Colleges (including presentations about GSA's support for two-year college faculty, COSEE Pacific Partnerships support for two-year college faculty and programs for two-year college students, and the American Association of Physics Teachers work on Physics in Two-year Colleges)
- Addressing Isolation and Building Our Community: Concurrent Sessions
 - Interdisciplinary Curriculum and Collaborations
 - Scholarly Practices
 - Using Web 2.0
 - Adjunct Faculty
- Recommendations and Next Steps

The workshop website (listed above) was developed by the Science Education Resources Center (SERC) at Carleton College. The website includes the workshop program with links to workshop presentations and a participant page that includes essays, activities, and course descriptions submitted by participants.

Recommendations made by the workshop participants include the following. The list also gives follow-up actions. The workshop group also endorsed a vision statement regarding ocean science education and 2YC and that vision statement has been submitted to COSEE

- **Establish a formal community/organizational structure.** Bob Blodgett requested this be part of the agenda for the NAGT meeting at GSA.
- **Develop a set of 'best practices' regarding geosciences programs in 2YC.** Joy Branlund, Eric Baer, Bob Filson, Pamela Gore, and Kaatje Kraft from the workshop working are continuing to work on this effort, which would include a survey.
- **Collect more information about 2YC programs,** faculty, and students (recognizing the great variation in 2YC). A group is planning to develop a survey to collect more information about 2YC programs, faculty and students, including more demographic data about students in geosciences courses at 2YC. Some of this is part of the “best practices” effort; there were several groups that wanted to develop a survey.
- **Create/expand a website or web portal** to disseminate information. The geo2yc site at SERC is a good start and was used in this way by Eric Baer and Heather Macdonald for the webpage on selected opportunities for 2yc faculty at GSA
<<http://serc.carleton.edu/geo2yc/2010GSA/index.html>>
- **Provide more opportunities for two-year college faculty (including part-time faculty) to meet and exchange strategies and discuss challenges** (e.g., workshops such as this one, social receptions at GSA sponsored by GSA); GSA has continued the 2YC reception; Eric Baer and I organized a workshop/discussion that will be held Sunday evening at GSA from 5:30-7:00 on **Funding Opportunities for Two-year College Faculty: Possibilities, Challenges and Successes** (sponsored by NAGT); Katryn Wiese has organized a field trip and an evening dinner and drinks for 2YC faculty in association with the AGU meeting (see website below); and we are considering additional face-to-face and virtual workshops. AGU events (K Wiese)
http://www.ccsf.edu/Departments/Earth_Sciences/content/2YCAGU.htm
- **Continue the conversations** and discussions begun at the workshop (John Bartley established a LinkedIn group in addition to the workshop email list and discussion boards).
- **Provide more resources on careers in the geosciences relevant for 2YC students and more opportunities for to establish and evaluate early research experiences** (e.g., and Early REU program).
- **Provide increased support for writing proposals for external funds** (e.g., workshops on proposal writing).

Overall, the workshop was a great success and we very much appreciate the support given by NAGT. We are excited about the various follow-on efforts and look forward to continuing to work with NAGT.

MARGINS Mini-Lessons: Bringing Continental Margin Research to the Undergraduate Classroom

Geoffrey Abers, Chair, MARGINS Steering Committee (2006-2010)
Lamont-Doherty Earth Observatory of Columbia University

The National Science Foundations' MARGINS program provided a decade of funding for research on active processes in the earth that cross the shoreline: processes that break continents apart, that generate great earthquakes, that cycle water and CO₂ into and out of the planet's interior, and that directly connect onshore erosion to offshore stratigraphic records. This program also provided a major educational opportunity, to take the results of active research to the undergraduate classroom as they were generated. Many of the processes and techniques used in the program figure prominently in undergraduate classes, from broad introductory survey courses to upper-level courses in petrology, sedimentology, geophysics, and a variety of other subjects. The results are also data-rich, and provide opportunities for undergraduates to directly access and analyze quantitative observations of regional to global scale.

The Mini-Lessons program developed a series of web-based course content modules, hosted through SERC and developed through the MARGINS Education and Outreach program. They cover a variety of scales of activities centered around MARGINS research (<http://serc.carleton.edu/margins>). The program was funded by a CCLI Phase I grant 2006-2009, collaborative between the MARGINS Office (G. Abers; at Boston Univ. then later Lamont-Doherty), SERC (C. Manduca, Carleton Coll.), Univ. So. Florida (J. Ryan), and Cal. State San Jose (D. Reed). By the Phase I completion in 2009 a total of 32 Mini-Lessons have been developed through a series of workshops, the most successful of which paired MARGINS researchers with teaching faculty at predominantly undergraduate institutions. Most lessons involved tasks appropriate for a lab exercise or interactive lecture, and many relied upon the GeoMapApp tool for interactively accessing and manipulating spatial data (www.geomapapp.org). Toward the end of the program the concept of large-scale lessons emerged, developing consistent themes through a sequence of coupled mini-lessons or, most prominently, as a Virtual Voyage based on a 3-D seismic survey over the southern Japan subduction zone megathrust.

In May 2009 a completion and assessment workshop was held at Lamont-Doherty, with 33 participants mostly from undergraduate colleges. This resulted in a communal testing and refinement and publication on-line of the finished Mini-Lessons and assessment of many of them. During 2008 a Mini-Lesson assessment template was developed, posted at SERC, and beta-tested via an initial online submission. Our evaluation plan centers on providing an observational protocol that faculty can use to assess the success of the mini-lessons in achieving the desired learning goals. This protocol was completed in consultation with SERC and reviewed by the project PIs and tested by Rosemary Hickey-Vargas. We found that voluntary participation was difficult to obtain, but participation in conjunction with workshops yielded good results, particularly if lesson designs or evaluations were a pre-requisite for attendance. This strategy led to evaluation and revision of 17 of 32 mini-lessons at that workshop. They are used in a variety of ways, as indicated by the feedback received. While faculty sometimes followed lessons as written, more typically the lessons were mined for data, strategies, and

templates adapted to local needs. Lessons providing experience with data access tools (particularly GeoMapApp) were particularly popular. The lessons also reached a wide audience; in 2009 brochures describing them were sent to over 800 earth sciences and related departments, and the programs were publicized at most MARGINS workshops and newsletters.

While this project has ended, we anticipate that it will continue to be built upon. At least one upcoming workshop explicitly included funds for continued development of MARGINS-themed Mini-Lessons and parallel projects are emerging outside of MARGINS. The continued development of the Mini-Lessons features prominently in the new GeoPRISMS Draft Science Plan; GeoPRISMS is a successor to the decadal MARGINS program.

**On the Cutting Edge:
Professional Development for Current and Future Geoscience Faculty**
<http://serc.carleton.edu/NAGTWorkshops/index.html>

**NAGT Report, October 2010
Heather Macdonald, Cathryn Manduca, David Mogk, and Barbara Tewksbury**

The overall goal of the *Cutting Edge* project is to improve the quality of geoscience education for undergraduate students through the dissemination of exemplary practices and materials to current and future faculty through an integrated, synergistic set of workshops and a variety of web resources. We aim to bring advances in pedagogy and geoscience research to the broader community of those who teach geoscience to undergraduates. We are pleased to let you know that we have received a third CCLI grant from the NSF Division of Undergraduate Education: On the Cutting Edge: A Community Resource Transforming Undergraduate Education. We have added four new PIs: Rachel Beane, David McConnell, Katryn Wiese, and Michael Wyssession. We will continue to offer face-to-face workshops and will expand our program with a variety of virtual and hybrid workshops, series, and events. We continue to offer “partnership” workshops held in conjunction with various professional meetings or other regional venues. The program for the coming year is given in flyers that will be distributed at the meeting.

We are grateful to NAGT for the advertising and publicity that NAGT provides and for its co-sponsorship of sessions at professional meetings. In addition, the opportunity to include *JGE* articles on the *Cutting Edge* website provides high-quality material to the website and increases the visibility of *JGE*. Both NAGT and Cutting Edge are contributors to the Geoscience Education Social at GSA. We are collaborating on e-news advertising aspects of the website, the website display that is in the NAGT Booth at GSA and AGU meetings (we provide partial support for the display) and on efforts to promote NAGT membership. We are pleased that NAGT has agreed to work with us to garner support in various forms from other professional societies. We encourage NAGT officers and members to suggest workshop topics for future workshops.

We are pleased to report that the “On the Cutting Edge” website received a Science Prize for Online Resources in Education (SPORE) given by AAAS. The citation for essay associated with the award is given below.

Manduca, Cathryn A., David W. Mogk, Barbara Tewksbury, R. Heather Macdonald, Sean P. Fox, Ellen R. Iverson, Karin Kirk, John McDaris, Carol Ormand, and Monica Bruckner (2010). SPORE: Science Prize for Online Resources in Education: On the Cutting Edge: Teaching Help For Geoscience Faculty: *Science*, v. 327, no. 5969, pp. 1095-1096.

The thematic collections on the website typically link fundamental scientific research, pedagogical approaches, examples and activities, data and tools, images, and supporting services. We continue to use a range of approaches to provide resources derived from workshops to a broader audience via the web-site. We have added new collections associated with workshops in the previous year’s workshop series. We expect that faculty participants at workshops now

contribute to the website; for most workshops, participants submit one or more teaching activities and/or course descriptions prior to the workshop. The website front page shows the range of topical resources (also listed below).

Managing Your Career

- Preparing for an Academic Career
- Early Career Faculty
- Career Development

Enhancing Your Teaching

- Affective Domain
- Assessment of Learning
- Course Design
- Data, Simulations, and Models
- Introductory Courses
- Metacognition
- Online Teaching
- Service Learning
- Teaching in the Field
- Teaching Methods
- Urban Students and Urban Issues
- Using Online Games and Environments
- Visualizations
- Web Design

Geoscience Topics and Themes

- Biocomplexity
- Climate Change
- Complex Systems
- Deep Earth
- Discoveries from Mars
- Early Earth
- Energy
- Geochemistry
- Geology and Human Health
- Geophysics
- Hurricanes and Climate Change
- Hydrogeology
- Mineralogy
- Ocean Systems
- Paleontology
- Petrology
- Public Policy
- Rates and Time

- Sedimentary Geology
- Structural Geology

Teach the Earth and Starting Point Reports

Fall 2010

John McDaris

Teach the Earth

The Teach the Earth Portal has continued to add new content over the last year, including nine new modules on teaching methods, 8 new collections of geoscience teaching resources, as well as new information relating to geoscience departments and two-year colleges. The new content on Teach the Earth includes:

Teaching Methods

- Teaching Geoscience Online
- Service Learning
- Teaching with Learning Assistants
- PhET Interactive Science Simulations
- Using Issues to Teach Science
- Quantitative Writing
- Undergraduate Research
- Classroom Response Systems
- Classroom Experiments

Geoscience Teaching Resources

- *Climate Literacy & Energy Awareness Network (CLEAN)* – Reviewed collection of educational resources
- *Teaching Geoscience with Visualizations* – 4 new hazard event collections of visualization and teaching resources
- *River Geomorphology Videos Collection*
- *Earth Exploration Toolbook* – 7 new examples of using data in the middle and high school classroom
- *Understanding the Deep Earth* – Activities, topical collections, visualizations, and online resources about teaching about the deep Earth.
- *Developing Student Understanding of Complex Systems* – An array of resources for teaching and assessing complex systems thinking
- *Using Remote Sensing and GIS to Teach Geoscience* – Data sources, activities, and course syllabi for teaching with remote sensing and GIS
- *Teaching Geoscience in the Field* – Activities and resources for using fieldwork to teach geoscience

Geoscience in Two-Year Colleges – Teaching activities, course descriptions, and discussions on the unique needs of 2YC geoscience educators

Making the Case for Your Department – Resources and strategies for becoming and staying a Valued member of your institution

In addition, a new way of getting users to the specific content they are looking for has been implemented in the form Site Guides. Site Guide pages act as mini-portals on particular topics and direct users to the places across all the websites included in Teach the Earth when

they can get the kind of information they are trying to find. Teach the Earth currently sports Site Guides on many popular topics and new ones are added regularly as projects add new topical resources. There are also Site Guides with strategies for finding types of materials like activities, visuals, and course descriptions. A partial list of current Site Guides includes:

- Strengthening your Teaching
- Designing Courses
- Teaching Large Classes
- Quantitative Skills, Thinking, and Reasoning
- Resources for K-12 Teachers
- GIS Resources
- Plate Tectonics
- Hazards
- Energy
- Evolution
- Weathering and the Rock Cycle
- Geologic Time

as well as many others. This “parallel navigation” strategy has undergone some usability testing and seems to be an improving the use experience on the site.

Starting Point

Starting Point has benefitted from the addition of new pedagogic modules to Teach the Earth as well as introductory geoscience examples contributed through a number of projects. All of the new teaching method modules that have introductory examples or applications have been included in the Starting Point site.

Traffic to the site has also increased. Between October 1, 2009 and September 30, 2010, more than 457,500 unique visitors used the site compared to just over 409,200 unique visitors in the same period the previous year; a 12% increase. The five pedagogic modules receiving the most traffic were:

- Mathematical and Statistical Models (12.7%)
- Roleplaying (12.7%)
- Assessment (8.7%)
- Interactive Lectures (5.7%)
- Teaching with Models (5.6%)

Starting Point Traffic Statistics

