
Earth Science Week 2002

“Water Is All Around Us”

Highlights and News Clippings



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Highlights from Earth Science Week 2002

Earth Science Week 2002 was celebrated from October 13-19 with the theme "Water is all Around Us". Now in its fifth year, the Earth Science Week (ESW) celebration has grown to include events in all 50 states and in many countries around the globe. The program is well on its way to becoming the premier outreach program for many prominent Earth science organizations, and has become an annual tradition that includes the education community and raises public awareness about the importance of Earth Science to society.

The American Geological Institute organizes and publicizes the week as a service to its member societies, the geoscience community and the public. Earth Science Week 2002 was sponsored primarily through the generous support of the US Geological Survey and the American Association of Petroleum Geologists Foundation. Planning in 2002 benefited from the collective experience and ideas of five years of past ESW celebrations. In 2002, we contracted a comprehensive, professional evaluator to conduct a survey of ESW participants. This statistical snapshot of the ESW program has been combined with data collected by AGI. The resulting evaluation provides a clear picture of the strengths and weaknesses of the ESW program.

Key Outcomes of the 2002 ESW Evaluation

AGI gathered evaluation data from participants in Earth Science Week through online feedback forms, paper surveys included in ESW kits, and through an email survey distributed by professional evaluators. Responses to the 2002 ESW celebration were overwhelmingly positive. Participants contacted AGI to report on the successes of their ESW events and shared comments and ideas for improving the program in the coming years. Nearly 60% of the respondents in the statistical survey said they participated in ESW 2002, and 90% of the respondents plan to participate in 2003. This indicates a huge potential to increase participation in the week, and illustrates the high demand for continuing the ESW program.

The evaluation also provided information about ways to improve ESW. Nearly one-third of survey respondents rated the usefulness of Earth Science Week as *excellent*, a figure that AGI would like to see increase in coming years. The concerns and recommendations that we received fall into several categories. Many respondents want to see better publicity and media coverage, both locally and nationally. About 20% of survey respondents suggested that AGI start to promote ESW earlier in the year, and about 10% expressed concerns with funding for local events and programs. AGI is currently already working to address these concerns, as noted in the *Earth Science Week Strategic Plan* under development at AGI.

In support of Earth Science Week, the AGI produces several types of materials for use by planners, educators and the general public. These materials received rave reviews in post-ESW evaluation surveys.

ESW kits

AGI distributed more than 8,000 ESW kits to the geoscience community and to educators in 2002. These kits were sent to all 50 states and to several countries. IN 2003, AGI plans to distribute more than 11,000 kits.

Web Resources

AGI staff completely revamped and updated the Earth Science Week website in 2002 in order to reflect the new theme and to distribute information to teachers and the public. There has been a dramatic increase in the use of online resources for Earth Science Week. In 2002, 45,665 people visited the ESW home page, with more than 90% of these hits occurring in the last quarter of 2002 following the launch of new website.

National Contests

For the first time, the AGI initiated national contests that encouraged K-12 students and the general public to get involved in the week. We received more than 487 entries in the art, essay and photography contests, and awarded grand prizes of \$500 plus a complimentary one-year subscription to *Geotimes* to the winners in each category.

ESW Events

Examples of Earth Science Week events can be classified by level of activity necessary to complete them. The least active events include obtaining state proclamations, holding poster displays and posting information on websites. Most active events were defined as field trips, workshops and tours, with lectures, demos, contests and open houses falling in the middle. 44% of the respondents in the survey reported that they participated in the least active type of ESW events, and 21% participated in most active types of events.

Official Proclamations

Official proclamations of Earth Science Week were made in 23 States and in several cities, including Alaska, Arkansas, Colorado, Delaware, Florida, Iowa, Illinois, Louisiana, Maryland, Missouri, New Hampshire, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Utah, Vermont, and Washington. In addition, President George W. Bush officially recognized the week. In appreciation of the work that geoscientists do, the President stated that "The earth science industry is helping to improve the lives of Americans and people throughout the world. Dedicated and highly skilled geologists, geophysicists, and other earth and environmental scientists are working to protect and preserve our natural resources and environment. Their efforts are also keeping us safe from natural disasters and promoting our appreciation for the beauty and grandeur of nature."

Comprehensive List of Earth Science Week Events

Arizona

Flagstaff

- The U.S. Geological Survey Flagstaff Field Center hosted an Open House at the facility to celebrate Earth Science Week and the Flagstaff Festival of Science.

Tempe

- An Earth Science Day was sponsored by the Arizona State Department of Geological Sciences. There were more than 30 activities, booths, and demonstrations, including Moon buggies and 3-Corner Satellites from the Mechanical and Aerospace Engineering program of the NASA Space Grant, and the Space Photography Lab.
- A workshop for teachers that focused on the use of Internet mapping tools incorporating USGS data was conducted by USGS geographer Joseph Kerski at the University of Arizona.

Tucson

- The Flandrau Science Center at the University of Arizona hosted a number of activities including guest lecturers and hands on activities.

California

- Phil Stoffer, a USGS geologist, led a field trip for teachers to examine the San Andreas Fault in the Santa Cruz Mountains.
- USGS scientists met with congressional office staffers to discuss on-going USGS integrated earth science research in the Los Angeles area.
- In coordination with the EPA, Department of the Interior and San Diego State University, USGS scientists demonstrated streamgaging to children of the Pala and La Jolla reservations.
- Several southern California Indian reservation schools participated in water sampling demonstrations and activities conducted by USGS staff.

Antioch

- The Northern California Geological Society, in cooperation with East Bay Regional Parks District, hosted a Teachers Day at Black Diamond Mines Regional Preserve in Antioch, CA. Events included a geology talk, a tour of the mine, and a surface geology walk.

Pasadena

- The U. S. Geological Survey in Pasadena sponsored a drawing contest for all Pasadena Elementary school students. They also held two nights of Earth Science education lessons at KidSpace, a local children's museum.

Sacramento

- Exhibits about USGS research were on display at California State University Sacramento.

Tahoe City

- In coordination with the Tahoe City Public Utilities District, the USGS dedicated a newly remodeled streamgage.

Visalia

- The USGS participated in an event promoting resources offered by the City of Menlo Park, which is where the USGS office is located. The USGS provided materials showcasing the products and information the USGS has available to the public.

Colorado

- The Colorado Geological Survey had field trips and other events for ESW and the Colorado Scientific Society website had links to info about local and national contests.

Denver

- The Geological Society of America sponsored a series of free public lectures about geology at the REI Flagship store.
- The Rocky Mountain Association of Geologists sponsored an art and essay contest for first through eighth grade students in the Denver Metro area schools.
- A workshop and exhibit focused on helping data users make effective use of USGS spatial data at the 2002 "Geographic Information Systems in the Rockies" conference.
- The USGS conducted tours of its Rocky Mountain Mapping Center facility.
- The USGS distributed information and presented results of its earth science-related research at the Geological Society of America conference.

Golden

- Friends of Dinosaur Ridge and the Colorado School of Mines Department of Geology and Geological Engineering sponsored a lecture by Dr. Murray Hitzman titled "Traveling the World for Free – A Geologist's Career".

District of Columbia

- Taste of DC Earth Science Pavilion: AGI sponsored a tent at this annual public event, where families could become rock detectives, identify rocks and minerals, and learn about fossils and the importance of water.

Florida

St. Petersburg

- USGS Center for Coastal and Regional Marine Studies hosted its annual ESW open house for local forth grade students and for the general public.

Tallahassee

- The Florida Geological Survey hosted an open house at their facility. Geologists from the staff also gave talks in local schools about Florida geology.

Tampa

- Demonstrations of water quality sampling, discharge measurement techniques, continuous water monitoring gages, and the USGS real-time water monitoring network were hosted by USGS scientists on the banks of the Hillborough River.

Georgia

Clarkston

- A professor of geology at Georgia Perimeter College conducted Earth Science Week events in December. These included rocks and minerals presentations to third graders, topography lessons to fifth graders, and an educational booth at a gem and mineral show.

Moultrie

- The Georgia District of the USGS manned an exhibit at the 25th annual Sunbelt Agricultural Exposition. The exhibit focused on ground and surface water resources of Georgia.

Illinois

Champaign

- The Illinois State Geological Survey held the 5th Annual "Natural Resources Quiz Bowl" at Jefferson Middle School. The Quiz Bowl is hosted by the Scientific Surveys of Illinois and the College of Education of the University of Illinois at Urbana-Champaign.

Indiana

Clarksville

- A Fall Fossil Festival was held in late September at the Falls of the Ohio State Park.

Indianapolis

- An after-school science club hosted by an USGS Hydrologist and his wife focused their October meeting on Earth's natural resources, groundwater, the water cycle, and recycling.

South Bend

- The University of Notre Dame hosted a meeting for first year students focusing on the environment and careers.

Iowa

Raymond

- On October 13th, a public open house was held at the Basic Materials Corporation Quarry facility. Programs included Geology of the Area by University of Northern Iowa Earth Science Department, Sand Sculpturing by Waterloo Arts Council, Quarry Operations by Basic Materials staff, and a "Find a rock, mineral, or fossil" program for school and scout groups. Basic Materials Corporation also provided Earth Science Week packets to all teachers in Black Hawk County. Field trips for schools and local rock and mineral clubs were also conducted.

Kentucky

Lexington

- The University of Kentucky Department of Geological Sciences and the Kentucky Geological Survey sponsored ESW open house

Louisiana

Baton Rouge

- The USGS outreach staff participated in an exhibition and workshop session for teachers celebrating the 10th annual “Experience Science Saturday” at Westdale Middle School.

Maine

Augusta

- Maine Earth Science Day was held on Oct 16 at the Maine State Museum.

Maryland

Baltimore

- Patuxent Research Refuge conducted tours of the Wildlife Research Center, wildlife conservations tram tours, guided nature hikes, and craft projects.

Maryland Science Center

- Four AGI Education Staff acted as visiting scientists at the museum to teach and inform children and adults about Earth Sciences.

Massachusetts

Framingham

- Framingham State College professors invited the public on a geological tour of MetroWest to discover the scientific gems of eastern Massachusetts.

Turners Falls

- The S.O. Conte Anadromous Fish Research Center held two open houses: one for local seventh grade students and one open to the public.

Woods Hole

- The U. S. Geological Survey sponsored a “GeoFest: Earth Adventures” for local students, their parents and teachers.

Michigan

Cadillac

- The Cadillac District Office of the Michigan Department of Environmental Quality held its second annual Earth Science Week open house.

Missouri

Rolla

- The U.S. Geological Survey in Rolla hosted “Geopardy”, a spin-off of “Jeopardy” for middle school students. Topics included maps, water resources, and earthquakes.

Nebraska

Hastings

- An eighth grade class at St. Cecilia’s School celebrated Earth Science Week by making model atoms and elements, viewing the superscreen movie “Caves”, and touring their local museum.

Milligan

- The fifth graders at Milligan Elementary participated in a Global Environmental Project and took field trips to Turkey Creek to collect water, sand and silt samples. They will test for nitrates, phosphates, dissolved oxygen content and e-coli content in the water, as well as recording weather conditions and signs of wildlife, counting plant populations, identifying birds, and seining for macroinvertebrates.

Nevada

- The Nevada Bureau of Mines and Geology organized public field trips. One trip went to the Eagle Picher Minerals diatomite mine and the Mopung Hills. A second trip allowed participants to search for evidence of volcanic and magmatic activity in northwest Nevada.

New Jersey

- The New Jersey Science Teacher Association, with the help of AMS and WETS programs staff, organized two workshop entitled "Water in the Earth Systems", and "Water in the Oceans".
- An Earth Science Forum addressing issues in Earth Science teaching in New Jersey was also held at the New Jersey Science Convention.

New Jersey Geological Survey

- Provided awareness to the public of the Earth Sciences by setting up a booth at the New Jersey Science Convention

New Mexico

Albuquerque

- The New Mexico Museum of Natural History and Science held special Earth Science Week events.

Las Vegas

- A geology professor at New Mexico Highlands University coordinated a number of Earth Science Week events. Events included a geology movie night, a trash pickup along Gallinas Creek, a colloquium on New Mexico's water resources, and a field trip to the Harding Pegmatite Mine.

New York

- 5th Annual Western New York Earth Science Day introduced the public to Earth Scientists and provided information about the importance of earth sciences to society and the many career opportunities that exist within the Earth Sciences.

Corning

- Guest educator Theresa Ponader led aquatic stories and experiments for school-age scientists at the Southeast Steuben County Library.

Ithaca

- The Paleontological Research Institute held a Community Kickoff to celebrate the construction of the new Museum of the Earth.

Lamont-Doherty Earth Observatory

- Held an open house.

North Carolina

Asheville

- The Colburn Gem and Mineral Museum was open to the public for free during ESW. In addition, there were special programs each day centered on this year's theme, including: 1.) Clean Water of NC presents, "All About CWNC and Stream Monitoring", 2.) Keith Bamberger, Colburn Educator, "Discovering North Carolina's River Basins" 3.) Kay McLeod, Director of Education, "Rachel Carson, How One Person Can Make a Difference", and 4.) Special Guest, "Air, Water, and Soil: the Elements of Life".

Brevard

- The Brevard College Division of Environmental Studies, Mathematics, and Natural Sciences held activities for a Cub Scout troop in their Geology Laboratory.

Wake County

- The North Carolina Museum of Natural Sciences offered a *Geology Adventure* teacher workshop that combined laboratory and field experience on October 26.

Ohio

Brunswick

- The Geology Society of Brunswick High School took a field trip to the West Branch Reservoir near Akron, Ohio to dig in the glacial clays along the shoreline for gypsum crystals.

Cleveland

- The Cleveland Museum of Natural History sponsored an Earth Science Day at the museum.

Delaware

- Highbanks Metro Park hosted exhibits, demonstrations, and geological hikes in celebration of Earth Science Week. Two educator workshops were also held at the park. The USGS held demonstrations on how to measure streamflow in the Olentangy River, water levels in a monitoring well, and stream and groundwater quality. Schools also brought classes to the park for USGS demonstrations. Other agencies collected aquatic insects and examined soil profiles in a pit dug for Earth Science Week events.

Mentor

- Students at Ridge Junior High participated in activities such as a contest with a daily Earth science question over the announcements, a "Jurassic Park" viewing party, and a star party.

Richfield

- An Earth Science Fair was held at Furnace Run Metro Park.

Oklahoma

Tulsa

- The Society of Exploration Geophysicists Geoscience Center hosted an Inaugural Girl Scout merit badge program, tours to see a special exhibit from the Tulsa Rock and Mineral Club, and a special display on energy, rocks, fossil, and minerals from the Tulsa County Library.

Pennsylvania

Lancaster

- The Department of Geosciences and the student-run Geosociety from Franklin & Marshall College hosted an Earth Science Family Night. Hands-on, inquiry-based activities were set up in the classrooms and laboratories around the Geoscience Department for the children and their families who attended.

Oxford

- A Geoscience Club was formed for ninth grade students interested in minerals at the Oxford High School. The club made a new display for all students to see. The students also practiced using GPS systems.

Philadelphia

- Workshops focusing on mapping test scores and using USGS maps and Internet sources in curriculum were conducted by the USGS at the annual National Council for Geographic Education conference.

Tennessee

Knoxville

- The Department of Geological Sciences at the University of Tennessee hosted their *3rd Annual Earth Science Fair*.

Texas

Austin

- The Austin Earth Science Week Consortium sponsored:
October 15 - Career Day Fair for middle school students. The USGS also participated in this career fair.
October 13-19 - Free group tours of rocks, minerals, and prehistoric life collections at the *Texas Memorial Museum*
October 18 - "Whiskey's for Drinking, Water's for Fighting", a lecture by Dr. Jack Sharp on the Edwards Aquifer

Houston

- The Houston Geological Society had a number of ESW activities including a Family Earth Science Festival, Family-Friendly Field Trips, "Views of the Earth" Symposium, and Classroom Connection, allowing speakers to go to local schools.

Midland

- The West Texas Geological Society sponsored 50 volunteer speakers to visit local schools. Three of the junior high schools received a 3-D presentation from the Bureau of Economic Geology's Earthview.

Utah

Salt Lake City

- The Utah Geological Survey is sponsored hands-on activities for school and educational groups in celebration of Earth Science Week.

Vermont

Burlington

- The Perkins Museum sponsored a Poster Contest: Awesome Forces that Shape the Earth!
- The Fleming Museum hosted a Geologic Resources Tours
- A field trip was held at the Vermont NEA Convention.

Middlebury

- OMYA, Inc. hosted a Quarry Open House for Earth Science Week 2002

Montpelier

- Mineral Identification Day was held at VINS October 19

State Parks at Button Bay, Mt. Pilo, Groton, and Elmore

- Hosted "Geologists in Parks" with the Geologic Survey and Society.

Waterbury

- The Vermont Geological Survey, the Vermont Geological Society, and several businesses in Vermont sponsored events during Earth Science Week.

Virginia

Arlington

- The Earth Science Division of the National Science Foundation sponsored two lectures:
 1. The Fate of the Delta of the Mississippi River: Can STC Help?, given by Gary Parker, Director, National Center for Earth Surface-Dynamics (NCED), The University of Minnesota
 2. Water: hydrologic science and sustainability in the semi-arid Southwestern U.S., given by Roger C. Bales, Deputy Director, NSF Center for the Sustainability of Semi-Arid Hydrology and Riparian Areas (SAHRA), University of Arizona

Washington

- The Washington Department of Natural Resources, Division of Geology and Earth Resources hosted live and virtual geologic fieldtrips.
- The USGS Cascades Volcano Observatory participated in Emergency Management events in Lacey, Puyallup and Tacoma.
- Co-sponsored by the USGS, the Tri-County Ground-Water Management Area, Grant, Adams, and Franklin Counties, the Washington State Department of Ecology, local conservation districts, and the EPA, homeowners in a network of water wells in Grant, Adams, and Franklin Counties sampled their own water for nitrate concentrations.

Spokane

- The USGS conducted demonstrations of how scientists measure water quantity and quality in the Spokane River and the Spokane/Rathdrum Aquifer.

Tacoma

- At the Water Monitoring Expo, USGS scientists demonstrated how to measure water flow in a river, check water levels in well, and test for chemicals present in water.

Vancouver

- USGS Cascades Volcano Observatory staff held a teacher workshop and introduced volcano curriculum activities to middle school teachers in area at risk of volcano activity.

West Virginia

Morgantown:

- Along with the Caving Club, WVU AAPG members set up a booth in the student union on campus to talk to other students about Earth science.
- WVU Student Members of AAPG visited an elementary school to teach Earth science.

INTERNATIONAL:

India

Pune

- A lecture by Dr. Kantimati Kulkarni, Department of Geology and Paleontology, Agharkar Research Institute, was held at The Science Center, Pune. The talk was titled 'Fossil trails and tracks: Insight into environment'.

New Zealand

Auckland

- A Mount Auckland field trip was led by Hugh Grenfell. A Mangere Mountain - Ihumatao Fossil Forest field trip was led by Bruce Hayward.

Manawatu

- The Palmerston North Public Library has agreed displayed of photographs and general publicity about Earth Science Week from a photographic competition with the theme "The Mountain". Te Manawa (the Manawatu Science Centre and Museum) promoted their Manawatu Gorge and rocks/fossils education programs to schools during the week. There was also a Public Lecture on an Earth Science topic of general interest.

Wellington

- Institute of Geological and Nuclear Sciences Soundings Theatre: Public lecture by Professor Alex Malahoff (Chief Executive of GNS) at Te Papa.

Australia

Australian Capital Territory

- Lecture held titled "Working with Dinosaurs" at the National Museum of Australia, Canberra
- Lecture by Artists Lyn Moore and Tracey Andrews discussing their cross-cultural journeys via the use of satellite imaging and earth sciences, at the Canberra Museum and Gallery.

- KIDS QUAKE event: primary school children will jump for 2 minutes at Parliament House, Canberra. The jump will be measured by one of Geoscience Australia's seismometers. School children from SA, WA, Tasmania and NSW will also be participating.

Tasmania

- Questacon hosted a week of 'Awesome Earth' science drama shows for kids in the Questacon Theatre.
- Geoscience Australia hosted Public Lectures: Professor Ross Taylor "Is there anyone else out there? The search for new Planets" and Schott Hochnull "Resurrecting the Rock Jock"
- Launch of Earth Science Week in Tasmania by the Hon. Michael Aird MLC - Leader of the Government in the Upper House
- Special cave tours for kids hosted at Hastings Caves State Reserve, in Southern Tasmania
- The Tasmanian Museum's Geological Gallery houses a variety of displays

New South Wales

- The NSW Division of GSA organized a talk by Dr. Armstrong Osborne Age of Fishes Museum - Fossils on the Footpath

South Australia

- In conjunction with the Geological Society, SA, the Mineral and Energy Resources Dept, SA hosted a Community Education Program about Earth Science

Victoria

- "Diamonds and planetary evolution" public lecture by Professor Ken Collerson.
- IMAX Theatre Melbourne screened a range of films throughout Earth Science and hosted special Teacher Previews.

Northern Territory

- "Out of this World in Alice Springs" Presented by Northern Territory Minerals' Council (Inc.)
- "Through Transformations to Mineral Wealth" The Museum and Art Gallery of the Northern Territory (MAGNT) and the Northern Territory Minerals Council (Inc) hosted an interactive program for students in Year 5 -9 to explore earth sciences.

United Kingdom

- The "Planet Science" website was constructed to provide hands on activities for the home and classroom with links to web sites about different rocks, minerals and fossils, earth science resources for teachers and experiments. www.planet-science.com/outthere/

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SPECIAL UPDATE: President Bush's Earth Science Week 2002 Message

(Posted 10-18-02)

This update was originally sent out as an e-mail message to AGI's member societies.

The following presidential message was released by the White House in recognition of Earth Science Week 2002, which extends from October 13th to 19th. The message joins proclamations issued by numerous state governors and city mayors.

AGI thanks President Bush for this statement and thanks all the geoscientists who have organized the many Earth Science Week activities going on across the United States and around the world.

THE WHITE HOUSE
Washington

October 17, 2002

I send greetings to those celebrating Earth Science Week, 2002, sponsored by the American Geological Institute.

The earth science industry is helping to improve the lives of Americans and people throughout the world. Dedicated and highly skilled geologists, geophysicists, and other earth and environmental scientists are working to protect and preserve our natural resources and environment. Their efforts are also keeping us safe from natural disasters and promoting our appreciation for the beauty and grandeur of nature.

During Earth Science Week, I encourage all Americans to recognize the vital role of the earth sciences in our lives, and to renew our commitment to good stewardship of the land. This year's theme, "Water Is All Around You," focuses on the importance of our natural resources and how they affect our health, our economy, and our National security.

I applaud those students interested in earth science for your hard work and dedication to this important field of study. I also commend science teachers, parents, and everyone involved for inspiring young Americans, and all our citizens, to acquire knowledge that will help shape our lives for decades to come. Your work strengthens our Nation and points the way to a brighter future for all.

Laura joins me in sending our best wishes for a successful week.

George W. Bush

http://www.agiweb.org/gap/legis107/esw_president1002.html

American Geological Institute
SPOTLIGHT
News from AGI and the geoscience community

AGI Press Release:
Geoscience Community
Plans Strategy for
Earth Science Week

FOR IMMEDIATE RELEASE
May 9, 2002

Contact: Michael J. Smith (207) 230-0046
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Geoscience Community Plans Strategy for Earth Science Week

ALEXANDRIA, VA — Increasing public understanding and appreciation of the Earth sciences is of critical importance to our Nation and to the geoscience profession. Since its inception in October 1998, Earth Science Week has been celebrated annually in every state and several countries. Through these activities, thousands of scientists, educators, and youth leaders have reached millions of students and individuals. The success of Earth Science Week and other established annual programs like National Chemistry Week, National Science and Technology Week, National Engineers Week, and Geography Awareness Week, illustrates the enormous potential these programs offer for informal public education.

Compared to these other well-established programs, Earth Science Week is just getting started and has tremendous potential for growth and improvement. On Monday, April 22, 2002 (Earth Day), 37 geoscientists and educators attended the national Earth Science Week Outreach Meeting at the U.S. Geological Survey (USGS) headquarters in Reston, Virginia. Organized by the American Geological Institute (AGI) and hosted by the USGS, the meeting provided an opportunity for attendees to hear from individuals within organizations that have been conducting successful outreach programs and to explore critical issues in geoscience outreach. These issues were: 1) defining the scope of Earth Science Week; 2) expanding participation by AGI Member Societies; 3) establishing themes for future Earth Science Weeks; and 4) improving the effectiveness of Earth Science Week.

AGI President-Elect M. Ray Thomasson opened the event by urging attendees to help AGI take Earth Science Week "to a new level." Charles "Chip" Groat, Director of the USGS, stressed the need to convey the relevance of Earth science and make it personal. Specifically, he pointed out how Earth Science Week will help accomplish these two goals. Mike Smith, AGI's Director of Education, emphasized how important the meeting was in helping AGI staff to establish a strategic plan for Earth Science Week for the next five years. During the remainder of the morning session, six presenters shared their experiences and "lessons learned" from successful outreach programming. The afternoon session featured breakout discussions focused on key questions related to the goals of the meeting, on how participants might contribute to the overall Earth Science Week program in the coming year, and the role that they will play in implementing Earth Science Week activities in their organizations and geographic regions.

A significant outcome from the meeting was the adoption of the theme "Water is All Around You" for 2002 Earth Science Week. With a theme identified, AGI can better utilize the many suggestions generated during the working group sessions to expand and improve communication, collaboration, and implementation of Earth Science Week programming. Visit <http://www.earthscienceworld.org/week/> for

the latest news and information about Earth Science Week, including the complete report on the April 22 meeting.

The American Geological Institute is a nonprofit federation of 40 geoscientific and professional associations that represent more than 120,000 geologists, geophysicists, and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in mankind's use of resources and interaction with the environment. More information about AGI can be found at <http://www.agiweb.org>. The Institute also provides a public-outreach web site, <http://www.earthscienceworld.org>.

American Geological Institute

SPOTLIGHT

News from AGI and the geoscience community

AGI Press Release:
AGI Initiates Contests for
Earth Science Week

FOR IMMEDIATE RELEASE
August 22, 2002

Contact: Michael J. Smith (207) 230-0046
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AGI Initiates Contests for Earth Science Week

ALEXANDRIA, VA — The American Geological Institute (AGI) is pleased to announce the launching of three national contests designed to inspire citizens to get involved in Earth Science Week. The 2002 Earth Science Week celebration will take place October 13-19, and will focus on the theme, "Water is All Around You." The contests coincide with the debut of a new Earth Science Week web site, <http://www.earthsciweek.org>. Each of the three contest categories – Photography, Art, and Writing – encourages participants to take a unique perspective on the water theme. All entries must be postmarked by October 1, 2002. Cash prizes will be awarded to the Grand Prize winner in each contest. Winners will be announced during Earth Science Week and posted on the Earth Science Week web site.

Entries in each contest will be judged by a panel of geoscientists and teachers. Contestants of all ages are invited to submit photographs to the Earth Science Week Photography competition. Entries are to capture some aspect of the Earth or Earth sciences. The Grand Prize photograph will be included in the 2003 Earth Science Week logo and will be published in a future issue of *Geotimes* magazine. Elementary-school students in grades K-6 are eligible to participate in the Earth Science Week Art Contest. Drawings, paintings, or other two-dimensional artwork depicting the theme, "Water World," will be considered. Winning entries in this category will be displayed at AGI and at the national headquarters of the U.S. Geological Survey near Washington, DC. The Earth Science Week Essay contest is open to secondary-school students in grades 7-12. Entitled "A Day in the Life of a Water Molecule," entries are limited to 500 words and are to be creative works that focus on the ways in which water molecules move through the water cycle and affect the Earth. The First Prize essay will be published in a future issue of *Geotimes* magazine and finalists will be featured on the Earth Science Week web site.

Visitors to the Earth Science Week web site, <http://www.earthsciweek.org>, will find complete descriptions of each contest, entry forms, and other information about getting involved in Earth Science Week events. The site includes information about water and water resources, listings of Earth Science Week activities planned across the country, and contact information for Earth science resources in each state. In addition, visitors can join in a discussion forum or a listserve to share ideas for planning Earth Science Week events, and they can find links to ideas for Earth Science Week activities for the classroom that comply with the National Science Education Standards.

AGI established Earth Science Week in 1998 to give students and citizens new opportunities to discover the Earth sciences and to encourage stewardship of the Earth. It highlights the important contributions that Earth and environmental sciences make to society and invites the public to become engaged in current scientific exploration. Organizers emphasize a different facet of Earth science each year. In 2002, Earth Science Week focuses on one of the most important natural resources on our Earth – water. This year, AGI's efforts to coordinate Earth Science Week are supported by generous grants from the U.S. Geological Survey and the American Association of Petroleum Geologists Foundation.

The American Geological Institute is a nonprofit federation of 40 geoscientific and professional associations that represent more than 120,000 geologists, geophysicists, and other Earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in mankind's use of resources and interaction with the environment. More information about AGI can be found at <http://www.agiweb.org>. The Institute also provides a public-outreach web site, <http://www.earthscienceworld.org>.

SPOTLIGHT

News from AGI and the geoscience community

FOR IMMEDIATE RELEASE
October 24, 2002

Contact: Michael Smith: (207)230-0046
E-mail: mjs@agiweb.org

AGI Announces the Winners of Earth Science Week Contests

ALEXANDRIA, VA — The American Geological Institute is proud to announce the winners of three Earth Science Week contests. These contests were designed to encourage students and the public to participate in this annual celebration which recognizes the importance of Earth sciences in our lives. This year's contests included an art contest for elementary school children, an essay contest for secondary school students, and a Photography Contest open to all ages. Winners in each contest were selected from more than 450 entries.

The winner of the Art Contest, featuring the theme "Water World," is Janet Jonasson's First Grade Class at Madison Elementary School in Indio, CA. Their collective artwork, entitled "Water: Every Drop Counts," was displayed during Earth Science Week, October 13-19, at the U.S. Geological Survey's headquarters building outside Washington, DC. The winner of the essay contest, "A Day in the Life of a Water Molecule," is Grier Simmons, age 13, of Iron Station, NC. His essay, "Drizzle's Day," will be published in a future issue of *Geotimes*, AGI's monthly newsmagazine of the Earth sciences. The winner of the Photography Contest is Ray Kenny of Durango, CO, who submitted a photograph taken at Willis Creek in southeastern Utah. This winning photograph will also be published in a future issue of *Geotimes*. Winning entries and finalists for each of these three contests can be viewed by visiting the Earth Science Week web site, <http://www.earthsciweek.org>.

This year's Earth Science Week celebration was a tremendous success, with events held in more than 30 cities across the U.S. and in several countries. Earth Science Week 2002 was officially proclaimed by 19 states and was recognized by President George W. Bush. "The Earth science industry is helping to improve the lives of Americans and people throughout the world. Dedicated and highly skilled geologists, geophysicists, and other Earth and environmental scientists are working to protect and preserve our natural resources and environment. Their efforts are also keeping us safe from natural disasters and promoting our appreciation for the beauty and grandeur of nature," wrote President Bush.

The theme for Earth Science Week 2002 was "Water is All Around You," emphasizing the importance of water as one of the Earth's greatest natural resources. This theme coincided with the declaration of 2002 as the Year of Clean Water, marking the 30th anniversary of the Clean Water Act.

The goal of Earth Science Week is to increase the public's understanding of geology and the Earth sciences so that citizens can make informed decisions concerning land management and use, address environmental and ecological issues, prepare for and recover from natural disasters, and appreciate the beauty and wonder of the natural world. This annual event, celebrated during the second full week in October, offers students opportunities to discover the Earth sciences and provides geoscientists and Earth-science organizations the opportunity to share their knowledge and enthusiasm about the Earth and how it works.

To participate in future Earth Science Week celebrations, visit the Earth Science Week web site at <http://www.earthsciweek.org> or contact Cynthia Martinez, Earth Science Week Coordinator, at (703) 379-2480 ext. 227 or cmm@agiweb.org.

The American Geological Institute is a nonprofit federation of 40 scientific and professional associations that represent more than 100,000 geologists, geophysicists, and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in mankind's use of resources and interaction with the environment. More information about AGI can be found at <http://www.agiweb.org>. The Institute also provides a public-outreach web site, <http://www.earthscienceworld.org>.

USGS
science for a changing world

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Earth Science Week

October 13-19, 2002

Water is all around you

Director's Message

Local Activities

National Water Monitoring Day
October 18

Learn how to participate

Celebrate the year of clean water

"Water is All Around You" is this year's theme for Earth Science Week (ESW), an annual event sponsored by the American Geological Institute and its member organizations. This year's event coincides with National Water Monitoring Day, October 18, sponsored by America's Clean Water Foundation.

The science of the USGS benefits lives in countless ways; Earth Science Week is a great opportunity to increase public awareness of the diversity of scientific expertise within the USGS and the ways in which USGS contributes to the health and vitality of citizens, communities, our Nation and our world. Take an online journey through the wealth of natural science information available from the USGS in its web pages.

For more information, contact: Karen Wood or Gail Wendt

Director's Message | Activities | USGS WWW Links | National Water Monitoring Day

U.S. Department of the Interior, U.S. Geological Survey, Reston, VA, USA

URL <http://www.usgs.gov/earthscience/index.html>

Contact: USGS Web Team

Last modification: 30-Sep-2002@17:42

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USGS Activities In Your State



USGS online resources, activities, and events in support of Earth Science Week will be featured here as they are available. Check back frequently to see what's happening.

[Arizona](#) | [California](#) | [Colorado](#) | [Florida](#) | [Georgia](#) | [Louisiana](#) | [Massachusetts](#) | [Ohio](#) | [Pennsylvania](#) | [Texas](#) | [Washington](#)

Arizona

Open House at Flagstaff Field Center

Contact: [Sue Priest](#)

The USGS Flagstaff Field Center will host an Open House on September 28, 2002, from 9:00 am - 3:00 pm featuring exhibits, interactive activities and tours of the facility as part of Earth Science Week and the Flagstaff Festival of Science.

Highlighted will be the public opening of our newest building - the Shoemaker Center for Astrogeology in which visitors can take a walk through the solar system, participate in planetary activities, and learn about USGS participation in space research. In addition, visitors will learn about more geology, mapping, biology and water resources. USGS scientists will doing presentations at local schools during the week.

Workshop for K-12 Educators To Focus on Internet Mapping Tools

Contact: [Joseph Kerski](#)

USGS geographer Joseph Kerski will conduct a workshop at the University of Arizona, October 2, 2002, for K-12 educators from across the state as part of the University of Arizona's Sherrill Scholar Program. The workshop, will focus on the use of Internet mapping tools that offer USGS data, such as topographic maps and aerial photographs through Terraserver, biological, water resources, and earth science-related maps through The National Atlas, and near real-time wildfire maps

through GeoMac.

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California

USGS Participates in Community Event to Promote Earth Science as a Community Resource

Contact: [Liz Colvard](#)

The USGS will participate in an event in Visalia, Calif., October 16, sponsored by a California business group to promote what the City of Menlo Park -- where the USGS resides -- has to offer. The USGS is providing "gift baskets" of free, publicly available USGS products to demonstrate the breadth and benefits of natural science information available to the public from the USGS as a partner in the local community.

Field-trip to the San Andreas Fault (for teachers)

Contact: [Phil Stoffer](#)

On Sunday, October 13, USGS geologist Phil Stoffer will be leading a field trip for teachers to examine the San Andreas Fault in the Santa Cruz Mountains in the Mid-Peninsula region between San Francisco and San Jose. Stops will include a walk along the "Earthquake Trail" at Las Trancos, visits to a quarry, sag pond, and overlooks in the Monte Bello preserve, and a tour of outcrops throughout the Russian Ridge natural area (all within several miles of each other). Invited participants include K-12 teachers and park docents affiliated with the Bay Area Earth Science Institute (BAESI) and Bay Area Schools for Excellence in Education (BASEE). The 8am-5pm trip will involve hiking about 4 miles, and will include introduction to interpreting USGS topo maps and geologic maps, geology-ecology relationships, and evaluation of a paleoindian archeological site. Participants can earn college credit for participation through San Jose State University.

Drawing Contest and Activities at KidSpace Museum

Contact: [Wendy Shindle](#)

The USGS Pasadena Earthquake Hazards office is sponsoring a drawing contest for Pasadena U.S.D. elementary students in celebration of Earth Science Week. Prizes include USGS earthquake posters, lanyards, and more! Winning entries will be displayed in KidSpace Museum and the winning pictures and the artist's names will also be posted on the USGS Pasadena website during Earth Science Week.

In addition, the USGS Pasadena office will be leading two Earth Science activities for kids at KidSpace Museum in Pasadena. October 17, 6:45-7:45 PM and October 19, 1:00-2:00 PM.

USGS Exhibits at California State University Sacramento Campus

Contact: Dale Cox

Earth science exhibits and displays detailing USGS research in California will be on display October 15-18 at the California State University Sacramento Campus. Model volcanic eruptions staged periodically throughout the day.

USGS Scientists Visit Congressional Staff

Contact: Dale Cox

On October 15 and 16 USGS scientists will meet with staffers of congressional offices, including Rep. Howard Berman, Rep. Brad Sherman, Rep. Henry Waxman, and Rep. Hilda Solis to discuss on-going USGS integrated earth science research in the Los Angeles area.

USGS Lake Tahoe/Truckee River Streamgauge Dedication

Contact: Dale Cox

On October 18, USGS in coordination with the Tahoe City Public Utilities District will dedicate a newly remodeled streamgauge situated in a recently redesigned park and bike path area. Exhibits, displays, and streamflow monitoring demonstrations as part of National Water Monitoring Day.

USGS Demo Streamgaging

Contact: Dale Cox

USGS scientists will demonstrate streamgaging to children of the Pala and the La Jolla reservations on October 18 in coordination with the EPA, Department of Interior, and San Diego State University.

USGS Conducts Water Sampling Activities for Indian Reservation schools

Contact: Ronald Fay

USGS water quality technician Ronald Fay and scientist emeritus Eleanora Robbins will conduct water sampling activities for students at several southern California Indian reservation schools in conjunction with National Water Monitoring Day and Earth Science Week. Included are fourth graders from the Casita Center Science and Technology Magnet School in Vista; and, pre-school children from the La Jolla Reservation Head Start program, who will measure the

San Luis Rey River on their reservation. Students will also tour a USGS water-quality van and see how testing equipment is used to sample water quality.

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Colorado

GIS in the Rockies Conference

Contact: [Joseph Kerski](#)

USGS scientists will conduct a workshop and host an exhibit at the 2002 "Geographic Information Systems in the Rockies" conference October 7-11, 2002 at Denver's Merchandise Mart. The workshop will focus on helping data users make effective use of USGS spatial data for decision making within a geographic information system. In addition, the USGS will highlight its mapping liaison work in Colorado, homeland security, wildfire mapping, and The National Map. Over 750 GIS professionals and university students are expected to attend.

Tour the USGS Mapping Center in Denver, Colorado

Contact: [Joseph Kerski](#)

During Earth Science Week, the USGS will conduct tours for educators and students of its Rocky Mountain Mapping Center facility in Denver, where over 50 million maps, books, CDs, and other resources useful for Earth Science teaching are housed. In addition the USGS will distribute posters, lesson plans and other materials on such topics as water quality, global change, land use, Chronic Wasting Disease, West Nile Virus, invasive weeds, and natural hazards. Demonstrations will be provided on ground water, soil erosion, and how USGS scientists measure the amount of water flowing in a river. There will be daily drawings for prizes that include Geode stones and a variety of popular posters and maps.

Hours are 8:00 am to 4:00 pm Tuesday through Friday, closed on Monday Oct. 14th

USGS Research Featured at Geological Society of America Conference

Contact: [Joseph Kerski](#)

The USGS will present results of its earth science-related research and distribute information in several USGS exhibits at the Geological Society of America conference, on October 27-30, 2002, at Denver's Colorado Convention Center. Over

10,000 researchers, educators, and scientists are expected to attend.

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Florida

Visit the USGS Stream Gage in Tampa, Florida

Contact: [Yvonne Stoker](#)

The USGS will be demonstrating water quality sampling techniques, state-of-the-art discharge measurement techniques, continuous water monitoring gages, and the USGS real-time water monitoring network on the banks of the Hillsborough River in downtown Tampa, October 18 as part of Earth Science Week and National Water Monitoring Day. The event will include live discharge measurements using a Broad Band Acoustic Doppler discharge system with real-time display of results on laptop computers; demonstration of the water quality sampling protocol; tours of a specialized water quality sampling vehicle; a display of laptop computers with links to the USGS real-time water network; and demonstration of a working USGS gage.

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Georgia

USGS Exhibit at Sunbelt Agricultural Exposition

Contact: [Nancy Barber](#)

The USGS Georgia District will man an exhibit at the 25th annual Sunbelt Agricultural Exposition in Moultrie, Georgia, October 15-17, 2002. The exhibit will use the Earth Science Week theme and materials of "Water Is All Around You", and will include information on ground- and surface-water resources of Georgia and on various USGS activities of interest to the agricultural community and the residents of Georgia and neighboring States. The Sunbelt Agricultural Exposition (<http://www.sunbeltexpo.com/>) typically attracts 200,000 visitors from around the world, and is billed as North America's premier farm show.

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Louisiana

USGS Pariticipates in "Experience Science Saturday"

Contact: Cheryl A. Johnson

On Saturday, October 12, the USGS outreach staff will participate in a combined exhibition/workshop session for teachers celebrating the 10th Annual "Experience Science Saturday" at Westdale Middle School in Baton Rouge. The Louisiana District has participated in this event as an exhibitor for three years. This program is sponsored by the Louisiana Resource Center for Educators (LRCE) and has trained more than 5,000 teachers and impacted over 150,000 students within the last ten years.

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Massachusetts

Open House at the Conte Anadromous Fish Research Center

Contact: Stephen Rideout

The Conte Anadromous Fish Research Center located in Turner Falls will be holding an Open House, October 3-5 in celebration of Earth Science Week. More than 150 students from the Great Falls Middle School in Turners Falls will visit the Center October 3-4. On Saturday, October 5, the public is invited to attend the Open House, from 10 a.m. to 4 p.m. The Saturday event also coincides with the Connecticut River Watershed Council's "Source to the Sea" river clean up, as well as with a proposed ribbon cutting ceremony to dedicate the site Master Plan implementation for the Great Falls Discovery Center, a collaborative effort between the Massachusetts Department of Environmental Management, U.S. Fish and Wildlife Service, Massachusetts Department of Fish and Wildlife, Northeast Utilities, the Town of Montague and the USGS.

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Ohio

Measuring Water Quality and Quantity at Highbanks Metro Park

Contact: Mike Eberle

The USGS will be demonstrating how to measure streamflow in the Olentangy River, water levels in a monitoring well, and stream and ground-water quality, all at Highbanks Metro Park on October 13, from 1:00 to 4:00 p.m to celebrate Earth

Science Week. Park personnel will be leading geology hikes and collecting benthic invertebrates in the Olentangy. The Franklin and Delaware County Soil and Water Conservation Districts will lead park visitors through a soil-profile pit and explain how soil horizons develop. The Ohio Department of Natural Resources, along with various other agencies and organizations, will have exhibits, distribute educational earth-science materials, and lead fun activities for kids and adults.

Highbanks Metro Park is located north of Columbus at 9466 Columbus Pike (US Route 23-N), Lewis Center, OH 43035. From I-270, take U.S. 23 north about 3 miles. Entrance to park in on the left, just before Powell Road.

School Field Trips, K-8 students at Highbanks Metro Park

Contact: Mike Eberle

The USGS will measure ground-water flow using a sand-tank model and demonstrate how to measure streamflow in the Olentangy River, water levels in a monitoring well, and stream and ground-water quality at one of several "education stations" at Highbanks Metro Park on October 16, from 9:30 a.m. to 4:30 p.m. Other agencies will be collecting aquatic insects and examining soil profiles in a pit dug especially for Earth Science Week events.

Highbanks Metro Park is located north of Columbus at 9466 Columbus Pike (US Route 23 N), Lewis Center, OH 43035. From I-270, take U.S. 23 north about 3 miles. Entrance to park in on the left, just before Powell Road.

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Pennsylvania

National Council for Geographic Education Conference

Contact: Joseph Kerski

The USGS will conduct workshops and host an exhibit at the 2002 annual conference of the National Council for Geographic Education (NCGE) being held October 16-18, 2002 in Philadelphia, PA. The NCGE is the largest professional geographic education association in North America with over 3,000 members. The workshops will focus on mapping test scores and using USGS maps and Internet resources in the curriculum for the over 800 teachers who are expected to attend the conference. The USGS will distribute maps, lesson

plans, posters, and CDs on such topics as global change, land use, invasive weeds, population, floodplains, and natural hazards.

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Texas

USGS Participated in Earth Science Career Day at Bureau of Economic Geology

Contact: [Dee Lurry](#)

On October 15, 2002, approximately 300 middle school children will attend an Earth Science Career Fair at the University of Texas' Bureau of Economic Geology. As part of the planned activities, staff from the USGS district office in Austin will lead kids through the popular Water Jeopardy game. Many state and Federal agencies as well as consultants and non-profits participate in the annual event created to get young people to consider earth science as a career choice.

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Washington

USGS Hosts Teacher Workshop Focusing on Volcano curriculum

Contact: [Carolyn Driedger](#)

Staff from the USGS Cascades Volcano Observatory will hold a teacher workshop and introduce volcano curriculum activities to middle school teachers in areas at risk from volcano hazards, on October 5th. The Mount Rainier curriculum "What to do with a Volcano in your backyard" is being assembled collaboratively by the USGS Volcano Hazards Program, the National Park Service, and by teachers in four school districts located in areas at risk. This full-day workshop will provide approximately 20 teachers from a broader area a chance to test the activities and make final comment before the curriculum is placed on the Internet in 2003.

The USGS Cascades Volcano Observatory (CVO) participates in Emergency Management Events

Contact: [Carolyn Driedger](#)

The USGS-CVO will participate at Emergency Management events in Lacey, Puyallup and Tacoma, and will display exhibits about Mounts Baker, Rainier and Glacier Peak. Volcano posters

and cutouts are two of the most popular items selected by children at these events.

Aquifer and River Open House in Spokane

Contact: John Clemens

On September 28, USGS will conduct demonstrations of how scientists measure the water quantity and quality in the Spokane River and the Spokane/Rathdrum Aquifer. Exhibits will show how sound waves are used to find the bottom of the aquifer. Two wells will be used to show aquifer water quantity and quality. Information about water will be available from local water companies, Washington State Department of Ecology, Spokane County, and others. Fun, water-related activities for children, including an Aquifer Protection Poster Contest. Co-sponsored by USGS, Spokane Aquifer Joint Board, Washington State Department of Ecology, and Spokane County.

USGS Participates in Water Monitoring Expo in Tacoma

Contact: John Clemens

On October 18, USGS scientists will provide demonstrations of how USGS scientists measure the amount of water flowing in a river, check the water level in a well, and test for chemicals in water at the Water Monitoring Expo being held in downtown Tacoma. A USGS water-quality mobile lab and equipment will be on display. For updated information, see the Web page at <http://wa.water.usgs.gov/monitor/>. Co-sponsored by the USGS, the University of Washington-Tacoma, and Pierce County Stream Team.

Test Your Well Water

Contact: John Clemens

On October 14-18, homeowners in a network of more than 600 water wells in Grant, Adams, and Franklin Counties, in eastern Washington will sample their own well water to be tested for concentrations of nitrate. Nitrate test kits will be distributed in the communities' grocery stores. Co-sponsored by USGS; the Tri-County Ground-Water Management Area; Grant, Adams, and Franklin Counties; Washington State Department of Ecology; local conservation districts; and the U.S. Environmental Protection Agency.

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What's happening this year?

Earth Science Week

October 13–19, 2002

What will YOU do to enhance geoscience awareness in your community this year?



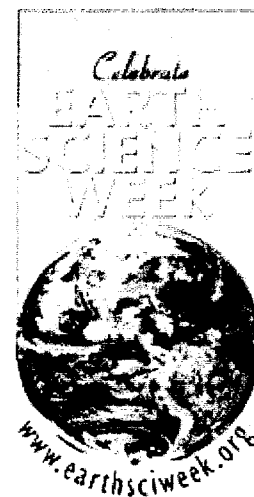
Lecture Series

What is Earth Science Week?

Earth Science Week, the second full week in October, is an annual celebration of the contribution geoscience makes to society. The resolution to establish Earth Science Week was initiated by the Association of American State Geologists and was read into the Congressional Record in July 1998 by Senator Ron Wyden of Oregon.

Read the message from President Clinton (2000) encouraging all Americans to participate in Earth Science Week activities. The promotion of Earth Science Week is one of the 50th anniversary initiatives of the American Geological Institute (AGI), of which GSA is a member.

GSA urges each of you to set aside at least one day during Earth Science Week to reach out to your community and promote the creation of a conscientious society committed to the responsible use of Earth and its resources. Write to your Elected Officials! GSA member participation in Earth Science Week activities will help implement GSA's goal to support geoscience in the service of society. This site provides information and ideas to assist you in planning your Earth Science Week activities.



For more information and resources, visit AGI's Earth Science Week Web site.

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Last Revised on October 17, 2002

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NSTA Calendar

October 2002

through

November 2002

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Oct 18 2002 - Earth Science Week 2002

"Water Is All Around You" is the theme of this year's Earth Science Week, organized by the American Geological Institute (AGI). The event is held in the second week of October to celebrate the contributions of geosciences to society. Via AGI's website (see below), you can order an information kit, find out about local and regional activities, and invite a geoscientist to your classroom. Teachers and curriculum coordinators should follow the Participate! link for ways to get students involved. View pictures of the Earth at "Earth Data—A Current View of the Earth" (www.earthscienceworld.org/data). This page features news events, links to satellite images of the Earth, and the prices of various Earth resources. Many additional K–12 earth science activities can be found at www.earthscienceworld.org/activities/wrapper.html?page=index.html. U.S. Geological Survey online resources, activities, and events in support of Earth Science Week will be featured as they are available on www.usgs.gov/earthscience/activities.html. Check back frequently to see what's happening. Many of the National Parks will be hosting Earth Science Week Events. These events provide opportunities to learn about earth science and its place in the National Parks. The website www.aqd.nps.gov/grd/esw/events.htm allows you to search for events by park name and lists parks holding events in alphabetical order. Another section of the site (www.aqd.nps.gov/grd/esw/activities.htm) contains educational activities that can be done during Earth Science Week.

Website: [Click here](#)

Cost:

Deadline: -

Region

- All Regions
- Canada
- Central
- International
- North
- North
- South
- South

Event

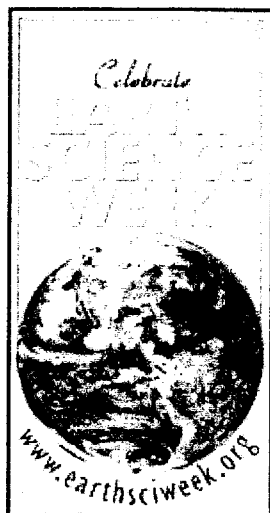
- All Categories
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Earth Science Week and SEG

October 13-19, 2002

As SEG members, we can join the celebration and:

- Give students opportunities to discover the Earth Sciences
- Publicize the message that Earth Science is all around us
- Encourage stewardship of the Earth
- Share your knowledge and enthusiasm about the Earth

To more easily enable you to make presentations to your local Elementary School about Exploration Geophysics, we have prepared several PowerPoint slide sets for you that have a basic introduction to geophysics and to petroleum exploration. Electrical, Magnetic, Gravity, and Seismic methods are covered in the geophysics slide set along with fun experiments that you can use to help keep the kids interest.

You will find that these K-12 slide sets are available in many languages!

SEG K-12 Slide Sets

Please join us in participating in this worthwhile and exciting event!

To find out more about Earth Science Week, look at

**American Geological Institute
Earth Science Week WEB Page**

Date: 22 October 2002

To: Department of Geological Sciences and Other Participants
in ASU Earth Science Day 2002

From: Jim Tybureczy and Tom Sharp, Earth Science Day 2002 Coordinators

Re: Earth Science Day 2002- Thank you for all your help

ASU Earth Science Day 2002 was sponsored by the Department of Geological Sciences on Saturday, October 19, 2002. We counted a total of 939 parents, children, teachers, and other visitors at the reception table so we estimate that total attendance was over 1000 people, an increase of over 50% from last year's attendance. The more than 30 activities, booths and demonstrations were very well received by all the visitors who attended. I would like to extend our sincerest gratitude to all who helped make this a very special event. Earth Science Day embodies much of what is very special and unique to our Department and that is a deeply held commitment to outreach and a productive collegiality that allows us all to work together toward this worthy goal. It was great working with all of you to put on this event.

Large numbers of students and faculty from the Department of Geological Sciences, including undergraduates, volunteered. I cannot name all who helped, but I am very very grateful for all the effort put out to help with this event. All our staff put forth great efforts as well. The Space Photography Lab Open House coordinated by David Williams and Charles Hewett, was, as always, a great foundation for the event, the MARS TES Outreach group headed by Sheri Klug brought a slew of great activities and enthusiasm, Astrobiology put on a great show coordinated by Becky Davis and the ASU Robert S. Dietz Geology Museum supervised by Brad Archer was a very popular attraction. The Department of Geography brought student volunteers, a number of faculty and staff participants, and a great set of activities all outstandingly coordinated by Maria Farmer. The NASA Space Grant group from Mechanical and Aerospace Engineering brought their Moon Buggies and their 3-Corner Satellite with student volunteers as well. Volunteers from the Center for Environmental Studies 'Ecology Explorers' program participated as did 'Lucy' and volunteers from the Institute of Human Origins. Conrad Storad of ASU Research Publications provided copies of the 'Chain Reaction' and 'ASU Research' magazines and other freebies. We thank you all for your efforts and support of ESD 2002. If anyone has photographs of ESD 2002, we'd like to see them and to get some of them up on our web site. Ramon Arrowsmith has already put some of the Balloon Aerial Photography photos up on his site at http://activetectonics.la.asu.edu/Earth_Sci_Day_02_Balloon_Photos/

Many people contributed extra special efforts to our success this year. The front office staff did an outstanding job of coordinating the pre-event mailers, planning for the event in the month's leading up to it, reproducing thousands of flyers, tracking down last minute supplies, making sure that the refreshments for volunteers appeared at the proper time and place. In addition to all that work, Del Schrag and Mary Lemon (and her husband and son!) made big contributions during the fun on Saturday, too! Behind the scenes, Cammy Cecil made sure that everything was progressing smoothly. Maria Farmer and Cammy did a great job in organizing food and refreshments. Chris Skiba took care of the physical plant needs outstandingly, and Sue Selkirk anticipated our every need in providing signs, banners, and other graphic needs. Joan Bahamonde got our web page up and running and helped keep the computer and A/V efforts on track.

Geological Sciences students provided huge amounts of time and effort that made the whole event successful. The Geology Club, coordinated by Matt Hansen and Mimi Diaz, was very visible and helpful. The Club provided the free rock and minerals samples for kids, and had a successful mineral and refreshment sale. Students put in huge amounts of effort in every facet of Earth Science Day and the Department thanks you all very very much.

Our pre-event publicity consisted of (1) direct mailings to teachers and parents on the Departmental, Space Photography Lab, MARS TES, and Arizona Science Teacher's Association (AzSTA) mailing lists; we are very grateful to these groups for sharing their data with us, (2) the announcement on our web page, (3) and announcements in the ASU Insight and the Arizona Republic.

The dates for next year's national Earth Science Week (sponsored by the American Geological Institute, <http://www.agiweb.org/>) have not been announced yet. We will be on the lookout for new ideas and activities to include.

Very few events on campus involve such a high degree of participation from a department. And the fact that we've done this for 5 years now is testament to our commitment to community outreach and to the presentation of the best face of ASU to the public. We appreciate your support and help in putting on Earth Science Day, especially the great amount of time and effort that the students and our staff put in to it. It could not be done without support and participation from the entire Geological Sciences Department! Thank you and congratulations for a job well done!



WILDLIFE PARKS WATER GEOLOGY OIL & GAS LAND MINING FO

Colorado

News Release: The Colorado Geological Survey announces ESW



News about Colorado's Natural Resources



10/8/2002

Colorado Geological Survey

The Colorado Geological Survey announces Celebration of the Fifth Annual Earth Science Week

*Governor Bill Owens has declared that October 13-19th is **Earth Science Week in Colorado**. "Earth sciences are integral to finding, developing, and conserving mineral, energy, and water resources; to providing the basis for preparing for and mitigating natural hazards such as landslides, floods, earthquakes, and expansive soils; and are critical to environmental and ecological issues ranging from water and air quality to waste disposal"*

News Release

For Immediate Release

October 2, 2002

News Contact: Vince Matthews
(303) 866-2611

The Colorado Geological Survey announces Celebration of the Fifth Annual Earth Science Week

Governor Bill Owens has declared that October 13-19th is **Earth Science Week in Colorado**. "Earth sciences are integral to finding, developing, and conserving mineral, energy, and water resources; to providing the basis for preparing for and mitigating natural hazards such as landslides, floods, earthquakes, and expansive soils; and are critical to environmental and ecological issues ranging from water and air quality to waste disposal", explains Governor Owens. He further stated that understanding the geological factors of resources, hazards, and environment are vital to land management and land use decisions made in Colorado.

Earth scientists across Colorado and the country will celebrate Earth Science Week by leading field trips, visiting classrooms, and engaging in other special activities. Two field trips, free to the public, will be offered and led by the geologists at the Colorado Geological Survey. The mineral resources of the Front Range area will be the focus of a field trip along the Front Range on Saturday, October 12th. The world famous Purgatoire River dinosaur trackway near La Junta will be the subject of a field trip in the southeast part of the state on Saturday, October 19th. A talk entitled "Avalanche Safety in Colorado" is jointly sponsored by the Colorado Geological Survey, the Geological Society of America, and REI. Presenting the talk will be Halsted Morris, Avalanche Safety Course Instructor and Field Observer, Colorado Geological Survey, Colorado Avalanche Information Center (CAIC). The lecture is on 10/19/2002 from 2:00-3:00 p.m. at the REI flagship store.

For further information visit <http://geosurvey.state.co.us/> or call 303-866-2611.

<http://www.dnr.state.co.us/news/press.asp?pressid=2119>

SUBJECT: Earth Science Week 2002 Activities from USGS Rocky Mountain
Mapping Center - Submitted by Joseph J. Kerski from . on 8/19/02 2:03:00 PM

During Earth Science Week, the USGS will conduct tours for educators and students of its Rocky Mountain Mapping Center facility in Denver, where over 50 million maps, books, CDs, and other resources useful for Earth Science teaching are housed.

USGS Geographer Joseph Kerski will conduct a workshop for K-12 educators from across Arizona through the University of Arizona's Sherrill Scholar Program. The program brings together geography teachers from across the state and geography instructors from across the country for the purpose of expanding the use of geography throughout the curriculum. Kerski's workshop on 2 October 2002 will focus on the use of Internet mapping tools that offer USGS data, such as topographic maps and aerial photographs through Terraserver, biological, water resources, and earth science-related maps through The National Atlas, and near real-time wildfire maps through GeoMac.

USGS scientists will conduct workshops and host an informational exhibit at the 2002 "Geographic Information Systems in the Rockies" conference from 7-11 October 2002 at Denver's Merchandise Mart. The workshops will include one from Geographer Joseph Kerski that helps data users make effective use of USGS spatial data for decision making within a geographic information system. In addition, the USGS will highlight its mapping liaison work in Colorado, homeland security, wildfire mapping, and The National Map at the conference. Over 750 GIS professionals and university students are expected to attend.

The USGS will conduct workshops and operate an informational exhibit at the 2002 annual conference of the National Council for Geographic Education (NCGE), 16-18 October 2002, in Philadelphia, Pennsylvania. The NCGE is the largest professional geographic education association in North America with over 3,000 members. The workshops will focus on mapping test scores and using USGS maps and Internet resources in the curriculum for the over 800 teachers who are expected to attend the conference. The USGS will distribute maps, lesson plans, posters, and CDs on such topics as global change, land use, invasive weeds, population, floodplains, and natural hazards.

The USGS will present results of its earth science-related research and distribute information in several USGS exhibits at the Geological Society of America conference, 27-30 October 2002, at Denver's Colorado Convention Center. Over 10,000 researchers, educators, and scientists are expected to attend.

Joseph J. Kerski, Ph.D. Geographer: Education/GIS US Geological Survey Building 810 - Entrance W-5 - Room 3000 Box 25046 - MS 507 Denver CO 80225-0046 USA	jjkerski@usgs.gov Voice 303-202-4315 Fax 303-202-4137 http://rockyweb.cr.usgs.gov/public/outreach/
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University of Kentucky

**Department of Geological Sciences
Kentucky Geological Survey**

**Earth Science Week - Open House
Wednesday 6-8 p.m. October 16, 2002**

Plan to attend our annual open house during Earth Science Week.

**Location: Slone Building and Mining and Minerals Building
(KGS Building) on the UK campus**

Activities will include The Rock Pile (start your own rock and mineral collection), groundwater activities, rocks under the microscope, fluorescent mineral display, and seismology demonstration.

**For more information on national Earth Science Week, please
go to**

<http://www.earthsciweek.org/>



EXHIBITS

- SpaceLink Main Page
- Exhibit Components
- Latest Space News
- Live Events
- Fun Space...Games & More
- For Educators
- About SpaceLink
- SpaceLink Calendar



Earth Science Celebration

October 18-19, 2002

Hundreds of students visited SpaceLink during our celebration of Earth Science Week, October 18-19, 2002. Science educators from the American Geological Institute (AGI) were present during the celebration to share their knowledge about Earth Science with our visitors.

- Friday, October 18, from 11 AM to 2 PM:
Tom Johnson and Abi Howe
- Saturday, October 19, from 1 PM to 3 PM:
Cindy Martinez and Mark Carpenter

While here, AGI educators gave away Earth Science Week commemorative posters, balloons, and bookmarks. They also had available sample rocks and tools used in the field. This year's theme was *Water is All Around Us*.



This year marked the fifth annual national Earth Science Week celebration. October 18 was also National Water Monitoring Day.

Internet Links

American Geological Institute
Official page for the American Geological Institute.

Earth Science Week
Official web site for Earth Science Week.

National Water Monitoring Day
Official page for the National Water Monitoring Day event.

Sound Waves

Coastal Science & Research News from Across the USGS

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Outreach

Sound Waves

October 2002

[print this issue](#)**Woods Hole Field Center to Celebrate Earth Science Week****By Kate Visser**

October 2002

in this issue:

[previous story](#) | [next story](#)

National Earth Science Week runs from October 13 to 19, and the U.S. Geological Survey (USGS) in Woods Hole, MA, is inviting local students (in kindergarten through eighth grade), along with parents and teachers, to an Earth Science Week celebration entitled "GeoFest: Earth Adventures." Earth Science Week is celebrated annually to increase public awareness and understanding of the Earth sciences and to give people of all ages the opportunity to discover the connection between their lives and the Earth. The USGS' GeoFest will be held at the Carriage House next to the Woods Hole Field Center on Saturday, October 26, 2002.

The USGS hopes to expose students to Earth-science concepts in a fun and exciting way. The event will include numerous hands-on exhibits created and attended by USGS scientists, engineers, and technicians. Geologists will lead a short "geology walk" along part of the Woods Hole Bike Path. Please contact **Kate Visser** at kvisser@usgs.gov or (508) 457-2331 if you'd like to be a part of the event!

Related Web Sites

Woods Hole Field Center
U.S. Geological Survey (USGS)
Earth Science Week 2002
American Geological Institute

in this issue:

[previous story](#) | [next story](#)

in this issue:

Research

cover story:

Tsunami Deposits in the
Geologic RecordOutreachMonterey Bay National Marine
Sanctuary Tenth Anniversary**Earth Science Week -
Woods Hole**MeetingsChinese Scientists Visit Gas-
Hydrate Labs

Blacks In Government

Briefing Congress on Coastal
HazardsAwardsDistinguished Service Award -
Bill DillonDistinguished Service Award -
Bill NormarkSuperior Service Award -
Marlene NobleSuperior Service Award -
Florence WongEnvironmental Champion
Award - Sue Hunt

Safety Award - Ellen Mecray

Staff & Center News30th Annual Falmouth Road
Race

Earth Science Week 2002 Field Trips
By D.D. LaPointe
Nevada Bureau of Mines and Geology

On November 19 and 20, 2002, the northern Nevada desert came alive with hundreds of people participating in Earth Science Week geology field trips organized by Nevada Bureau of Mines and Geology. Coyotes were startled from their morning meal as approximately 470 seekers of geologic truth caravanned along unimproved gravel roads that don't generally see that much traffic in a decade. On Saturday, one group of about 180 braved choking dust to reach the Eagle Picher Minerals diatomite mine, where finely laminated lacustrine layers were pried apart by eager seekers of sardine-sized Miocene stickleback fish fossils (photos 13Oct2001HazenKidWithFish3.jpg, 13Oct2001Hazen2.jpg). Retired paleontologists Jim Firby and Howard Schorn held court on a pile of the blindingly white rock that had been loosened and heaped up by Eagle Picher for easier access. Children brought their fossil treasures to them for verification while other geologists circulated among the group helping to answer questions and admire the finds. After an hour or so, those who had not yet had their fill of fossil-collecting continued driving east and north to the Mopung Hills, where the now-dry shoreline of a precursor to ancient Lake Lahontan yielded tufa encrustations accompanied by a variety of mollusks. Nevada's history and prehistory were indicated here by the remains of a century-old lime kiln, nearby emigrant trail, and caves once inhabited by native Americans. Those who ventured on westward from this site followed more dusty roads leading to "Fossil Hill" first described by scientists in the earliest surveys of the territory. Tiny fossil gastropod shells had weathered out of the reef-like ledge for discovery by those with sharp eyes fixed on the ground (photo 13Oct2001NightengaleWithDog10.jpg, 13Oct2001Nightengale16.jpg). This type section of the Miocene Truckee Formation showed Earth Science Week participants one more example of the extent to which ancient lakes were once prevalent in an area where bodies of water are now scarce.

While this group was busily seeking evidence of ancient life, a second caravan of about 90 people was headed north from Reno in search of evidence of volcanic and magmatic activity in NW Nevada. At "Moon Rocks" they vied with weekend dirt bikers to occupy an eerie landscape of huge liesegang-banded, spheroidally weathered granite boulders (photos ESW2002FT 009.jpg, photo ESW2002FT 014.jpg, Red Rock 19Oct2002 1.jpg).

Many walked along a tourmaline-encrusted, slickensided fault plane cutting the granite and found fragments of microcline and quartz weathered out of pegmatitic zones.

Participants were careful to respect petroglyphs etched into the desert varnish on granite cliffs at the site. At the next stop, participants were challenged to determine the prevailing wind direction by examining pitted and grooved erosional surfaces carved by wind-driven sand-blasting of tuff boulders exposed on the crest of a ridge (photo ESW2002FT 020.jpg). Those who broke fresh surfaces of the rock were treated to the sight of sparkling sanidine and biotite crystals in the pink rhyolitic welded tuff (photo ESW2002FT 021.jpg). Lunch seating was plentiful on rocks at the next stop where dikes of aplite, pegmatite and microdiorite cut across the quartz monzodiorite country rock

(photos ESW2002FT 004.jpg, ESW2002FT 007.jpg). Boy Scouts and Girl Scouts in the group scrambled to collect as many different kinds of intrusive igneous rocks as possible, some finding hand samples of small dikes cutting the country rock. The procession of vehicles next followed the Bedell Flat-Honey Lake right lateral strike slip fault zone for several miles, stopping briefly to discuss evidence for a variety of fault types active in this part of the state. The group continued west to Red Rock Canyon where those with sturdy footwear hiked up a canyon to the base of a flow where fragments of many rock types had been incorporated into the tuff. Bright white and gray tuff cliffs juxtaposed against hoodoo-like vermilion red tuffs presented the opportunity for some spectacular photography here, too (photos Red Rock 19Oct2002 1.jpg, Red Rock tuff 20Oct2002 4.jpg Red Rock tuff 20Oct2002 5.jpg). The last stop of the day was at Petersen Mountain, a renown collecting area for scepter quartz crystals, where the group fanned out across the slopes and looked for smoky, clear, and citrine quartz crystals. Everyone found some crystals worth keeping and a few nice small scepters were found.

The igneous rock trip was repeated the following day for an additional 200 people who still found plenty of rocks to collect and geological mysteries to ponder. The increased numbers and enthusiasm of the participants indicates a public thirst for geologic knowledge in our area. The questions they asked indicated thoughtful consideration of what they were told by the geoscientists on the trip. We heard nothing but positive comments about our Earth Science Week field trip offerings, with many wanting to know if we could offer them every week or so!

Road logs with color photos of these trips can be viewed on the Internet at:

<http://www.nbmng.unr.edu/dox/e41.pdf>

and

<http://www.nbmng.unr.edu/dox/e40.pdf>



**NEW JERSEY GEOLOGICAL SURVEY
celebrates
EARTH SCIENCE WEEK
October 13-19, 2002**

On October 15th and 16th, 2002

Visit the DEP Booth at the

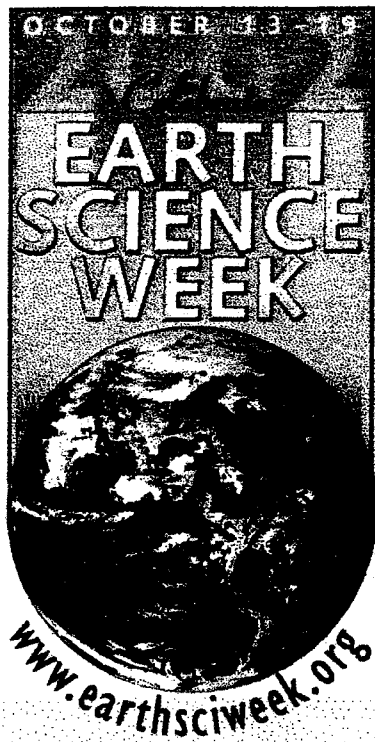
New Jersey Science Convention

Double Tree Hotel

Holiday Inn and Garden State Exhibit Center

Somerset, New Jersey

<http://www.state.nj.us/dep/njgs/eswk2002.htm>



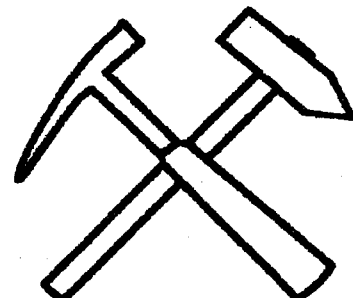
New Mexico Highlands University's *Environmental Geology Program* is celebrating Earth Science Week 2002! Come join in the fun with the students & faculty at Highlands!

SCHEDULE OF EVENTS

Wednesday 10/16	6:00 pm Science Complex LN3	Night at the Movies - <i>Volcano, Jurassic Park, Mad Max</i>
Thursday 10/17	1:00 pm Science Complex LN3	Earth Science Program Open House Open House at the Science Complex
Friday 10/18	12:00 pm CNS 635	Colloquium: <i>New Mexico's Water Resources</i> by Dr. William Stone, Hydrogeologist, Los Alamos National Laboratory.
Saturday 10/19	8:00 am	Field Trip to the Harding Pegmatite Mine, Taos County (all day, assemble at Centennial Park)

For more information, contact:

Dr. Jennifer Lindline
Environmental Geology Program Coordinator
lindlinej@nmhu.edu
505.426.2046



APPROVED FOR POSTING

Please join us for
the 5th annual
celebration of:

Western New York Earth Science Day

Western New York Earth Science Day introduces the public - to earth scientists and provides an opportunity to learn first-hand what earth scientists do, the importance of earth sciences to society, and the many and varied career opportunities that exist within the earth sciences.

? This event is FREE to the public and will be held rain or shine. ?

? Fossil-collecting will be available at the site to those interested ,
(fossil-collecting is free for HNHS members; non-member adults, \$4; children, \$3)

? Free on-site parking. Sheltered exhibits. ?

? Food and drink available for purchase. Restrooms available. ?

? Many exciting activities are planned, including: ?

- ⊕ Free drilling and rock-coring demonstrations at 10:30 a.m. and 1:30 p.m.
- ⊕ See West Valley Demonstration Project's 30-foot Walk-through Exhibit
 - ⊕ Boy and Girl Scouts can earn credit toward merit badges and pins
 - ⊕ Scavenger hunts, games, crafts, raffles, and much more!

Where: Penn Dixie Site, Hamburg, New York (see map on reverse)

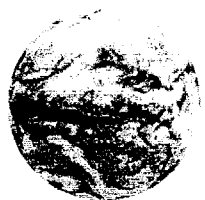
When: Saturday, October 19, 2002, 9:00 a.m. to 3:00 p.m.

Sponsored by:

For more information or to participate, contact
Jerry Bastedo (jcb02@buffnet.net) or
Rick Watt (rwatt@ene.com)
Or call the HNHS at 716/627-4560.



North Carolina Student soaks up top prize in Earth Science Week Contest



Celebrate
Earth Science Week
2002

October 13th-19th

The grand prize winner of this years' Earth Science Week essay contest, is Grier Simmons, age 13, of Iron Station, NC. His essay, "Drizzle's Day," built upon the theme "A Day in the Life of a Water Molecule." Grier took home a \$500 check for his efforts.

The topic for Earth Science Week 2002 was "Water is All Around You," emphasizing the importance of water as one of the Earth's greatest natural resources. This theme was inspired by the 30th anniversary of the Clean Water Act.

Grier is a 9th grader at East Lincoln High School, where he is enrolled in Ms. Debbie Michael's Earth/Environmental science class. According to Michael, "Grier is an excellent student and talented writer who also a wrestler on the school's team." The E/ES class has been required for graduation from High School since 2000.

Simmons wrote, in part, in his essay, "Now continue condensing," said Mrs. Sleet, "but prepare for freefall. On the count of three: 1, 2, 3...whoaaaa!" As Drizzle fell, he remained spherical, but Mrs. Sleet's bottom flattened out and she bulged on the sides. "When you hit the ground run off to evaporation," said Mrs. Sleet as she prepared for impact.

The full version of the article can be can be viewed at <http://www.earthsciweek.org>. Grier's essay will be published in the December issue of Geotimes, AGI's monthly newsmagazine of the Earth sciences. Check for it at <http://www.geotimes.org/current/>

This year's contests included an art contest for elementary-school children, an essay contest for secondary-school students, and a photography contest open to all ages. Winners in each contest were selected from more than 450 entries.

Earth Science Week contests were designed to encourage students and the public to recognize the importance of Earth sciences in our lives.

To participate in future Earth Science Week celebrations, visit the Earth Science Week web site at <http://www.earthsciweek.org>, or contact the Mary Watson, at (919) 733-2423 ext. 410, or contact or the national Earth Science Week Coordinator Cynthia Martinez, at (703) 379- 2480 ext. 227 or cmm@agiweb.org.



September/October 2002

Antiques Rock Show

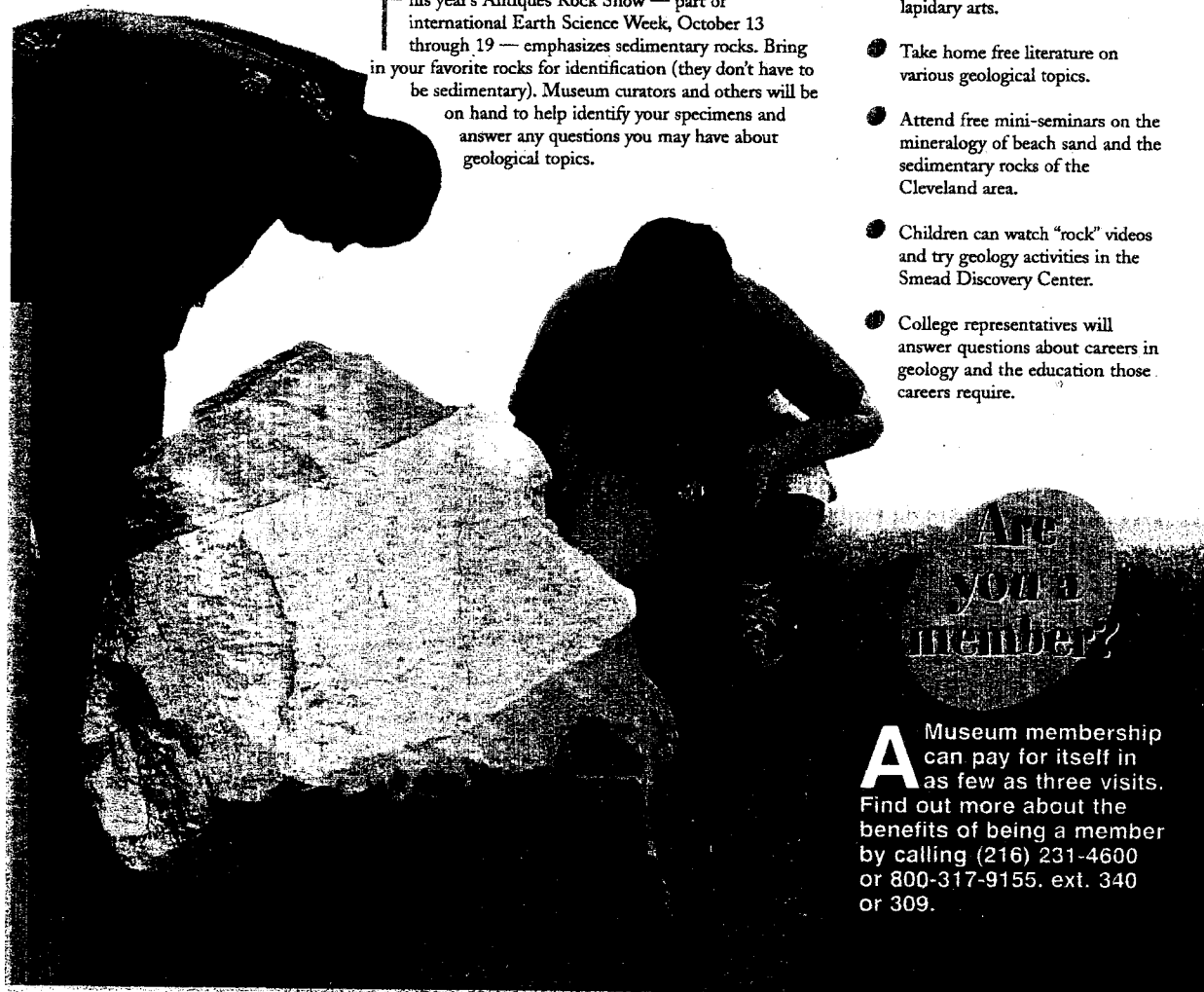
Sunday, October 13, noon to 4 pm
Free with Museum Admission

Celebrate Earth Science Day — it's sedimentary!

This year's Antiques Rock Show — part of International Earth Science Week, October 13 through 19 — emphasizes sedimentary rocks. Bring in your favorite rocks for identification (they don't have to be sedimentary). Museum curators and others will be on hand to help identify your specimens and answer any questions you may have about geological topics.

In addition:

- See hands-on exhibits and live demonstrations by members of the Cleveland Geological Society, Museum volunteers and groups representing the fields of geology, paleontology, gemology and the lapidary arts.
- Take home free literature on various geological topics.
- Attend free mini-seminars on the mineralogy of beach sand and the sedimentary rocks of the Cleveland area.
- Children can watch "rock" videos and try geology activities in the Smead Discovery Center.
- College representatives will answer questions about careers in geology and the education those careers require.



Are
you a
member?

A Museum membership can pay for itself in as few as three visits. Find out more about the benefits of being a member by calling (216) 231-4600 or 800-317-9155, ext. 340 or 309.

401 Church Street, 20th Floor, L&C Tower
Nashville, TN 37243

For immediate release October 1, 2002
For more information contact Amanda Sluss, TDEC
PIO
Office: (615) 532-0288
Pager: 1-877-251-2956



1-888-891-TDEC
www.tdec.net

3rd ANNUAL EARTH SCIENCE FAIR EDUCATES LOCAL SCHOOL STUDENTS

The University of Tennessee Department of Geological Sciences will host the 3rd Annual Earth Science Fair on October 10, 2002 to celebrate nationally proclaimed Earth Science Week set for October 13-19, 2002.

Volunteer students, faculty and staff from sponsoring organizations will provide displays, demonstrations and hands-on activities from 9:00 a.m. until 3:30 p.m. at the Geological Sciences Building on UT campus. The fair this year has been expanded to include exhibits in the Department of Geography and McClung Museum. Teachers, parents, middle and high school earth science students from the region have been invited to attend. Student groups will travel together with a guide to participate in thirty-minute sessions on various topics. The general public is invited to view the displays at their leisure and admission is free.

The Earth Science Fair is a great opportunity for students to learn about the planet. The event provides hands-on activities that you just can't do in a classroom setting. Exhibits at the fair will include: Mars geology, Moon geology, gold panning, soil and groundwater, physical geography, Tennessee geology, minerals in everyday life, meteorite impacts, geologic time and the Gray fossil site. This year the fair will include the new Burgess Shale exhibit, as well as the Geology and Fossil History of Tennessee exhibit at McClung Museum.

The American Geological Institute, a not-for-profit federation of 35 professional societies, initiated Earth Science Week in 1998. Sponsors participating in the fair include: UT Department of Geological Sciences, UT Department of Geography, Frank H. McClung Museum, UT College of Arts & Sciences, Tennessee Division of Geology, Tennessee Geographic Alliance, East Tennessee Geological Society, Knoxville Gem and Mineral Society, Tennessee Earth Science Teachers, Rinker Materials and ARCADIS.

For more information contact Barbara Burton at 865-250-9405 or e-mail bburton2@utk.edu. Also check the new web site: <http://web.utk.edu/~geoclub/earthscifair>.

3rd Annual Earth Science Fair 2002

Interim Report

The Department of Geological Sciences, in collaboration with sponsoring organizations, participates in nationally proclaimed Earth Science Week (initiated in 1998 by the American Geological Institute, a not-for-profit federation of 35 professional societies) by hosting an Earth Science Fair. This daylong program of demonstrations, displays and hand-on activities has become increasingly popular with the region's public and private schools. The Fair is a great opportunity to expose middle and high school students to the earth and planetary sciences, subjects typically absent from the standard curriculum.

This year's Fair took place on Thursday, October 10. Despite the persistent drizzle, it was a great success. There were no cancellations, and everyone seemed to enjoy the wide range of indoor and outdoor activities. Over 60 volunteer guides and presenters contributed their entire day to this event, including graduate students, faculty, retired professors, state government employees, as well as folks from private industry.

The Fair was expanded this year to include speakers from the Department of Geography and presentations at the Frank H. McClung Museum, including the new Geology and Fossil History of Tennessee and Burgess Shale exhibits. The "time trail" activity was modified to connect participants between the two venues, with groups traveling either forward or backward in time. Over 110 presentations were scheduled over the course of the day.

Altogether, 16 groups from 10 schools (over 350 students) as well as members of the general public participated in the Fair. Groups of 25 students, traveling with their teachers and a guide, chose from the 15 presentations/activities offered. The Fair hosted 5 middle (Cherokee, Holston, Jacksboro, North West, South Doyle), 1 high (Clinton), 1 elementary (the entire 8th grade class from Winfield Elementary School in Scott County) and 3 private schools (Nature's Way Montessori, Temple Baptist Academy, Tennessee School for the Deaf).

A Fair website (<http://web.ukt.edu/~geoclub/earthscifair>) was set up to provide more detailed information about the event and Earth Science Week, to allow on-line registration, and generally broaden the Fair's exposure beyond its mailing list.

The Fair was supported by UT (College of Arts and Sciences Outreach, Dept. of Geological Sciences, Dept. of Geography, Frank H. McClung Museum, Telephone Services), East Tennessee Geological Soc., Knoxville Gem and Mineral Soc., TN Division of Geology, TN Earth Science Teachers, TN Geographic Alliance, and the following corporate sponsors: AMEC Earth & Environmental, ARCADIS, Bechtel Jacobs, Rinker Materials, and SAIC.

Donations from sponsoring organizations totaled \$4,572.00, while expenses are estimated at \$3,779.40.

Earth



Science Fair

Thursday, Oct. 10, 2002

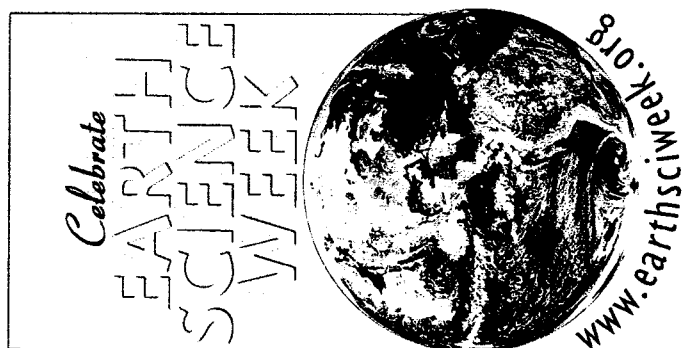
9:00 am - 3:30 pm

University of Tennessee
Geological Sciences Building

and

Frank H. McClung Museum

Barbara Burton
Dept. of Geological Sciences
University of Tennessee
Knoxville, TN 37996-1410



Remember to reserve a spot for your group by
Friday, September 6th.

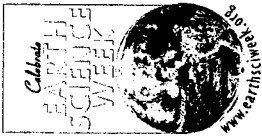
To register, detach this portion of the brochure
and mail to:

Barbara Burton
Dept. of Geological Sciences
University of Tennessee
Knoxville, TN 37996-1410

or fax the completed form to:
(865) 974-2368

or register on line at our web site:

<http://web.utk.edu/~geoclub/earthscifair>



As part of National Earth Science Week, the Dept. of Geological Sciences at the University of Tennessee (Knoxville) will host the 3rd Annual Earth Science Fair on Thursday, October 10, 2002.

Middle and High School Students from across East Tennessee are invited to help celebrate the earth sciences by participating in this valuable learning experience. Volunteer students, faculty and staff from sponsoring organizations will provide displays, demonstrations and hand-on activities that will increase students' understanding of the impact of earth related processes on their daily lives.

Attendance at this event is free, and participating teachers will receive an Earth Science Week Information Kit. Events will take place at UT's Geological Sciences Building and at the Frank H. McClung Museum, and will include presentations on the following topics.

Topics/Activities

The Burgess Shale: Evolution's Big Bang † *
 Geologic Time Trail ‡
 Geology and Fossil History of Tennessee *
 Gold Panning
 Impact Craters
 Introduction to the World of Caves *
 Mars
 Minerals in Everyday Life
 The Moon
 Natural Hazards & Mineral Resources of East Tennessee
 Satellites, Bugs, Computers and Plants
 Soil and Ground Water
 Tennessee's Big Dig: The Gray Fossil Site
 Terrestrial Remote Sensing & Map Interpretation
 This Isn't Your Parent's Geography Class

† temporary Smithsonian Institution Exhibit
 * located at Frank H. McClung Museum; all three are offered as a package only, and must be scheduled together.
 ‡ Geologic Time Trail involves a walk that links the Museum and Dept. of Geology building

† temporary Smithsonian Institution Exhibit

* located at Frank H. McClung Museum; all three are offered as a package only, and must be scheduled together.

‡ Geologic Time Trail involves a walk that links the Museum and Dept. of Geology building

Schedule

Groups of 20-25 students will travel together with a guide to participate in ½-hour sessions that run from 9:00 am until 3:30 pm. Lunch breaks will be scheduled for groups that attend morning and afternoon sessions. A selection of bagged lunches will be available to purchase on the day (@ \$4.00/person), or bring your own lunch.

Participation

Participation is free, but space is limited, and groups will be registered on a "first come, first served" basis. Try to sign up early so we can accommodate your group, and limit your school's group size to no more than 50 students.

To register, complete the information on the Sign Up Form to the right and fax or mail it back to us by Friday, September 6th. You can also visit our web site to register.

For further information on this event, or Earth Science Week, check out our web site at

<http://web.utk.edu/~geoclub/earthscifair>

or contact:

Barbara Burton

Dept. of Geological Sciences
 University of Tennessee
 telephone (865) 250-9405
 fax (865) 974-2368
 email bburton2@utk.edu

Presenters/Sponsors

AMEC Earth and Environmental
 ARCADIS
 Bechtel Jacobs Company, LLC
 Rinker Materials
 East Tennessee Geological Society
 Knoxville Gem & Mineral Society
 Tennessee Division of Geology
 Tennessee Earth Science Teachers
 Tennessee Geographic Alliance

University of Tennessee: (UT)
 Frank H. McClung Museum
 UT College of Arts & Sciences
 UT Dept. of Geological Sciences
 UT Dept. of Geography
 UT Telephone Services

To register, complete and return form by Friday, September 6 using regular mail, web, or fax. Please print legibly. Address & fax on the reverse.

School _____

address _____

teacher _____

telephone _____

fax _____

email _____

number of students _____

number of lunches required _____

arrival time? _____ departure time? _____

Please indicate your level of interest in each session,

from 1 (most interested) to 15 (least interested)

_____ The Burgess Shale: Evolution's Big Bang † *

_____ Geologic Time Trail ‡

_____ Geology and Fossil History of Tennessee *

_____ Gold Panning

_____ Impact Craters

_____ Introduction to the World of Caves *

_____ Mars

_____ Minerals in Everyday Life

_____ The Moon

_____ Natural Hazards & Mineral Resources of E Tennessee

_____ Satellites, Bugs, Computers and Plants

_____ Soil and Ground Water

_____ Tennessee's Big Dig: The Gray Fossil Site

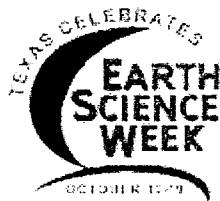
_____ Terrestrial Remote Sensing & Map Interpretation

_____ This Isn't Your Parent's Geography Class

† temporary Smithsonian Institution Exhibit

* located at Frank H. McClung Museum; all three are offered as a package only, and must be scheduled together.

‡ Geologic Time Trail involves a walk that links the Museum and Dept. of Geology building



**Welcome to the Texas
Earth Science Week Website!**

National ESW Website

Texas ESW
Austin
College Station
El Paso
Houston
Midland
San Antonio

**Proclamations from
the Texas' Governors
Office**

**More Earth Science
Links**

Archive of ESW
Question-of-the-Day

Earth Science Week (ESW) is a nationwide program designed to promote interest and knowledge of the earth sciences and its contributions to society. It is an annual celebration sponsored by the **American Geological Institute**. ESW 2002 will be celebrated nationwide the week of **October 13-19, 2002**. The third annual Career Day Fair will be held in Austin on **Tuesday, October 15, 2002**.

The Texas ESW consortium encourage you to use this website to discover past and future ESW activities as well as the resources available to teachers, students, and the public.

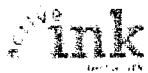
We hope that you will support the advancement of earth science education in our community and participate in Earth Science Week 2002!

The Astronaut visit has been cancelled. Logon to a live webcast of other Career Day Fair presentations.
Tuesday, Oct. 15, Time: to be announced

<http://streamer.cjit.utexas.edu/~science/astronaut.html>



site hosted by
the Bureau of
Economic
Geology



site developed by
the ActiveInk
Network

If you wish to update your existing web page and/or add a Texas ESW activity to this website, please contact Sigrid Clift at telephone 512-471-0320 or E-mail sigrid.clift@beg.utexas.edu.

<http://www.beg.utexas.edu/esw/>



2002 Earth Science Week

Participating for the second consecutive year, the GCSSEPM hosted one of the most popular "Passport Stations" on Saturday October 12 for the opening of Earth Science Week (ESW) activities at the Houston Museum of Natural Science. Section volunteers, Tony D'Agostino, Nick D'Agostino, Nancy Engelhardt-Moore, Bob Moore and Don van Nieuwenhuise spoke about microfossils, paleoecology, geologic field work, and other subjects to hundreds of visitors to the museum.



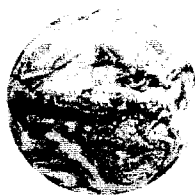
Elementary, middle school, high school and even college students from Italy and elsewhere enjoyed the ESW activities and our station in particular. The GCSEPM participated with many other Houston geoscience societies such as the HGS, SEG, SIPES, Houston Gem and Mineral Society and others. Denise Stone, President of the HGS welcomed all the volunteer societies and museum visitors. Denise also read a proclamation from Houston Mayor Lee Brown declaring Earth Science Week as an official event supported by the City of Houston.



Earth Science Week 2002

Earth Science Week, observed annually in the United States, Canada and, increasingly, in other countries, is an opportunity to understand the impact of the earth Sciences in our daily lives. The Houston Geological Society is honored to join in the celebration for its fifth year. As geologists, we hope to

- Give people, particularly students, special opportunities to learn about the Earth Sciences
- Increase awareness that Earth Science is all around us
- Encourage stewardship of the Earth
- Share our knowledge and enthusiasm about the Earth



Celebrate
Earth Science Week
2002
October 13th-19th

The American Geological Institute is the national sponsor of Earth Science Week.

Organizations participating in this year's Earth Science Week include:

- the Houston Geological Society
- American Association of Petroleum Geologists, House of Delegates, Houston chapter
- Association for Women Geoscientists
- Geophysical Society of Houston
- Houston Gem and Mineral Society
- Houston Museum of Natural Science
- Gulf Coast Section SEPM
- Society of Independent Professional Earth Scientists – Houston chapter
- Society of Petroleum Engineers - Gulf Coast Section
- National Association for Black Geologists and Geophysicists
- Texas Earth Science Teachers Association

Sponsorship opportunities are available for this years events.

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Earth Science Week 2001

- Contacts for 2002
- Events in 2002
- Articles
 - HGS Bulletin Sept.2002
- HGS ESW home page: links to articles and photos from past years

Houston Geological Society Contacts


Earth Science Week Committee - Email the co-chairs if you have suggestions, or if you want to help!

Elizabeth Fisher, Chair		eafisher@jasongeo.com
Jennifer Burton, Logistics Chair	• General contact for more information	jennifer_burton@anadarko.com
Alison Henning, Academic Chair	• HGS members: email for help in making an ESW presentation at your children's schools	alison_henning@yahoo.com
	• General contact for teachers	
	• Contact for school contest	
Stephanie Shipp	• Symposium	shippst@rice.edu
Neal Immega, Field trip leader	• Information on field trips	paleo@hgms.org
	• Field trip documentation	
Inda Immega, Museum liaison	• Information on Family Earth Science Festival	immega@swbell.net
Mark Cocker	HGS Publicity liaison, educational material organizer	
Janet Combes	HGS Board representative	
Glenn Lowenstein	HGS Environmental liaison	
Andrea Reynolds	HGS NeoGeos liaison, field trip interpreters orientation and training	
Lexy Bieniek	MATS/TESTA liaison	
Nancy Englehart-Moore	GCS SEPM liaison	
Jeannie Perdue	SPE-GCS liaison	
Jill Rowlands	HGMS liaison	

Activities proposed for ESW2002 in Houston

What	When and Where	Details
Family Earth Science Festival at the Houston	Saturday October 12, 2002 11:00AM to 5:00PM, Houston Museum of Natural Science, Wiess Energy Hall, Cullen Hall of Gems &	Explore our Earth! Continuous activities, demonstrations, contests, prizes, and special presentations Do an experiment, solve a problem, and get your "passport" stamped at "passport stations" staffed by

<p>Museum of Natural Science</p>	<p>Minerals, and the Hall of Paleontology</p> <p>Noon (tentative), Mayor Brown's Earth Science Week proclamation, Weiss Energy Hall</p> <p>No registration required -- just come and bring the whole family. For event info, contact Inda Immega, immega@swbell.net</p>	<p>more than 50 experts from Houston Earth Science organizations. Hear the Mayor's ESW proclamation.</p> <p>No charge beyond Museum admission.</p> <p>Organized by the HGS ESW committees. Co-sponsored by HMNS and sister Geoscience societies.</p>
<p>"Views of the Earth" symposium</p> <p>at the Houston Museum of Natural Science</p>	<p>Wednesday, October 16, 2002</p> <p>6:30 PM, reception (cash bar)</p> <p>7:00 - 8:30PM, speakers</p> <p><u>Houston Museum of Natural Science, Brown Auditorium</u></p> <p>Free, no registration needed. For info contact Stephanie Shipp shippst@rice.edu</p>	<p>Energy resources play a significant role in our lives - especially in Houston, home of the petroleum industry. During the second annual Houston ESW symposium, speakers from the government, energy industry, and NASA will explore the present state of energy resources and how future changes will impact us. Join the speakers before the symposium for cocktails (cash bar) and hors d'oeuvres.</p> <p>Organized by the HGS ESW committees. Co-sponsored by HMNS and sister Geoscience societies.</p>
<p>Classroom visits</p> <p>Also see:</p> <p><u>classroom activities</u></p> <p><u>ESW classroom kits</u></p>	<p>Monday, October 14 through Friday, October 16, 2002</p>	<p>Geoscientists are encouraged to visit their children's schools to share their knowledge with Earth-Scientists-to-be!. HGS can provide slides, materials, posters, teachers kits, etc.</p> <p>ESW Committee, Academic Liaison.</p>

<p>Student essay contest</p> <p>Also see:</p> <p><u>National ESW contests</u> for children and adults</p>	<p>Through September, 2002.</p> <p>Contact: Alison Henning, alison_henning@yahoo.com</p>	<p>K-12 students will share their thoughts on "Earth Science in My Community" in artwork or essay. Three finalists will be selected by the Earth Science Week Committee.</p> <p>HGS ESW and Academic Liaison Committees</p>
<p>Beneath Your Feet</p> <p>Family Field Trips</p> 	<p>Friday, October 18, 2002, 11am - 1pm</p> <p>Participants: Meet the tour in front of One Shell Plaza (look for a volunteer in a bright safety vest) and pick up directions to the other sites.</p> <p>Volunteers: Pick up vests and maps at OSP, be at your stations by 11.</p> <p>Free, no registration needed.</p> <p>Contact: Neal Immega, paleo@hgms.org</p>	<p>Field trip #1: Downtown building stones.</p> <p>Examine the striking vertical outcrops of igneous, metamorphic and sedimentary rocks in downtown Houston. Explore geologic processes and talk about the practical uses of earth materials. Our lunchtime walk is designed for people who work in the city but everyone is welcome!</p> <p>Organized by HGS ESW, Field trip, and NeoGeos committees</p>
	<p>Saturday, October 19, 2002</p> <p>Participants: Arrive at the State Park HQ parking lot any time between 11 AM to 2 PM. Look for volunteers in bright vests!</p> <p>Volunteers: 10 AM -3PM</p> <p>Free, except for admission to the park. Register by emailing the field trip leader</p>	<p>Field trip #2. High Island -- Join Geoscientists and Museum staff at Galveston Island State Park to investigate the geology, ecology, and societal importance of barrier island beaches and back bay environments!</p> <p>This is a joint field trip organized by the HGS ESW, Field Trip, ESW and NeoGeos Committees with the help of the HMNS and the HGMS.</p>
	<p>Sunday, October 20, 2002</p> <p>Participants: Arrive at the Ocean Star any time between 11-3PM. Look for volunteers in bright vests.</p> <p>Volunteers: 11-3:15PM</p>	<p>Field trip #3: Ocean Star Museum -- Visit the Ocean Star, the Offshore Energy Center's oil rig museum in Galveston Texas! Ceoscience and engineering docents will show you what it takes to drill for oil offshore. Geophysicists will demonstrate seismic interpretation on real workstations.</p> <p>Organized by SPE-GCS with the help of the HGS, ESW Committee, Field Trip</p>


	<p>No cost beyond admission to the Ocean Star. No registration necessary.</p> <p>Contact: Neal Immega, paleo@hgms.org</p>	Committee NeoGeos, HGMS, HMNS.
HGS participation in MATS	<p>Saturday October 26, 2002</p> <p>10:00AM to 5:00PM, at <u>Houston Museum of Natural Science</u></p> <p><u>Metropolitan Association for Teachers of Science</u></p>	<p>Planning to participate in Share-a-thon and present a workshop.</p> <p>Organized by HGS ESW Committee, Academic Liaison.</p>

Other Links of Interest

Texas Earth Science Week:at www.beg.utexas.edu/esw/

Geological Society of America's Earth Science Week page:
<http://www.geosociety.org/educate/earthweek.htm>

AGI's Earth Science page: <http://www.earthsciweek.org/>

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This page was last updated on 20-August-2002 9:15 PM by ii*

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Earth Science Week

Utah Geological Survey
Utah Core Research Center
240 North Redwood Road
Salt Lake City

October 16 - 18, 2002
(Wednesday - Friday)
8:00 a.m. - 5:00 p.m.

Hands-on activities
for school/educational groups



*Students pan for "gold" during
Earth Science Week.*

Earth Science Week was initiated in 1998 by the Geological Institute to increase public understanding and appreciation of the Earth sciences.

The Earth sciences are crucial to our quality of life. Understanding of these sciences can help people make decisions for land management and use, address environmental and ecological issues, and prepare to mitigate natural hazards.

Therefore, states across the nation, including Utah, celebrate this important week. The Utah Geological Survey, activities and demonstrations for schools and other educational groups will be offered October 16-18.

This year's theme is "Water is All Around You." To this end, the Utah Division of Reclamation Rights will have a large stream table for hands-on learning. Other activities include mineral tests and observing how fossils are excavated for study.

To reserve a time, please call Carolyn Olsen at 537-3359. The time slots fill up quickly - some groups may have to schedule for next year - a year in advance!

Earth Science Week Declaration signed by Governor Michael Leavitt

<http://geology.utah.gov/whatsnew/index.htm>

EARTH SCIENCE WEEK 2002

October 13-19, 2002- Earth Science Week 2002

- **Hosts:** Earth Science Week is a joint project of the Vermont Geological Society, the Vermont Geological Survey at VT ANR, the Perkins Museum at UVM, the American Geological Institute and numerous individuals, organizations and businesses including OMYA and VINS.
- **Contacts:** Marjorie Gale and Christine Massey
- **Phone:** 802-241-3608 (MG) and 802-656-1344 (CM)
- **E-mail:** marjieg@dec.anr.state.vt.us or cmassey@zoo.uvm.edu
- **Location:** Events at various locations around the state
- **Information:** The annual Earth Science Week festivities include Geologists-in-the-Parks, a poster contest, museum tours, a quarry tour, guest speakers and more. Search the complete listing below.

October 12, 2002- OMYA, Inc. Quarry Open House for Earth Science Week 2002

- **Day of the Week:** Saturday
- **Contact:** Alice Blount
- **Phone:** 802-770-7267
- **E-mail:** alice.blount@omya.com
- **Location:** Middlebury, VT
- **Time:** 10 am - 3 pm
- **Information:** Come visit the OMYA quarry. They are planning to have a rock pile for collectors, a geology mural for artists, trucks, drills, and mining equipment, tours, food and more. For information, please visit the [OMYA Earth Science Week 2002 site](#).

October 15 & 16, 2002- Geologists-in-the-Parks for Earth Science Week 2002

- **Host:** The annual Earth Science Week Geologists-in-the-Parks is co-sponsored by the Vermont Geological Survey at DEC, the Vermont Geological Society, and the Dept. of Forest and Parks.
- **Contacts:** Marjorie Gale
- **Phone:** 802-241-3608
- **E-mail:** marjieg@dec.anr.state.vt.us
- **Locations:** State Parks at Button Bay, Mt. Philo, Groton, and Elmore.
- **Information:** The event is open to school groups. There is no charge for this activity which features a park tour with a professional geologist. Groups must pre-register and enrollment is limited.

October 18, 2002- Perkins Museum Poster Contest: Awesome Forces that Shape the Earth!

- **Host:** Perkins Geology Museum at the University of Vermont Geology Dept.
- **Contacts:** Christine Massey
- **Phone:** 802-656-1344
- **E-mail:** cmassey@zoo.uvm.edu
- **Location:** Perkins Museum Poster Contest, Dept. of Geology, 43 Colchester Ave., University of Vermont, Burlington, VT 05405-0122
- **Information:** Theme: Awesome Forces that Shape the Earth! (ex. plate tectonics, earthquakes, volcanoes, glaciers, and even the stream in your backyard); Grade levels: K-2, 3-5, 6-8, & 9-12; Size: No larger than standard poster board (22"x28"); On the back: Student Name, Teacher Name, School, Mailing Address, Age group, Phone Number; Cash prizes and Vermont rock kits; Due date: Friday, October 18.

October 15-18, 2002- Mercury in the Environment Guest Speakers, Earth Science Week 2002

- **Host:** Vermont Dept. of Environmental Conservation, Environmental Assistance Division
- **Contacts:** Karen Busshart, Mercury Project Coordinator, or Tom Benoit, Hazardous Materials Specialist
- **Phone:** 802-241-3455 (Karen) ; 802-241-3472 (Tom)
- **E-mail:** karenbu@dec.anr.state.vt.us, tombe@dec.anr.state.vt.us
- **Location:** Will visit your site!
- **Information:** The PowerPoint presentation includes information about mercury, where it comes from, how it gets into our environment, health effects, what products in our home contain mercury, and proper disposal. The presentation also includes a class participation demonstration on bioaccumulation in the food chain. Booklets "Good Sneakers and Mercury" and "Mercury in the Environment" are available on request. Classroom visits will be first come, first served and are recommended for grades 6-9.

October 15-18, 2002- Fleming Museum Geologic Resources Tours, Earth Science Week 2002

- **Host:** Fleming Museum at the University of Vermont
- **Contacts:** Chris Fearon
- **Phone:** 802-656-0750
- **Location:** Fleming Museum, Colchester Ave., University of Vermont, Burlington, VT 05405-0122
- **Information:** Special tours with a geologist to examine geologic materials used in objects and exhibits at UVM's Fleming Museum.

October 18, 2002- National Water Quality Monitoring Day

- **Contacts:** [Year of Clean Water](http://www.epa.gov/cleanwater)
- **Information:** October 18, 2002 is the 30th anniversary of the enactment of the Clean Water Act. Schools, citizens groups and individuals may participate in the National Water Quality Monitoring Day by registering on-line. Test kits may be purchased and instructions are given for monitoring and entering data at Year of Clean Water

October 19, 2002- Mineral Identification Day at VINS for Earth Science Week 2002

- **Host:** VINS North Branch Nature Center
- **Contacts:** Peter Watt or Chip Darmstadt
- **Phone:** 802-229-6206
- **Location:** VINS North Branch Nature Center, 713 Elm St. (Rte. 12), Montpelier, VT
- **Time:** 10:00 am - noon
- **Information:** Geologists and mineral collectors will be on hand to help you identify rocks in your collection. Bill and Ethel Schuele, members of the Burlington Gem and Mineral Club, will also bring rocks and fossils from their own collection and will have some small specimens for sale.

October 24, 2002- Vermont NEA Convention Field Trip

- **Contact:** Christine Massey
- **Phone:** 802-656-1344
- **E-mail:** cmassey@zoo.uvm.edu
- **Location:** Burlington, VT
- **Information:** Christine Massey and Shelley Snyder will lead "Geologic Field Trip Sites in Northwestern Vermont for Teachers."

Earth Science Week Proclamation

For Earth Science Week Activities and Planning, we recommend you visit American Geological Institute.

Click [here](#) for a list of geology books recommended by the Vermont Geological Society members.

Please take time to view some great posters by Vermont students from 2000 and the [Earth Science Week 2001 Photo Album](#).

[RETURN TO THE VGS HOMEPAGE](#)
[TO THE DEPT. OF ENVIRONMENTAL CONSERVATION HOMEPAGE](#)
[TO THE VT AGENCY OF NATURAL RESOURCES HOMEPAGE](#)
[TO THE STATE OF VT HOMEPAGE](#)

Laurence R. Becker, State Geologist
Vermont Geological Survey

103 S. Main St., Laundry Bldg.

Waterbury, VT 05671-0301

Phone: (802) 241-3608

FAX: (802) 241-3273

Last Updated: 8/29/02

Site maintained by: Marjorie Gale ~ marjieg@dec.anr.state.vt.us

ANNOUNCEMENT

Virginia
National Science Foundation
Earth Science Education Week Lectures

EARTH SCIENCE EDUCATION WEEK LECTURES

The theme for this year's Earth Science Week is: **Water Is All around You**

In recognition of Earth Science Week, the Earth Science Division, Geoscience Directorate, is sponsoring two lectures focusing on the work of the two NSF Science and Technology Centers established in the Division.

10:00AM, October 16, Room 110

The Fate of the Delta of the Mississippi River: Can an STC Help?

Gary Parker, Director,
National Center for Earth Surface-dynamics (NCED), The University of Minnesota

The delta of the Mississippi River is constantly subsiding by compaction under its own weight. Under natural conditions the river has acted to balance this subsidence by depositing sediment over the entire delta. This has been accomplished by overbank flooding channel and shifting channels. Today, however, the river is confined behind levees, preventing overbank deposition of sediment on the floodplain. These levees, as well as the Old River Control Structure, prevent channel shifting. As a result, bed of the river has risen, and the delta tip has elongated into the Gulf of Mexico, as the surrounding delta subsides. At present the riverbed is sufficiently high that a failure of the Old River Control Structure during a flood would cause a catastrophic shift into the Atchafalaya River. Meanwhile, the entire delta is rapidly subsiding in the absence of a sediment supply, and the shoreline is advancing toward New Orleans. The newly instituted National Center for Earth-surface Dynamics (NCED) is commencing a study of alluvial fan-deltas that should eventually allow for a) predictions in regard to the Mississippi River and its delta in the case of no remediation and b) evaluation of suggested techniques for remediation. The problem is fraught with political, social and economic complications, but the Center can play a useful role in encouraging the community to face the problem head-on by emphasizing the hydraulic and geomorphic consequences.

2:00PM, October 16, Room 110

Water: hydrologic science and sustainability in the semi-arid Southwestern U.S.

Roger C. Bales; Deputy Director, NSF Center for the Sustainability of semi-Arid Hydrology and Riparian Areas (SAHRA), University of Arizona

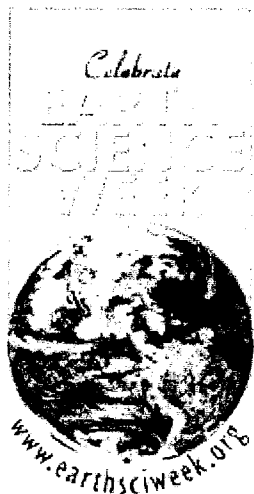
Semi-arid regions are beginning to face unprecedented hydrologic stresses, owing to the combined influences of population growth, land-use change, and climate variability/change. With the steady socioeconomic changes and ongoing climate variability, the event of greatest concern is the multi-year drought. While regional droughts of decadal or longer duration have occurred in the past, it is the interaction of climatic and socioeconomic factors that makes the current stresses unprecedented. Accurate information on annual water balance and water fluxes becomes ever more important as demand approaches or exceeds available supplies; and is critical for sustainable water management. Water demand for a natural basin or a metropolitan area is the sum of many individual demands, the characteristics of which are not well known. Recent scientific advances are narrowing critical knowledge gaps, and providing a better quantitative understanding of water supply, water demand and water quality characteristics. Examples include: i) improved snowpack and rainfall estimates through new remote sensing and ground-based measurements, ii) the role of vegetation in controlling groundwater recharge, iii) more accurate delineation of groundwater recharge areas using multiple tracer methods, and iv) water-nutrient-vegetation interactions in riparian zones, which house much of the region's biodiversity and account for a large fraction of the regional evapotranspiration.



DIVISION OF GEOLOGY AND EARTH RESOURCES

Earth Science Week

October 13-19, 2002



Celebrate Earth Science Week with

Geologic Field Trips!

- Geologic field trips in Washington State that require a car and/or hiking boots
- Geologic trips in Washington State that require the Internet and a good chair
- National Park Geology Tours and other USA geologic field trips and tours

Suggested supplies:

- hand lens
- rock hammer
- chisel
- gloves
- safety glasses
- collecting bags or boxes

Take a general guide to rocks and minerals on all outings. Examples:

Bishop, A. C.; Woolley, A. R.; Hamilton, W. R., 1999, **Philip's minerals rocks and fossils**: George Philip Limited in association with the Natural History Museum, 336 p.

Bishop, A. C.; Woolley, Alan Robert; Hamilton, William Roger, 1999, **Cambridge Guide to Minerals, Rocks and Fossils**: 336 pages; 2nd edition (October 1, 1999)

Kavanagh, James; Leung, Raymond (Illustrator), 2001, **Geology-- An Introduction to Familiar Rocks, Minerals, Gemstones & Fossils** (Pocket Naturalist): Waterford Press, Pocket edition (June 2001)

Mottana, Annibale; Crespi, Rodolfo; Liborio, Giuseppe, 1977, **Simon & Schuster's guide to rocks and minerals**: Simon & Schuster, 607 p.

Roberts John L., 2001, **A Photographic Guide to Minerals, Rocks and Fossils**: 128 pages; (August 27, 2001)

Selected reading (available from most local public libraries):

Alt, David D.; Hyndman, Donald W., 1984, **Roadside geology of Washington**: Mountain Press Publishing Company [Missoula, Mont.], 282 p.

American Geological Institute, 1976, rev.ed., **Dictionary of geologic terms**: Anchor Books, 472 p.

Clifford, Nick, 1996, **Incredible earth**: DK Publishing, Inc., 44 p.

DK Publishing, Inc., 1993, **The visual dictionary of the Earth**: DK Publishing, Inc. Eyewitness Visual Dictionaries, 64 p.

Farndon, John, 2000, **How the Earth works**: Reader's Digest Association, Inc., 192 p.

Harris, Ann G.; Tuttle, Esther; Tuttle, Sherwood D., 1997, **Geology of national parks**; 5th ed.: Kendall/Hunt Publishing Company, 758 p.

Jackson, Julia A., editor, 1997, **Glossary of geology**; 4th ed.: American Geological Institute, 769 p.

Kiver, Eugene P.; Harris, David V., 1999, **Geology of U.S. parklands**: John Wiley & Sons, Inc., 902 p.

Symes, R. F.; Natural History Museum staff, 2000, **Rocks and minerals**: Dorling Kindersley DK Eyewitness Books, 63 p.

Taylor, Paul D., 2000, **Fossil**: Dorling Kindersley DK Eyewitness Books, 63 p.

Van Rose, Susanna, 2000, **Volcano and earthquake**: Dorling Kindersley DK Eyewitness Books, 63 p.

Vernon, Ron, 2000, **Beneath our feet--The rocks of Planet Earth**: Cambridge University Press, 216 p.

Williams, Hill, 2002, **The restless Northwest--A geological story**: WSU Press, 163 p.

Wyckoff, Jerome, 1999, **Reading the earth--Landforms in the making**: Adastra West, Inc., 352 p.

[Washington Geologic Field Trips](#) | [Virtual Geologic Trips](#) | [USA Geologic Field Trips](#)
Earth Science Week Home

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Last modified 18 Jul 2002

<http://www.wa.gov/dnr/htdocs/ger/esweek/>

Celebrating Earth Science Week 2002 at Easton Elementary, Morgantown, WV

Volunteers, Amy Gross, Stephanie Shawhan, and Autumn Rhodes



Amy demonstrates how we identify minerals to the first grade class.

The combined class of second graders kept us on our toes, so we forgot to get a picture of them in action.



Stephanie checks up on a table of fourth graders and makes sure that they know their minerals.



Stephanie walks around the room to show the third graders a close up of a mineral.



Amy really gets into helping kids learn their minerals!



Autumn helps the fourth graders identify their minerals.



The fourth graders are excited about minerals!

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Updated: 15 September 2002

Earth Science Week 13-19 October 2002



What is Earth Science Week?

Earth Science Week is an international event, and its aim is to help people develop an understanding of the importance, and impacts, of earth science to every day life, as well as encouraging a sense of responsibility for the use and protection of our natural resources and the environment.

- ▶ Find out more about Earth Science Week
- ▶ Getting Started: Ideas and Themes to celebrate Earth Science Week
- ▶ Activities in your state (*items are added regularly*)

More information

If you would like more information, or wish to participate, contact **Jeanette Holland, Communications Unit, Geoscience Australia on (02) 6249 9731**, with details of your Earth Science Week activities for inclusion in the "Activities in your State" site as well as future press releases.

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Updated: 15 September 2002

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Earth Science Week

Earth Science Week started at the American Geological Institute based in Alexandria, Va., but its influence is beginning to spread worldwide. With the 1998 launch of the 'Earth Science Week' web site, www.earthsciweek.org, requests for information and questions about starting Earth Science Week programs flowed in from all over the world. U.S. organisations with international affiliations, such as the American Association of Petroleum Geologists, have also promoted international interest. That trend has continued, and in 1999, geoscientists and geoscience organisations in Argentina, Australia, Canada, Columbia, Croatia, Germany, Hong Kong, India, Japan, Liberia, Malaysia, Mexico, New Zealand, Norway, Poland, Puerto Rico, Saudi Arabia, Scotland, South Africa, Spain, Switzerland, Taiwan and Trinidad began developing Earth Science Week activities. As the North American and Australian initiatives expand, geoscientists from Europe to Asia to South America are also working to establish annual programs.

As international interest in Earth Science Week broadens, the phrase "Think globally, act locally" is a fitting guide to shape its growth. Just as parents must nurture a growing child, geoscientists around the world must individually nurture Earth Science Week's long-term success. They must invest their energies and resources to raise public awareness and understanding of the earth sciences in their communities.

What are the objectives of Earth Science Week?

- To give students new opportunities to discover the Earth sciences.
- To highlight the contributions that the Earth sciences make to society.
- To publicise the message that Earth science is all around us.
- To encourage stewardship of the Earth through an understanding of Earth processes.
- To develop a mechanism for geoscientists to share their knowledge and enthusiasm about the Earth and how it works.
- To have fun!

Earth Science Week is an opportunity for all those involved in earth sciences around the world to present the results of their activities, highlighting the importance of their work to the community.

This special week gives geoscientists, teachers and parents special opportunities to help students explore and discover connections between their lives and the Earth.

Geoscience Australia in Canberra, managed the first Australian

celebrations of Earth Science Week in October 1999. The main highlight was the grand opening Geoscience Australia's new Earth Science Education Centre, which caters specifically for school groups. The centre offers 'hands-on' curriculum linked activities for school children in a friendly environment as well as organising and running teacher workshops.

What can you do?

Please join Geoscience Australia and support Earth Science Week by organising something special at your school. Join the celebrations with a geoscience activity day, family activities, scientific demonstrations, photographic displays, library 'geoscience' book displays, children's earth science artwork display, science projects displays, teacher workshops, public lectures, invite a guest speaker, design Earth Science Week promotional material and an ESW web page.

Earth Science Week 2002 at Geoscience Australia

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http://www.ga.gov.au/about/event/earth_science_week.jsp



Betterment through Science

**Registered Office: 9, Paraj Apartments; 205, Shaniwar Peth; Pune 411 30.
Phone - 4487171**

Brief report on the Earth Science week activities organised by Science Centre, Pune

“Science centre” Pune, India is an organization established with the efforts of Dr. V.D. Borkar, an eminent Paleontologist and his friends. This organization carries out voluntary activities mainly in the city of Pune to promote scientific temper and propagate science. Activities are focused at school children. Demonstrations, slide shows, field trips are organised by the volunteers of the science centre.

On the occasion of International Earth Science Week 2002, the Science Centre, Pune had arranged a lecture by Dr Kantimati Kulkarni, Department of Geology & Paleontology, Agharkar Research Institute, Pune; on 22nd Oct 2002. Prof. Lalitkumar Kshirsagar, Head of the Department of Petroleum Engineering, Maharashtra Institute of Technology, presided over the function.

Dr. Kulkarni spoke on 'Fossil trails and tracks: Insight into environment'.

At the outset she described various activities of tiny creatures in the intertidal zone to be found on any beach and narrated various structures like trails, tracks, pellets, burrows, etc. produced through such activities. She further said that just below the surface of the beach sand, teeming activity could be witnessed if one were to dig even a little. The audience was left wide eyed when she said that similar structures emplaced by extinct organisms millions of years ago on the beaches that then existed, are still preserved in sedimentary rocks as trace fossils.

In order to impress the use of trace fossils, she quoted a few examples from the study of trace fossils made by her from the various rock formations occurring in different states of India.

Projecting slides in connection with ichnogenus *skolithos* from the Vindhyan Supergroup of Proterozoic age, she said that it is a positive evidence of the antiquity of the metazoans. The Proterozoic fauna had no hard parts and therefore the only proof of their existence is the traces left behind by them. It also speaks of development of coelomic cavity, required for emplacing vertical burrows, well within the Proterozoic times.

As regards *Ophiomorpha* from Jurassic of Kutch, she explained that it was a dwelling burrow created by crabs characteristically fortified by pellets. Such strengthening of walls connotes the unstable nature of the substrate which these animals inhabited.

She also spoke of a special category of burrows, viz. nesting or brooding, which are rarely preserved as fossils. The presence of structures in the Permian rocks of Rajasthan was demonstrated with the help of pictures.

Drawing upon her studies, Dr. Kulkarni observed that the biodiversity of the intertidal zone in the past was very rich. Very often news items appear about mass mortality of fish fauna due to oil spillages and industrial effluents. Loss of benthic fauna remains unnoticed. In the last couple of decades human influence has drastically reduced marine biodiversity.

In his presidential remarks, Dr. Kshirsagar observed that we have been grossly neglecting earth sciences in planning and development projects. They play an important role in water harvesting and exploration, controlling pollution, exploitation of fossil fuels, combating natural calamities like earthquakes and floods. He also emphasized the role that National Parks played in generating public awareness regarding earth sciences. Lauding the efforts taken in the western and European nations in this regard, he strongly recommended the need for such activities in India too.

The function concluded with a vote of thanks proposed by Ad. Shantanu Khurjekar. The programme was compeered by Ms. Tanuja Marathe of the Geology Department, Fergusson College.

Pradeep Jadhav
(Reporter, Volunteer)



Panorama of Te Mata Peak - all made of Pliocene Te Aute limestone

Austin Hendy, University of Waikato

EARTH SCIENCE WEEK, 13-19 October 2002



Earth Science Week is fast becoming a worldwide event, and is an opportunity to to promote and encourage an active interest in the Earth Sciences to the wider community.

What are the objectives of Earth Science Week?

- * To give students new opportunities to discover the Earth sciences.
- * To highlight the contributions that the Earth sciences make to society.
- * To publicise the message that Earth science is all around us.
- * To encourage stewardship of the Earth through an understanding of Earth processes.
- * For geoscientists to share their enthusiasm about the Earth and how it works.
- * To have fun!

Find out more about Earth Science Week

Some ideas to get you started

Activities planned –updated regularly

Information

For more information, or if you would like to publicise your event, contact Tasha Black at the Royal Society of NZ, ph (04) 470 5759, email: tasha.black@rsnz.org

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<http://www.gsnz.org.nz/gses02.htm>



join
in
the fun >>>

Earth Sciences Week, the second full week in October, is an annual celebration of the geosciences.

It aims to enhance people's awareness of the importance of earth sciences to our lives and to help you understand how the Earth works. This international event is supported by the American Geological Institute and even former president Bill Clinton is a fan!

This year's theme is "**Water is All Around You**", emphasizing the importance of the Earth's greatest natural resource- and **Planet Science** is here to help you get involved!

We've put together some brilliant **hands on activities** for the home and classroom with some great links to **web sites** where you can find out about different rocks, minerals and fossils, get hold of earth science resources for teachers and try plenty more experiments. And if all this **inspires** you to be an **earth scientist** we've got the information to help you get on the right track.

Experiments...

>>>

Water Down the Plughole

To fit in with this year's water theme why not take part in **our** international experiment - have you ever wondered why water **spirals** as it goes down the **plug hole**? And does it really go down the plug hole in **opposite** directions on opposite sides of the world? Click

here to find out, and get hold of all the **information** you need to do the experiment with some fun facts, web and curriculum links.

>>> **Help Help Volcano!**

We don't have any **active volcanoes** in the UK but you can make your own with baking powder and vinegar.

Stand back! This volcano will explode in your kitchen!

>>> **Lava Flow!**

Create **mini volcanic eruptions** and build layers of lava using play dough!

>>> **Bread Rock**

Recreate the formation of **sedimentary rock** using left over bread and your hob

Activities...

Earth Quake!

To launch **Science Year** in September 2001 thousands of people took part in the **Giant Jump** by jumping at the same time across the county. This year, schools in **Australia** will be re-enacting the Giant Jump- and you can too.

Click here for all the **instructions**, including how to do the Giant Jump, some fun earth science facts, and information about how to build your own **seismometer**. We've got **3 different designs** for you to try on the day of your jump. These include a simple cardboard box and pen and a solenoid sensor- where vibrations cause a coil to move around a magnet, generating a voltage. The greater the voltage the greater the vibration detected- so what are you waiting for? Jump to it!

Been Inspired?

Do you enjoy working **outdoors**? Do you like **travelling**? Do you like **puzzle solving**? Then you may have what it takes to be an Earth Scientist! Why don't you go to the **NEXT STEPS** section of our web site and check out what real earth scientists are up to in our **Meet Your Match** database?. You can also

access more information on careers in Earth Science from the Official Earth Science Week website.

Want to find out more?

Official Earth Science Week website, with plenty of **activities** for the classroom based around this years theme- water! (the curriculum focus is North American, but this site contains some good universal activities)

If you are interested in how **volcanoes** work or why **earthquakes** happen, How Stuff Works has all the information you could need.

The BBC education site contains a series of fun **geology activities** to do at home or in the classroom, including Chocs Like Rocks, the Sedimentary Sandwich and Rock Cycle experiments

The Earthlab Datasite is an accessible **database** containing info on over 2000 UK rocks, minerals and fossils.

Links for teachers

<http://www.matter.org.uk/schools/content/Seismology/index.html>
Provides good **lesson resources** from the University of Liverpool's MATTER Seismic Waves site

<http://www.ucl.ac.uk/geosci>
Offers loads of earth sciences-related material for schools including **downloadable** activities, access to geology loan boxes, summer school programmes and a school questionnaire.

<http://www.esta-uk.org>
The **UK's** Earth Science Teachers Association website


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<i>Waterloo Cedar Falls Courier</i> -September 12, 2002-Waterloo, IA	50,000	3-13
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<i>Sun</i> -Sept. 30, 2002-Baltimore, MD	320,986	3-15
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TOTAL	3,515,418	

IS ALL AROUND YOU



Understanding water, including its properties, distribution, supply circulation, quality, and its role in weather, climate, shaping our Earth's surface, and helping humans meet essential needs, is essential to middle school science literacy. Both the *National Science Education Standards* (NRC 1996) and the *Benchmarks for Science Literacy* (AAAS 1993) stress the importance of helping middle school students improve their understanding of these important aspects of water and the Earth system. The American Geological Institute is helping teachers and geoscientists emphasize the importance of water by selecting *Water is All Around Us* as the theme of this year's Earth Science Week. The activity on the back of this month's poster insert, *Water—The Essential Resource*, encourages students to think about how they use water and identifies steps they can take to conserve this valuable resource.

Our use of water

In most parts of the world, water is a scarce resource. That might seem strange because there is so much water on Earth. However, almost all of the water on Earth, more than 97 percent of it, is seawater in the oceans, and most of the world's fresh water is frozen solid in large glaciers in Antarctica and Greenland (see Figure 1). The fresh water that is available for human use is either con-

Michael J. Smith is director of education and co-author of the *EarthComm* and *Investigating Earth Systems* curriculum projects at the American Geological Institute in Alexandria, Virginia. **John B. Southard** is professor emeritus of geology at the Massachusetts Institute of Technology in Cambridge, Massachusetts.

rained in soil and rock below the surface, called groundwater, or in rivers and lakes.

In most areas of the United States, there is enough fresh water for human use. Yet usable fresh water is not as abundant as you might think. In some areas, such as the arid Southwest, there is not enough water, and water has to be brought long distances to meet the demand. Even in areas with plenty of fresh water, there are sometimes shortages. During times of drought, when rainfall is below average for a number of years, water supplies can become dangerously low. In the summer of 2002, western states from the Rockies to California and the eastern coastal states from South Carolina to New Jersey experienced severe to extreme drought conditions. (For a list of areas currently experiencing drought conditions, visit www.drought.unl.edu/dm/current.html.)

Even when rainfall is adequate, water from rivers and lakes might be unusable because of pollution. Groundwater use may also be restricted in wetland areas. Our supply of available water is limited. So, as the population of the United States continues to grow, water shortages will become more common and water conservation will become increasingly important.

The activity on this month's poster asks students to make a list of the ways water is used in their homes. This list could include drinking, cooking, bathing, brushing teeth, washing clothes, dishes, and cars, flushing toilets, watering gardens and lawns, and filling swimming pools. The follow-up investigation into the amounts of water used, and possibly wasted, in the home might surprise your students. This leads into an exploration of ways to conserve water.

FIGURE 1 Distribution of water in the hydrosphere

Reservoir	Percentage of total water	Percentage of fresh water	Percentage of unfrozen fresh water
Oceans	97.54	—	—
Ice (mostly glaciers)	1.81	73.9	—
Groundwater	0.63	25.7	98.4
Saltwater lakes and streams	0.007	—	—
Freshwater lakes and streams	0.009	0.36	1.4
Atmosphere	0.001	0.04	0.2

These figures account for 99.9 percent of all water. The remaining water is tied up in the biosphere and as soil moisture.



There are many ways to conserve water at home. Some are easier than others. Leaky faucets and leaky toilets waste very large amounts of water, because even though the flow rates are small, they leak all the time. New designs of toilets and washing machines use much less water than older designs, but replacement is expensive. Water-saving showerheads save a lot of water, and they are relatively easy and inexpensive to replace. Unfortunately, some of the most effective ways to reduce water use can also be the most inconvenient for students and their families. Taking "navy showers" (turning off the water while you're soaping yourself), not planting lavish lawns in areas that are normally arid, and driving a dirty car are examples of effective and simple ways to conserve water that will seem impractical and inconvenient to many people. The public is usually quicker to support other measures, such as smart faucets that turn off when you leave the sink, that don't impact their quality of life. However, as responsible citizens, students must make informed and often difficult choices about their own water use if we are to protect this life-giving resource.

The water cycle

The front of the water poster underscores how water is essential for life and that water is constantly on the move. Many of the processes in the water cycle that are implied in the poster will not be readily apparent to many middle school students. In addition to exploration and inquiry, you can use the sidebar at right to explore the movement of water in the Earth system with your students.

Earth Science Week

For information, resources, and ideas about participating in Earth Science Week, including activities and student competitions related to its central theme of Water is All Around You, visit www.earthsciweek.org. Links to further information and resources related to water resources can be found at AGI's Investigating Earth Systems website at www.agiweb.org/ies.

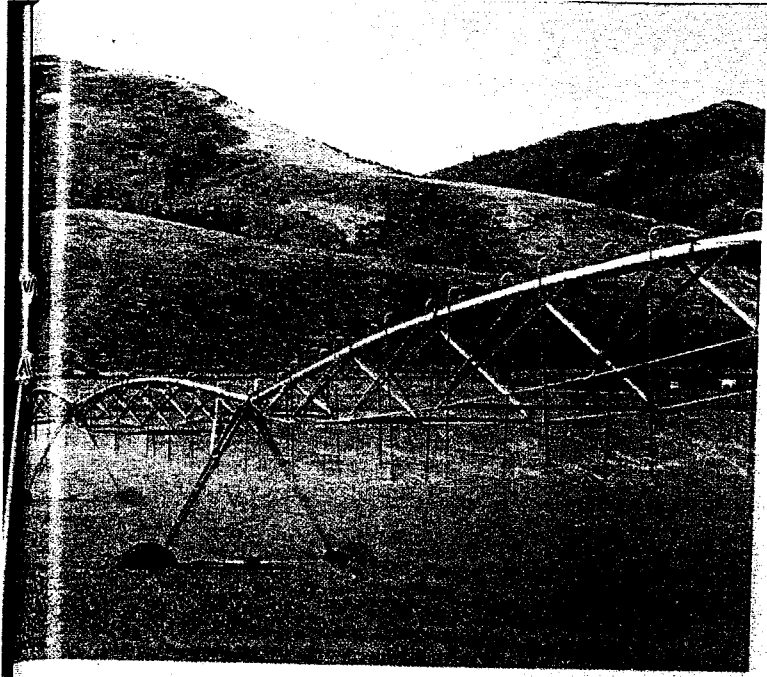
Water in motion

Water is the only common substance that exists at the Earth's surface as a solid, a liquid, and a gas. Water is present at, or near, the surface everywhere on Earth. In many places, the presence of water is obvious, in the form of lakes, rivers, glaciers, and the ocean. Even in the driest of deserts, however, it rains now and then, and although the humidity there is usually very low, there is at least some water vapor in the air.

Water, in the form of liquid, solid, or vapor, is in a continuous state of change and movement. Water resides in many different kinds of places, and it takes many different kinds of pathways in its movement. The combination of all of these different movements is called the water cycle, or the hydrologic cycle.

The water cycle is called a "cycle" because the Earth's surface water forms a closed system. In a closed system, material moves from place to place within the system but is not gained or lost from the system. The Earth's surface water is not a perfectly closed system, because relatively small amounts are gained or lost from the system. Some water is buried with sediments and becomes locked away deep in the Earth for geologically long times. Volcanoes release water vapor contained in the molten rock that feeds the volcanoes. Nonetheless, these gains and losses are very small compared to the volume of water in the Earth's surface water cycle.

Evaporation (change of water from liquid to vapor) and precipitation (change of water from vapor to liquid or solid) are the major processes in the water cycle. The balance between evaporation and precipitation varies from place to place and from time to time. It's known, however, that there is more evaporation than precipitation



over the surface of the Earth's oceans, and there is more precipitation than evaporation over the surface of the Earth's continents. That fact has a very important implication: there is net movement of water vapor from the oceans to the continents, and net movement of liquid (and solid) water from the continents to the oceans.

The oceans cover about three-quarters of the Earth. Ocean water is constantly evaporating into the atmosphere. If enough water vapor is present in the air, and if the air is cooled sufficiently, the water vapor condenses to form tiny droplets of liquid water. If these droplets are close to the ground, they form fog. If they form at higher altitudes, by rising air currents, they form clouds.

All of the solid or liquid water that falls to Earth from clouds is called precipitation. Snow, sleet, and hail are solid forms of precipitation. Rain and drizzle are liquid forms of precipitation. When rain falls on the Earth's surface, or snow melts, several things can happen to the water. Some evaporates back into the atmosphere. Some water flows downhill on the surface, under the pull of gravity, and collects in streams and rivers. This flowing water is called surface runoff. Most rivers empty their water into the oceans. Some rivers, however, end in closed basins on land. Death Valley and the Great Salt Lake are examples of such closed basins.

Some precipitation soaks into the ground rather than evaporating or running off. The water moves slowly downward, percolating through the open pore spaces of porous soil and rock material. Eventually the water reaches a zone where all of the pore spaces are filled with water. This water is called groundwater. Some water, called soil moisture, remains behind in the surface layer of soil. The roots of plants absorb some of the water that soaks into the soil. This water travels upward through the stem and branches of the plant into the leaves and is released into the atmosphere in a process called transpiration.

It has been estimated that each year about 36,000 cubic kilometers of water flows from the surface of the continents into the oceans. That represents the excess of precipitation over evaporation on the continents. This water carries sediment particles and dissolved minerals into the ocean. The sediment particles come to rest on the ocean bottom. When seawater evaporates, it leaves the dissolved materials behind. Over geologic time, this process has gradually made the oceans as salty as they are now.

In Earth systems science, the water cycle is viewed as a flow of matter and energy. Each place that holds water is called a reservoir. The rate at which water flows from one reservoir to another in a given time is called a flux. Energy is required to make water flow from one reservoir to another. On average, the total amount of water in all reservoirs combined is nearly constant. The amount of water stored in any one reservoir varies over time. For example, in many areas there may be more water in groundwater during the spring (when precipitation is high, and water use and evaporation is low) than in the summer (when precipitation is low, and evaporation and water use are high).

Water exists at the Earth's surface as liquid, solid, and vapor. It is forever changing from one of those three states to another. You can easily observe how water changes from liquid to solid by freezing and from solid to liquid by melting. Water also changes from liquid to vapor by evaporation and from vapor to liquid by condensation. Condensation is how clouds and raindrops form. Water can even change from vapor directly into solid; that is how snowflakes are formed, high in the atmosphere.

The total amount of water near the surface of the Earth stays almost the same through time, but water is always moving from place to place. You can think of places where water resides, like the ocean or lakes or glaciers, as "reservoirs." Water moves from reservoir to reservoir in various ways. It can move in the form of liquid, solid, or vapor. This complicated movement of the Earth's water is called the water cycle.

One of the most important "loops" in the water cycle involves evaporation of water from the ocean surface, transport in the form of water vapor to the continents by winds, and precipitation as rain or snow on the continents. The rainfall then runs off by way of streams, rivers, and groundwater back to the ocean. Another important "loop" in the water cycle involves condensation of water vapor in the atmosphere to form rain, soaking of the rain into the ground, uptake of the water by plant roots, and return of that water, in the form of water vapor, back into the atmosphere by transpiration through the leaves of the plants. There are many other "loops" as well. The Earth's water cycle is very complicated in its details.

Geology



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This Is the Week That Is

**October 13–19, 2002 is a whole week for
Earth science**

Six months ago was Earth Day. You may have noticed, as I did a few years ago, that [Earth Day](#) has precious little [Earth science](#) in it. Professional societies for geologists noticed that too, so they created their own Earth event. This year the week of October 13–19 is it—Earth Science Week. Look around and see if you like it.

Why do we need an Earth Science Week when we have an Earth Day? If you ask me, the reasons for both events are the same—our lives, and just as important, our societies depend on the wealth that this planet provides. But here are two reasons for having a separate event.

First, the proponents of Earth Day have settled on a consciousness-raising program centered around the plants and animals. They have kept things simple, at the level of poppies and puppies. Endangered species, threatened habitat, pollution control and international laws to save the whales are absolutely worthy of this effort. And that message is plenty for one day. Earth Day works for what it needs to do, but it's not enough time for what *Earth Science Week* needs to do.

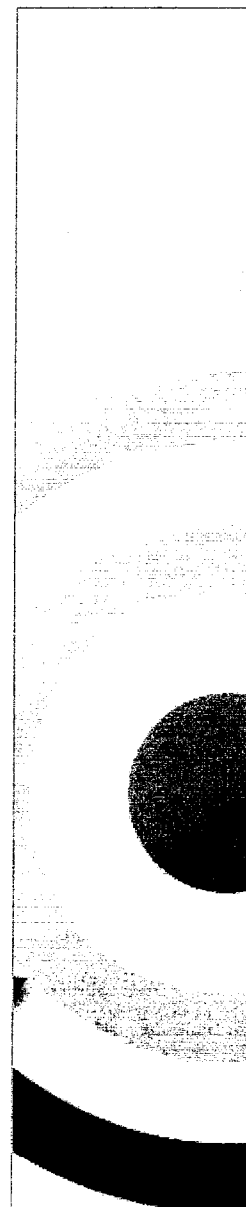
Because, second, saving the whales will not save us. If you think of the human race living on Earth like a family living in a house, *Earth Day* is about cleaning house. But our house needs more than a

Related Resources

- [The Water Geo-Quiz](#)
- [Water Glossaries](#)
- [Mineral Resources](#)

Elsewhere on the Web

- [Earth Science Week](#)
- [Water Monitoring Day](#)
- [National Center for Science Education](#)



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spring cleaning—it needs fixing up. It needs repairs, new furnishings for the new tenants, and better appliances to serve their needs. That work is not like picking up trash from the beach, which anyone can do. It calls for professionals, scientists and technicians who know how the house is constructed. They must learn ways to run a mine properly, find the right waste disposal site, fix ruined ground, locate clean water, and restore worn-out soil. Turning young people on to a career in Earth science, and keeping others reasonably informed about it, takes at least a week, and in fact there are events during most of October.

Earth Day began in 1970 as a political event, aimed at affecting public policy. Earth Science Week began in 1998 as part of the American Geological Institute's 50th anniversary. But it has a public policy goal, too—to raise awareness of the value of Earth resources. Behind that is a desire to strengthen science teaching in public schools and halt the erosion of public funding for geological research. I think it's *necessary*, not just desirable, to teach and fund more Earth science, so I really hope you'll check out Earth Science Week.

This year, the special focus of Earth Science Week is water. The [home page of Earth Science Week](#) has a [list of activities](#) you can try at your school. The U.S. Geological Survey, the nation's largest water-related agency, has the most ambitious program. See its special page for a list of [activities](#) across the nation, too, as well as links elsewhere.

The highlight of the week is National Water Monitoring Day, October 18. To mark the 30th anniversary of the Clean Water Act, many USGS specialists will take you to the river with them, where you can see directly how they help safeguard our water. [Start on this page](#) to learn more.

If you're touched by some part of Earth Science Week, whether it's [cookie mining](#) or visiting the Salt Institute's [frequently asked questions page](#), then drop me a note to say so. Because this is my contribution to the event—to get *you* there.

Some people don't confine their work to just one week, because there are groups that actively oppose Earth science all year. I'm thinking of the National Center for Science Education, which fights creationists who are trying to hijack the public schools. Give their site a visit this week, too.

"Water is All Around You"

Duane A. Carey, CPG-10305

Attention AIPG Sections:

Earth Science Week 2002
"Water Is All Around You"
October 13-19, 2002

Last Spring I represented AIPG at a planning meeting to define the scope of this year's Earth Science Week (ESW), and to set themes, increase participation, and improve effectiveness of future ESWs. This year's theme is "Water is All Around You". This theme is consistent with the 30th anniversary of the Clean Water Act, and National Water Monitoring Day will occur during ESW on October 18.

The meeting was organized by the American Geological Institute (AGI) to solicit input from its member societies, and was held at the U.S.G.S. headquarters in Reston, Virginia. U.S.G.S. Director Mr. Chip Groat (CPG-02774), addressed the participants with a discussion of the need for geologists to convey the relevance of earth science. From water, mineral, and energy resources to geologic hazards, earth science intimately affects the public, yet few citizens have even a rudimentary knowledge of geologic processes or their significance. That's why ESW is so important; it is our opportunity to spread the word, and ultimately, demonstrate the importance of our profession.

How can you help? First, recognize that ESW is best promoted at the local level, through individual AIPG sections. By working within our various local networks, we can spread the word at the grassroots level. Second, you can follow the lead of Texas, which has taken a leadership role on this issue. The next section of this article summarizes several of the great, easy-to-implement initiatives undertaken by Texas during previous ESWs. Third, learn how to work with your local media. Establishing relationships with local media can significantly aid in the promotion of earth science, in general, and geology, in particular. The last section of this article summarizes tips offered by Cindy Workosky of the National Science Teachers Association. During the AGI planning meeting, Ms. Workosky gave a media-relations presentation, which was based on many years of media relations at the NSTA. Her informed presentation was one of the highlights of the day. Finally, visit the AGI website at www.agiweb.org and click on the ESW link.

Texas Successes and Other Good Ideas

- Spearhead ESW celebrations in local towns and your state capital.
- Distribute ESW kits available from AGI.

- Supplement kits with Earth Science items pertaining to your region.
- Solicit local meteorologists (arguably the most visible earth scientists) to promote ESW during their forecasts. Provide them with fun questions and answers that they can pose to their viewers.
- Contact local science teachers to coordinate school activities.
- Host an ESW fair.
- Lead Earth Science book drive for libraries.
- Establish an ESW committee that can respond to requests from media, schools, politicians, etc.
- Add an ESW link to your section's website.
- Network with other similar groups (e.g., science teachers, rock clubs, environmental groups).
- Coastal states can include oceanography topics, especially considering this year's "Water is All Around You" theme.
- Solicit local corporate assistance, especially from industries associated with earth science.

Media Relations Tips

How do you get the media to cover your story?

- Pray for a slow news day!
- Have a good story and keep it simple and focused.
- Be aggressive. Take the extra time to call every relevant reporter.
- Don't just send press releases—send emails, make phone calls, and follow-up.
- Know your media outlets and what they cover. Focus on those resources that are most likely to cover your type of story (or have a history of covering related stories).
- Know the reporters in your community. Find profiles and learn about who they are.
- Fracture the media—tailor your story to the appropriate reporter and media outlet.
- For TV, focus on the visual (e.g., pictures of volcanoes, flowing wells, storm surges). For newspaper, focus on the issues. Be creative. Make your story stand out in any way possible.

What is a good story?

- The more people your story affects, the more likely it will be covered. Look at the community and single out the story

EARTH SCIENCE WEEK 2002

or angle that is controversial or a hot topic. Given recent droughts and this year's water theme, this should be easy. Encourage celebrity or VIP participation in the news story.

- News that has a national hook with a local angle is best. What does it mean to us?
- News that affects or involves children captures attention more than just a "talking head".
- News with a fresh and new perspective can captivate audiences.

What are the different media outlets available? How can you make use of them?

- Newspapers: national, regional, local (daily or weekly), universities/schools, professional newsletters, Associated Press. Neighborhood papers are always looking for good story ideas.
 - Who: call education/science writers and editors, feature writers, city desk, calendar of events.

- When: call 3 weeks to a month before event.
- Television: news desk, national newsroom, local network affiliates, 24-hour cable news, public-access channel.
 - Who: call education or science reporters, program producers of morning shows, meteorologists.
 - When: call TV news desks a week to 2 days in advance, call morning program producers a month in advance.
- Radio: local shows are your best bet. AM talk radio, local NPR.
 - Who: call program producers, drive-time programs.
 - When: call a week in advance.
- All: contact Visitors or Convention Bureau to get a media list of reporters in the area. Follow-up!

Finally, please keep National apprised of your efforts and activities, so they can help coordinate activities among various sections. You can send additional ESW ideas to me at dcarey@bennettandwilliams.com or call (410) 461-8244.

Tucson Citizen
October 14, 2002
Tucson, AZ
Daily 42,400

Slide

WHAT'S GOING ON

Today

Themselves – Doseone has come through Tucson as part of experimental hip-hop combo cLOUDDEAD, but he's a busy guy. Another like-minded project, the atmospheric Themselves, sees Doseone and Jel in town at Solar Culture, 31 E. Toole Ave. You just need to bring \$7. Call 884-0874.

Tomorrow

Dickey Betts – Dickey Betts has been lauded for his guitarwork, and his Les Paul got quite a workout on last year's solo LP "Let's Get Together." The man is clearly a careful student of blues and rock, and if you'd like to have Betts teach you a thing or two, head to Backstage, 6350 E. Tanque Verde. Doors open at 7 p.m., with the show scheduled to start at 8. Tickets are \$15 in advance, available at your closest Zia Records. Call 733-6262 for more info.

Earth Science Week

Explore earthquakes, volcanoes, the environment and other features of Earth from 9 a.m.-5 p.m. at Flandrau, 1601 E. University. Cost is \$3 adults, \$2 children; call 626-6257.

Haunted Odyssey

The Atlantis Laser Odyssey is filled with scary characters and Halloween decorations from 4-10 p.m. through Oct. 31 at Fun-tasticks, 221 E. Wetmore. Cost is \$5 a game; call 888-4653.

ChocAlot reopening

ChocAlot celebrates its 20th anniversary with chocolate-making classes and chocolate fondue demonstrations from 4-8 p.m. at 6350 E. Broadway. Call 748-8889.

Callaghan wine dinner

The five-course dinner will feature wines by Kent Callaghan of Callaghan Vineyards in Elgin and fare by Westward Look's Chef Jason Jonilonis begins at 6:30 p.m. at Westward Look Resort, 245 E. Ina. Cost is \$80; call 297-0134.

Earth Science Week declared

Gov. Bill Owens has declared Oct. 13-19 as Earth Science Week in Colorado.

"Earth sciences are integral to finding, developing, and conserving mineral, energy, and water resources; to providing the basis for preparing for and mitigating natural hazards such as landslides, floods, earthquakes, and expansive soils; and are critical to environmental and ecological issues ranging from water and air quality to waste disposal," Owens said.

He further stated that understanding the geological factors of resources, hazards, and environment are vital to land management and land use decisions made in Colorado.

Earth scientists across Colorado and the country will celebrate the week by leading field trips, visiting classrooms, and engaging in other special activities.

Two field trips, free to the public, will be offered and led by the geologists at the Colorado Geological Survey.

The mineral resources of the Front Range area will be the focus of a field trip along the Front Range on Saturday, Oct. 12.

The world famous Purgatoire River dinosaur trackway near La Junta will be the subject of a field trip in the southeast part of the state on Saturday, Oct. 19.

A talk entitled "Avalanche Safety in Colorado" is jointly sponsored by the Colorado Geological Survey, the Geological Society of America, and REI. The lecture is from 2-3 p.m. on Oct. 19 at the REI flagship store.

For further information, visit <http://geosurvey.state.co.us/> or call (303)866-2611.

EVENTS

Free lectures in celebration of National Earth Sciences Week

Today begins National Earth Science Week, sponsored by the American Geological Institute, and the Geological Society of America is kicking off a series of free, public lectures in celebration. All presentations will be held at the REI Flagship Store auditorium, 1416 Platte St., Denver.

Ronal Kerbo, cave management coordinator for the National Park Service, will talk Tuesday about "Hidden Caves of the World," from 7 to 8 p.m.

Russell Dubiel, a geologist with the U.S. Geological Survey, will talk Wednesday about why Colorado has such diverse geology, and how that attracts outdoor enthusiasts. His talk is scheduled to run from 7 to 8 p.m.

Connie Woodhouse of the National Oceanic and Atmospheric Administration's paleoclimatology program will talk about "Reconstructing Records of Past Droughts in Colorado Using Tree Rings," Friday from 7 to 8 p.m.

Halstead Morris, an avalanche safety instructor for the Colorado Geological Survey, will talk about avalanche safety from 2 to 3 p.m. Saturday.

For more information, visit www.earthsci-week.org.

Sunday Camera
October 13, 2002
Boulder, CO
Daily 33,417



PHOTO BY CRAIG HEIDON FOR THE WASHINGTON POST

Choices

Earth Science Week Marks a Watershed Event

By JAN CHILDRRESS
Special to The Washington Post

There are more than a few drops of truth in the ancient mariner's lament: "Water, water everywhere, nor any drop to drink." Water covers three-quarters of Earth's surface but almost all is in the oceans. Most fresh water is locked within glaciers and ice caps, leaving the humans of this planet with just 1 percent for their own use.

You'd think we would eagerly protect that precious 1 percent, but in the United States, at least, the record of environmental stewardship was pretty dismal for a while, particularly in the 1950s and '60s when stories of rivers catching fire and populations of dead fish washing ashore were often front-page news. In 1972, after years of pressure from conservation groups like the Izaak Walton League, Congress passed the Clean Water Act.

To honor the 30-year anniversary of that legislation, Congress declared 2002 the Year of Clean Water. The American Geological Institute, which this week is leading the annual national observance of Earth Science Week, chose "Water Is All Around You" as this year's theme, with dozens of activities for schools and citizen groups. And on Friday, the date when the Clean Water Act was

manual and send the data back to them," Bill says.

Kobett also sends his data to Peter Bergstrom, a biologist with the U.S. Fish and Wildlife Service and a citizen monitor himself. On Saturday afternoons once a month, the two men test the water at three sites on the Magothy. Their monitoring is more involved than Kobett's work on Cornfield Creek, because the Magothy River Association and the Alliance for the Chesapeake Bay, the two organizations for whom Bergstrom volunteers, are committed to replenishing the river's underwater grass beds, also known as submerged aquatic vegetation (SAV). These grasses provide habitat for juvenile fish and crabs and food for the estuary's waterfowl. SAV also adds oxygen to the water and improves water clarity by stabilizing river-bottom sediments.

Kobett and Bergstrom collect data on temperature, salinity, pH (acidity-alkalinity) levels, dissolved oxygen, and turbidity (clarity). Like blood work for humans, these core measurements determine the health of a water system. Colder water, for example, holds more dissolved oxygen, essential for fish and other organisms. Salty water encourages the growth of oysters, prized not just for food but for their ability to filter water. Salinity levels also determine which grasses can be planted in a particular habitat: some grasses decline in wa-

Girl Scout Troop 3114 at Sea Creek in Annapolis: Helen Doherty does a turbidity check; at left, Bill Kobett watches Hannah Brown, Danielle McAtee, Nikki Agriest, Ruth Doherty and Erica Costas.

"Secchi disk" is lowered by rope into the water. The farther down it can be seen, the better. In addition, Bergstrom and Kobett scoop water into small vials and add drops of chemicals; as the water turns color or clears, it provides information on dissolved oxygen and pH levels.

"Citizen monitors measure the same parameters, such as temperature and pH, at every station, and that's necessary to establish reliable baseline data," says Bergstrom. "It is also important to monitor regularly, about every two weeks, to determine status—what is the water doing right now?—and trends—how status changes over time, or if it changes."

"The Kobetts are amazing," he adds with a laugh. "They monitor like clockwork every Wednesday. I don't think Bill has missed more than a few weeks this year."

"I've got the time and I like the water," Kobett says. "The bay is complex, and it's good to know what is going on. We now have 10 years of data—a good baseline for our end of the Magothy—and if you get information that consistently doesn't fit, you might have a problem."

"Government agencies can provide technical assistance and guidance," says Hamilton, "but I think the power really is with the people who live in the watershed and who fish, swim and drink the

Marks a Watershed Event

By JAN CHILDRESS
Special to The Washington Post

There are more than a few drops of truth in the ancient mariner's lament: "Water, water everywhere, nor any drop to drink." Water covers three-quarters of Earth's surface but almost all is in the oceans. Most fresh water is locked within glaciers and ice caps, leaving the humans of this planet with just 1 percent for their own use.

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For the Chesapeake Bay, one of several organizations that recruit and train citizen monitors, everyone within the Chesapeake Bay watershed lives just a few minutes from one of the 100,000 streams and rivers feeding into the bay. These waterways are professionally monitored by a complex network of federal, state and local agencies such as the U.S. Geological Survey, Environmental Protection Agency and Maryland Department of Natural Resources. USGS has been the lead agency for water monitoring for more than 100 years, but its staff cannot cover the vast system alone. Nonprofit watershed organizations such as the Alliance and their citizen monitors become increasingly important to the cause.

Citizen monitoring extends the areas where we get information and helps us prioritize where we need to do scientific research, says USGS biologist Pixie Hamilton. "The citizen movement has grown incredibly fast over the last 10 years. I think it's because people are concerned about the streams in their back yards."

Cornfield Creek, a tributary of the Magothy River, flows past the back yard of Bill and Barbara Kobett, a retired couple living in Pasadena, just north of Annapolis. In 1992, they attended a citizen water-monitoring training session run by Anne Arundel County. Almost every Wednesday since then, the Kobetts have been on their pier, using equipment provided by the county to conduct a series of chemical, physical and biological tests. Neither Bill, a mechanical engineer, nor Barbara, a homemaker, has training in chemistry or biology beyond the high school level, but they found monitoring to be simple and straightforward.

"We just follow the instructions in the county's

manual and send the data back to them," Bill says.

Kobett also sends his data to Peter Bergstrom, a biologist with the U.S. Fish and Wildlife Service and a citizen monitor himself. On Saturday afternoons once a month, the two men test the water at three sites on the Magothy. Their monitoring is more involved than Kobett's work on Cornfield Creek, because the Magothy River Association and the Alliance for the Chesapeake Bay, the two organizations for whom Bergstrom volunteers, are committed to replenishing the river's underwater grass beds, also known as submerged aquatic vegetation (SAV). These grasses provide habitat for juvenile fish and crabs and food for the estuary's waterfowl. SAV also adds oxygen to the water and improves water clarity by stabilizing river-bottom sediments.

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Girl Scout Troop 3114 at Spa Creek in Annapolis: Helen Doherty does a turbidity check; at left, Bill Kobett watches Hannah Brown, Danielle McAteer, Nikki Agriest, Ruth Doherty and Erica Coates.

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"Government agencies can provide technical assistance and guidance," says Hamilton, "but I think the power really is with the people who live in the watershed and who fish, swim and drink the water. Citizen water monitoring is becoming an incredible network. The value is great to this country."

Become a Water Monitor

Many Chesapeake Bay watershed groups have year-round conservation programs that include citizen monitoring of tidal and non-tidal waters. Here are some activities taking place to celebrate National Water Monitoring Day.

Additional event listings and information can be found at: www.epa.gov, www.usgs.gov, www.yearofcleanwater.org, www.fairfaxcounty.gov/nswcd/monitoring.htm and www.dnr.state.md.us/streams/volunteer/vol_index.html.

District of Columbia

- Anacostia Watershed Society: Anacostia Community Boat House, Friday. Contact Robert Boone, 301-699-6204.

Maryland

- Friends of Cabin John Creek Watershed, Montgomery County, Saturday and Sunday. Pre-registration required. www.cabinjohn.org/focjcw.
- Jug Bay Wetlands Sanctuary, Anne Arundel County, Saturday. Pre-registration. Contact jugbay@load.net.
- Patapsco Valley State Park, Avalon Pavilion, Baltimore County, Friday. Contact Rita Bruckler, Department of Natural Resources, rbruckler@dnr.state.md.us.

Virginia

- Alliance for the Chesapeake Bay: "Snapshot" water monitoring throughout Virginia, through Oct. 27. Contact Stacey Moulds, smoulds@acb-online.org.
- Biological and chemical monitoring demonstration, Eakin Park, Fairfax County, Friday. Contact Joanna Arciszewski, jarcis@fairfaxcounty.gov.
- Occoquan Rendezvous, Bull Run Marina, Clifton, Sunday. Contact Katherine Mull, kmull@novaregion.org or Cliff Fairweather, cfairweather@dubornaturalist.org.
- Watershed Education Day, Tarleton Park, Alexandria, Saturday. Contact Andy Rosenberger, anrosenb@vt.edu.

Waterloo Cedar Falls Courier
September 12, 2002
Waterloo, IA
Daily 50,000

■ Earth Science Week

WATERLOO — In about a month we will be celebrating Earth Science Week (Oct. 13-19), a week designated each year by the American Geological Institute as time to focus on earth science issues and information. The earth sciences impact our world with a wide range of topics ranging from weather to agriculture, including the aggregate industry, the study of earthquakes, land forms, land use, water use, mining and paleontology, the list goes on and on. Every day we make countless decisions regarding our personal impact and contact with the earth sciences. We at Basic Materials Corp., recognize the importance of the Earth Sciences and encourage everyone to learn more about the earth we live on, the earth processes at work, and the resources we obtain from the earth.

Basic Materials will provide an Educational Resources Kit to K-12 teachers from the American Geological Institute at no charge if the individual teachers will send their requests along with the address of their school ASAP to me at the address given below. In addition, Basic Materials is also sponsoring a "Rock Hounds Club" for all adults who are interested in rocks, minerals and fossils. You can receive information about joining by sending a request for information to me at the address given below. We firmly believe an understanding of the earth sciences at all age and interest levels promotes curiosity about the world in which we live along with an appreciation for our planet. While you're requesting information for either an Educational Resources Kit or Rock Hounds Club, mark Oct. 13 on your calendar from 10 a.m. to 4 p.m. to visit our earth Science Week open house at the Basic Materials Corp., Raymond Quarry Facility just east of Raymond on Dubuque Road.

SHERMAN LUNDY
Geologist
Basic Materials Corp.

Arkansas City Traveler
April 11, 2002
Arkansas City, KS
Daily 6,000

Kansas Geological Survey field trip set for April 20

3446
LAWRENCE — Rocks and fossils of South Central Kansas will be the focus of a non-technical field trip sponsored by the Kansas Geological Survey, based at the University of Kansas. The field trip is scheduled for Saturday, April 20, and is open to the public.

With several stops east of El Dorado, the field trip will provide a general introduction to the region's geology. At Eureka City Lake, participants will learn about basic bedrock geology: Limestones, shales and sandstones that were deposited during the Pennsylvanian Period, about 300 million years ago.

The trip also will stop at Toronto Lake to investigate sandstone deposits and visit a quarry near Buffalo to learn about a rare (in Kansas) igneous, or once-molten, rock. Participants will have an opportunity to collect fossils at one site.

The field trip, which will depart Saturday morning, the 20th, from El Dorado, is on a first-come, first-served basis, and space is limited. The cost is \$15 per person. Additional information about this and previous field trips is available on the GeoKansas Web site, <http://www.kgs.ukans.edu/Extension/fieldtrips.html>.

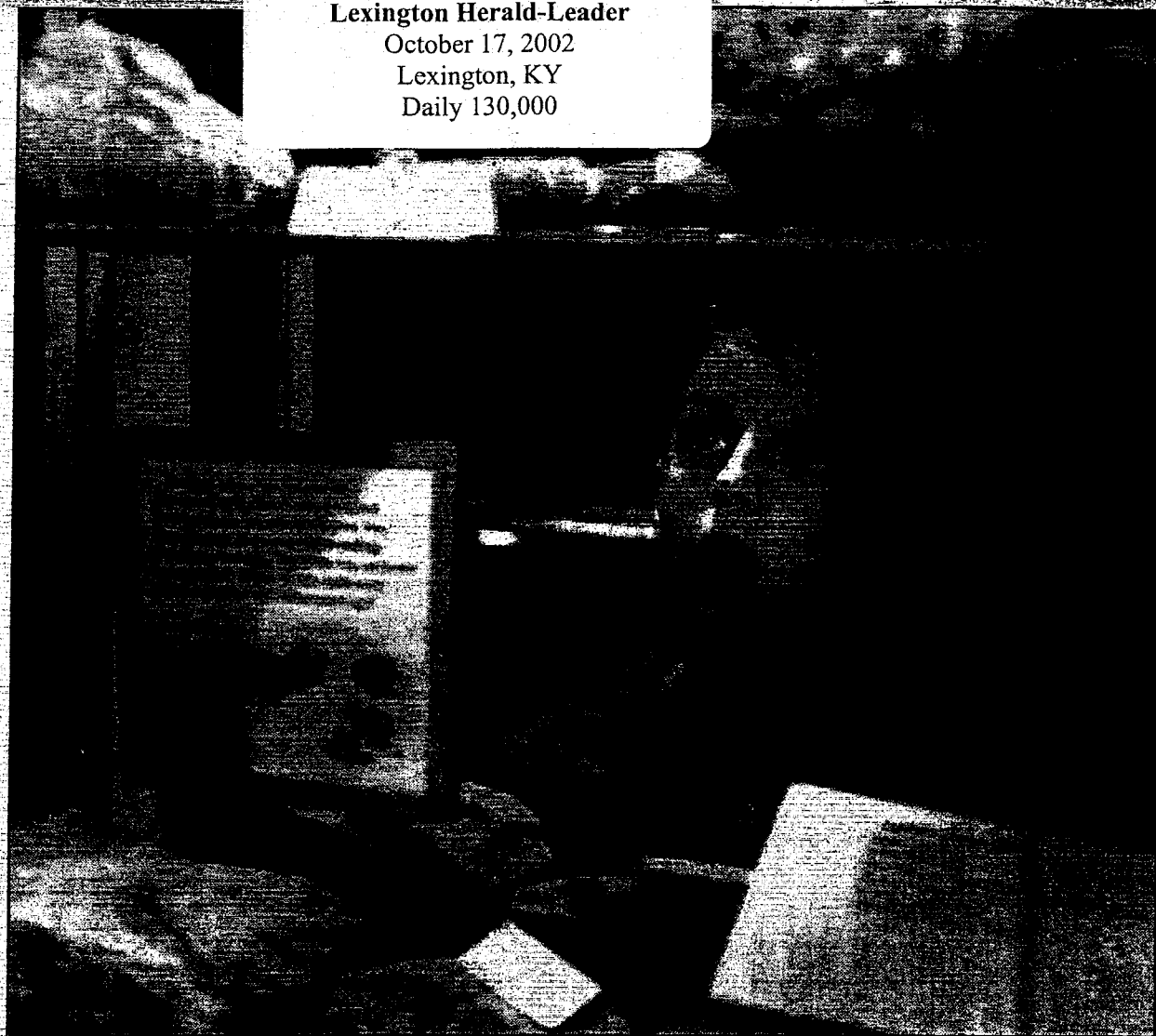
This field trip is a repeat of the trip the survey conducted in October, in celebration of Earth Science Week. The American Geological Institute, based in Alexandria, Va., established Earth Science Week in 1998. To find out more about Earth Science Week or to request an information kit, visit <http://www.earthsci-week.org>.

To register for the trip, contact Liz Brosius at (785) 864-2063 or lbrosius@kgs.ku.edu, or Rex Buchanan at (785) 864-2106 or rex@kgs.ku.edu.

Lexington Herald-Leader
October 16, 2002
Lexington, KY
Daily 130,000

UK welcomes rock collectors

Children and adults can upgrade their rock collections or have rocks, minerals and fossils identified at an open house today at the University of Kentucky. There also will be slide shows, viewing rocks under a microscope and a guided tour of geology displays. The event, part of Earth Science Week, will be held from 6 p.m. to 8 p.m. at the Mining and Mineral Resources Building on Rose Street and in the Slone Research Building on Washington Street. After 4:30 p.m., parking is available in the UK E and C4 lots on Virginia Avenue and the E lot beside the William T. Young Library on Columbia Avenue. More information is available at www.uky.edu/KGS/. 5446



PHOTOS BY DAVID PENNY | STAFF

Brandon Curtis, 11, was awed by fossils on display at the University of Kentucky's Mining and Mineral Resources Building yesterday. An open-house with activities available was held as part of the Kentucky Geological Society and UK Department of Geological Sciences' celebration of Earth Science Week.

ROCKS OF AGES

5446

There they were, hundreds of them, up close and personal — rocks.

Rocks, meteorites, fossils, and minerals — including some that glow in the dark — were on display last night at the Kentucky Geological Survey and the University of Kentucky Department of Geological Sciences, as part

of a celebration of Earth Science Week.

The display included "The Rock Pile," which kids and adults could sort through to start or upgrade their rock collections.

Geologists were also available to identify rocks from people's personal collections.



A fossilized crinoid — a relative of the modern starfish that lived 420 million years ago — was one of many items on display at the UK open house last night.

Sun
September 30, 2002
Baltimore, MD
Daily 320,986

HOWARD DATEBOOK

5446

TODAY

U.S. policy: Howard County library is offering talks on "The Implications of Sept. 11 for U.S. Policy" at the central library, 10375 Little Patuxent Parkway, Columbia. Col. Mark Pizzo will discuss "Military Transformation in a World of Terrorism" at 7 p.m. today. Albert C. Pierce, professor of ethics at the Naval Academy, will discuss "The Ethics of U.S. Use of Force" at 7 p.m. Oct. 7. 410-313-7800.

TOMORROW

Show house: Historic Ellicott City Inc.'s 18th Decorator Show House, Cloverdale, in Mount Airy, a farmhouse decorated by local interior designers, will be open to Oct. 20. Hours are from 10 a.m. to 3 p.m. Tuesday and Thursday; 10 a.m. to 4 p.m. Wednesday, Friday and Saturday; and noon to 5 p.m. Sunday. Admission is \$10 in advance; \$12 at the door. A boutique, garden shop and programs on gardening, history and fashion are available. Proceeds will help support preservation projects of Historic Ellicott City Inc. 410-461-6908 or www.echo.org.

Young, elder: Babies, toddlers and pre-schoolers are invited to visit residents for "Share-A-Hug Story Time" from 10 a.m. to 11 a.m. at Lorien Nursing Home, 6334 Cedar Lane, Columbia. The children and residents will share stories, singing, puppets and finger-play games. 410-313-7461.

Book club: The Central Library, 10375 Little Patuxent Parkway, will sponsor a book club for girls, ages 11 to 13, and their parents from 7 p.m. to 8:30 p.m. *The Breadwinner*, by Deborah Ellis, will be discussed. Registration is required. 410-313-7860.

THURSDAY

down the Youghiogheny River (no one gets wet) and an overnight at Seven Spring Mountain Resort. The cost is \$270 double; \$195 single. Registration is due as soon as possible. 410-313-7279.

SATURDAY

Wildlife festival: Patuxent Research Refuge will celebrate Earth Science Week, National Wildlife Refuge Week and a century of wildlife conservation and bird-banding from 10 a.m. to 3 p.m. at its National Wildlife Visitor Center in Laurel. Activities will include tours of the Wildlife Research Center, wildlife conservation tram tours, guided nature hikes and craft projects for children. Admission is free. Tram tours are \$3 for adults; \$2 for seniors. Children to age 12 pay \$1. 301-497-5763; TDD, 301-497-5779.

Snipe hunt: Howard County Department of Recreation and Parks will sponsor a "Great Snipe Hunt," for families with children ages 4 to 7, from 7 p.m. to 9 p.m. at Schooley Mill Park. Participants will prepare for the hunt with a campfire, hayride and s'mores, and then hike into the woods to search for the Fulton Snipe. Participants should take a large brown paper bag and flashlight (the hunt is imaginary). The cost is \$30 per family. Registration is required. 410-313-7275; text telephone, 410-313-4665. In case of inclement weather, call 410-313-4452 after 4 p.m. the day of the event.

Civil War walk: Patapsco Valley State Park will hold a walking tour, "Relay During the Civil War," from 10 a.m. to noon in Relay. Participants will learn the town's role in the history of B&O Railroad and protecting Thomas Viaduct during the Civil War. Registration is required. Donations are welcome. 410-737-0451.

Sun
October 4, 2002
Baltimore, MD
Daily 320,986

Patuxent refuge marking Earth Science Week

5446
Patuxent Research Refuge will celebrate Earth Science Week, National Wildlife Refuge Week and a century of wildlife conservation and bird-banding from 10 a.m. to 3 p.m. tomorrow at its National Wildlife Visitor Center in Laurel.

Activities will include tours of the Wildlife Research Center, wildlife conservation tram tours, guided nature hikes and craft projects for children.

Admission is free. Tram tours are \$3 for adults; \$2 for senior citizens. Children to age 12 pay \$1. The center is off Powder Mill Road between the Baltimore-Washington Parkway and Route 197.

Information: 301-497-5763; TDD, 301-497-5779.

This tour really rocks

Framingham State College professors offer weeklong geological look at MetroWest

5446

By Charlie Breitrose
NEWS STAFF WRITER

FRAMINGHAM — In celebration of Earth Science Week, Framingham State College professors have invited the public to join them on a geological tour of MetroWest and discover the scientific gems of eastern Massachusetts.

Geology and oceanography professor Margaret Lidback has often taken her students on field trips, but

this will be the first time she has invited the public.

"People in the department are interested in helping people understand science," Lidback said.

Along with colleague Carol Hildreth, Lidback will lead a tour of geological features in MetroWest formed when glaciers covered the area 20,000 to 30,000 years ago. One of the features will be the site of

GEOLOGY, Page B5 *D*

This tour rocks

GEOLOGY, From B1
FSC's campus. *D*

"The hill the campus is on is made of material like the rocky soil you find in New England," Lidback said. "It is made of that and was plastered by the glacier."

The tour also will take the group to Walden Pond, which was also left by a glacier.

She also will read passages from Henry David Thoreau's writings about the pond.

Lidback and Hildreth will each lead a group around the Harvard Museum of Natural History, which Lidback said is a science resource that's not widely known.

The Earth Science Week celebration will run for more than a week, with events from Oct. 13 to Oct. 27.

► Sunday, Oct. 13 — Harvard Museum of Natural History: Meet at the front entrance of the museum, 26 Oxford St., Cambridge, at 12:45 p.m. Includes the museum's dinosaur exhibit and mineral, rock and fossil collections.

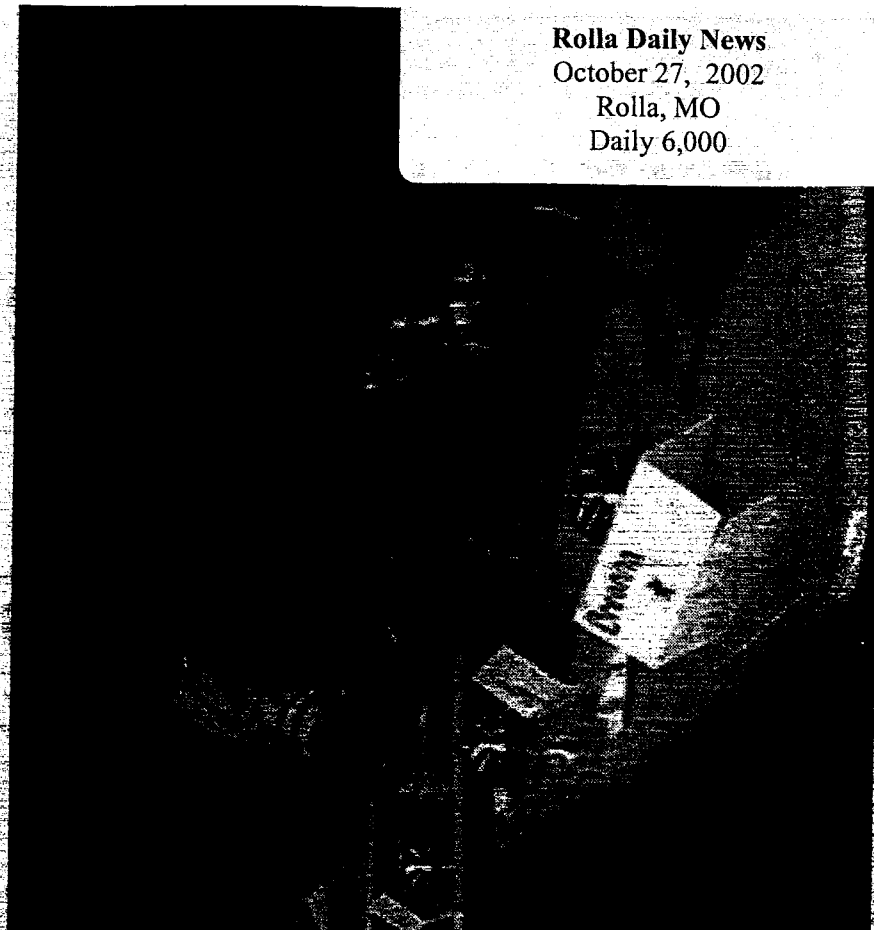
► Wednesday, Oct. 16 — Observe

the night sky with a telescope from 7:30 to 9 p.m. Meet on Larned Beach (between Hemenway Hall and Whittemore Library). The group will look at galaxies, nebulae and the moon with the college's telescope. Participants are encouraged to bring their binoculars.

► Saturday, Oct. 19 — Learn about the glacial geology of the MetroWest from 10 a.m. to 2 p.m. Meet at the Maynard Street parking lot at 9:45 a.m. to car pool. The group will visit glacial features around the FSC campus, and other glacial formations such as Walden Pond. Bring a lunch.

► Sunday, Oct. 20 — Harvard Museum of Natural History from 10 a.m. to noon. Meet at 9:45 a.m. See above for description.

► Sunday, Oct. 27 — Purgatory Chasm geology field trip, from 10 a.m. to noon. Meet at the visitor center parking lot at 9:45 a.m. View the State Park through the eyes of a geologist. The controversy about the chasm's origin will be discussed and rock outcroppings will be viewed.



Martha Prime Edwards photos

Celebrating earth and its resources ⁵⁴⁴⁰

In celebration of Earth Science Week, U.S. Geological Survey in Rolla brought "Geopardy" to Rolla Middle School students in Candace Stanley's 6th grade science class. Loosely patterned after the popular game show "Jeopardy," the USGS version included topics such as maps, water resources, earthquakes and more. Pictured above right at the event: USGS staff member Keith Brady (far left), scorekeeper Shane Stotler, USGS Intern Rebecca Moneymaker (left the Geopardy board), "game show host" Mark Newell, USGS's public affairs manager, and teacher Candy Stanley (seated far right). Above, competing in one of the Geopardy rounds at Rolla Middle School last week were sixth grade science students Breanna Salamone, Alle Luechtefeld, Niliam Patel and Justin Schubring. Justin Schubring is pictured answering a "Double Geopardy" question about water resources. According to USGS's Mark Newell, the Geopardy game is available to any interested teachers in the area, and topics and answers can be tailored to grades and age groups. Right, students work on their "Final Geopardy" question. The winner in this class was sixth grader Niliam Patel, pictured third from right, followed by Justin Schubring, who placed second. For "Final Geopardy," students were asked how many states border Missouri, and to name all of the states.



OUTLOOK

On Geology, Land Survey, Water Resources,
Dam Safety and the State Water Plan



Winter, 2002
Vol. 15, No. 2

EARTH SCIENCE WEEK

Rolla Mayor Joe Morgan has joined the Missouri Department of Natural Resources in recognizing October 13-19 as Earth Science Week. Earth Science Week has been celebrated on a national level for the past three years and is sponsored by the American Geological Institute and state geological surveys across the country. Mimi Garstang, State Geologist and Director of the Geological Survey and Resource Assessment Division of the Missouri Department of Natural Resources sponsored the proclamation signed by Mayor Morgan. "I urge all citizens to recognize the importance of earth science information," said Garstang.

The purpose of Earth Science Week is to recognize the important role that earth sciences play in our everyday lives. This year there was specific emphasis on how earth science information assists scientists in protecting our water resources. The disciplines of geology, hydrology, land surveying and engineering play fundamental roles in the health and welfare of all Missourians. "A good understanding of natural processes is vital to understanding environmental issues because we all make choices that



Attending the signing of the Earth Science Week Proclamation for Rolla were (back row, l to r) Steve Sturgess, Anita Studdard, Mimi Garstang, Bill Duley, Nona Lancaster, Candice Stanley; (front row, l to r) Shae Grisham, Laura Studyvin, Mayor Joe Morgan, Jacob Sells and Ryan Wilkerson.

impact the use and conservation of our natural resources," said Garstang. "The more students understand about earth sciences, the better they will be equipped for making important environmental decisions in the future.

Shae Grisham, Laura Studyvin, Jacob Sells, and Ryan Wilkerson, four of Rolla Middle School's brightest science students, witnessed the signing of the proclamation in the school library. Anita Studdard, middle school principal, and Candice Stanley, 6th grade science teacher, also participated in the cer-

emony in an effort to reinforce the values of effective science education.

Governor Bob Holden signed an Earth Science Week proclamation for Missouri on October 4, 2002, in Jefferson City.

Staff from the Geological Survey and Resource Assessment Division attending included Bill Duley, deputy director of the division; Steve Sturgess, geological survey program director; and Nona Lancaster, administration program director.

sierra family

Learn about geology on field trips

Rocks, fossils, fault lines, volcanic tuffs and other ancient wonders and mysteries come alive on trips led by folks from the Nevada Bureau of Mines and Geology at the University of Nevada, Reno. This year, as part of National Earth Science Week, the department is offering two free trips on Oct. 19 and 20.

One trip heads east to the Fallon/Fernley/Hazen area to dig fossils and will be offered on Oct. 19 only; the other trip heads north off Winnemucca Ranch Road to find volcanic tuff, granite, "moon rocks" and other geological clues to ancient Nevada. That trip will be offered on Oct. 19 and 20.

Led by geologists and paleontologists, these free trips offer a true desert adventure with a safety net. The expert guides know where they're going and can explain what you'll see along the way. It's an easy way to make events of millions of years ago seem real to children.

This is the fifth year the Bureau of Mines and Geology has led free public trips into northern Nevada's deserts and the growing popularity has prompted the department to offer two trips on each of the two days.



KIDDING AROUND
HOLLY
O'DRISCOLL

"Last year we had 75 cars snaking through the desert (on the one-day only trip)," said D.D. LaPointe, a geologist at UNR's Mackay School of Mines.

Keeping everyone together and trying to keep on schedule got a bit hectic, so the department decided to offer trips on both Saturday and Sunday. Last year's trip was so popular, they decided to offer it again, in addition to a new adventure.

The trips are good for families, because each group drives its own car and leaves whenever it wants, LaPointe said. High clearance vehicles are best for these trips that go down unimproved dirt roads. Expect lots of dust. Wear sturdy shoes or hiking boots and bring your own food and water. No sandals allowed.

While anyone can go to the department's Web site, download the field guides and maps then set off alone on these trips, part of the fun and much of the educational aspect is going with experienced guides.

Both trips will start at 8:30

a.m. from Washoe County's Lazy 5 Regional Park off Pyramid Highway. Leaders will hand out maps and field guides, then gather participants (each family drives its own car) to caravan to the first site.

Trip 1: The Right Tuff

Trip 1 will start at 8:30 a.m. Oct. 19 and 20 at Lazy 5 Regional Park, 7100 Pyramid Lake Highway, Sparks. The trip will end at about 3 p.m., and include a 60-mile drive.

This trip has six stops along a maze of dirt roads north of Spanish Springs where people can collect granite, aplite, pegmatite, volcanic tuff and quartz crystals and feldspar in several colors. There are some very weird and photogenic rock

TRIP TIPS

- Drive a high clearance vehicle with good tires.
- Bring water and lunch.
- Wear heavy shoes, a hat and sunscreen. No sandals allowed.
- Bring a hammer, chisel or screwdriver for splitting the rocks.
- There are no bathrooms available after leaving Lazy 5 Regional Park.





Photo provided by D.D. LaPointe

CLOSER LOOK: Larry Garside, a geologist with the Nevada Bureau of Mines and Geology at UNR, inspects a rock.

formations along this trip, so bring a camera too.

The first stop is about 18 miles from the Lazy 5 Regional Park, an area of granite outcroppings called "Moon Rocks." Next up: The Tuff of Whiskey Springs that's about 30 million years old. The group will stop at Dike Swarm for lunch and rock hounds can collect a variety of quartz, granite and other materials. At stop four, look for wild mustangs and fault lines that pushed up newer hills still forming around the valley. Stop five: Hike along a trail to the base of the Red Rock volcanic tuffs. The group should reach the last stop, Petersen Mountain, around 3 p.m. to hunt for quartz crystals. LaPointe said many families probably will leave here after a short time; others may stay and dig for hours. The site has parking for about 10 cars, but there's another parking area about 400 yards away that people can walk from, she said.

"Few people would ever be able to find this stuff on their own," said LaPointe, who researched and wrote the field guides to this trip. "I've lived here 20 years and never been out there (until now)."

For details about the trip, visit the Bureau of Mines and Geology Web site, www.nbmng.unr.edu/esweek/announcement.pdf. To sign up for the trip, visit the Web site www.nbmng.unr.edu/esweek/signup.htm or call Terri at 784-6691, Ext. 126.

Holly O'Driscoll is a Reno free-lance writer with three children.

Trip 2:

"Fossils and Ancient Lakes"

Trip 2 will start at 8:30 a.m. Oct. 19 at Lazy 5 Regional Park, 7100 Pyramid Lake Highway, Sparks. It will end about 5 p.m., and includes a 100-plus mile drive.

This trip treks to three unique sites east of Reno. At the first stop, a diatomite mine near Hazen, the group can dig for fossils of fish that lived in a lake about eight million years ago

during the Miocene Epoch. Today, diatomite is used to clean up industrial wastes and filter liquids from water to beer. At the second stop, Mopung Hills, trip-goers can look for fossils in the limestone near what used to be Lake Lahontan. The last stop, Fossil Hill near the Hot Springs Mountains, hosts many types of gastropods (snails) in a

reef-like deposit.

Access to this last spot is a little rocky and dusty, so heavy-duty tires in good condition are best here, LaPointe said. Bring a hammer or digging instrument, a plastic bag and newspapers to wrap the fragile fossils.

These trips give families a fun chance to see areas of Nevada that most people rarely visit, LaPointe said.

Leader
October 15, 2002
Corning, NY
Daily 15,000

Program open to young scientists

CORNING In celebration of Earth Science Week, a special program for school-age scientists titled, "Water is All Around You," will be held from 1-2 p.m. Saturday at the Southeast Steuben County Library, 300 Nasser Civic Center Plaza. Guest educator will be Theresa Ponader, who will lead aquatic stories and experiments. Registration is not required. For more information, call 936-3713, Ext. 503.

Leader
October 19, 2002
Corning, NY
Daily 15,000

BEST BETS

Great ways to get more
out of your Saturday

1 The theme for the annual **stamp show** today at the Arnot Mall is antique toys. The show will consist of 60 16-page frames and will have 12-15 dealers primarily from New York and Pennsylvania in attendance. Hours for the show are from 10 a.m.-6 p.m. The event is free and open to the public.

2 **Haunted Happenings** 2002, Tanglewood's annual event, will be held from 11 a.m.-4 p.m. today at the new Gleason Meadows Nature Center, 443 Coleman Ave., Elmira. The event, held rain or shine, will feature games, face painting, hay rides, pumpkin painting, scary storytelling and a new Monster Mansion for the youngsters. Cost is \$4 for children and \$3 for adults with children under 5 admitted free. For more information, call 732-6060.

3 In celebration of Earth Science Week, the Southeast Steuben County Library will present "Water is All Around You," a program for school-age scientists, from 1-2 p.m. today. Theresa Ponader will offer a fun-filled program featuring aquatic stories and experiments. Registration is not required. For more information, call 936-3713, Ext. 503.

County seeking

Gazette staff reports

The Delaware County Board of Commissioners is currently seeking to appoint a non-Republican resident of the county to the Delaware County Transit Board. This public board consists of seven members who serve three-year terms.

The transit board is responsible for the management, administration and operation of the county public transit system. The board meets on the third Monday of every month at 7 p.m.

Interested individuals can obtain an appointment application through the Delaware County Human Resources Department, 10 Court St., or by calling 740-833-2120.

Completed applications must be returned to the human resources department no later

than Oct. 15.

The commissioners are also seeking to appoint a new member to the Metropolitan Housing

Local briefs

Authority Board for a five-year term. Members should be residents of the city of

Delaware, Delaware Township or Radnor Township.

Applications can be obtained at the county's human resources department, by phone or by e-mail at jobs@co.delaware.oh.us. Application deadline is Oct. 17.

Park celebrating earth, water

Highbanks Metro Park will

host Earth Science Week and National Water Monitoring Day activities from 1 to 4 p.m. Sunday at the park's nature center and Big Meadows picnic area.

The event will feature exhibits, demonstrations and geological hikes.

Two educator workshops sponsored by the Delaware and Franklin Soil and Water Conservation Districts will also be offered at the park during Earth Science week, Sunday through Oct. 19.

A "Dig In" workshop, to be held from 8:30 a.m. to 4 p.m. Oct. 12, will allow participants to climb into a soil pit, discover a soil tunnel and learn conservation techniques.

From 8:30 a.m. to 4 p.m. on Oct. 18, participants in a "Project WET" workshop will learn ways to incorporate the science of water into the teaching curriculum.

National Water Monitoring Day is Oct. 18. The holiday is in honor of the 30th celebration of the signing of the Clean Water

Act.

For more information, or to register for a workshop, contact Highbanks Metro Park at 614-846-992.

ODNR offering boating course

The Ohio Department of Natural Resources Division of Watercraft will offer an eight-hour boating education course on Saturday. The class will be held at the Division of Watercraft Alum Creek Field Office, 3305 S. Old State Road, from 8 a.m. to 5 p.m.

The course covers state and federal laws, navigational rules of the road, and basic boating safety practices. A \$5 pre-paid fee covers the cost of materials.

Olentangy Valley News

October 9, 2002

Columbus, OH

Daily 11,758

Earth Science Week will put focus on environment

Highbanks Metro Park will celebrate Earth Science Week and National Water Monitoring Day from 1 to 4 p.m. Sunday at the park's nature center and Big Meadows picnic area.

"Water is All Around Us" is the 2002 theme of Earth Science Week Sunday through Oct. 19, and National Water Monitoring Day, observed Oct. 18, represents the 30th anniversary of the Clean Water Act.

At the Olentangy River near the Big Meadows picnic area, the U.S. Geological

Survey exhibit will feature an acoustic doppler current profiler demonstration on how to measure streamflow with a current meter, water levels in a monitoring well and stream and ground water quality.

Highbanks Metro Park personnel will lead geology hikes and collect aquatic organisms in the Olentangy.

Representatives from other state and federal agencies and organizations will have exhibits, distribute educational earth-science materials and lead activities for children and adults.

Two educator workshops sponsored by Delaware and Franklin Soil and Water Conservation Districts will be offered: "Dig in" class, where you can climb into a soil pit, discover a soil tunnel and learn conservation techniques, will be held from 8:30 a.m. to 4 p.m. Saturday, and Project WET from 8:30 a.m. to 4 p.m. Oct. 18.

For more information contact Suzan Jervey at jervey@metroparks.net or Highbanks Metro Park at 846-9962.

GEOLOGY

Earth week events devoted to understanding the planet

We often take our world for granted. Subconsciously we know we depend on its soil, water and air, but rarely do we give our Earth a second thought.

Once a year we remedy that oversight during Earth Science Week. This year, the fifth annual event begins Sunday.

Each year, the week focuses on a different facet of the Earth. The theme this year is "Water is All Around You."

One highlight will be National Water Monitoring Day on Oct. 18. Individuals, families, school classes and civic groups in the United States will be checking local water supplies that day.

You can find out how to participate by visiting www.yearofcleanwater.org, which also has lesson plans and educational activities. At the site you can order a neat water-testing kit for \$16.75.

Oct. 18 was chosen because it is the 30th anniversary of passage of the Clean Water Act.

Thanks to that and similar legislation we no longer have to worry about such things as the Cuyahoga River catching fire.

Significant progress has been made, but there is still much to do.

Earth Science Week also has a Web site, www.earthsciweek.org, with ac-

tivities, including one called "Splash Splash: Water's Journey to My Glass," and contests for essays, photos and visual arts. At the site you can order kits (for \$4.95) containing an activities book, a poster and lots of other information.

Local observation of Earth Science Week will be focused at Highbanks Metro Park from 1 to 4 p.m. Sunday. There will be exhibits, activities and free samples of rocks and minerals. Park workers will be collecting aquatic organisms in the Olentangy River and will lead geology hikes. In a pit dug for the occasion, workers from Franklin and Delaware County Soil and Water Conservation districts will explain soil profiles and how soils form.

U.S. Geological Survey personnel will demonstrate an acoustic Doppler current profiler, used to measure floodwaters. The device was featured recently on the Discovery Channel's *Disaster Detectives* program.

Unlike previous years, I will not be there with great specimens from the Orton Geological Museum. Instead, I will be in Oklahoma attending the annual meeting of the Society of Vertebrate Paleontology. There I will hear about the latest research on dinosaurs and other prehistoric reptiles, birds, mammals and fish. In future columns I'll tell you what I find out.

Dale Gnidovec is curator of the Orton Geological Museum at Ohio State University.
gnidovec@geology.ohio-state.edu



DALE
GNIDOVEC

Barberton Herald
October 17, 2002
Barberton, OH
Daily 7,500

Earth Science Fair 2002

Celebrate Earth Science Week by discovering the world above, at and beneath the surface of the earth. Enjoy earth science exhibits, talks and hikes during this afternoon of free family fun with Cuyahoga Valley National Park and Metro Parks, Serving Summit County. Join Metro Parks Naturalists, rangers, and scientists from around Ohio at Brushwood Pavilion in Furnace Run Metro Park from 1 to 5 p.m. on Sunday, Oct. 20. For more information call 330-865-8065 or visit www.summitmetroparks.org.

Brushwood Pavilion is located at 4955 Townsend Road, one mile northwest of Brecksville Road, in Richfield. 5446

President's Page -

Midterm report 5446 p330

This month marks the halfway point for the term of the 2001-02 Executive Committee. So, it is befitting to assess where we are and where we are going. Last October, I wrote a President's Page titled "Looking ahead for the coming year." This was published only on SEG's Web site because this column was preempted by another about the events of September 11 and SEG's 2001 Annual Meeting. The preempted column can still be found online at <http://seg.org/publications/webonly>.



SEG now has a new executive director, Mary Fleming, who joins us from the American Statistical Association. Her background can be found in the February issue of *TLE* and on the SEG Web site. As of this writing, Mary has been on the job for just two months but is already making a positive impact. I want to take this opportunity to thank Jack Ingram, SEG associate director of finance, for his skillful service as acting executive director during the nine-month search process.

Education. SEG now has 105 student sections worldwide, an increase of seven since September 2001. The new sections are in Brazil, Canada, India, Nigeria, Russia, Turkey, and Ukraine. The revamped and revitalized Geoscience Center had its grand opening during Earth Science Week in October 2001 and is now accelerating its outreach to students and teachers. The center and its associated "traveling museum" reached an average of 126 students/teachers per week in January and 165 in February. The projected average for March was 195. Adjacent to the Geoscience Center is a fair-sized meeting and lecture room. We are considering expenditures to outfit this room with video and other high-tech communications equipment that can be put to immediate use to record our CE courses, Distinguished Lectures, and Distinguished Instructor Short Courses. Ultimately, we envision broadcasting these events over the Internet both live and in recorded mode. Two recorded DLs are even available today via our Web site.

I have mentioned in earlier columns the material that SEG offers to assist those inspired to talk about geophysics at the middle and high school level. Similar material exists in many other geoscience societies, and we are building a network to facilitate discovering what is available and how to access it. One particular effort in this regard is our closer work with the American Geological Institute. Among other things, AGI organizes Earth Science Week every year. This event, generally held around the second week of October, looks like another major outreach success story. Since its inception five years ago, it has grown to involve all 50 of the states in the United States and 30 countries outside the United States. Our goal is to provide input to Earth Science Week and make all SEG members, sections, and associated societies aware of the various events and outreach opportunities that will be taking place.

Publications. If you have logged onto the SEG Web site


recently, you will have noticed that the online versions of *GEOPHYSICS* and *TLE* are now under access control. If you elected to receive or subscribe to the electronic versions of *GEOPHYSICS* and *TLE* when instituting or renewing your membership, you have full access to current and past issues of these journals. If not, you can still readily browse abstracts and, for a fee, download articles. This project has been in the works for some time and represents SEG's next step into the world of electronic publication. Most of the archive of technical papers from both journals was online at the time of this writing, and the rest was soon to follow. One of the many advantages of electronic publication is the searching and cross-referencing of journal articles. If the cross-referenced article is in *TLE* or *GEOPHYSICS*, one mouse click takes you there immediately. If the article is from another journal that participates in the major cross-referencing initiatives, then one click takes you to the abstract of that article and then, depending on access authority and article availability, you can access (either for free or for a fee) the complete article and reference list. This step is just a beginning. Imagine journal articles with animated figures, 3-D figures, video, and graphs with links to the underlying raw data.

The world of electronic publication is rapidly growing and evolving. But, as neat as much of the future seems, there is still a lot of uncharted territory. One effort to forge into this territory is a joint project with AAPG and GSA. We are well into a feasibility study of what we call a geoscience e-journal aggregate. The aggregate simply means an interconnected set of journals and publications. Initially, this aggregate would link the societies' journal articles via references. The initial target group consists of university and institution libraries. Subsequently, links could be available to all geoscience societies, creating a true geoscience e-journal aggregate.

Meetings. SEG's major event every year is the International Exposition and Annual Meeting. Planning and preparation for this year's meeting (6-10 October in Salt Lake City, Utah) are well under way. The facilities are fantastic—a benefit of the upgrades in Salt Lake City for the 2002 Winter Olympics. Technical papers can be submitted and will be reviewed online. There will be several overnight tours to some really spectacular places. We hope to try a few new things at this meeting, so stayed tuned for future announcements. The best way to keep tabs on these changes is via the SEG Web site where more details about conference registration and housing will be initially published.

SEG will be cosponsoring—with AAPG, the Egyptian Petroleum Exploration Society, the Egyptian Geophysical Society, and EAGE—a meeting in Cairo during October 2002. This event marks the first time that SEG and AAPG have joined forces in an international meeting. We are now discussing other joint meeting possibilities, but it is premature to say much about them.

Finance. Although SEG is healthy financially, we continue to closely monitor our revenue and expenses and to investigate other sources of revenue that will allow us to maintain or improve all valued services to our mem-

 bers. One area that is getting a close look is our dues structure. In the next few months, we will present a report and possibly a proposal on SEG dues.

Membership. SEG membership continues to grow. We now have nearly 18 500 members from more than 100 countries; 46% of the members now reside in countries outside of the United States.

Global membership is a new category of membership instituted this year to allow geoscientists in low-income countries to become SEG members at a highly reduced dues rate. As of this writing, 350 global members have joined.

SEG, AAPG, and SPE have now agreed to a reciprocal membership arrangement between our societies. The agreement is that any Active member of any of the three societies automatically qualifies to become an Associate member of the other societies. Dues still must be paid, but one can bypass the references and much of the paperwork. You will find a link on the SEG Web site that will walk you through the steps of becoming a member of AAPG and/or SPE. This applies to Active members only and is another reason why qualified Associate members should transfer their membership to Active status.

An SEG video project is well under way to provide a visually oriented membership promotion. The goal is to create a snappy 5-8 minute videotape summary of SEG and the benefits of membership. We plan to have this ready by the Annual Meeting.

Intersociety cooperation and initiatives. We have made a major push to work with other societies in areas of mutual and complementary benefit. I have mentioned several already: reciprocal membership among SEG, AAPG, and SPE; the e-journal aggregate with AAPG and GSA; the joint meeting in Cairo with AAPG, EPEX, EGS, and EAGE; and joint education initiatives with AGI and other member societies.

Several more initiatives are under way or under consideration. One is to evolve the AAPG/SEG Student Expo held in Houston every year into a Virtual Student Expo. The Student Expo has been a great success in the past but is limited to students and companies who can be physically present in Houston. The VSE would allow students to present their resumes/research online and to connect with a far wider range of potential employers.

Finally, we recognize that exploration geophysics is not just a tool for the petroleum and mining industries but has value in many other fields. So we are building and in some cases rebuilding bridges to other geoscience societies such as the American Geophysical Union and the Environmental and Engineering Society. This is just a start.

It truly amazes me how much goes on under the overall heading "SEG." This is a tribute to the dedication of our members and staff. **E**

—WALT LYNN
President

AAPG Explorer

October 2002

Tula, OK

Daily 31,000

Schools Ready For Earth Science Week Activities

5446
Tens of thousands of American students will be talking about science of the Earth on Oct. 13-19 during the 2002 Earth Science Week.

This year's theme of "Water is Around You" includes nationwide photography, art and writing contests where students are encouraged to take a unique perspective on the water theme. Entries will be judged by a panel of geoscientists and teachers, with winning entries being displayed in Washington, D.C., and published in various publications and Web sites.

A number of AAPG societies are planning special activities during the week, including classroom visits and demonstrations.

Earth Science Week was launched in 1998 to give students and citizens opportunities to discover the earth sciences and the contributions that the earth and environmental sciences makes to society. The American Geological Institute, which is the Earth Science Week organizer, emphasizes a different facet of earth science each year.

The AAPG Foundation is a major sponsor of the effort and provided \$25,000 to fund the effort this year. A commitment of \$25,000 will continue for the next two years. The U.S. Geological Survey is also a major source of grants.

Information about Earth Science Week is available at <http://www.earthsciweek.org/>.

Earth Week Being Observed in Pennsylvania

On behalf of Gov. Mark Schweiker, Department of Conservation and Natural Resources (DCNR) secretary John C. Oliver today announced that Oct. 13-19 is Earth Science Week in Pennsylvania.

"Earth sciences contribute critical elements to our understanding, appreciation of and respect for nature," Oliver said, adding, "Geology and other earth sciences are fundamental to the health, welfare and safety of Pennsylvanians and to the economy of the commonwealth."

Earth sciences are the study of geologic features such as rocks, minerals and ground waters as well as atmospheric conditions. Pennsylvanians have turned to earth sciences to help

explain periodic natural events, such as earthquakes, landslides, sinkholes, droughts and floods.

"The ongoing drought problems have placed earth sciences in the spotlight," Oliver said. "Recent drought conditions have shown us the importance of understanding the environment around us. Celebrating the

study of earth sciences is an important step toward recognizing and conserving our precious natural resources."

Earth Science Week is a national initiative, with nearly 40 other states observing this week with activities.

Subscribe!

Gov. Schweiker administration celebrates Earth Science Week

On behalf of Gov. Mark Schweiker, Department of Conservation and Natural Resources (DCNR) Secretary John C. Oliver today announced that Oct. 13 through Oct. 19 is Earth Science Week in Pennsylvania.

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"Our very surroundings are continuously modified by the weathering and erosion capabilities of water," said Geologic Survey Bureau Director Jay Parrish. "Each time it rains or snows, every frost, each drop of water, works away at the rocks we sit on."

National Earth Science Week is part of the American Geological Institute's (AGI) yearly focus on geology and related subjects. Earth Science Week has become an international event with participants celebrating around the globe.

For more information on DCNR's Bureau of Topographic and Geologic Survey, call 717-702-2063, or visit the PA PowerPort at www.state.pa.us, PA Keyword: "geologic survey." To request an Earth Science Week information packet, or for more information on Earth Science Week, visit the Earth Science Week's web site at www.earthsci-week.org.

Mainliner

October 16, 2002

Cresson, PA

Daily 4,500

Pennsylvanians Celebrate Earth Science Week

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Lee County Observer
October 16, 2002
Bishopville, SC
Daily 4,200

Community Times
October 17, 2002
Florence, SC
Daily 1,555

**District observes Earth
Science Week**
Assistant Superintendent
of Instruction Roberta Wider
urges all schools to partici-
pate in special activities in
observance of Earth Science
Week, Oct. 13-19.

Earth Science Week, the
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is an annual celebration of the
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All Around You" is this year's
theme for Earth Science
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cides with National Water
Monitoring Day, Oct. 18
sponsored by America's
Clean Water Foundation.

Earth Science Week is a
great opportunity to increase
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tributes to the health and
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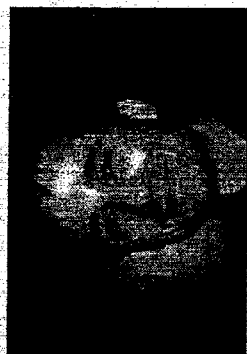
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Children can learn a lot by digging into earth sciences

ANTHONY FIORILLO



According to an ancient proverb, "We have not inherited the earth from our ancestors, we have only borrowed it from our children." If that is the case, we might want to look at how we are cultivating the next generation's environmental keepers.

As math and science education continues to improve, students are better prepared to live, work and prosper in an increasingly technology-intensive society. Yet science literacy won't be sufficient to address the broad environmental issues facing society. The essential questions of our age — including resource utilization and depletion, atmospheric and climate change, water pollution and land degradation — must be answered by both pure and applied research. We must encourage our youths to become the next generation of earth scientists.

What is earth science? Paleon-

must introduce our children to experiences that show earth science in action. Taking our children to visit nature and science museums and nature parks can help to spark a fascination with the natural world and expose our youths to individuals who have turned their own curiosity about the world into a life's work.

To that end, the American Geological Institute has initiated Earth Science Week, which takes place this week and provides programs that allow the public to meet professionals in the geological sciences. The institute's members are coordinating with educators and parents to have geoscientists and engineers lead activities or demonstrations in classrooms, allow school groups to make on-site visits and coordinate geoscience career fairs.

Science museums like the Dallas Museum of Natural History al-

so are striving to take more of their experts into classrooms, making labs and work spaces visible to the public and exposing their visitors to research from affiliated universities and businesses. The museum's plans for an expanded facility will allow it to broach more areas and disciplines in nature and science, increasing awareness among adults and kids alike of the wide scope of natural science and its importance to human life.

Earth Science Week is a celebration of initiatives that prepare future generations for careers in science. If corporations working and researching in the earth sciences are seriously concerned about the future of the geosciences, they should increase their efforts to support schools and museum programs. Outreach programs should be put into place that target youths from all ethnic and eco-

nomic backgrounds and expose them to the wonders of our world.

Encouraging young people to visit scientific workplaces and museums, "shadow" people on the job, volunteer for field research and find off-campus internships and summer placements will allow them to develop their interest in science and environment-related professions. There is no substitute for practical experience in learning what one is good at, what a field is like and what geological and earth science professionals actually do.

If our youths are exposed to and excited by the vast career opportunities within the earth sciences, we can rest assured that those who inherit the earth will be good stewards.

Anthony Fiorillo is curator of earth sciences at the Dallas Museum of Natural History.

Dallas Morning News
October 18, 2002
Dallas, TX
Daily 500,357

Houston Chronicle
October 9, 2002
Houston, TX
Daily 545,066

Earth Science Week events

Several local organizations are participating in **Earth Science Week**, Oct. 13-19, part of the American Geological Institute's outreach program.

Local events are organized by the Earth Science Week Committee of the Houston Geological Society, in collaboration with local geoscience organizations. More details and a complete list of involved organizations can be found at: www.hgs.org/esw02.htm.

Events include:

■ **Family Earth Science Festival** — 11 a.m.-5 p.m. Saturday, Houston Museum of Natural Science, Weiss Energy Hall. The festival features an energy passport contest, hands-on demonstrations, special presentations and programs at the World Energy Theater.

■ **Family-Friendly Field Trips** — 11 a.m.-1 p.m. Oct. 18, Downtown Building Stones. Free. Lunchtime walk to explore the vertical outcrops of igneous, metamorphic and sedimentary rocks in downtown Houston.

EARTH SCIENCE WEEK KICKS OFF

ON SATURDAY, OCTOBER 12, 2002!

Houston Geological Society Bulletin
September 2002
Houston, TX
Monthly 4,500



Family Earth Science Festival

Houston Museum of Natural Science

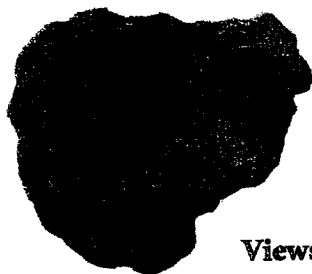
Saturday, October 12, 2002, 11:00 a.m.–5:00 p.m.

Join us for the Family Earth Science Festival at the Houston Museum of Natural Science's Weiss Energy Hall! The festival will include an energy passport contest, hands-on demonstrations, special presentations and programs at the World Energy Theater. We are requesting that Mayor Brown issue a Houston ESW proclamation, which will be read during the opening ceremony for Houston's Earth Science Week in the museum's Pendulum Hall at 1:00 PM. Join us for an enjoyable day as a visitor or a volunteer, and bring your family and friends!

Classroom Connections

October 14–18, 2002

Share your enthusiasm for Earth Science by volunteering to speak with students at local schools. We will also host an Earth Science contest for students to express their thoughts on "Earth Science in My Community." For more information, please contact Alison Henning at alison_henning@yahoo.com. Volunteer to visit your children's or neighbor's or friend's school!



Views of the Earth Symposium

Houston Museum of Natural Science, Brown Auditorium

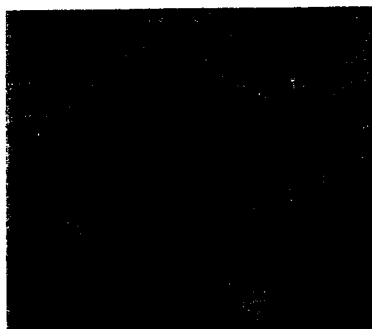
Wednesday, October 16, 2002, 6:30 p.m.

The Earth Science Week Committee presents the second annual Views of the Earth Symposium to celebrate Earth Science Week. The theme this year is energy resources, which play a significant role in the lives of all Houstonians. Three speakers will explore the present state of energy resources and the impact of future changes in these resources on us. The symposium will begin with a cocktail reception at 6:30 p.m., followed by the presentations at 7:00 p.m. This event is free of charge and open to the public. For more information, please contact Stephanie Shipp at shippst@rice.edu.

Family-Friendly Field Trips

Various Locations

October 18–20, 2002



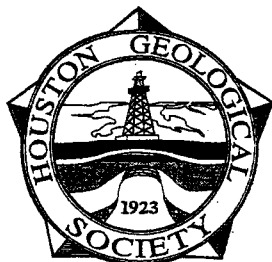
An urban, lunchtime fieldtrip kicks off the adventures on Friday, October 18. We will examine the downtown building stones to illustrate geologic processes as well as talk about the practical uses of earth materials. Our Downtown Building Stone walk is designed for people who work in the city but anyone is welcome.

A field trip to Galveston Island State Park is planned for Saturday, October 19. Arrive at the park any time between 11:00 a.m. and 2:00 p.m. We will have stations staffed by geoscientists and museum personnel to investigate and explain barrier island and back-bay environments, their formation and societal impact.

On Sunday, October 20, visit the *Ocean Star*, the Offshore Energy Center's oil rig museum in Galveston. Arrive any time between 11:00 a.m. and 3:00 p.m. There will be geoscience and engineering docents to guide you through the process of drilling for oil offshore. Geophysicists will demonstrate seismic interpretation on real workstations. For a map visit www.oceanstaroec.com.

Trips are free except for Ocean Star admission on Sunday, but you must register. Email hgms_trips@hotmail.com and state the number of adults and children attending. Further details will be posted on the HGS Web calendar at www.hgs.org/coursidx.htm.

For information about sponsorship of any of these events, please contact Jennifer Burton at Jennifer_Burton@anadarko.com.



The Bulletin

Houston Geological Society

Volume 45, Number 1

September 2002

VIEWS OF THE EARTH SYMPOSIUM

Join us at our second annual evening symposium to celebrate Earth Science Week!

Energy resources play a big role in our lives—especially in Houston, home of the petroleum industry. Three speakers will explore the present state of energy resources and the impact of future changes in energy resources on us.

View from the White House—How do our policy makers assess the current state of our energy resources and what changes do they recommend?

View from Industry—How long will our present resources last and what will replace them?

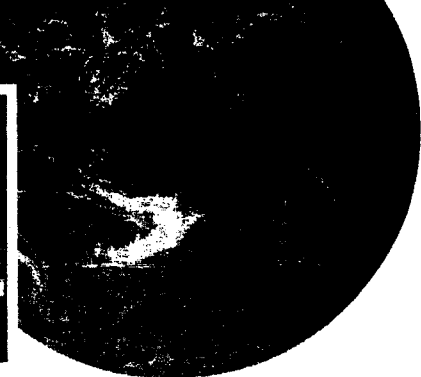
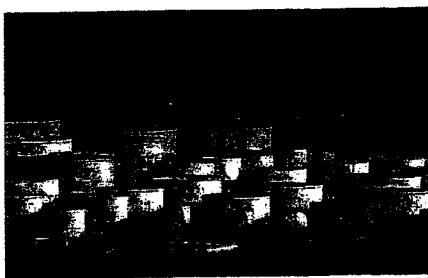
View from the Universe—How is NASA aiding the exploration of energy resources, on Earth and beyond?

Where: Houston Museum of Natural Science, Brown Auditorium

When: 7:00 - 8:30 p.m., Wednesday, October 16, 2002

Who: Friends of the Earth!

Join the speakers before the symposium for cocktails and hors d'oeuvres, beginning at 6:30 p.m. The symposium is free of charge and open to the public.



Standard-Examiner

October 13, 2002

Ogden, UT

Daily 62,000

Science gets 5th earthy this week

SALT LAKE CITY — Utah Gov. Mike Leavitt has declared this week Earth Science Week, making it the fifth time Utah has celebrated the occasion.

This year's theme is "Water Is All Around You."

More than 500 elementary school students will visit the Utah Geological Survey's Core Research Center during the latter part of this week. Hands-on activities will be available, including ground-and-surface water models, "gold" panning, rocks and minerals and tours of the dinosaur lab.

5446
This issue of *Geotimes* may strike you first as an odd assortment of topics, with key phrases such as urban tunneling, power canal failure, urban subsidence, lava flow response and urban "shake" maps. You will detect an urban leaning and that was by design: an issue devoted to the geologic issues of urban areas.

Less by design is a second theme that rumbles through each of these stories, namely the comingling of geoscience and engineering. Just what are the relations between these two? Are they bosom buddies, fellow travelers or strange bedfellows? Follow along and see where the stories lead.

Boston's "Big Dig" is a colossal tale by any yardstick, as author Brad Miller describes for us. Although the scale may seldom be matched, the subterranean reconfiguration of urban areas will only increase as population continues to grow and flock to urban areas. So now that we agree on that, how will our approach to urban planning and subsurface site characterization evolve? What is the role of geology, of engineering and specifically of geological engineering? Our features answers some of these questions by taking a look at the history of geotechnical engineering in Boston.

In our second feature, *Geotimes* staff writer Lisa Pinsker weaves an engaging tale of where the U. S. seismological community has moved since the problematic days of earthquake prediction. As Pinsker shows us, the community has moved toward early earthquake characterization, urban "shake intensity" projections and impact scenarios. The evolving Advanced National Seismic System (ANSS) offers the real prospect of warning kids in school to dive under their desks seconds before a detected earthquake's shock waves arrive. As Pinsker notes, recent programs include "expanding earthquake monitoring to buildings by bringing together seismologists and engineers, who traditionally have worked separately." Where else might engineers and geoscientists be "working separately," where greater collaboration might produce better outcomes?

Engineering geology (geological engineering, geotechnical engineering, etc.) has covered many of these geoscience-engineering boundaries and has overlapped for decades with considerable success. Recent and current events suggest, however, that the overlaps will increasingly become central to our life on Earth, such that the collaboration and engagement of geoscience and engineering will need to be elevated to a higher level of priority — in academe, in consulting, in government agencies and in the minds of practitioners.

Kobe, Japan, is also expanding its earthquake monitoring system following the devastating quake that took more than 6,000 lives in 1995. In our third feature, a series of stories about cities facing unique urban geology issues, Pinsker reports that the goal is similar to that in the United States, except that "Japan has so many instruments that interpolation is unnecessary."

The interplay of geoscience and engineering is obvious in Kristina Bartlett's account of subsidence induced by aquifer depletion in Las Vegas, Nev. Also in this feature, Christina Reed relates stories of the recent volcanic eruption in Goma, the Democratic Republic of the Congo; and Greg Peterson describes landslide problems in Colorado Springs, Colo.

Finally, in our Comment column this month Ward Chesworth gives us his provocative take on "sustainability" and what the end of human history might look like. He invokes quotes from Harrison Brown, one of our foremost geochemists and posits that science has defined humankind's conditions and options from which we must now "engineer" some sort of global sustainability. He too seems perplexed by "sustainable development," which to me, at least in terms of earth resource exploitation, seems at best an oxymoron.

Together the articles in this issue provide a timely glance at the relations between geoscience and engineering (in all its forms and families). Science and engineering are different. They have different purposes, require different skills, and attract different types of people with different motivations (the Myers-Briggs personality profiles prove that!). The application of earth science to engineered structures is not the same as the collection and interpretation of geoscience data. Yet, as this month's stories illustrate, the course of human events is driving these fields closer together.

In the meantime, don't forget to be active during the annual Earth Science Week, Oct. 13-19. Visit www.earthscienceworld.org for details.

Believe your compass,



Samuel S. Adams
Geotimes Editor-in-Chief




Public place for satellite IMAGERY



Geoscience Australia became a little part of Australian history on July 22 when a four metre high mosaic of its Landsat-7 imagery of Australia went on permanent display in Commonwealth Place, a new area for the public between Old Parliament House and Lake Burley Griffin in Canberra.

Prime Minister John Howard officiated at the unveiling of the first part of Commonwealth Place—a public arena with an open grassed area for community gatherings, concerts and celebrations. Visitors see the Landsat-7 mosaic as they follow the sandstone walkway to the main arena.

The mosaic is divided into nine vertical slivers, reproduced on toughened glass with a light source behind it to accentuate the diverse colours. The Australian Greenhouse Office commissioned the mosaic, which was produced by Geoimage.

The huge mosaic attracts the attention of all that pass along the walkway, and will no doubt increase public awareness of satellite imagery and remote sensing. 



Earth science, a public affair



Earth Science Week is an international event for the public that runs from October 13–19 this year, and Geoscience Australia is coordinating the Australian activities.

Australia's official launch is mid-week with a nationwide KIDS QUAKE on October 16. Outside Parliament House in Canberra, about 100 primary school children will jump continuously for two minutes. The effect will be recorded on one of Geoscience Australia's seismographs to demonstrate the science of monitoring earthquakes.

Geoscience Australia will also host three terrific public lectures on Sunday, October 13 with topics covering other worlds, our restless world, and the ancient world.

Australian National University Professor Ross Taylor will discuss the search for new planets. As a NASA employee, Taylor carried out the initial analysis of the first lunar sample returned to Earth, and has worked on models of the origin, composition and evolution of the moon.

Geoscience Australia volcanologist, Dr Wally Johnson will no doubt attract a diverse audience with his talk about geohazards (earthquakes, landslides, volcanoes) and their impact on communities. Young Australian of the Year and Assistant Curator of Palaeontology at the Queensland Museum, Scott Hucknull will be a crowd-pleaser with his talk and examples of ancient vertebrate.

To top off Earth Science Week celebrations, Geoscience Australia's Education Centre will be hosting a series of 'volcano-making' workshops for schools, special interest groups (e.g. scouts) and after-school care programs.

Earth Science Week has been celebrated in Australia for the past three years. It aims to help the community understand the importance and impact of earth science in everyday life.

For information about Earth Science Week, including ideas on how to celebrate the week and what activities are planned, visit the Geoscience Australia web site (www.ga.gov.au/about/events/esw2002.jsp).

The National Library, National Gallery, National Museum of Australia, Canberra Museum and Gallery, Australian Reptile Centre, Questacon, Australian Botanical Gardens, CSIRO and the Deep Space Tracking Station at Tidbinbilla have events during the week. Tasmania and New Zealand are also participating through the Geological Society of New Zealand and the Centre for Ore Research at the University of Tasmania.

For more information phone Jeanette Holland on +61 2 6249 9731 or e-mail jeanette.holland@ga.gov.au 

GEOSCIENCE AUSTRALIA

Minerals Exploration Seminar

Perth November 20

Canberra November 26

e-mail joy.dunn@ga.gov.au

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