

# Earth Science Week 2014 “Earth’s Connected Systems”

## Highlights and News Clips

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#### Section 2

News Clips

[www.earthsciweek.org/highlights](http://www.earthsciweek.org/highlights)

Because of the large and increasing number of news clippings citing Earth Science Week activities and resources, the print edition of the print report no longer includes clippings. To view the hundreds of press releases and news items promoting awareness of Earth Science Week each year, please go online to [www.earthsciweek.org/highlights](http://www.earthsciweek.org/highlights). Thank you for helping us in our efforts to conserve resources and protect the environment.



# Highlights and News Clips: Earth Science Week 2014

## *Introduction*

Held October 12-18, 2014, the 17th annual **Earth Science Week** celebrated the theme of “**Earth’s Connected Systems.**” The 2014 event, like past celebrations, promoted public and professional awareness of Earth science in education and society.

“With this theme, Earth Science Week cuts to the core of Earth science and what it means to society,” said AGI Outreach Manager Geoff Camphire in announcing the theme of the celebration. “The interactions of Earth systems are at the heart of our most critical issues, from energy and the environment to climate change and emerging economic realities.” Earth Science Week 2014 learning resources and activities promoted awareness of the dynamic interactions of the planet’s natural systems.

AGI organizes Earth Science Week as a service to member societies, with generous help from partners that provide funding, donate materials, organize events, and publicize the event. Funding partners in 2014 included the U.S. Geological Survey (USGS); American Association of Petroleum Geologists (AAPG) Foundation; National Park Service; National Aeronautics and Space Administration (NASA); American Geophysical Union (AGU); National Geographic; Geological Society of America (GSA); Association of American State Geologists (AASG); Society for Mining, Metallurgy and Exploration (SME); Archaeological Institute of America (AIA); and Esri.

Earth Science Week **participation remained strong.** People in all 50 states and in more than six countries participated in events and activities. The Earth Science Week website received over 200,000 hits in 2014. In addition, hundreds of people nationwide actively participated in the program’s visual arts, essay, and photography contests.

Earth Science Week events ranged from educators teaching Earth science activities in their classrooms to open houses held at major USGS field stations. A detailed list of events can be found in Part 1. This list represents only events reported directly to AGI, so please notify Earth Science Week staff if your participation is not listed.

Additional events are highlighted in Part 2, a compilation of news releases and other items by members of the geoscience community. Each year, web, print, and broadcast media coverage of Earth Science Week reaches more than **50 million people.** Part 2 contains examples of print and electronic media promoting Earth Science Week activities, resources, and materials. In addition, television news programs covered Earth Science Week on local stations in three states.

This report is designed to give an overview of the activities organized by AGI and other groups for Earth Science Week. We hope this information on 2014 events and publicity inspires you to develop your own activities next year. Please visit [www.earthsciweek.org](http://www.earthsciweek.org) for event planning, materials, resources, and support. Contact Earth Science Week staff at [info@earthsciweek.org](mailto:info@earthsciweek.org) for assistance in planning for Earth Science Week.

## **Earth Science Week 2014 Summary of Activities**

### **Overview**

More than 50 million people gained a new awareness of the geosciences through the 17th annual Earth Science Week. People worldwide learned about Earth science through program promotions, education efforts, news media, and Internet coverage. The event celebrated the theme “Earth’s Connected Systems” by promoting awareness of the dynamic interactions of the planet’s natural systems.

Earth Science Week events ranged from individual teachers and classes conducting playground science projects to activities at locations such as USGS field stations, NASA facilities, and national parks. Many activities were organized around the days of Earth Science Week that routinely are set aside times for areas of special focus:

- Geocachers worldwide used GPS devices to find and learn about sites of geoscientific significance on **International EarthCache Day**, October 12.
- AGI’s “Big Ideas of Earth Science” videos and activities allowed students to explore core concepts on **Earth Science Literacy Day**, October 13.
- Schools nationwide held activities for **No Child Left Inside Day** on October 14, encouraging students to explore geoscience topics firsthand outdoors.
- The fifth annual **National Fossil Day**, October 15, invited young people to learn about paleontology at parks and other locations across the country.
- **Geoscience for Everyone Day**, October 16, reached out to underrepresented groups, including women, minorities, and people with a range of abilities.
- The third annual **Geologic Map Day**, October 17, offered resources to help young people explore the study, uses, and importance of geologic maps.
- Finally, for the first time, program participants explored archaeological wonders on **International Archaeology Day**, October 18.

Internationally, students and others in the Australia, Cameroon, Canada, Dominica, and the United Kingdom participated in events, explorations, and activities during Earth Science Week. Hundreds of essayists, artists, and shutterbugs once again entered the annual Earth Science Week contests.

### **Key Partnerships and Efforts**

Earth Science Week’s success depends on the collaboration of key partners. In 2014, AGI forged partnerships with several organizations and pursued signature initiatives:

AGI recently expanded eligibility for its Earth Science Week photo contest to allow members of **AGI International Affiliates** and international members of AGI Member Societies to participate. Previously open only to U.S. residents, the photo contest has always been a major part of Earth Science Week.

Educators seeking teaching resources and other support were directed by AGI to the **American Association of Petroleum Geologists (AAPG)** and the AAPG Foundation. In addition, Earth Science Week promoted awareness of AAPG's Visiting Geoscientist program and Distinguished Lecturer program. AAPG Student Chapters received kits. Earth Science Week's 2014 activity calendar featured a classroom activity by AAPG.

AGI supported the **Austin Earth Science Week Consortium**'s celebration in Texas in 2014 by donating posters and other educational materials. Hundreds of middle-school students attended a career fair and participated in activities.

The **American Geophysical Union (AGU)** continued its role as a supporting program partner in 2014 with the contribution of funds as well as expertise. Earth Science Week's 2014 activity calendar featured an AGU classroom activity. AGU's annual meetings, professional development workshops, programs for college students, print and electronic resources, and new "LEARN With AGU" video series were promoted through the Earth Science Week e-newsletter, website, and activity calendar. Earth Science Week staff also presented at the Exploration Station during AGU's Fall Meeting in San Francisco, sharing the wonder of geoscience with visiting families.

Earth Science Week 2014 promoted awareness of the **American Institute of Professional Geologists (AIPG)**, an AGI member society that advocates for geologists and certifies their credentials. AIPG offers several PowerPoint presentations online for free download, presenting career information for young, newly graduated geoscientists.

The **Archaeological Institute of America**, a new Earth Science Week partner, provided a classroom activity for the program's 2014 activity calendar.

Earth Science Week directed participants' attention to the **Association of American Geographers (AAG)**, an AGI member society, which offers an array of web resources for K-12 and college-level instruction. Reinforcing the theme of "Earth's Connected Systems," materials support geographic approaches to Earth science education. For example, Geographic Advantage, an educational companion for the National Research Council's "Understanding the Changing Planet," outlines teaching strategies and investigations that show students how geographers explore environmental change.

The **Association of American State Geologists** partnered with AGI and the USGS to support the third annual Geologic Map Day during Earth Science Week 2014.

Encouraging educators to make use of the resources offered by the **Association of Environmental and Engineering Geologists (AEG)** to its members, Earth Science Week 2014 turned a spotlight on AEG's technical publications, section and chapter meetings, and special educator sessions at the AEG annual meeting.

Earth Science Week promoted awareness of a website of great value to educators, AGI's new **Center for Geoscience & Society**. The center provides powerful resources for the

advancement of the discipline. For example, the Center's first original report, featured on the site, describes significant gaps between identified priorities and lagging practice in Earth science education. The website is the world's most comprehensive and up-to-date online clearinghouse for Earth and space science information and educational resources, ranging from high school curricula and classroom activities to video collections, career resources, and national research reports.

The **Critical Zone Observatories** provided an activity flyer on resource management for the Earth Science Week Toolkit in 2014.

The **Center for Ocean Sciences Education Excellence (COSEE)**, a longtime program partner, directed participants to three online videos depicting dramatic changes in Alaska's marine ecosystems through interviews with scientists. The videos were produced by COSEE Alaska in cooperation with other geoscience organizations.

Earth Science Week drew attention to the 2014-2015 **EarthScope** Speaker Series, which presented scientific results of EarthScope research to faculty and students at colleges and universities. EarthScope explored the structure and evolution of the North American continent and the processes that cause earthquakes and volcanic eruptions.

Leading the charge to incorporate GIS (geographic information system) technology and mapping software in Earth science education, **Esri** blogged to provide educators with useful resources and information during Earth Science Week 2014. Earth Science Week, in turn, promoted GIS Day, November 19, to raise awareness of geographic information systems. GIS Day 2014 events allowed users of geographic information systems across the country and around the world to demonstrate real-world applications that make a difference in society. Esri, a GIS Day sponsor and longtime Earth Science Week partner, also served as a partner in the Geologic Map Day initiative in 2014. In addition, Earth Science Week's 2014 activity calendar featured an activity from Esri. Earth Science Week participants learned about instructor-led training classes as well as "virtual campus" web-based training courses offered by Esri.

**ExxonMobil**, a longtime Earth Science Week partner, provided its "Outlook for Energy: A View to 2040 - Highlights" brochure for the Earth Science Week Toolkit. The brochure features projections for changes in energy production and usage in the future. In addition, Earth Science Week participating educators were invited to apply to take part in two training events in 2014. ExxonMobil Exploration and AGI held a K-5 Earth Science Teacher Leadership Academy in Houston in June. Also, a Middle School Earth Science Teacher Leadership Academy was held in July. Each academy provided teachers with Earth science content, hands-on activities, resources, and field experiences they could use with students in the classroom and with their colleagues in professional development.

The **Gemological Institute of America's** GemKids program provided a poster on gem science for the Earth Science Week 2014 Toolkit.

Through Earth Science Week, participants learned about educational resources and programs of the **Geological Society of America** (GSA), a longtime program partner. Featured education and outreach programs included the Teacher Advocate Program, Teacher GeoVenture trips, the Distinguished Earth Science Teacher in Residence program, and GSA's GeoCorps America program. GSA also organized International EarthCache Day at the start of Earth Science Week 2014, provided a learning activity for the calendar, and became an active partner in the Geologic Map Day initiative.

The **Geological Society of London** (GSL), an AGI member society, provided two online resources for learning about key geoscience topics. Electronic map-based resources were the focus of GSL's Plate Tectonics page. In addition, a site was launched to accompany GSL's Rock Cycle online module.

Program participants were directed to **Geology.com**, a major Earth Science Week partner which provides a variety of geoscience materials including daily Earth science news, maps, an online dictionary of Earth science terms, and information on geoscience careers, as well as resources for teachers, including links to lesson plans from major Earth science organizations. Geology.com, in turn, covered Earth Science Week announcements, programs, and activities throughout the year.

The **Houston Geological Society** (HGS) played a leadership role in partnering with AGI to promote the second annual Earth Science Week Houston, including educational activities citywide that encouraged learning about the geosciences.

The **Howard Hughes Medical Institute** (HHMI), a new program partner, provided key materials for the Earth Science Week 2014 Toolkit. Prized components of this year's kit were a time-scale ruler, an "Earth Evolution" poster, and a "Great Transitions" DVD. In addition, Earth Science Week participants learned about "Your Inner Fish," a three-part series that aired on PBS in April 2014. To accompany the series release, the Howard HHMI provided free classroom resources on subjects ranging from evolution to human health to the workings of the biosphere.

The **Incorporated Research Institutions for Seismology** (IRIS) provided a classroom activity for Earth Science Week's 2014 activity calendar. To help teachers and students delve into the science behind current events, Earth Science Week directed them to "Recent Earthquake Teachable Moments," a website of IRIS. These resources — including PowerPoint presentations, animations, and visualizations, as well as links to Spanish-language materials and USGS data — dealt with, for example, the magnitude-7.0 earthquake that struck in the Atlantic Ocean, southeast of the Falkland Islands, in November 2013.

Earth Science Week collaborated extensively with the **Institute for Global Environmental Strategies** (IGES) in 2014. Major areas of focus were NASA education efforts and IGES's Thatcher Environmental Research Contest, which challenged students to conduct research on the changing planet using the latest geospatial tools and data.

An Earth science bookmark from the **National Association of Geoscience Teachers** (NAGT) was included in the Earth Science Week Toolkit in 2014. Program participants also learned about NAGT's Outstanding Earth Science Teacher Awards and Dorothy Stout Professional Development Grants.

**NASA**, a founding partner of Earth Science Week, provided a unique “wheel” publication showing the planet's water system for the Earth Science Week 2014 Toolkit. Also included was a GLOBE Earth System Data lithograph. Earth Science Week's 2014 activity calendar also featured a classroom activity from NASA.

The **National Earth Science Teachers Association** (NESTA), a longtime Earth Science Week partner, continued its vital role in helping AGI promote excellence in geoscience education. At the National Science Teachers Association Annual Conference, the NESTA Reception included a ceremony during which a teacher was given the Edward C. Roy, Jr. Award for Excellence in K-8 Earth Science Teaching. In addition, NESTA members received copies of the Earth Science Week 2014 poster in their association newsletter.

Earth Science Week raised awareness of **National Environmental Education Week** (EE Week), the nation's largest environmental education event. Focusing on “Greening STEM: Engineering a Sustainable World,” EE Week connected educators with resources to promote K-12 students' understanding of the environment.

**National Geographic** provided a “Geographic Groceries” flyer for the 2013 educator kit, highlighting uses of maps in understanding resource allocation.

Earth Science Week promoted the **National Ground Water Association's** (NGWA) Ground Water Awareness Week in March 2014 as well as NGWA's new Protect Your Groundwater Day program in September 2014, advocating water conservation and contamination. The AGI member society offers Ground Water Adventures, a website providing educational activities for young people.

The **National Oceanic and Atmospheric Administration** (NOAA) provided a GLOBE learning materials for the Earth Science Week Toolkit. Earth Science Week's 2014 activity calendar featured a GLOBE activity from NOAA. In addition, Earth Science Week 2013 directed participants to NOAA's online education resources, including lesson plans, instructional games, videos, and more.

A longtime Earth Science Week partner, the **National Park Service** (NPS) continued for the fifth year a major component to its involvement in Earth Science Week. National Fossil Day, established as a celebration to take place annually on the Wednesday of Earth Science Week, once again reached millions of people. The “Caves of the National Parks” poster, appearing in the Earth Science Week 2014 Toolkit, successfully continued the series of park posters produced collaboratively by the agency and AGI. The agency also served as a partner in the Geologic Map Day initiative in 2014. Earth Science Week's 2014 activity calendar also featured a classroom activity from the agency.



Earth Science Week participants learned about soil education resources offered online by the **National Resource Conservation Service (NRCS)**. Resources for the elementary level include lesson plans, links to soil education websites, and even soil songs.

For Earth science teachers and students searching for the most up-to-date information on climate change, Earth Science Week 2014 highlighted a **National Science Foundation (NSF)** website. The site features an NSF report summarizing the current state of knowledge about climate change, as well as resources dealing with related news, discoveries, statistics, and publications.

Earth Science Week partnered with the **National Science Teachers Association (NSTA)** again in 2014, reaching science educators nationwide. Program participants learned about “Freebies for Science Teachers” on the NSTA website. Also, AGI exhibited once again at the NSTA Annual National Conference, sharing Earth Science Week and other education material for science teachers.

**The NEED Project** provided a classroom activity for the Earth Science Week 2014-15 activity calendar, promoting understanding of the carbon cycle.

Earth Science Week raised awareness of Houston’s **Offshore Energy Center (OEC)**, which offered educational resources for Earth science teachers. OEC’s Education Outreach program provided, for instance, an online Career Interest Profile that students could fill out to learn which energy careers dovetail with what they enjoy doing.

As detailed in the Earth Science Week newsletter, the **Oklahoma Energy Resources Board (OERB)** provides materials and services to improve the lives of Oklahomans and others through education and restoration. OERB educational resources such as the “Career Paths” web page provide information on careers in the Earth sciences.

Gearing up for National Fossil Day, Earth Science Week directed program partners’ attention to the **Paleontological Research Institution (PRI)**, an AGI member society providing education materials and opportunities for science teachers and students at all grade levels. The online Teacher Friendly Guide, for example, gives brief geologic histories of every region of the United States.

The **Paleontological Society**, and AGI member society, provided a “Geologic Ages” poster for the Earth Science Week Toolkit in 2014.

**Partners in Resource Education (PRE)**, a longtime program partner, provides activities focusing on the geoscience of conservation. The consortium of seven federal agencies educates thousands of young people, introduces them to natural resource careers, and cultivates the next generation of land and water stewards. In 2014, PRE collaborated to promote awareness of Earth Science Week, and vice versa.

**Rite in the Rain**, which makes notebooks for fieldwork by professional geoscientists, created a miniature field notebook — with “all-weather writing paper” and charts on

types of clouds, soils, and geological map symbols — for inclusion in the Earth Science Week 2014 Toolkit. The company supported the program in 2014 by donating a portion of the notebooks.

**Schlumberger Excellence in Educational Development (SEED)** is a nonprofit education program that empowers Schlumberger employee volunteers and educators to share their passion for learning and science with students. AGI has partnered with the program to launch a joint initiative, the SEED Earth Science Week Online Toolkit, to provide geoscience education resources in both Spanish and English. With new resources added periodically since 2010, visitors now can view, download, and print over 70 lessons, posters, fact sheets and other items, each offered in both Spanish and English. In addition, Earth Science Week’s 2014 activity calendar featured a SEED activity.

For teachers aiming to “shake up” education, Earth Science Week shone a spotlight on the **Seismological Society of America (SSA)**. SSA’s website provided seismic eruption models, wave animations, plate tectonics simulations, information on tsunamis, and more. SSA also offered publications, information on seismology careers, a distinguished lecturer series, and an electronic encyclopedia of earthquakes.

Earth Science Week participants were encouraged to take advantage of offerings of the **Society of Exploration Geophysicists (SEG)**, which provides programs for educators and students. For example, the distinguished lecturer series and honorary lecturer series both enabled students to meet professional geophysicists, learn about groundbreaking research in the field of seismic research, and obtain valuable career information.

The Minerals Education Coalition of the **Society of Mining, Metallurgy, and Exploration (SME)**, an AGI member society, supported Earth Science Week in 2014. SME provided an activity poster on aggregates for the 2014 educator kit. SME played a major role in launching Earth Science Week Denver in 2014. Also, Earth Science Week’s 2014 activity calendar featured a classroom activity from SME.

Advanced by the **Society of Petroleum Engineers (SPE)**, the Energy4Me program offers education resources on energy sources. The program provided a poster on energy science included in the Earth Science Week 2014 Toolkit. Earth Science Week’s 2014 activity calendar also featured a classroom activity by SPE.

The **Soil Science Society of America (SSSA)**, a longtime program partner, provided an “International Year of Soils” publication for the 2014 educator kit, preparing program participants for the 2015 global celebration of soil science. SSSA provides lessons, activities, fun facts, sites of interest, and soil definitions for the novice soil scientist online. These resources were promoted by the October event. Earth Science Week’s 2014 activity calendar featured a classroom activity courtesy of SSSA.

AGI donated posters and other educational materials to help **Texas Woman’s University** celebrate Earth Science Week 2014 with a Science Fair. The event was widely attended by the College of Arts and Sciences’ over 5,000 students.

The **U.S. Bureau of Land Management**, a new Earth Science Week partner, provided a flyer including a dinosaurs activity sheet for the 2014 educator kit. Earth Science Week's 2014 activity calendar featured a classroom activity from BLM.

Educators were invited to use a flyer and a bookmark provided for the Earth Science Week 2014 Toolkit by the **U.S. Department of Energy's** Office of Science. The department, an Earth Science Week partner, offered worksheets and activities on climate science. Also, participants learned of DOE's Energy Education & Workforce Development website, which offers hundreds of K-12 lesson plans.

Earth Science Week also promoted awareness of the **U.S. Environmental Protection Agency's** collection of free resources to enhance middle school students' understanding of climate change impacts on the United States' wildlife and ecosystems. The online toolkit includes case studies, activities, and videos based on climate science, environmental education, and stewardship information.

Overlapping Earth Science Week 2014, National Wildlife Refuge Week also was held October 14-20. The event, celebrating the richness of the 550 units that make up America's National Wildlife Refuge System, was sponsored once again by the **U.S. Fish and Wildlife Service (FWS)**, an Earth Science Week partner. FWS also provided a flyer on wilderness areas as well as an activity for the calendar included in the Earth Science Week 2014 Toolkit.

Earth Science Week participants learned about online education resources offered by the **U.S. Geological Survey (USGS)**, a longtime Earth Science Week partner, as well as the thousands of free images and over 69,000 searchable publications such as maps, books, and charts provided online by the agency. For the Earth Science Week 2014 Toolkit, USGS provided a flyer on the many excellent educational and instructional resources available through the USGS Education website. Also, USGS continued its leadership role as a founding partner of Geologic Map Day in 2014, providing support as well as its National Geologic Map Database's MapView, which offers a mosaic view of published geologic maps. Perhaps most significant, AGI worked with USGS to create a new educational resource for the Earth Science Week website, the "Be a Citizen Scientist" page. This site, which features information and links for recommended citizen science programs focusing on geoscience, invites students and others to participate in research on earthquakes, coastal erosion, flooding, landslides, and other geoscientific phenomena.

PLAN!T NOW's **Young Meteorologist Program** takes students on a severe weather preparedness adventure while learning about severe weather science and safety. Promoted by Earth Science Week, the program was developed in partnership with the National Oceanic and Atmospheric Administration's National Weather Service and the National Education Association. Young Meteorologists are shown opportunities to put their knowledge to work in hands-on activities and community service projects.

## **Earth Science Week Toolkits**

Across the country, AGI distributed some **16,000 Earth Science Week Toolkits** to teachers and geoscientists in 2014. The number of state geological surveys requesting complimentary kits for distribution rose to 32, up from 30 in 2013. Similarly, the number of AGI member societies requesting complimentary Earth Science Week Toolkits for distribution climbed to 28 in 2014 from 25 in 2013. As in past years, thousands of kits also were distributed through program partners including USGS, NASA, the National Park Service, and AAPG Student Chapters. Hundreds of kits were shipped free to geoscience department chairs at colleges and universities nationwide. Toolkits were shipped to program participants in all 50 states and a number of countries overseas.

The 2014 toolkit featured AGI's traditional Earth Science Week poster, education and outreach flyer, and school-year calendar showcasing geoscience classroom investigations and important dates of Earth science events. Program partners' contributions made the Earth Science Week 2014 Toolkit one of the richest in recent years.

## **Web Resources**

The Earth Science Week website ([www.earthsciweek.org](http://www.earthsciweek.org)) delivers essential resources for educators throughout the year. A 2014 redesign and new features made it easier than ever to identify and find programs, publications, and educational tools. The new site offers a more attractive presentation, streamlined functionality, and user-friendly interface.

As in past years, the **Earth Science Week website** was updated regularly to reflect the new theme, contests, proclamations, events, initiatives, and classroom activities for 2014. The Home Page received over 57,000 hits in 2013. Within the site, the Classroom Activities page received 45,000 hits, the For Teachers page received 11,000 hits, and the Contests page received nearly 10,000 hits.

A major addition in 2014 was a new educational resource offered by the Earth Science Week website, the **"Be a Citizen Scientist"** page, which features information and links for recommended "citizen science" programs focusing on geoscience. Citizen science initiatives invite ordinary citizens to participate in scientific research by making observations and contributing to large data sets. The "Be a Citizen Scientist" page spotlights initiatives inviting students and others to participate in research on earthquakes, coastal erosion, flooding, landslides, and other geoscientific phenomena. The page is supported by the U.S. Geological Survey, a longtime Earth Science Week partner, which sponsors or has partnerships with many citizen science programs.

Also for the first time, AGI offered four quarterly **Earth Science Week Webcasts** in 2014, expanding the program's use of online formats and media for public outreach. The free webcasts provided lively overviews of Focus Days (spring), Contests (summer), the Toolkit (autumn), and the Roy Award (winter). Each roughly five-minute tutorial includes a wealth of online links, which viewers can click during the narrated presentation to review available resources.

Program participants were encouraged to visit the continually updated Earth Science Week **Classroom Activities** page for more than 120 free learning activities, most of them contributed by leading geoscience agencies and groups. Activities are organized and searchable by various criteria, including specific Earth science topics. To find the perfect activity for a lesson, teachers can search by grade level and science education standard. Maybe most useful, they also can search among 24 categories of Earth science topics, from energy and environment to plate tectonics and weathering. This may be why Classroom Activities rank as one of the program's most popular online offerings, with 97 percent of survey respondents rating it as "useful" or "very useful."

AGI provided a set of free online videos and other electronic resources to help students, educators, and others explore the "big ideas" of Earth science during Earth Science Week 2014 and throughout the year. **Big Ideas Videos** bring to life the nine core geoscience concepts that everyone should know. The Earth Science Literacy Initiative, funded by the National Science Foundation, codified these principles. The videos are available on YouTube and TeacherTube. The Earth Science Week website also provides dozens of classroom activities linked to the "big ideas."

Those hosting events during Earth Science Week 2014 were invited to let people know about it at **Events in Your Area**. This web page provided information on events taking place through program partners in each state. In addition, events and groups could be listed in **Earth Science Organizations**, an online map that offers clickable links to Earth Science Week events taking place at parks, museums, science and technology centers, university geology departments, local geological societies, and other nearby locations.

A page dedicated to **Geoscience Career, Scholarship, and Internship Resources** was added to the program website. Another page of **Links** was included to provide external connections to sites provide resources on key topics such as chemistry, climate, drought, earthquakes, energy, floods, hurricanes, landslides, sinkholes, soil, tornadoes, tsunamis, volcanoes, and wilderness fires.

To maximize Earth Science Week teachers' access to education resources in both Spanish and English, over 70 lessons, posters, fact sheets, and other materials have been compiled in the **SEED Earth Science Week Online Toolkit**. The website, a partnership of Schlumberger Excellence in Educational Development (SEED) and AGI, was created in 2010 to provide educational materials, activities, and other resources for Spanish-speaking students and teachers, as well as English speakers, in U.S. and SEED network schools around the world. Resources developed by SEED, AGI, and other geoscience organizations include lessons, posters, and fact sheets.

Finally, Earth Science Week makes ample use of online social networking to reach new audiences, especially young people. The program's presence on **Facebook**, the Internet's most popular networking site, includes an Earth Science Week Fan Page. In addition, web surfers are invited to receive geoscience news, resources, and opportunities by following Earth Science Week on **Twitter**. Tweets are sent frequently, whenever there is valuable news or information to share. The number of people learning about Earth

Science Week through social media exploded in 2014, as tens of millions of people received program information through Facebook and Twitter.

## **Newsletter**

The monthly **Earth Science Week Update** newsletter reached over 8,100 teacher, student, and geoscientist subscribers in the past year, an increase of 4 percent from the previous year. The electronic newsletter kept planners and participants up-to-date on Earth Science Week planning at the national level, encouraged participation in local areas, and provided news on geoscience topics of interest to participants.

Besides highlighting worthwhile resources, these monthly e-mail updates reinforce the belief that geoscience education is a priority throughout the year, not only during one week each October. It is little wonder that the e-newsletter remains one of the program's most popular online offerings, with 97 percent of survey respondents rating it as "useful" or "very useful."

## **National Contests**

AGI held three national contests in connection with Earth Science Week for the 13th consecutive year. The contests were designed to encourage K-12 students, teachers, and the general public to become involved in the celebration by exploring artistic and academic applications of Earth science. Earth Science Week expanded eligibility for its photo contest to allow international members of **AGI Member Societies** and **AGI International Affiliates** to participate.

The three contests continued to provide ways for many people to participate in Earth Science Week. Photos, art, and essays were submitted by hundreds of people. Each first-place winner received \$300 and a copy of AGI's *The Geoscience Handbook*. Entries submitted by winners and finalists were posted online.

Swetha Karthikeyan of Dayton, New Jersey, won first place in the visual arts contest with a creative drawing showing connections among Earth systems in her community. Finalists were Isabella Matheu, Christa Paulus, Mia Sherman, and Tyler Wu. Students in grades K-5 made two-dimensional artworks illustrating the theme "**Earth's Connected Systems and Me.**" Eva Jasinski of Gloucester Point, Virginia, won first place in the photo contest with her self-portrait in a corn field, including a reflection of corn in a mirror representing humans' dependence on corn. Finalists were Della Barbato, Reata Livermont, Monica Saaty, and Elaina Zodiatis. Submissions illustrated the theme "**Connections in My Community.**" Ari Sinervo of Aptos, California, won first place in the essay contest with his paper on "How Fog Affects Life." Finalists were Kelsey Ge, Emma Lame, Davis Young, and Michelle Yue. Students in grades 6-9 wrote essays of up to 300 words addressing this year's theme, "**Earth System Science in Today's World.**"

## **Earth Science Teacher Award**

For the seventh consecutive year, AGI and the AGI Foundation offered the **Edward C. Roy, Jr. Award for Excellence in K-8 Earth Science Teaching**. Laura Finney, a teacher at Chamberlin Hill Intermediate School in Findlay, Ohio, was named the 2014

recipient of the award. Finney, who earned her master's degree in curriculum and teaching from Bowling Green State University, has spent her career challenging students in kindergarten through ninth grade with what she calls "authentic experiences" and inquiry-based learning in the Earth sciences.

Finney received a \$2,500 prize and an additional grant of \$1,000 to enable her to attend the National Science Teachers Association 2014 National Conference to accept the award during a reception hosted by the National Earth Science Teachers Association. Finalists for the award were Brian McDowell of Mason County Middle School in Germantown, Kentucky, and James Christopher Spiegl of Montgomery Bell Academy in Pegram, Tennessee.

The award recognizes one classroom teacher from kindergarten to eighth grade for leadership and innovation in Earth science education. This award is named in honor of Dr. Edward C. Roy, Jr., a past president of AGI and strong supporter of Earth science education. In addition to U.S. teachers, instructors throughout the United Kingdom were invited to compete for the prize. U.K. teachers were provided with detailed guidance on entering the competition by AGI and **The Geological Society of London**, a member society and Earth Science Week partner.

## **Events**

Earth Science Week 2014 kicked off on Sunday, October 12, with **International EarthCache Day**. "EarthCaching" is a variation of a recreational activity known as geocaching, in which a geocache organizer posts latitude and longitude coordinates on the Internet to advertise a cache that geocachers locate using GPS devices. The activity has attracted over a million participants worldwide. When people visit an EarthCache, they learn something special about Earth science, the geology of the location, or how the Earth's resources and environment are managed there. EarthCaching has been developed by the Geological Society of America, a major program partner.

On Monday, October 13, educators and young people were encouraged to explore "big ideas" as part of **Earth Science Literacy Day**. The AGI "Big Ideas of Earth Science" videos provided on YouTube and TeacherTube outline the core concepts of geoscience, as codified by the Earth Science Literacy Initiative with support from the National Science Foundation. To help teachers and students use the videos, the Earth Science Week website offers dozens of related classroom activities.

One of the highlights of recent years' Earth Science Week celebrations has been "**No Child Left Inside**" Day, an event that in its inaugural year engaged some 500 students in outdoor learning activities and received coverage by news media from NBC to NPR. In 2014, students and educators nationwide were invited to take part on the Tuesday of Earth Science Week, October 14. AGI's online NCLI Day Guide provided everything needed to plan a local NCLI Day event. The free guide provided 17 outdoor activities, as well as detailed recommendations for creating partnerships, planning logistics, reaching out to the local media, and following up in the classroom.

Earth Science Week featured the return of a popular event on Wednesday, October 15, 2014. In partnership with the National Park Service (NPS), AGI helped conduct the fifth annual **National Fossil Day**, including activities and resources designed to celebrate the scientific and educational value of fossils, paleontology, and the importance of preserving fossils for future generations. NPS offered a website full of educational resources and information designed specifically for students and teachers. On the site's NPS Fossil Park Highlights page, visitors could find lesson plans developed to reflect state standards, fossil trading cards, videos about pygmy mammoths, special brochures, a virtual museum exhibit on dinosaurs, and more. NPS also held a National Fossil Day Art Contest. Finally, AGI collaborated with NPS partners and other geoscience organizations to conduct the fifth annual National Fossil Day event in Washington, D.C. NPS and the Smithsonian Institution collaborated to host the National Fossil Day Celebration at the Smithsonian's National Museum of Natural History. The free public event began with remarks from museum and agency officials, followed by a gathering of grade school children who recited the "Junior Paleontologist Pledge" on the mall steps of the museum. On hand will be scientists from the National Park Service, the Bureau of Land Management, the National Science Foundation, Maryland Dinosaur Park, and AGI.

Program participants were invited to join the Earth Science Week team in encouraging everyone — including women, minorities, and people with a range of abilities — to explore geoscience careers on **Geoscience for Everyone Day**, Thursday, October 16. Educators welcomed geoscientists into the classroom to speak. Geoscientists visited schools and volunteered at science centers. Others organized scout events, led field trips, and held special "Take Your Child to Work Day" events. The aim was to open a young person's eyes to the world of Earth science. Doing so, participants supported the efforts of AGI member societies such as the Association for Women Geoscientists and the National Association of Black Geoscientists in raising awareness of the remarkable opportunities available to all young people in the Earth sciences. The program website directed participants to "Visiting Geoscientists: An Outreach Guide for Geoscience Professionals," a handbook co-produced by AGI and the American Association of Petroleum Geologists' Youth Education Activities Committee.

The third annual **Geologic Map Day**, held on Friday, October 17, 2014, promoted awareness of the study, uses, and importance of geologic mapping for education, science, business, and a variety of public policy concerns. The final event for the school week of Earth Science Week 2014 was hosted by the U.S. Geological Survey and the Association of American State Geologists in partnership with AGI, along with additional partners including the National Park Service, the Geological Society of America, NASA, and Esri. Students, teachers, and the wider public tapped into the various educational activities, print materials, online resources, and public outreach opportunities for active participation. The Earth Science Week 2014 Toolkit contained a Geologic Map Day poster that provided geologic maps, plus step-by-step instructions for a related classroom activity. Additional resources for learning about geologic maps were featured on the Geologic Map Day web page of the Earth Science Week site. USGS and GSA invited university-level students to enter the 2014 Best Student Geologic Map Competition. Activities nationwide, many led by state geologic surveys, spurred learning in schools.



Earth Science Week 2014 reached its climax with **International Archaeology Day** on Saturday, October 18. The event was a celebration of archaeology and the thrill of discovery. Every October, archaeological programs and activities for people of all ages and interests are presented by the Archaeological Institute of America and archaeological organizations across the United States, Canada, and elsewhere. Programs included a family-friendly archaeology fair, a guided tour of a local archaeological site, a simulated dig, and a lecture or a classroom visit from an archaeologist. In every case, interactive, hands-on International Archaeology Day programs provided the chance for participants to indulge their inner “Indiana Jones.”

### **Citywide Celebrations**

Two city-specific celebrations served as major centers of public awareness activities during Earth Science Week 2014. **Earth Science Week Houston** and **Earth Science Week Denver** both extended and deepened the reach of the successful Earth Science Week campaign with special events, educational materials, online resources, and activities in schools and other settings. In Houston, major partners included the Houston Geological Society, the Houston Museum of Natural Science, and the Consumer Energy Alliance. In the Denver area, partners included the Colorado Scientific Society, the Colorado School of Mines, and the Society for Mining, Metallurgy and Exploration.

To support these celebrations, AGI donated hundreds of Earth Science Week Toolkits to schools in the Houston Independent School District and Denver Public Schools. Each kit contained dozens of study guides, posters, disks, and other resources for Earth science education, which school officials worked with teachers to use in inspiring activities in the classroom. In addition, AGI launched the official Citywide Celebrations website to provide educators, students, and families with links to additional educational resources as well as other offerings in participating cities. Program participants nationwide were encouraged to collaborate with local partners to launch their own Citywide Celebration.

### **AGI Promotions**

Earth Science Week promoted awareness of numerous AGI programs and resources of interest to Earth science educators, students, and enthusiasts, including the AGI Geoscience Workforce program, the International Affiliates program, the William L. Fisher Congressional Geoscience Fellowship, the Pulse of Earth Science website, the Visiting Geoscientists guide, the online Earth and Space Science (ESS) course for teachers, the Earth Science Organizations website, the Faces of Earth DVD, the Why Earth Science video, and GeoConnection Network.

### **Official Proclamations**

Governors issued proclamations recognizing Earth Science Week 2014 in **14 states**: Alaska, Delaware, Illinois, Louisiana, Missouri, Nevada, New Jersey, New Mexico, North Dakota, Oklahoma, Oregon, Pennsylvania, South Dakota, and Tennessee. Seven of these states have issued “perpetual proclamations,” ensuring recognition of Earth Science Week every year.

## **Publicity and Media Coverage**

AGI enlisted the support of a wide range of media in promoting awareness of Earth Science Week, resulting in unprecedented reach for promotional activities in 2014 and helping to lay a foundation for more coverage in years to come.

**Internet:** Earth Science Week activities were highlighted on hundreds of Internet pages besides the official event site. Information promoting events and publicizing the celebration was featured by program partners and promoters including USGS, AIPG, AAPG, AASG, Archaeological Institute of America, GSA, AGU, SME, SEG, SPE, NSTA, NESTA, NAGT, SSSA, NASA, NOAA, National Park Service, Bureau of Land Management, Consortium for Ocean Leadership, The NEED Project, Critical Zones Observatories, UNAVCO, Esri, Geoscience Australia, Australian Public Service, Petroleum Exploration Society of Great Britain, California Classroom Science, Hands on the Land, Colorado Scientific Society, Louisiana Geological Survey, New Mexico Bureau of Geology & Mineral Resources, Wyoming State Geological Survey, Utah Geological Survey, Ohio Department of Natural Resources, Mississippi State University, Utah Coalition for Education Technology, Virginia Department of Mines Minerals and Safety, State of New Jersey, University of Wyoming, University of Nebraska-Lincoln, University of Arkansas, Grand Valley State University, Colorado Mountain College, University of Dayton, University of Nevada, Arizona State University, Florida Institute of Technology, New Mexico Tech, The Open University, Arizona Geology, Ohio Earth Science Teachers Association, The GLOBE Program, PAESTA, Mourné Cooley Gullion Geotourism, Derbyshire Education Business Partnership, Broadway World, CNW, How to Smile, GIS User, GIS Café, The Geological Society of London, British Society for Geomorphology, Aggregates Manager, Golden Software, and McClung Museum of Natural History and Culture. Earth Science Week was mentioned on hundreds of websites, social networks, and blogs.

**Television/Radio:** Earth Science Week was covered by television stations across the country, including ABC 7 WJLA in Washington DC, ABC 10 News in Michigan, NBC 3 WKCY in Ohio, WGBY 57 in Massachusetts, KJCT 8 in Colorado, KQED in California, BBC News in England, and BBC News Northern Ireland. In addition, the event was covered by radio stations such as Washington DC's WTOP, News Radio 1510 WLAC, and KRAI 55 Country.

**Print/News Media:** AGI distributed press releases to hundreds of newspapers, magazines, and other print media outlets. Many local and national publications ran items on Earth Science Week (for examples, see Section 2). AGI staff also wrote articles for the SouthEast Education Network's *SEEN* magazine and the National Earth Science Teacher Association's *The Earth Scientist* magazine. The articles highlighted Earth Science Week activities and theme.

Earth Science Week news and events were covered by major national and international news organizations such as *Discover Magazine*, *The Huffington Post*, *Smithsonian Magazine*, *Smithsonian Science*, *World News*, *Nature World News*, *AAPG Explorer*, *SEEN Magazine*, *Science Recorder*, *The Spectrum*, *RigZone*, *Virtual-Strategy Magazine*,

*SpaceRef*, *HNGN*, and *EarthZine*. Coverage of Earth Science Week programs and activities was provided by local news organizations such as *EDP24* of England; *The Clare Champion* of Ireland; *Lynn News* of the United Kingdom; *Belfast Telegraph* of the United Kingdom; *Western Daily Press* of the United Kingdom; *Canberra Times* of Australia; *Kiama Independent* of Australia; *The Tobago News* of Tabago; *Contra Costa Times* of California; *Las Vegas Review-Journal* of Nevada; *The Bismarck Tribune* of North Dakota; *The Daily Times* of New Mexico; *The Fresno Bee* of California; *Missoulian* of Missouri; *The Daily Pennsylvanian* of Pennsylvania; *Earth Matters* in New Mexico; *Blue Mountain Eagle* of Oregon; *The Paris News* in Texas; *Moab Sun News* of Utah; *Fairfield Sun Times* of Montana; *Connecticut News* of Connecticut; *East Tennessean* of Tennessee; *East Village Magazine* of Michigan; *St. George News* of Utah; *Indiana Daily Student* of Indiana; *Ahwatukee Foothills News* of Arizona; *The Record-Courier* in Nevada; *Johnson City Press* of Tennessee; *Hot Springs Star* of South Dakota; *The South Texan* in Texas; *The Apalachicola and Carrabelle Times* in Florida; *Oil City* of Wyoming; *Turtle Bay* of California; *Southeast Missourian* of Missouri; *The Herald* of Washington; *We Are Central PA* of Pennsylvania; *Upper Michigan Source* of Michigan; *Magic Valley Times-News* of Idaho; *The Gilmer Mirror* of Texas; *WCF Courier Cedar Valley Business Times* of Iowa; *The Hays Daily News* of Kansas; *The Daily Nebraskan* of Nebraska; *The News-Reporter* in Georgia; *Between the Lines* of Washington; *The Oneida Daily Dispatch* in New York; *Lansing City Pulse* of Michigan; and *DCist* of the District of Columbia.

Some 54,250 copies of the Earth Science Week 2014 poster, featuring a geoscience learning activity in addition to promotional content, were distributed as inserts in publications carrying articles about the event, such as *The Earth Scientist*, *GSA Today*, *AAPG Explorer*, and AGI's *Earth* magazine.

## **External Evaluation of Earth Science Week 2014: Key Findings**

Following the event, AGI secured an independent contractor, PS International, to complete a formal external evaluation of Earth Science Week 2014, as it has in past years. Some 8,100 program participants were invited to participate in a survey in the closing months of 2014, with a valid response rate of 2.7 percent.

Results were overwhelmingly positive. Comparing participation last year and plans for the next year, 88 percent of survey respondents said they anticipate either increasing or maintaining level participation. That figure is up from 84 percent the previous year.

A large majority of participants (88 percent) once again said Earth Science Week offers opportunities for teaching and promoting Earth science that they wouldn't have otherwise. Participants commented on the "useful annual topics to focus on" and the way the "theme provides opportunities to explore new aspects of Earth Science."

Similarly, 91 percent said program resources and activities are "very" or "somewhat" important to educating students and others about Earth science. This figure is up from 86 percent last year. "Teachers really appreciate all the materials," remarked one participant.

Most respondents find Earth Science Week and related resources highly useful, with 77 percent rating the program's overall usefulness as "excellent" or "good." When respondents were asked to rate 20 key items from the Earth Science Week 2014 Toolkit and the program website, all were rated "very useful" or "useful" by strong majorities of participants. Top-rated items were AGI classroom activities, the ESW e-newsletter, the Big Ideas videos/activities, the Be a Citizen Scientist page, USGS material on educational resources, NASA educational materials, the Energy4Me poster, and Department of Energy climate material.

Participants said they were very active during Earth Science Week. Many reported specific activities that were highly active. For example, 95 percent reported activities categorized as "most active" (e.g., field trips and outside lessons), "active" (e.g., external speakers and open house discussions), or "somewhat active" (e.g., lesson plans and kit distribution).

Asked how Earth Science Week might be improved, the largest share of respondents (35 percent) advocated additional program materials and activities. Additional suggestions included increasing communication and promotions. AGI uses evaluation findings to improve the program.

## **Earth Science Week Sponsors**

United States Geological Survey  
National Aeronautics and Space Administration  
National Park Service  
American Association of Petroleum Geologists Foundation  
American Geophysical Union  
Society for Mining, Metallurgy, and Exploration  
National Geographic  
Association of American State Geologists  
Geological Society of America  
Archaeological Association of America  
Esri

## **Earth Science Week Program Partners**

American Association of Petroleum Geologists Foundation  
American Geophysical Union  
American Geosciences Institute  
Archaeological Institute of America  
Association for Women Geoscientists  
Association of American State Geologists  
Consortium for Ocean Leadership  
Critical Zones Observatories  
Esri  
ExxonMobil  
Geological Society of America  
Incorporated Research Institutions for Seismology  
National Earth Science Teachers Association  
National Energy Education Development Project  
National Geographic Education  
National Science Teachers Association  
Rite in the Rain  
SEED: Schlumberger Excellence in Educational Development  
Society for Mining, Metallurgy, and Exploration  
Society of Exploration Geophysicists  
Society of Petroleum Engineers  
Soil Science Society of America  
U.S. Bureau of Land Management  
U.S. Department of Energy  
U.S. Fish and Wildlife Service  
U.S. Geological Survey  
U.S. National Aeronautics and Space Administration  
U.S. National Oceanographic and Atmospheric Administration  
U.S. National Park Service  
U.S. National Weather Service

## **Earth Science Week 2014 Events and Activities by State and Territory**

### Alabama

- The Alabama Geological Survey distributed 50 complimentary Earth Science Week Toolkits to science educators.
- The University of Alabama Museums hosted National Fossil Day events on October 15. Activities included specimen displays, demonstrations on 3-D scanning and printing of fossils, and a lecture about new fossil finds from Dr. Dana Ehret.

### Alaska

- The Alaska Public Lands Information Center arranged fossil resources and hands-on activities for students and teachers.
- The Bureau of Land Management of Alaska celebrated Earth Science Week by encouraging citizens to look out for auroras.
- The governor of Alaska issued a perpetual proclamation of Earth Science Week.

### Arizona

- The Earth Science Museum and Mesa Community College joined together to celebrate the theme of “Earth’s Connected Systems” at an Earth Science Day event. The event included a volcano demonstration, an opportunity for students to start their own mineral collections, planetarium shows, and lectures.

### Arkansas

- The Arkansas Geological Survey promoted Earth Science Week among teachers and citizens.
- The University of Arkansas at Little Rock hosted an open house in celebration of National Fossil Day.

### California

- To celebrate National Fossil Day, the Fossil Discovery Center of Chowchilla held museum tours and mock digs. The museum also showcased fossils of saber-tooth cats, petrified wood, and hand hominid skills replicas.
- The John D. Cooper Center held “Prehistoric Day” at the Santa Ana Zoo. Visitors saw and touched real fossils and artifacts from Orange County.
- The California Geological Survey distributed 50 toolkits to educators at the National Geoscience Teachers Association’s fall conference.
- Ari Sinervo of Aptos, California, won first place in the Earth Science Week Essay contest explaining “Earth System Science in Today’s World.”

### Colorado

- The Society for Mining, Metallurgy, and Exploration distributed Earth Science Week Toolkits at the Denver Gem & Mineral show and to the Colorado Association of Science Teachers’ conference.

- The Geological Society of America encouraged geocachers all around the world to participate in International EarthCache Day.
- Dinosaur Discovery Day at Dinosaur Ridge celebrated Earth Science Week with guides stationed at the track site and other fossil sites along the Dinosaur Ridge Trail. Patrons experienced sifting for microfossils, dinosaur track painting, dinosaur digs, rock and mineral identification, gold panning, and metal detecting.
- Colorado Mountain College hosted a speaker series to celebrate Earth Science Week.
- The Colorado School of Mines Teacher Enhancement program celebrated Earth Science Week by promoting public awareness.
- The Colorado Geographic Alliance promoted and participated in NASA’s Earth Science Week program, SkyScience.
- The Colorado Scientific Society hosted many events during the week, including lectures, geology hikes, field trips, and Earth Science Week Toolkit distribution.

#### Connecticut

- The Connecticut Geological Survey promoted Earth Science Week and distributed kits among educators in the state.
- Central Connecticut State University celebrated Earth Science Week with free family activities. Participants got to touch meteorites, walk along a geologic timeline, and learn about the state’s geologic history.

#### Delaware

- The governor of Delaware issued a perpetual proclamation of Earth Science Week.
- The Delaware Geological Survey supported National Fossil Day with information on the state’s fossil record and geological formations.

#### District of Columbia

- The National Park Service and AGI hosted exhibits at the National Fossil Day celebration at the Smithsonian Nation Museum of Natural History.

#### Florida

- The Florida Geological Survey hosted “Scout Night,” an event designed to assist local Scouts obtain their geology badge.
- The Florida Geological Survey also held an Open House, allowing tours of the Florida State University Antarctic Marine Geology Research Laboratory, views of drill core samples, and demonstrations of geographic information systems (GIS) as applied to geologic mappings and hazards.
- The South Florida Museum hosted a National Fossil Day family night. There was a special screening of “Sea Monsters: A Prehistoric Adventure,” fossil exhibitions, and an outdoor fossil dig. Children earned Junior Paleontologist badges.
- Florida Institute of Technology professors and students recorded and blogged about their interests in the Earth sciences.

## Georgia

- Iris Garden Club celebrated No Child Left Inside Day with activities for students.

## Hawaii

- The Hawaii Environmental Education Alliance promoted Earth Science Week among educators in Hawaii.
- Hawaii News Now promoted Earth Science Week and NASA's Sky Science.

## Idaho

- The Idaho Mining Association promoted Earth Science Week among citizens statewide.
- The Idaho Geological Survey debuted a new geologic map of the state, coinciding with Geologic Map Day.

## Illinois

- The National Fossil Day celebration at the Illinois State Museum featured the "Changes: Dynamic Illinois Environments" exhibition and a "Play Museum." Children examined fossils under a video microscope.
- The governor of Illinois issued a perpetual proclamation of Earth Science Week.
- Fifth-graders at St. Joseph School enjoyed a "Fun with Rocks" program, hosted by geologist Steve Padovani.
- The Illinois State Museum in Springfield hosted a "Shake Out, Rock Out, and Nerd Out" event to celebrate Earth science and National Fossil Day.

## Indiana

- The Monroe County History Center in Bloomington hosted a rock and fossil display in celebration of National Fossil Day.
- The Indiana Geological Survey promoted Earth Science Week among citizens across the state.

## Iowa

- The BMC Aggregates' Morgan Quarry kicked off Earth Science Week with its "Sunday at the Quarry" event. Participants did rock, fossil, and mineral collecting with the Gem and Mineral Society and went on a geology tour of the quarry. BMC Aggregates also distributed Earth Science Week Toolkits to educators.
- The University Of Iowa Museum Of Natural History hosted an Earth Science Week celebration where members of the public inquired about their rock and fossil collection and learned about state geology.

## Kansas

- The Kansas Geological Survey obtained and distributed 100 Earth Science Week Toolkits for educators.
- The Stenberg Museum of Natural History in Hays at Fort Hays State University hosted many activities throughout October to celebrate Earth Science Week. Festivities included a photography contest, paleontology presentations, geocaching activities, and an informative career lecture.



## Kentucky

- In celebration of National Fossil Day, the Big Bone Lick State Park held an “Ordovician Fossil Roundup.”
- The Kentucky Geological Survey hosted its annual Open House to celebrate Earth Science Week. Attendees were given free kits and were invited to browse the rock and fossil collections.

## Louisiana

- The governor of Louisiana declared October 12-18 to be Earth Science Week.
- The Louisiana Geological Survey distributed Earth Science Week Toolkits to schools across the state.

## Maine

- Students visited the Maine State Museum for Maine Earth Science Day. Activities included demonstrations on Maine’s geology and exhibits featuring various rock and fossil specimens.
- The L.C. Bates Museum held a National Fossil Day tour of the museum. The museum featured a collection of dinosaur fossils on exhibit, and participants created their own “fossils.”
- More than 300 students participated in Waban’s TREE Center Earth Science Week celebration. Students learned about various topics relating to this year’s theme of “Earth’s Connected Systems.”

## Maryland

- The Calvert Marine Museum celebrated National Fossil Day with a bone dig, a scavenger hunt, crafts, and presentations.
- The Maryland Geocaching Society took part in International EarthCaching Day.

## Massachusetts

- The Harvard Museum of Natural History featured curated tours of its gem collection by Dr. Raquel Alonso-Perez, fossil investigation, and a gallery of geologic maps.
- The Oak Bluffs Library hosted a show-and-tell event for National Fossil Day.

## Michigan

- Grand Valley State University encouraged participation in Earth Science Week and promoted the message of Earth science understanding.
- Visitors at the Michigan State University Museum explored its Hall of Evolution and talked with university students about various types of fossils, preservation, and research methods. The museum also hosted guided tours and a Junior Paleontologist Scavenger Hunt.

## Minnesota

- The Duluth Children’s Museum held activities in celebration of National Fossil Day including fossils digs, making and eating fossil parfaits, playing games, and creating fossil models.

- For National Fossil Day, visitors at the Science Museum of Minnesota learned about Twin Cities fossils, trilobites, Green River Wyoming fossil fish, fossil coprolites, microfossils, and a recently discovered fossil saber-tooth cat from Minnesota.
- The Minnesota Department of Education promoted awareness of Earth Science Week among teachers statewide.

#### Mississippi

- The Dunn-Seiler Geology Museum at Mississippi State University sponsored an art and creative story contest in conjunction with National Fossil Day. K-12 students were encouraged to creatively represent, either through art or creative writing, a mammoth that used to roam the state.
- The Mississippi Science Teachers Association promoted the Earth Science Week 2014 contests among teachers and students across the state.

#### Missouri

- The governor of Missouri declared October 12-18 to be Earth Science Week.
- The Great Central U.S. ShakeOut was held on October 16, during Earth Science Week, to promote preparedness and safety during earthquakes.
- The Missouri Geological Survey celebrated National Fossil Day with special exhibits and activities at the Edward L. Clark Museum of Missouri Geology. Visitors received a small Crinoid stem fossil (the official state fossil) to add to their personal collections. Furthermore, for Geologic Map Day, the Missouri Geological Survey promoted awareness of the study, uses, and importance of geologic mapping for education, science, business, and public policy.
- A geologist from the Missouri Geological Survey took fourth-grade students from Cuba Elementary School on fossil tour of the state capitol.

#### Montana

- The Museum of the Rockies held a Fossil Festival to celebrate National Fossil Day. Children explored the ways that paleontologists work, learned about Earth's history, studied ancient plants and animals, and discovered how they could protect fossils through engaging hands-on activities.
- The University of Montana Paleontology Center hosted over 125 people for fossil identification, movies, and tours of the facility.

#### Nebraska

- Agate Fossil Beds National Monument celebrated National Fossil Day with hands-on activities for students. Dr. Emmett Evanoff presented "Animals, Plants Volcanoes, and Ancient Climate Change; the Fauna and Flora of the White River Group of the Great Plains."
- Nebraska University State Museum invited children and families to a special paleontology-themed night with fossil digs and fossil identification.
- The University of Nebraska-Lincoln ran a special article highlighting Geologic Map Day and the importance of mapping in society.

## Nevada

- For National Fossil Day, the Nevada State Museum of Las Vegas hosted a contest to name its Ichthyosaur fossil specimen.
- The governor of Nevada issued a perpetual proclamation of Earth Science Week.
- The Nevada Bureau of Mines and Geology held its 15th annual Earth Science Week field trip. Participants saw how geologists use geologic maps to unravel the history of the area, assess earthquake hazards, and evaluate the potential for mineral resources.

## New Hampshire

- The New Hampshire Geological Survey promoted awareness of Earth Science Week among residents and community members.

## New Jersey

- The New Jersey Geological and Water Survey distributed Earth Science Week Toolkits and Geologic Map Day materials to teachers. Survey staff members celebrated by holding a geo-photo scavenger hunt and a geo-sample identification contest, cleanup of the trash in the parking lot, and a plant swap.
- The governor of New Jersey declared October 12-18 to be Earth Science Week.
- Swetha Karthikeyan of Dayton, New Jersey, won first place in the Earth Science Week Visual Arts Contest, “Earth’s Connected Systems and Me.”
- Students at Banyan Elementary School in Fairfield worked with professional geologists and paleontologists on activities and experiments at their celebration.

## New Mexico

- The New Mexico Bureau of Geology hosted its annual public radio spots during Earth Science Week, in collaboration with KUNM radio. The broadcasts focused on the geology of New Mexico and were heard by thousands of citizens.
- The New Mexico Bureau of Geology also opened its offices at New Mexico Tech to the public. There were activities reflecting the theme of “Earth’s Connected Systems,” including geologic and aquifer mapping displays; a photogrammetric machine used to show 3-D features like faults, folds, and rock formations; and a variety of other maps.
- The Mesalands Community College Dinosaur Museum and Natural Science Laboratory presented a special lecture for National Fossil Day.
- The governor of New Mexico declared October 12-18 Earth Science Week.

## New York

- The American Museum of Natural History in New York City hosted a National Fossil Day celebration.
- The Museum of the Earth and the Paleontological Research Institute hosted a Teacher Resource Day to help teachers meet with scientists, expand their rock and fossil collections, and explore museum exhibits.
- The Great Swamp Conservancy celebrated National Fossil Day with many activities, including construction of fossil replicas, artwork of ancient reptiles, and distribution of Junior Paleontologist Activity Booklets.

#### North Carolina

- The Discovery Place's KidScience in Charlotte celebrated National Fossil Day. Visitors discovered the secrets behind the preserved remains of animals, plants, and other organisms from the past from the museum's extensive fossil collection.
- Enviro-Equipment Inc. donated education toolkits to the North Carolina Science Teachers Association.
- Local geocachers celebrated International EarthCache Day, the first day of Earth Science Week.

#### North Dakota

- North Dakota's governor issued a perpetual proclamation of Earth Science Week.
- The Fargo Public Library hosted a free, hands-on session presented by a paleontologist from the Geosciences Department of North Dakota State University.
- A team from the North Dakota Geologic Survey examined and identified fossil collections at the North Dakota Heritage Center for National Fossil Day.

#### Ohio

- Earth Science Week 2014 posters were included in the fall issue of "The Ohio Earth Scientist" by OESTA, which were distributed to Ohio geoscience teachers.
- The Ohio Statehouse hosted an Earth Science Week Fossil Tour, a geology tour of the statehouse with special guests from the Ohio State University Orton Geological Museum and the Ohio Department of Natural Resources (ODNR) Division of Geological Survey. Participants had the opportunity to learn from these experts about the "Building Stones of Capitol Square."
- ODNR Division of Geological Survey staff led hikes at four eastern state parks, highlighting the Mississippian Black Hand Sandstone Formation. Geologists also lead a "fossil hunt" hike at Hueston Woods State Park.
- The Cincinnati Museum celebrated "Fossil Week" for National Fossil Day with lectures, field trips, exhibits, and workshops for teachers.

#### Oklahoma

- Oklahoma's governor issued a perpetual proclamation of Earth Science Week.
- The Oklahoma 4-H program promoted Earth Science Week to students statewide.

#### Oregon

- The governor of Oregon declared October 12-18 to be Earth Science Week.
- The Oregon Department of Geology and Mineral Industries hosted an Open House featuring maps, tools of the trade, and a question panel.
- The Oregon Department of Geology and Mineral Industries partnered with the Washington Division of Geology and Earth Resources to debut a new map of the Columbia River Gorge in honor of Geologic Map Day.

### Pennsylvania

- The Pennsylvania Earth Science Teacher Association promoted awareness of National Fossil Day among science educators in Pennsylvania.
- The State Museum of Pennsylvania held an event for National Fossil Day. Visitors had the opportunity to learn about the state fossil, the trilobite *Phacops rana*.
- The governor of Pennsylvania declared October 12-18 to be Earth Science Week.

### Puerto Rico

- To celebrate Earth Science Week, the Puerto Rico Seismic Network organized educational activities such as the “Great Puerto Rico ShakeOut” for educators and students throughout October.
- Earth Science Week Toolkits were distributed to science educators and outreach contacts in Puerto Rico.

### Rhode Island

- The Museum of Natural History in Roger Williams Park celebrated National Fossil Day with special fossil events and activities. Events at the museum included activity stations, a special fossil-themed scavenger hunts, and craft activities. Visitors brought fossils to be identified by the museum’s paleontology curator.
- The Rhode Island Geography Education Alliance promoted Earth Science Week to residents and community members.

### South Carolina

- The South Carolina Geological Survey celebrated Earth Science Week and Geologic Map Day by developing two new online maps and distributing Earth Science Week Toolkits to educators.

### South Dakota

- South Dakota’s governor issued a perpetual proclamation of Earth Science Week.
- The South Dakota Discovery Center promoted Earth Science Week to citizens across the state.
- The Journey Museum in Rapid City featured Earth science activities and demonstrations in the facility’s geodome.
- The Museum of Geology at South Dakota School of Mines and Technology celebrated National Fossil Day by showcasing its specimen of the South Dakota state fossil, the Triceratops.

### Tennessee

- The governor of Tennessee declared October 12-18 to be Earth Science Week.
- The Tennessee Division of Geology distributed a total of 90 Earth Science Week Toolkits to educators.
- The McClung Museum of Natural History and Culture hosted “Can You Dig It?” The event highlighted fossil exploration for National Fossil Day.

## Texas

- The Austin Earth Science Week Consortium held a career event for middle school students. Earth science professionals gave presentations about their careers, and students were able to participate in hands-on activities through various exhibits. Students learned about petroleum, solar energy, industrial mining resources, surface and ground water resources, weather and climate, archeology, astronomy, and environmental science.
- The Mineral Wells Area Chamber of Commerce hosted its Annual Crazy Fossil Dig Event in celebration of National Fossil Day.
- The Houston Geocaching Society celebrated International Earth Cache Day.
- The Houston Geological Society held various events for Earth Science Week with partners in the Houston area. HIS Inc. hosted a Geoscience Day for middle school Girl Scouts and Boys Scouts of America, including workshops with hands-on demonstrations on oil and gas formation, as well as methods used to find and extract these valuable resources.
- The Houston Museum of Natural Science hosted Energy Day in Houston. The event offered hands-on activities for kids and guided tours of the Wiess Energy Hall and the Paleontology Hall. The Downtown Houston Festival by Consumer Energy Alliance hosted Energy Day, providing free tours of downtown building stones. The Houston Gem and Mineral Society sponsored a field trip to Whiskey Bridge, a site of the Crockett Formation. The Geophysical Society of Houston hosted a booth demonstrating how geologists use acoustics to model the Earth.
- Visitors joined paleontologists at the Texas Memorial Museum to celebrate National Fossil Day and learn about fossils and the science of paleontology.
- Sul Ross State University promoted awareness of National Fossil Day.

## Utah

- Fourth- and fifth-grade students visited the Utah Geological Survey for educational activities such as panning for minerals, experimenting with erosion and deposition in a stream, exploration of the rock cycle, identification of minerals and researching fossils.
- Museum of the Moab hosted its first Moab Dinosaur Festival in celebration of National Fossil Day.
- Capitol Reef National Park celebrated Earth Science Week with a variety of activities, including a geology talk, hikes around the park, fossil identifications, and hands-on activities.

## Vermont

- The Vermont Geological Survey promoted awareness of Earth science activities and Geologic Map Day among educators.

## Virginia

- The Virginia Department of Mines, Minerals and Energy premiered the movie “Switch” and hosted a paleontology presentation led by an emeritus professor on National Fossil Day.
- The governor declared October 12-18 to be Earth Science Week.

- The Virginia Tech Society of Exploration Geophysicists hosted an Earth Science Week event with local students.
- Patrick Henry Community College hosted many different events throughout the week both on campus and off. The public was invited to view a display from the Virginia Museum of Natural History, take a hike on a nature walk, attend a lecture by a paleontology curator from the museum, and enter a Recycled Art Sculpture Contest.
- Eva Jasinski of Gloucester Point, Virginia, won first place in the Earth Science Week photo contest, “Connections in My Community.”

#### Washington

- To honor the Pacific Northwest’s geologic and biologic past, the Stonerose Interpretive Center hosted its third annual National Fossil Day celebration. Events included an open house, fossil identification courses, tours of the fossil collection, presentations, and staff-led digs.
- The Washington State Department of Natural Resources held a rock auction featuring mineral and fossil specimens with proceeds to benefit the Washington Geological Library.
- The Washington Geological Library also debuted a new map of the Columbia River Gorge.

#### West Virginia

- The Clay Center celebrated National Fossil Day by inviting visitors to examine various fossils at the center, showcasing the new exhibit “Be the Dinosaur.” Many hands-on activities used computer simulation to show the environments dinosaurs lived in and the excavation methods used to acquire fossils.
- The West Virginia Geological and Economic Survey celebrated National Fossil Day and Geologic Map day while promoting resources from Earth Science Week.

#### Wisconsin

- The Wisconsin Geological and Natural History Survey promoted awareness of Earth Science Week among residents and community members.

#### Wyoming

- The University of Wyoming’s Geological Museum celebrated National Fossil Day by inviting the public to research bones and fossils and learn about a paleontologist’s method for preparing fossil specimens.
- The Tate Geological Museum brought back its “Fossil Road Show,” a program encouraging the public to bring in rocks, minerals, and fossils from personal collections to be professionally identified. Other activities included a laboratory tour, crafts, art exhibitions, and free National Park Service Junior Ranger books.
- The Wyoming State Geological Survey distributed education kits to middle school teachers across the state.

## International Events

### Australia

- Geoscience Australia's Earth Science Week 2014 celebrated the theme of "Earth's Connected Systems." Geoscience Australia promoted its annual Top Geoshot photography competition and participation in International EarthCache Day.

### Cameroon

- The Geo-Environmental Research Association hosted the first-ever Earth Science Week celebration in Cameroon. Accomplished scientists mentored early-career teachers and awarded prizes to distinguished students.

### Canada

- The International EarthCache Event was held in Duncan, BC, and attended by more than 500 people.

### Dominica

- The Tobago Emergency Management Agency and the University of the West Indies Seismic Research Centre hosted an Earth Science Display and Student Exhibition in celebration of Earth Science Week.

### United Kingdom

- UK Earth Science Week, hosted by the Geological Society of London was celebrated October 13-19, focusing on the theme of "Our Geo-Heritage."
- The Geological Society of London featured "Ask a Geologist Live," a Twitter question-and-answer segment with five Earth scientists.
- The Royal Society Summer Science Exhibition showcased science institutions across the UK. The exhibition hosted 20 exhibits, where visitors had the opportunity to come and speak to the scientists about their research, attend talks and hear panel discussions.
- EarthCache events were held throughout the UK as part of Earth Science Week.

Because of the large and increasing number of news clippings citing Earth Science Week activities and resources, the print edition of the print report no longer includes clippings. To view the hundreds of press releases and news items promoting awareness of Earth Science Week each year, please go online to [www.earthsciweek.org/highlights](http://www.earthsciweek.org/highlights). Thank you for helping us in our efforts to conserve resources and protect the environment.