

Earth Science Week 2021:

“Water Today and for the Future”

October 10–16, 2021

Executive Summary

The American Geosciences Institute’s 24th annual Earth Science Week celebrated the theme of **“Water Today and for the Future.”** The 2021 event focused on the importance of learning how to understand, conserve, and protect water, perhaps Earth’s most vital resource.

Reaching People

Despite challenges arising from the global coronavirus pandemic, Earth Science Week reached millions of people with programs, information, education resources, and activities relating to the geosciences, mostly through direct outreach and coverage in news media online. The program’s reach remained widespread, as people in all 50 states and 13 countries participated in events and activities.

Earth Science Week 2021 offered many ways for individuals, groups, and families to participate. Many K–12 geoscience students took part in hands-on, investigative learning activities as part of Earth Science Week, as indicated by usage of the Earth Science Week 2021 Toolkit and the program website (www.earthsciweek.org). Many people learned about geoscience through virtual and in-person events organized by universities, government agencies, parks, museums, science centers, corporations, industrial facilities, nonprofit associations, scout organizations, and other groups. More than 120 people actively participated in the program’s long-running visual arts, video, essay, and photography contests. And many more engaged with Earth Science Week through program innovations that only first emerged in 2021.

Program Innovations

Earth Science Week 2021 introduced new program components:

Earth Science Week Webinar Series

In collaboration with partners, AGI hosted the **“Water Today and for the Future” Webinar Series**, available during Earth Science Week 2021. Webinars had live question-and-answer periods with presenters. Aimed at the general public and education community, webinars remain available on the Earth Science Week YouTube channel.

Presenters covered an array of thought-provoking, timely topics: “Groundwater Exploration in Response to Humanitarian Crises,” by Dr. Paul Bauman, Technical Director of the Near Surface Geophysics Group, BGC Engineering Inc.; “Water Supply Issues in the Delaware River System: A Tale of Tunnels, Transfers, Tumult, and Trout,” by Dr. David Wunsch, Director and State Geologist of the Delaware Geological Survey and President of the American Geosciences Institute; “Perspectives on a Crucial Resource: The Importance and Vulnerability of Our Water Supplies,” by Dr. David Kremer, University of Nevada, Las Vegas and President of the International

Association of Hydrogeologists; and “Earth Science and the International Year of Caves and Karst,” by Dr. George Veni, Executive Director of National Cave and Karst Research Institute.

Earth Science Week Online Toolkit

The **Online Toolkit**, formally introduced in 2021, included downloadable resources available from past program celebrations. This growing, searchable compendium features classroom activities, posters, news articles, career information, teacher professional development resources, and more. Over a dozen highly visual resources dealing with the Earth Science Week 2021 theme of “Water Today and for the Future” were added, including posters, infographics, and other items covering topics such as ocean acidification, coral reef restoration, groundwater, floods, hurricanes, and the hydrologic cycle.

Users can search by type of resource, theme, year, language, disciplinary core ideas, cross-cutting concepts, science and engineering practices, and more. The Online Toolkit houses resources dating back to 2014 and is a useful option for partners that want to lower their paper use, as well as users who are limited by shipping and printing costs.



Earth Science Week 2021 Visual Arts Contest entry by Nathan Xu.

Earth Science Week Video Contest

AGI invited members of American Association of Petroleum Geologists (AAPG) Student Chapters in the Asia Pacific Region to enter the **“Water Is Part of Life Around the World” video contest**. The University of Indonesia’s AAPG Student Chapter won first place with its team entry on how pollution affects the many water sources of Indonesia and suggestions of improvements that should be made for the prosperity of people’s lives.

The contest invited submissions of brief, original videos exploring ways that people use, manage, conserve, are impacted by, or face issues with water in their communities. The winning team offered this description of its video: “The location featured in the video is Indonesia, where water is a big part of our lives here. Indonesia is blessed with lots of water sources but lacks efforts in utilizing our abundant water. We made this video in hope that in the future, we could work together to optimize the water potential in Indonesia, so water can be more useful and resourceful for the prosperity of its people’s lives.”

Earth Science Week 2021 Visual Arts Contest entry by Elizabeth Xu.



Earth Science Week 2021 Photography Contest entry
by Peter Lee.

Connections Online

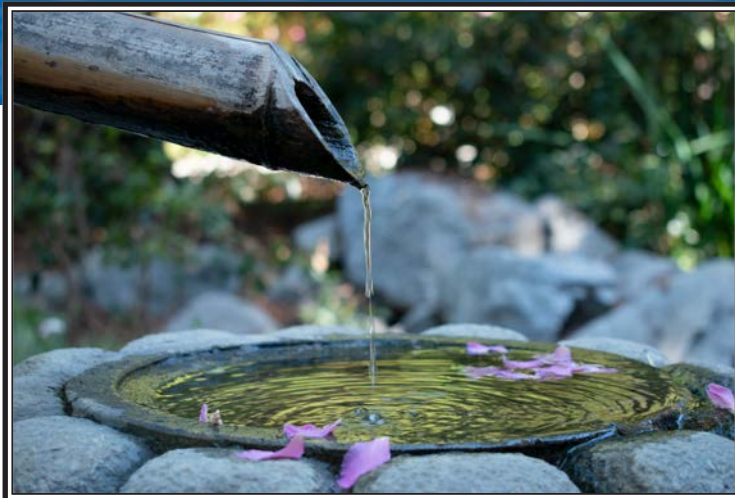
Receiving over 500,000 page views in 2021, the **Earth Science Week website** was accessed by users in 219 nations, territories, and regions worldwide, according to Google Analytics. Within the site, all searches made in 2021 related to specific pages totaled 340,266 for Classroom Activities, 25,252 for Contests, 8,176 for Big Ideas Activities, and 1,880 for Focus Days. The Earth Science Week website features resources too numerous to list, including Big Ideas Videos, a national clickable map of Earth Science Organizations, and the program's promotional video and quarterly webcasts.



Earth Science Week 2021 Visual Arts Contest entry
by Everett Lee.

The monthly **Earth Science Week Update e-newsletter** reached some 4,500 teacher, student, and geoscientist subscribers. The newsletter kept event planners and participants up to date on program opportunities at the national level, encouraged participation in local areas, and provided news on geoscience topics of interest.

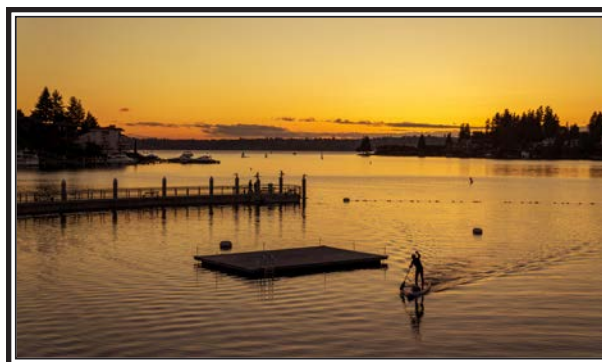
Finally, Earth Science Week uses online social networking to reach key audiences, especially young people. The program's presence on Facebook includes an Earth Science Week Fan Page. In addition, web surfers are invited to receive geoscience news, resources, and opportunities by following Earth Science Week on Twitter. The number of people learning about Earth Science Week through social media remained impressive in 2021, with the program attracting 6,517 Facebook followers and 8,524 Twitter followers.



Print Materials

AGI answered the ongoing need for quality print materials for teachers by assembling materials for them to use with students. AGI answered this need once again by assembling some **9,000 Earth Science Week Toolkits**, the vast majority of which were distributed to teachers and geoscientists before the end of 2021. The kit featured AGI's traditional Earth Science Week poster, and the school-year calendar showcasing geoscience classroom investigations and important dates of Earth science events. Additionally, program partners' contributions made the 2021 kit one of the richest in recent years, containing more than 30 educational items on a wide variety of geoscience topics, many directly related to the 2021 thematic focus of water science.

Program partners assisted in the distribution the Earth Science Week kits. Fifteen AGI member societies requested complimentary Earth Science Week Toolkits for distribution, and 28 state geological surveys requested complimentary kits for distribution. As in past years, thousands of kits also were distributed through program partners including USGS, NASA, the National Park Service, and AAPG Student Chapters. Toolkits were shipped to program participants in all 50 states and 11 countries overseas.



Earth Science Week 2021 Photography Contest
entry by Alex Xu.



2021 Earth Science Week poster from AGI

Geoscience Community

AGI organizes Earth Science Week as a service to member societies, with generous help from partners that provide funding, contribute materials, organize events, and publicize the program.

Earth Science Week Sponsors

United States Geological Survey; American Association of Petroleum Geologists Foundation; National Park Service; National Aeronautics and Space Administration; Geological Society of America; AmericaView; American Geophysical Union; Society for Mining, Metallurgy, and Exploration (Minerals Education Coalition); Society of Exploration Geophysicists; Geothermal Rising; Water Footprint Calculator/Grace Communications Foundation; American Meteorological Society; CLEAN (Climate Literacy and Energy Awareness Network)

Global Sponsors

ExxonMobil; International Raw Materials Observatory; International Union of Geological Sciences; Irish Centre for Research in Applied Geosciences

Earth Science Week Program Partners

American Association of Petroleum Geologists; American Association of Petroleum Geologists Foundation; American Geophysical Union; American Geosciences Institute; American Institute of Professional Geologists; American Meteorological Society; AmericaView; Association for Women Geoscientists; Association of

American State Geologists; CLEAN (Climate Literacy and Energy Awareness Network); Earth Science Information Partners; ExxonMobil; Gemological Institute of America; Geological Society of America; Geothermal Rising; Incorporated Research Institutions for Seismology; International Raw Materials Observatory; International Union of Geological Sciences; Irish Centre for Research in Applied Geosciences; Mineralogical Society of America; Minerals Education Coalition; National Association of Geoscience Teachers; National Earth Science Teachers Association; National Speleological Society; Nutrients for Life Foundation; Society for Mining, Metallurgy, and Exploration; Society of Exploration Geophysicists; Soil Science Society of America; UNAVCO; U.S. Bureau of Land Management; U.S. Forest 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 Science Foundation; Water Footprint Calculator/Grace Communications Foundation

For additional details, please see the full Earth Science Week 2021 Highlights Report, visit online at www.earthsciweek.org, or contact staff at info@earthsciweek.org.

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