



Earth Science Week 2020:

“Earth Materials in Our Lives”

October 11–17, 2020

Executive Summary

The American Geosciences Institute’s 23rd annual Earth Science Week celebrated the theme of **“Earth Materials in Our Lives.”** The 2020 event focused on the ways that Earth materials impact humans — and the ways human activity impacts these materials — in the 21st century.

Reaching People

Despite challenges arising from the global pandemic of 2020, 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 28 countries participated in events and activities.

Earth Science Week offered ways to participate for virtually anyone. 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 2020.

Program Innovations

Earth Science Week 2020 introduced new program components:

- The most significant addition to Earth Science Week’s online offerings may have been the launch of AGI’s **Geoscience Women in STEM website**, providing Earth science teaching and learning resources inspired by the geoscience-related work of leading women scientists and engineers, with support from Lyda Hill Philanthropies. The site strengthens geoscience education through the stories of women in geoscience, including some recently selected as AAAS IF/THEN Ambassadors by IF/THEN®, an initiative created by Lyda Hill Philanthropies to encourage and elevate the participation of girls and women in science, technology, engineering, and math (STEM). The site offers curriculum connections that focus on the Next Generation Science Standards in Earth and Space Science (NGSS-ESS) and illuminate ways that STEM topics can be explored across traditional disciplinary boundaries. AGI unveiled the completed website with a free NGSS-ESS Working Group webinar, “Promoting Diversity in the Geosciences: Meet the Geoscience Women in STEM.”



Alex Xu's winning entry for the 2020 ESW Photography Contest

subject areas. The webinar series was organized by the Board on International Scientific Organizations, U.S. National Committee for Geological Sciences, National Academies of Sciences, Engineering, and Medicine. Supported by the National Science Foundation, the series was sponsored by the American Association of State Geologists, Geological Society of America, National Association of Geoscience Teachers, National Earth Science Teachers Association, National Park Service, U.S. Geological Survey, and AGI.

- On Monday, October 12, 2020, educators, young people, and mineral enthusiasts of all ages were encouraged to take part in the first-ever **Minerals Day**. AGI and the Mineralogical Society of America (MSA) launched Minerals Day to raise awareness of and appreciation for minerals among the general public as well as students and teachers of all ages and at all levels. Dovetailing with the Earth Science Week 2020 theme of "Earth Materials in Our Lives," Minerals Day introduced participants to a host of educational resources and activities focusing on the role of raw materials in the lives of individuals and in society. AGI and MSA both launched Minerals Day web pages to spur activity and provide resources in an educational climate shaped by the coronavirus pandemic.
- In collaboration with the Mineralogical Society of America, the International Raw Materials Observatory, and additional partners, AGI hosted the **"Earth Materials Frontiers" Webinar Series**, available during Earth Science Week 2020 and beyond. This series of nine webinars covered thought-provoking, timely topics relating to the theme of "Earth Materials in Our Lives," including gemology, crystallography, the mineralogy of Mars, space exploration for raw materials, robotics in mining, conflict minerals, and critical mineral commodities. Selected on-demand webinars had live question-and-answer periods with presenters.
- Working with a coalition of organizations, AGI also encouraged Earth Science Week participants to take part in the **"America's Geoheritage II: Identifying, Developing, and Preserving America's Natural Legacy" Distinguished Speaker Webinar Series**. The series of eight free webinars presented a range of topics related to geoheritage that could be connected to curriculum and instruction in several



Justin Xu's winning entry for the ESW 2020 Visual Arts Contest

- Earth Science Week participants were invited to download or print the new **Critical Needs in Geoscience Mini-Poster** available digitally online in 2020. AGI and its federation of geoscience societies collaborated to provide an overview of critical issues and policy recommendations for the incoming presidential administration, federal agencies, and the U.S. Congress. AGI's mini-poster summarizes the key points of the full document, "Geosciences Supporting a Thriving Society in a Changing World," which informs policymakers about ways that the geoscience knowledge, experience, and ingenuity can address society's most pressing issues.

Right: Elizabeth Xu's illustration for the ESW 2020 Visual Arts Contest



Ella Giguere's photographic entry for the 2020 ESW Contest

Connections Online

Receiving over 494,000 page views in 2020, the **Earth Science Week website** was accessed by users in 212 nations, territories, and regions worldwide, according to Google Analytics. Within the site, all searches made in 2020 related to specific pages totaled 337,757 for Classroom Activities, 20,186 for Contests, 7,891 for Big Ideas Activities, and 1,988 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.

The monthly **Earth Science Week Update e-newsletter** reached some 5,000 teacher, student, and geoscientist subscribers. The newsletter kept even 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**, 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**. The number of people learning about Earth Science Week through social media remained impressive in 2020, with the program attracting more than 6,400 Facebook follows and over 206,000 Twitter impressions.



Print Materials

Even in today's high-tech learning environments, educators also repeatedly report that they need print materials to use with students. AGI answered this need once again by assembling some **10,000 Earth Science Week Toolkits**, the vast majority of which were distributed to teachers and geoscientists before the end of 2020. 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 2020 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 2020 thematic focus of Earth materials.

Program partners assisted in the distribution the Earth Science Week kits. Thirteen AGI member societies requested complimentary Earth Science Week Toolkits for distribution, and 27 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 28 countries overseas.



Tori Judy's entry for the 2020 ESW Photography Contest



2020 Earth Science Week poster

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, National Aeronautics and Space Administration, National Park Service, American Association of Petroleum Geologists Foundation, American Geophysical Union, Geothermal Resources Council, IF/THEN® (Lyda Hill Philanthropies), Society for Mining, Metallurgy, and Exploration (Minerals Education Coalition), Society of Exploration Geophysicists, AmericaView, Geological Society of America, Consumer Energy Alliance, Nautilus, Water Footprint Calculator/Grace Communications Foundation, American Meteorological Society, CLEAN (Climate Literacy and Energy Awareness Network)

Global Sponsors

International Raw Materials Observatory, American Association of Petroleum Geologists Foundation, ExxonMobil, Newmont Corporation

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, Archaeological Institute of America, Association for Women Geoscientists, Association of American State Geologists, CLEAN (Climate Literacy and Energy Awareness Network), Consumer Energy Alliance, Critical Zones Observatories, ExxonMobil, Geological Institute of America, Geological Society of America, Geothermal Resources Council, IF/THEN® (Lyda Hill Philanthropies), Incorporated Research Institutions for Seismology, International Raw Materials Observatory, Mineralogical Society of America, Minerals Education Coalition, National Earth Science Teachers Association, Nautilus, Newmont Corporation, 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 2020 Highlights Report, visit online at www.earthsciweek.org, or contact staff at info@earthsciweek.org.

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