EARTH SCIENCE Earth Science for a Sustainable World Earth Science Week 2022 October 9–15 www.earthsciweek.org

You're Invited

"Earth Science for a Sustainable World," the theme of Earth Science Week 2022 (October 9-15), emphasizes the essential role of Earth science in helping people make decisions that maintain and strengthen the planet's ability to support thriving life.

SUSTAINABLE DEVELOPMENT GALS

The United Nations adopted 17 Sustainable Development Goals (SDGs) in 2015 as a global call to action to solve humanity's biggest challenges. Some of these SDGs are supported by the geosciences and are highlighted on this year's Earth Science Week poster. More information about the SDGs can be found at https://sdgs.un.org/goals.

About the Map

The map on the poster front is an elevation map, where the colors represent different depths and heights according to the key.

AGI appreciates the work from Jeannine Cody and others who put together this map and the topographic and bathymetric datasets to create it.

Front map by USGS/J. Cody using an Esri dataset with data from Airbus, USGS, NGA, NASA, NOAA, CGIAR, GEBCO, NCEAS, NLS, OS, NMA, Geodatastyrelsen, GSA, GSI and the GIS User Community.

Other Resources

For more information about the SDGs, classroom activities related to the SDGs, and other teacher resources described above, visit www.earthsciweek.org/ content/sustainable-world.

Resources and activities have been collected and developed to engage students with the SDGs, specifically looking at how work in the geosciences supports the SDGs. Each of us can contribute to improving sustainability in our communities and helping achieve the Sustainable Development Goals.

You are invited to join in the celebration of Earth Science Week 2022. Learning about and raising awareness of the SDGs can enable explorations of how individuals and communities can work to improve sustainability.

Please scan this QR code for an interactive online version of this poster.



The map on the poster front shows elevations (heights and depths) corresponding to these approximate key colors (measurements in meters).

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Earth Science Week Future Dates October 8–14, 2023 October 13–19, 2024 October 12–18, 2025

American Geosciences Institute 4220 King Street Alexandria, VA 22302 (703) 379-2480 www.americangeosciences.org

Your Vital Role

- Schools and classrooms can hold events, complete activities, and invite guest geoscientists to give presentations. Students can do projects, compete in Earth Science Week contests, watch webcasts, and go on field trips to museums or local parks.
- Colleges and universities can encourage Earth science departments, professors, and students to host an open house or conduct an event that educates the public about the geosciences.
- Geoscience companies and other organizations can reach out to communities by obtaining Earth Science Week Toolkits for local classrooms, hosting an open house, or sending a geoscientist to visit a local school.
- Museums and science centers can shine a spotlight on geoscience-related exhibits or create a program especially for Earth Science Week.
- Families and citizen groups can participate by planning an event or activity for their communities, youth groups, or schools.

Learning Activities

SDG Initiatives in ArcGIS StoryMaps

The poster front introduces several SDGs and related projects that are supported by geoscience. Those projects are described using ArgGIS StoryMaps. To access the StoryMaps introduced on the poster front and other StoryMaps that highlight work related to the SDGs, visit an online version of the poster at https://padlet.com/AGI_Education/ SDGStoryMaps.

Some of the locations featured in the Story-Maps are identified on the map on the poster front. Add additional locations to the map as they are introduced in each of the Story-Maps. A smaller, printable version of the map is located at www.earthsciweek.org/content/ sustainable-world, along with other resources.

SDGs and Earth's Systems

The geosciences help people understand the dynamic Earth systems that affect them, as well as how people affect those systems. As you review a StoryMap, identify when Earth systems are described, and consider their role in how people are working to support the SDGs. Use the Earth System Diagram at

https://bit.ly/3ypg0DB to show how the different Earth systems and their interactions in the initiative are related. Think beyond the StoryMap—in a different color, write down other ways the Earth systems are related to that initiative.

SDGs in Your Community — **Create a Display**

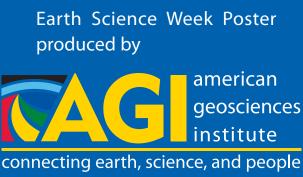
Consider the work your community is doing related to the SDGs. What are some initiatives in your community or region that support one or more of the SDGs? How can geoscience knowledge help that work? How might people be affected by these initiatives? How can you get involved?

Create a display by printing out the icons of the SDGs that relate to your community's initiatives (found at https://bit.ly/3yp1X0D) and posting articles, images, and/or ideas you write about your community's connections to the SDGs.

SDGs in Your Community — Focus on a Site

Observe or think about a location in your community. How could it be improved in terms of

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Find Out More

for instructional resources, newsletters, day) are highlighted and more informalocal events, and classroom activities. Have a great Earth Science Week!

Get Connected

Where to start? Simply go online and (www.earthsciweek.org/contests/) explore some of the electronic resources Week website:

Classroom Activities

(www.earthsciweek.org/classroom activities) Search a collection of more than 120 activities that offer a wide diversity of ways to explore Earth science.

Focus Days

See the Earth Science Week 2022 Tool- (www.earthsciweek.org/focus-days) kit (www.earthsciweek.org/materials) Special topics such as Minerals Day and website (www.earthsciweek.org/) (Monday) and Geologic Map Day (Frition, learning activities, and resources are provided.

Contests

Guidelines are given on the program's available through the Earth Science annual video, photo, art, and essay contests. Prizes are awarded to students and others nationwide.



Earth Science Week 2021 Visual Arts Contest entry b Justin Xu.

Earth Science Week Program Partners

American Association of Petroleum Geo 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 Climate Literacy & Energy Awareness Network (CLEAN) Consortium of Universities for the Advancement of Hvdrologic Science Earth Science Information Partners ExxonMobil

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Society for Mining, Metallurgy, and Exploration Society of Exploration Geophysicists Soil Science Society of America UNAVCO

- U.S. Bureau of Land Managemen
- U.S. Geological Survey
- U.S. National Aeronautics and Space Administration
- U.S. Natural Resources Conservation Service

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at that site? What actions could you take to improve it? What actions would need to come from officials in your community (e.g., mayor's office, city council, public works board)? In terms of sustainability, what challenges might you face in improving this site?

SDGs in the Geosciences

Earth science is all around us and plays a large role in accomplishing the SDGs. Examine the poster, 'Geoscience for the Future' (developed by the Geological Society of London, found at https://bit.ly/3KV903V) to see the many subdisciplines of geoscience and how geoscientists contribute to our world. Choose a topic in a white box and explain how the SDGs listed with it are linked to the topic.

NGSS Connections

- Science and Engineering Practices Analyzing and Interpreting Data, Constructing Explanations and Designing Solutions, Engaging in Argument from Evidence
- Disciplinary Core Ideas Earth's Materials and Systems, Human Impacts on Earth's Systems Crosscutting Concepts — Cause and Effect,
- Stability and Change

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sustainability? What SDGs could be addressed









Water Footprint Calculator (Grace Communications Foundation)