



EarthCaching

A guide for GSA members



Background and History

Engaging the public in geoscience is always a challenge. What is even more of a challenge is having them experience geology in the field with nothing more than a few pages of notes. And yet EarthCaching (www.earthcache.org) has them doing exactly that—at over 19,500 sites around the globe. And we want your help to add more.

EarthCaching, a program developed and coordinated by the Geological Society of America (GSA), is part of the highly successful worldwide treasure-hunt phenomenon known as geocaching. The game is based around the use of a GPS receiver (GPSr) to find a location at which other people have hidden a container. In the container can be found a log book and in many small treasures to trade. The visitor signs the log book, trades a trinket, then re-hides the container in the same place. Afterward, they log the experience online.

In EarthCaching, however, there is no container—Earth itself provides the treasure. Visitors to EarthCaches are asked to undertake an educational geology based task to both expand their own knowledge and to prove that they visited the site. They then log their visit on the geocaching Web site.

EarthCaching started in 2003 when a GSA member mentioned at the Seattle GSA Annual Meeting that GSA should somehow get involved in geocaching. Within a few months, GSA partnered with the geocaching company Groundspeak Inc. and established a set of guidelines for the creation of EarthCaches, setting up three trial sites. From these three, one in Australia and two in Colorado, and with the help of many hundreds of individual cachers, there are now well over 20,000 EarthCache sites in over 170 countries. These sites have been visited by over 6 million people, and the number is rising exponentially. To learn more about the EarthCache community, read "[Who EarthCaches and Why?](#)", a report by the Center for STEM Research, Education, and Outreach at Southern Illinois University Edwardsville (SIUE).

EarthCaches can be developed by anyone in the community through the geocaching Web site (www.geocaching.com) using a set of guidelines found at www.earthcache.org. Basically, we are seeking sites that laypeople can visit to learn about some interesting geological phenomenon by not only observing, but by undertaking a task to gets them more involved in the science. For example, people might be taken to a road cutting that shows a dramatic normal fault. The geocacher could be asked to work out the fault displacement by observing a distinctive layer that is offset. Another example might be to ask a visitor to a fossil location to measure the size of the fossils and work out an average size.

Each submission is reviewed by a team of EarthCache reviewers, and if the site meets the guidelines, the team publishes the listing. This peer review ensures the quality and appropriateness of all EarthCaches.

Get Involved

There many ways you can get involved in EarthCaching. The primary way is to become an active geocacher who creates and has published a series of EarthCaches based on interesting geological sites. You may then also get involved by hosting EarthCache-based geocaching events that allow you to bring together geocachers to talk about the geology of an area or to assist them in creating their own EarthCaches. International EarthCache Day is a great time to get others involved.



Getting started

Step 1.

The very first thing you need to do to become involved in EarthCaching is to get experience as a geocacher. This means creating a free account at [Geocaching.com](https://www.geocaching.com) and reviewing some of the how-to resources in its [Help Center](#).

Geocaching involves the hunting for geocaches of all types (including EarthCaches). Having experience with the way the game operates and how people interact with the game is crucial to becoming actively involved in EarthCaching. One thing that is important to learn in this stage is what the current geocaching guidelines are for placing a traditional geocache. Maybe setting up your own traditional geocache (one with a box and log book) is a good way to learn about the process and how to have a cache published through the system. Attending a geocaching event local to you is also an excellent way to understand the process and become involved in the community.

Step 2.

Visit and log a number of EarthCaches. You find these by logging into [Geocaching.com](https://www.geocaching.com) and searching by location. See what other people have been setting up as EarthCaches to get ideas of what is working in the community.

Step 3.

Understanding the special guidelines for having an EarthCache published is the important next step. These guidelines are shown below, but they are adjusted slightly each year to account for evolution within the greater game of geocaching. You can find the latest [guidelines](#) on the GSA's [EarthCache homepage](#). The guidelines can be found in multiple languages.

Step 4.

Develop and submit your own EarthCache – following all the guidelines. You need to understand that your submission goes through a peer review process to check your submissions against the guidelines and common caching practices. Often the reviewer will need to work with you to tweak the submission before it is published.

Remember here that you are trying to present geoscience to the general public – and so you need to explain ideas in a simple way, using diagrams and photos. Don't be too technical and do not use geological jargon unless you explain the terms. Finally, you need to develop a logging task that is geological based, that can only be done on that site, and provides the visitor with a lesson about some aspect of geoscience. If you develop an EarthCache, please let us know by emailing earthcache@geosociety.org or sharing it on our [Facebook page](#).

Step 5.

Now you have an EarthCache, you need to check the answers that come in to your logging tasks. You can expect to get a few in a month and you need to assist folks who did not get your task, praise those who did it correctly etc. It will just take a few minutes – but providing feedback is all part of the learning experience. **And now you are an actively involved – and providing a wonderful experience and learning environment for another part of our community.**

Educators Guide

There is a free [EarthCache Educators Guide](#) that you can use to develop classroom materials using EarthCaching as a teaching tool.



EarthCache Guidelines

Anybody can develop an EarthCache site, from experienced geologists to aspiring rockhounds. In order for an EarthCache site to be published online at geocaching.com, it must meet the [EarthCache Guidelines](#) developed by GSA, Geocaching.com, and the volunteer EarthCache review team.



Peer Reviewers

Geocaching.com recruits and manages a team of volunteers around the world to undertake the peer review of EarthCache submissions. These volunteers, known as the ‘geoawares’, have vast experience with geocaching as well as having backgrounds in geoscience and related disciplines. GSA staff support the review team by providing geoscience information and resources.

To become a ‘geoaware’ you need to be an active geocacher with many years of experience and, if possible, already be part of the geocaching.com volunteer team. The EarthCache program would not be possible without this team of dedicated reviewers.

EarthCache Masters Awards and EarthCache Discovery Awards

These awards reward people for being involved in EarthCaching. Based on the number of EarthCaches they have visited and/or created, these schemes provide electronic icons to EarthCachers to display on their web-sites or caching profiles. You can find out more by visiting the [EarthCache Master Award page](#) or the [EarthCache Discovery Award page](#).

International EarthCache Day

Always held on the first Sunday of Earth Science Week (in October each year), [International EarthCache Day](#) celebrates the EarthCaching experience by having people from around the globe arranging geocaching events (a type of geocache that brings people together to talk about and go caching) based on EarthCaches. GSA normally provides some ‘freebies’ to organizers to hand out on the day

Resources:

[GSA EarthCache Homepage](#)

[Geocaching.com](#)

[EarthCache Facebook Page](#)

Contact: Matt Dawson, mdawson@geosociety.org, 303-357-1025

Let Earth Be Your Teacher!

