



# 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](http://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. ([See this research on who EarthCaches and why](#)).

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.

EarthCaches can be developed by anyone in the community through the geocaching Web site ([www.geocaching.com](http://www.geocaching.com)) using a set of guidelines found at [www.earthcache.org](http://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 get 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.





## How to help

There is a number of ways you can help get involved in EarthCaching. Obviously the most wonderful way is to become an active geocacher who creates and has published a series of EarthCaches based on wonderful 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. Finally, you can get involved in the GSA led EarthCaching activities, such as the International Earth Cache day, the International EarthCache Events or the EarthCache Academy. (More about all of these later).



## 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 [www.geocaching.com](http://www.geocaching.com) and following their [Geocaching 101 guide](#). 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 listed in the [www.geocaching.com](http://www.geocaching.com) lists of caches, or you can find them on the [GSA Earthcache.org](http://GSA Earthcache.org) website (which is just a subset of the greater listings). 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 each year to account for evolution within the greater game of geocaching. You can find the [latest guidelines](#) on the [Earthcache.org](http://Earthcache.org) website. 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. We would love you to register with us so we know which members are involved. [You can register with us here.](#)

### 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. [You can download the free guide here.](#)



## EarthCache Guidelines

**1. EarthCaches must provide an earth science lesson.** ([earth science defined](#))

**2. EarthCaches must be educational.** They provide accurate, educational, but non-technical explanations of what visitors will experience at the site. The cache page, including the description and logging tasks, must assume only a basic knowledge of geology. ([educational aspects of EarthCaches defined](#))

**3. EarthCaches must highlight a unique feature.** ([uniqueness defined](#)) EarthCaches that duplicate existing EarthCache information about the site or related sites may be rejected. EarthCaches must be developed to provide a unique experience to the location's visitors, and to teach a unique lesson about the feature at the site. Multiple EarthCaches on the same feature should be avoided and content, rather than proximity, will be the guiding principle of EarthCache reviewers.

**4. EarthCaches must have approval from the Land Manager prior to submission** ([depending on local laws and customs](#)). The name, title, and contact details of the person that authorized the EarthCache must be included in a Reviewer Note. Otherwise, information about the type of land, and the reasons why permission may not be required, must be included in a Reviewer Note. ([permission requirements explained](#))



**5. An EarthCache can be a single site or multiple sites.** You must have visited the site(s) recently (within two months) to make current, first-hand observations. You must provide accurate coordinates for each site where visitors are to perform the logging tasks, and ensure these areas are accessible to the public. You are responsible for taking appropriate actions if conditions change regarding access, permission, or other concerns. ([site requirements explained](#))

**6. Logging an EarthCache requires visitors to undertake a site-specific task which provides a learning opportunity related to the topic.** The logging tasks must have visitors using the information from the cache page along with their observations at the site to perform some type of analysis of their own. Logging task solutions will serve as the cache owner's proof that the cacher has visited the site. Questions which only serve to prove that someone visited the site, and do not relate to the site's geology, are not permitted. All requests for photographs must be optional. Visitors must be able to send their answers to logging tasks via the cache owner's profile. Auto-responders cannot be used to verify answers. ([link to Help Center](#)) The answers to the logging tasks must be placed in a Reviewer Note at the time of submission. ([logging tasks explained](#))

**7. The EarthCache text and logging tasks must be submitted in the local language.** Additional languages are encouraged, but the local language must be listed first. You may be requested to provide text in a language understandable to your reviewer to assist with the reviewing process.

**8. Respect Trademarks and Copyright and only use text, images or logos if you have permission.** EarthCaches with information that is copied from other sources, plagiarized, or used without proper attribution will not be published. Limited amounts of text may be quoted, but must be properly attributed. ([link to Help Center](#))

**9. EarthCache sites adhere to the principles of geocaching and Leave No Trace outdoor ethics.** In addition, use waypoints to ensure cachers take appropriate pathways and use established trails only. Damage to the site is unacceptable. Please be mindful of fragile ecosystems. EarthCache sites will highlight the principle of collect memories--not samples. Furthermore, no physical cache, or other items, can be left at the site.

**10. EarthCaches are submitted through geocaching.com and must meet these guidelines and adhere to the Geocache Listing Requirements / Guidelines and geocaching.com Site Terms of Use Agreement.** The Geological Society of America and the EarthCache Team retains the right to edit, modify, reject or archive any EarthCache that does not adhere to these guidelines, or for any other purpose that the Team deems as appropriate.



## Peer Reviewers

Geocaching.com has selected, with our input, 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 geoscience backgrounds. The GSA Headquarter teams (geoaware and geoawareHQ) trains and coordinates the team and deal with overarching issues, including the evolution of the guidelines.

To become a 'geoaware' you need to be active geocachers with many years of experience and, if possible, already be part of the geocaching.com volunteer team. The group is very focused and works well as a team to deal with world-wide issues quickly within the confines of the geocaching.com game. There is little reward for the geoawares – many working hundreds of hours a month to keep the process moving. We are very much in their debt!



## Other EarthCache Activities

The EarthCache program has a number of other components that aim. to assist people involved in EarthCaching. These range from reward systems, through field experiences and even an online learning academy. The whole purpose of these components is to keep people engaged in EarthCaching and to raise their awareness of the importance of geoscience to our society.

### 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 websites or caching profiles. You can find out more by visiting the [EarthCache Master Award](#) page or the [EarthCache Discovery Award](#) page.

### EarthCache GeoVentures

These are field trips designed specifically for EarthCachers. They take people to locations to learn about the geology as well as finding caches. Locations are selected based on exciting geology as well as multiple caching opportunities. For example, trips have been led to Hawaii and Iceland. Participants come away from the trip with a new understanding of the excitement of geology as well as building life-long friendships with other cachers. [The latest trips can be found here.](#)

### 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.

### International EarthCache Event

Held just once a year, this very large event brings together hundreds of EarthCahers from around the globe to learn about EarthCaching. First held in Maine, USA in 2012 when 711 people attended, these days have

learning seminars as well as field trip, vendors and more. Organized by volunteers and supported by GSA staff, these events are a highlight of the program as they bring together a truly global audience. The location of the event moved around the globe - USA, Canada, Germany etc. We are always seeking volunteers to assist in running the event, running workshops and leading field trips associated with the event. You can find out more about all our [EarthCache Events here](#).

### EarthCache Academy

Established in 2015, the EarthCache Academy is an online learning environment where EarthCachers can learn more about geology at their own pace. This background knowledge helps cachers to better enjoy the EarthCaching experience, including giving non-geologists the knowledge-base to create their own EarthCaches. The courses are inexpensive, fun to do and provide certificates and more to participants. [Find out more about the EarthCache Academy here](#).



### Get involved!

If you would like to help us make EarthCaching even better, then please be in contact with us. We are always looking for people to help create great EarthCaches, run EarthCache events and help us develop new and exciting materials for the EarthCache Academy.

To register with us as a GSA Member EarthCacher, please e-mail [mdawson@geosociety.org](mailto:mdawson@geosociety.org).

To keep up-to-date with the EarthCache program, please visit our website ([EarthCache.org](http://EarthCache.org)) and join our [Facebook page for EarthCachers](#).

To offer any other help, please don't hesitate to contact us:

Matt Dawson (geoawareHQ) at [mdawson@geosociety.org](mailto:mdawson@geosociety.org)



**EarthCaching - Let the Earth be your teacher!**