Geocaching The 4-H Way

18 USC 707

A Basic Guide to Geocaching

As it relates to the 4-H Mission Areas

PURDUE UNIVERSITY | Extension - Hamilton County

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Note from the Authors

It is our hope that “Geocaching the 4-H Way” will introduce the joys of geocaching to all who utilize it. It is intended to be used as a basic introduction and foundation for a multitude of geocaching uses.

“Geocaching the 4-H Way” is compiled in such a way that it can be used as:

A resource guide for planning 4-H group geocaching adventures

A fun way to incorporate science into 4-H Club activities or educational workshops

A guide for 4-H Club Volunteer Leaders to plan an exciting 4-H Club outing

A project manual for those who choose to make it a 4-H project

A resource for forming a 4-H Geocaching SPARK Club

A great way for families to enjoy a 4-H activity together

Classroom school enrichment and/or after school activities

Many other 4-H Club and group activities

PURDUE UNIVERSITY

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Adapted from National 4-H Council, Groundspeak Geocaching and Virginia Tech 4-HGeocoin Adventure.
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Website: www.geocaching.com

4-H Mission Areas

Science

4-H Science programs reach more than 5 million youth with hands-on learning experiences to encourage young minds and help fill our nation's shortage of young leaders proficient in science, engineering, and technology. Our science programs tackle important national and global issues such as climate change, workforce development, and technological innovation.

To address increased demand for science and technology professionals, 4-H is working to reach a bold goal of engaging one million new young people in science programs. Currently, 4-H Science programs reach more than 5 million youth with hands-on learning experiences to ensure global competitiveness and prepare the next generation of science, engineering, and technology leaders.

4-H's approach is comprehensive and holistic—from agriculture to climate change to alternative energy—youth are learning about highly relevant complex systems and issues that will ensure their contributions to their communities today and their success as global leaders tomorrow.

Civic Engagement

4-H has always emphasized the importance of developing passionate, well-informed citizens who are involved in their communities and help to foster positive social change. Civic engagement helps young people understand the big picture and learn skills that will encourage them to become engaged, responsible citizens and successful leaders. With 4-H citizenship programs, youth learn how to lead, make decisions, and contribute to their communities from an early age.

4-H Civic Engagement programs empower young people to be well-informed citizens who are actively engaged in their communities and the world. By providing them with opportunities to connect to their communities and adult leaders, youth gain a clear understanding of their role in civic affairs and are able to build their decision-making ability. This solid foundation helps youth understand and acquire the skills that will allow them to become astute leaders for the 21st Century.

Healthy Living

Healthy living is just plain smart. That's why it's been a core belief of 4-H since the beginning. By supporting the physical, mental, and emotional health of our nation's youth, we help them lead healthy and productive lives into adulthood. Programs address such critical issues as childhood obesity, substance abuse, and physical safety.

Healthy living has been at the core of 4-H and remains a foundation of our pledge. Although 4-H believes that healthy living habits of young people begin in the context of their families and communities, we strive to equip youth with healthy living knowledge and skills that will prepare them physically, emotionally and socially to meet the challenges of the 21st century.

To meet the needs of today's youth, 4-H Healthy Living programs seek to address national issues including nutrition and physical fitness, substance abuse, safety, and social and emotional wellness.

Source: National 4-H Council

Geocaching and the 4-H Mission Areas

Geocaching is a real-world, outdoor treasure hunting game.
Players try to locate hidden containers, called geocaches, using GPS-enabled devices and then share experiences online.
This activity incorporates all of the 4-H Mission Areas and reminds us of the 4-H Pledge.

Science: *"I Pledge My Head to Clearer Thinking..."*

Life Skills: critical thinking, problem solving, decision making, connecting with the environment, utilizing GPS technology, learning orienteering, participating in a high-tech, outdoor adventures and journaling online

Cachers solve clues and locate GPS coordinates to find the "treasure". In its simplest form, a geocache contains a logbook or logsheet for you to sign. Caches may also contain items for trade, but the journey in discovering a geocache is often the greatest reward.

Civic Engagement: *"My Heart to Greater Loyalty and My Hands to Larger Service…"*

Life Skills: Social interaction, caring for yourself and others, spending quality time with family and friends, understanding our role in preserving the environment and developing a sense of pride in our community

People from all age groups can participate in geocaching, including families with children, students, adults and retirees. Geocaching is a great way to bring friends and family together while having fun outdoors.

Writing about the experience online creates a personal journal that connects the cacher with previous and future cachers.

There is also a community service opportunity called "Cache In...Trash Out" (CITO). This concept is simple. When a group goes geocaching they take a trash bag and pick up trash they find along the way and dispose of it properly.

Healthy Living: *"And My Health to Better Living…"*

Life Skills: Physical activity, walking, hiking and climbing, safety, clearing your mind and promoting a positive attitude

Geocaching offers a great reason to get outdoors. It combines technology with outdoor adventure and is a great way to explore locations near and far. Combine geocaching with camping, hiking, biking, boating or any number of activities to make them an even more enjoyable experience.

"For My Club, My Community, My Country and My World."

Life Skills: Exploring, experiencing the thrill of the hunt, understanding of geography and appreciation of history

Caches often have an interesting background which explains the history of an area or points out an important landmark that may have gone unnoticed. There are geocaches all around the world. They may be at your local park, the end of a long hike, underwater, or on the side of a city street. They are literally all around us.

So get out there and go Geocaching the 4-H Way!

Geocaching Basics

Introduction

The word Geocaching refers to GEO for geography and to CACHING (pronounced "cashing" as in a check) and is the process of hiding and finding geocaches. A cache in computer terms usually refers to information stored in memory to make it faster to retrieve, but, the term geocache (or cache) is also used in hiking/camping as a hiding place for concealing and preserving provisions.

Geocaching is a high-tech, entertaining outdoor adventure game for GPS users. The idea is to "hunt" for hidden containers (geocaches) that have been placed in the landscape. Geocaches vary greatly in size and appearance. In the field you will see everything from large, clear plastic containers to film canisters to a fake rock with a secret compartment.

Geocaching is enjoyed by people of all ages, with a strong sense of community and support for the environment.

Getting Started

1. Create an account on www.geocaching.com
2. Choose a geocache hunting "nickname"
3. Search site for nearby geocaches
4. Read past logs. You may want to choose another cache
5. Read cache description, note cache details and "hint"
6. Add coordinates for geocaches into your GPS unit
7. "Hunt" your geocaches
8. When found sign finders logbook inside of each cache
9. Take an item, leave an item if you wish
10. Return cache to exact position and condition as it was found
11. Write about your experience on www.geocaching.com

Some Geocaching Terms

Geocoins: A trackable special coin created by individuals or groups as a signature item/calling card
Muggles: non-cachers who do not understand the game and will be present from time to time. Avoid giving away secret cache locations to them.
Smiley: You found the cache!
Trackable Items: Items that are transported from cache to cache and have a unique tracking number that can be followed on www.geocache.com
Travel Bugs: A trackable tag that is attached to an item
Waypoint: average of several attempts to set cache coordinates

Some Finder Log Abbreviations

BYOP: Bring Your Own Pen
DNF: Did Not Find
FTF: First to Find
SL: Signed Log
SWAG: Stuff We All Get (trader items)
TFTC: Thanks for the Cache
TFTH: Thanks for the Hide
TN/LN: Took nothing, left nothing

GEOCACHING.COM

Cache Sizes

Micro/Nano: very small - contains only a finders log to sign
Small: Small bottles to sandwich-sized containers
Regular: A container or ammo can about the size of a shoebox
Large: A large coffee can to bucket sized container
Other: See cache description for information

Some Important Tips

- Carry some form of identification with you
- Avoid woods geocaching during hunting season
- Stay with the group and do not geocache alone
- Youth should ALWAYS geocache with a responsible adult
- Be courteous to other hikers/bikers and geocachers
- Stay alert and aware of surroundings, garbage, animals, etc.
- Watch your footing to prevent falls
- Be respectful of property and act responsibly
- Do not cache in "No Trespassing" areas without permission
- Seek permission where appropriate before hunting caches
- Wear sunscreen especially on long hikes or all day outings
- Clean cuts and scrapes right away and apply first aid
- Wear thick-soled, closed-toed shoes
- Wear Long pants / jeans to protect from vines and briars
- Wear bright color shirt - long sleeves are good for brushy areas
- Avoid poison ivy, sumac, thorns, etc.
- Geocaching is an outdoor activity - you may get dirty
- Be honest if you are questioned by law enforcement officers (they are not muggles… many have heard of geocaching)

Some Important Things To Take Along

Batteries/Device chargers (batteries drain quickly)
Bug repellant (insects can be annoying)
Cell phone (emergency calls, navigation, geocache apps, etc.)
Change of clothes/shoes (especially in wet or muddy conditions)
Drinking water (stay hydrated especially on very warm days)
First aid kit (for tending to occasional scrapes and scratches)
Flashlight (some caches are in logs and other dark spots)
Food/Snacks (fuel keeps you going)
GPS Unit (with cache coordinates entered)
Hand sanitizer wipes (hands will get dirty)
Ink pen (for writing in finder logs)
Trader items (collecting these can be great fun)
Tweezers (for accessing micro/nano cache finder logs)
Whistle (to blow in case cacher is separated from group)

CACHE IN TRASH OUT™

Cache In - Trash Out (CITO)

Cache In Trash Out can easily happen on every geocache adventure. Bring a trash bag along with you on your walks in the woods and pick up the occasional piece of trash you see on the trail. Even this small act can make a huge difference to the environment.

Geocaching Benefits

- Geocaching is fun way to enjoy nature and get some exercise
- It is a great way for families and groups to spend quality time together and build cooperative relationships
- It is also a good way to learn about technology and orienteering while you enjoy the great outdoors.

Geocache Record Keeping

For geocache hunters who use only GPS units it is important to prepare before your adventure. A written record sheet like the one below can be a good tool to make the experience more enjoyable and productive. After selecting caches on www.Geocaching.com that you would like to find it is important to write the cache information on a record sheet. You may create one of your own on a computer or simply use the one provided and photocopy it to create your personal geocache record book. You will want the information in columns 1-5 to help you find the cache. You can enter your finds and the action you took in columns 6 and 7.

Smartphone cachers can keep track of their finds electronically with your profile on www.Geocaching.com. However, some people may find keeping a written log is a fun way to compare notes and share your finds with others. A journal of this type is a good way to learn record-keeping skills and enjoy your finds again and again.

Geocaching Record Book

#	Geocache Name	Town/Area	Geocacache GPS Coordinates	Hint	Date Found ☺	Action Taken
1	Example Cache (not real)	Geoville, IN	N 036° 28.782′ W 087° 59.372′	think green	2/17/2020	TNLNSL
2	Example Cache (not real)	Cachetown, IN	N 038 28.654′ W 086° 59.407′	tree	DNF	
3	Example Cache (not real)	Treasure, IN	N 035 24.904′ W 083° 45.316′	underneath	2/19/2020	Dropped TB

Geocaching Record Book

#	Geocache Name	Town/Area	Geocacache GPS Coordinates	Hint	Date Found ☺	Action Taken
1	Example Cache (not real)	Geoville, IN	N 036° 28.782′ W 087° 59.372′	think green	2/17/2020	TNLNSL

Tips for Hiding a Geocache

Step 1 - Research a Cache Location

Geocaching is just like real estate - location, location, location! It is common for geocachers to hide caches in locations that are important to them, reflecting a special interest or skill of the cache owner. These unique locations on the planet can be quite diverse. A prime camping spot, great viewpoint, unusual location, etc. are all good places to hide a cache. When thinking about where to place a cache, keep these things in mind:

Does it meet all requirements and geocaching guidelines to be listed on the Geocaching.com site? Make sure to review these during your research. Issues of concern include cache saturation, commerciality, solicitation and long-term cache maintenance.

Did you consider accessibility? If it is too visible or too close to busy roads and trails, there is a good chance someone may stumble upon it by accident. It is best to place a cache just off trail to preserve the environment but keep it out of sight of people casually passing by.

Did you seek permission from the land owner or manager? If you place a cache on private land, you must ask permission before hiding your cache. If you place it on public lands, contact the land manager to find out about any rules or restrictions. Please note: You will be in violation of federal regulation by placing a cache in any area administered by the National Park Service (US). The National Park regulations are intended to protect the fragile environment, and historical and cultural areas found in the parks.

Will the location placement cause unnecessary concern? Please use common sense when choosing a location for your cache. Do not design your cache such that it might be confused with something more dangerous.
You are ultimately responsible for the cache so make sure you know the rules for the area where your cache is being placed. Respect the area around your chosen location. Keep in mind that others will be walking in these areas.

Avoid the location of a wild animal nest, or an off-trail with delicate ground cover, too much activity may damage the very nature of why this area is cool.

Do not place caches on archaeological or historical sites. In most cases these areas are highly sensitive to the extra traffic that would be caused by vehicles and humans.

A cache hidden in full view of office or apartment building windows exposes a geocacher to being seen by someone who may think the cache search looks suspicious.

Step 2 - Preparing Your Cache

Cache Containers

Start by choosing a container that will withstand the weather all year round. Geocachers have had good success with clear, watertight plastic containers, ammunition boxes, and waterproof boxes often used on boats. You will also want to invest in zippered plastic bags to further protect the cache contents, in case your container does leak. Camouflage tape is available to help your cache blend with surroundings. View sample cache containers at Groundspeak.com

Whatever the container, make sure to clearly identify your cache as a geocache. Most geocachers mark the cache container with the words "Official Geocache," the name of the cache, and appropriate contact information. The more information you can provide, the better.

Cache Contents
Next, you will need a logbook. (4-H example on next page). Make sure to place a writing utensil in the cache as well. If you are in an area where the temperature drops below freezing, make sure to provide a soft lead pencil. Pens tend to freeze and are rendered useless. Include a welcome note (on next page) that explains the activity in case someone accidentally finds your cache. This note can also be found on the geocaching.com website

Lastly, you can put items for trading into the cache. It is highly recommended, but not necessary. What you place into your cache is up to you, budget permitting. Some ideas of items to give as goodies:

- Disposable camera. Put one in and ask everyone to take a picture and put it back in the cache. Later you can develop the photos and place them online.
- Toys for children. Include action figures, games, playing cards, and more.
- Trackable items such as "travel bugs", "geocoins", etc that have a unique identifying number and can be moved from cache to cache and are logged on Geocaching.com

People of all ages hide and seek caches, so think carefully before placing an item into a cache. Explosives, ammunition, knives, drugs and alcohol are not to be placed in a cache. Respect the local laws.

Food items are always a bad idea. Animals have better noses than humans, and in some cases caches have been chewed through and destroyed because of food items in a cache. Please do not put food in a cache.

Step 3 - Placing Your Cache
Once you arrive at the location of your hide, it is critical to obtain accurate GPS coordinates. This is the very heart of the activity, after all. Be aware that during bad weather, the accuracy of the GPS unit may be poor.
Some GPS units have the ability to take an average set of coordinates. If your device cannot, it is best to mark a waypoint, walk away from the location, then return and mark another waypoint. Continue marking waypoints (at the location, around 7 - 10 times) and then select the best waypoint for the most accurate cache location coordinates.

Once you have your waypoint, write it in permanent marker on the container and in the logbook. Make sure you have a copy to bring back with you. Write a few notes in the logbook if you like, place it in a zippered plastic bag for extra protection, and place it in the cache container.

Step 4 - Submitting Your Cache
Take time to review the Geocaching Listing Guidelines online at www. Geocaching.com again. After placing your cache, does it still meet all requirements for placement? If so, fill out the online form, paying careful attention to the helpful notes provided. Write a description that attracts geocachers to your location, including images of interest.

Add descriptive attributes so that others can make a quick assessment of your cache. For example, is this area dog-friendly? Is the hike over an hour long? Is the area accessible in a wheelchair? Is a boat required?
Double-check the accuracy and the format of your work and make any needed edits. After a review, your cache will be published for the general public.

Step 5 - Maintaining Your Cache
Once you place the cache, it is your responsibility to maintain the cache and the area around it. You will need to return as often as you can to ensure that your cache is not impacting the area negatively, and to check that the container is in good shape.

Does the area look disturbed? Are visitors disrupting the landscape in any way?

If you eventually have concerns about the location, remove the container and make appropriate changes to your online listing.

Groundspeak official statement for inside of cache container

GEOCACHE SITE - PLEASE READ

Congratulations, you've found it! Intentionally or not!

What is this hidden container sitting here for?

What the heck is this thing doing here with all these things in it?

It is part of a worldwide game dedicated to GPS (Global Positioning System) users, called Geocaching. The game basically involves a GPS user hiding "treasure" (this container and its contents), and publishing the exact coordinates so other GPS users can come on a "treasure hunt" to find it. The only rules are: if you take something from the cache, you must leave something for the cache, and you must write about your visit in the logbook. Hopefully, the person that hid this container found a good spot that is not easily found by uninterested parties. Sometimes, a good spot turns out to be a bad spot, though.

If you found this container by accident:

Great! You are welcome to join us! We ask only that you:

- Please do not move or vandalize the container. The real treasure is just finding the container and sharing your thoughts with everyone else who finds it.
- If you wish, go ahead and take something. But please also leave something of your own for others to find, and write it in the logbook.

If possible, let us know that you found it, by visiting the web site listed below.

Geocaching is open to everyone with a GPS and a sense of adventure. There are similar sites all over the world.

The organization has its home on the Internet. Visit our website if you want to learn more, or have any comments:

http://www.geocaching.com

If this container needs to be removed for any reason, please let us know. We apologize, and will be happy to move it.

Labels for the outside of the cache container

OFFICIAL GEOCACHE

Do Not Remove

OFFICIAL GEOCACHE

Do Not Remove

OFFICIAL GEOCACHE

Do Not Remove

4-H

GEOCACHE

Official Log

4-H

GEOCACHE

Official Log

4-H

GEOCACHE

Official Log

4-H

GEOCACHE

Official Log

Geocaching The 4-H Way

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Project Record Sheet

_____ (Year)

4-H Member Name_____

Number of Years in Project _____

1. How many times did you go geocaching this year?_____
2. How many geocaches did you find this year? _____
3. Who are some people who went with you?

   _____

   _____
4. Where are some of the places you went?

   _____

   _____
5. What is a your favorite find this year?

   _____
6. Did you find any trackables (travel bugs, coins, etc?) _____
7. Did you record your finds online at Geocachng.com? _____
8. Did you hide any geocaches? _____ If so, how many? _____
9. What is your favorite part about “Geocaching the 4-H Way” adventures?

_____

_____

Please complete the reverse side of this page also

Science Mission Area

"I Pledge My Head to Clearer Thinking…"

While participating in this activity did you use any of the following? (Please circle all that apply)

Critical thinking, problem solving, decision making, connecting with the environment, utilizing GPS technology, learning orienteering, enjoy participating in a high-tech outdoor adventures, journaling online.

Other(s): _____

Civic Engagement Mission Area

"My Heart to Greater Loyalty and My Hands to Larger Service…"

During this activity did you experience any of the following? (Please circle all that apply)

Social interaction, caring for yourself and others, spending quality time with family and friends, understanding our role in preserving the environment, developing a sense of pride in our community, picking up trash (CITO) as a community service

Other(s): _____

Healthy Living Mission Area

"And My Health to Better Living…"

Did you do any of the following? (Please circle all that apply)

Physical activity, walking, hiking and climbing, practicing safety, clearing your mind, promoting a positive attitude

Other(s): _____

"For My Club, My Community, My Country and My World."

Did you encounter any of the following? (Please circle all that apply)

Exploring, experiencing the thrill of the hunt, understanding of geography, appreciation of history

Other(s): _____

Is there anything you would like to add about your "Geocaching the 4-H Way" experience(s)?

_____

_____

_____

_____

Geocaching The 4-H Way

Some Project Exhibit Suggestions

Create a poster or notebook on some aspect of Geocaching. Some topics might be:

- Geocaching Safety Tips
- Helpful Geocaching Tools
- How to Prepare for a Geocache Outing
- How to Read a Compass
- How to use coordinates on a GPS device to find geocaches
- Or some other interesting geocache topic, etc.

Create a Record Book/Notebook to keep track of all of your geocache adventures.

Include log records, photos of your finds (such as trackables, geocoins, etc.)

Create a geocache that is ready to hide

Include official log for finders to sign, cache explanation, tradable items, First to Find reward, etc. Be sure to decorate it with camouflage paint or tape to blend with the intended hiding location.

Plan and conduct a geocaching outing and document the event with photos.

Plan a “Cache In Trash Out” Community Service project.
Include finds and interesting details of the adventure.

Display a collection of your favorite geocache found items

Use your imagination and create your own project related to geocaching.
Each year should show development and increase in scope and difficulty.

A Suggested Geocache Adventure

How To Set Up A Temporary Geocache For An Educational Session

Use the "Tips for Hiding a Geocache" steps 1-3 to guide you where to place the caches and what size will fit best in the hiding spot. (You do not need to complete steps 4-5 as this is not a permanent cache)

Make sure GPS units have enough power or replace batteries. Make sure to have spare batteries on hand.

Load coordinates on the GPS units or provide a sheet to the participants to enter in the coordinates during the class.

Turn on the GPS units prior to the first session so they have time to retrieve satellite data. (10 to 15 minutes before the session should be enough time)

Geocaching Class Talking Points

Use the "Geocaching Basics" sheet for opening talking points to explain geocaching.

Go over some geocaching terms: Examples- Geocoin, Muggles, Waypoints, etc.

MAKE SURE TO COVER WHAT POISON IVY LOOKS LIKE!!!!!!

How to do geocaching at home

Cache In-Trash Out

Time To Go Geocaching!

Divide whole group up into smaller groups based on number of GPS units available.

Ask each group to create a group name.

Give every group a Geocaching Record Sheet (that lists all of the possible caches) and a pencil

Teach them the controls of the GPS unit they are utilizing in this class.

Give each group their first cache number to go find so that each group starts at a different cache location.

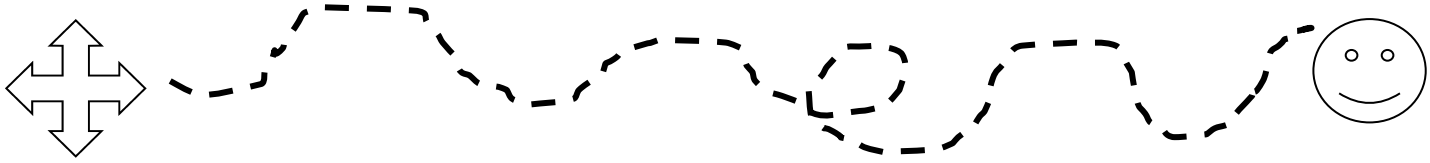
Make sure to emphasize that they need to be secretive and don't let people see them.

They need to go in their order given so groups don't bunch up

There may be things that they need to do at a cache, like sing a song.

They can put the cache back and walk away from the site and find a different spot to complete their task.

Enjoy the thrill of the hunt!



Geocaching The 4-H Way

Evaluation

Completion of this form is voluntary and anonymous

Science Mission Area

"I Pledge My Head to Clearer Thinking…"

While participating in this activity did you use any of the following? (Please circle all that apply)

Critical thinking, problem solving, decision making, connecting with the environment, utilizing GPS technology, learning orienteering, enjoy participating in a high-tech outdoor adventures, journaling online.

Other(s): _____

Civic Engagement Mission Area

"My Heart to Greater Loyalty and My Hands to Larger Service…"

During this activity did you experience any of the following? (Please circle all that apply)

Social interaction, caring for yourself and others, spending quality time with family and friends, understanding our role in preserving the environment, developing a sense of pride in our community, picking up trash (CITO) as a community service

Other(s): _____

Healthy Living Mission Area

"And My Health to Better Living…"

Did you do any of the following? (Please circle all that apply)

Physical activity, walking, hiking and climbing, practicing safety, clearing your mind, promoting a positive attitude

Other(s): _____

"For My Club, My Community, My Country and My World."

Did you encounter any of the following? (Please circle all that apply)

Exploring, experiencing the thrill of the hunt, understanding of geography, appreciation of history

Other(s): _____

Is there anything you would like to add about your "Geocaching the 4-H Way" experience(s)?

_____

_____