

# The Virginia Geocoin

# Adventure

This document and additional information is available via: <u>https://virginiaview.cnre.vt.edu/geocoin/</u>







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# 4-H Geocoin

In 4-H there are many project and learning opportunities in the areas of Science, Engineering and Technology (SET). The *Geocoin Adventure* provides experience with GNSS technology to map and document the path of a Virginia Geocoin across the country (and the world) while learning about the area land use and culture of the community where it is cached.

You will need to ensure that your geocoin is properly placed into a geocache, and "put into circulation". You will then have the opportunity to watch the coin's movements (using GoogleEarth) as it moves from cache to cache. We have developed intensive instructions to provide you with everything that you need to know about geocaching and trackable Geocoins to track and document successfully. Enjoy your travels!

#### So you want to get started? Just follow these steps:

- 1. Be sure to copy the serial number (usually 6 characters) that is stamped on your geocoin here for future reference: \_\_\_\_\_.
- 2. Create a geocaching account (http: www.geocaching.com) if you do not have an account already. Please note that you will need to provide your email address, and will need to verify your account before it is activated!
- 3. While the geocoin has been given to you (and you physically have it in your possession) you will need to virtually "grab" the coin from its current holder or owner (see page 8: How to retrieve a trackable item).
- After you have "grabbed" the geocoin from its current owner, you are ready to navigate to and place the geocoin in the geocache (where it will go next; see Page 10: How to Drop Off a Trackable Item).
- 5. After you have placed the geocoin in a geocache, you will need to return to geocaching.com, and log or associate your geocoin with the geocache using the serial number on your geocoin that you documented on #1 above (see page 9: How to Drop Off a Trackable Item).
- 6. Now you are ready to "watch" where your geocoin travels! To receive email notifications when your geocoin is moved from cache to cache, simply add the geocoin to you watchlist (see page 11: How to Watch a Trackable Item).

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Project Reflections: see separate document

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## What is the Virginia Geocoin Adventure?

The *Virginia Geocoin Adventure* is a 4-H Technology Project as part of 4-H SET (Science, Engineering, and Technology). It can be one project in a 4-H Community Club or it could be a 4-H Project Club where all members coordinate on the same project. This project has been supported by Virginia 4-H and VirginiaView.

**Program Goal:** To increase geospatial and geographical awareness and to encourage youth and adults to learn more about land use, their communities, and their world. In addition to keeping maintaining a project record book, you are encouraged to post pictures (on geocaching.com or in your record book), and maintain a log or provide a written history, of what you are learning, including interesting stories and fun facts about each community where the geocoin travels. Most of all... have fun outdoors! Using the learning lessons, students can also virtually explore the world and learn about invasive species and other issues impacting our planet.



#### About this item:

These coins were developed as part of a collaborative Extension, outreach and education effort through the Virginia Geospatial Extension Program (<u>https://gep.frec.vt.edu</u>), Virginia Cooperative Extension 4-H (<u>https://ext.vt.edu</u>) and VirginiaView (<u>www.virginiaview.net</u>). Note that not geocaching items are trackable, and not all trackable items are 'coins' (trackable items come in an assortment of sizes and shapes)!

## What is Geocaching?

- A high-tech entertaining adventure game for GPS users
- The idea is to "hunt" for hidden containers (geocaches or caches) that have been placed in the landscape
- Pick an item from the cache and leave an item
- Geocaching is enjoyed by people of all ages, and can encourage community connections. This is a great excuse to get outside and get moving!
- his trackable coin has a unique serial number which enables you to map it's movements
- 'Geocaching is increasingly used in recreation and tourism. Virginia 4-H has adopted the *4-H Geocoin Adventure* to get more kids involved in using GPS and to share their learning virtually.

#### **Getting Started**

So, you do not know where any geocaches are? Well, that is exactly why you are here!

After logging on to your account on Geocaching.com, you can search for the relative locations of geocaches in your community (or any community!).





Figure 1: Select View Map from the menu to identify existing caches near you.



Use the searchbar to navigate to your community (Figure 2)

Figure 2: Locating a geocache- After the map opens, enter your location in the search bar, and click on the search button (magnifying glass). Then select "Search this area". Caches can be located by address, ZIP/



Figure 3—Notice that the relative locations of geocaches appear on the map! There are over 50 geocaches in Blacksburg!

And then identify all of the locations within the area of interest (the map) that contain geocaches. (Figure 3)



The rest area is a very busy 24/7 so be discrete. Have a safe journey!

#### Additional Hints (Decrypt)

Fbhgurnfg pbeare bs Gur Ohaxre. Cyrnfr bcra pnershyyl naq qba'g oernx gur yngpu ba gur pbagnvare.

Figure 4

Eruvqr jryy!

You will find an information page associated with each cache (Figure 4). This particular cache is called Kilmer Bunker (A). This is a fairly easy cache to locate, and the terrain around the cache is fairly easy to navigate (B). The cache is fairly large. (C). Based on the information provided in this example, I would expect the cache to be approximately the size of a small box (smaller than a shoebox).

One of the most important pieces of information, is the location of the cache. This cache is located in New Jersey. Coordinates are provided in both Latitude and Longitude (degress, decimal minutes) and UTM coordinates (D). You can also print driving directions to get you close to the cache. You can download the GPX file. GPX files are open standard files that are used to transfer information to GNSS receivers, such as a GARMIN, or SmartPhone. Note that Geocaching.com now charges a membership fee to transfer coordinates directly from geocaching.com to a GNSS (GPS) receiver (but you can manually transfer coordinates).

A general description of the Cache (E) can contain important cultural or historical information associated with the location of the cache. In addition, this description can also provide important details that may help you to locate the cache. Some cache hints may have an encrypted puzzle (with a key) that, when deciphered, can provide additional clues about the cache. Every geocoin (or trackable item) has its own webpage as well (Figure 5). This page provides Information about each trackable item, including the name of the trackable (Virginia 4H: Carroll County), where it has traveled to, how far it has traveled. In addition, you can also access a map (via GoogleEarth) that shows where the item has traveled (Figure 6).



Figure 5: Each trackable item has an informational page that contains information about that trackable item.



Figure 6: Select 'View Map' to follow the travels of each trackable item (or Geocoin).

## How to Geocache

Now that you understand the Geocaching website, you are ready to Geocache!

1. Create account on <a href="http://www.geocaching.com">http://www.geocaching.com</a> (or logon to an existing account) from the main page (Figure 7).



Figure 7: Geocaching.com

- 2. Make sure you have acquired satellites outside with your GPS receiver prior to before you Geocache
- 3. Navigate to "Search" from the menu (or click on "Go To Map" | Figure 8).



Figure 8

The Virginia Geospatial Extension Program





Figure 13: Trackable items. To find a trackable item enter in the tracking number or the item's name (for example Virginia 4-H Geocoin).

4. Enter location information (zip code, address, location; see Figure 2).

5. View the list of potential caches in your area (in the Table of Contents on the left side margin of your map) and select a cache from the list.

• This will provide you with some summary information about the cache, and will enable you to download a gpx file (1). To get more information about the cache, select the "Open cache page" button (2).

• The **Last Found** column indicates the most recent discovery of the cache.

• These pages provide additional information about the cache, including the difficulty of finding the cache, the difficulty of the terrain, and the size of the cache.

• The **Description** information gives more details about the geocache. You can read this to discover more details.

• The **Download GPX** allows you to download the coordinates of the geocache to your GNSS receiver.

8. After downloading your coordinates to your GNSS receiver, you can begin navigating to the geocache.

#### How to Retrieve a Trackable Item (geocoin)

If someone has mailed/given you a trackable item, or if you have found a trackable item, you will need to virtually "grab it" from its current holder (owner) before placing it in a different geocache.

- 1. Log in to Geocaching.com
- 2. Navigate to "Trackable Items" (Figure 11)
- 3. Enter the tracking code into "Enter the Tracking Number of the Item:" or the enter the item name into "Search for a Trackable Item by Name"
- 4. Claim the geocoin by clicking on "Discovered It"
- 5. Grab it from the current holder by setting the "Type of Log" to "Grab it from current holder: [name]". You must also fill in the "Travel Bug Tracking #" and the Comments field. Click "Submit log entry" when you're done.

GEOCA	CHING Play	Community	Shop	[	Upgrade
$\searrow$	Post a New In reference to:	-	jital Planet Geocoin #5 by Clams	stock	
	Type of Log:	Discovered It	$\checkmark$		
	Date Logged:	01/08/2021	(MM/dd/yyyy)		
	Tracking Code:				
	Comments:	B I 66 8	- H1 H2 H3 🗄 🗮		How To Format
	Log Options	entry* 🕜			
	Submit Log Entry				

Figure 11: Grabbing a trackable item from its current holder. To grab it, you need to set the "Type of Log" to "Grab from current hold-

### How to Drop Off a Trackable Item

Once you have found a geocoin you need to place it in a new geocache!

- 1. Log in to Geocaching.com
- 2. Navigate to "Go to Map" (Figure 1)
- 3. Find a cache where you would like to drop off your geocoin and download the location to your GNSS receiver.
- 4. Once you have visited the cache and placed the geocoin in the cache you need to let others know you've put it there! To let others know, locate the cache on geocach-ing.com.
- 5. Once you have found the cache and are viewing the cache details you can log your visit and drop off the geocoin (Figure 16)
- 6. On the right side of the page click on "Log Geocache" (Figure 12)



Figure 12