Activity B5 Geocache Hunting

Introduction:
Searching for a Geocache is an exciting way for your learners to apply their GPS navigational skills. The basic principles are similar to the beginner level "GPS Treasure Hunt" activity, but everything is done on a larger scale. Many thousands of Geocaches are hidden around the world and it is likely that some are found in your area. Locations and information about these caches are found on the ***geocaching.com*** website. The rules are very simple: 1. Take something from the cache, 2. Leave something in the cache, and 3. Write about it in the cache logbook.

Time Involved: variable

Materials Needed:
- Internet access to find local Geocache sites.
- GPS receivers and magnetic compasses.
- Topographic and/or other maps covering the Geocache sites.
- Cache trade items.

Getting Started:

Before introducing Geocaching to your learners, you should become familiar with the game, its variations, and the many resources available. Explore the ***http://www.geocaching.com/*** website. Check out the *Getting Started* page. Be sure to review the *Frequently Asked Questions (FAQ)* and *Finding your first Geocache* information. This would be a good time to create your free account with geocaching.com. Next you should search the listings for caches in your area. The simplest way is to enter your zip code in the site's search engine, but there are other options as well. Hopefully you will find a variety of interesting caches in your area. (If not, the website encourages you to hide a cache yourself, and provides instructions on how to do it. We will further explore this challenge in ***C2: Hosting a Geocache***.)

See *"Preparing GPS Receivers for Group Activities"*. Note that receiver default settings usually are hddd°mm.mmm (degrees and decimal minutes) and datum WGS 84. These are also the same settings used for Geocaching waypoints. Make sure that you are aware of the datum for any maps that you are using.

Do the Activity
Involve your learners in the selection of the cache(s) to be sought. If feasible, have them actually perform the "Seek a Cache" search on the **geocaching.com** website. Otherwise, print off a selection of nearby caches for your group to review. Have them study the descriptions and plot the general locations on a highway map. Once they have selected the cache(s) they want to visit, secure topographic maps and/or aerial photos of the cache sites. Under *Resources* below, you will find several helpful mapping sites. However, the

easiest way to is to use the “For online map ...” links that are provided on each specific cache page. The cache will automatically be located in the center of the map! For topographic maps, use TerraServer or TopoZone. Load the cache coordinates in your GPS receivers and check the position on your maps. Remember to carry an appropriate trade item for your group to leave in the cache. Mark your starting location (parking area or trail-head) before setting off on the hunt. Keep your group together until they reach the approximate location of the cache, then spread out to search the immediate area. Some caches are well hidden and your GPS units may only get you within 30 feet or so, depending on conditions. Once the cache is found, make an entry in its log book and exchange trade items. Seal the cache and place it back just as you found it. After you return home, remember to log your visit on the website and email the cache owner.

A detailed step-by-step “Guide to Finding a Cache” can be found at:
http://www.geocaching.com/about/finding.aspx .

Background Information

Adapted from Groundspeak, Inc.’s geocaching.com website:

*Cach*e is pronounced "cash". In geocaching, it is a hidden container filled with a log book and pencil/pen, and possibly prizes. Caches were often used by explorers, miners, etc. to hide foodstuffs and other items for emergency purposes. People still hide caches of supplies today for similar reasons.

Geocaching is an entertaining adventure game for GPS users. Participating in a cache hunt is a good way to take advantage of the wonderful features and capability of a GPS unit. The basic idea is to have individuals and organizations set up caches all over the world and share the locations of these caches on the internet. GPS users can then use the location coordinates to find the caches. Once found, a cache may provide the visitor with a wide variety of rewards. All the visitor is asked to do is if they get something they should try to leave something for the cache.

Geocaching is a relatively new phenomenon. Therefore, the rules are very simple:
1. Take something from the cache
2. Leave something in the cache
3. Write about it in the logbook

GPS Stash Hunt is an earlier name, but *Geocaching* has become the standard term for the game. The word Geocaching broken out is GEO for geography, and CACHING for the process of hiding a cache. A cache in computer terms is information usually stored in memory to make it faster to retrieve, but the term is also used in hiking/camping as a hiding place for concealing and preserving provisions.

What is usually in a cache?
A cache can come in many forms but the first item should always be the logbook. In its simplest form a cache can be just a logbook and nothing else. The logbook contains

information from the founder of the cache and notes from the cache's visitors. The logbook can contain much valuable, rewarding, and entertaining information. A logbook might contain information about nearby attractions, coordinates to other unpublished caches, and even jokes written by visitors. If you get some information from a logbook you should give some back. At the very least you can leave the date and time you visited the cache.

Larger caches may consist of a waterproof plastic bucket placed tastefully within the local terrain. The bucket will contain the logbook and any number of more or less valuable items. These items turn the cache into a true treasure hunt. You never know what the founder or other visitors of the cache may have left there for you to enjoy. Remember, if you take something, its only fair for you to leave something in return. Items in a bucket cache could be: Maps, books, software, hardware, CD's, videos, pictures, money, jewelry, tickets, antiques, tools, games, etc. It is recommended that items in a bucket cache be individually packaged in a clear zipped plastic bag to protect them.

Additional Resources

- Groundspeak Inc. http://geocaching.com
- TerraServer – USA http://terraserver.microsoft.com/
- TopoZone http://topozone.com/
- MapServer http://mapserver.maptech.com/
- MapQuest http://www.mapquest.com/
- MapPoint http://mappoint.msn.com/
- Yahoo Maps http://maps.yahoo.com/maps
- Rand McNally http://www.randmcnally.com/
- Tiger Census Maps http://tiger.census.gov/
- USAPhotoMaps http://www.jdmcox.com/
- Easy GPS http://easygps.com/
- Garmin http://www.garmin.com/cartography/
- Magellan http://www.magellangps.com/en/products/software.asp
- MapTech http://www.maptech.com/
- Delorme http://www.delorme.com/

Note: Comments and suggestions regarding this activity and other components of the Virginia 4-H GPS curriculum are appreciated. Please contact Mike Clifford at: mjc4h@vt.edu / 804-561-5411 / 11131 Amelia Springs Rd., Jetersville, VA 23083