

Youth Environmental Engagement Using Geospatial Technology

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Community Detachment from the Environment

We live in a time where many do not appreciate the importance and relevance of the environment.

- Why is this an issue?
Nature Deficit Disorder: Children exhibiting ADHD-like symptoms due to lack of time spent outdoors.
Spike in ADHD and ADD: Lack of exercise can increase symptoms of ADHD and ADD.
Child Obesity: Caused by a lack of exercise and more time spent inside.
A Decrease in Emotional Well-Being: Can lead to a disconnect with nature and the world around them.
- What will happen if we do not get more people involved?
A Generation of "Uninformed" Citizens: A lack of understanding of our dependency on natural resources and ecosystem services could result in no future generation of environmental stewards.
Environmental Damage: If the next generation is unaware of the danger of environmental unrest, global warming, unsustainable land use, pollution, etc. it will threaten human livelihood.

Wind Hill Community Farm & Longo Open Space

➤ I set up a geocaching/navigation workshop for youth at Wind Hill Community Farm and Longo Farm Open Space (Fig. 1 & 2). This area was selected because it is a space that is highly used and cherished by local residents of Glastonbury and nearby towns. It is a perfect venue that youth can access easily and future geocaching workshops can occur.

➤ Background of Wind Hill Community Farm:
Wind Hill Community Farm is a non-profit, organic farm that offers Community Supported Agriculture for local families to buy seasonal shares of their produce, a community garden to rent personal garden space for their families, and educational programming that is located in Glastonbury.

➤ History of Longo Farm:
Longo Farm was once the sight of the state's largest dairy farm, but now an open space in Glastonbury that is utilized for many outdoor activities, such as bird-watching (events are regularly put on by the Land Heritage Coalition of Glastonbury), hiking, and dirt biking.



Fig 1. Longo Farm Open space featured rock outcropping that provided numerous location to hide caches.

My Goal

- Engage youth and teens in the outdoors and provide an opportunity to learn about the environment in fun way via geocaching.
- Use user-friendly geospatial technology (GPS) so that participants can learn new skills while exploring new outdoor surroundings.
- Decrease community detachment from the environment.



Fig. 2

Workshop

I developed a geocaching/navigation workshop, which involved establishing 5 geocaches within a local community farm's property (Fig. 2) and running the workshop with several participants (Fig. 3). On the day of the workshop, participants got to explore an unfamiliar outdoor area of their town and they got a chance to learn new essential skills involving:

- Compass Practice: Participants were paired and given a golf tee and were instructed on navigating in a triangle using a compass.
- GPS Technology: Participants were instructed on how GPS units work, how they are implemented today in modern professions, and how to use them to find geocaches (the activity of the workshop).
- Geocaching: Pairs of participants were each given a unit with the waypoints of pre-set caches. There were 5 placed in total (Fig. 2) and the team who found them all first were given a reward.
- Make You Own Cache: Now that participants had an idea of what a cache consisted of, they each placed their own for others in the community to find later.



Fig 3. Workshop participants learning how to use GPS units.

Geocaching

- What is geocaching?
Geocaching is an international treasure hunt with caches hidden all around the world. They are located using GPS units.
- How are the skills gained from geocaching used in other applications?
 - Telemetry: GPS units use telemetry to locate the current position of the device.
 - GIS/Mapping/Google Maps: Participants were given a map to help them find the way to the cache.
 - Surveying: Surveying is taking a set of data to create a map later. Participants took waypoints of where they hid their own caches.
 - Navigation: Navigation is using the device to get from one point to another. Participants used the units to get from their current location to the hidden caches
 - Want to learn how to geocache?
Visit: <https://www.geocaching.com/play>



Fig. 4 Label that was placed on the geocache. This makes it easy to distinguish from litter.

Community Response

- Participants expressed their excitement throughout the workshop for the environment and they were excited to learn how to geocache.
- Boy Scout Troop master, Mark Moleski, who helped organize the event, gave words of encouragement and praise, as this workshop helped some of the scouts in the troop work on their geocaching and orienteering merit badge.
- Parents of the participants were very excited for their children who got the chance to learn about geocaching and the environment,

In the Future

This project was designed to be repeatable with participants of various ages (e.g. middle school to adults) backgrounds, as well as in multiple locations. Given the great community network of the Wind Hill Farm and Land Heritage Coalition, I plan to put on more workshops with a variety of audiences.

Acknowledgements

I would like to thank Dr. Laura Cisneros for her support and help, Barbra Wagner for access to Wind Hill Community Farm and help during a practice run of the workshop, and the Land Heritage Coalition of Glastonbury for a scholarship to attend the NRCA and support of my community project. Last but not least, I would like to thank my parents for inspiration and support during this process.

References

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