

Class Summary

Quick Facts

Outside: 2 hours

Grade: 5th and up

Offered: Year-round

Physical Activity: 1-2 miles of hiking on varied terrain

Other: No special skills required

Concepts

- Design
- Cooperation
- Innovation
- Exploration

[Minnesota Academic Standards >](#)

- Science
- Math
- Physical Education

[Classroom Activities >](#)

- **Pre-Activity:** *Triangulation Worksheet*
- **Post-Activity:** *GPS Careers*

STEM Components

- Utilize
- Operate
- Estimate
- Measure
- Record

IB Profiles

- | | |
|---|---|
| <input type="checkbox"/> Inquirers | <input type="checkbox"/> Open-minded |
| <input checked="" type="checkbox"/> Knowledgeable | <input checked="" type="checkbox"/> Caring |
| <input checked="" type="checkbox"/> Thinkers | <input checked="" type="checkbox"/> Risk-takers |
| <input checked="" type="checkbox"/> Communicators | <input type="checkbox"/> Balanced |
| <input checked="" type="checkbox"/> Principled | <input type="checkbox"/> Reflective |

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Outcomes, students will:

1. Order a navigational timeline, piecing together the navigational tools used from the past to the present.
2. Learn how to operate a Garmin GPS receiver in order find waypoints.
3. Work cooperatively with a partner, sharing the task of navigating, to locate hidden caches in the woods.

Brief Synopsis:

Students will get a glimpse of just how advanced navigational technology has become over time ! The class will begin by learning the basic concepts behind GPS technology then, students will be learn the basics of a GPS receiver. Their skills will be put to the test on our small outdoor practice course before tackling Eagle Bluff's, "Murder Mystery Course." In this activity, students will navigate through the woods in search of hidden caches to solve the mystery of who killed Marvin the Mouse.

Outline:

Navigational Timeline (20 minutes)

Imagine how difficult it would be to navigate without the aid of some type of navigational tool? Students will have to chronological order a navigational timeline which highlights 10 different navigational tools used throughout human history.

GPS Basics (1 hour)

The Global Positioning System (GPS) is the most significant recent advance in navigation technology. Students will learn the concept behind GPS technology and the purpose it serves for both the military and the layperson. Each pair of students will be given a GPS receiver. Step by step instructions will be given to students as they learn to manipulate the screen pages to obtain specific information.

Dash For The Cache: Murder Mystery (1 hour 40 minutes)

It is time to take outside what was learned inside. Participants will practice using their GPS receiver on a small, outdoor course which allows for additional instruction and assistance. The culminating class activity is a "Murder Mystery," where the class will use their new skills to solve a murder mystery (similar to the game of "Clue.") For this activity, students will use their GPS receivers to locate up to twelve different cache sites hidden throughout Eagle Bluff's campus.