

## Nutshell

In this lesson, students will become familiar with the use of GPS technology. They will use GPS to navigate to a point and will observe and describe that site as a team.

## Objectives

Students will be able to....

- Map a waypoint and navigate to a waypoint using a GPS receiver
- Describe a place using technical writing skills, descriptive writing skills, and visual tools

## WI State and Core Standards

*Common Core English Language Arts: WS.K-5.2, WS.K-5.7;*

*Environmental Education: B.4.5;*

*Social Studies: A.8.1, A.8.2*



## Materials

- GPS units
- Cameras
- Clipboards and writing utensils
- Large envelopes

## Teacher Preparations:

- notify the main office that you will be outside for a certain amount of time
  - be sure students are appropriately dressed for the weather
- gather all needed materials so you don't have to run back inside
- classroom behavior guidelines are the same outdoors as they are in the classroom
- familiarize yourself with the features use of the GPS units and cameras
- assure that the GPS units and cameras have well charged batteries

## Procedure

1. Review terms with the class before going outside: GPS, waypoint, navigate.
2. Divide the class into groups of 3 or 4. Give each group one large envelope with a GPS unit, a camera, a clipboard with paper, and writing utensils. If you have enough GPS units for each student to have one, it would be helpful.
3. Take students outdoors to practice using GPS and mapping with the *Exploring Your School Grounds* worksheet. Teams can navigate to as many locations as time allows. As a final step, lead the class in a discussion of the things they observed.

## Further Enrichment:

- Compile the images and descriptions students gathered during their exploration of the school site to create a display for the classroom.
- Explore another nearby site or your school forest using GPS.



# Exploring Your School Grounds

Team Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Work as a team to learn to use GPS to explore your school grounds.**

## **Practice using the GPS.**

1. Use your GPS unit to mark a waypoint where you are standing now. Label that waypoint as “home.”
2. Go to another place and mark that as a waypoint.
3. Navigate back to “home” using the GPS.

## **Find a special place**

4. Find a special place within the boundaries of the area you may work in. As a team, do the following things at your special place:
  - Mark and name this waypoint on your GPS. The name should describe your place.
  - Write the name of your waypoint on the envelope. Also write the coordinates on the envelope.
  - Take pictures of the place.
  - Using descriptive language, each team member should write about the place. What makes it special? When you are done writing about your place, put the descriptions in the envelope.
5. Return to “home” using the GPS to navigate.

## **Find another team’s special place**

6. Pick up another group’s envelope and navigate to the place they marked using their GPS.
7. When you have found the place with the GPS, read the descriptions and look at the photographs in their envelope. Are you in the right place?
8. Draw a map of the place you are in. When you have drawn the map, place it in the envelope.
9. Return to “home”
10. In a class discussion describe the places you saw, what made them unique, and if you were able to recognize the descriptions of the other teams.

