

MODULE I, INTRODUCTION TO GPS/GIS

Lab Exercise #3 - Use of GPS Receiver, Finding a Geographic Position

Instruction Sheet

OBJECTIVES

- Students will be able to use latitude/longitude (lat/long) coordinates to find an object (such as a monument, isolated tree, garden, fire hydrant, etc.) located on campus.

MATERIALS

- GPS receivers (that display lat/long position) Instructions given based on Garmin 12
- Latitude/longitude coordinate of a specific object (should be large enough to see from 20-30 yards away)

INSTRUCTIONS

1. This exercise assumes initial instruction in latitude/longitude coordinates and basic use of GPS receiver (see Lab Exercise #1 & #2).
2. Break class into groups based on number of GPS receivers available (try to keep the number of students per receiver at 5 or less).
3. Handout GPS receivers with a review of basic instructions for acquiring satellites and displaying lat/long position.
 - a) turn on receiver
 - b) hold receiver horizontal clear of any objects that may block the satellites
 - c) when the receiver switches screens, enough satellites are being tracked and the receiver has calculated your current position.
4. Identify the lat/long position of the location or object to be found and instruct the groups to find it. Give hints or clues as you see fit.
5. It may be helpful to have each group find a different object. After all groups have found their assigned object, return to the classroom to discuss problems or how using lat/long coordinates worked compared to giving directions.
6. This exercise works best in a large area.

VARIATIONS

- ◆ Do a scavenger hunt with groups finding different objects
- ◆ Prizes for finding objects
- ◆ Have clues (lat/long) at each location leading them to a series of points that lead to final meeting place
- ◆ Give lat/long of the noon meal or snack location



MODULE I, INTRODUCTION TO GPS/GIS

Lab Exercise #3 - Use of GPS Receiver, Finding a Geographic Position

Student Worksheet

OBJECTIVES

- Students will be able to use a GPS receiver and latitude/longitude (lat/long) coordinates to find an object located on campus.

MATERIALS

- GPS receivers
- Latitude/longitude coordinate of a specific object

INSTRUCTIONS

1. Your class will be divided into groups based on the number of GPS receivers
2. Get a review of basic instructions for acquiring satellites and displaying lat/long position.
 - a) turn on receiver
 - b) hold receiver horizontal clear of any objects that may block the satellites
 - c) when the receiver switches screens, enough satellites are being tracked and the receiver has calculated your current position.
3. Get the Latitude / Longitude of the object your group is to find from your instructor

Latitude

Longitude

4. Find the object Clue _____

5. After you have found your assigned object, return to the classroom.
6. Did you have any problems finding the object? Would it have been easier to get directions? Be prepared to discuss problems.

