

2013 Indigenous Fellows Institute: Project Report (Introducing Students to GPS and GIS)

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Purpose: To introduce Global Positioning System (GPS) and Geographic Information Systems (GIS) to students, in an effort to increase the usage of technology in their environmental studies. There is a direct link and need for spatial analysis of information with regards to resource management. On Saipan (and in many other areas of the country), there has been an increase in usage of GIS/GPS in research and daily work requirements of NRM agencies. Therefore, this opportunity will both better prepare students for future research work as well as employment.

Lesson:

Provide a lecture on GPS covering the basics of GPS, followed by a question and discussion session.

Laboratory exercise based on using GPS handheld units:

- 1) Review how to use a GPS unit, starting from taking it out of the box and putting the batteries in. Once the different functions and menus, both those you will use and those you will not, are discussed, divide the class into teams of two, provide each team with a handheld unit and an exercise.
- 2) The exercise should instruct students to input a waypoint (latitude and longitude) into their unit and find it using their GPS receiver.

Next, lecture on GIS, describing and discussing the basics of what GIS actually is and how it can be used. Follow this up with a field exercise to gather spatial data using the GPS handheld units and input that data into GIS software. Show the students some of the basic functions of the software.