

GPS Setting and Finding Waypoints Lesson

GPS Basics

Lesson Purpose:

- Explanation of how a gps works
- Learning how to mark waypoints and find waypoints
- Review or preview of curricular material

Needed supplies/organization

- Supplied by ITT:
- GPS units, handout on gps use

Supplied by teacher:

- If possible, either use the teacher's classroom document camera, or check one out from the library
- Students need to be in designated pairs
- Students need pencils and paper or index card
- Each pair of students needs a different curricular question* which they will set down and mark as a waypoint.
 - ∞ *questions can be written by the teacher (one per pair) or written by the students.
 - ∞ *It works best to have the questions written in advance of the lesson.
- **The day before the lesson remind students to bring appropriate outdoor clothing to class**

Lesson Procedure:

Explanation and History: (In the classroom)

- Explain what a gps is, and how it works (it's a receiver, uses satellites, was in use prior to 1985 by military only. President Reagan authorized the de-classification of satellites for general public use after the 1985 passenger plane was shot down over North Korea
- Use Venn diagram or live student models to demonstrate how satellites pinpoint location
- Using the document camera, go over the buttons on the gps. Pass out handout
- Have students pick up 1 gps per pair and have their question, an index card or another piece of paper with their names at the top (to record answers), and a pencil.
- **Students record their names and gps number at the top of the paper containing their question**

Outdoor lesson:

- Students will work in pairs to set down their curricular question paper, then use the gps to mark it's location. This marked location is called a waypoint.

- As pairs come back have them trade gps units with another pair OR wait until all students come back to group, get in a circle, and pass gps units to the right/left (teacher preference).
- Students will find the waypoint that was set by the previous pair. Remind students to look at the # on the question. It should match their gps unit. If it doesn't, they haven't found the correct waypoint and should request help from the ITT/teacher. They should **not** pick up the question paper unless it matches.
- When they find the waypoint, they will record the question # and their answer on their index card or paper then pick up the question paper and go to a new location, set it down and mark it before returning to trade gps units again with another group.
- The process will be repeated so that both members in the pair get to mark and find.