

## Recommended Exercises:

- 1. Collecting and Navigating to Waypoints:** With a friend or friends, Person A goes outside, out of sight of Person B, and collects a waypoint, (see Lesson on Waypoints).
  - a. One GPS Receiver option – Person A then walks back to Person B and gives the receiver to them and they navigate to this waypoint. Reverse roles.
  - b. Two Receiver Option - Person A then walks back to Person B and narrates the waypoint coordinates to Person B (remember to include the Coordinate System and Datum). Person B enters the coordinates into their receiver and then navigates to this waypoint. Reverse roles.
- 2. Collecting and Navigating to Waypoints:** Simply go out to a park or open space and create a waypoint at a significant place...flagpole, BBQ pit, stop sign, street corner. The next day navigate to that same spot using your GPS...it is simple but a good first step to learn the basics of navigating and to get used to using the different screens without having to worry about finding something somewhere you have never been....might be the first step in an exercise before navigating to a waypoint that you have never been to.
- 3. Waypoint for your vehicle:** one way to quickly mark your vehicle location every time you go out in the field.... have a waypoint called "Truck". Before you leave the truck, open the waypoint on the GPS and "re-average" the "Truck" waypoint. This moves the waypoint to your current vehicle location. No need to re-type waypoint name. Set one up outside and then practice re-averaging this in a new location.
- 4. Collecting Tracks:** Collect a track around your neighborhood, (see Lesson on Tracks). View it on your map screen.
  - a. Map the perimeter of your local mall, high school, or favorite walk in a park.
  - b. Using your track log, try to draw something simple or write your initials.
  - c. Calculate the area of the mall or football field or your neighborhood park.
- 5. Geocache or Benchmarking:** Go to <http://www.geocaching.com/> and find the coordinates of a nearby site. Navigate to it.
  - d. Suggest that you look for only the regular or large size caches. Most micro caches are very challenging for even seasoned cachers. Some virtual and multi-stage caches can also be challenging.
  - e. Access to Geocaching.com requires email address and signing up before you can "find a cache".
  - f. Once a User creates a membership, click "find a geocache". Select the easiest ones (graded 1-5). Enter an address. Search within 5 miles. User could also use the Google maps to click and locate right from the site.
- 6. Waypoints and Coordinate Systems:** Take a waypoint just outside of your office...go back in and write down the coordinates for that one waypoint in NAD27, NAD83, and WGS84 and compare how the coordinates for the same location have changed....now write down the coordinates in NAD83 but in UTM and then in Ddd.mm.ss now in DDD.mm.mm now in DDDD.ddd and compare how the same place can have very different coordinates. It is good practice in changing the settings and shows the differences in Datums and coordinate systems.