

Navigating Nature —GPS

Seniors Staying Safe on the Trails

Knowing how the map, GPS, compass, work together are key learnings. The communication of where you are to friends, family or first responders are safety components built into the courses. From May to September of 2018, a variety of formal and informal teaching events will be used to allow seniors and students to practice their GPS, Compass and Map skills. Compass and GPS skills will be taught in a confined safe area and along established trails.

Greencheck Basic Course

For seniors who wish to learn more, and wish be able to mentor others, the Greencheck Level 1 Basic Course will be offered. Course attendees will work on using both GPS Units and cell phones to detect coordinates and know what they mean. The "Greencheck" GPS/GIS Certificate for the Level 1 Basic course will be awarded to seniors completing the program.

The course uses topographic maps of the area surrounding the Lakehead Region Conservation Authority's Administrative Office and Hazelwood Lake Conservation Area. Seniors and youth can learn map skills and key ways to determine "where you are" on the map using GPS units. The Greencheck Field Guide is provided to course attendees, and is a handy guide that can be stored in a pack. The course is delivered as a full day session, with study at the LRCA Multipurpose Room in the morning followed by an afternoon field trip.

Greencheck Level 1– Full Course

This course is designed with high school or college classes in mind or for organizations requiring a higher level of competency with the map, gps and compass. The two day course includes classroom instruction on coordinate systems, components of topographic maps as well as the field skills needed to navigate and find locations.

The course is followed by a test administered at the LRCA Administrative Office. Certification of the skills learned will be granted by a card or certificate from the Canadian Ecology Centre.



http://greencheckgps.ca



Overall Expectations-Full Course

By the end of the course or program the participant will:

- explain or define a location; a detailed response would include the following location standards.
- The map datum
- The coordinate system (UTM or latitude/longitude)
- Direction in relation to a defined point (location) on a map
- Details (anecdotal) related to the location

For the Map -Skills and Content

- Identify a standard Canadian Topographical 1:50 000 topographical map.
- Explain the use of the scale on the map to determine distances from two points, A to B
- Identify the map datum source on the map (required for the GPS setting)
- Identify the UTM and latitude/longitude grid "tick" or indicator marks in the corners and margins of the map
- Demonstrate and identify a location(s) on the map "rounded off" to the nearest 100 m for the UTM system (i.e. E 5129400) or to the nearest "hundredth" of a decimal minute for latitude/longitude (i.e. N 46° 17.700').

For the Compass- Skills and Content

- Identify (and demonstrate where) Magnetic North is located, as related to present location (surroundings)
- Recognize and express the identified location in relation to a north, east, south or west direction as related to surroundings, for example the east side of the road, the north side of the lake, the west fork of the trail etc...
- Describe the location (with coordinates) on the map and give directional details or physical features to help with location
- Identify component parts of a compass with adjustment to find Magnetic North

For the GPS- Skills and Content

- Find the Navigation setting on the GPS Setup menu
- Enter the map datum setting WGS 84 (NAD 83) or NAD 27 according to map datum source on the 1:50 000 or 1:24 000 topographical map
- Enter either UTM and latitude/longitude coordinate system as a setting
- Read the Position or Navigation page of the GPS unit (UTM or latitude/longitude) in relation to the topographical map
- Mark a waypoint (GPS location) and identify the easting and northing and the latitude and longitude coordinates
- Save and Retrieve a waypoint (with coordinates)
- Retrieve a waypoint (as above, with coordinates)
- Demonstrate the function Go To (a destination, as above, with coordinates)

Basic Course– The basic certification does not require as extensive an understanding of compass skills and utilizes the UTM coordinate system exclusively. The test and certification are optional.