



LAKEHEAD REGION
CONSERVATION AUTHORITY

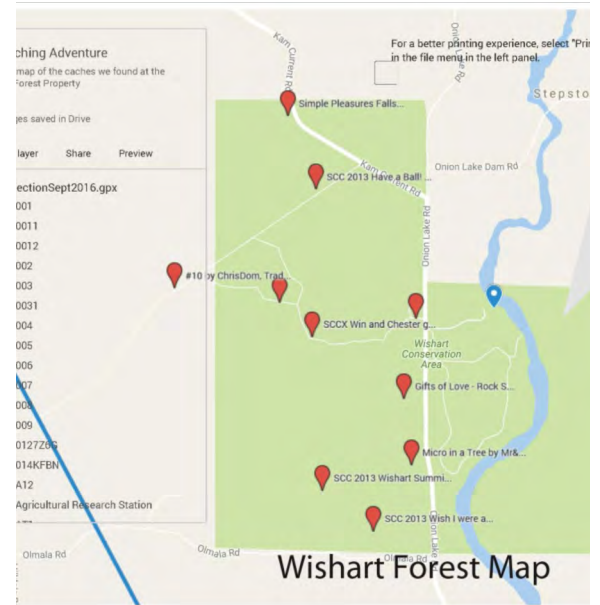
GEOCACHING, GPS & MAPPING

Challenge your navigation skills with the fun and exciting sport of geocaching. Create a map of your discoveries.

Students explore the worldwide sport of Geocaching. They become wilderness detectives by hunting for hidden caches. Using free software applications such as Google Earth, Google Maps or Garmin Basecamp, maps can be created using different themes, as an optional classroom extension.

Essential safety skills can be taught by marking starting points, leaving a virtual cookie trail and learning how the map and compass connect to GPS technology. Students share the use of 25 LRCA GPS units.

This activity is suitable for students in grade 4-12 and the level of instruction can be adapted to different learners. Best results occur when students partner up to learn how the GPS works. Hazelwood Lake or Cascades Conservation Areas provide excellent areas for students to search for caches.



Participants learn how to record waypoints and can make maps using Garmin Basecamp



Students work in pairs learning GPS navigation skills



Topographic Map skills such as contour lines and scale can be integrated with an optional classroom extension.



Hazelwood Lake Conservation Area has nine geocaches hidden on three different trails.

Inquiry Skills and Mapping

Inquiry, which guides students through the inquiry process for the particular subject. Included in each Inquiry section is an expectation that focuses on map skills, which may include using mapping applications, extracting information from globes or maps, and analysing and/or constructing print or digital maps. Maps – and the spatial skills associated with them – may be integrated into any component of the inquiry process, as the following examples illustrate.

Formulating questions:

1. Students formulate questions related to the type of map or maps best suited to their inquiry.
2. *Gathering/organizing:* Students determine the purpose of different maps and which are most relevant to their inquiry.
3. *Analysing/interpreting:* Students extract information from, plot information on, and/or analyse various types of maps to help them determine patterns, trends, and/or interrelationships.
4. *Communication:* Students construct maps in order to communicate key pieces of information.

THE ROLE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY IN SOCIAL STUDIES, HISTORY, AND GEOGRAPHY

1. *In the inquiry process:* ICT programs can help students throughout the inquiry process as they gather, organize, and analyse information, data, and evidence, and as they write, edit, and communicate their findings.
2. *To help develop spatial skills:* Students can extract and analyse information using on-line interactive mapping and graphing programs. Such programs can also help students organize and present information in maps and graphs. Students in the junior and intermediate grades can use GIS to layer information when analysing and creating new maps.
3. *As part of field studies:* When engaging in a field study, students can combine a number of ICT tools such as GPS, hand-held personal digital devices, and digital cameras

