

Learning Outcomes/Expectations - Forestry

Participants should be able to:

- T identify the major forest regions of Canada and their principle tree species
- T explain the historical importance of forests, including their values to people and to the natural environment as a whole
- T identify how much of Canada and Prince Edward Island's surface land area is forests, including how much of the forested land is publicly and privately owned
- T identify the kinds and number of jobs in Canada which are forest-related
- T describe the economic importance of forested-related industries to provincial, national and international economies
- T explain the main components in the operation of a sawmill, including processes, jobs and equipment
- T measure lumber in "board feet" (measure of lumber or boards)
- T explain the industrial paper making process, including processes, jobs, and equipment
- T identify the major types of forest products that are produced in the Maritimes (i.e. pulp and paper, lumber, veneer, fuelwood, poles, etc.)
- T identify coniferous & deciduous tree species common to Prince Edward Island

Participants should be able to:

- T demonstrate the use of common forestry equipment such as compass, calipers, diameter tape, prism, clinometer, etc. to measure tree height, girth and timber volume
- T calculate tree age from growth rings
- T explain general tree history from growth rings (i.e. periods of drought, faster growth, scarring from fire)
- T explain tree growth from photosynthesis to trunk growth to role of roots
- T interpret macro features from an aerial photograph and understand how these photographs are utilized to prepare a forest inventory

Participants should be able to:

- T explain the forest management cycle and each of its component parts:
 - (a) planning
 - (b) harvesting
 - (c) site preparation
 - (d) regeneration - natural - artificial plant
 - (e) tending and protection

Explain how environmental concerns such as water quality, habitat, recreation and aesthetics are incorporated into forest management

- T explain the concepts of even and uneven aged forests
- T describe the various cutting styles and the silvicultural principles underlying them
- T explain forest practices and standards as described by various government and industry organizations

Participants should be able to:

- T identify the four main categories of harmful insects and how they affect trees and forests
 - (a) defoliators
 - (b) sucking insects
 - (c) gall makers
 - (d) borers
- T describe the main insect and diseases that affect Canadian forests

Participants should be able to:

- T explain the principle of “sustainable development” and how it applies to forest practices
- T explain “biodiversity” and those policies and measures that are being implemented to increase biodiversity in Prince Edward Island; also, describe methods that citizens and grassroots organizations can undertake to increase biodiversity
- T address current forestry issues from different perspectives (i.e. clear cut vs old growth debate, prescribe burns in protected areas, alternatives to chemical pesticides)