



# GREAT OUTDOORS C

## WELCOME

Welcome to the 4-H Great Outdoors C Project! Please read through this guide carefully, as it contains information and suggestions that are important for your project. **4-H leaders can obtain a Leader Project Guide and other resources from the PEI 4-H Office.** Hopefully you, as a member, will “Learn to do by Doing” through hands-on activities that will encourage learning and enjoyment. If you have any questions, contact your District 4-H Officer or your 4-H project leader.

## 4-H YEAR COMPLETION

You complete a project by:

- completing the project Achievement Day requirements
- completing a communication project
- completing a community project
- completing an agriculture awareness project
- taking part in Achievement Day

**You must complete all of the listed aspects in order to show at Fairs and**



ACHIEVEMENT DAY REQUIREMENTS	
Leaf Collection	40
Special Project	30
Tour	30
	<b>100 Marks</b>

EXHIBITION REQUIREMENT
Leaf Collection

**Special Project**  
Great Outdoors members are expected to complete a special project. This can be done individually or in a group. Members are required to write a one page report on their observations on one of the following activities:

- Grafting
- Collect and Germinate Seeds
- Aging a Tree
- Camping
- Hiking
- Canoeing
- Cross Country Skiing
- Orienteering

**Tour**  
Great Outdoors C members are expected to participate in one tour and write a one page report on their tour. Tour suggestions include...

- Frank Gaudet Tree Nursery
- Seed Orchard
- Woodlot Tour
- MacPhail Woods Ecological Forestry Project



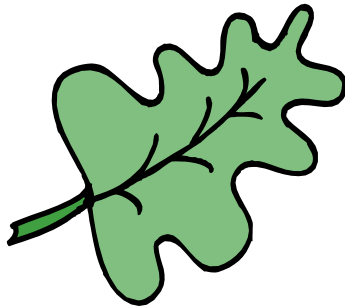
**Ages for 4-H members as of January 1st of the 4-H year:**  
 Junior: 9-11 years  
 Intermediate: 12-14 years  
 Senior: 15-21 years

**Check out the PEI 4-H Web Site**  
[www.pei4h.pe.ca](http://www.pei4h.pe.ca)

## HELPFUL RESOURCES!

[www.canadatrails.ca](http://www.canadatrails.ca)  
[www.tctrail.ca](http://www.tctrail.ca)  
[www.canadianforestry.com](http://www.canadianforestry.com)  
[www.macphailwoods.org](http://www.macphailwoods.org)  
[www.backyardgardener.com/tree](http://www.backyardgardener.com/tree)  
[www.orienteing.org](http://www.orienteing.org)  
[www.peisland.com](http://www.peisland.com)

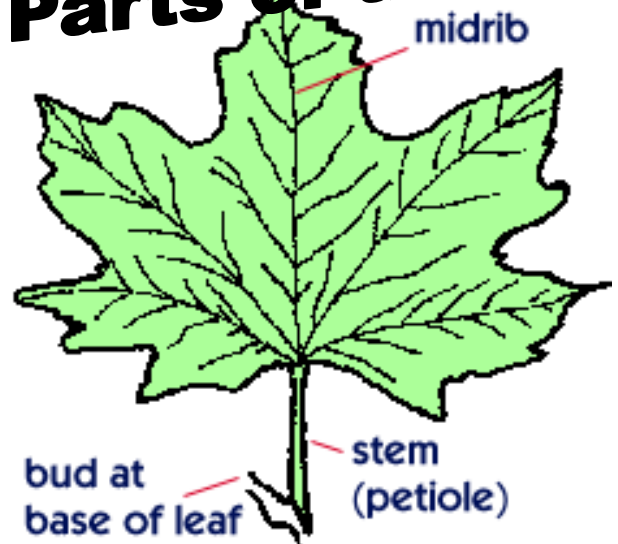
A variety of books and videos  
A Day in the Forest - Island Forests (7 minutes)  
Forestry in Action (14 minutes)  
4-H Foresters (3 minutes)  
are available at the PEI 4-H Office which can be borrowed for a two week loan period. To book these, call 368-4833 or drop by the PEI 4-H Office at 40 Enman Crescent, Charlottetown.



## BE A GOOD SPORT!

In the spirit of learn to do by doing, all those involved in 4-H are encouraged to practice good sportsmanship, use common sense at all 4-H activities and the work in any 4-H project should be the member's own work.

## Parts of a Leaf



# Common Native Trees of PEI

Trees grown on PEI originally; natural occurring species, not those imported from other areas.

### Softwoods

(with clustered needles)

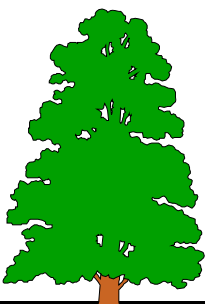
Eastern White Pine  
Red Pine

(with single needles)

White Spruce  
Black Spruce  
Balsam Fir  
Eastern Hemlock  
Eastern Larch (Tamarack)

(with scale-like leaves)

Eastern White Cedar



### Hardwoods

(with alternate leaf arrangements)

Red Oak  
Beech  
White Birch  
Yellow Birch  
Grey Birch  
White Elm  
Trembling Aspen (poplar)  
Large Toothed Aspen  
Speckled Alder  
Pin Cherry  
Choke Cherry

(with opposite leaf arrangement)

Sugar Maple  
Red Maple  
Striped Maple  
Mountain Maple  
Mountain Ash  
Black Ash

# New Words

## **Scientific Names:**

Part of an international language among scientists. This is a naming scheme (using Latin) which reflects the relationship of organisms to each other. Trees have only one scientific name.

## **Species:**

Group of organisms (trees) with similar characteristics and which show close relationship to each other. i.e., White Spruce and Black Spruce are species.

## **Magnetic Compass:**

Instrument for determining direction, made basically of a freely suspended magnetic needle that points toward the magnetic north.

## **Magnetic North:**

Direction towards which the needle of a compass points. It is a natural deposit of iron ore located 22,500 km south of the true north pole.

## **True North:**

Pole located at the centre of the top of the earth in the Arctic Continent.

## **Magnetic Declination:**

Angle formed between the direction of a compass needle and the true north; the difference between magnetic north and true north.

## **Bearing:**

Position of direction of an object or point.

## **Pace:**

Distance covered from your left foot to left foot, or right to right, measured either from toe to toe or heel to heel.

## **Reproduction:**

Process by which an animal or plant gives rise to another of its kind—to produce young.

## **Sprouts:**

New stems which grow from the stumps of trees.

## **Sucker Growth:**

Shoot of sprout arising from the lateral roots of certain trees.

## **Layering:**

Method of reproduction in which living lower branches of some trees come into contact with moist ground or are covered with litter and produce roots. These branches eventually grow into trees separate from the parent tree.

## **Seed:**

Fertilized part of the female flower that contains an embryo which can reproduce a plant similar to the one from which it came.

## **Germinate:**

To begin to grow or develop; sprout.

## **Pollen:**

Fertilizing element of male flower, consisting of a fine yellowish powder.

## **Fertilize:**

Cause the reproductive part of female flower to begin developing into a new tree (seed).

## **Fruit:**

Seed-bearing part of trees and other plants.

## **Cone:**

Fruiting body of coniferous trees, which produce the seed. Cones usually have woody, overlapping scales.

## **Nut:**

One-seeded fruit with a woody outer covering that does not split open when the fruit is ripe (acorn).

## **Drupe:**

Simple, one-seeded, fleshy fruit which remains closed at maturity (cherry).

## **Pome:**

Fleshy fruit consisting of a central core with usually 5 seeds enclosed in a capsule and an outer fleshy layer (apple).

## **Samara:**

One-seeded, winged fruit (ash, elm, maple).

## **Stratification:**

Store seeds in a cold, moist environment for a specific period of time to overcome dormancy or for storage.

## **Radicle:**

Small seed root; first root

## **Hypocotyle:**

Small seed stem (become tree trunk).

## **Cotyledon:**

Seed leaf, or one pair of the first leaves from a sprouting seed.

## **Photosynthesis:**

Process by which green plants change water, carbon dioxide (from the air) and sunlight into plant food needed for life.

## **Reforestation:**

Reproduction or renewal of a forest by either natural seeding or artificial methods. Harvesting or fire usually come before reforestation.

## **Natural Regeneration:**

Reproduction or renewal of a forest from the seeds of the other trees in or near the area.

## **Artificial Reforestation:**

Renewal of a forest area by either seeding or seedling planting.

## **Direct Seeding:**

Planting seeds directly on reforested sites - not a common practice.

## **Seedling:**

Young, tiny tree; a stage in a tree's growth from germination to the point where it is no more than 2 meters high and 2.5 cm in diameter.

## **Container Seedling:**

Seedlings which are grown in nurseries in individual tubes—for reforestation.

## **Bare Root Seedling:**

Seedlings which are grown in outdoor seed beds—for reforestation.

## **Site Preparation:**

Operation to expose mineral soil, mix mineral soil with humus, reduce competition from plants, and compact logging slash to make planting easier, and generally to improve the site where tree seedlings are to be planted.

## **Tree-Seed Orchards:**

Orchards where many high quality seed producing trees are grown under controlled conditions. They make seed collection easier for forestry workers and ensure good seeds!

## **Tree Nurseries:**

Greenhouses with excellent growing conditions, where seeds are planted and grown into tiny, healthy seedlings for reforestation.

# LEAF COLLECTION

*(Achievement Day and Exhibition Requirement)*

Making a tree identification collection is not only interesting, its fun! Each project member must make a leaf collection of twelve different Island trees. Each tree should be represented by a well-formed leaf (hardwoods) or several needles (softwoods).

To make a good quality leaf collection for tree identification there are five important steps you should follow:

- Gather good materials;
- Keep them fresh before pressing;
- Press them to keep their fresh, natural appearance;
- Mount them securely and attractively;
- Protect them from damage or breakage



## GATHERING YOUR LEAVES AND NEEDLES

Try to collect fully grown leaves. Young leaves do not represent the true size, and they often turn dark because of their high water content. Gather only healthy, well-developed leaves and avoid those which have been torn or damaged. If the leaf is compound, take the entire leaf, not just a single leaflet. Pick your leaves near the bottom of the stem and be sure to pick more than one leaf per tree—three should be enough.

## KEEPING THE MATERIAL FRESH

You'll need an old magazine, or catalogue when you go gathering your leaves. As you collect each leaf, carefully place it flat between the pages of the magazine to protect it from damage until you get it home to press.

## PRESSING SPECIMENS FOR FRESH, NATURAL APPEARANCE

At home, the leaves need further drying and pressing. The simplest leaf press can be made using newspaper, corrugated cardboard, 2 pieces of plywood, and a heavy object to use as weight. (Wooden presses can be obtained or constructed, but they may be costly and time consuming).

To make and use your homemade press, place a piece of plywood on a flat surface in a dry room (if you keep it in a damp area the leaves may mildew or mold). Place a piece of cardboard over the sheet of plywood. Then put several pieces of folded newspapers over the cardboard. Place one leaf flat on the newspapers. Cover with new newspaper, and cardboard, more newspaper, and another leaf. Continue this "sandwich making" process until all your leaves are in the press. When your press is finished, it should look like so—from bottom to top—a piece of plywood, piece of cardboard, newspapers, a leaf, newspapers, piece of cardboard...a leaf, newspapers, piece of cardboard, piece of plywood, and a heavy object.

Allow 7 to 10 days for pressing. It's a good idea to open the press 2 days after putting the leaves in. Carefully change the newspapers. The leaves' moisture is absorbed by the papers near them and if the papers are not changed, some of the leaves may turn black. One change is probably enough. If the leaves feel cool on your cheek they need more drying.

## MOUNTING YOUR PRESSED SPECIMENS

When dry, your leaves and needles need to be mounted on the pages of your display book. Remember to handle the pressed and dried leaves carefully, as they break easily! For your display book a "sticky page" photo album works perfectly, but if you wish you can make your own booklet using hard paper. A scrapbook or a three-ring binder with pages added can also be used. Mount your leaves and needles on separate pages and in the lower right hand corner of the page print the common name of the tree the leaf or needles came from, and the date of collection. Use a dark pencil or pen and make sure your spellings are correct.

Print your name, club and age on a separate page at the back of your booklet.

## PROTECTING YOUR MOUNTED SPECIMENTS

If you use a "sticky page" photo album for your display book you won't have to worry about preserving your display. It should keep well for a very long time. If you make your own book from construction paper or the like, you should protect it by carrying it in a three-ring binder or a box. Always store your leaf collection in a dry place.

