

Tree Identification



Suggested Time: 45-60 minutes
Science, Environmental Science, Math
Envirothon NB Learning Objectives

Recommended Grades: 6 - 12
(adaptable for younger ages)
Outside activity
Group or Individual

Curriculum Outcomes

Skills

- **Observation, Data Collection**
 - Decide how to collect information, measurements
- **Analysis and Interpretation**
 - Learn to use a dichotomous key or field guide to identify species.
- **Analyze, Interpret and Communication**
 - Convey findings through presentation



NB Global Competencies

- Critical Thinking & Problem Solving
- Communications
- Collaboration
- Sustainability & Global Citizenship
- Innovation & Creativity
- Self Awareness and Self Management

Key Concept

Identify tree species, understand use of dichotomous keys.

Acknowledgements



Your environmental trust fund at work.



Questions?

Connect with a natural resource expert.

Contact us:

Becky Geneau

Science East, Director

Environmental Programming & Science Competitions

Centrebecky.geneau@scienceeast.nb.ca



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Tree Identification

Introduction

Trees are all around us in our communities, parks and backyards. They are an important part of our lives by providing us essential needs like food and oxygen.

Acadian Forest (Wabanaki) Region

A forest region is defined as a major geographic belt or zone characterized by a broad uniformity in physiography and in the composition of dominant tree species. Different forest regions exist because of differences in soil types, topography, climate and precipitation. Canada has eight forest regions, each geographically characterized by dominant species and stand types of vegetation. New Brunswick is within the Acadian Forest (Wabanaki) Region.

In this Eco-Lab, you will gain knowledge on the parts and tissues of a tree, twig, and leaf and be able to explain how a tree grows. Know what dendrochronology is and how it can be used to understand past environmental conditions. Understand the processes of photosynthesis and respiration and be able to identify common tree species without a key, and identify specific or unusual trees using a key.

Resources:

Here are some resources that might help you in identifying trees:

Dichotomous Keys

- [Softwood Trees of the Acadian Forest \(Wabanaki\) Region](#)
- [Hardwood Trees of the Acadian Forest \(Wabanaki\) Region](#)
- [Forestry Study Guide Envirothon NB - High School](#)
- [Forestry Study Guide Envirothon NB - Middle School](#)

Activity 1 - Dichotomous Key - Identification tool

Definition:

A dichotomous key is a tool used in science for plant or animal identification. It is a series of questions, and each question is a choice between two characteristics.

The identity of the tree you are identifying is determined by choosing the characteristics that best apply.

Some common uses of a dichotomous key are:

- To identify and categories organisms.
- To help students easily understand complex scientific concepts.
- To simplify and organize large amounts of information for identification.

Go to the Dichotomous Key Activity Sheet to create your own.

Going Further:

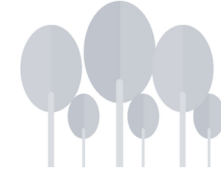
Community Science
[NCF-Envirothon iNaturalist Project](#)

Join the NCF-Envirothon iNaturalist project for additional activities and worksheets. Post your favourite photos of leaves, barks, buds, cones, etc.

[Accept the Challenge - Instructions](#)
Get the FREE App!



iNaturalist



Activity 1: Dichotomous Key

Create your own dichotomous key

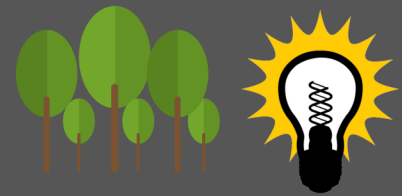
1. You will be provided with 10 different candy bars (or various items around your room, which you will use to make your own dichotomous key.
2. Sort the candy bars into two categories based on a physical characteristic (size, colour, ingredients, shape, etc.). Write a question to reflect the physical difference between the two groups.
3. Then sort each of those smaller groups into two categories again using a new physical characteristic.
4. Continue this process until all the candy bars have been separated into their own individual groups.
5. Record the characteristics you used to separate each group using steps in the box below.
6. You can also use pictures of their physical characteristics to sort them.

Dichotomous Key



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Tree Identification

This Eco-Lab activity is focused on using the a dichotomous key, field guides and iNaturalist app to identify trees.

Activity 2 - Tree Identification - Collect, Record Analyse, Interpret

Teams / Groups

As a team/group, identify 8 trees. List at least three (3) key identifying features in the “field notes” for each observation to justify your reasoning.

Individual Participants

As an individual, identify 4 trees. You must list at least three (3) key identifying features in the “field notes” for each observation to justify your reasoning.

Reporting and Presentation

- Taking photos
- Drawing pictures or sketches
- Collecting leaves/buds/cones
- Written descriptions

When photographing trees, there are a few things you will need to snap shots of for the ID to be confirmed, especially with dormant deciduous trees. Three features that are important to get an accurate identification are:

- Bark
- Cones
- Buds
- Leaves
- Branches

Three photographs showcasing different parts of the plant in question will allow other naturalists to confirm the identifying features you have listed in the “field notes” section of the Photo Evidence sheet.



Extension Activity

If you are outside this winter, keep an eye out for other winter weeds and wild vegetation, and consider adding them as sightings to the iNaturalist project or SEEK app!

Collect: Begin a leaf, cone, twig collection of your own, you can laminate leaves to preserve them or display photos taken. List as many uses of each as you can.



Recommended Watch

Virtual Workshop:

Tree Identification & Physiology
presented by Bernie Daigle, NR Can - Canadian Forest Service

Going Further:

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[NCF-Envirothon iNaturalist Project](#)

Join the NCF-Envirothon iNaturalist project for additional activities and worksheets. Post your favourite photos of tracks, habitat, fur, bones, feathers, etc.

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We want to hear from you!

Share your video, photos or presentations with us!
E-mail them to becky.geneau@scienceeast.nb.ca or tag us on social media. #ScienceEast #EnvirothonNB



Questions?

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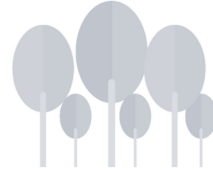
Becky Geneau

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Activity 2: Photo Evidence

Field Notes

Location _____

Date _____

Paste photo here or draw the features of the trees



What did you find? _____

Notes:

Using resources and field guides, identify the trees. Comment on where you found the tree. Describe or draw the features (Bark, Buds, Branches). Did you observe any leaves? What resource did you use to identify it. Write down other observations you made about the surrounding environment.
