

TREE BEE TEACHER'S GUIDE

Tricks and tips to help educators incorporate Tree Bee resources into their classroom.



PURPOSE

The purpose of this guide is to:

- Inspire teachers to bring trees and forests into their classrooms through a fun and interactive learning experience,
- Provide teachers with Tree Bee learning objectives,
- Provide teachers with Ontario curriculum links, and
- Address frequently asked questions.

ABOUT US

Tree Bee

Tree Bee is an education tool that encourages students to learn about tree identification and general forest knowledge. Tree Bee is a great opportunity to get kids excited about trees, forests and nature.

www.treebee.ca

Forests Ontario

Forests Ontario is dedicated to the renewal and stewardship of Ontario's forests. Forests Ontario is the voice for Ontario's forests. We are a provincial resource and trusted authority for those seeking to invest in the future of our forests - through donations, sponsorship, volunteerism, tree planting, community awareness events and forest management.

www.forestsontario.ca



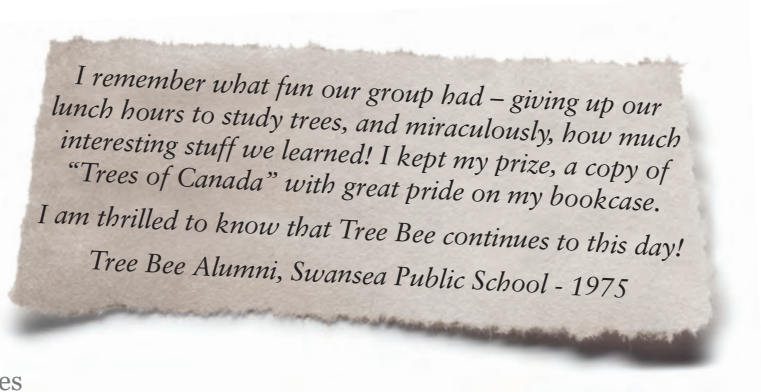
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What is Tree Bee?

Tree Bee introduces communities to the trees in their own backyards. Through online resources and activities, schools, families and forest enthusiasts are encouraged to get outside and explore.

Through Tree Bee, Forests Ontario provides educators with teaching resources including factsheets, lesson plans, tree identification drills, that can be used throughout the year to connect students with nature and foster a meaningful and lasting connection to our forests.

Where there is community support, Tree Bee can also feature a friendly competition during which students work collaboratively to identify tree species using images of prominent features such as leaves, bark, buds and fruit. Additionally, teams are challenged to answer a series of multiple choice questions related to forests and forest management.



Learning Objectives

Tree Bee is an engaging, interdisciplinary program which capitalizes on children's inherent fascination with nature. The key learning objectives of Tree Bee are:

- 1 To increase students' awareness of forest management and forest ecosystems
- 2 To increase students' knowledge of, and ability to, identify common tree species
- 3 To highlight the historical and current importance of forestry to Canada's economy
- 4 To develop students' understanding of the ecological goods and services provided by forests
- 5 To foster an appreciation for local and national green spaces
- 6 To engage students in cooperative learning opportunities and develop teamwork skills

Study Tip:

Have your students, independently or as a group, select a tree or forest fact which interests them to research. Students can create a report, design a poster or prepare a creative presentation on their topic to share with the class.

Ontario Curriculum Links

Tree Bee is an interdisciplinary program that links to the following grade 4, 5 and 6 Ontario curriculums.

CURRICULUM	YEAR	GRADE	OVERALL EXPECTATIONS	SPECIFIC EXPECTATIONS
Social Studies	2013	4	<p><i>People and Environments: Political and Physical Regions of Canada</i></p> <p>B1. Application: assess some key ways in which industrial development and the natural environment affect each other in two or more political and/or physical regions of Canada</p> <p>B3. Understanding Context: Regions in Canada</p>	<p>B1.1 Analyse some of the general ways in which the natural environment of regions in Canada has affected the development of industry</p> <p>B1.3 Describe some key actions taken by both industries and citizens to address the need for more sustainable use of land and resources</p> <p>B3.1 Identify various physical regions in Canada and describe their location and some of the major ways they are distinct from and similar to each other</p>
Science & Technology	2007	5	<p><i>Understanding Earth & Space Systems: Conservation of Energy and Resources</i></p> <p>1. Analyze the immediate and long-term effects of energy and resource use on society and the environment, and evaluate options for conserving energy and resources</p> <p>3. Demonstrate an understanding of the various forms and sources of energy and the ways in which energy can be transformed and conserved</p>	<p>3.2 Identify renewable and non-renewable sources of energy</p> <p>3.3 Describe how energy is stored and transformed in a given device or system</p>

Every year at my own school, students who are no longer eligible to participate because they are in grade 7, ask if they can help coach and they come back to help the team prepare for the next competition.

Tree Bee Coach, St Monica Catholic School - 2013

Ontario Curriculum Links

CURRICULUM	YEAR	GRADE	OVERALL EXPECTATIONS	SPECIFIC EXPECTATIONS
Science & Technology	2007	6	<p><i>Understanding Life Systems</i></p> <p><i>Biodiversity</i></p> <p>2. Investigate the characteristic of living things, and classify diverse organisms according to specific characteristics</p>	<p>1.2 Assess the benefits that human societies derive from biodiversity and the problems that occur when biodiversity is diminished</p> <p>2.3 Use scientific inquiry/research skills to compare the characteristics of organisms within the plant or animal kingdoms</p>
Science & Technology	2007	6	<p>3. Demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans</p>	<p>3.1 Identify and describe the distinguishing characteristics of different groups of plants and animals and use these characteristics to further classify various kinds of plants and animals</p> <p>3.2 Demonstrate an understanding of biodiversity as the variety of life on earth, including variety within each species of plant and animal, among species of plants and animals in communities, and among communities and the physical landscape that supports them</p> <p>3.6 Identify every day products that come from a diversity of organisms</p>

Study Tip:

Take a hike in a local park or your school yard!

Getting outdoors and interacting with nature is a lasting way to teach tree identification to students.

Engage students through interactive activities like a tree scavenger hunt or hand out tree keys and teach students to use them.

Tree Bee In Your Classroom

You decide how much, or how little, class time to dedicate to Tree Bee. Some teachers run Tree Bee as an extracurricular club or team while others choose to make regular use of Tree Bee resources in their classroom.

Resources and study materials are currently available on the Tree Bee site (www.treebee.ca). New resources are uploaded to the website as they are completed, so check back often. In addition to Tree Bee resources, the following Focus on Forests lesson plans, activity sheets and factsheets are strongly linked to Tree Bee learning objectives:

- Canada's Arboreal Emblems (Factsheet)
- Canada's Forest Distribution (Lesson Plan)
- Construct a Tree (Lesson Plan)
- Leaf it to Memory (Activity)
- Let's Look at Trees (Lesson Plan)
- Leaf Bingo (Activity)
- Not all Plants Are Created Equal (Lesson Plan)
- Parts of a Tree (Factsheet)
- Tree Bee Pocket Guide (Activity)
- Weird Wood Products (Lesson Plan)

Any of the above resources can accessed through the Focus on Forests website free of charge. Visit www.forestsonario.ca to download copies.

Study Tip:
Flash cards are an effective study tool. Prepare a set for your students using images found online or have students make their own as an assignment.



Tree Bee Competition

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Frequently Asked Questions

1 *What are the costs to participate in Tree Bee?*

There is no cost to access Tree Bee or Focus on Forests teaching resources for use by educators or community groups; however, fees associated with participation in regional events are at the discretion of local organizers. Please consider making a donation to Forests Ontario in support of our education programs.

2 *What is the format of a Tree Bee competition?*

The competition format will vary by location but generally speaking participants are divided into teams of 2 to 3 students, however these numbers may vary based on the competition. Competition testing consists of two components: 1) Tree identification and 2) Forest Literacy.

a) Tree identification

Teams are challenged to identify a number of trees using only images or samples of prominent features such as bark, buds, fruit, leaves or the tree silhouette. The number of trees selected is chosen by the competition organizer. Students are given a limited amount of time to select the corresponding tree species from a long list and match the slide number to the correct species.

b) Forest Literacy Quiz

Following the tree ID quiz, students have 15 minutes (or another amount of time chosen by the community organizer) to complete a multiple choice test focused on forest literacy. Again, the number of questions on the test is at the discretion of the local organizers.

Marking of tests and the announcement of the winning teams may take place following testing or at a later time.

3 *What are students tested on at a Tree Bee competition?*

Students will be tested on tree identification skills and forest literacy. Study materials, including a bank of possible multiple choice questions, are all accessible through the Tree Bee website. The tree identification portion will focus on common native and introduced Canadian tree species.

4 *How much preparation is required to attend a competition?*

There is no minimum preparation time required to participate, however students find the experience more rewarding when they can actively participate in the test. The structure of running Tree Bee as an extracurricular activity or club is particularly successful in preparing students. In these cases, teams tend to meet a minimum of once per week leading up to the competition.

5 *How can I prepare my students to participate in a Tree Bee competition?*

It is encouraged that you speak with your local Tree Bee organizer to confirm what tree species students may be asked to identify. A bank of Forest Literacy questions is available through the Tree Bee website for preparation.

Why Tree Bee?

Simply put, because kids love trees! Tree Bee resources draw on students' inherent fascination with nature and foster a sense of stewardship in participants that, as we have often heard from program alumni, continues into adulthood. Additionally Tree Bee resources enable educators without expertise in forests or forest management to weave important environmental and economic concepts into their classroom. Forests and forestry are an important aspect of the Canadian economy, history and identity which should be reflected in classrooms across the country.

My years in Tree Bee were most definitely great fun, but I also learned a great deal. Besides learning about tree identification and forestry education I learned what it felt like to be confident. Being a member of the [Tree Bee] club helped me to grow out of my shy shell and discover a "sport" at which I thrived.
Tree Bee Alumni, St Monica Catholic School - 2005



Bring Forests into Your Classroom

Forests Ontario is a registered, non-profit organization committed to the re-greening of Ontario through forest restoration efforts. Our education and awareness programs enable educators to bring forestry into their classrooms and to create stewards to protect our forests for the future. Our two leading education programs are Focus on Forests and the Ontario Envirothon – read more to find out if they are a good fit for you and your students.

Focus on Forests is Canada’s leading forest education program that engages youth and educators in learning more about our forests. We achieve this goal through the development free curriculum-linked resources and videos, the delivery of immersive programs and outreach activities. Printed resources are available in French and English for grades K-12. Visit www.focusonforests.ca to create a free Focus on Forests user account and access our resources!

The **Ontario Envirothon** is a unique program for students in grades 9- 12 that encourages participants to learn about the natural world through direct experiences in the outdoors. Working in teams of 5, students participate in workshops and tests and are mentored by professionals from the natural resources sector. The objective of the Ontario Envirothon goes beyond learning about the environment, and shows students how to make positive changes and lead by example within their own communities. For more information visit www.ontarioenvirothon.ca.

Tree Bee Partners

Forests Ontario would like to thank our Tree Bee partners whose generous support enabled us to develop the Tree Bee website and associated online resources:

