



**WISCONSIN'S**  
**MILLENNIUM TREE**

Dear Fourth Grade Educator:

Enclosed are a variety of activities and resource materials to help you introduce your fourth grade students to the forest resources in Wisconsin. We invite you to use all of the activities (either during a short-term unit or spread over the course of the school year) or select individual activities that fit into your curriculum. No matter how you decide to use these materials, we hope they help your students recognize that our state is blessed with an abundance of trees and water. Through conservation—the wise use of the resources—these valuable natural resources can meet our needs today as well as those of future generations. Whether you live in Wisconsin's northwoods or in an urban center of Wisconsin, trees play a critical role in your students' everyday lives. These activities can help students understand that link between their lives and the rural and urban forest resources of Wisconsin.

Wisconsin has a rich forest resource that is important for many different reasons. Our forests are critical in helping to maintain our clean water and air and the high quality of life we enjoy in Wisconsin. Forests provide a wide range of recreational opportunities. Many creatures large and small depend on the forest for food and habitat. Wisconsin residents and visitors alike appreciate Wisconsin's forests for their natural beauty. The forests in Wisconsin also are a crucial component of the state's economy—both as a tourist destination and for the jobs that are directly and indirectly dependent on the forest industry. Wisconsin forests provide the raw material for the many wood products we depend on in our daily lives today. And the forests of Wisconsin have been an economic mainstay of the region since statehood. Through the activities included in this packet, your students can learn to appreciate Wisconsin's diverse forest resource for all of these values - and many more.

Your students can learn about what kinds of trees grow in Wisconsin's 16 million acres of forests, how students can be involved in caring for the forest, and what issues surround the management of this vital resource today. Concerns about urban sprawl, impacts of management practices on the forest's biological diversity, meeting the needs of an increasing population with a decreasing base of forest land available for harvest—these are just a few of the challenges for today's leaders and natural resource professionals. Because of the wide variety of demands placed on our forests today, conflict over their use and management is inevitable. Thus, it is critical that students learn about the resource so they can become informed decisionmakers in the management of the resource.

The way our society views the forest resource has changed dramatically over the years. At the time of statehood, the forests of Wisconsin seemed endless. Early settlers viewed the land and the resources on it as inexhaustible. Trees were cut to clear the land for agriculture, and the great white pines from the Wisconsin northwoods were used to build the cities of the Midwest. In 1899 and 1900, Wisconsin led the world in lumber production. Initially the bountiful forest seemed adequate to satisfy all the demands placed on it; however, by the late 19<sup>th</sup> century, some people began to realize that the resources had limits and that conservation was necessary to provide for current needs and, even more importantly, for future generations.

Wisconsin's map of presettlement vegetation shows forests stretching from Lake Superior to Illinois and from Lake Michigan to the Mississippi and St. Croix Rivers. The fifth inventory of Wisconsin's forests, completed in 1996, also revealed a wealth of forest land in our state. But what happened between those times is the story of how sustainable forestry evolved in Wisconsin.

So what is sustainable forestry? In 1996, a diverse group of people reached consensus on the following definition, which is now in the state statutes as part of the language guiding the management of the state forests in Wisconsin:

*“Sustainable forestry is the practice of managing dynamic forest ecosystems to provide ecological, economic, social and cultural benefits for present and future generations.”*

Today, 46 percent of Wisconsin is forested and our forests have recovered remarkably, thanks to the planning of the legislature, foresight of leaders, and hard work of hundreds of unsung heroes who extinguished the fires raging across Wisconsin, replanted the forests, and nurtured them into the beautiful resource we enjoy today. Forests in Wisconsin are once again rich in opportunities for recreation, watershed protection, wildlife habitat, biological diversity, and wood products.

Have fun with your students as you learn about Wisconsin's valuable forests and explore the components of sustainable forestry using these activities.

*“Wisconsin's forests are forever and for everyone.”*

## **Of particular importance to Educators:**

It should be noted in each activity that the Wisconsin Model Academic Standards are “addressed.” Throughout this document, the term addressed means that there is a clear connection between the activity and the standard or standards. It does not imply that the standard or standards are met by completing the activity. It is up to you as the educator to meet the standards, by drawing that clear link between the essential knowledge the student understands by doing the activity and the evidence you need to show that the student understands the essential knowledge.

To obtain copies of the details about the standards addressed, you can use the Department of Public Instruction’s website ([www.DPI.state.wi.us](http://www.DPI.state.wi.us)) and then download the standards. A CD-ROM version of the standards is also available at the Department, containing all the standards for each content area.

You will find the guide divided into three sections:

1. The Changing Forests
2. The Many Benefits of Trees and Forests
3. Sustaining the Forest for Present and Future Generations



# Table of Contents

	<i>Page</i>
<b>The Changing Forests</b>	
A Tree-rif-ic Math Activity .....	1
Local Tree Identification Guide .....	9
School Grounds Timeline .....	19
Visiting My Schoolyard Tree .....	25
Forest Field Notes .....	39
Tree Rings .....	53
Watch Out for Exotic and Invasive Species in Wisconsin’s Forests .....	61
Forest Community .....	65
Pollination .....	69
Energy in the Ecosystem .....	75
<b>The Many Benefits of Trees and Forests</b>	
Recreational Use Survey .....	87
Handmade Paper .....	91
Would Wood be Needed for My Job? .....	101
Water, Water Everywhere .....	103
Trees and the Water Cycle .....	109
“Leafscapes” an Artist View .....	115
Barrens and Butterflies .....	123
Design an Urban Schoolyard Forest .....	131
<b>Sustaining the Forest for Present and Future Generations</b>	
Where in the World are the Forests? .....	145
So You Want to be a Forester .....	151
Consumer Choices and Consequences .....	157
Forest Issues Project .....	161
ABCs of Forestry .....	173
Forest Fact or Fiction .....	177
<b>Appendix</b> .....	<b>191</b>

# The Changing Forests

