Getting Started!

What is a woodlot?

A woodlot is the wooded portion of a private property upon which small-scale forestry operations are carried out

or

a woodlot is a segment of a woodland or forest capable of small-scale production of forest products such as wood fuel, sap for maple syrup, saw logs, as well as recreational uses like bird watching, bushwalking, and wildflower appreciation.

Rationale

The Benefits of School Ground Greening

http://www.evergreen.ca/en/lg/resources/workbox/1_Benefitsofgreenschools_updated.pdf

Shows that school ground greening benefits all parties involved: students, teachers, schools and communities.

School Habitats

http://www.nwf.org/schoolyard/whycreateasite.cfm

Demonstrates teaching with schoolyard habitat in an integrative context across the subject areas, both supporting and deepening the quality of instruction and student engagement. It enhances the teaching and learning of science, math, social studies and English.
# Curricular Links

## Primary

### Language
<table>
<thead>
<tr>
<th>Grade 1-3</th>
<th>Writing</th>
<th>Overall: 1, 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1-3</td>
<td>Reading</td>
<td>Overall: 2</td>
</tr>
<tr>
<td>Grade 1-3</td>
<td>Oral Communication</td>
<td>Overall: 2</td>
</tr>
<tr>
<td>Grade 1-3</td>
<td>Media Literacy</td>
<td>Overall: 1, 3, 4</td>
</tr>
</tbody>
</table>

For links to Specific Expectations to **Language** please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)

### Science
<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Life Systems: Characteristics of Living Things</th>
<th>Overall: 1, 2, 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2</td>
<td>Life Systems: Growth and Change in Animals</td>
<td>Overall: 1</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Life Systems: Growth and Change in Plants</td>
<td>Overall: 1, 2, 3</td>
</tr>
</tbody>
</table>

For links to Specific Expectations in **Science** please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)

### The Arts
<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Visual Arts</th>
<th>Overall: 1, 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2</td>
<td>Visual Arts</td>
<td>Overall: 1, 2</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Visual Arts</td>
<td>Overall: 1, 2</td>
</tr>
</tbody>
</table>

For links to Specific Expectations in **The Arts** please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)

## Junior

### Language
<table>
<thead>
<tr>
<th>Grade 4-6</th>
<th>Writing</th>
<th>Overall: 1, 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 4-6</td>
<td>Reading</td>
<td>Overall: 2</td>
</tr>
<tr>
<td>Grade 4-6</td>
<td>Oral Communication</td>
<td>Overall: 2</td>
</tr>
<tr>
<td>Grade 4-6</td>
<td>Media Literacy</td>
<td>Overall: 1, 3</td>
</tr>
</tbody>
</table>

For links to Specific Expectations in **Language** please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)

### Science
<table>
<thead>
<tr>
<th>Grade 4</th>
<th>Life Systems: Habitats and Communities</th>
<th>Overall: 1, 2, 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 6</td>
<td>Life Systems: Diversity of Living Things</td>
<td>Overall: 1</td>
</tr>
</tbody>
</table>

For links to Specific Expectations in **Science** please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)

### The Arts
<table>
<thead>
<tr>
<th>Grade 4</th>
<th>Visual Arts</th>
<th>Overall: 1, 2</th>
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<tbody>
<tr>
<td>Grade 5</td>
<td>Visual Arts</td>
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<tr>
<td>Grade 6</td>
<td>Visual Arts</td>
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</tr>
</tbody>
</table>

For links to Specific Expectations in **The Arts** please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)
# Curricular Links

## Intermediate

### Math

<table>
<thead>
<tr>
<th>Grade</th>
<th>Area</th>
<th>Overall</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>Data Management</td>
<td>1, 2</td>
</tr>
<tr>
<td>7</td>
<td>Number Sense</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Measurement</td>
<td>1, 2</td>
</tr>
<tr>
<td>8</td>
<td>Data Management</td>
<td>1, 2</td>
</tr>
<tr>
<td>8</td>
<td>Number Sense</td>
<td>2, 3</td>
</tr>
</tbody>
</table>

### Language

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<tr>
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<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Writing</td>
<td>1, 2</td>
</tr>
<tr>
<td>7</td>
<td>Oral Communication</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Writing</td>
<td>1, 2</td>
</tr>
<tr>
<td>8</td>
<td>Oral Communication</td>
<td>2</td>
</tr>
</tbody>
</table>

### Science

<table>
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<tr>
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<th>Overall</th>
</tr>
</thead>
<tbody>
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<td>7</td>
<td>Life Systems</td>
<td>1, 2, 3</td>
</tr>
</tbody>
</table>

### The Arts

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<tbody>
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<td>Visual Arts</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>8</td>
<td>Visual Arts</td>
<td>1, 2, 3</td>
</tr>
</tbody>
</table>

For links to Specific Expectations in different curricular areas please visit the Ministry’s website @ [http://www.edu.gov.on.ca](http://www.edu.gov.on.ca)
If Trees Could Talk  
http://www.foresthistory.org/Education/index.html
This is a 9-module, middle school curriculum that gives teachers the opportunity to download social studies activities. Each module is a compilation of resources (documents, maps, newspaper articles, oral histories or photographs) from which students are asked to gather, examine and analyze information, and synthesize insights.

Investigating Biological Communities in Natural and Artificial Ecosystems  
In this activity, students survey and compose plant and animal populations that exist in natural and artificial ecosystems. Students will estimate the relative abundance of organisms, identify their ecological relationships, and describe how they are suited to a particular habitat.

Shade for Kids Workshop-in-a-Box  
This resource provides you with everything you need to deliver a workshop that addresses all the elements of designing for shade.

Getting Started Workshop-in-a-Box  
This resource provides you with everything you need to deliver a workshop that addresses all the elements of getting started.

Learning Grounds  
This guide will help you get started with your school ground greening project. You will learn what you need to do in order to plan and implement your project.

Natural Habitat Communities  
http://www.evergreen.ca/en/lg/resources/design/design-5.pdf
This site covers the basic ideas for creating prairie, meadow, woodland, pond and wetland habitats on your school grounds.

Gathering Places  
This site focuses on creating formal gathering places on school grounds to support the use of outdoor classroom teaching as well as to provide a space for social gathering and organized school functions.
Sources for Activities

All Hands in the Dirt: A Guide to Designing and Creating Natural School Grounds

This book is a guide and support to schools interested in making improvements to their school grounds. It promotes a participatory design process that actively engages the whole school community, particularly the students, in the process.

Nature in Your School Yard

http://www.ifdn.com/nature/index.htm
This site is about welcoming nature back to the grounds around a school. It will give you some ideas about how school grounds can be returned to natural habitats, involving more than planting some trees and flowers. Students learn about community partners and networking.
1. The story of a successful high school woodlot program that can be modeled by schools in our system. Many ideas for the start-up portion of your own woodlot and how to branch off into your own directions.
   [http://findarticles.com/p/articles/mi_m1016/is_n1-2_v98/pnum=2&opg=11830844](http://findarticles.com/p/articles/mi_m1016/is_n1-2_v98/pnum=2&opg=11830844)

2. Rationale is presented for the creation and maintenance of a woodlot on your grounds. Excellent rationale presented with useable ideas and creative uses for the woodlot itself.

3. Excellent resource for the teacher who isn’t very familiar with the idea of a woodlot, but wants to implement some environmental awareness in the students he/she teaches. Lesson plans, discussion topics, introduction of concepts, etc. are all touched upon, making it user-friendly for all educators.
   [http://sftrc.cas.psu.edu/LessonPlans.html](http://sftrc.cas.psu.edu/LessonPlans.html)

4. A primary lesson plan for students and teachers to explore the great outdoors around their schools, and learn about the environment in a new and interesting way. Lots of information for teachers to use, with excellent ideas for hands-on learning activities that students will enjoy.
   [http://www.focusonforests.on.ca/sample/](http://www.focusonforests.on.ca/sample/)

5. A real world application that uses measurement to give the students the opportunity to see the relationships between the amount of wood and how it can be (and is being) used in a certain area. Applications for the woodlot of your own school are given by this Penn State website. Conversions will be necessary for the calculations given, as they are in standard, not metric, units.
   [http://sftrc.cas.psu.edu/LessonPlans/Forestry/MeasuringIntro.html](http://sftrc.cas.psu.edu/LessonPlans/Forestry/MeasuringIntro.html)

6. This site has a vast number of related links for educators to view environmental issues and projects for implementation in the schools, including woodlots. Excellent background information, as well as ready-to-use lessons for the classroom. All grade levels are covered thoroughly. Excellent!

7. A very comprehensive site for both information and activities that teachers can use to assist them in their search for good activities; also includes testimonials and “best practices” from educators around the province of Ontario regarding green practices.
Subject-based Activities

Math

Number Sense
- Demonstrate and understanding of magnitude by counting forward to 100, (count the number of dandelions in an area).
- Solve problems involving the addition and subtraction of single-digit whole numbers, (add the number of dandelions to the number of clover).
- Use problem solving strategies to estimate the number of individuals which exist in a population, (solve Fermi Problems to determine the number of blades of grass in a given area).
- Identify the various vegetative species which exist within the naturalization area and calculate the ratio of “Species 1” : “Species 2”, (the ratio of plantain : sweet clover, the ratio of hawthorne : burdoch).
- Find the fraction of “species 1” compared to all the individuals of the community, (the fraction of trees which are oak, the fraction of wildflowers which are dandelions).
- Calculate the percentage of a particular species which exhibits a given feature or characteristic, (calculate the percentage of maple trees with a circumference of 60 cm or greater).

Data Management
- Collect and organize primary data and display the data using concrete graphs and pictographs, (count the different types of trees in an area and display in a pictograph).
- Read and describe primary data presented in concrete graphs and pictographs and graphic organizers and describe the data using comparative language, (read someone else’s bar graph to determine if there are more maple trees or oak trees in an area).
- Construct a variety of tables, (frequency, tally chart) and create a variety of graphs,(bar, circle) relating to the frequency of species located in the naturalization area.
- Collect primary data and present in a stem and leaf plot, (record the heights of shrubs in an area and present in a stem and leaf plot, record the ambient temperatures in the naturalization area and present in charts, tables and graphs).
- Determine the 3 measures of central tendency from primary data collected from the naturalization area, (calculate the mean, median and mode for diameters, heights and circumferences of shrubs and trees, calculate the mean, median and mode of temperatures in the naturalization area over a three week period).
- Make and evaluate convincing arguments based on the analysis of data, (use quadrat sampling to predict the population in a given area).
Subject-based Activities

Measurement

• Estimate, measure and describe length, area, mass, capacity and temperature using standard and non-standard units of measurement,(how many acorn could you hold in your hand, how wide/how many steps is the naturalization area at your school, how many oak leaves will it take to cover a particular area, determine the mass of 50 leaves and use to predict the total mass of all the leaves in the naturalization area).
• Estimate, measure and record length, perimeter, area using a variety of strategies, (use formula of a rectangle to calculate the perimeter and area of your naturalization area).
• Make and evaluate convincing arguments based on the analysis of data, (use quadrat sampling to predict the population in a given area).
• Report on research into real-life applications of area measurements, (if a mature maple tree requires an area of 25 square metres to survive, determine the number of trees that your naturalization area could support - defend your argument using a scale drawing of the region).

Language

Writing

• Generate, gather and organize ideas and information to write for an intended purpose and audience, (If the naturalization area could tell you a story about what happens at night, what would that story sound like, write a letter to the principal explaining to them why the naturalization area is important to the school community, create a graphic organizer and utilize it to create a proposal to town council requesting funds to expand your school’s current naturalization area).

Media Literacy

• Create a variety of media texts for different purposes and audiences, using appropriate forms, conventions and techniques,(create a school bulletin board illustrating the different species which can be found in your school’s naturalization area, create a collage of colours conveying the mood which can be experienced when visiting the naturalization area, create a series of video stills or photographs for use in a particular grade about changes which occur in the naturalization area over the course of changing seasons, create a comic strip depicting the activities of a living creature, (bird, squirrel) while visiting the naturalization area, create an informational brochure designed for distribution in the local community which identifies the learning opportunities a naturalization area can offer to students.)
Subject-based Activities

Oral and Visual Communication

- Use speaking skills and strategies appropriately to communicate with different audiences for a variety of purposes, (communicate ideas, opinions and information orally - using a series of verbal instructions one student directs the movements of another from a starting point to a desired end-point within the naturalization area, provide a series of verbal cues that direct one student to perform a task, such as drawing or sketching one biotic component in the naturalization area, use the various pillars of character as a basis, (respect, citizenship, caring etc.) in an oral report to peers to convey support for sustaining the naturalization area in your school, use a variety of visual aids to support or enhance an oral presentation).

Science

- Many of the learning expectations from the "life systems" strand in grades 1, 2, 3, 4, 6 and 7 can be covered and enhanced, via "hands-on" activities through investigating the school's naturalization area. The learning objectives can be achieved simultaneously by coupling knowledge obtained from the classroom with concrete, practical experiences obtained in the naturalization area.

The Arts – Visual Arts

- Produce two and three dimensional works of art that communicate ideas, (thoughts, feelings, experiences) for specific purposes, (using natural resources create a 3 dimensional piece of art that represents something seen in the naturalization area, create a mask from materials found in the naturalization area to celebrate an event or season, design a logo which represents the naturalization area at your school, use two point perspective to create a visual representation of the naturalization area).
- Use the elements and principles of design, (colour, line, shape, space, form, texture, emphasis, rhythm, balance, unity, variety, proportion) and use them in ways which are grade appropriate, (use colour, shape and texture to create a visual representation of the naturalization area which appeals to the viewer’s senses, use the concept of a focal point to emphasize a particular feature in the naturalization area, use resources found in the environment, (bark, leaves, grasses to create texture in a work of art).

For a full list of learning objectives please visit the Ministry’s website @ http://www.edu.gov.on.ca