

## Educational Connections

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### Key Concepts

### Site Connections

<p>1. Questioning and Analysis Use credible research methods to investigate environmental questions, revise their personal understanding to accommodate new knowledge and perspectives, and be able to communicate this understanding to others.</p>	<ul style="list-style-type: none"> <li>~ investigation skills</li> <li>~ observations with a variety of senses</li> <li>~ collection of data</li> <li>~ mapping</li> <li>~ orienteering</li> <li>~ trail hiking</li> <li>~ forest measurements</li> <li>~ navigation skills</li> </ul>
<p>2. Knowledge of Environmental Processes &amp; Systems Demonstrate an understanding of the natural environment and the interrelationships among natural systems.</p>	<ul style="list-style-type: none"> <li>~ forest products</li> <li>~ forestry identification</li> <li>~ ecosystem of school forest</li> <li>~ pollution</li> <li>~ changes in the forest</li> <li>~ cycles within the forest</li> </ul>
<p>3. Environmental Issue Investigation Skills Identify, investigate, and evaluate environmental problems and issues.</p>	<ul style="list-style-type: none"> <li>~ impact of management strategies</li> <li>~ effects of climate changes</li> <li>~ attitudes regarding forest usage</li> </ul>
<p>4. Decision and Action Skills Use findings from environmental issue investigations to develop decision-making skills, and to gain experience in citizen action skills.</p>	<ul style="list-style-type: none"> <li>~ impact of environmental decisions</li> <li>~ responsibilities of citizens regarding forestry</li> <li>~ analyze biotic impact</li> <li>~ water testing</li> <li>~ cost analysis of a forest</li> </ul>
<p>5. Personal and Civic Responsibility Develop an understanding and commitment to environmental stewardship.</p>	<ul style="list-style-type: none"> <li>~ action plan for the school forest</li> <li>~ action regarding environmental issues</li> <li>~ promotion of stewardship</li> </ul>

## Classroom Curriculum Connections & Alignment with State Standards

### Kindergarten

Subject	Activity	Season	Key Concept	State Std.
Math	Count leaflets on ash leaves to compare total numbers	Fall	1	B.4.2
	Sort items collected in the forest according to shapes and/or colors	Fall	1	B.4.2
	Take a nature walk and count how many butterflies they see.	Spring	1	B.4.2
Science	Find stages of oak tree life cycle in forest (acorn, seedling, mature tree). Using LEAF guide, create a sequenced oak tree life stage (pg 28).	Fall	2	A.4.5
	Create bug suckers and investigate insects.	Fall	2	B.4.1
	Water concepts (conversation practices)	Spring	2,3,4	C.4.2
Social Studies	Forest Use game (LEAF pgs 47-53)	Fall/Spring	2	D.4.3
	Forest Product Time Machine LEAF lesson 4	Fall	2,3	B.4.1
Language Arts	Read "The Very Hungry Caterpillar" and scout for caterpillars.	Fall	1,2	A.4.4
	Have a scavenger hunt to find items within the forest that starts with each letter of the alphabet.	Spring	1	A.4.1
	Label and identify vocabulary words on a nature hike.	Spring	2	D.4.1
Music	Sing "The Habitat Song" (to the tune of "London Bridge")	Fall/Spring	2	A.4.2

### First Grade

Subject	Activity	Season	Key Concept	State Std.
Math	Identify and sketch shapes	Fall	1	C.4.1
	Estimate and measure length of branches & sticks	Spring	1	D.4.2
	Collect, estimate, and count number of acorns & pinecones	Fall	1	B.4.2
	Create patterns using leaves	Fall	1	F.4.3
Science	Identify body coverings of organisms	Fall	2	F.4.1
	Identify common woodland plants	Spring	1	F.4.4
	Use magnifying glasses to examine soil content	Spring	1	C.4.4
	Measure and record rainfall via rain gauges	Fall	1	C.4.5
Social Studies	Forest related careers ~ guest speaker from DNR	Spring	2	D.4.6
	Discuss uses of forest resources	Spring	2	D.4.3
	Collect litter and discuss types of pollution	Spring	2	C.4.1
	Construct a map of the forest	Fall	1	A.4.3
Language Arts	Journal write	Spring	1	B.4.1
	Listening walk in the woods	Fall	1	C.4.2
	Read aloud and discuss "The Giving Tree"	Spring	2	C.4.2
	Read forest stories and identify events/characters as reality or fantasy	Fall	2	A.4.3
Music	Identify various pitches by tapping objects of various species/size in the school forest	Fall/Spring	1	A.4.1

## Second Grade

Subject	Activity	Season	Key Concept	State Std.
Math	Compare weight of rocks vs. leaves	Fall	1	D.4.2
	Group objects found in the forest (acorns, rocks, twigs, seed pods, etc) into groups of 2, 5, and 10	Fall/Spring	1	B.4.2
	Determine age of tree by analyzing tree rings	Fall/Spring	1,2	B.4.5
Science	Senses ~ get the most out of your nature hike by using the five senses	Spring	1	C.4.2
	Life cycle of the monarch using butterfly houses	Spring	2	F.4.3
	“What Bear Goes Where?” (Project WILD pg 118)	Fall	2	F.4.4
Social Studies	Conduct a recycling drive with plastics, cans, etc	Fall	3,4,5	C.4.3
	Identify and explain individual responsibilities regarding the school forest	Spring	3,4,5	C.4.6
	Identify resources found within the school forest that are valuable	Spring	2	A.4.7 D.4.3
Language Arts	Read “Little Red Riding Hood” outside and discuss “unhuggable” animals	Fall	2	A.4.2
	Animal Puppet shows presented by high school students	Fall/Spring	3,5	C.4.2
	Describe the seasonal changes seen in the school forest throughout the school year	Fall - Spring	2	C.4.1
Art	Create a collage using animals found in certain habitats (desert, woodland, etc).	Fall/Spring	2	K.4.3

### Third Grade

Subject	Activity	Season	Key Concept	State Std.
Math	Discover fractions existing in nature (butterfly halves, leaves, clover leaves thirds)	Fall	1	B.4.4
	Estimate and measure the length of shadows seen within the forest	Spring	1	D.4.2 D.4.4
	“Protective Coloration” (yarn activity) Calculate survival rate of organisms that use camouflage	Fall	2	E.4.1
Science	Weather ~ Record observations of the soil at various parts of the school forest (snow at north vs. south, open areas, wetland areas, etc)	Fall/Spring	1,2,3	E.4.5
	Discuss basic needs of an organism found within the school forest	Fall	2	F.4.1
	Investigate responses to changes in the environment for different animals found in the school forest (frogs hibernating in mud, bears hibernating, etc)	Fall	1,2	F.4.2
Social Studies	Navigate through the school forest by using a given map	Spring	1	A.4.5
	Bury garbage in the fall, discuss landfill issues, and dig up in the spring to evaluate decomposition	Fall - Spring	2,3,4,5	C.4.1
Language Arts	Animal Charades (Project WILD pg 281)	Fall	2	D.4.2
	Wildlife journaling	Spring	1,2	B.4.1
	Identify cause and effect situations in the school forest	Fall/Spring	2,3,4	A.4.2 C.4.3

### Fourth Grade

Subject	Activity	Season	Key Concept	State Std.
Math	Using mirrors, observe symmetrical and asymmetrical shapes found in nature	Spring	1	C.4.2
	Calculate solar energy conversions of Celsius and Fahrenheit through the use of solar cookers	Spring	2	D.4.3
	Identify the location of shapes/objects found throughout the school forest	Fall	1	C.4.1 C.4.4
Science	Owl pellet investigation	Fall	2	A.4.5 C.4.5
	Using simple science equipment, collect data from the school forest	Fall	1	C.4.4
	Create and discuss soil profiles while comparing and contrasting the properties from throughout the school forest	Spring	1,2	E.4.2
Social Studies	Forest Fire history (Peshtigo Fire Museum visit)	Fall	3	B.4.7
	History of the economic impact of Wisconsin forestry	Fall	3	B.4.4
	Identify renewable and non-renewable resources found within the school forest	Spring	2	D.4.3
	Investigate inventions used to produce products from the school forest	Spring	1	B.4.8
Language Arts	Read "W is for Wisconsin" and discuss the points related to natural resources found in the state	Fall	2	A.4.4
	"Learning to Look, Looking to See" (Project WILD pg 278)	Fall	1,2	F.4.1
	Read clues to participate in a scavenger hunt in the school forest	Spring	1	C.4.2
Physical Education	"Thicket Game" (Project WILD pg 114) hide and seek	Spring	2,5	D.4.1
Music	Identify and mimic rhythms as they relate to nature	Fall	1,2	B.4.1
Ag Education	Presentation from Wisconsin Maple Queen regarding the production of maple products in Wisconsin	Spring	2	D.4.1 D.4.2

### Fifth Grade

Subject	Activity	Season	Key Concept	State Std.
Math	Calculate perimeter of geometric figure (ex=gazebo)	Fall/Spring	1	D.8.3
	Proportional Biomass using "Prairie Plot Study" (hula hoops)	Spring	1,2	E.8.2
	Write their own story problems using information from the school forest	Spring	3,4	B.8.7
Science	Seed Dispersal Activity ~ collect seeds and determine dispersal methods (burdocks, samaras, berries, etc)	Fall	1,2	B.8.4
	Create compost columns	Spring	2,3	C.8.1
	Comparison of aquatic and non-aquatic biomes	Spring	2,3	E.8.1
Social Studies	Compare and contrast early mapping techniques to modern ones using school forest maps as an example	Fall/Spring	1	A.8.1 B.8.1
	Visualizing population density with chairs and students	Fall/Spring	2	A.8.11
	Measure effects of air pollution using Ringlemann smoke chart	Spring	2,3	A.8.6
Language Arts	Descriptive writing through the use of super ears	Fall/Spring	1,2	B.8.1
	Write a tall tale using a native Wisconsin animal	Spring	2	B.8.2
	Compare the forestry areas found within various states	Spring	1	LA A.8.5 SS F.8.1
Music	Create a musical instrument using materials found in the school forest	Fall	1	B.8.8

### Sixth Grade

Subject	Activity	Season	Key Concept	State Std
Math	“Spider Web Geometry” (Project WILD pg 34)	Fall	1,2	C.8.1
	Compare maple leaves to the nearest millimeter in length	Spring	1,2	D.8.3
	Mentally estimate distance while calculating pace throughout different areas in the school forest	Spring	1,2	B.8.7
Science	Discover the basic needs of plants	Fall	1,2	F.8.2
	Create a terrarium using natural products from the school woods	Fall	1,2	D.8.2
	Plaster castings and identification of various animal tracks found in the school forest	Spring	1,2	F.8.2
	Create vermicomposting system using a two-liter bottle	Spring	1,2	E.8.2
Social Studies	World Hunger Cookie Game	Fall/Spring	1,3	A.8.7 A.8.11
	Identify symbols commonly seen on a topographic map	Fall/Spring	1	A.8.5
	Using peer mediation, describe conflict and resolution to an environmental issue found within our area	Spring	3,4	C.8.7 E.8.4 E.8.12
Language Arts	Record descriptive changes in leaves during the fall	Fall	1,2	F.8.1
	Write about a time when they have enjoyed nature	Spring	1	C.8.1
Physical Education	“Deadly Links” (hawk, shrew, grasshopper game) with highly involved physical activity	Fall	2	G.8.2

## Seventh Grade

Subject	Activity	Season	Key Concept	State Std
Math	Proportions using dandelion seeds.	Spring	1,5	E.8.3
	Through the use of data collection & charts, compare and contrast the weight/height of bears to themselves at different ages	Fall	1,2	B.8.7
	Determine the volume of a backpack and consider what you would include in packing for a hike in our area	Spring	1,2	E.8.4
Science	Identify organisms found in the school forest from each of the five kingdoms.	Fall	1	F.8.1
	Identify a specific community and the population of that community.	Spring	2	F.8.8
	Locate producers, consumers, and decomposers found in the school forest.	Fall	2,3	F.8.8
	Locate examples of organisms that represent mutualism, competition, predation, parasitism, and commensalisms.	Spring	1,3	F.8.8
	Identify the essential needs at a particular organism found in the school forest.	Fall	2	F.8.7
Social Studies	Compare cultural differences in regard to environmental issues.	Spring	2	E.8.11
	Develop a map of the school forest using cardinal directions and landforms.	Fall	1	A.8.2
	Devise a list of natural resources located in our school forest.	Fall	2	D.8.7
	Compare the layout of the school forest to glacial deposits in each area.	Spring	1	A.8.5
Language Arts	Animal Poetry ~ through observations in the school forest, write poetry regarding animals seen and heard	Fall	1,2	B.8.1 C.8.1
	Write a fable regarding the school forest	Spring	1,2	B.8.1 B.8.2
Art	Design and create an imaginary animal that would live in the forest	Fall/Spring	1,2	C.8.6
Technology Education	Make bird houses to put in the school forest for appropriate species	Fall/Spring	2,3	C.8.2
Physical Education	Low Ropes Course	Fall/Spring	1,2	A.8.2

## Eighth Grade

Subject	Activity	Season	Key Concept	
Math	Given the circumference of a tree, students will find the diameter of the stump.	Fall	1	B8.7
	Measure the length/width of the school forest to find the total square feet and convert it to acres.	Fall	1	D.8.3
	Determine the distance diagonally of the school forest using the Pythagorean theorem.	Spring	1	D.8.3
	Locate different geometric shapes that occur naturally in the school woods both 2-D and 3-D.	Spring	1	C.8.3
Science	Investigation of geology in the school forest	Spring	1,2	E.8.1
	Discuss the impact that geology has on forest flora and fauna	Spring	2,3	E.8.4
	Create and use nephoscopes for cloud investigation devices	Fall	1,2	C.8.3
Social Studies	Research and compile information regarding the history of our school forest	Fall	3,4	B.8.1
	“Know Your Legislation: What’s in It for Wildlife” (Project WILD pg 272)	Spring	3,4,5	C.8.1 C.8.7
	“What Did You Lunch Cost Wildlife?” (Project WILD pg 68)	Fall/Spring	1,2	D.8.11
Language Arts	“Interview a Spider” (Project WILD)	Fall/Spring	1,2	B.8.1
	“Wild Words” (Project WILD pg 41)	Spring	1,2	B.8.2
	Create an itinerary for a family trip to a nature place of interest in the area	Spring	2,3	A.8.4
Music	Share a nature rap with elementary students	Spring	2,3	D.8.2
Ag Education	Discuss products that are made from resources found within the forest.	Fall – Spring	1,2,5	D.8.1 E.8.6

## Ninth Grade

Subject	Activity	Season	Key Concept	
Math	Determine distance by using GPS units in the forest	Fall/Spring	1	A.12.1
	“I’m Thirsty” (Project WILD pg 134)	Fall	1,2	A.12.3
	Using a calculator, determine the acreage of the school forest	Spring	1	A.12.5
Science	Using weather station, record the weather patterns over the course of two weeks and discuss the impact on plant & animal species	Spring	1,2	G.12.2
	Calculate relative humidity and dew point at various points in the school forest	Fall	1,2	D.12.11
	Calculate wind speed and wind direction in regards of air pollution; create anemometers	Spring	1,2	D.12.12
Social Studies	Research and present ideas on the values and contributions that animals/plants make to society	Fall/Spring	3,4,5	C.12.9
	Wisconsin’s forest history and impact on the global economy	Fall	3,4	D.12.3
	Create an awareness of present day environmental issues through current events discussion	Fall/Spring	4,5	C.12.9
Language Arts	Students will read to acquire information about species found within the school forest by using field guides	Fall/Spring	1,2	A.12.4
	Write an article regarding the progress of the development of the school forest to be published in the school or local newspapers	Fall	3,4	E.12.1
	Compose persuasive letters seeking donations for the school forest project	Fall	3,4,5	B.12.1
Art	Tree Rubbings Collage	Spring	1	C.12.1
FACE	Create a recipe using natural products found in the school forest	Spring	1	B.1
Business Education	Identify training required for a career in the natural resource field	Fall	1	K.12.5
Ag Education	Identify tree species to harvest for making Christmas wreaths, swags, and floral arrangements.	Winter	2,5	D.12.1 E.12.6

## Tenth Grade

Subject	Activity	Season	Key Concept	
Math	Calculate and graph precipitation during the course of the school year received at the school forest site	Fall – Spring	1,2	D.12.3
	Collect data relating to the temperatures found above and below snow levels	Winter	1,2	D.12.3
Science	Waste Water in a Jar	Spring	1,2,3	F.12.8
	Taxonomy (leaf ID/native trees of Wisconsin)	Fall	1,2,3	F.12.11
	Food Webs	Fall – Spring	1,2,3	F.12.7
Social Studies	Evaluate the impact of the westward movement on wildlife on the prairies (bison, native plants, trees, etc)	Fall	1,3	B.12.3
	Analyze natural resources to determine the influence of economy in the local area	Fall	2,3	A.12.5
	Create and conduct a survey to determine future growth of the school forest	Spring	4,5	A.12.9
Language Arts	Compose and present a persuasive speech using an environmental topic	Spring	4,5	C.12.1
	Create and present a presentation suitable for the district school board highlighting the points of the importance of environmental education at all grade levels	Spring	4,5	C.12.1
Foreign Language	Translate things found in nature to any given language	Fall	1	A.5
Art	Weave a natural basket using materials found in the school forest	Spring	1	C.12.8
Business Education	Market a natural resource product to the general public	Spring	1	F.12.8
Ag Education	Discuss ways to prevent erosion in the school forest.	Fall	2,3	E.12.4

### Eleventh Grade

Subject	Activity	Season		Key Concept
Math	Exponential growth using human population as an example (tarp activity)	Fall/Spring	1,3	A.12.1
	Calculate the percentage of species in a given plot study done at the school forest	Spring	1,3	E.12.2
	Calculate the height of a tree using angles	Fall	1	C.12.5
Science	Forest Succession	Spring	1,2,3	F.12.7
	Diverse communities and competition	Spring	1,2,3	F.12.8
	Expansion and contraction due to climate through physics	Fall/Spring	1	E.12.2
Social Studies	Create a timeline on a large tree cookie	Fall/Spring	1	B.12.3
	“We’re in This Together” (Project WILD pg 44)	Fall/Spring	4,5	C.12.1
	Movement of biomes and climate changes in regards to global warming	Spring	1,2,3	A.12.1
Language Arts	Create a news broadcast of the progress of the school forest	Spring	4,5	E.12.2
	Create an informational brochure for our newly updated and user friendly school forest	Fall	1,4,5	B.12.1
	Investigate the origins of nature words	Spring	1	D.12.2
Art	“Drawing on Nature” (Project WILD pg 285)	Spring	2	B.12.7
Physical Education	Cross Country Skiing in the school forest	Winter	5	A.12.1
Technology Education	Create a web page to highlight the happenings of the school forest	Fall – Spring	4,5	C.12.6
Foreign Language	Create a skit on a fictional forest character using the cultural basis of the studied language	Spring	1	C.1
Business Education	Create a digital video of newly developed facilities within the school forest	Spring	4,5	B.BS.11
	Take and inventory digital photos from the school forest to be used in other media	Fall - Spring	1	B.BS.11
Ag Education	Collect water samples from the wetland area.	Spring	1,2,3	E.12.2

**Twelfth Grade**

Subject	Activity	Season		Key Concept
Math	Calculate the board feet and cost of a boardwalk to be constructed in the school forest	Fall	1,2	D.12.3
	Calculate the volume of water found within a newly constructed wetland area	Spring	1,2	D.12.3
Science	Snow Crystallization through the understanding of physics	Winter	1,2	D.12.11
	Soil chemistry by measuring pH level and amounts of N,P,K present at various points in the school forest	Spring	1,2	C.12.4
	Collect water samples and identify microscopic life forms	Fall/Spring	1,2	F.12.7 F.12.8
Social Studies	Read “Silent Spring” and discuss the impact it had on current wildlife management within the United States	Spring	3	SS A.12.6 SC H.12.4
	Ethical Debates: “To Hunt or Not to Hunt”, “Great Lakes Usage”, etc	Fall	4,5	A.12.6
	Research land use policies within the Gillett area	Spring	4,5	A.12.12
	Discuss the economic impact of recycling for the city of Gillett	Fall	4,5	A.12.4
Language Arts	Create media release regarding progress of school forest project to be included in the district newsletter	Spring	4,5	B.12.1
	Create an advertisement to draw public relations to increase school forest usage among the general public	Spring	4,5	B.12.1
Technology Education	Construct the teaching platform gazebo area through the Building Trades course	Fall	1,4	B.12.2
FACE	Develop/plan activities to be used with elementary age children and visit the school to participate with them	Spring	4,5	D.4
Music	Write words to a set melody about nature and the environment	Spring	1,2	D.12.3
Business Education	Develop a budget for a future project to be completed within the school forest	Spring	4,5	C.BS.4

