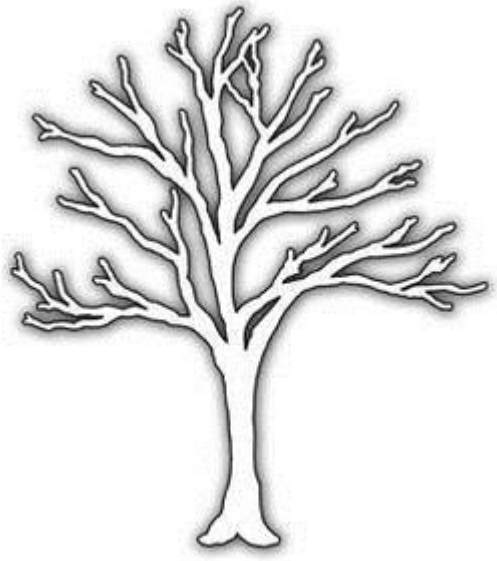
Giezendanner School Forest Education Plan

Developed by the School Forest Committee

Baldwin-Woodville Area School District

2013



Funded by a Wisconsin Environmental Education Board Grant

An Education Plan for the Giezendanner School Forest
Baldwin-Woodville Area School District

Mission Statement

The mission of the Baldwin-Woodville Area School District is to create a safe, productive, and respectful learning environment that will meet the needs of all students to be lifelong learners. B-W School District will provide the facilities and resources necessary for students to become successful and productive members of society.

The Giezendanner School Forest will serve as a school and community resource. The forest will be used to offer hands-on learning opportunities, enhance student awareness, and encourage appreciation for the natural world.

Rationale

Value Statement

The past several decades have definitely changed how people spend their time. It does not matter that the villages of Baldwin and Woodville are surrounded by farmland and woods, many people no longer spend time exploring the natural world around them. Most leisure time is spent indoors interacting with electronic media or in structured athletic activities; time spent in free play and roaming the fields or woods is seldom experienced. A recent study indicates that many children in the 8 to 18 year old range spend 7 ½ hours per day using media (computers, game systems, television, etc.) the equivalent of a full work day only they are doing it seven days a week instead of five (Kaiser, 2010). This study does not take into account the time spent at school with technology. What does this mean for us?

- Children's knowledge and experience of the natural world is limited. Watching a movie about nature is not the same as experiencing it firsthand.
- Childhood obesity is on the rise and may eventually shorten life spans by 2 to 5 years (Ludwig, 2007).
- Mental, physical and spiritual health suffer (Louv, 2008).

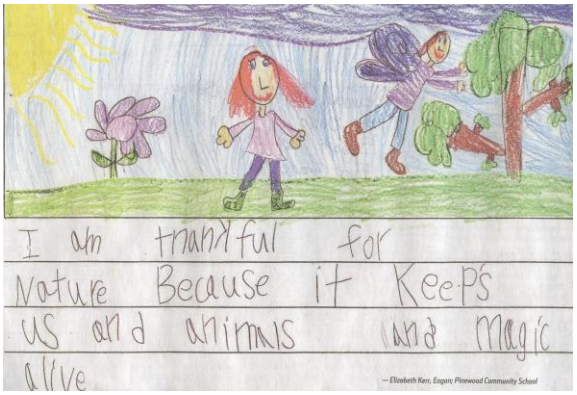
Study after study confirms that when students are involved in interdisciplinary, hands-on, standards-based instruction in a real setting they perform better on standardized tests. In addition, there has been a correlation with reduced discipline problems (SEER, 2005). When used across the curriculum, environmental education impacts scores in science, reading, math and social studies (Lieberman, 1998). Research also reveals that outdoor education serves to motivate students, involves all the senses, helps students to concentrate for longer periods of time, and keeps them active (Coyle, 2010).

Because of this, we believe that educational opportunities at the Giezendanner School Forest can only benefit our students. Outdoor, hands-on, interdisciplinary curriculum will help to connect our students to nature, engage their senses, and give them “real” experiences in the world around them. Involving children in nature is to our benefit and theirs. . . “Our mental, physical, and spiritual health depends upon it. The health of the earth is at stake as well. How the young respond to nature, and how they raise their own children, will shape the configurations and conditions of our cities, homes . . . our daily lives” (Louv, 2008).

Target Messages

- The natural world has inherent value.
- Sustainable and conservation minded practices allow the natural world and human activity to co-exist beneficially.
- Our environment and community is enhanced and sustained by individual and collective responsible resource use, as well as with environmental knowledge, awareness, and appreciation.
- Our personal health is directly related to our exposure to nature and the health of the environment.

It is our hope that experiences in the Giezendanner School Forest and the hands on, fun, educational programs being developed will instill the same attitude of this Minnesota first grader in the Baldwin-Woodville students and community.



Needs Assessment Results

An initial needs assessment was completed in January 2012. It indicated an interest in utilizing the school forest but was not detailed enough to provide true guidance to the School Forest Committee. It was revised and completed by the Baldwin-Woodville staff in August 2012. The results were overwhelmingly positive. All 43 survey responses knew that the school forest was gifted to the school district!

Approximately 84% of respondents were enthusiastic and willing to take students to the school forest. The survey indicated an overwhelming interest in using the school forest at the elementary and middle school levels for a variety of reasons. The respondents indicated that over 48% of teachers would need help with developing their school forest lessons. This clearly demonstrated that basic resources are needed for those teachers. Teachers are excited about having hands on activities for students as well as the location of the school forest, hoping that they would be able to utilize it multiple times throughout the school year rather than one extended trip to a nature center that has to be paid for. Teachers also listed a variety of activities they would conduct while visiting the forest which will become the stepping stones for the curriculum. Some teachers responded in this way: “A place to share with students an

appreciation for nature and one another. A place to get away from "distractions" and to become grounded in the forest around you” and “A forest is a rich sensory environment that can provide a wealth of ideas and applications for writing fiction, non-fiction, and poetry.”

Some barriers to using the school forest included facilities and materials. As we are just beginning, there are no permanent bathrooms, classroom or storage areas. The survey shows that the most needed improvements to the school forest to make it functional included developing trails, preparing a map, creating bus access, seating, restrooms and educational center to store and teach in. There are not simple supplies such as pencils, binoculars, clip boards, snowshoes, magnifying glasses, or compasses available that teachers indicated would be helpful and necessary to begin to utilize the school forest. Inflexibility in class schedules and time are also issues that we will work to address.

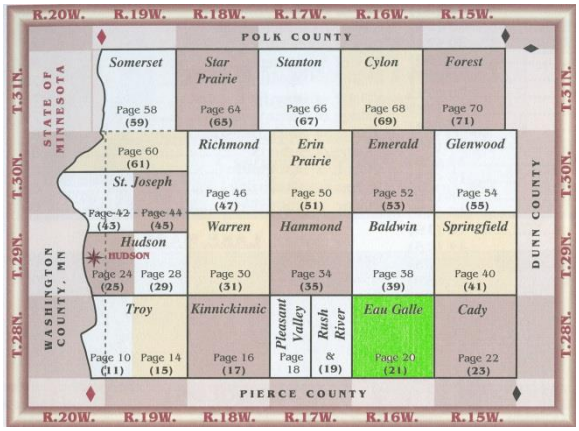
Most of our teachers lack the resources, training, and time to incorporate these environmental standards into their curriculum. This will take some time to accomplish and with the help of the committee, we strive to have these resources available for teachers to use to extend the classroom to the school forest.

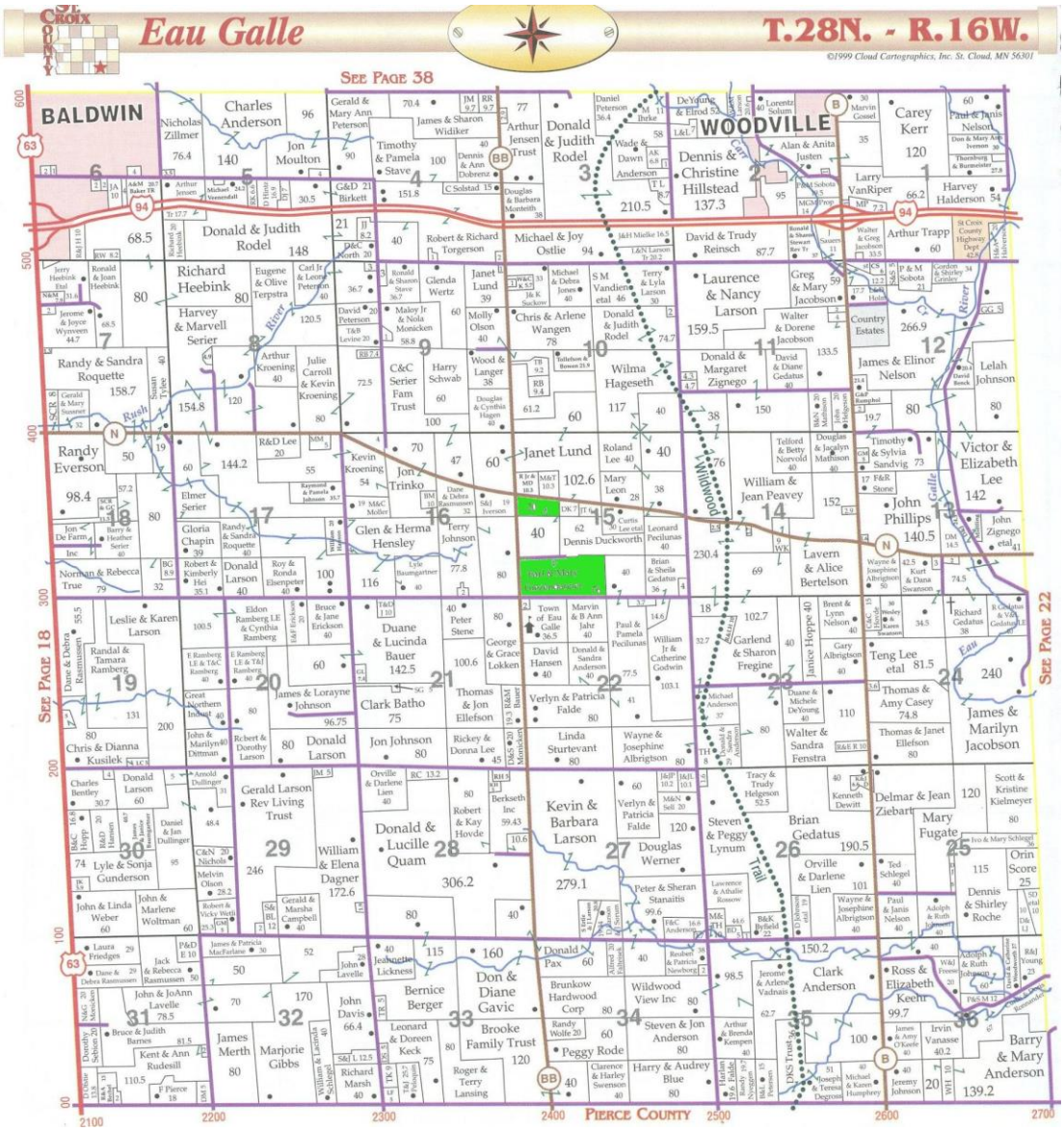
Input from the community was also sought and this comment from an involved community member is particularly insightful, “The overall success of the school forest will be measured by use. In order to have the property used as much as possible, the curriculum will need support. We have come a long way and there have been countless volunteer hours. The trail formation was a huge step forward and the removal of hundreds if not thousands of mature buckthorn has been monumental! I believe once the parking area in completed, we'll see a clearer path forward as others see the dream and take time to explore it.”

Site Description and Opportunities

Site Description and Location

Baldwin-Woodville’s Giezendanner School Forest consists of two parcels of land found in the town of Eau Galle, St. Croix County, which is approximately 6 miles from Baldwin, and 4.5 miles from Woodville. The smaller parcel is 20 acres and the other 76 acres.





Legal Description:

- 20 acres: The South One-Half of the Southwest Quarter of the Northwest Quarter of Section 15, Township Twenty-eight North, Range Sixteen West.
- 76 acres: South Half of Southwest Quarter of Section 15, Township Twenty-eight North, Range Sixteen West. Excepting therefrom property conveyed for highway purposes to Town of Eau Galle in that certain deed recorded December 5, 1963 in Vol. 399 of Records, page 574, Document no. 274612. Also excepting the North 132 feet of West 660 feet of Southeast Quarter of Southwest Quarter, Section 15, Town 28, Range 16 West.

Directions to the 76 acre parcel from Baldwin:

Begin in Baldwin and head south on Hwy 63 until Cty Rd N, turn left on N, continue to Cty Rd BB, turn right. Continue on BB until 30th Ave. Turn left on 30th, the entrance to the school forest is the first driveway on the left.

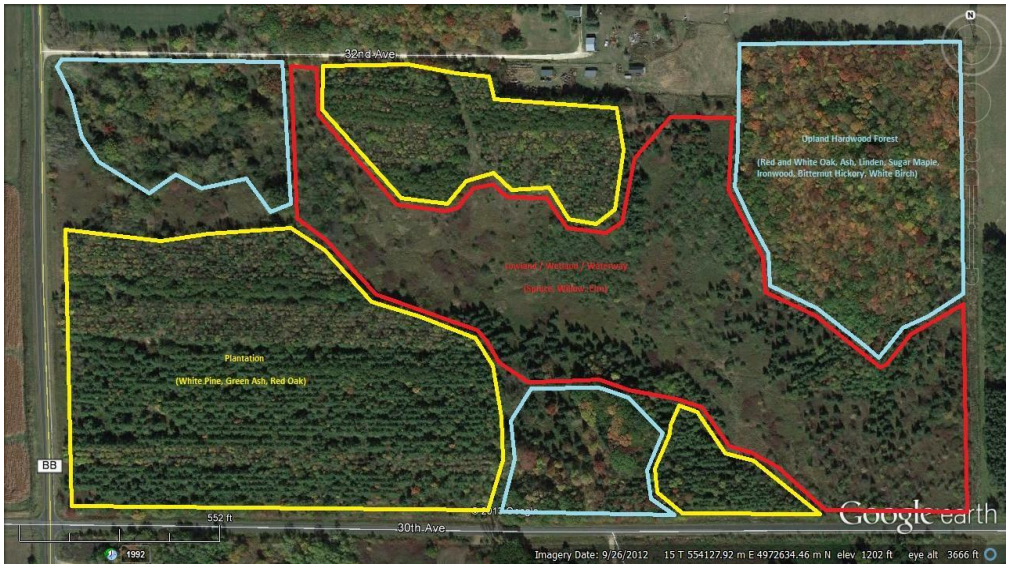
Directions to the 76 acre parcel from Woodville:
Take Cty Rd BB south out of Woodville. Continue to 30th Ave. Turn left on 30th, the entrance to the school forest is the first driveway on the left.
The 76 acre parcel is being developed as an outdoor classroom. The 20 acre parcel is on the corner of Cty Hwy BB and Cty Hwy N.

Ecological Description:

The timber stand on the 20 acre parcel contains a mixture of sugar maple, basswood, red maple, white ash and white oak.

A 41 acre northern hardwood and white pine/white spruce plantation was planted on the 76 acres in 1988 and in 1989. Prior to this the southwest portion of this plot was farmed with the primary crops being hay and corn. A portion of this acreage also contains white birch, aspen, red oak, green ash, red cedar and elm. A swampy area runs through the middle and lower portion of this property and contains grasses and other herbaceous plants. The previous owner desired to provide wildlife habitat so left hollow trees and large woody debris for shelter and food for animals.

Wildlife found in the area includes (but is not limited to) whitetail deer, fox and coyotes, skunks and raccoons. Wild turkeys are frequently seen on the property as are chickadees, cardinals, crows, red-tailed hawks, and blue jays.



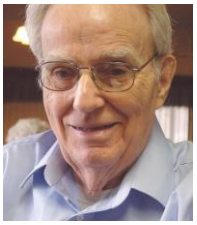
Areas outlined in blue are an upland hardwood forest, yellow are a tree plantation, and red is a lowland, wetland waterway. Full-sized map found at the end of this document.

Facilities: None at this time. Installation of restrooms is planned for the spring of 2014.

Educational opportunities possible at the site include:

- Animal tracks and signs
- Appreciation of nature
- Arbor Day celebrations
- Art – drawing, painting
- Biodiversity
- Bird watching
- Building background knowledge for reading and other studies
- Compare and contrast writing
- Community education
- Data collection and analysis
- Creative writing
- Ecology
- Food chain studies
- Forest management
- Forest regeneration
- Forest surveys
- Geology
- Habitat studies
- Hands-on learning
- Invasive species: identification and control
- Land use history
- Leadership activities
- Life-cycle investigations
- Management plan development
- Mapping
- Math connections: measurement, area and acreage
- Multi-sense observations
- Navigation skills
- Outdoor safety
- Phenology
- Photography
- Physical fitness: cross-country skiing, snowshoeing, hiking
- Plant identification and classification
- Soil analysis
- Stewardship projects
- Team building activities
- Weather and climate observations
- Wildlife identification and classification

Site History On August 10, 2010 the Baldwin-Woodville Area School District was bequeathed 96 acres from the estate of Mary J. Giezendanner. According to her will, it was her and her husband's desire that it be used for a school forest, although the school district had the option to use it as they saw fit. Thankfully, the Baldwin-Woodville School Board decided to keep the land and utilize it as a school forest. Interviews with Giezendanner's neighbors, Janet Lund and Dennis Duckworth, indicated that the Giezendanners were wonderful neighbors who served as a second set of parents to the children in the neighborhood, they themselves were childless. Earl loved the woods and forestry; he was constantly working in his woods. His landowner objectives as found on his managed forest lands stewardship plan were: to grow a mixture of hardwoods and white pine for timber products, return the land to its original condition, provide wildlife habitat and recreational opportunities. This goal will be continued by the Giezendanner School Forest committee with the addition of a strong educational component.



The Giezendanners first purchased 20 acres in the Eau Galle Township in 1964 from Lloyd Monicken. In 1965, Wayne Johnson sold them the neighboring 20 wooded acres. This 20 acres is now owned by the school district but is not connected to the larger parcel.

In 1987, the Giezendanners had the opportunity to purchase an additional 76 acres just down the road from their home. The previous owner, Lloyd Burch had farmed in the area since 1952. The 76 acres were used for agriculture. The southwest portion was planted in corn and hay but it was quite rocky farmland. The rest was wet and was used as pasture land. Once Earl purchased the land, he began planting trees on it. He enrolled the land in the State of Wisconsin's Managed Forest Plan in 1990.

But this is recent history, evidence exists in the area of habitation by small groups of Archaic peoples around 5,000 B.C. It is uncertain whether they were permanent residents or were following regional migrations. They were here long enough to make stone tools and projectile points. The Chippewa (Ojibwa) and the Sioux battled over this area in the 17th and 18th centuries.

The township 28N, Range 16W, Section 15 was first surveyed by J.S. Jarrett in October of 1849. His field notes indicate that the land was rolling and covered with oak, sugar maple, elm, birch, and ash trees. According to the abstract the land is officially deeded to the State of Wisconsin by the United States in 1851. G.W. Long takes possession of approximately 160 acres in 1863. According to Westward to the St. Croix by Harold Weatherhead, lumbering of this area was intense in the 1870s and had been completely harvested by the mid-1890s. The area was known as the "big woods" and was covered with hardwoods.

Following the lumbering, the land went into agricultural use and was owned by several generations of Johnsons. Willis and Milda Johnson then sold 76 acres of land to Lloyd Burch in 1959. Lloyd Burch also owned an adjoining 40 acres. Lloyd did remove timber from the land at that time but he needed to pay the value of the timber to the Johnsons. It is interesting to note that the original Eau Galle Town Hall was on this property but Lloyd Burch skidded it across the swamp in the winter to use as a machine shed on his farm.

Site Management

Earl Giezendanner enrolled his property in the Managed Forest Lands Stewardship Forestry Plan in 1990. It was renewed in 1995 and ends in 2039. His goal was to raise a mixture of hardwoods and white pine, provide wildlife habitat and recreational opportunities. These objectives fit in with Baldwin-Woodville's outdoor classroom plan and will allow for the exposure of students and community to a natural environment.

The development of this land as a school forest is in the beginning stages and its usefulness for students and staff is of primary concern, therefore our goals are to:

- Involve students, staff and community in all aspects of management as much as possible.
- Continue a forest management plan that maintains forest health, provides wildlife habitat, and educational and recreational opportunities.
- Remove invasive species.
- Control poison ivy in heavy traffic areas.
- Complete and improve the trail system.
- Add a driveway and parking lot access.
- Build restroom facilities.
- Provide outdoor and indoor classroom areas for learning opportunities.

Proper site management and development will make it possible for staff, students and the community to fully utilize and benefit from the property. It should:

- encourage staff to plan and implement lessons on the land.
- allow community organizations (Scouts, 4-H, etc.) to provide programming there.
- enable all students to experience the school forest.
- provide students, staff and community with stewardship opportunities.

Educational Connections

Key Concepts/Educational Goals

1. The natural world exhibits predictable patterns. Humans seek to understand these natural patterns and cycles.
2. Plants, animals, and humans can coexist while maintaining land integrity
3. Activity in nature promotes physical and emotional wellbeing
4. Materials flow through our ecosystem as “natural resources”, which are finite, not unlimited. People, like all life, must consume resources to live.
5. The natural world can inspire; spiritually and creatively.
6. Wisconsin ecosystems are unique due to climate, natural events, and historical events.
7. Tools, technology, and skills are used to study and participate in the environment.

Classroom Curriculum Connections

The current curriculum concentrates on grades K-8. The needs assessment indicated the most enthusiasm by those teachers for involving students in hands on educational experiences at the school forest. As experience with the school forest grows, so will the involvement of additional staff and grade levels. Science is the most natural tie in and it allows students to easily engage in hands on projects.

Grade Level	Content Area	Key Concepts	Enduring Understandings	Objectives	Activities	WI State Standard
4K-K	Science	1, 3	We can use all of our senses to understand and appreciate nature.	Learn that nature offers many interesting and beautiful things.	Nature Hunt Nature Hunt Activity Page	A.4.1 A.4.2
4K-K	Science	1	There are many different types of trees in the school forest.	Students will differentiate between various leaf types.	Leaf Matching Game Leaf Matching Activity Lesson	A.4.1 A.4.2
1	Science	1.2.4	Trees are living things and are homes for living things	Learn the parts of a tree and what it does. Learn that trees change with the seasons Learn that trees are homes to animals and insects Learn that trees are used to make a variety of products and provide us with oxygen Explore the forest looking for a variety of leaf shapes, colors and sizes	1. Leaf Hunt/Hike and Leaf Collection (Looking for similarities and differences Location: School Forest 2. Stuffed Forest Animals: scavenger hunt for hidden animals Location: School Forest 3. Leaf mobiles Creating a leaf and twig mobile identifying different shapes and sizes of leaves. Location: School Forest then classroom	Cognition A.EL.1, C.EL.1, C.EL.2 EE A.4.2 EE A.4.3
1	Science, Literature	1,2,4	Sap is food for trees and people.	Learn how sap moves through the trees and provides energy.	The Sugaring Off Party by Jonathan London Maple syrup collection and processing. Local maple sugarers will help groups tap trees. Sap collected will be measured and boiled down in the classroom.	EE A.4.1 EE A.4.2 EE A.4.3 Sci F.4.1 CC Reading 1. 2.3.4.6
1	Science	1,2,4	Plants are living things.	Students learn that plants have similarities and differences, Review the needs of plants to grow and survive, Plant and observe their flower's growth.	1. Planting Violas: students will plant a viola and observe growth and changes in the plant. Location: Classroom 2. Forest Plant Investigation: looking for similarities and differences in leaves, color, height, etc. Location: School Forest	Cognition: A.EL. 1, C. EL.1, C.EL.2, C.EL.3
1	Science	1	People use their five senses to group and compare living and non-living things.	Students will be able to identify living and nonliving parts of a forest	Sensing the Forest from LEAF Guide K-1 Unit	Ag.Ed. E.4.1
1	Science Reading	1	There is a wide variety of plant life.	Students will observe details in various plant populations of the forest and create a Venn Diagram to compare and contrast them.	Plant Comparisons	E.E. A.4.4 E.4.2

2	Science	2, 6	The arrangement of food, water, shelter, and space is important to humans and other animals.	Students will be able to 1) identify the components of habitat 2) recognize how humans and other animals depend upon habitat 3)interpret the significance of loss or change in habitat in terms of people and wildlife Students will be able to: 1) identify the basic components of habitat as food, water, shelter, and space in a suitable arrangement; and 2) generalize that these components of habitat are needed by all animals - including people and wildlife. Students will be able to: 1) identify their own basic needs for food, water, shelter, and space in a suitable arrangement; and 2) generalize that wildlife and other animals have similar basic needs. Students will be able to: identify the materials and techniques used by at least one animal to construct its shelter; and 2) construct a model of an animal using materials collected from the natural environment.	Habitat Lap Sit (or variations) -From Project Wild Curriculum Habitracks What's that Habitat? My Kingdom for a Shelter Habitat Lesson Plans from Project Wild	B.B.4 B.B.6
2	Art	2	Animals, like people, share habitats and must coexist	Students will draw animals and habitats found in a deciduous forest.	What's Your Niche? P.10	
3	Science Reading	1,4,6	What happens to one organism affects others.	Describe causes and effects in nature	Read about Cause and Effect in Science textbook, Spend time observing cause and effect in the forest. Create cause and effect chart. Fallen Log Project	EE A.4.1 EE A.4.2 EE A.4.3 EE A.4.4 D.8.5

3	Science Math	1,4,6,7	Soil is important to people and other living things	Explore content of soil Compare different types of soil and explain how it forms.	Collect and Graph Soil samples of various areas of the forest.	C12-C15 E.4.1, E.4.2
4	Science Math	1,6,7	It takes more than just height to make a tree champion!	Students will define height, circumference, and crown spread and measure them on a tree.	Tree Champs (Measure trees and hold a contest to find the biggest tree in the forest)	CC Math 4.MD
4	Science Art	1	Animals are grouped according to their shared characteristics.	Explore the characteristics of animals Classify animals based on symmetry	How are animals different? Practice page	EE A.4.1 EE A.4.2 EE A.4.3 EE A.4.4
5	Science Social Studies English	1,6	A variety of life forms exist in a given area.	Students will observe and identify plants, animals and landforms.	Lewis and Clark journaling	LA B.8.1 CC Writing 5:2 5:4
5	Science	1,2	Humans have an impact on the ecosystem.	Students learn about wildlife and the impact of humans.	Checks and balances game	F.8.8 F.8.9
5	Social Studies	7	Maps are useful tools.	Students will learn how to draw a to scale map.	Map the forest including trails and landmarks.	A.8.2
5	Social Studies, Language Arts, Science	1, 6	Change is a process.	Students will understand how the environment and lifestyle has changed over time.	Little House in the Big Woods excerpt. Compare and contrast with Venn diagram. Pioneer games. Knot tying.	SS A.8.4 LA F.8.1 EE B.8.10
5	Physical Education	3, 7		Students will learn how to read and use a compass.	Orienteering	PE1:3:A7
6	Language	7	A variety of technologies can be used to get directions.	Students will use GPS, map and compass to locate objects in the forest. Compare and contrast the methods.	After using both a GPS and a map and compass to find objects in the geocaching exercise, students will write a compare/contrast essay relating the two ways of navigation.	CC Writing Gr. 6: 2 , 4
7	Life Science	1,6,7	Classification systems are used so we can better understand and communicate about things in our world	Students will learn to use a dichotomous key to identify an organism.	Students will use various animal, plant, and fungus dichotomous keys to identify organisms in the forest.	B.8.5
7	Life Science	1,7	Science is a process of investigating and	Students will be able to collect data to contribute to a large group study.	Students will collect data for one of the following; a. Citizen Science App such as Creek Watch, Sensr, or	A.8.4, B.8.3, B.8.5, B.8.1,

			strives to provide reliable results.		sci.spy. b.Collecting data for their OWOR project.	C.8.8, E.8.4, F.8.8, G.8.3, G.8.7
7	Life Science	1,7	Information can be obtained by examining the world in different ways.	Students will be able to manage the collection and labeling of field samples for examination.	A. Students collect samples and label with collection data. B. Students examine samples under a microscope to identify microscopic organisms. C. Students compare and contrast collection data and microorganisms to find patterns in their habitats.	A.8.4, B.8.3, B.8.5, B.8.1, C.8.8, E.8.4, F.8.8, G.8.3, G.8.7
7	Life Science	1,2,4,7	Humans impact their environment either positively or negatively.	Students will be able to identify signs of stability in an ecosystem.	A. Students will collect data such as population surveys, tree borings and soil samples for a longitudinal study on the health of the school forest. B. Students will compare and contrast data to previous years.	A.8.4, B.8.3, B.8.5, B.8.1, C.8.8, E.8.4, F.8.8, G.8.3, G.8.7
7	Life Science	1,2,4,7	Humans impact their environment either positively or negatively.	Students will be able to perform techniques to improve the health of a forest.	A. Students will determine a feasible course of action for improving the health and stability of the forest. B. Students will carry out their forest improvement plans.	C.8.10, E.8.1, E.8.6, F.8.8, F.8.9, F.8.10, G.8.4, G.8.5, H.8.2
7	Math	1,4,7	Analyzing data in different ways can help identify patterns.	Students will be able to perform techniques to obtain and analyze data.	A. Students will use a sextant and triangulation to measure the height of a tree. B. Students use population samples to calculate total populations of organisms. C. Students will create graphs and analyze data to identify patterns in forest growth	B.8.4, B.8.5, C.8.3, C.8.6, F.8.9
7	Geography	1, 6	Ecological development follows patterns and can help predict changes in the environment.	Students will be able to compare local ecological development to other geographical areas.	A. Students will identify developmental stage of a forest. B. Students will identify the factors that contributed to the change in geographical areas that had environments similar to our own.	A.8.1, A.8.4 A.8.6 A.8.8
7	Geography	7	Different types of maps convey different information.	Students will be able to identify different styles of maps and ascertain information from them.	A. Students will use topographical maps to identify elevation of the forest. B. Students will identify their location on a political map.	A.8.1, A.8.4, A.8.5, A.8.6,

7	English/L.A.	5	Writing styles differ depending on its purpose.	Students will be able to differentiate between subjective and objective writing.	A. Students will write a subjective description of the forest. B. Students will write an objective description of the forest.	CC Writing gr. 7: 2, 4, 5
7	English/L.A.	5	Inspiration for creative writing can come from one's environment.	Students will be able to identify environments that encourage their creativity..	A. Students will record inspirational thoughts for use in their environmental persuasive essay and the OWOR cocurricular project.	
7	Technology	7	Technology can connect add to our understanding and help share information	Students will be able to use portable electronic devices to collect and share data.	A. students use applications such as LeafSnap, Redwood Watch, Sensr, Project Noah, and Bio Kids to collect and share information on the forest. B. Students will use GPS and the RePicture app to locate and record growth of a tree.	ITC1.a, ITC1.c, ITC1.i,
7	Art	5	Nature can inspire art	Students will be able to draw a nature scene.	A. Students use charcoal or pencil to draw a tree. B. Students will use watercolor to paint a landscape.	A.8.3, B.8.5, C.8.6, C.8.7, E.8.5, G.8.4, H.8.2, H.8.3, I.8.2, I.8.6, J.8.2,L.8.4,
8	Earth Science	6,7	Observations can help predict weather patterns	Students will be able to identify and measure aspects of the weather	A. Students will measure wind speed, temperature. B. Students will identify cloud types C. Students will share a weather forecast. based on observations.	C.8.1 C.8.2 C.8.3 C.8.4 C8.6 C8.8
8	Earth Science	6,7	Rocks can be identified by measurable characteristics.	Students will be able to identify rock types	A. Students will use streak plates to identify hardness of a rock. B. Students will use a weak acid to determine Ph of a rock C. Students will use a blacklight to look for rock phosphorescence .	E.8.2 E.8.5
8	Math	5, 7	Algebra can be used to measure and convey information	Students will be able to determine slope of the land based on topographical data.	A. Students will measure elevation to create a topographical map. B. Students will determine slope of the land using topographical data. They will utilize indirect measurement to plot the battlefield.	CC.8.F.3 CC.8.G.9
	Math	5, 7	Algebra can be used to measure and convey information	Students will be able to determine a weapon's range.	After learning about muskets and mortar, calculate the initial velocity of mortar using data from initial firearms. Using this data,	CC.8.F.3 CC.8.G.9

					select a safe location to set up the defenses for the camp on the map of the land.	
8	World History	5, 7	Society and technology change over time.	Students will be able to compare and contrast different time periods	Students will interact with members of Clann Tartan reenactment group to learn about their society.	B.8.3 B.8.7 B.8.10 D.8.1 A.8.1 A.8.8
8	English/ Language Arts	5, 7	Writing can be used to record history and convey thought.	Students will be able to express and reflect upon their experiences with Clann Tartan in the forest through writing.	Students will write an argumentative essay in support of or against one of the following topics connected to Clann Tartan.	8.1b
8	Literature	5, 7	Storytelling is a way to pass down ideas.	After listening to storytelling, students will be able to reenact a story of their own.		
5-7	Physical Education	3	Outdoor activities improve personal health and increase camaraderie.	Students will engage in outdoor activities	Hiking the trails, pedometer work, snowshoeing, cross-country skiing scavenger hunts. outdoor games.	PE 3:2:A4 PE 3:3:A3 PE 4:3:B1 PE 1:3:A7
5-7	Guidance	3,7	It is fun to succeed together.	Students will work together to solve a problem.	Leadership and teambuilding activities	LE1.a.9.m LE1.b.5.m LE1.b.6.m
9-12	Community Service	2, 3, 4	Satisfaction comes from helping out.	Students will help maintain the school forest and facilities.	Removal of invasive species. Trail upkeep.	

Staff Development

Staff development is essential for the success of the school forest curriculum. The following will be offered to familiarize teachers with the school forest and curriculum materials:

- On site tour by building levels. Next one scheduled in the spring of 2014.
- Yearly update at beginning of the year inservice (Nicki Severson, Dennis Paquette).
- Overview of elementary curriculum and associated teaching kits by grade level (Becky Morrissey/Nicole Kriener).
- Provide opportunities for teachers to attend Environmental Education classes and workshops.
- Experienced teachers will share how they have used the school forest (Becky Morrissey, organizer).
- Sponsor LEAF or Project Wild training for teachers.
- Utilize local resources for additional training (DNR, UW-Extension)

Resources

People

- School Forest Education Sub-Committee
- Aleisha Miller, LLC Environmental Educator, St. Croix County
- Gretchen Marshall, Wisconsin School Forest Education Specialist
- William Dingwell, Menomonie School Forest Coordinator
- Staff at Department of Natural Resources

Materials Available

- Activity kits at elementary
- Art supplies
- Books (fiction and nonfiction) to expand literacy and non-fiction components of lessons.
- Cross-country skis
- Digital cameras.
- First aid kits
- Insect field guides
- iPads (no wireless access on site)
- Project Wild lesson plans
- LEAF Tree Identification Cards
- Science textbooks

Materials Needed

- Animal props (furs, bones, mounted specimens)
- Backpacks
- Biltmore sticks
- Binoculars
- Buckets
- Bug boxes
- Chemicals for invasive species control
- Clipboards
- Compasses
- Construction materials (benches, storage building, classroom)
- 5 gallon Igloo water coolers
- Diameter tapes
- Field guides (multiple copies)
- GPS units
- Ice cube trays for sorting specimens
- Insect nets
- Loppers and clippers
- Lumbering tools
- Magnifying glasses
- Pedometers
- Plastic storage containers
- School forest user guide
- Shovels
- Snowshoes
- Soil sifters
- Wheelbarrows (3)
- Work gloves

On-site Facilities

This is a fledgling program, a beautiful piece of land is available for the students' use but much needs to be done.

Currently:

- An access driveway
- A perimeter trail and shorter loop
- Porta potties rented as needed

Needed:

- Driveway and parking lot (bid accepted; work beginning Dec. 2013)
- Permanent restrooms
- Benches
- Enclosed classroom area
- Signage (directional and informational)
- Storage for materials
- Trails extended and improved

Funding Sources:

- Giezendanner Estate (as approved by Baldwin-Woodville School Board)
- Wisconsin Environmental Education Board School Forest Grant (up to $20,000)
- St. Croix Valley Master Gardeners Association (Grant)
- Baldwin-Woodville Area Community Foundation (Grant)
- Ann Marie Foundation (Grant)
- Possible fundraisers/donations

Assessment

The Giezendanner School Forest program will be reviewed annually using the following methods:

- After each visit to the school forest, teachers will be asked to fill out an evaluation form. The form will be a short survey asking about number of students, activities involved in and success (or not) of educational activities, how to improve the forest and curriculum.
- Total number of classes using the school forest for educational purposes will be tracked.
- Student surveys.
- Test scores are monitored on a regular basis by the school district.

The results of these surveys will be reviewed by the School Forest Committee in the spring so that issues can be addressed over the summer. Results will be shared with the Baldwin-Woodville School District administration and School Board. Modifications will be made to the educational and management plan as needed.

Sustaining the School Forest Program

School Forest Committee and its Responsibilities

Committee member	Affiliation	Responsibilities
Deb Rasmussen	School Board Member	Chairperson Finances Grant writing
Dane Rasmussen	Community Member	Invasive species removal Site & trail development
Jack Rasmussen	Community Member	Invasive species removal Site & trail development Forestry plan
Jason Gough	Community Member; Certified Master Arborist	Site & trail development Forestry plan Grant writing
Claire Stein	Community Member Retired teacher	Site & facility development Grant writing
Debby Walters	Community Member Retired teacher	Education plan Site & facility development Community outreach Grant writing
Dennis Duckworth	Community Member Eau Galle Town Board	Advisory Management plan review
Jake Kusilek	High School Teacher	Construction
Sarah Pollock	Community Member Former Teacher	Education plan
Nicki Severson	Middle School Teacher	Education Committee Curriculum integration Staff inservice
Dennis Paquette	Middle School Teacher	Education Committee Curriculum integration
Becky Morrissey	Elementary School Teacher	Education Committee Curriculum integration
Nicole Kriener	Elementary School Teacher	Education Committee Curriculum integration Grant Writing

Scott Benoy	Curriculum Director	Education Committee Curriculum integration
Jennfier Smith	Community Education	Community education offerings
Gretchen Marshall	LEAF Forestry and Outdoor Education Specialist	Advisory Curriculum development
Dahn Bohr	DNR forester	Forestry plan
Eric Russell	District Superintendent	Personnel structure Finances

Baldwin-Woodville Area Community Volunteers

- A group of local young adults and adults that are willing to help and maintain the school forest.
- Girl Scout Troops (Leaders: Heidi Dumond, Heather Shaw, Pauline Wangen)
- Boy Scout Troop (Matt Knegendorf, Leader)

Statewide Consultants

- Gretchen Marshall, LEAF Forestry and Outdoor Education Specialist
- Dahn Bohr (DNR Forester)

Communication Plan

As this program develops, it is essential to work closely with the Baldwin-Woodville School District administration, school board, staff, students, and community so that they are aware of the resources and opportunities available to enrich the educational program and lives of the students involved.

- An updated webpage will be maintained and contain history, photos and up-to-date information regarding the use of the forest.
- School forest updates will be shared at School Board Meetings (at least) annually.
- Teachers will receive in service training on environmental education curriculum.
- The media will be notified of events, such as teacher training, community events and project completion.
- Staff meetings and emails will inform staff members of activities at the school forest.
- A Facebook page will be utilized to inform and build community support.
- Outreach to local community groups, such as Scouts, 4-H Clubs, church groups.
- Maintain contact with Eau Galle Township officials for good community relations.

Long-Range Goals

In order for the Giezendanner School Forest to mature into the envisioned outdoor classroom that will enhance and extend the regular classroom curriculum and help our students to develop an appreciation and connection to the land, much needs to be done. Our goals are many!

- Improved access to the property in terms of a driveway and parking lot.
- Upgrade and expand the existing trail system.
- Permanent restroom facilities.
- A part-time school forest coordinator position to support teachers, curriculum, community outreach and grant writing.
- Providing training and support for interested school staff to make their teaching on site more effective.
- Expand the support base for the school property (Friends of the School Forest group, larger sub-committees for various tasks).
- Update the school forest management plan to provide a diverse and sustainable environment.
- Offer community education courses related to the environment and school forest.

Implementation Plan

2013/2014 School Year		
Goal	Who Will Implement	Resources
Complete school forest education plan and present to school board. Submit to Wisconsin Environmental Education Board.	Education Committee	
Fall tour of the school forest for staff	Nicki Severson	School forest
Trail development	Trail Development Committee	Equipment and tools
Driveway and parking lot.	Albrightson Excavating	Funding from the Giezendanner Estate.
Permanent restroom facilities.	Claire Stene, bids	Funding
Forest restoration: planting of red and white oak, sugar maple, tamarack	Jack Rasmussen, organizer 5th grade students and teachers	DNR seedlings
Clann Tartan unit held on site	8th grade team	

Create a resource list of educational materials and guest speakers and share with staff through staff meetings and website.	Education Committee Debby Walters	
Submit grant to WEEB for facility development, school coordinator, educational materials.	Grant Writing Committee	
2014/2015 School Year		
Part-time school forest coordinator hired to assist in forest usage, community outreach and grant writing.	School Board	Funding
Construct benches for outdoor classroom seating.	Jake Kusilek High School Tech Ed Class	Lumber
Organize a Friends of the School Forest group	Debby Walters	
Investigate establishing an endowment fund for continued financial support of the forest and educational program.	Jack Rasmussen	
Upgrade existing trails and continue trail development	Trail Development Committee	Equipment and tools. Wood chips.
Continue to development and implement school forest curriculum.	Education Committee Interested staff	
K-8 grade classes visit the school forest once during the school year.	Education Committee Classroom teachers	
Inservice offered for teachers.	Nicki Severson Becky Morrissey	
Design an indoor classroom for the school forest.	Site & Facility Development Education Committee	
Obtain necessary tools and equipment for forest maintenance.	Trail Development Site Development	Funding/Donations

Build storage shed for tools and equipment.	Jake Kusilek /Kyle Miller High School TechEd Classes	Funding for materials
Trail and educational signage	Dennis Paquette Seventh grade students	Funding for materials
Designate a fire pit area and construct a safe one.	Site & Facility Development	Funding for materials
Signage indicating school forest entrance.	Site & Facility Development	Funding
Provide community education activities on-site.	Jennifer Smith Education Committee Community members	
Assess usage of the school forest by teachers, students and community.	Education Committee	
2015/2016 School Year		
Construct permanent indoor classroom at the forest.	Site & Facility Development	Funding
Improve wildlife habitat and food sources with additional plantings.	Fifth grade students and teachers	DNR
Construct a low ropes challenge course.	Site & Facility Development Education Committee	
Refine the perimeter trail enough so it can be used in the B-W cross-country program.	Trail Committee Cross-country team	
Line fence with neighboring agricultural property	Site & Facility Development	Funding

Ongoing objectives:

- Revise and strengthen the educational curriculum associated with the site.
- Provide yearly training for staff.
- Each grade level utilizes the school forest at least once a year.
- Update educational materials.
- Continue to battle invasive species (buckthorn, garlic mustard and others.
- Involve the students and community in the stewardship of the land.
- Maintain the health of the forest through an updated forestry plan.

- Monetary support.
- Continued assessment of facility needs.
- Gathering input from staff, students, community on usage and development needs (curriculum, resources, facility)

District Commitment

- Present the School Forest Plan at the December 2013 School Board meeting for adoption.
- Monies from the Giezendanner Estate to be used for start up facilities.
- Transportation costs.
- Providing inservice time.

Values Statement
Works Cited

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Giezendanner School Forest

Baldwin-Woodville Area School District

76 acre parcel