

RAHR MEMORIAL SCHOOL FOREST

EDUCATION PLAN



Updated: 4/4/2007

TABLE OF CONTENTS

| | |
|---|----|
| Mission Statement | 1 |
| Rationale | 1 |
| Value Statement | 1 |
| Target Messages..... | 1 |
| Needs Assessment Results | 1 |
| Site Description and Opportunities..... | 3 |
| Legal Description..... | 3 |
| Site History | 4 |
| Site Management | 7 |
| Map | 8 |
| Educational Connections | 9 |
| Key Concepts / Enduring Understandings..... | 9 |
| Alignment with Wisconsin’s Model Academic Standards | 9 |
| Site Connections | 9 |
| Classroom Curriculum Connections..... | 9 |
| Staff Development | 9 |
| Resources | 10 |
| Assessment..... | 11 |
| Grade Level Activities and Curriculum Connections | 12 |
| Sustaining the School Forest Program..... | 23 |
| School Forest Committees | 23 |
| Communication | 24 |
| Long-Range Plan | 24 |
| Implementation Plan..... | 25 |
| District Commitment | 27 |
| References..... | 28 |

Completed by: Jill Backus, Lynn Bushman, Mary Fogltanz, Shari Lipski, Patty Maher, Tina Menting,
Kathie Nelson, James VanSchyndel, Kathy Whitman
Consultants: Marcia Flaherty, Ellen Reinertson, Jeremy Solin (LEAF Program)
School Forest Advisory Committee: Lee Braunel, Carol Christiansen, Jody Henseler, Andrea Holschbach,
James Kempf, Curt Kittleson, Jeanie Miller, Chris Peterson, Jeff Schulz

Produced under a 2006-2007 grant from the Wisconsin Environmental Education Board.

MISSION STATEMENT

The Rahr Memorial School Forest serves as a multiple-use natural school and community resource, providing opportunities for people to develop awareness of and appreciation for the natural world to become informed, responsible decision-makers regarding the environment.

RATIONALE

Value Statement

The Rahr Memorial School Forest offers a unique natural resource learning site which facilitates the development of ecological and social sense of place. Integrating environmental education (EE) into the curriculum is an effective method to increase student achievement, decrease behavior issues, and increase attendance (Lieberman and Hoody 1998).

“Understanding the environment
leads to appreciation of the environment
which leads to better care of the environment.”
~unknown~

Target Messages

1. Awareness and sensitivity are vital to understanding the natural world.
2. Humans directly impact the natural environment.
3. The natural world has inherent value.
4. Specific skills are required to identify, investigate, and take action toward prevention and resolution of environmental issues.
5. Humans are obligated to make informed decisions and contribute to environmental sustainability.

Needs Assessment Results

At the start of the 2006-2007 school year, MPSD elementary teachers were asked to complete a needs assessment survey regarding the School Forest. The results from this survey will assist with future School Forest planning. One-hundred-twenty-seven (127) surveys were collected. The following section contains the results.

School Forest Use

- 20 teachers use the School Forest once per year
- 74 teachers use the School Forest twice per year
- 30 teachers use the School Forest three or more times per year
- 3 teachers do not use the School Forest every year

The Needs Assessment showed that, overall, kindergarten and second grade uses the School Forest the most often. The Needs Assessment showed that, overall fifth grade uses the School Forest the least.

Problems that prevented people from using the School Forest typically included problems with scheduling (no space available) and weather.

Lessons

The *existing activities* that are done at the School Forest are:

Kindergarten: trees, animals, snowshoeing, senses, observations

First Grade: insects, soils, snow, snowshoeing, animals

Second Grade: plants, weather, insects, animals

Third Grade: trees, measurements, habitats, life cycles, birds

Fourth Grade: birds, tracking, lumbering, maple sugaring, Nature Guide
Integrated Guides

Fifth Grade: swamp study, invertebrates, winter ecology, team building

Sixth Grade: team building, survival, snowshoeing, cross-country skiing,
astronomy, environmental sciences

The Needs Assessment displayed a *need for development* of the following lessons for use at the School Forest

Kindergarten: beach activities for use throughout the year

First Grade: animal classification activities

Second Grade: Earth Week connections (awareness activities) and
curriculum on balance & motion

Third Grade: update measurements activities and writing activities

Fourth Grade: soils, geology, landforms, coordinate grid activities

Fifth Grade: connection with variables and scientific method (possibly
boat designs and water quality)

Sixth Grade: continue development of astronomy classes

Materials

Many positive comments were made about currently available materials and the preparation done by the School Forest Coordinator.

Several requests were made for specialists/volunteers to enhance lessons. Other requests were for:

Specific map of locations

Additional child-friendly signage

Weather tools

Additional materials for hands-on experiences

Soils materials

Field guides for younger students

Stuffed (taxidermy) animals

Large skis, ski boots, and snowshoes

High and low ropes courses

Binders in each school library containing grade level activities, including a
section with miscellaneous activities for that grade level

As it turns out, some of the requested materials were already being added to the School Forest supplies and some are already present. It seems that more knowledge of what is available needs to be shared with the teachers.

Facilities

94% of K-6 teachers are satisfied with the School Forest facilities. Suggestions for improvement include:

- Updating signs on trails
- Addition tree identification signage
- Improving bathroom facilities
- Improving wheelchair accessibility
- Additional outdoor teaching area
- Add a research library
- Add a composting demonstration area
- Modeling conservation through energy-saving measures and recycling

Professional Development

When asked if teachers felt they had enough knowledge of natural resources and environmental education to effectively utilize the School Forest:

- 71% of K – 2nd grade teachers feel like they do and 29% do not
- 37% of 3rd – 6th grade teachers felt they do and 63% do not

Teachers would like to acquire more background knowledge in areas such as soils, water, plant/animal identification, and wildlife.

Teachers would like more professional development opportunities in the following areas (percentage of teachers requesting):

- 33% content (background information on forest, wildlife, water, soils, etc.)
- 28% outdoor education methods
- 9% environmental education (background information on EE, how it can be used, state EE standards)
- 22% EE curriculum (e.g. LEAF, PLT, WET, WILD)
- 8% forest management

SITE DESCRIPTION AND OPPORTUNITIES

The Rahr Memorial School Forest is located north of Point Beach State Forest along Lake Michigan. It is comprised of 293.31 acres of mixed forest, pine plantations, sand dunes, pond, swamp, beach shoreline, hemlock forest, transitional forests, and learning areas.

Legal Description

County: Manitowoc

- | | |
|-----------------------|--------------------------------------|
| Town Name: Two Creeks | Township: 21N; Range 24E; Section 36 |
| | Township: 21N; Range 25E; Section 31 |
| Town Name: Two Rivers | Township: 20N; Range 24E; Section 5 |
| | Township: 20N; Range 25E; Section 4 |

Site History

Natural History

The Rahr Memorial School Forest is located north of the Point Beach State Forest on the shore of Lake Michigan. The School Forest contains a total of 293.31 acres located in the townships of Two Rivers and Two Creeks in Manitowoc County.

There have been several changes in landforms over time due to glaciations, fluctuations in Lake Michigan's water levels, and the effects caused by wind blown sand. Glacial Lake Nipissing covered the area 4,000 years ago. The present Lake Michigan levels existed about 2,000 years ago. The three soil types, as reported by the Soil Survey of Manitowoc County, include Bridgeman fine sand, dune sand, and peat.

Many species of trees exist within the School Forest including oak, aspen, maple, white pine, red pine, hemlock, paper birch, yellow birch, jack pine, Norway spruce, white cedar, and green ash. There is also a variety of herbaceous plants including grasses, sedges, wildflowers, shrubs, invasive plants, and rare specimens.

Wildlife that can be found at the School Forest includes grey fox, red fox, white-tail deer, wild turkey, raccoon, turtle, frog, salamander, owl, skunk, waterfowl, song birds, coyote, insects, and many more.

Cultural History

There is no date available, but it is known that Native Americans inhabited the area near the site of the School Forest sometime after the retreat of the last glacier which created the unique ridges and swales. There is a site on the south side of Molash Creek (in Point Beach State Forest) where chips can be found which were remnants of arrowhead making. The chips are from orange igneous rocks. Since no igneous rocks are found in this area, the rocks had to be carried in. There is an old Indian road, which ran from Green Bay to Milwaukee along the lakeshore.

From the early 1800s onward, lumber and forestry products were the major industries. In 1852, 90% of the exports were lumber and forestry products. Wood was used for posts, shingles and lathes. The hemlock trees from Two Rivers north to Two Creeks were cut for lumber. The bark was used in the tanning industry (from which Tannery Road received its name). Peeling and boiling the hemlock bark produced tannic acid, which was used in the softening of animal hides, as they became leather. The logs were sent to the area sawmills to become lumber.

Firewood was cut to fire the many steamships which frequented the area. The wood was hauled to Lake Michigan piers for the ships. The whole School Forest property was eventually logged off. It is reported that—at any time during this period—people could stand on the shore near the School Forest property and see at least two steam ships. The SS Vernon sank off the School Forest property and floated to the southeast. Many people drowned, were unidentified, and are buried in a mass grave in Two Rivers. In 1872, shipping logs reflect that there were fewer forestry products and more agricultural products, such as wheat, beef, and hides being shipped. This indicated that the land had

been cleared for farming. The climate was found to be conducive for agriculture as it was level and with decent soil. The soil absorbed moisture from the lake during the night to enhance growing.

The infamous Peshtigo Fire began on October 8, 1871, and burned into northeastern Wisconsin, including what is now School Forest property. The story has been written up in the Manitowoc Historical Society monoliths. The property is home to many bracken ferns that will grow only where there has been a fire. On the south eighty, there are no really big, old trees. What are big trees now would have been very young at that time.

Another fire on the property occurred in 1954 between the lake and the lodge area. Taking two days to put it out, no one knows how it started. Traces can still be seen. By reaching into the hollowed-out trunks, charcoal can be extracted.

In 1998, a small forest fire burned one acre. On April 24, 2000, approximately 15-20 acres in the northeast part of the South 80 were burned in a forest fire. The cause of both of these fires is unknown.

Also there are two trash piles on the property known formerly as the Rebarchek farm. One is near the pond and the other is southwest of the hemlock forest. The property was purchased in 1955 so the piles preceded this date. Glass and heavier metals have been found but, interestingly, no plastics have been found.

The idea of establishing a School Forest came about through a series of events. In 1950, a group of fifth and sixth graders planted trees at Silver Creek Park in Manitowoc. At Madison School, excitement for the environment was created by a Conservation Corner started in Mr. Allen Peterson's class. Also at Madison, Petrea Rahr was in Mr. Eugene Krejcarek's class where they listened to the "Ranger Mac" program. Petrea's father, Guido Rahr, showed a great interest in helping advance environmental education for the students of Manitowoc. These events built the connections within the community to begin the process of starting a School Forest.

In December of 1954, the Rahr Foundation purchased land from David Le Clair for the Manitowoc Public School District to use as a location for tree planting. A second parcel of land was purchased from Joseph and Cyril Gehl. Both of these pieces of land were officially dedicated as the Rahr Memorial School Forest on May 1, 1955. The first official trees were planted by Mark Hooper, president of the Board of Education, and Mr. Clarence Alt, treasurer of the Rahr Foundation.

As the 1955-56 school year began, many teachers started to request visits to the forest. To accommodate these groups, discussion began to build a classroom building. The building would also provide an ideal spot for the sixth grade camping program which had started in 1952. This program was started on a trial basis by Mr. Ed Ehlert, principal, and Mr. Joseph Rappel, sixth grade teacher, from McKinley School. It was expanded to include all elementary schools in 1953. The camp took place at Camp Shaganappi on Lake Winnebago for sixth years and then at Camp Bird in Crivitz.

The new building was constructed through the efforts of many community groups, Manitowoc families, companies, public entities, and individuals. MPSD staff and supporters worked hard to raise funds. Madison school principal, Ivon Greene, McKinley School principal, Ed Ehlert, and Madison teacher, Eugene Krejcarek were among the advocates of the project. The first sixth grade camp in the new Lodge started on April 28, 1959.

An additional 25 acres of land was purchased from George and Joseph Rebarchek in 1961. The 40 acre Lenhart property was purchased in 1962. About 26 acres of land was purchased from Adolph Grimm and Louis Saubert in 1964. Sixty more acres were purchased from George and Joseph Rebarchek in 1970. The last properties were bought from Mark Hooper in 1991 and Nancy Hooper Horvath in 1997.

- 1956 – A fundraising campaign helped in construction of a Lodge for overnight use.
- 1959 – The Lodge was completed. The first overnight event took place in the spring.
(Later to be named the Ehlert Lodge.)
- 1963 – A second building was constructed to provide housing for the cooks and storage.
(Later to be named the Ivon Greene Building.)
- 1969 – A telescope was built and donated by Dr. John Larsen.
- 1969 – Lee Braunel started the observation posts project. Posts were installed throughout the forest. Photos and student writings document the post sites over the years.
- 1977 – A third classroom building was constructed. (Later to be named the Eugene Krejcarek Study Center.)
- 1983 – A wildlife pond was created and a pathway was constructed with funds from the Rahr Foundation.
- 1983 – The school board honored three MPSD administrators for their efforts “in organizing, securing, and developing the Rahr School Forest property, buildings, and program.” The three School Forest buildings were named after them.
- 1996 – Curt Kittleson was hired as the first School Forest Director. Until this time, the role was filled by an elementary principal along with their regular duties. Curt Kittleson retired as the principal of Madison School, but continued to be the Director on a part-time basis. This allowed him to help teach classes at the forest and develop many new programs for use at the School Forest.
- 2002 – Patty (Brodeen) Maher was hired as the first full-time School Forest Coordinator after Curt Kittleson retired.
- 2004 – Construction of a new classroom building began.
- 2005 – On May 1st, the 50-year anniversary was celebrated at the School Forest. An estimated 500 people attended the Forest Festival.
- 2006 – A Wisconsin Environmental Education Board grant was received to create a School Forest Education Plan.
- 2007 – The fourth classroom building was finished with the support of area businesses, community members, the Rahr Foundation, and school district funds. The building was named the Environmental Learning Center.

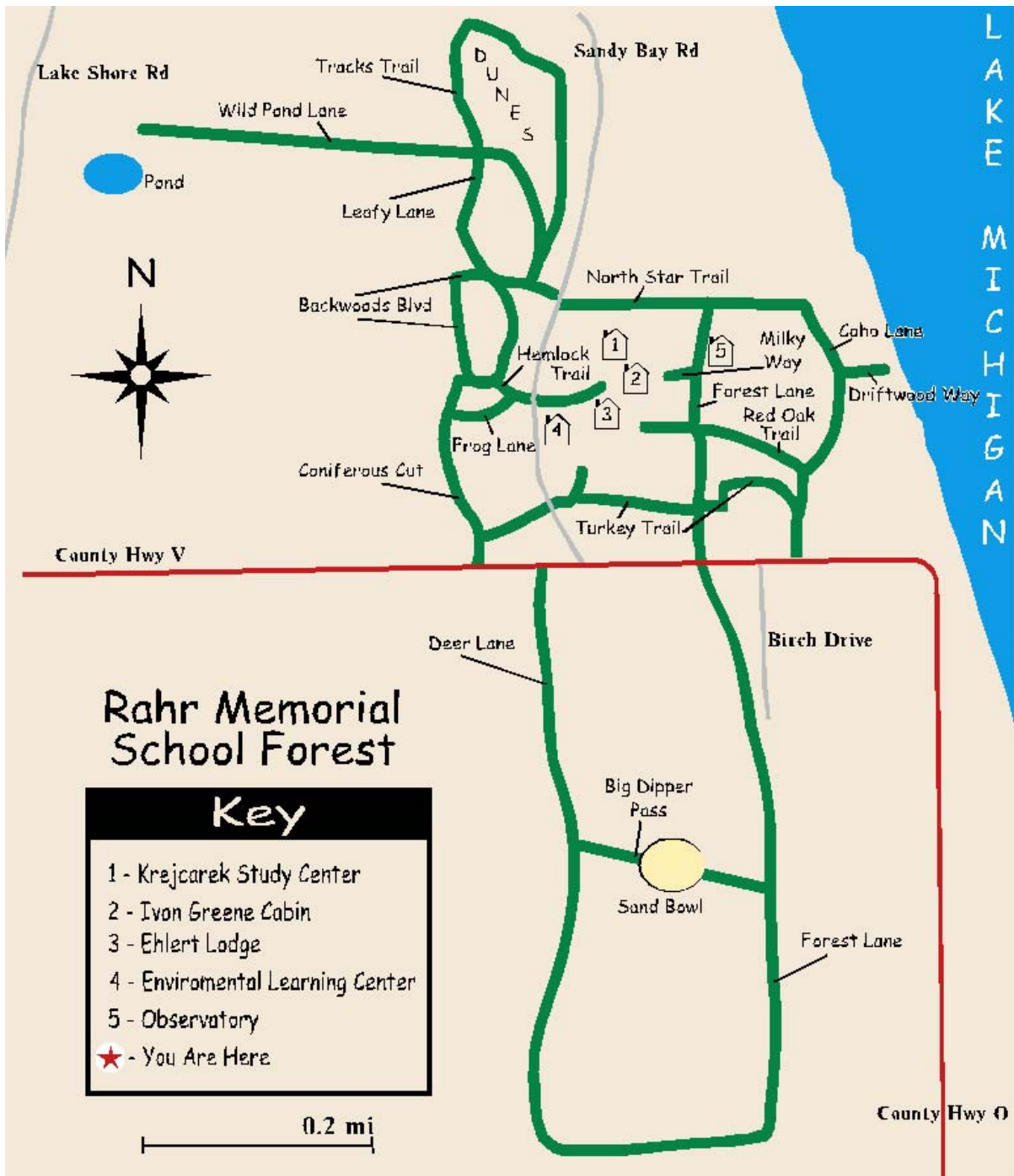
For more information about the events and people that made the School Forest possible, please see “Rahr Memorial School Forest History” written by Eugene Krejcarek.

Site Management

Objectives: The Rahr Memorial School Forest's primary objective is to provide ecological education via an outdoor classroom. In order to fulfill the above objective, additional objectives include:

- Active, sustainable forest management to provide for timber, wildlife, and recreational opportunities
- Grassland and dune management
- Maintenance of the diversity of vegetation types
- Promotion of best management practices for healthy water quality

The detailed Forest Management Plan (that guides management until 2030) can be requested from the School Forest Coordinator. The plan includes management options that focus on providing educational opportunities for students and the community. Students are involved in forest management through tree planting and invasive species removal. The plan is updated and revised, as needed, by school district staff and the Manitowoc County DNR Forester.



2007 Eagle project by Matthew Lohr from Troop 925 Two Rivers, WI
 GPS equipment and software donated by Magellan
 Timber and hardware donated by Two Rivers Building Supply
 Signs donated by Mr. Otek Sign & Textile

EDUCATIONAL CONNECTIONS

Key Concepts/ Enduring Understandings

1. Human values, lifestyles, and actions impact environmental health.
2. The global environment needs responsible stewards.
3. Ecosystems are complex, ever-changing, valuable resources that need proper care.
4. Wisconsin ecosystems are unique due to historical events, climate, and many other factors.
5. The natural world can affect physical, emotional, and social health.
6. The natural world has aesthetic value, providing inspiration and creativity.
7. Sustainable natural resource management aims to provide essential resources for humans, enhance local communities, and protect the health of the land.
8. Natural resources are limited.
9. Tools, technology, and skills are used to study and participate in the environment (on earth and in space).

Classroom Curriculum Connections

Activities at the School Forest are closely tied to classroom curriculum. See pages 12-22 for details.

Site Connections

The School Forest site is an amazing place with many different types of forest types and areas to learn. Some of these areas include: sand dunes, Lake Michigan beach, mixed forests, hemlock forests, pine plantations, bottomland hardwoods, fields, pond, and swamp. Please see the chart on pages 12-22 for connections between the site and the curriculum.

Alignment with Wisconsin's Model Academic Standards

The Wisconsin's Model Academic Standards are addressed in the School Forest curriculum. Please see the chart on page 12-22 for many of the addressed state standards.

Staff Development

Several professional development opportunities will be provided for district staff.

| Topic | Date | Location | Presenter |
|--|--------------------------|-----------------------------|------------------------------|
| LEAF | Summer 2007, fall 2007 | Rahr Memorial School Forest | LEAF facilitator |
| Great Lakes in My World | Winter 2007, spring 2008 | Rahr Memorial School Forest | Alliance for the Great Lakes |
| KEEP | Winter 2008 | Rahr Memorial School Forest | KEEP facilitator |
| Forestry in a Landscape Context: A Project-Based Learning Module | Summer 2008 | Rahr Memorial School Forest | LEAF and WFREA facilitators |

Other future plans:

AIMS

Invaders of the Forest

Angler Education

Resources

School Forest Advisory Committee
Members
School Forest Coordinator
LEAF Program staff
Conservation Education Inc. of
Manitowoc County
Wisconsin Center for Environmental
Education
UW-Stevens Point

People

UW- Manitowoc
DNR Forester – Mishicot office
DNR Warden and Wildlife Biologist –
Mishicot office
Silver Lake College – science dept.
Wisconsin Wildlife Federation
Wisconsin Waterfowl Association
Woodland Dunes Nature Center
Wisconsin Maritime Museum

Materials Available (updated 1/07*)

| | | |
|---|---|---------------------------------------|
| Aerial nets (10) | Flashlights and extra batteries | Rain coats/ ponchos |
| Animal props (furs, skulls) (variety) | <i>Forest Trees of WI</i> books (30) | Rakes (5) |
| Animal track molds (many) | <i>Golden Guide to Birds</i> (30) | Research books (many) |
| Animal Track guides (8) | Hawk flash guides (10) | Rulers and meter sticks (many) |
| Aquatic nets (10) | Hats and mittens | Safety goggles |
| Aquatic collection tubs (4) | Ice auger | Secchi disk (1) |
| Art supplies – crayons, paper, pencils, colored pencils, tape, glue, scissors | Ice cube trays (15) | Shovels (15) |
| Biltmore sticks (5) | Increment borer (2) | Skull collection (1) |
| Binoculars (24) | Insect I.D. keys (15) | Snowshoes (4 th gr+) (25) |
| Bird field guides (30) | Insect field guides (15) | Snowshoes (K-2 nd gr) (30) |
| Blankets | LCD projector | Soil sifters (many) |
| Buckets (many) | <i>Look What I Did with a Leaf</i> books | Stopwatches (2) |
| Bug boxes (8) | Loppers | Telescopes (14) |
| Candles and matches | Lumbering tools (many) | Television and VCR (2) |
| CD player | Magnifying lenses (50) | Thermometers (many) |
| Children's storybooks | Mammals of WI Tracking Guide (10) | Topographic maps |
| Clinometers (2) | Maps of School Forest (Many) | Tree cookies (many) |
| Clipboards (200+) | Microscopes | Trowels (10) |
| Compasses (30) | Mushroom field guides (4) | Water backpack (1) |
| Cross-country ski equipment (6 th gr+) (25 sets) | Overhead projector (2) | Wildflower guides (30) |
| Dip nets/pans (10) | Paper bags | Wind chill charts (many) |
| Feather study kit (1) | Plaster of Paris (varies) | Winter coats |
| First Aid Stations (3) | <i>Pond Life</i> guide books (30) | Winter boots |
| Flagging tape | Posters (many) | <i>Winter Tree Finder</i> (15) |
| | Projection screen (3) | <i>Winter Weed Finder</i> (30) |
| | Recreation equipment (variety) | Weather radios (2) |
| | | Wood samples (many) |

*for an updated list, please contact the School Forest Coordinator

Materials Needed

Animal pelts, bones
Archery equipment
Binders in the schools with
School Forest
curricula

Digital camera
Erosion table
GPS units
Interpretative signage
Maps of School Forest

Mounted specimens
Tracking equipment
Water quality test kits
Weather stations and
equipment

Assessment

One goal of the School Forest program is to increase utilization of the School Forest. However, the ultimate goal is to increase students' learning and environmental literacy.

The on-going success of the School Forest program will be assessed in a variety of ways, including:

- tracking of annual attendance at the School Forest.
- a teacher survey completed every two years that addresses the perceived value of the School Forest.

The School Forest Advisory Committees will use this data to analyze and make recommendations for the future growth of the program.

Kindergarten

| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
|---------------------------|---|--|----------------------------|-------------------------------|--|----------------------------|
| Science | Forests have living and non-living elements. | Sort items found on forest floor into living and non-living categories | Living and Non-Living Sort | Trails | 6 | Science D.4.1 |
| Science | Trees have traits that help us to identify their species. | Have students search for colors to match their clothing. | Color Match | Trails | 4 | Science D.4.2 |
| Science | Senses can help us appreciate the environment. | Draw a sound map to illustrate sources of sounds heard. | Sound Map | Trails | 6 | Science C.4.2 |
| Science | Animals deal with winter in unique ways | Search for animal holes and tunnels in the snow. | Animal Home Search | Lodge area | 3 | Science F.4.1 |
| Science | Senses can help us appreciate the environment. | Find and explore various smells along trail. | Smell Hike | Trails | 6 | Science C.4.2 |
| Science and Math | Snow can change its form. | Melt snow in a cup and measure water, using comparative terms of vocabulary. | Snow Melt | Lodge area | 9 | Science C.4.2; Math A.4.4 |
| Science | Snow has unique properties | Hike area, looking for snowdrifts, snow layers and melted snow areas. | Snow Hike | Building areas and trails | 3 | Science D.4.4 |
| Physical education | Outdoor winter recreation is healthy and fun. | Use snowshoes to take a hike. | Snowshoe Hike | Trails | 9 | P.E. A.4.3 |
| Science | Deer have survival adaptations. | Search for deer signs and trails. | Deer Trail Search | Trails | 4 | Science F.4.1 |

| | | | | | | |
|----------------------------------|--|--|---|------------------------------|----------------------------------|------------------------------|
| Science | Camouflage is one method of survival. | Play tag-type game to show how camouflage can help/hinder the hiding process. | Thicket Game | Area without overgrown brush | 3 | Science F.4.1 |
| Literacy | A variety of words can be used to describe sensory experiences. | Take a hike to observe forest, using senses to stimulate descriptive vocabulary. | Trail Hike | Red Oak Trail | 6 | L.A. D.4.6 |
| Science | Living things can be found on the forest floor. | Use hula hoop to delineate area on forest floor, drawing what is seen within the hoop. | Draw What You See | Open area | 3 | Science C.4.1 |
| Science | Seasons bring many changes. | Compare and contrast trees in various seasons. | Tree Comparisons | Red Oak Trail | 3 | Science C.4.2 |
| Science | There are many types of trees. | Examine leaves, trunks and seeds of maple, oak, birch and aspen trees. | Leaf Examination | Lodge area | 3 | Science C.4.2 |
| First Grade | | | | | | |
| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
| Science | There are many small plants, animals, and other objects to learn about in nature | Observe and identify animal body parts | Use magnifying glasses and collecting jars to collect insects - Insects (Little Critters) | Mixed Forest | 2, 9 | Science C 4.2 |
| Science | Decomposition is an example of an interesting natural process that is an integral part of the food web | Discuss changes made by decomposition | Find examples of decomposing materials- Decomposition (Little Critters) | Mixed Forest | 3, 8 | Science A.4.5 |
| Science and Language Arts | Plants and animals are vital components in the web of life | Listen to and discuss the story "Log Hotel" and then examine a "log hotel" in the forest | Carefully observe a rotting log to discover invertebrates that live in logs - Log Hotel (Little Critters) | Mixed Forest | 2, 3 | Science C.4.2; L.A. C.4.2 |

| | | | | | | |
|---------------------------|---|---|--|------------------------------|------|---|
| Science | Every type of soil has unique characteristics | Explain the characteristics of soil | Collect soil samples in different areas and compare - Soils Hike (Soils Day) | Hemlock forest, Swamp, Beach | 1, 4 | Science E.4.1, E.4.2, D.4.1 |
| Science | Every type of soil has unique characteristics | Explain percolation through soil | Experiment water traveling through 4 soil types - Percolation class (Soils Day) | Near buildings | 9 | Science E.4.1, E.4.2, D.4.1 |
| Science | Every type of soil has unique characteristics | Examine the different sizes of soil particles | Experiment sifting 4 types of soil - Sifting class (Soils Day) | Near buildings | 9 | Science E.4.1, E.4.2, D.4.2 |
| Science | Every type of soil has unique characteristics | Experiment erosion with 4 different types of soil | Examine how erosion occurs and how different types of soil erode - Erosion class (Soils Day) | Near buildings | 1, 3 | Science E.4.1, E.4.2, D.4.3 |
| Language Arts | Aesthetic value of nature provides inspiration and creativity | Use a journal to record observations in nature | Observe, draw, or write about animals or plant life (Little Critters) | Forest, Beach | 6, 9 | L.A. B. 4.1 |
| Physical Education | Outdoor winter recreation is healthy and fun | Snowshoeing, like other physical activity, promotes overall health and well-being | Use snowshoes to hike through the forest. - Snowshoeing (Winter Wonders) | Mixed Forest | 5, 6 | P.E. D.4.1 |
| Science and Math | Snow has unique properties | Predict and examine snow structure, composition, and properties. | Create a snow flake. Collect snow and discover what will happen as it reaches room temperature. Measure the depth of the snow in different areas. -Snow fun (Winter Wonders) | Classroom and Mixed forest | 4, 9 | Science D.4.3; Math A.4.2, C.4.1, D.4.3 |
| Science | Animals have survival techniques that help them live in WI winter conditions. | Explain survival strategies used by WI animals in winter | Examine animal furs, learn about different survival strategies, and look for animal tracks in the snow - Animals in Winter (Winter Wonders) | Mixed forest | 9 | Science C.4.2 |

Second Grade

| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
|--|---|--|--|------------------------------------|--|--|
| Science/ Math/ Social Studies | Plants and their seeds are made up of many parts and each part has a specific function | Examine structures of plants and discuss their functions. List the requirements for plant survival. Discover the diversity of wildflowers in the forest. | Review the structures of plants. Hike to open area and study plant parts. Dig up plant draw the structures. Replant and then hike to wildflower area identify colors and variety - Structures of Plants (New Plants) | Forest, classroom, wildflower area | 3, 9 | Science B.4.1,C.4.1, C.4.2,C.4.4, F.4.1, F.4.2; Math D.4.1, D.4.3, E.4.3 |
| Science/ Math | Plants are varied and valuable resources. | Examine the diversity of plant life found in the forest. Appreciate the beauty and value of the natural resources. | Hike the trail and examine different types of plants found in the forest. Take scavenger hunt and make comparisons of different types of plants. Make leaf rubbings. - Plant Types (New Plants) | Forest, Turkey Trail | 1,5,6 | Science B.4.1,C.4.1, C.4.2,C.4.4, F.4.1, F.4.2; Math D.4.1,D.4.3, E.4.3; |
| Science/ Math | Plants and their seeds are made up of many different parts and each part has a specific function. | Investigate plant seeds. Discover seeds have different parts and are spread in a variety of ways. | Discuss different types of seeds. Learn parts of the seed through the "Little Sprout "activity. Seed scavenger hunt - Seed Study(New Plants) | Forest, trails | 3 | Science B.4.1,C.4.1, C.4.2,C.4.4, F.4.1, F.4.2; Math D.4.1, D.4.3, E.4.3 |
| Science/ Math | Plants are living things that have certain needs for survival. Ecosystems need to be protected. | List plant needs for survival. Graph survival outcomes. | Play "Every plant for Itself" game. Graph the results. Examine cross sections of tree rings. Plant survival (New Plants) | Forest, trails | 2,3,9 | Science B.4.1,C.4.1, C.4.2,C.4.4, F.4.1, F.4.2; Math D.4.1, D.4.3, E.4.3 |

| | | | | | | |
|---|--|--|---|-----------------------|------|--|
| Science/ Social Studies | Changes in weather cause living things to adapt to their environment. | Use tools to examine the effects of weather on animals. | Hike the turkey trail making animal observations. View the forest from different animal perspectives. Play charades to show animals reactions to weather conditions. - Animals & Weather(Weather in the Woods) | Forest, Turkey Trail | 5 | Science A.4.1, A.4.3, C.4.1,C.4.2, C.4.4, C.4.6, F.4.2, F.4.4; Social Studies A.4.4, A.4.6 |
| Science/ Math/ Social Studies/ Environmental Education | Changes in weather cause living things to adapt to their environment. | Use tools to discover changes in location change weather conditions, Examine the effects of weather on travel on Lake Michigan. Discover weathers effect on humans' daily lives. | Hike to the beach use pinwheels and thermometers and discuss changes. Listen to legends of Lake Michigan. Use maps to learn about local shipwrecks and the effects of weather. Discuss clothing choices related to weather conditions. Humans & Weather (Weather in the Woods) | Beach | 5, 9 | Science A.4.1, C.4.1, C.4.2, C.4.4, C.4.6, F.4.4; Math D.4.1, D.4.3, D.4.4, E.4.1; Social Studies A.4.4, A.4.6 |
| Science/ Math/ Social Studies | Changes in weather cause living things to adapt to their environment. | Use tools to discover changes in location change weather conditions, Examine the effects of weather on the land over time. Make logical predictions about weather | Listen to story and make weather observations through the windows. Use weather tools and hike to the Dunes record weather conditions. Discuss how weather has changed the land features over time. Make cloud observations and make predictions about the weather. Evidence of Weather (Weather in the Woods) | Classroom, Sand Dunes | 4, 9 | Science A.4.1, A.4.3, C.4.1, C.4.2, C.4.4 C.4.6; Math D.4.1, D.4.3, D.4.4, E.4.1; Social Studies A.4.4, A.4.6 |
| Science/ Math/ Social Studies | Changes in weather cause living things to adapt to their environment. Plants have certain requirements for survival. | Use tools to discover changes in location change weather conditions, Examine how plants are affected by weather. | Use pinwheels and thermometers and hike into the Hemlock forest. Examine plants and photos of plants and discuss needs and the effects of weather. - Plants & Weather (Weather in the Woods) | Hemlock Forest | 3 | Science A.4.1, A.4.3, C.4.1, C.4.2, C.4.4, D.4.6, F.4.2; Math D.4.1, D.4.3, D.4.4, E.4.1 |

Third Grade

| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
|--|--|---|---|--------------------------------------|--|--|
| Science | Birds have unique characteristics that help them survive in their environment. | Describe the characteristics of a bird. Compare and contrast the structures and functions of different types of birds (i.e. songbirds, scavengers, predators, etc.) | Birds, Birds, Birds (Forest Creatures): Hike trails to observe birds. Also observe by feeders. | Bird feeders, various trails | 3, 5, 9 | Science A.4.1, B.4.1 |
| Science | Mammals have unique characteristics that help them survive in their environment. | Identify and describe the basic needs of mammals. Explain how camouflage helps animals to survive. | Mammals (Forest Creatures): Hike trails to observe mammals and search for animal signs. Participate in <i>Thicket</i> and <i>Predator/Prey</i> learning activities. | Mixed forests, Sand Dunes, Buildings | 3 | Science A.4.1, B.4.1, C.4.2, C.4.5, F.4.1 |
| Science | Mammals use internal and external cues to adapt to their environment. | Explain how fluctuations in resources affect animal populations. | Mammals (Forest Creatures): Participate in <i>Oh Deer!</i> | Open area or Sand Dunes. | 1, 2, 3, 7 | Science F.4.2 |
| Science/ Social Studies | Wetlands are complex, valuable natural resources that need proper care. | Compare and contrast the different kinds of wetlands. Describe the importance of wetlands. Explain the positive and negative impacts humans have on wetlands. | Wetland Study: Hike to swamp, observe presence of animals, collect aquatic insects and/or animals and observe swamp plants and their adaptations. | Swamp dock | 1, 2, 3, 5, 7, 9 | Science A.4.1,A.4.2, A.4.5,C.4.2, C.4.4,C.4.5, C.4.7,F.4.2, F.4.4,H.4.2, H.4.4; Soc. Studies A.4.4, A.4.9 |
| Science/ Math | Scientific tools and skills are required to study and better understand the environment. | Record and graph soil temperatures. Compare and contrast results and describe possible reasons for variation. | Measure the surface soil temperature from the lakeshore into the woods every meter using thermometers and the degrees Centigrade. | Lakeshore | 3, 9 | Science A.4.1,C.4.2, C.4.4,C.4.5, C.4.6,D.4.4; Math A.4.2, A.4.3, D.4.4, E.4.1 |

| Science/ Math | Scientific tools and skills are required to study and better understand the environment. | Record and graph soil temperatures. Compare and contrast results and describe possible reasons for variation. | Dig into soil and measure temperature at different depths, record, and graph | Sand Dunes | 3, 9 | Science A.4.1,A.4.2, C.4.4,C.4.5, C.4.6,D.4.4; Math A.4.2, A.4.3,D.4.4, E.4.1 |
|---------------------------------------|--|--|--|---------------------------------|--|---|
| Fourth Grade | | | | | | |
| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
| Science/ Language Arts | Birds play an important role in the environment. A nature journal is a tool we can use to learn more about our surroundings. | Observe and identify birds using binoculars. Compare and contrast them. Describe the importance of birds. Create and use a journal to record observations. | Birds (Birds, Bugs and Journals) | Mixed Forests, Wetlands, Trails | 3, 6, 7, 8, 9 | Science C.8.1,E.8.1, F.4.4; L. A. B.8.1 C.8.1 |
| Science/ Language Arts | Insects play a valuable role in the environment. A nature journal is a tool we can use to learn more about our surroundings. | Observe and record collected insects. Describe the importance of decomposition and the positive and negative roles of insects. | Insects (Birds, Bugs and Journals) | Field and Swamp | 3, 6, 7, 8, 9 | Science C.8.1,E.8.1, F.4.4; LA B.8.1, C.8.1 |
| Science | There is a long history of people using sugar maple trees to make maple syrup in WI. WI. Forests are unique and we need to appreciate their value. | Identify Maple trees. Explain different parts of a tree and what each part does. Tap a Maple tree. Compare and contrast a Maple trees in the School Forest. List the steps of Maple sugaring and describe the history of Maple sugaring in WI. | Maple Sugaring | Trails | 3,4,5,6,7,8,9 | Science C.4.1, C.4.4, D.4.3 |

| | | | | | | |
|-------------------------------------|---|--|---|--------------------|---------------|--|
| Math/ Social Studies | Logging in WI is a historically significant part of WI history. | List tools that were significant to lumbering history in WI. | Examine and use the lumbering tools on display in the Krejcarek building | Krejcarek Building | 1, 2, 4, 6, 9 | Social Studies B.4.3, B.4.4, B.4.7 |
| Social Studies | Lumberjacking has a unique culture. | Describe and explain how to use the unique tools used by lumberjacks. | Use traditional tools to roll logs and cut logs | Mixed forest | 1, 3, 4, 6, 9 | Social Studies B.4.3, B.4.4, B.4.7 |
| Social Studies | Lumberjacking has a unique culture. | Describe and explain activities that a lumberjack might participate in | Experience what a day would be like living as a lumberjack by participating in activities such as eating breakfast, making butter, rolling logs, light a match with an ax, throwing logs and flipping simulated pancakes. | Ehlert Lodge | 1, 3, 4, 5, 9 | Social Studies B.4.3, B.4.4, B.4.7 |

Fifth Grade

| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
|---|--|---|---|-------------------------------|--|---|
| Phy. Ed. | Outdoor recreation leads to increased environmental awareness and overall health | Develop snowshoeing skills and participate in an outdoor winter sport | Snowshoe the trails of the School Forest (Winter Day) | Trails | 5, 6 | P.E. A.8.3 B.8.4 D.8.1 D.8.2 F.4.1 |
| Phy. Ed. and Language Arts | Our senses provide a unique opportunity to gather information | Discover nature elements through the use of senses | Blind Hike (Planting Day) | Trails and Pond | 5,6,9 | P.E. A.8.1 A.8.4 D.8.2; L.A. C.8.2 C.8.3 |

| | | | | | | |
|---|---|--|---|--|------|---|
| Science | Plants have adaptations that allow them to survive. Resources and tools can be useful for identification. | Explain the basic needs of trees, identify trees by examining their buds and using a dichotomous key, explain how plants survive during winter | Trees in Winter (Winter Day) | Mixed Forest | 3, 9 | Science C.8.2, C.8.6 |
| Science/ Language Arts | Plants and animals have adaptations that allow them to survive | Identify ways animals adapt and survive in winter, Identify animal tracks, Explain how animal populations affect other animals | Animal Adaptations (Winter Day) | Classroom and Trails | 3 | Science F.8.1, F.8.2, F.8.6, F.8.7; L. A.: C.8.2 |
| Science/ Language Arts/ Math | Humans adapt to survive | Identify the signs and symptoms of hypothermia and its treatment, Identify and explain weather appropriate clothing | You and Winter (Winter Day) | Classroom | 5 | Science C.8.6, F.8.1, F.8.2, F.8.6, F.8.7; L.A. C.8.2; Math A.8.2, D.8.3, E.8.1 |
| Science/ Language Arts/ Math | Scientific Investigations involve questioning, predicting, summarizing, graphing, and communicating | Identify snow as an insulator and insulating qualities of various types of cloth, define wind chill, and graph how well different materials insulate | Snow Study (Winter Day) | Classroom and Outside | 5, 9 | Science B.8.4, C.8.6; L. A. F.8.1; Math: A.8.2, D.8.3, E.8.1 |
| Science | Living things survive if their environment meets their needs | Identify abiotic and biotic components of ecosystems Identify the needs of organisms | Environments, Ecosystems (Planting Day) | Pine Plantation, Hemlock Forest, Transitional Forest, and Mixed Forest | 3, 4 | Science F.8.8 |

| | | | | | | |
|----------------|--|--|------------------------------|--|---------|---|
| Science | Living things survive if their environment meets their needs | List the needs of a tree for survival and plant trees | Tree Planting (Planting Day) | Various sites throughout the School Forest | 2, 7, 9 | |
| Science | Wetlands contain a variety of organisms which indicate water quality | Discover aquatic life in the swamp, use identification keys to identify aquatic life, use scientific tools to collect data, determine healthiness of the swamp and defend position | Aquatic Life (Planting Day) | Swamp | 9 | Science C.8.1,C.8.2, C.8.3,C.8.4, C.8.7,C.8.9, C.8.10 |

Sixth Grade

| Subject | Enduring Understanding | Objective | Activity | Location (see map) | Key Concepts (see page 8) | State Standards |
|----------------|--|---|------------------------|---------------------------|----------------------------------|--|
| Science | All things are part of an ever-changing web of life. | Explain the process of decomposition in journals. Collect examples of decomposers and play Compost Game. | Buried Treasures(Camp) | Trails | 3 | Science F.8.2,F.8.7, F.8.8,F.8.9 |
| Science | Animals, specifically owls, have adaptations that allow them to live in their environment. | Demonstrate scientific observations while learning about owls through pellet dissection and further study of owl characteristics. | Owl Ecology(Camp) | Trails | 3 | Science C.8.1,C.8.6, C.8.10, F.8.7, F.8.8 |
| Science | All living things can be classified by their characteristics | Identify, classify and sketch examples of fungi, plants and animals found in the forest. | Wild Kingdoms (Camp) | Trails | 3 | Science C.8.2, C.8.4,C.8.6 F.8.2, F.8.6, F.8.9 |

| | | | | | | |
|---------------------------|--|--|-------------------------|--------------|-----|--|
| Science | The earth and moon's relationship can be studied using scientific tools. | Use telescopes to view moon and stars in the night sky. | Space(Camp) | Telescope | 9 | Science A.8.6,C.8.4, C.8.5,C.8.6, E.8.8 |
| Science/ Math | Human survival requires interdependence and cooperation. | Demonstrate the use of a compass by completing the orienteering course. | Orienteering (Camp) | Mixed Forest | 7,9 | D.8.3 G.8.3 |
| Social Studies | Human survival requires interdependence and cooperation. | Participate in problem-solving team activities. | Group Challenges (Camp) | Mixed Forest | 3,9 | Social Studies B.8.10 |
| Physical Education | Outdoor recreation leads to increased environmental awareness and overall health | Experience outdoor physical activities in winter weather, such as cross-country skiing and snow-shoeing. | Winter Trip | Trails | 5,6 | P.E. A.8.3, D.8.1, D.8.3, E.8.1 |

SUSTAINING THE SCHOOL FOREST PROGRAM

School Forest Committee

The School Forest Committee provides leadership and support for School Forest programming. It is recommended that the committee 1) include more individuals, 2) accomplish goal specific projects, and 3) provide well-rounded leadership in both the areas of Education & Outreach and Facilities & Grounds.

Committee Members:

Administrators (1 principal and 1 central office), 4 teachers (1 lower elementary, 1 upper elementary, and 2 secondary), Board of Education member, Director of Buildings and Grounds, School Forest custodian, LEAF program representative, DNR/Forester, retired staff member/community member, parent/ community member, Lincoln High School Environmental Club advisor, School Forest coordinator

Future plan: include students and more community members in the committee.

Responsibilities of the Advisory Committee:

Education & Outreach:

- Community Events
- Fundraising for special projects
- Oversight for new educational programs
- Updating/Reviewing Educational Plan
- Budgetary and review grants
- Write up for Owl Hoots/staff notes/email after each meeting
- Make suggestions and provide content for updating the Web site
- Committee personnel review—monitor the services and support personnel
- Liaisons within the schools—contacts with other teachers and give feedback to the committee

Facilities & Grounds:

- Forest management (reviewing management plan)
- Financial aspects of restoration and expansion
- Minutes from meetings in Staff Notes
- Monitoring and reviewing updates on facilities
- Technology advances
- Committee personnel review—monitor the services and support personnel
- Opportunities for the School Forest program
- Security and trail procedures and policies/restrictions/signage
- PR relating to policy changes
- Ensure School Forest compliance with Health Department standards
- Trail maintenance
- Recycling program

Communication

- The School Forest Coordinator will maintain a School Forest website located at: <http://schoolcenter.mpsd.k12.wi.us/education/dept/dept.php?sectionid=1368>. Here, the Advisory Committee, MPSD staff, and students will post School Forest updates, community activities, and photos.
- The District will host an annual School Forest event for community members to learn about and participate in activities at the School Forest.
- Presentations about activities at the School Forest will be made at least annually to the school board.
- Information will be shared with the media for all “milestones” at the School Forest including community involvement, teacher training, and projects.
- The School Forest Coordinator will offer in-service training for teachers to become more familiar with the School Forest site and curriculum.
- The School Forest Coordinator will continue bi-monthly contact with teachers through a newsletter.
- The School Forest Coordinator will continue monthly contact with the Advisory Committee through an e-mail update.

Long-range Plan

To fulfill our vision for the use of the School Forest, we have identified the following goals for the School Forest committees:

1. Train teachers about the School Forest curriculum.
2. Expand the School Forest curriculum for students to maximize learning at the School Forest.
3. Continue to manage the School Forest to maintain and expand trails, control invasive species, and manage wildlife to optimize the diversity and health of the site.
4. Increase School Forest attendance by 5% each school year.
5. Increase use of School Forest to 90% of school days.
6. Allow opportunities for every elementary student to visit the School Forest three times yearly.
7. Provide an opportunity for every secondary student to visit the School Forest annually.
8. Establish a “Friends of the Rahr Memorial School Forest” group.
9. Upgrade School Forest technology to be comparable to the classroom.
10. Update older facilities/equipment.
11. Make the School Forest more handicap accessible.
12. Increase School Forest staff to accommodate rise in usage.

Implementation Plan

| Event/Activity | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/2011 |
|---|---------|---------|---------|---------|-----------|
| Follow forest management timeline | X | X | X | X | X |
| Offer S.F. community event | X | X | X | X | X |
| Offer in-service for teachers | X | X | X | X | X |
| Update facilities | X | X | X | X | X |
| Increase S.F. use | X | X | X | X | X |
| Expand K-6 curriculum based on Needs Assessment survey | | X | | | |
| Create binders with S.F. activities for each school library | | X | | | |
| Update S.F. technology | | X | X | X | X |
| Improve handicap accessibility | | X | X | X | X |
| Develop and expand 7-12 curriculum | | | X | X | X |
| Establish a "Friends of the Rahr Memorial School Forest" group | | | X | | |
| Update curriculum and binders in schools | | | X | | X |
| Update the S.F. Education Plan | | | X | | X |
| Provide three S.F. visits per year for every elementary student | | | | | X |
| Provide one S.F. visit per year for every secondary student | | | | | X |

Forest Management

Activities

Every fall, the forest management plan will be reviewed for the next year.

Plans will be made for management based on the plan.

Some tasks may be accomplished by student and scout groups.

Resources

School Forest Coordinator
 Director of Buildings and
 Grounds

DNR forester
 DNR invasive species experts
 Student and scout groups

Community Event

Activities

January, gather a group to plan the event

February, contact guest speakers

March, contact volunteers

March, arrange food, beverages, printing, transportation, events

April, write and release a press release about the event

May, submit another press release

May, prepare facilities

May, host community event

Resources

School Forest Coordinator
 Public Relations Specialist

School Forest Advisory Committee

Staff Development

Activities

Every year, offer staff training of School Forest curriculum, switching the grade levels (one year offer K – 3rd grade and the next year offer 4th – 6th grade then back to K-3rd)

Contact EE groups/organizations to offer workshops

Grant money will be sought to help fund workshops

Create a mentor-mentee program where retired teachers help teach and train other teachers at the School Forest

Resources

School Forest Coordinator

KEEP

Director of Student

Alliance for the Great Lakes

Learning

Guest speakers

School Forest Advisory

Grant programs

Committee

Retired teachers

LEAF

Facilities and Accessibility

Activities

Every year, the Advisory Committee will discuss plans for that year to update the existing facilities and increase wheelchair accessibility.

The maintenance department will handle implementation of plans.

Some tasks may be accomplished by student and scout groups.

When necessary, a local contractor/specialist will be hired.

If needed, request for financial assistance will be sent to the Rahr Foundation and/or acquired through grants.

Resources

School Forest Advisory

Director of Pupil Services

Committee

School nurses

Director of Buildings and

Area companies

Grounds

Rahr Foundation

Advisory Committee

Activities

During the 2007-2008 school year, the existing School Forest Advisory Committee will be restructured to include more people.

Curriculum

Activities

In 2007 – 2008, the lessons that were requested by teachers in the needs assessment will be created.

Binders will be created that contain this Education Plan, grade specific lesson plans, and optional activities for K-6. These binders will be placed in all of the elementary school libraries.

In 2008, post curriculum on-line.

In 2008 – 2009, secondary curriculum will be developed and/or expanded.

In 2008 – 2009, the elementary curriculum will be updated.

Resources

School Forest Coordinator

Assistant Director of Student Learning

Director of Student

Teachers

Learning

Summer curriculum writing time (stipends)

Grants

Technology

Activities

Starting in 2007, the technology at the School Forest will be updated to match classroom equipment. This will be decided by the Advisory Committee.

Resources

School Forest Advisory
Committee

Grants
School technology advocates

Friends group

Activities

In 2007 and 2008, research will be done to find steps needed to form a Friends group.

The group will be formed during the 2008 – 2009 school year.

Press releases will be sent out to announce the beginning of the group.

Notes about it will also be in the staff newsletter that goes out to current and retired staff of the MPSD.

Resources

Superintendent
School Forest Coordinator
Public Relations Specialist

School Forest Secretary
Teacher and retired staff

Increase use of School Forest

Activities

School Forest Coordinator will, each year, advertise learning opportunities to teachers through the S.F. newsletter and e-mails.

School Forest Coordinator will work with teachers to overcome obstacles.

School Forest Secretary will schedule groups for the School Forest.

During the 2010-2011 school year, all elementary students should have three opportunities to go to the School Forest.

During the 2010-2011 school year, all secondary students should have at least one opportunity to go to the School Forest.

Resources

Teachers
School Forest Coordinator
School Forest Secretary

District Commitment

In 2006, the Manitowoc Public School District Board of Education made a commitment to the Rahr Memorial School Forest through supporting and endorsing a Wisconsin Environmental Education Board School Forest Grant for \$4,888.27, with a substantial match from the district.

The Rahr Memorial School Forest Education Plan will be presented to the Manitowoc School Board in April of 2007.

REFERENCES

Curt Kittleson (personal communication, January 2007) helped with the history of the School Forest.

Krejcarek, Eugene. Rahr Memorial School Forest History. Manitowoc, WI 1998

Armond Kueter (personal communication, December 2006) helped with the history of the School Forest.

Lieberman and Hoody. Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning. 1998

Rahr Memorial School Forest lesson plans

Wisconsin Model Academic Standards. Wisconsin Department of Public Instruction