
EVALUATING A SYSTEMS APPROACH TO
ENVIRONMENTAL EDUCATION:

CEDARBURG SCHOOL DISTRICT – RIVEREDGE
NATURE CENTER PARTNERSHIP PROJECT



PARTICIPANT EVALUATION REPORT

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TABLE OF CONTENTS

Executive Summary	3
Introduction	3-4
Partnership Components and Objectives.....	4
Methodology of Evaluation	5
Results and Findings.....	6-12
Conclusion	13
Appendix A: Kindergarten & 1 st Grade Opinion Survey	14-15
Appendix B: 2 nd Grade Opinion Survey	16-17
Appendix C: 3 rd – 5 th Grade Opinion & Frequency Survey	18-20
Appendix D: Teacher Opinion Survey	21-22
References	23

LIST OF TABLES

TABLE 1: Evaluation Components	5
TABLE 2: Kindergarten & 1 st Grade Opinion Survey Results	6
TABLE 3: 2 nd Grade Opinion Survey Results	6
TABLE 4: 3 rd – 5 th Grade Opinion Survey Results	7
TABLE 5: 3 rd – 5 th Grade Frequency Survey Results	7
TABLE 6: K-5 Response to, “Nature is important to me.”	8
TABLE 7: K-5 Response to, “After your experience at Riveredge today, would you choose to visit a pond, forest, field or other natural area with your friends and family?”	8
TABLE 8: K-5 th Grade Percentage of Accurate Response to Multiple Choice Knowledge Questions	9
TABLE 9: Teacher Affiliation	10
TABLE 10: Teacher Perceptions of Project	11
CHART 11: Teacher Perceptions of Current Effectiveness of Environmental and Outdoor Learning Across Subject Areas	11
CHART 12: Teacher Perceptions of Potential Effectiveness of Environmental and Outdoor Learning across Subject Areas	12
CHART 13: Teacher Self Report on Frequency of Use of Outdoor Spaces for Lessons.....	12

EXECUTIVE SUMMARY

Riveredge Nature Center has partnered for two years with the Cedarburg School District in a way which integrates environmental and outdoor learning within their curriculum through a systems approach. Instead of merely utilizing a yearly field trip to a natural area as a way to expose students to their natural environment, Riveredge and the Cedarburg School District have been developing and adapting a way to provide a greater impact, and return on investment, to the elementary students of the district. The following evaluation summary provides the results of a preliminary evaluation conducted during the second year of the partnership. It is intended that many of the evaluation tools used in this data collection effort will be utilized on an annual bases – thus, providing a rich and meaningful set of data which may illustrate mid and long term impact of the partnership.

INTRODUCTION

During the 2013-14 school year, the Cedarburg School District and Riveredge Nature Center completed their second year of a unique partnership. The partnership is partially funded through the Cedarburg School District and partially through the operating fund of Riveredge Nature Center. Funding was received through the Wisconsin Environmental Education Board to conduct a preliminary study on the outcomes of this public-private partnership. The evaluation presented here provides a baseline for additional research as the partnership grows in depth and duration.

The research project “Evaluating a Systems Approach to Environmental Education” utilized a variety of evaluation methods to determine the effectiveness of the Riveredge Nature Center (RNC) – Cedarburg School District (CSD) environmental education partnership. This unique model implements a systems approach to support the integration of environmental education throughout the curriculum of all K-5 classrooms in the Cedarburg School District. Systems thinking considers the whole of a system rather than focusing on a single part or set of parts; the RNC-CSD partnership supports integration of environmental learning throughout the formal elementary education system.

The goals of the RNC-CSD partnership are:

- To support environmental education which is fully integrated into K-5 science at each grade level and includes an inquiry, literature, and nature based approach to the curriculum;
- To provide one common, grade specific, guaranteed outdoor student experience at Riveredge; and
- To provide professional development for the faculty that leads to an increased use of each of the schools’ outdoor classrooms.

As there are limited examples of holistic partnerships between school districts and nature centers, administrators and staff at both RNC and CSD were interested in the answers to the following questions. In addition to the objectives listed above, the following questions were also considered when developing the evaluative approach described in this document.

- What outcomes are achieved by students, teachers, and partnering environmental organizations when a systems approach is applied to a nature center/school district partnership?
- Does a systems approach increase the likelihood that students will learn science concepts, develop inquiry skills, develop a positive environmental attitude, form a beneficial learning community, and spend time outside with their families?
- Do teachers who participate in an integrated systems approach to environmental education and corresponding, targeted professional development use more environmental examples in their curriculum and utilize their outdoor classrooms and nearby natural areas more often? An “integrated systems approach” is defined as utilizing multiple outdoor experiences, in different locations, within the curriculum of two or more subject areas throughout the school year.

The “Evaluating a Systems Approach to Environmental Education” project was the initial evaluation effort for this partnership and worked to engage several target audiences for the development and collection of the research data. Audiences included in the project evaluation included:

- All kindergarten – 5th grade students (1,119) and teachers (52) in the Cedarburg School District (CSD).
- CSD administrative staff (Director of Curriculum and Elementary School Principals)
- Riveredge Nature Center (RNC) environmental educators who worked actively work to implement all facets of the RNC-CSD project and assist in data collection.

The Cedarburg School District is located predominately in the City and Town of Cedarburg, Wisconsin, about 17 miles north of Milwaukee in the heart of Ozaukee County. Distinguished as one of the top school districts in Wisconsin by the Public Policy Forum, Cedarburg schools consistently achieve one of the state's top rankings in Math, Science and Reading, as well as boast a graduation rate of 99%ⁱⁱ. In 2014-15, the district’s student population was 3,008 youth and was comprised of five schools: three elementary schools, one middle school, and one high school. The racial makeup of the district is 92% White, 3% Asian, 2% Hispanic, 2% African American, and 1% American Indianⁱⁱⁱ. The three elementary schools (Westlawn, Thorson, and Parkview) are involved in the CSD-RNC partnership and were the focus of this evaluation.

PARTNERSHIP COMPONENTS AND OBJECTIVES

The Riveredge Nature Center (RNC) – Cedarburg School District (CSD) partnership is unique because it includes a wide variety of support, curriculum development, and opportunities, including:

- Participation of each elementary student, teacher, and class in all three Cedarburg elementary schools;
- Annual guaranteed outdoor environmental education learning experience at RNC for all students;
- Professional development opportunities available to all K-5 teachers led by RNC education staff;
- A RNC staff member designated to work with the teachers and students at each school throughout the year to support the use of local outdoor spaces for instructional purposes;
- Science equipment for each school that teachers and students use in their outdoor classrooms to augment an inquiry-based approach to science learning;
- On-site outreach programs led by RNC staff at each school; and
- Support of each school principal and the Director of Curriculum and Instruction.

The partnership objectives were created, together, by both RNC and CSD administration. Although all objectives were not measured as part of this initial evaluation, they were used as the starting point for determining appropriate evaluation tools and methods presented in this evaluative summary. Partnership objectives include:

1. Students will meet the learning outcomes identified by the district/teachers.
2. Students will show increased knowledge about, appreciation of, and relationship to the natural environment.
3. Students will indicate importance of and connection to their community (human and natural).
4. Students and their families will increase their connection to the natural world through increased time outside or increased sustainable practices at home.
5. Teachers will increase their utilization of natural outdoor spaces across grade levels and subject areas.
6. Cedarburg School District administration will model environmentally sound practices.
7. Riveredge Nature Center will increase meaningful connections with students, teachers, and their families through deepened relationships because of the partnership.
8. Cedarburg community will demonstrate a raised awareness and understanding of important community environmental issues and show increased evidence of environmental stewardship.

METHODOLOGY OF PROJECT EVALUATION

The Evaluation Plan was created in partnership with the CSD Director of Curriculum and the principal of Thorson Elementary School; its goals are to collect baseline data that can be compared in future years, document short term impacts of the partnership, and gather opinions on improvement ideas and professional development needs. Feedback and suggestions on the K-5 student opinion survey and other components of the evaluation plan were provided by the Elementary Science Committee. The final evaluation components were based on the suggestions of these stakeholder groups and represent an evaluation plan that was feasible and accepted by the school district.

Table 1: Evaluation Components

Audience	Participation Metrics	Method	Description	Objectives Evaluated
K-5 grade Students	Kindergarten: 158 2 nd Grade: 148 3 rd Grade: 216 4 th Grade: 174 5 th Grade: 142	Exit Slips used at the end of field trips to Riveredge in the spring and fall of 2014.	Modeled after exit slips already used by CSD teachers. At Riveredge, exit slip questions were administered verbally and in writing as a group debriefing exercise after the field experience is complete.	<ol style="list-style-type: none"> 1. Students will meet the learning outcomes identified by the district/teachers. 2. Students will show increased knowledge about, appreciation of, and relationship to the natural environment. 3. Students will indicate importance of and connection to their community (human and natural).
K-5 grade students	<i>K-1 Grades Students: 297</i> (93.4% return) <i>2nd Grade: 146</i> (94.2% return) <i>3-5 Grades: 521</i> (93.9% return)	Opinion Survey ^{iv} Paper copies administered to all students in June 2014	The survey of 5K – 5th graders helps shed insight into the attitudes of CSD students regarding their school, nature, outside and free time.	<ol style="list-style-type: none"> 1. Students will show increased knowledge about, appreciation of, and relationship to the natural environment. 2. Students will indicate importance of and connection to their community (human and natural).
Elementary School Teachers	27 (52% return)	Opinion Survey ² Online Survey Monkey tool administered in June 2014	Used to collect opinions on the effectiveness and impacts of the partnership. Information will also be collected to help develop the professional development program in the summer of 2014.	<ol style="list-style-type: none"> 1. Program improvement 2. Professional development needs 3. Teachers will increase their utilization of natural outdoor spaces across grade levels and subject areas. Perceived impacts on students concerning: <ul style="list-style-type: none"> • Students will meet the learning outcomes identified by the district/teachers. • Students will show increased knowledge about, appreciation of, and relationship to the natural environment. • Students will indicate importance of and connection to their community (human and natural).
CSD Administrators	4 <i>Elementary School Principals (3)</i> <i>Director of Curriculum (1)</i>	Focus Groups Spring & Fall 2014	Small group and individual discussion to gain insights on perceived benefits, challenges, and areas of improvement for the partnership.	<ol style="list-style-type: none"> 1. Perceived impacts of partnership on all partnership objectives. 2. Program improvement 3. Professional development

RESULTS AND FINDINGS

The results and findings are presented for students followed by the teachers. The vast majority of opinion survey questions were modeled after a similar evaluation completed by Dr. Christine Kelly with the LEAF/Goodman Armstrong Cree Community Partnership Project in 2011.

Student Opinion Survey Results

The following tables illustrate the results of the K-5th grade opinion surveys as well as a perceived frequency survey completed with 3rd – 5th grades. Overall, responses indicate that a majority of students have a positive feeling toward the natural world. Questions in bold are those which indicate a positive feeling about spending time outside, either recreationally or during formal learning. These specific responses help illustrate how often youth go outdoors and positive feelings to spending time outdoors. As research continues to highlight both the decreased time youth spend outdoors and the positive outcomes in mental health, physical health, and academic achievement, we are interested to see if the partnership increases the percentage of positive responses as the years progress.

K-1st Grade Results

Table 2: Kindergarten & 1st Grade Opinion Survey Results; N=297

	YES	NO
Do you like school?	88%	12%
Do you think trees are pretty?	77%	23%
Is it okay to kill ants and insects for fun?	22%	78%
Is the forest a good place to explore	93%	6%
Do you think wild animals are interesting	92%	7%
Do you use things that are made from trees?	91%	8%
Does your family spend time outdoors, such as go on hikes together?	82%	18%
Do you like to go outside to learn at school?	87%	12%
Do you like to spend most of your play time inside?	51%	48%
Do you like to go to natural areas (parks, nature centers, woods)	87%	12%

2nd Grade Results

Starting with the second grade students, the teachers strongly recommended providing a “sometimes” option for all questions.

Table 3: 2nd Grade Opinion Survey Results; N=146

	YES	NO	SOMETIMES
Do you like school?	49%	8%	43%
Do you think trees are pretty?	49%	18%	33%
Is it okay to kill ants and insects for fun?	6%	82%	12%
Is the forest a good place to explore	73%	3%	24%
Do you think wild animals are interesting	77%	5%	18%
Do you use things that are made from trees?	72%	7%	21%
Does your family spend time outdoors, such as go on hikes together?	57%	7%	36%
Do you like to go outside to learn at school?	66%	11%	23%
Do you like to spend most of your play time inside?	11%	45%	45%
Do you like to go to natural areas (parks, nature centers, woods)	71%	8%	21%

3rd – 5th Grade Results

Table 4: 3rd – 5th Grade Opinion Survey Results; N=521

Opinion Statements	Agree a Lot	Agree a Little	Not Sure	Disagree a Little	Disagree a Lot
Our school is environmentally healthy.	51%	34%	10%	4%	1%
Cedarburg is an environmentally healthy community.	44%	39%	11%	5%	1%
I like to spend most of my free time indoors.	12%	22%	11%	27%	28%
I know a lot about nature.	29%	44%	16%	9%	2%
I enjoy learning about nature.	43%	32%	13%	8%	4%
I enjoy learning outdoors during school.	66%	21%	7%	5%	1%
Learning outdoors helps me to get better grades in school.	13%	27%	39%	10%	11%
It is okay if a little water gets polluted because there is plenty of water.	3%	8%	14%	16%	59%
I like to help other people, even if it is hard work.	56%	33%	7%	2%	2%

Table 5: 3rd – 5th Grade Frequency Survey Results; N=521

Opinion Statements	Never	Sometimes	A lot	Not Sure
The school grounds & nearby areas are used as places to learn.	4%	72%	15%	9%
I spend almost the whole day inside buildings, cars, and/or buses.	23%	56%	14%	7%
Our classroom assignments or homework are about nearby nature and/or the community where we live.	31%	50%	4%	15%
I visit parks, forests, creeks, ponds or other natural areas with friends, family or as part of a group.	2%	54%	42%	2%
I enjoy coming to school.	5%	50%	40%	5%
I feel the learning I do at school is important to my future.	1%	20%	74%	5%
I think about how important nature is to me and my community.	5%	46%	41%	8%
Throughout the day, I notice nature around me: plants, animals, birds, water, etc.	3%	32%	62%	3%
I am glad to live in this community.	0%	11%	85%	4%

Student Exit Slip Results

The goal of the survey is to gather data on student attitudes toward nature in general and whether or not they would be likely to visit a natural area with their friends and family on their own. In addition, students were asked a knowledge question based on the school program they participated in at Riveredge. Data was gathered in spring and fall 2014 using a paper administered survey that employed yes/no/maybe questions. To ensure grade-appropriateness, unique surveys were created for each grade level. The surveys were read aloud as students marked their responses on paper. In addition, comments were recorded for each question. Data was compiled and analyzed for overarching trends and themes. First grade students were not surveyed because their field trips fell outside of the survey period.

Table 6: K-5 Response to, “Nature is important to me.”

	Yes	Maybe	No
K N=158 students	97%	N/A	3%
2 nd N=148 students	84%	11%	5%
3 rd N=216 students	92%	8%	0%
4 th N=174 students	82%	15%	3%
5 th N=142 students	93%	7%	0%
Total	90%	10%	2%

Students in all grade levels overwhelmingly (90%) reported that nature is important to them.

- Nature helps me release stress and have more fun.
- Seven students commented that we get food from nature (nature gives us food, plants give us food, it gives me all the food I need to stay alive, seeds grow into food).
- Seventeen students commented that trees create oxygen for breathing.
- Twelve students commented that they like animals and animals live in nature (animals are part of nature).
- Six students commented on the importance of natural resources (without nature we would not survive, things we use come from nature, we use the natural resources and animals, all of our needs come from nature, we wouldn't have a lot of things we have today).
- Seven students expressed that nature is fun to learn about (I like learning about nature, I like to learn about life and how it works, I want to learn about wild things).
- Nine students commented on specific activities they enjoy (like to camp, play, swim, fish, hunt, climb trees, hike, explore, collect frogs in ponds, feed ducks).
- Five students commented on the beauty of nature (without nature, every place would be bland, it's beautiful, it's pretty).
- Five students commented that they like nature (I love nature, I like nature, it is fun).

Table 7: K-5 Response to, “After your experience at Riveredge today, would you choose to visit a pond, forest, field or other natural area with your friends and family?”

	Yes	Maybe	No
K N=158 students	90%	N/A	10%
2 nd N=148 students	64%	30%	6%
3 rd N=216 students	76%	21%	3%
4 th N=174 students	66%	31%	3%
5 th N=142 students	66%	31%	3%
Total	72%	28%	5%

The majority of students (72%) responded that they would visit a pond, forest, field or other natural area with their friends and family after their experience at Riveredge. Slightly more than a quarter of students (28%) responded that they might visit a natural area.

- I like to explore.
- I have a forest in my backyard. It is my play area.
- It is fun to see different animals.
- I want to come with my whole family in the winter to see how the prairie and forest are different.
- I like to walk and see things and so would my family.
- I thought it was fun here.
- I want to know more about forests, prairies and ponds.

Table 8: K-5th Grade Percentage of Accurate Response to Multiple Choice Knowledge Questions

Multiple Choice Knowledge Question	Kindergarten % Correct N=158 Students	2 nd Grade % Correct N=148 Students	3 rd Grade % Correct N=216 Students	4 th Grade % Correct N=174 Students	5 th Grade % Correct N=142 Students
Do plants and soil help each other?	92%				
Are you connected to the communities we explored today?		68%			
Are you connected to the pond?			61%		
Do changes in the land impact the things that live there?				83%	
Are you connected to the Milwaukee River?					53%

Kindergarten comments:

- Ten students commented that soil helps plants grow.
- Six students said that they make fresh food.
- Soil has nutrients for plants.
- Because they spread vitamins every year.
- Have to have soil for worms to make good soil for plants.
- By helping plants stay in the ground.

Second grade comments:

- Seven students said they have a forest in their backyard.
- I am connected to the forest because my grandpa has one that he planted.
- We all need water, air, food and shelter.
- Eight students commented on things they experienced during the program (felt the soil, found critters, found plants, cooled off in the forest, had fun, hiking in the forest was cool, liked the forest but not the prairie, liked being in the shade more than the sun).
- No – no communities in yard.
- I love Riveredge and want to come back here because it’s fun.

Third grade comments:

- Six students commented that we need water (need water for drinking, need water for pet fish, our bodies use water, we are like 70% water and the water in the pond is connected to the water we drink).
- Eight students commented on using ponds for recreation (swimming, fishing, catching tadpoles, exploring).
- Five students made a connection to the water cycle (our bodies use water and we are connected to the water cycle; pond water goes to clouds, to rain, to fish in Lake Michigan; the water connects through streams and rivers; my well is connected to the pond through groundwater; because of the water cycle).
- Four students commented that they visit ponds/wetlands near their home (have a pond in their backyard, their neighbor has a pond, they live near a creek, go for a walk to a pond).

Fourth grade comments:

- Four students commented on some aspect of recreation (skiing, fishing, recreation in lakes, sledding and other things) on landforms.
- Fourteen students commented on that changes in the land impact habitat/animals' homes (when land changes, animals' homes change; plants and animals adapt to where they live and if things change, they wouldn't have a place to stay; animals dig homes in the hills made by glaciers; flat land that becomes a lake would give animals something to drink; glaciers may make it too cold for animals).

Fifth grade comments:

- Students commented on their understanding of the watershed (we are in the same watershed as the river, the river goes into the Great Lakes, the watershed is where we live, rain goes into different streams, creeks are connected, tributaries run to the river and lake).
- I kayak on the Milwaukee River with my dad.
- The river is a food source.
- We drink water from the river.
- The river is near my house.

Teacher Results

The teacher survey was designed to assess and determine baseline measures the following:

- Knowledge of the partnership
- Overall views on the effectiveness of the project
- Current integration of the project throughout subject areas
- Opinions on future potential impact of the project throughout subject areas
- Use of the outdoors as a place for learning

Although all elementary school teachers were invited to participate in the online survey, only teachers in grades Kindergarten through 5th grade chose to complete the tool.

Table 9: Teacher Affiliation; N=27 teachers

Please indicate the primary grade taught.		
Grade/Subject Area Affiliation	Percent	Number
Specials (art, music, physical education, etc.)	0.0%	0
Early Childhood	0.0%	0
4K	0.0%	0
K	15%	4
1st	22%	6
2nd	15%	4
3rd	11%	3
4th	22%	6
5th	15%	4
Other (please specify)		0

Overall teacher responses indicated an overall understanding and excitement about the project. Responses also indicate, as expected, that there is a need for continual communication about the partnership and strategies should be created to increase teacher involvement in all partnership components.

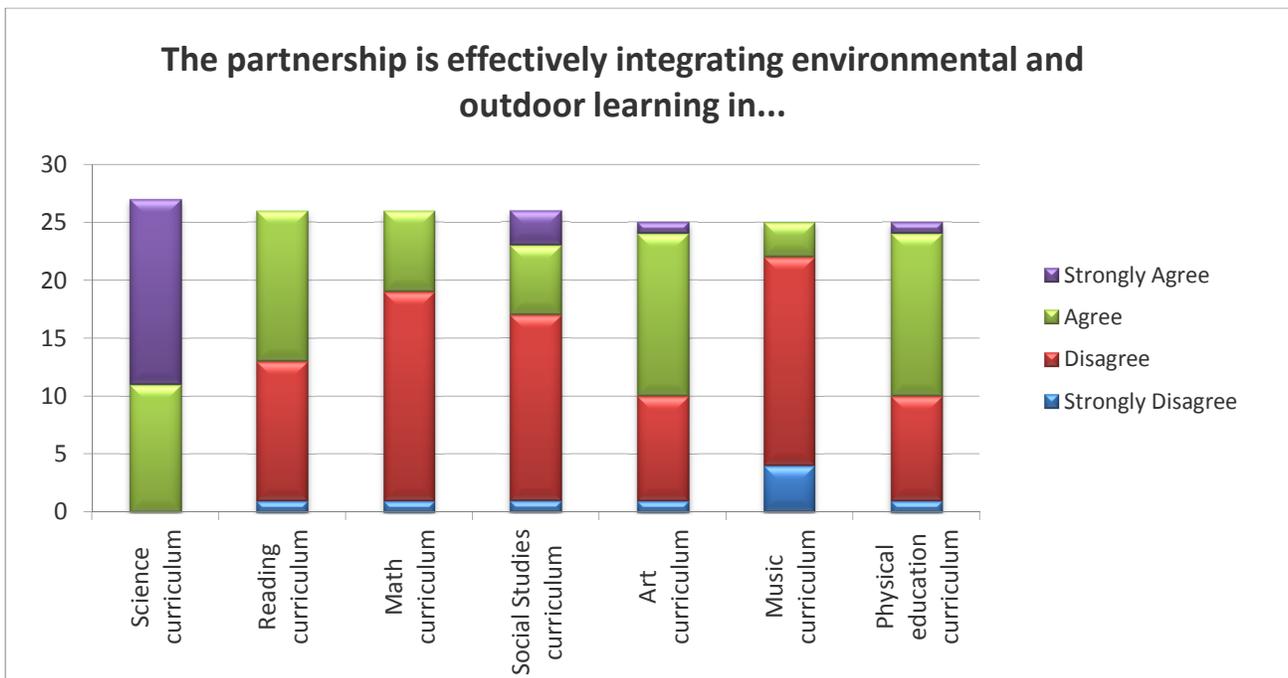
Table 10: Teacher Perceptions of Project; N=27 teachers

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
I am excited to be a part of this partnership.	68%	40%	0	0
I understand my role in this partnership.	50%	48%	8%	0
My personal knowledge of the natural world has increased as a result of my involvement in this partnership.	28%	72%	8%	0
The partnership is a good use of resources (school, teacher, Riveredge, etc.)	68%	36%	4%	0
I have learned new methods for utilizing the outdoors in my curriculum through this partnership.	28%	68%	12%	0
My students have benefited from this partnership.	68%	40%	0	0

Probably the most interesting results include the perceptions related to the applicability of outdoor learning within the subject areas. The graphs below illustrate current perceptions and future hopes of the teachers in regards to effectively combining outdoor learning with the following subject areas: science, reading, math, social studies, art, music, and physical education.

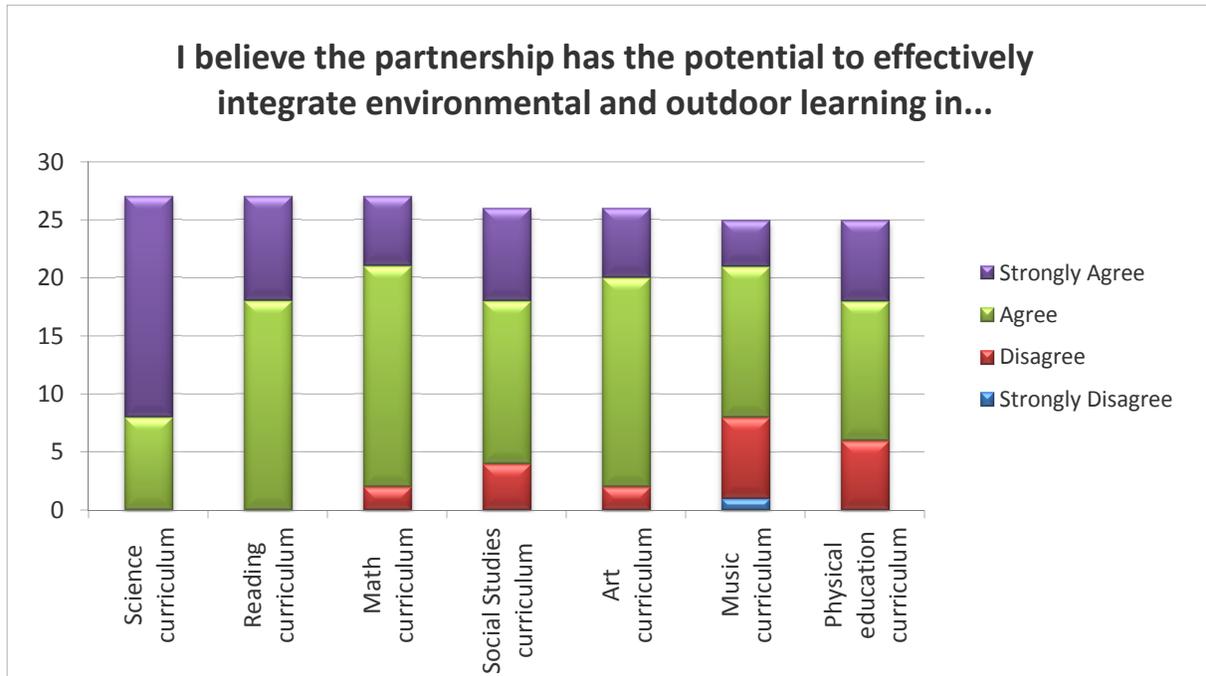
The results indicate, as expected, that most teachers associate outdoor learning with implementation of science curriculum – with 100% of respondents indicating “strong agreement” or “agreement” with this area of effective integration. Only art and physical education curriculum received more than half of the respondents indicating agreement to effective integration of outdoor learning. All other areas had more than 50% of respondents “disagreeing” or “strongly disagreeing” with the statement.

Chart 11: Teacher Perceptions of Current Effectiveness of Environmental and Outdoor Learning Across Subject Areas N=27 teachers



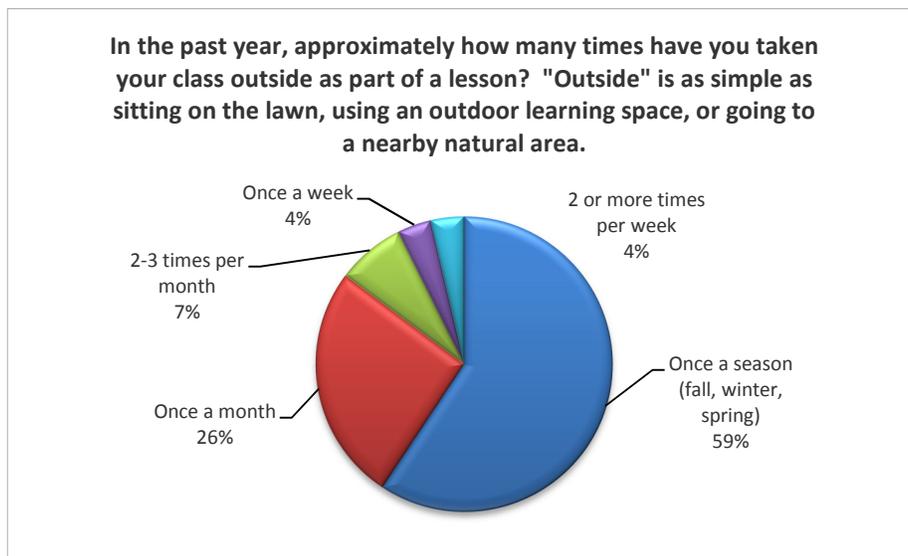
Even more interesting, is the beliefs reported by teachers in the next survey question. As indicated in the chart below. Over 50% of responding teachers either “strongly agree” or “agree” that the partnership has the potential to effectively integrate environmental and outdoor learning across all subject areas. Science curriculum again scored the highest potential, and music curriculum the least, but all areas showed wide spread optimism.

Table 12: Teacher Perceptions of Potential Effectiveness of Environmental and Outdoor Learning across Subject Areas N=27 teachers



Finally, one of the most significant self-reporting statistics gathered by this survey was the amount of time teachers use an outdoor area as a location for a lesson. Over half of the teachers reported using the outdoors only one time per season. The graphic below indicates the other percentages. Only two teachers indicated going outdoors one or more times per week. In the future, we hope to see this statistical response increase on a yearly basis. It is our hope that the partnership equips, enables, and encourages outdoor learning throughout the elementary school subject areas.

Chart 13: Teacher Self Report on Frequency of Use of Outdoor Spaces for Lessons; N=27 teachers



CONCLUSIONS

Overall, this evaluation project provided meaningful insights into the opinions of students, teachers, and administrators about feelings toward the natural world, likeliness to spend time outdoors (recreationally and in formal learning), and thoughts about the current state of the partnership and opportunities for the future.

Students Desire to Go Outdoors is Contrary to Time Spent Outdoors

Overall, students expressed a positive attitude toward time spent outdoors in school and at home. They expressed a positive attitude toward the natural world. When students and teachers were asked about the frequency of time spent outdoors, positive responses decreased dramatically. With the additional knowledge research gives us about the importance and positive results of time spent outdoors on mental health, physical health, and academic achievement, it will be important to find ways to encourage more time for everyone in the school system and personal lives. We believe that partnerships between nature centers/environmental organizations and school districts will provide an avenue to decreasing barriers to outdoor learning. It is also hopeful that families can be encouraged to spend more time together outdoors because of the increased outdoor learning occurring in their children's schools.

Program Improvement Opportunities

Teacher and administrator responses indicated an overall positive opinion of the partnership and a willingness to continue in future years. Responses also indicated a need for more communication about the partnership objectives as well as optimism about the benefits of integrating outdoor learning across most subject areas.

Additional resources and assistance to help increase the integration of outdoor learning across subject areas would be beneficial to implementing an even greater systems approach to environmental education within the school district. Currently, Riveredge and the Cedarburg School District are discussing a school based naturalist position which, in future years, may do just that.

Future Data Collection

As this evaluation was meant to provide a baseline comparison for future years, it will be meaningful to see if or how the data results vary as the years of the partnership progress. The evaluation projected also highlighted additional opportunities for beneficial data collection and communications. In future years, it may be meaningful to collect data the following data.

- Responses from students' families about their opinions of the importance of the natural world, connection to their community, and time spent outdoors.
- Completion of teacher logs of use of outdoor spaces that include subject matter taught, duration, and observations of student learning.
- Identification of barriers to time spent learning and recreating outdoors.
- Comparison data between student responses and the elementary school they attend. With additional variable data collected from each elementary school regarding how the environment is integrated within their school structure, access to outdoor learning areas, and frequency of outdoor learning time, we would be able to correlate student opinion responses more accurately with their school environment.

Final Thoughts & Thanks

Although more data collection is certainly warranted, we hope that this evaluation project helps other environmental organizations consider the possibilities of system based partnerships with their local school districts. When developing such a partnership, discuss the possibility of baseline data collection prior to the start of the partnership components. Such data, collected annually, will provide not only the partners, but the field of environmental education a better understanding of how, together, we can make meaningful change within our communities through the use of natural world.

We extend great thanks to the Cedarburg School District administration, staff, and students for agreeing to participate in this data collection, Dr. Steve Kerlin and Dr. Kendra Liddicoat from UW-Stevens Point for their help with brainstorming and student assistance in data mining, and Jeremy Solin from the Wisconsin Center for Environmental Education for providing resources for the design of this evaluation project.

APPENDIX ONE: K – 1ST GRADE OPINION SURVEY

Teacher Information:

Survey purpose:

This opinion survey is part of the research project, funded by the Wisconsin Environmental Education Board, to document impacts and outcomes in regards to the Cedarburg School District – Riveredge Nature Center partnership.

The survey of K – 2nd graders helps shed insight into the attitudes of Cedarburg School District’s young children regarding their school, nature, outside and free time. Results will be compared to similar questions asked of older students to potentially illustrate trends, similarities, and differences between the grade groups. If the opinion survey is completed on an annual basis, significant changes in the results can help us track a shift in opinions regarding the natural world over time.

Survey instruction:

Please provide this survey to all of your students. Read each question aloud and have them indicate their answer by coloring in the appropriate box.

Once finished, please complete the bottom portion of this sheet, attach it to all the completed surveys, and return the surveys and this sheet in the envelope to your administrative office. Riveredge will collect the completed surveys, compile, and provide results at the end of 2014.

Thank you very much for your time and effort in completing this survey with your students!

If you have any questions or suggestions, please feel free to contact Jessica Jens, Riveredge Nature Center Executive Director, at jjens@riveredge.us or 262-416-1068.

Survey Collection Data

Date Completed: _____

Grade: _____

School: _____

of Students in Class: _____ **# of Surveys Completed:** _____

1. Do you like school?

Yes No

2. Do you think trees are pretty?

Yes No

3. Is it okay to kill ants and insects for fun?

Yes No

4. Is the forest a good place to explore?

Yes No

5. Do you think wild animals are interesting?

Yes No

6. Do you use things that are made from trees?

Yes No

7. Does your family spend time outdoors, such as go on hikes together?

Yes No

8. Do you like to go outside to learn at school?

Yes No

9. Do you like to spend most of your play time inside?

Yes No

10. Do you like to go to natural areas (parks, nature centers, woods)

Yes No

APPENDIX B: 2ND GRADE OPINION SURVEY

Teacher Information:

Survey purpose:

This opinion survey is part of the research project, funded by the Wisconsin Environmental Education Board, to document impacts and outcomes in regards to the Cedarburg School District – Riveredge Nature Center partnership.

The survey of K – 2nd graders helps shed insight into the attitudes of Cedarburg School District’s young children regarding their school, nature, outside and free time. Results will be compared to similar questions asked of older students to potentially illustrate trends, similarities, and differences between the grade groups. If the opinion survey is completed on an annual basis, significant changes in the results can help us track a shift in opinions regarding the natural world over time.

Survey instruction:

Please provide this survey to all of your students. Read each question aloud and have them indicate their answer by coloring in the appropriate box.

Once finished, please complete the bottom portion of this sheet, attach it to all the completed surveys, and return the surveys and this sheet in the envelope to your administrative office. Riveredge will collect the completed surveys, compile, and provide results at the end of 2014.

Thank you very much for your time and effort in completing this survey with your students!

If you have any questions or suggestions, please feel free to contact Jessica Jens, Riveredge Nature Center Executive Director, at jjens@riveredge.us or 262-416-1068.

Survey Collection Data

Date Completed: _____

Grade: 2nd _____

School: _____

of Students in Class: _____

of Surveys Completed: _____

1. Do you like school?

Yes No Sometimes

2. Do you think trees are pretty?

Yes No Sometimes

3. Is it okay to kill ants and insects for fun?

Yes No Sometimes

4. Is the forest a good place to explore?

Yes No Sometimes

5. Do you think wild animals are interesting?

Yes No Sometimes

6. Do you use things that are made from trees?

Yes No Sometimes

7. Does your family spend time outdoors, such as go on hikes together?

Yes No Sometimes

8. Do you like to go outside to learn at school?

Yes No Sometimes

9. Do you like to spend most of your play time inside?

Yes No Sometimes

10. Do you like to go to natural areas (parks, nature centers, woods)

Yes No Sometimes

Teacher Information:

Survey purpose:

This opinion survey is part of the research project, funded by the Wisconsin Environmental Education Board, to document impacts and outcomes in regards to the Cedarburg School District – Riveredge Nature Center partnership.

The survey of 3rd – 5th graders helps shed insight into the attitudes of Cedarburg School District’s older elementary students regarding their school, nature, outside and frees time as well as their ideas and knowledge about the community and environment. Results will be compared to similar questions asked of younger students to potentially illustrate trends, similarities, and differences between the grade groups. If the opinion survey is completed on an annual basis, significant changes in the results can help us track a shift in opinions regarding the natural world over time.

Survey instruction:

Please provide this survey to all of your students. Ask them indicate their answer by circling the appropriate answer.

Once finished, please complete the bottom portion of this sheet, attach it to all the completed surveys, and return the surveys and this sheet in the envelope to your administrative office. Riveredge will collect the completed surveys, compile, and provide results at the end of 2014.

Thank you very much for your time and effort in completing this survey with your students!

If you have any questions or suggestions, please feel free to contact Jessica Jens, Riveredge Nature Center Executive Director, at jjens@riveredge.us or 262-416-1068.

Survey Collection Data

Date Completed: _____

Grade: _____

School: _____

of Students in Class: _____ **# of Surveys Completed:** _____

We are interested in your ideas and knowledge about your community and environment.

By community, we mean everything in the town or area around your school and where you live, including people, parks, nature and the built environment (i.e buildings, streets).

There are no right or wrong answers!

Please answer every question and give your completed survey to your teacher.

Thank you for completing the survey!

How much do you agree or disagree?

For each statement, circle the answer which best shows how you feel.

1. Our school is environmentally healthy.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

2. Cedarburg is an environmentally healthy community.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

3. I like to spend most of my free time indoors.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

4. I know a lot about nature.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

5. I enjoy learning about nature.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

6. I enjoy learning outdoors during school.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

7. Learning outdoors helps me to get better grades in school.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

8. It is okay if a little water gets polluted because there is plenty of water.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

9. I like to help other people, even if it is hard work.

Agree a LOT Agree a Little Not Sure Disagree a Little Disagree a LOT

How often do these things happen? Circle the best answer for each statement.

1. **The school grounds & nearby areas are used as places to learn.**

Never Sometimes A lot Not Sure

2. **I spend almost the whole day inside buildings, cars, and/or buses.**

Never Sometimes A lot Not Sure

3. **Our classroom assignments or homework are about nearby nature and/or the community where we live.**

Never Sometimes A lot Not Sure

4. **I visit parks, forests, creeks, ponds or other natural areas with friends, family or as part of a group.**

Never Sometimes A lot Not Sure

5. **I enjoy coming to school.**

Never Sometimes A lot Not Sure

6. **I feel the learning I do at school is important to my future.**

Never Sometimes A lot Not Sure

7. **I think about how important nature is to me and my community.**

Never Sometimes A lot Not Sure

8. **Throughout the day, I notice nature around me: plants, animals, birds, water, etc.**

Never Sometimes A lot Not Sure

9. **I am glad to live in this community.**

Never Sometimes A lot Not Sure

APPENDIX D: TEACHER OPINION SURVEY

School: _____

How aware are you of the Riveredge Nature Center – Cedarburg School District Partnership?

Not at all Some Very

Please rate the following statements:

I understand my role and expectations in this partnership.

Strongly Agree Agree Disagree Strongly Disagree

I am excited to be a part of this partnership.

Strongly Agree Agree Disagree Strongly Disagree

My personal knowledge of the natural world has increased as a result of my involvement in this project.

Strongly Agree Agree Disagree Strongly Disagree

The partnership is a good use of resources (school, teacher, Riveredge, etc.)

Strongly Agree Agree Disagree Strongly Disagree

I have learned new methods for utilizing the outdoors in my curriculum through this partnership.

Strongly Agree Agree Disagree Strongly Disagree

My students have benefitted from this partnership.

Strongly Agree Agree Disagree Strongly Disagree

What do you feel are the most important next steps in building this partnership? What role, if any, would you like to play in these steps?

What needs our immediate attention to make the most out of this partnership?

What professional development would help you most?

The partnership is effectively integrating environmental and outdoor learning in....

... science curriculum.

Strongly Agree Agree Disagree Strongly Disagree

... reading curriculum

Strongly Agree Agree Disagree Strongly Disagree

... math curriculum

Strongly Agree Agree Disagree Strongly Disagree

... art curriculum

Strongly Agree Agree Disagree Strongly Disagree

... music curriculum

Strongly Agree Agree Disagree Strongly Disagree

... physical education curriculum

Strongly Agree Agree Disagree Strongly Disagree

I believe this partnership has the potential to effectively integrating environmental and outdoor learning in....

... science curriculum.

Strongly Agree Agree Disagree Strongly Disagree

... reading curriculum

Strongly Agree Agree Disagree Strongly Disagree

... math curriculum

Strongly Agree Agree Disagree Strongly Disagree

... art curriculum

Strongly Agree Agree Disagree Strongly Disagree

... music curriculum

Strongly Agree Agree Disagree Strongly Disagree

... physical education curriculum

Strongly Agree Agree Disagree Strongly Disagree

ⁱ Ponto, C.F. & Linder, N.P. (2011). *Sustainable tomorrow: a teachers' guidebook for applying systems thinking to environmental education curricula*. Association of Fish and Wildlife Agencies. Available online: <http://www.fishwildlife.org/files/ConEd-Sustainable-Tomorrow-Systems-Thinking-Guidebook.pdf>

ⁱⁱ Cedarburg School District Website. <http://www.cedarburg.k12.wi.us/about.cfm> Retrieved 1.15.15

ⁱⁱⁱ Email from Karen Engelhoff on 1.5.2015

^{iv} Kelly, C. (2011). LEAF/Goodman Armstrong Creek Community Partnership Project. Year Two Participant Evaluation Report. University of Wisconsin – Stevens Point