



*Wolf Ridge
Environmental Learning Center*

K-12 Classroom Teacher Needs Assessment Survey

The purpose of this survey was to gather information from K-12 educators within the Minnesota Lake Superior Coastal Program area regarding their needs and interests pertaining to coastal zone resources and environmental education (EE). Survey distribution and collection took place during the 2006-07 school year. Information from this survey will be used to help develop future projects for schools and funding priorities to address identified educational needs and barriers.

In this study, 55 K-12 schools were identified in the Minnesota Lake Superior Coastal Zone. The schools ranged from Carlton, through Duluth, and up the North Shore of Lake Superior to Grand Portage, MN. Each school principal was asked to select one representative teacher from each grade level category to assess the needs of the faculty in those grades as they responded to the survey. Some of the participating schools contained grades K-12, thus being asked for four teachers to respond, whereas a K-5 school may have only had two teachers complete surveys. 114 surveys were distributed to these 55 schools in Northeastern Minnesota. Of these, 56 surveys were returned from the following districts and schools. The results from these surveys are provided in this document.

Grade level	#	Districts	Responding Schools	
K-2	16	Carlton (93)	Carlton High School	Central High School
3-5	16	Cloquet (94)	South Terrace Elementary	Denfeld High School
6-8	13	Esko (99)	Churchill Elementary	Ordean Middle School
9-12	10	Cook County (166)	Cloquet Middle School	Lincoln Park
undescribed	1	Lake Superior (381)	Lincoln High School	Homecroft Elementary
		Hermantown (700)	Winterquist Elementary	Lakewood Elementary
Total	56	Proctor (704)	Sawtooth Elementary	Lowell Elementary
		Duluth (709)	Cook County High School	Nettleton Elementary
		Charter Schools	Minnehaha Elementary	Stowe Elementary
		Parochial Schools	Two Harbors High School	North Shore Community School
			Hermantown Elementary	Harbor City International School
			Hermantown Middle School	Kenwood Edison
			Hermantown High School	Washburn Edison
			Proctor High School	The Marshall School
			St. Michael's Lakeside School	St. John's School
			St. Rose School	

Environmental Education at your school

Teaching Methods: To what extent do you agree with the following statements about environmental education at your school?

Low (1) – High (5)

Teaching Methods	Rank
1. I am comfortable teaching environmental education lessons or activities in my classroom.	4.20
4. Administrators at my school are committed to providing EE to students.	3.43
3. Other teachers in my grade level (circled above) are comfortable teaching EE in their classrooms.	3.02
2. Other teachers in my grade level (circled above) actively teach EE in their classrooms.	2.88

I presently do the following at My School: (please check all of the following that apply)

	#	Not used	Once /year	2-5 /year	Monthly	Weekly	Seasonally	Unit-based	Integrated	Check only
Teach about the environment	52 (93%)	4	2	2	8	11	3	14	8	4
Involve students in stewardship projects	33 (59%)	23	4	17	2	1	3	0	3	3
Use visits to environmental learning centers/nature centers	36 (64%)	20	17	12	4	0	2	0	0	1
Teach outdoors	43 (77%)	13	0	7	12	6	8	3	2	5
Use an outdoor school site	38 (68%)	18	2	4	9	6	4	1	3	9
Have EE guest speakers/programs	29 (52%)	27	9	12	3	3	0	1	0	1
Use published EE curriculum	21 (38%)	35	2	7	1	1	0	3	1	6
Created my own EE curriculum	26 (46%)	30	x	x	x	x	x	x	X	x

Key:

#	This is the total number of teachers that checked this category.
Not used	This is the number of teachers that did not check this category.
Once/year	Teachers checking this category do this one time during the school year.
2-5/year	Teachers checking this category do this 2-5 times during the school year.
Monthly	Teachers checking this category do this once per month during the school year.
Weekly	Teachers checking this category do this once per week during the school year.
Seasonally	Teachers checking this category do this during specific seasons during the school year.
Unit-based	Teachers checking this category do this during specific units during the school year.
Integrated	Teachers checking this category do this routinely during the school year.
Check only	Teachers checking this category did not specify how often they do this at their school.

Content Knowledge: Please rate your **level of knowledge** using the scale below.

Low (1)-High (5)

Topic	Rank
Outdoor recreation (x-c skiing, hiking, etc.)	3.91
General environmental issues (climate change, acid rain, etc.)	3.70
Wildlife	3.51
Personal growth and team building	3.50
Physical sciences (weather, chemistry, etc.)	3.49
Contemporary interactions of humans upon natural resources (forestry, recreation, development, mining, etc.)	3.45
Aquatic ecosystems	3.31
Earth Sciences (geology, watershed, etc.)	3.28
Birds	3.25
Historical interactions of human culture(s) upon natural resources (fur trade, logging, mining, etc.)	3.24
Specific coastal resource management issues (fisheries, forestry, development, etc.)	3.02

EE Resources: Please rate your **frequency of use** for the following written EE resources using the scale below:

Low (1)-High (5)

Resource	Unaware	%	Aware & Not used	%	Used	%	Rank
Project Learning Tree	11	20%	20	36%	25	44%	2.50
Project WET	10	18%	18	32%	28	50%	2.31
A Greenprint for Minnesota	31	55%	17	30%	8	15%	2.29
Project WILD	11	20%	16	29%	29	51%	2.26
MN Environmental Literacy Scope & Sequence	25	45%	20	36%	11	19%	2.20
Great Lake Aquarium Lake Effects	15	27%	23	41%	18	32%	2.19
Wolf Ridge Lesson Plans	13	23%	21	38%	22	39%	2.14
L. Superior/Duluth Streams curriculum	19	34%	18	32%	19	34%	2.06
Leopold Education Project	34	61%	18	32%	4	7%	1.67
North American Association for Enviro. Education: Guidelines for Excellence	30	54%	20	36%	6	10%	1.33

Note** This table shows the number and percentage of teachers that were either unaware, aware of and did not use, or use the listed EE curricular resources. For each listed curriculum, the corresponding rank shows the frequency of use and is based upon the number of teachers using the curriculum. For example, the 25 teachers that use Project Learning Tree rated it higher than the eight teachers that use Greenprint for Minnesota, and higher than the four teachers that use Leopold Education Project.

Environmental Education Needs

EE Resources: Please rate your **level of need** for EE resources, using the scale below:

Low (1)-High (5)

EE Resource Needs	Rank
Funding for EE activities & resources	4.21
Field trip opportunities	3.91
Speakers	3.80
EE professional development & training	3.59
Meetings with colleagues to share, network, & learn	3.59
EE curriculum resources & supplies	3.53
Lesson plans and written curriculum ideas	3.48
Mailings regarding EE information & opportunities	3.31
Development of teacher networks	3.26
Student clubs	2.98
Outdoor school site	2.83

Please **describe** items rated as a **high level of need** from the above list.

Teachers made additional comments that could be classified into the following categories.

Category	# of comments
Funding	29
Resources	21
Collaboration	13
Curriculum	11
Other	11
Professional Development	8
No comment	11

EE Professional Development Needs: Please rate your **level of need** for EE professional development in the following areas, using the scale below:

Low(1)-High(5)

Content	Rank
Specific coastal resource management issues (fisheries, forestry, development, etc.)	3.33
Aquatic ecosystems	3.25
Birds	3.11
Current interactions of humans upon natural resources (forestry, recreation, development, mining, etc.)	3.11
Historical interactions of human culture(s) upon natural resources (fur trade, logging, mining, etc.)	3.09
Earth Sciences (geology, watershed, etc.)	3.07
Wildlife	3.04
Physical sciences (weather, chemistry, etc.)	2.98
General environmental issues (climate change, acid rain, etc.)	2.96
Value of & rationale for environmental education	2.76
Personal growth and team building	2.76
Outdoor recreation (x-c skiing, hiking, etc.)	2.51

Low(1)-High(5)

Methods	Rank
Outdoor teaching methods	3.41
Place-based education	3.24
Environment as an Integrating Context (EIC)	3.19
Outdoor motivation strategies	3.13
Hands-on experiential education	3.13
Classroom management outdoors	3.11
Inquiry based learning	3.08

Other resources	Rank
Funding sources	4.21
Transportation to an outdoor EE site off campus	3.83
Grant writing	3.69
EE equipment resources	3.67
Integrating EE with other subjects	3.41
Alignment of EE with MN Academic Standards	3.38
Availability and use of written EE curriculum	3.30
Internet resources relating to EE	3.25
Development & use of outdoor EE site on campus	3.25
Teaching about environmental issues	3.15
Flexibility within daily school schedule	3.02

Please **describe** items rated as a **high level of need** from the above list.

Teachers made additional comments that could be classified into the following categories.

Category	# of comments
Funding	16
Professional Development	12
Academic Standards	12
Curriculum	10
Resources	9
Grants	7
Outdoor Site	7
Transportation	6
Internet Resources	4
Schedule Flexibility	4
No comment	17

Environmental Education Professional Development Opportunities:

Rate the opportunities you would like to see offered in the future from **most likely to attend (5)** to **least likely to attend (1)**.

Professional Development Opportunities	Rank
Teacher in-service during school year	4.05
Summer workshops	3.46
University courses for credit	2.96
Weekend workshops during school year	2.39

Potential Barriers to Environmental Education

1. What extent do you feel each factor is a **barrier to** teaching environmental education in your school?

Barriers to teaching EE	Rank
Inadequate funding	4.16
Lack of access to transportation	3.61
Lack of time amidst required core subjects	3.55
Inadequate EE equipment resources	3.50
Inadequate planning time	3.48
Current structure of daily school schedule	3.35
Inadequate written curriculum EE resources	3.19
Lack of content knowledge about coastal environment	3.02
Inadequate compensation for my efforts	2.62
Difficulty making EE relevant to core subjects	2.61
Does not address state academic standards	2.54
Lack of fellow teacher support in your school	2.30
Lack of administrative support	2.13
Beyond the provisions in my contract	2.00
Safety concerns associated with outdoor activities	2.00
Lack of parent support in your school	1.94

This project was conducted by Wolf Ridge Environmental Learning Center (Kevin Zak – Project Coordinator and Peter Smerud – Project Manager). For further information regarding this survey and the data collected, please contact:

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Minnesota's Lake Superior Coastal Program is a voluntary federal-state partnership dedicated to the comprehensive management of our coastal resources. The Program provides technical and financial resources for the local community, by bringing federal dollars into Minnesota for the Lake Superior coastal area.

The Coastal Program's goal is to preserve, protect, develop, and where possible, restore or enhance coastal resources along Minnesota's North Shore of Lake Superior. Our annual [Grant program](#) is an important funding source for local communities to help them balance protection of coastal resources with providing places for people to live, work, and play.

