

PROJECT PROFILE

Project Title: Upper Great Lakes Stewardship Initiative – Base Funding Proposal: Second Year Funding (Project Number 2018.1821)

Grantee Organization: Superior Watershed Partnership, 2 Peter White Drive, Marquette, Michigan 49855

Project Team: Individuals that contributed to project completion include:

- Abbie Hanson, Superior Watershed Partnership, Program Manager
- Carl Lindquist, Superior Watershed Partnership, Executive Director
- Barb Trombley, Superior Watershed Partnership, Administrator
- Chris Standerford, Northern Michigan University, Seaborg Math and Science Center Director
- Kim Smith, Northern Michigan University, STEM Education Consultant
- Karen Bacula, Unaffiliated, Education Consultant

Contact Person: Abbie Hanson, Superior Watershed Partnership, abbie@superiorwatersheds.org

Grant Amount: \$72,500

Time Frame: September 1, 2018 through August 31, 2019

Focus Areas: Great Lakes Stewardship Initiative (GLSI)

Brief Project Summary: In partnership with the Seaborg Center at Northern Michigan University, the Superior Watershed Partnership and the Upper Great Lakes Stewardship Initiative (GLSI) offered professional development for educators and supported place-based stewardship projects for K-12 students in Alger, Delta, Marquette, and Schoolcraft Counties. As one of nine GLSI hubs throughout the state, the Upper GLSI worked to promote school-community partnerships that engaged communities in project efforts and strengthened stewardship impacts among students. GLFT funding during the project period (September 2018 – August 2019) directly supported 53 total hours of professional development for 28 educators and provided project support for 559+ students.

REVIEW OF CHART OF WORK

Five broad project outcomes (and associated deliverables) were identified in the originally proposed chart of work. As the Upper GLSI hub will no longer be an official GLSI hub, a significant deviation was observed under Outcome 5 (detailed below). No additional significant deviations/changes were made to the chart of work. A summary of activities completed during the grant period are summarized under each outcome below.

Outcome 1: Meaningful PBE in schools. Utilize surveys, reports, and/or personal communication to assess teacher needs regarding implementation of PBE.

Deliverables: Sufficient coordination assistance and monetary support provided to enable successful PBE implementation for participating educators/schools.

Deviations Made to the Chart of Work (Outcome 1): none

To assess educator needs surrounding place-based education (PBE) implementation and professional learning (PL), surveys were distributed to workshop participants following each professional learning opportunity. The results of the surveys were used to identify and understand teacher needs/interests and to shape and plan for continued support throughout the remaining school year and moving forward. Participant feedback was compiled and is included in Appendix A below. Project photos are included in Appendix C.

Monetary support was also awarded to five educators/teaching teams in order to assist with implementation of PBE stewardship projects during the 2018-2019 school year and into fall of the 2019-2020 school year. Schools receiving minigrant support during the 2018-2019 school year included: Aspen Ridge Middle School, Escanaba High School, Gwinn Middle School, Marquette Senior High School, and Negaunee High School. A minimum of 264 students were/continue to be involved in project efforts. Specific project information is included in Table 1 below.

In combination with funding provide by the Great Lakes Stewardship Initiative's MiSTEM Advisory Council grant award, a Remotely Operated Vehicle (ROV) workshop for educators was held during July 2019. Monetary support was provided to participants to implement ROV related projects with their students beginning in fall 2019. Schools receiving ROV minigrants included: Escanaba High School, Gladstone High School, Gwinn Middle School, Iron Mountain High School, Kingsford Middle School, Les Cheneaux Community Schools, North Central Jr./Sr. High School, Rapid River High School, and Republic-Michigamme Schools. A minimum of 295 students were/continue to be involved in project efforts. Specific project information is included in Table 2 below.

Finally, students and educators from two Upper GLSI schools (Escanaba High School, Jessica Garber; Marquette Senior High School, Kim Parlato) were able to attend the Lake Superior Youth Symposium held at the University of Minnesota Duluth on May 16-19, 2019. During the workshop, students were able to attend field trips, talks, and workshops focused on Lake Superior, current challenges facing the Great Lakes, and how students can contribute to conservation and sustainability efforts. Feedback from both Upper GLSI educators emphasized that students were beyond excited to attend, and that they were inspired and looking forward to bringing lessons learned back to their schools and communities.

Table 1. 2018-2019 Upper GLSI Minigrant Supported Projects

School	Grade	Teachers	Total Students	Project/Event Details
Aspen Ridge Middle School	6-7	Kurt Corcoran Libby Nelson	13	Students worked to map and flag approximately 5 kilometers of a nature trail throughout the school campus. Working with community partners, trail construction began in spring 2019, with completion anticipated during the 2019-2020 school year. The trail will be utilized by various school user groups and will provide opportunities for the study of vegetation and wildlife. The trail will incorporate signage regarding the importance of wetlands and types of vegetation/wildlife present. Students will conduct vegetative surveys and possibly utilize game cameras to observe and identify area wildlife. Link to Project Video
Escanaba High School	9-12	Jessica Garber Jessica Larrabee Dan DeLong	62	Students worked with the Lake to Lake Cooperative Invasive Species Management Area to identify invasive plant infestations locally and to raise and install a native plant garden on the school campus.
Gwinn Middle School	6	Kristy Humphrey Brian Rice Elizabeth Henry Madeleine Weidener	88	Students raised salmon and released them into a local watershed (Dead River). Students learned the life history of the species through careful observation over the school year. In late November, the classroom received 190 salmon eggs. The fish reached their smolt stage in early May 2019. At this stage they were ready to move to a bigger stream and imprint to its smell. This final stage required that students travel with their fish to Marquette to be released below the hydro dam near Tourist Park in the Dead River.
Marquette Senior High School	9-12	Kelly Simon	47	Students traveled to St. Ignace and Mackinac City in order to study French and First Nations' history in the area. They studied the waterways and the Great Lakes influence on French Voyageurs, and took part in a Water Blessing ceremony with local First Nations tribal members. Students interacted with a Voyageur Interpreter at Fort Michillimackinac while studying the beach and Lake Michigan and Huron sites where voyageurs landed. Students learned the importance of protecting the Great Lakes and how past generations have influenced and protected them. They were exposed to the controversy surrounding Pipeline 5 and its potential impacts. Students also acted as Interpreters at Ft. de Buade museum in St. Ignace.

School	Grade	Teachers	Total Students	Project/Event Details
Negaunee High School	11-12	Todd Backlund Kevin Bell Kimberly Shefchik	54	Students learned about the importance of bats to the Great Lakes region. Students constructed bat houses and distributed them throughout Marquette County in hopes of creating habitat for declining populations. Students also constructed posters or pamphlets to share their research.
		TOTAL	264+	

Table 2. ROV Minigrant Projects/Awardees

School	Grade	Teachers	Total Students	Project/Event Details
Escanaba High School	9-12	Jessica Garber Marie Young	30-100	Funding was used to purchase motors, control boxes, switches, and PVC to construct ROVs. ROVs will be used to increase awareness of pollution in our local waterways. ROVs will be incorporated into water units and by an Environmental club project for monitoring waterways.
Gladstone High School	12	Katrina Clausen	10	ROV funding was utilized to build an additional ROV for classroom/community use.
Gwinn Middle School	9	Benjamin Platt	22	The minigrant was used to purchase PVC framing materials, connectors and adapters for making at least 6 ROVs. An additional power supply and camera will be purchased as well as a large tub for buoyancy testing in the classroom. Bilge motors, wiring harness, camera, etc. will be reused from original ROV.
Iron Mountain High School	9-12	Rhonda Carey	50-55	Funding was used to purchase motors and tools necessary to build four additional ROVs. The ROVs were/will be incorporated into the environmental based PBL class. I would like to use them to scope out and perhaps start yearly data collection on invasive species in Lake Antoine (milfoil, zebra mussels). I have also considered using them to identify underwater debris to clean up in our local waterways with my class or my environmental club students.

Kingsford Middle School	6	Dan Carey	145	Funding was used to purchase ROV supplies including motors and cables. A dip net and project boxes were also purchased for use in a macroinvertebrate study. ROVs are/will be used to survey local waterways and enhance lessons related to salmon release in the spring.
Les Cheneaux Community Schools	9-12	Mitchel Mast	30	Minigrant funding is being utilized to supply bussing costs and materials for ROV construction. Students are going to be working with local businesses to provide a service to them. This will teach them about the benefit of collaboration and general STEM principles to be utilized in their future careers. Students will also be conducting an underwater vessel search on a sunken ship found in our local bay.
North Central Jr./Sr. High School	6-8	Sarah McDougall	Not specified	Funding was utilized to purchase components for constructing ROV frames. ROVs will be constructed and utilized in order to integrate engineering into the science curriculum. Students will research local issues/opportunities for ROV use in the community.
Rapid River High School		Matt Spreitzer	Not specified	As part of a STEM class elective, funding was utilized to purchase equipment for construction of additional ROVs.
Republic-Michigamme Schools	8	Emily Harmon Christina Patrick	8	Funding was spent to purchase ROV supplies, including wireless temperature, dissolved oxygen and pH sensors. ROVs will be used to begin monitoring local streams and small bodies of water. The vision is for this to become a long term project that continues to add data from year to year from the same locations, as well as from additional locations identified.
		TOTAL	295+	

Outcome 2: Relevant and valuable PL opportunities. Implement diverse PL opportunities that address educator needs/desires (assess educator needs by using pre/post surveys, etc.)

Deliverables: A wide range of professional learning (PL) opportunities offered (teacher workshops, online webinars/forums, dinner/dialogue events, etc.) that grow and change in order to best accommodate teacher preferences and needs.

Deviations Made to the Chart of Work (Outcome 2): none

Professional learning opportunities supported by GLFT funding included: 1) a four day Introduction to Place-Based Education workshop (including one “virtual day”), and 2) a three day Remotely Operated Vehicle workshop for Upper Peninsula educators. In total, 53 hours of diverse professional learning opportunities were offered. Additional details are provided below.

A four day Upper GLSI supported *Introduction to Place-Based Education* workshop for educators concluded on November 1st, 2018. Full day in person sessions were held at Northern Michigan University
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on September 27th, October 17th and 18th, and November 1st, 2018. The event was well attended by educators from Marquette and Delta Counties (Day 1: 19 educators; Day 2: 14 educators; Day 3: 15 educators; Day 4: 15 educators). Educators in attendance are listed by workshop date in Appendix B below. Photos from the event are included in Appendix C. Content covered in each session included the following:

- Day 1: Teachers learned how to communicate what PBE means and how schools can use it to improve student learning and sense of place.
- Day 2: Teachers worked to complete the Earth Force process and learned how they can utilize it in the classroom to identify community environmental issues and select a student-led project to address the issue. Important logistics for working with students at a project site were covered, and educators participated in a field event sampling macroinvertebrates at two urban stream locations.
- Day 3: Teachers reflected on their field experience from Day 2, connected with community partners, experimented with different communication techniques, and utilized planning time to outline/plan for upcoming stewardship project ideas and/or lessons.
- Day 4: Teachers reflected on their experiences over the first three days of the workshop. A partner from Northern Michigan University’s Native American Studies department presented to the group about the importance of incorporating native cultures into PBE. Teachers learned about opportunities and priorities through the MiSTEM network, practiced implementing strategies including Talk Moves, and utilized planning time to discuss and prepare PBE project ideas for implementation with their students.

One “virtual day” of PL was also included as part of the series. Activities included as part of the optional “virtual day” included:

- Online discussion. Participants read an article and/or watched a video relating to cyclical trends in education and how schools can prioritize for the best ways kids learn. After reading/watching, participants recorded responses to prompts and provided feedback on their peers’ responses.
- Dinner and Dialogue. Participants gathered at Café BODEGA in Marquette and participated in informal discussions surrounding place-based education.
- Reflections. Participants wrote a final reflection on their place-based education workshop experience, lessons learned, and plans moving forward. Reflections were supported by at least one resource/reference that best represented their area(s) of interest.

In combination with funding provided by the Great Lakes Stewardship Initiative’s MiSTEM Advisory Council grant award, a Remotely Operated Vehicle (ROV) workshop for educators was held July 15-17, 2019. The workshop was attended by educators from across the Upper Peninsula (including counties outside of the Upper GLSI service area that are not covered by a GLSI hub). The event was held at Northern Michigan University and hosted by Square One Education Network. At the workshop, educators built and deployed (indoor and outdoor deployment) remotely operated vehicles to keep for use in their respective school/district. An evening Dinner and Dialogue session was also included. Additionally, minigrants were awarded to support student project efforts beginning in August 2019 (see Table 2 above). Educators in attendance are listed in Appendix B below. Photos from the event are included in Appendix C.

Outcome 3: Teacher collaboration. Support by avoiding barriers and promoting sharing.

Deliverables: Diverse teams of motivated educators in ready schools. Teaching teams and PL opportunities that incorporate poorly represented subject areas.

Deviations Made to the Chart of Work (Outcome 3): none

Professional learning opportunities were open to teachers in all subject areas. Materials utilized in events were developed to be applicable for all subject areas. Participating teachers in PL events included not only science educators, but art, English, French, math, chemistry, technology and sustainability educators, among others.

Larger minigrant awards were advertised for teaching teams consisting of two or more educators. Four of five projects implemented during the 2018-2019 school year incorporated a teaching team of at least two. While many ROV projects are in the beginning phases at participating schools, educators were encouraged to incorporate additional teachers and resources moving forward.

Outcome 4: School/Community Partnerships

Deliverables: Robust and engaging partnerships that are mutually beneficial for both parties. The Upper GLSI will work to maintain established partnerships and to recruit new community partners.

Deviations Made to the Chart of Work (Outcome 4): none

During the four day Introduction to PBE series, guest speakers from multiple organizations/agencies were invited to speak. Representatives from Pictured Rocks National Lakeshore/Hiawatha National Forest, the U.S. Fish and Wildlife Service, the Marquette County Conservation District, Clear Lake Education Center, Michigan State University Extension, Lake to Lake Cooperative Invasive Species Management Area, and Northern Michigan University's Native American Studies Department spoke and outlined opportunities for collaboration. As a result, several teachers developed projects that incorporated partnerships with some of the organizations/agencies. For example, the project at Escanaba High School incorporated input and a guest presentation from the Lake to Lake Cooperative Invasive Species Management Area. Todd Backlund at Negaunee High School invited the DNR to assist with project objectives. Additionally, Aspen Ridge Middle School worked closely with the Range Area Mountain Bike Association to plan, map, and begin to build their nature trail. Efforts will continue to promote and foster strong relationships between educators and community partners.

Outcome 5: Long-term sustainability. Implement a strategic fundraising/sustainability plan and identify sources of community support.

Deliverables: The implementation of a strategic fundraising campaign will serve to provide funding and support change, growth, and sustainability after the 2018-2019 school year.

Deviations Made to the Chart of Work (Outcome 5): Detailed below

The Upper GLSI team is beyond appreciative of the support provided by the GLFT and the GLSI central staff. Educators and students throughout the central Upper Peninsula have realized incredible benefits as a result of program funding. As the Superior Watershed Partnership and the Seaborg Math and Science Center decided to transition out of the Great Lakes Stewardship Initiative collaborative, the Upper GLSI did not participate in the strategic fundraising campaign. However, funding will continue to be sought to support place-based and STEM education efforts in the Upper Peninsula. Relationships established and/or strengthened with schools, educators, students, and community partners will continue to be cultivated, and Upper GLSI staff look forward to exploring opportunities to collaborate with the GLSI in the future, should

the opportunity arise. Community and youth environmental education has been and will continue to be an important cornerstone of the SWP's organizational mission.

Appendix A. Educator Workshop Survey Results/Participant Feedback

2018-2019 Introduction to Place-Based Education Workshop, Day 1: September 27th

What helpful feedback can you offer?

- Maybe let us have time to think of a project or help us brainstorm ideas of projects to use, especially local projects that meet MI science standards.
- I'm so excited!
- Really think I need to learn a bit more before answering this question.
- It was a long time to sit.
- Offering finances makes all the difference in the world.
- I loved seeing the projects that other teachers have done.
- Enjoyed seeing the projects which were completed.
- Great discussions so far! Great examples
- Loved that you brought in teachers who are implementing.
- It was helpful to hear about the different opportunities and projects.
- Loved the examples of the teachers and their classes.
- Just listening to the idea and excitement of the topic.
- Very informative, great ideas.
- I liked the examples.

What types of ideas are you still wrestling with?

- A place for me to start.
- How to incorporate Social Studies into the Great Lakes initiative.
- How to connect GLSI with local issues for my students.
- Management
- How to incorporate a project into my curriculum - ideas for what type of project I could do.
- Time. How to use within my classroom, small special ed group or in co-teaching placement (large group).
How to share this with the co-teacher
- What will benefit our community most (Escanaba)
- Just need more time to gather ideas and process!
- Agriculture/raising livestock
- What type of project can I do???
- Implementation with 4 different classes. Does this replace my "old" curriculum?
- Integration into my day.
- How to incorporate this type of "teaching" with on-line schools.
- How to tap into community "experts" to help out.
- How to link this to contacting/influencing legislators to make real change in the world. :) Being stewards implies a political aspect.

What type of support would be most helpful moving forward?

- Contacts with community members.
- Writing a grant
- Not sure??
- Planning time :) Discussion/brainstorming time.
- Visualizing my project. See my end goal.
- The resources given were amazing and Abbie's offer to help with grant writing or ideas.
- Financial support More ideas/examples.

- I am interested in more info about Lake Michigan because that is where we are.
- Availability for questions later.
- Ideas on how to create ideas on local projects - math based.
- More examples of successful projects involving other areas.
- More sharing of possible ideas from participants.
- Involving not just environmental bio but other subjects, too! How can college prep physics or my chem class work with the Great Lakes?

2018-2019 Introduction to Place-Based Education Workshop, Day 2: October 17, 2018

What other helpful feedback can you offer?

- I thoroughly enjoyed this experience, getting away from classroom, sharing ideas. Everyone seems so excited.
- Great balance between small and large group.
- Not at this point.
- I am enjoying learning from everyone else here. Everyone has valuable input to share.
- It would be productive to give a synopsis of the day in advance so we can process how to utilize system and practices better.

What types of ideas are you still wrestling with?

- Management of the students.
- Time and logistics
- Curriculum goals vs. personal interest
- What project to start up at my school
- Really thinking about which project and where I want to go with it.
- I just don't want to bite off more than I can chew.
- I am wrestling with how I am going to approach my students with projects I would like them to complete. They (my students) are on-line.
- Implementation of projects
- Implementation with my busy schedule
- Time to plan real projects at my school

What type of support would be most helpful moving forward?

- Time to plan
- I want to copy what someone else did. Less intimidating.
- More idea generating
- If I could have the support of our regional director. As far as supports in the "concrete" form, supports such as rubrics, where these projects could fit in the curriculum/take the place of some on-line units, etc.
- More networking
- Have someone come and see what I already have and what I need to do a project. (I am thinking about native species growing).
- Resources and outreach
- Management ideas

2018-2019 Introduction to Place-Based Education Workshop, Day 3: October 18, 2018

What helpful feedback can you offer?

- Excellent presenters - so many options!
- Great contacts - thank you!
- Can you send the powerpoints regarding the presenters
- Not sure. This was an awesome session.
- Can't wait to get all the powerpoints from presenters.
- I enjoyed the presenters that came in this morning. They were very informative.
- Not only is the information being shared useful, but so are the learning practices. I have learned about so many small activities to use.
- Don't worry about timelines. If the conversation is good let it run.
- This was a great experience.

What types of ideas are you still wrestling with?

- Grant writing
- Project execution management
- Incorporating projects with math
- Behavior management
- Funding for non-water-based lesson(s)
- How far do I really want to go with my project
- How to incorporate this PBE with online students
- If I should wait until next year or dive in this year
- How to integrate stewardship with French

What type of support would be most helpful moving forward?

- I need a 2nd opportunity for stipend. Site visit would be great.
- Just more time to plan with other staff
- A visit to my center so you can see what I am dealing with.
- Have someone come and see what I already have and what I need to do a project (I am thinking about native species growing). {Deliberate repeat of answer from day 2}
- I might need help with grant writing.
- I'd love to chat with any of the ladies re: grant writing. Thanks for being so helpful and sharing contact info.
- Outside resource to get project ideas
- Love to have all the emails and contacts of all the presenters.
- Conferencing
- Holding my hand through grant writing
- Possibly bring in guest speakers in 1st session then bring them back 3rd session (as desired) so folks who want to work with certain organizations can plan/grant write.

2018-2019 Introduction to Place-Based Education Workshop, Day 4: November 1, 2018

What other helpful feedback can you offer?

- Work time is the most helpful for PD like this. Time is so limited in schedule for planning.
- The Native American presenter was awesome. I would like to know more about the culture.
- Loved the resources! Loved the guest presenters!
- Thank you for the information and insight into new ideas.

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- Not just for science teachers.
- I finally pieced it together.
- Karen, Kim, and Abbie → You're all so great! Thank you for sharing your knowledge and caring!
- Would love to participate in WET workshop.
- I am planning a water unit at the end so I am going to check out some stuff!
- Great job.
- I loved talking to other peers about what they are doing.
- Three instructors makes for perfect variety!

What types of ideas are you still wrestling with?

- I feel content.
- Getting it all together.
- Planning
- Stewardship ideas
- Grant writing
- Still working out details of our garden but we are going to let students make some choices.
- Nothing at this point.
- How to get kids to buy into this.

What type of support would be most helpful moving forward?

- Contacts
- I just need to sit down and wrap my mind around it.
- I'm planning on contacting Abbie for a site visit to help get the ball rolling. :)
- More ideas - if help needed I will reach out.
- Grant writing
- You've provided it.
- Just continuing open communication and resources already available.
- Networking
- Grant writing workshop
- More PD opportunities related to PBE

What activities/presenters did you find most helpful?

- Conversations with peers and work time available.
- All of them.
- Everything!! ☺
- Group activities, sharing, reflecting
- Networking! All presentations Jud Sojourn
- Group talk/water cycle activity
- Guest presentation are very interesting! It's a nice opportunity to provide participants.
- Do you guys have all the power point from the presenters we saw last time?
- Time to collaborate - connections
- All (evaluation had this with a double underline)
- Loved the Native American guest speaker. Loved learning about Seaborg Center resources.

Questions 1- 6 -- Rating Scale Questions - Overall summary from session #4

- We were described as very helpful and did well presenting. One person felt we were average (#6)
- Sessions were perceived to be of the right length and the pacing was good. One person felt that some parts were slow and the work time fast.

- Group work and collaboration was found to be very helpful with a couple suggesting a little less than ‘very helpful’ (numbers 2, 3, 5 circled)
- Almost all felt they definitely perceived new teaching strategies. Two people thought a bit differently and selected #3 and #4.

July 15-17, 2019 ROV Workshop

	Questions	Value	Number of Responses
1	How helpful was this professional learning session? (1 = very helpful; 10 = not helpful)	1	12
2	How was the length of the session? (1 = too short; 10 = too long)	1	1
		3	1
		4	1
		5	4
		6	5
3	How as the pacing of the session? (1 = too fast; 10 = too slow)	2	1
		4	2
		5	1
		6	7
4	Was the group work and collaboration helpful? (1 = very helpful; 10 = not helpful)	7	1
		2	10
5	How did the presenters do? (1 = amazing; 10 = terrible)	1	2
		2	11
6	Did you perceive any new instructional strategies? (1 = Yes, definitely; 10 = I don't think so)	1	1
		3	8
		4	2
		6	1
7	What other helpful feedback can you offer?	Great workshop!	
		Favorite PD so far!	
8	What types of ideas are you still wrestling with?	Just overall logistics	
		How to make this fit into current lessons/time management	
		Financially funding this completely	
		More incorporation of engineering practices for 45 minute class periods	
9	What type of support would be most helpful moving forward?	Enough equipment	
		Continued funding for PD at no cost to teachers	
		Advanced training and designs workshop	
		Keep us in the loop on service learning project ideas in the community	
		Continued resources and opportunities to network	
		Money	
		Continued support with funding of equipment and possible intermediate professional development	
		It's all so new, my brain is working! I am sure I will think of something!	
		Just need to get going and invest time into making these plans happen!	
		Funding	

Appendix B. Professional Learning Workshop Attendance

September 27, 2018 attendance

Last Name	First Name	Grade Level	School	New or Returning
Backlund	Todd	11th 12th	Negaunee High School	New
Bilski	Jim	7-12	Bark River-Harris Schools	New
Cissell	Elizabeth	1,2,3 rd grade	North Star Montessori Academy	New
Clausen	Katrina	9-12	Gladstone	New
Corcoran	Kurt	6th	Aspen Ridge School	New
DeLong	Daniel	11th/12th	Escanaba	New
Demerse	Mary	10, 12	Escanaba High School	New
Fether	Jake	HS	Marquette Senior High School	New
Garber	Jessica	9-12	Escanaba High School	New
Hall	Lisa	Junior High	Bark River-Harris	New
Kainulainen	Jesse	9-12	Marquette Alternative High School	New
Kurpier	Kelly	High School	Success-VLC	New
Larrabee	Jessica	9-12 (mainly 10th)	Escanaba High School	New
Nelson	Libby	6-8	Aspen Ridge M.S.	Returning
Simon	Kelly	9-12	marquette senior high school, French	New
Swanson	Tyler	JH/HS	Bark River Harris High School	New
Waters	Sarah	High School	North Star Academy	New
Whitford	Nicole	6	Negaunee Middle School	New
Wright	Kathy	5th/6th grade	Powell Township School	Returning

October 17, 2018 attendance

Last Name	First Name	Grade Level	School
Cissell	Elizabeth	1,2,3 rd grade	North Star Montessori Academy
Clausen	Katrina	9-12	Gladstone
Corcoran	Kurt	6th	Aspen Ridge School
DeLong	Daniel	11th/12th	Escanaba
Fether	Jake	HS	Marquette Senior High School
Garber	Jessica	9-12	Escanaba High School
Hall	Lisa	Junior High	Bark River-Harris
Kainulainen	Jesse	9-12	Marquette Alternative High School
Kurpier	Kelly	High School	Success-VLC
Larrabee	Jessica	9-12 (mainly 10th)	Escanaba High School
Nelson	Libby	6-8	Aspen Ridge M.S.
Waters	Sarah	High School	North Star Academy
Whitford	Nicole	6	Negaunee Middle School

October 18, 2018 attendance

Last Name	First Name	Grade Level	School
Backlund	Todd	11th 12th	Negaunee High School
Cissell	Elizabeth	1,2,3 rd grade	North Star Montessori Academy
Clausen	Katrina	9-12	Gladstone
Corcoran	Kurt	6th	Aspen Ridge School
DeLong	Daniel	11th/12th	Escanaba
Fether	Jake	HS	Marquette Senior High School
Garber	Jessica	9-12	Escanaba High School
Hall	Lisa	Junior High	Bark River-Harris
Kainulainen	Jesse	9-12	Marquette Alternative High School
Kurpier	Kelly	High School	Success-VLC
Larrabee	Jessica	9-12 (mainly 10th)	Escanaba High School
Nelson	Libby	6-8	Aspen Ridge M.S.
simon	kelly	9-12	Marquette senior high school, French
Waters	Sarah	High School	North Star Academy
Whitford	Nicole	6	Negaunee Middle School

November 1, 2018 attendance

Last Name	First Name	Grade Level	School
Backlund	Todd	11th 12th	Negaunee High School
Cissell	Elizabeth	1,2,3 rd grade	North Star Montessori Academy
Clausen	Katrina	9-12	Gladstone
Corcoran	Kurt	6th	Aspen Ridge School
DeLong	Daniel	11th/12th	Escanaba
Fether	Jake	HS	Marquette Senior High School
Garber	Jessica	9-12	Escanaba High School
Hall	Lisa	Junior High	Bark River-Harris
Kainulainen	Jesse	9-12	Marquette Alternative High School
Kurpier	Kelly	High School	Success-VLC
Larrabee	Jessica	9-12 (mainly 10th)	Escanaba High School
Nelson	Libby	6-8	Aspen Ridge M.S.
Simon	Kelly	9-12	Marquette senior high school, French
Waters	Sarah	High School	North Star Academy
Whitford	Nicole	6	Negaunee Middle School

ROV Workshop Attendance - July 15-17, 2019

Last Name	First Name	Grade Level	School	New or Returning
Campbell	Alyssa		Community Partner	New
Carey	Dan	6	Kingsford Middle School	New
Carey	Rhonda	9-12	Iron Mountain High School	New
Clausen	Katrina	9-12	Gladstone High School	Returning
Garber	Jessica	9-12	Escanaba High School	Returning
Harmon	Emily	6-12	Republic-Michigamme Schools	New
Humphrey	Kristy	6-8	Gwinn Middle School	Returning
Mast	Mitchel	9-12	Les Cheneaux Community School	New
McDougall	Sarah	6-8	North Central Jr./Sr. High School	New
Patrick	Christina	2-3	Republic-Michigamme Schools	New
Platt	Benjamin	6-8	Gwinn Middle School	New
Spreitzer	Matt	9-12	Rapid River High School	New
Young	Marie	9-12	Escanaba High School	New

Appendix C. Photos and Video



Photo 1. Aspen Ridge Middle School – Students marking trail and clearing brush

[Aspen Ridge Trail Project – Link to project video](#)



Photo 2. Escanaba High School – Native plant garden



Photo 3. Escanaba High School – Rain barrel constructed and used to water native plant garden



Photo 4. Gwinn Middle School – Salmon release day



Photo 5. Gwinn Middle School – Salmon release day

Lake Stewardship Initiative funded the trip. Students were asked to use elements of realia, something you can touch, in their display projects. (Journal photo by Corey Kelly)

Local French class takes place-based education trip

By COREY KELLY
Journal Staff Writer

MARQUETTE — Making a school subject relevant to students' lives isn't easy, especially when you live in a rural place like the Upper Peninsula.

However, Marquette Senior High School's French teacher Kelly Simon is trying to do just that with her level one and two French students.

On May 16, both levels took a place-based education trip to the Mackinac Straits to visit Fort de Buade and Fort Michilimackinac, where they learned about the French influence in the region. Grants from the Great Lakes Stewardship Initiative funded the trip.

"I wanted them to see how relevant the language they are studying still is, in this area especially," Simon said.

Fort de Buade and Fort Michilimackinac were at one time occupied by the French and were influential during the fur trade.

"I don't think they realized what happened there and how vital it was to the fur trade and all that at the time and it's still there," Simon said.

MSES sophomore Elise Wilcox experienced these forts for the first time during this trip.

"We got to lots of different museums and to see many cool artifacts and even some people dressed up in traditional clothing. It was really neat to see," she said.

Wilcox revealed that she was surprised to learn how much French culture was in the region.

"I know we are pretty close to Canada, but I never expected that there would be this much French culture and unique French aspects of life in upper Michigan," Wilcox said.

When they returned to the classroom, Simon asked her students to choose a subject from the trip that interested them enough to create a display about it for their final

project. Major Arnt Schuyler DePeyster, as the subject.

"I got to walk around his house and thought it was interesting to see the different artifacts that were in there and see a poem that he wrote about one of his pets, which I thought was kind of fun," she said.

Wilcox's mom, Heather DePeyster, had heard about the

great idea. Addison grew up in the area and took French, but doesn't remember her classes ever making a connection to the local French history.

"I thought it was a great way to connect local kids to local history," Addison said. "We often think of that in a French class the only place we can go to is French Canada."

Simon wanted to bring these projects out into the community, so she contacted the Marquette Regional History Center and arranged for them to be displayed in the museum.

"They did a lot of hard work, and I didn't want that to be just stuck in the corner of my classroom," Simon said.

On Wednesday and Thursday, MSES French class projects were set on table tops that lined the walls of the main hall at the history center. By chance, for the past two weeks, students from all over the country had been visiting the center to learn about the fur trade and voyageur culture.

History center educator Delsy Rutz said that she received positive feedback from younger students who had the opportunity to see the displays and that the projects fit right into the lessons they had already been learning at school.

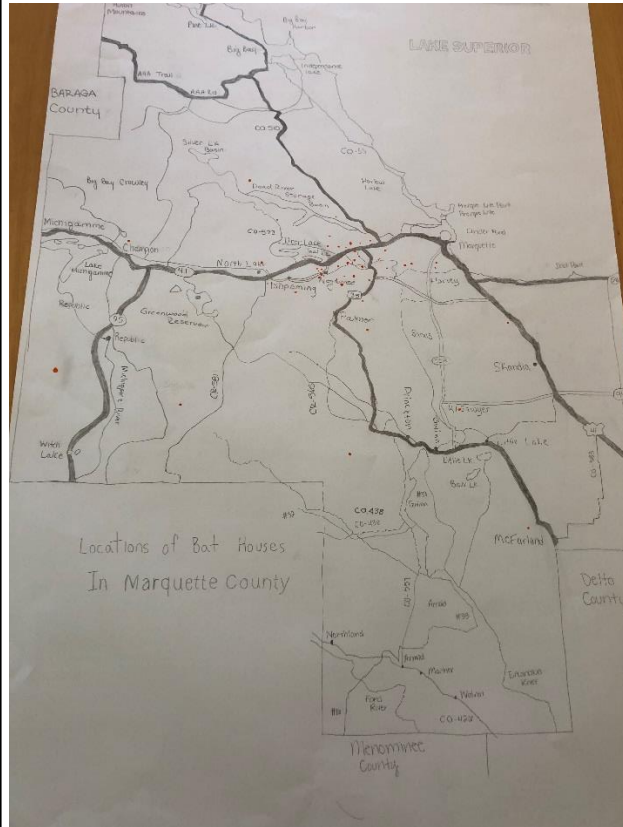
"They loved it, they said 'Oh, I've been there' or 'We read about this,'" Rutz said.

Simon plans on making a similar trip next year for a one-day voyageur camp at the Clear Lake Education Center near Marquette.

"I think the kids are more engaged when they feel like the language that they are learning is relevant... and our English language is based on it," Simon said. "It's not just a textbook they are learning about."

Corey Kelly can be reached at 906-228-2300, ext. 242.

Photo 6. Marquette Senior High School – Project media article



Photos 7 and 8. Negaunee High School – Facebook post regarding bat house project; map of Marquette County bat house distribution



Photos 9 and 10. Negaunee High School – Completed bat houses



Photos 11 and 12. Jessica Garber with students from Escanaba High School at the Lake Superior Youth Symposium in Duluth, MN



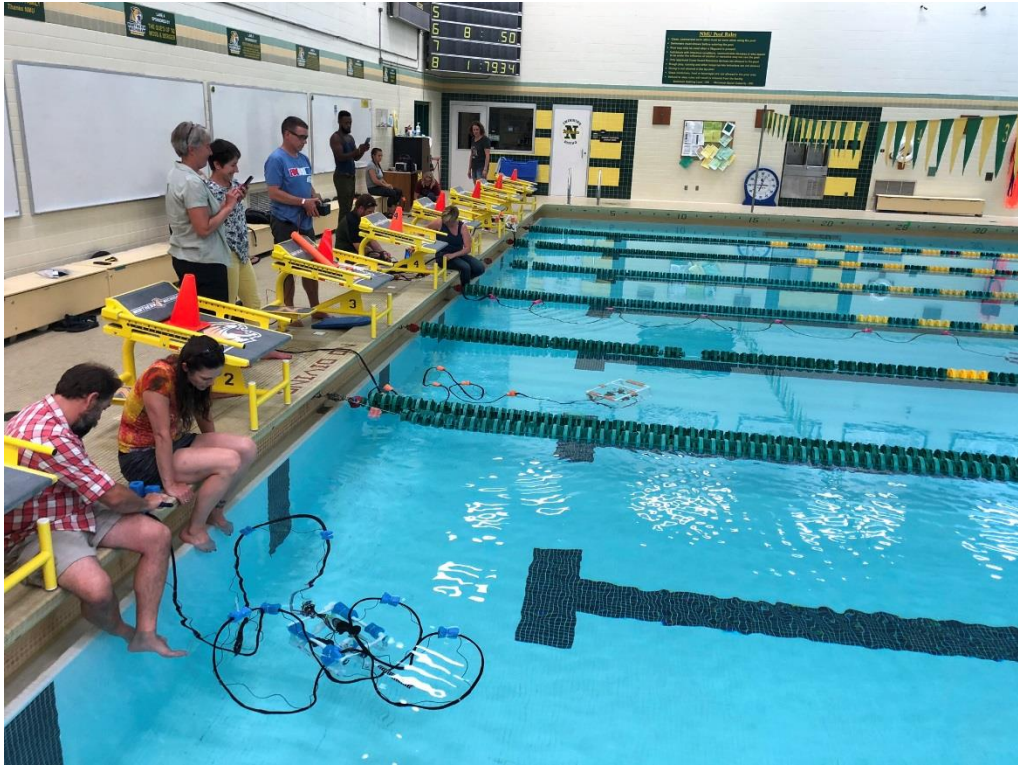
Photo 13 and 14. 2018-2019 Educator cohort and speaker at the Introduction to PBE workshop



Photo 15 and 16. 2018-2019 Educator cohort stream sampling in the City of Marquette
Final Report: *Upper Great Lakes Stewardship Initiative – Base Funding Proposal: Second Year Funding (Project Number 2018.1821)*



Photos 17 and 18. ROV Workshop construction



Photos 19 and 20. ROV Workshop – deploying ROVs



Photo 21. ROV Workshop – group photo