



Elementary Students Interpret Local Geology

A special group of Lincoln Elementary students help complete a two-year Fossil Park project at their local museum by using research and creativity in design of interpretive signs.

Do you wonder what ancient material lies beneath your feet? Could you explain how a petoskey stone was formed? If so, you're in luck! Alpena students have shared their expertise on local geology through a public exhibit at the Jesse Besser Museum of Northeast Michigan for all to visit and learn.

Opportunity Awaits

Never underestimate the power of responding, "Yes." Kellie Poli, 4th grade teacher at Lincoln Elementary (Alpena Public Schools), inherited a project that would send her and her students on a two-year exploration of Alpena's unique geological make-up and culminate with the installation of student-designed interpretive signs for a public exhibit - simply by saying "Yes." Her response, however, was only the beginning.

Phase One

Building on a foundation laid by high school students and community partners through a NE MI Great Lakes Stewardship Initiative grant, this cross-curricular, multi-grade project was originally funded to create a "fossil park" that educated community members, and visitors alike, about the geological features of northeast Michigan. Once the fossil park was in place, the partners turned to 3rd graders to create keys and signs to interpret what the visitors would experience.



"It was a great opportunity to introduce my students to local resources and make the connection to area community partners. In the end, we created something together that the whole community of Alpena can enjoy and learn from."

Kellie Poli

4th Grade Teacher, Lincoln Elementary

High schoolers visited elementary students in class to explain the history of Alpena and formation of the Great Lakes through glaciers, which is evident in the layered limestone quarries of LaFarge.

Partnerships for Success

The Jesse Besser Museum, Lafarge Alpena Plant, and Specification Stone Products came on board from the beginning to get the project underway. The class visited the museum and met Paleo Joe, a professional paleontologist who brought the fossils to life through his stories. He showed the students fossils and talked about the warm, shallow, tropical ocean that was Alpena many years ago.

Also at the museum, the students met Judy Dawley, a local artist

who was commissioned to create a devonian period art piece depicting the organisms living in the area long ago. The colorful mural located at the Fossil Park generated real excitement among the students about searching for fossils, as they heard firsthand about her artistic re-creation.

Let's Do That Again!

In a unique turn of events, Poli's students looped with her - meaning she had the same students for two years (3rd and 4th grade) as her new teaching assignment took her to the fourth grade classroom. This allowed her and her students the opportunity to dig even deeper (pun intended) into the fossil project! Throughout those two years, they visited three different unique fossil sites hosted by local quarries, met with an interpretive sign maker, and sorted and cleaned many fossils while doing additional research in the school's computer lab.



Project Partners



“Because of these signs, now I’m famous in Alpena! I learned a lot about fossils and how they’re so close to my school.”

-Jadon, 4th grade - Lincon Elementary



Michigan. The students list necessary items to bring along such as proper attire, tools and a water bottle. They also chose five of the best locations in the area to search for fossils, and included a handy map for navigation.

Far Reaching Student Impact

From rock quarries to fossilized ocean life and sinkholes to limestone cobble shorelines, this region’s unique geology is prized as a local coastal tourism asset and opportunity. Local organizations identify opportunities to capitalize on these geological assets, in this case using students, to promote sustainable coastal tourism across this region. These geology-based attractions are promoted by the U.S. 23 Huron Shores Heritage Route among a diversity of coastal tourism opportunities offered in the region. Through their learning, these Lincoln students are now a part of the effort.

Classroom Connections

With this age group, the interpretive fossil signs project hit on numerous grade-specific curriculum standards in science, history and language arts (reading and writing). The 3rd-then-4th graders were in charge of their learning when choosing specific fossil types they would study as they created informational posters which, in some cases, were nearly exact replicas of what the installed signs became. In addition, Mrs. Poli incorporated social studies skills and even a little math into the project using this opportunity to engage with community partners who donated time and expertise to further the students’ education.

Eco-Tourism Opportunities

From the conception of the Fossil Park, teachers and partners wanted to incorporate an element of public education. The information on the signs about local geological “hotspots” encourages visitors to go explore the fossils for themselves.

One of the six student signs is fully devoted to teaching potential fossil hunters where to look and how to prepare for fossil hunting in Northeast

What is Place-Based Education?

Place-Based Education (PBE) or Community Based Education (CBE) utilizes the local, natural and built environments as a context for learning and in doing so brings students into closer contact with their communities. This method is proven to develop knowledgeable and active stewards of the environment. When schools and communities work together, everybody wins!

Why:

This education strategy protects Great Lakes ecosystems, strengthens Northeast Michigan communities and provides critical support to schools as they strive to serve the academic and developmental needs of their students.

How:

Teachers and students are supported through project mini grants, connection to resource partnerships, and high-quality Professional Development that provides essential tools and techniques for fostering a collaborative culture of place-based learning within and among schools and their communities.

Supporting Community Development and Resource Stewardship Priorities through education:

Since 2006, numerous local and regional partners have engaged in Great Lakes education, networking and planning efforts across Michigan’s “sunrise side.” These efforts mobilized a network of school and community partners committed to identifying needs and developing strategies for enhancing coastal access, education, and sustainable resource management. Empowered through funding support from the Great Lakes Fishery Trust (GLFT), this collaboration now comprises the Northeast Michigan Great Lakes Stewardship Initiative, one of nine regional hubs through which GLFT furthers the principals and practices of place and community-based education as the Great Lakes Stewardship Initiative.

You are invited:

If you care about Northeast Michigan and want to make a difference for the future of our region, please contact NEMI GLSI to find out how you can get involved.

Phone: 989.356.8805 x41 or daniel.moffatt@noaa.gov

Northeast Michigan GLSI network programs and materials are open to all without regard to race, color, national or ethnic origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status, or veteran status.

How can I participate in the NE Michigan GLSI Network?



Many partners are currently exploring community- or place-based education development opportunities within the NE Michigan region. For more information, visit us on the web: www.nemiglsi.org

Who Can I Contact?

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