

RREV School Snapshot – Maine Academy of Natural Sciences

Background

In June 2020, the Maine Department of Education (MDOE) was awarded a \$16.9 million grant from the U.S. Department of Education's Rethink K–12 Education Models program to implement the Rethinking Responsive Education Ventures (RREV) program. The overarching purpose of RREV is to support Maine educators to create, implement, and disseminate responsive and innovative educational models that help all students learn and thrive.

Pilot Description

In August 2022, the Maine Academy of Natural Sciences (MeANS) received an award from RREV to implement its *Maker Space Barn* project. This pilot is in the Outdoor Education Accelerated category.

The goals of this pilot are to:

- Reinvigorate teaching and learning practices by adding outdoors capabilities, resources, and training.
- Connect the on-campus natural resources (a one-acre farm, two greenhouses, an apiary, and a maple sugaring shack) to daily classroom instruction.
- Increase student engagement and ownership of their learning experience.
- Create a blacksmithing program on campus that provides students with opportunities for vocational careers, certifications, and practical skills.

Key activities of this pilot include:

- Creating two new spaces for outdoor learning (the Maker Space Barn). One will be dedicated to blacksmithing activities and the other one to food preparation and outdoor learning.
- Hiring an Agriculture Assistant to support the school in utilizing the school's greenhouses, outdoor classrooms, farm, and apiary.
- Redefining the curricular focus and resources by linking daily instruction with outdoor learning.
- Creating a lasting on-campus blacksmithing and metalworking program.
- Facilitating on campus, outdoor activities for the students who are in a hybrid model.

Exhibit: RREV Award Summary

Budget

Category	Year 1
Personal Services – Salaries and Stipend	\$15,000
Instructional Supplies	\$5,000
Property – Learning Site Development/Construction	\$80,000
Total	\$100,000

- Students involved: All Grade 9-12 students served (around 170 students).
- Educators involved: 14 teachers are directly involved in the project (the director of curriculum and instruction, core subject teachers, the social worker, and the hired agriculture assistant).

Responsiveness of the pilot

MeANS's pilot is responsive to local needs and/or assets because:

- **It continues the school legacy of providing project-based and outdoor learning.** The school wants to capitalize on the successful learning experiences in their experiential outdoor classes and extend them to daily instruction. Additionally, the funding and equipment donated by a local blacksmith and the assistance of a former student will help to create a lasting on-campus blacksmithing and metalworking program, which will complement the classroom projects of carpentry, woodworking, and other artisanal pursuits.
- **It responds to students' interest in receiving training in blacksmithing and metalworking.** The school used to use the local blacksmith premises in town to provide training. After he suddenly passed away, the school needed a permanent facility to satisfy the increasing demand for this program.
- **It capitalizes on the current underused school facilities and resources.** The school has access to a one-acre farm, a Maple Sugaring shack, an apiary, and two greenhouses. However, few of the teachers utilize these resources regularly in their daily instruction. The new position of the Agriculture Assistant will help to connect the classroom content to outdoor learning and the current school resources.

Innovativeness of the pilot

MeANS's pilot is innovative because:

- **It extends the benefits of outdoor learning to all students all year round.** The past two years became a hiatus in the school tradition of engaging students in outdoor learning. However, the staff considered it as a temporary and isolated effort: *"We do outdoor learning in small pockets very well."* This project will make outdoors experiences a "more viable" option and will help teachers to *"feel more successful in supporting meaningful outdoor education."*
- **It transforms a community partnership into a lasting commitment for learning.** Schools tend to be the center of and have a significant impact on small communities. In this case, the legacy of work and service of a late neighbor inspired an alum and the school to give back by developing a new program with a significant meaning to the community.

Sustainability of the pilot

MeANS's pilot model's strategy for sustainability includes:

- Establishing a solid relationship with The American Blacksmithing Association and The New England Blacksmithing Association to keep providing quality training and trainers.
- Applying for grants and working with the community to sustain the Agricultural Assistant position through Americorps.
- Continuing to bring in professionals with expertise in outdoor instruction to collaborate with and educate teachers on best practices

SPRING UPDATE

Implementation Progress Update

Year 1 Challenges

- A challenge would be to have all the teachers onboard this project because it requires a change of mindset.
- A second challenge would be delays in the construction. Plans are to have the building ready in March of 2023.

Year 1 Successes