



2025-2026 Greening STEM Grants

Supported by PPG Foundation
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Proposal Due Date: March 31, 2025 at 11:59 pm Pacific

Awardees Announced: June 2025

Contact: Robert Sendrey, Program Director of Environmental Education, NEEF,

rsendrey@neefusa.org, Subject: PPG Greening STEM Funding Question

In Spring 2025, the National Environmental Education Foundation (NEEF) will collaborate with PPG Foundation (PPG) to select a cohort of Greening STEM projects from the PPG communities of Cleveland, OH, Greensboro, NC, and Huntsville, AL. The awards will support holistic STEM programs that infuse environmental science and resources into school curricula focused on student-directed investigations of relevant topics of research, local environmental issues, or problems affecting local public lands. The funding will allow formal and nonformal educators to design and deliver STEM programming that engages youth in place-based learning and environmental monitoring.

Through these PPG Foundation Greening STEM grants, PPG and NEEF seek to advance mutual STEM education goals by providing program participants with access to authentic STEM learning experiences that use the environment as a context for engagement.

Programming funded by these grants will utilize STEM-focused content, instructional strategies, training approaches, and collaboration and dissemination technologies to assist school educators and staff in implementing and enhancing learning in and outside of the classroom. Following project completion, all resources and related content developed under these grants will be made available via NEEF's Greening STEM Hub. For examples of successful past projects check out NEEF's collection of project videos and educational resources at https://www.neefusa.org/what-we-do/k-12-education/greening-stem-hub.

This grant competition is open to all public middle schools and their community partners in the targeted communities of Cleveland OH, Greensboro NC, and Huntsville AL. Applications must be submitted online through NEEF's grant management software.

Grant Program Priorities

NEEF and PPG aim to increase grantee teams' understanding of how to use STEM learning activities to address environmental challenges, engender stewardship, and forge lasting collaborations by:

 bringing Greening STEM programming that includes citizen science or environmental monitoring activities to middle school students;



- building the capacity of formal and informal educators to offer high quality STEM programming that aligns with state education standards;
- helping schools build a culture that values using the environment as a context for improving student learning and achievement;
- facilitating a collaborative development and planning process for engaging youth in environmental monitoring activities—identifying a topic relevant to the community and collecting environmental data (e.g., air, soil, water quality) while practicing Science and Engineering Practices (SEPs), acquiring Disciplinary Core Ideas (DCIs), and applying Crosscutting Concepts (CCC)
- stimulating educational partnerships between schools, and community-based organizations that facilitate meaningful place-based learning experiences for students;
- engendering environmental stewardship through a learner-centered approach that encourages authentic problem-solving, collaboration, and leadership in planning and leading a learning expedition on public lands; and
- increasing student interest in STEM content and careers.

Timeline

Application Process

- March 3, 2025 Online applications open
- March 31, 2025 Grant applications are due
- April 2025 Application review and grantee selection completed
- May 2025 Award announcement and distribution of funding

Grantee

- August 2025 May 2026 Grant performance period
- June 30, 2026 Grantee final reports due

Application Requirements

The following sections outline what will be expected of applicants. All applications must be submitted using NEEF's <u>online grants portal</u>. If you have applied for a NEEF grant previously, please use your existing account. If in doubt, existing accounts can be **searched for** using a tax ID number (EIN). First time applicants will need to create an account.

Grant applications are due on **March 31, 2025,** by 11:59 PM Pacific Time.

Eligibility

This grant competition is open to all public middle school educators and their community partners in the communities of Cleveland OH, Greensboro NC, and Huntsville AL.



Greening STEM Project Design Principles:

The Greening STEM Model is an interdisciplinary and collaborative approach to teaching STEM subjects that uses the natural environment and real-world challenges to engage learners and deliver high-quality STEM education. The students' experiences and interests are at the center of learning as they explore STEM content and develop a 21st century skills set. Throughout the experience, students can be tasked with different levels of responsibility from working as a team on a project to planning and leading a learning expedition. By having autonomy to design and explore a question of interest related to local landscapes, students are offered opportunities for authentic problem-solving while making gains in environmental knowledge and fostering a stewardship ethic.

All PPG Greening STEM projects shall include elements of two or more of the <u>2025 Greening STEM Project Design Principles</u>. These are: place-based learning, three-dimensional learning, project-based learning, and community-based learning.

- Place-based learning elements: Students are encouraged to explore a topic of study, issue, or problem through direct first-hand experience; collaboration between students interested in the same topic of study, issue, or problem is encouraged; facilitators (DE affiliated educator, community partners, nonformal educators) serve as connectors to existing ways to involve learners with the topics of interest.
- <u>Three-dimensional learning elements:</u> Exploration of an anchoring phenomenon encourages students to question assumptions and current understanding; STEM practices are used to motivate problem-solving; exploration of the anchoring phenomenon leads to disciplinary core ideas; cross-cutting concepts are used to connect the anchoring phenomenon to real world events.
- Project-based learning elements: The learners are intellectually challenged by their project work; the nature of their project engages learners over the course of days, weeks, or even months; real-world authenticity is achieved by the selection of tools, techniques, and technology used to explore the topic of study; the students have an opportunity to share their work with audiences beyond their classroom.
- Community-based learning elements: The topic of inquiry is explored within a local cultural context, encouraging learners to understand the unique makeup of their communities and the factors that shape them. They consider which knowledge systems and traditions are recognized in discussions of the issue and which are overlooked, as well as how this influences current understanding. Students also examine how different solutions impact their communities, ensuring they are practical, respectful of local perspectives, and responsive to the needs of those affected.

Funding

This year we anticipate there will be \$60,000 available to issue grants of \$10,000 each, two per



community, for the 2025-2026 academic school year.

Funding Can Be Requested to Support:

- Staff/personnel costs for partner project team members.
- Directly related travel costs for partner project team members
- Transportation costs for students and youth participants
- Development and printing of training and educational materials (e.g. cost to print field manuals, protocol documents, datasheets, etc.)
- Project-specific supplies and materials (e.g. measurement equipment, tablets, software, etc.)
- Data quality measures/evaluations.
- Costs for professional development for partner staff and educators to learn more about Greening STEM Project Design Principles (e.g. trainings on place-based learning, threedimensional learning, project-based learning, and/or community-based learning) and other skill sets germane to execution of the project
- On-site costs (e.g. transportation, portable restrooms)
- Postage/shipping (e.g. costs to mail students educational materials and/or supplies)
- Analysis of samples (e.g. air, soil, or water quality samples sent to a lab)
- Data analysis
- Training in program planning, citizen science or environmental monitoring, and Greening STEM Design Principles (no more than 10% of project budget should support training).
- Other costs include and we will evaluate

Required Project Proposal Criteria

Strong applications will include the following:

- Description of the goal of the proposed project.
- Description of the target audience, including grade level(s) and demographics.
- Description of the DE affiliated educator's plans for collaborating with the partnering school[s] or district and nonprofit organization(s) around the proposed project.
- Description of the citizen science or environmental monitoring project, including what STEM skills students will learn as a result of participating in the project. Please be sure to include:
 - Description of a series of STEM learning activities that will take place during the program.
 - Description of one or more of the pre-field activities that will prepare students for one or more field experiences to be followed by two or more post-field activities.
 - At least one pre-field activity must include a visit (virtual or in-person) to the participating school[s] from a DE representative.
 - Field-based activities must include one or more visits to a public land site to participate in data collection as part of a citizen science or environmental monitoring project.



- One of the two or more post-field activities must involve data analysis.
 Another activity needs to include some type of presentation of the project findings.
- Description demonstrates a commitment to Greening STEM Project Design Principles.
- Optional: Projects may involve classroom activities, out-of-school programs, and after-school programs.
 - O Please note: Out-of-school and after-school programs must involve a teacher from the participating school[s], preferably a science teacher, who can steward the Greening STEM project within the school, and champion its practices beyond the scope of the funding. For example: a science teacher who runs an afterschool eco-club or a teacher who offers academic-preparedness and leadership classes afterschool in which students explore social or environmental justice issues.
- Proposed projects can include the following partners:
 - School or School District: Projects must work with middle school students.
 Applications are required to provide a current letter of commitment from the participating school or school district. School districts may receive and manage funds.
 - Nonprofit Organization working at the community level (optional): May receive and manage funds, as well as provide assistance and support for project activities.
- A strong preference will be given to projects that:
 - Involve one or more science educators in the participating school[s].

Grantee Process

The following sections outline what will be expected of those who have successfully applied and have been selected as grantees.

Grant Awards Process

Funding for this grant will be distributed as a single payment, unless otherwise stipulated in the funding agreement.

Site Visits

NEEF will conduct virtual or in-person site visits during the grant period. These visits will be used as part of the evaluation process.

Targeted Project Outcomes

NEEF will be evaluating projects based on the following educator/staff and student participant outcomes:

Educators/staff and students demonstrate understanding of STEM concepts, the



scientific inquiry and environmental monitoring processes, and their applications.

- Educators/staff demonstrate confidence in the ability to lead environmental monitoring and citizen science activities/discussions.
- Students demonstrate confidence in their ability to participate in environmental monitoring and citizen science activities/discussions.
- Students demonstrate interest in pursuing or participating in classes, activities or discussions related to general STEM and/or environmental science.
- Students demonstrate motivation to pursue additional STEM-related classes, activities and/or careers.

Application Assistance

All applications must be submitted through our <u>online system</u>, and entering the access code: PPG2025. If you have any questions related to the funding opportunity, please consult our Grant FAQ page or email Robert Sendrey at <u>rsendrey@neefusa.org</u>. For all other technical questions or problems, please contact us at <u>grantsadmin@neefusa.org</u>. Please type "PPG Greening STEM Grant" in the subject line of your email.