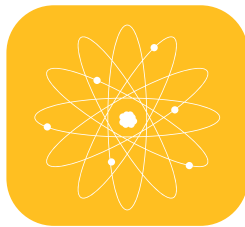


E-STEM

A W A R D S

Presented by



2024 Global E-STEM Awards

Request for Proposals

Overview

The **North American Association for Environmental Education (NAAEE)** and **Pratt & Whitney** believe that E-STEM is a great way for young people to build the problem-solving skills needed to address today's environmental challenges. The Global E-STEM Awards program will provide funding of up to \$15,000 USD for Innovation Grants and \$50,000 USD for Excellence Prizes to nonprofit organizations and their partners for E-STEM programs that engage students ages 11–22.

What is E-STEM?

E-STEM engages students in meaningful, real-world environmental problem solving that integrates science, technology, engineering, and math (STEM). E-STEM is not only a philosophy of teaching that promotes interdisciplinary learning, but also inspires students to apply what they learn to help solve complex environmental issues.

Specifically, this opportunity seeks to recognize programs that have successfully engaged students aged 11–22, particularly those considered underrepresented in STEM (see box), in meaningful learning experiences that increase STEM skills (science, technology, engineering, and math) through environmental problem solving (the “E” in E-STEM). Since the overall goal of this program is to increase students’ environmental literacy (see box) through STEM learning, build STEM interest and skills, and create pathways to environmental careers, applicants will be asked to describe how they plan to use the funds to either replicate or expand their successful program to reach additional students.

The Opportunity

The Global E-STEM Awards program supports promising programs that build and use STEM knowledge and skills in environmental learning and problem solving. Preference will be given to nonprofit organizations proposing to work with underrepresented audiences in STEM (see box) and to organizations using partnerships to boost their impact. Applicants will be asked to define “underrepresented” based on their country and/or region’s situation (in the United States, these groups include women, people with disabilities, and Black, Hispanic, and American Indian or Alaska Native people). Partnerships with additional organizations such as schools, governmental agencies, or other groups are encouraged to help strengthen the program offered.

Applicants will be considered for the following award pools:

- **E-STEM Innovation Grants** between \$5,000–\$15,000 USD each will be awarded to organizations proposing a new or expanded E-STEM project or program.
- **E-STEM Excellence Prizes** of \$15,000–\$50,000 USD will support new or expanded projects by organizations that also demonstrate excellence through their previous E-STEM programming.
- **Sustainable Transportation Grant** of \$10,000 USD will be awarded to one organization with proposed work focused on sustainable aviation and other transportation issues.

What are underrepresented audiences?

A number of audiences are underrepresented in E-STEM careers, as compared to the demographics of their country’s population as a whole. These audiences may vary by region or country. For example, [in the United States](#), underrepresented audiences in STEM include women, people with disabilities, and Black, Hispanic, and American Indian or Alaska Native people. Note that the concept of “underrepresentation” is fluid and constantly changing, and all applicants who can reasonably demonstrate why the groups they are working with are underrepresented will be given preference.

What is environmental literacy?

An environmentally literate person is someone who, both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the well-being of other individuals, societies, and the global environment; and participates in civic life. There are four interrelated components of environmental literacy: knowledge, dispositions, competencies, and environmentally responsible behavior. [Learn more about environmental literacy here.](#)

Since environmental issues are cross-disciplinary by nature, programs considered for the Global E-STEM Awards must be working to engage students in at least one of the four STEM topics (science, technology, engineering, and/or math) and have taken action (see box) on one or more of the following solutions to environmental issues:

- **Climate change solutions**—STEM learning opportunities that build student understanding of the impacts of human-caused increased levels of atmospheric carbon dioxide (CO₂). Programs may explore broad implications of sea level rise, changing weather patterns, global warming, or other climate change impacts. An example might be citizen science projects studying the impact of climate change on coral reefs or other ecosystems, and taking action to address or mitigate the impacts. Another example might involve learning about changing weather pattern impacts on local agricultural production and vulnerable communities, and taking action to conserve water.
- **Sustainable energy**—STEM learning opportunities that build student understanding of non-depleting, renewable, or zero-emission energy sources, and energy conservation strategies. Clean and renewable energy sources include wind, solar, geothermal, biomass, or hydropower, among others. Energy reduction can include a variety of strategies, from transportation choices to clean manufacturing to locally-grown food to installing energy-efficient light bulbs or weather stripping.
- **Sustainable transportation**—STEM learning opportunities that build student understanding of strategies to reduce the environmental impact of transportation, an extremely energy-consumptive human behavior. Potential projects might include educating students about sustainable aviation fuels (clean biofuels), electric transport, and clean manufacturing. Projects might involve using a gas sensor to test the CO₂ emissions of various biofuels and then calculating how much fuel would be needed to support a region's or country's commercial flight sector. Another example project could be educating students about the importance of aircraft design in fuel efficiency, and then holding an aircraft design competition in which students use computer software and engineering concepts to design their own aircraft.

We encourage applicants to visit the [program webpage](#) and read about past awardees for additional examples.

Taking action

Environmental education helps people gain the knowledge, skills, and dispositions to understand and tackle environmental challenges. It also helps motivate people, individually and collectively, to take action to address the issues. These actions can include everything from educating others in a community about environmental issues to taking direct conservation action, such as planting trees, cleaning up a beach, or designing a new technology for collecting plastic waste. For example, students could reduce food waste by developing a composting system for the school. Or they could monitor energy use in their school and present energy-saving ideas to the principal or superintendent. Actions include anything that can contribute to solving an environmental issue.

Eligibility

Applicant organizations must:

- Be a school, academic institution, or university, or an organization tax-exempt under section 501(c)(3) of the United States Internal Revenue Code and not classified as a private foundation, or a nonprofit or non-governmental organization with recognized legal status in their respective foreign country that is equal to section 501(c)(3) status. You will be requested to upload documentation to prove your nonprofit status in your application.
- Not be subject to U.S. or other applicable governmental sanctions and other restrictions. [See a full list of U.S. sanctions here.](#)
- Have a working bank account that can receive electronic funds in USD. The bank must not be subject to U.S. or other applicable governmental sanctions and other restrictions.
- Be able to demonstrate fiscal and administrative stability.
- Submit a program that worked with students aged 11-22.
- Be able to administer programs between December 2024–October 2025.
- **Submit applications online through Submittable** by 11:59 PM U.S. Eastern Time on Monday, July 8, 2024 ([time converter](#)).

Only submissions in English will be considered.

Timeline

- May 29, 2024 at 10:00 AM U.S. Eastern Time ([time converter](#)): Applicant webinar to go through the application and share tips for success; the webinar will be recorded and posted to the [program webpage](#).
- July 8, 2024: All applications due in **Submittable** by 11:59 PM U.S. Eastern Time.
- Late July–August 2024: Applications reviewed by E-STEM panel.
- September 2024: Awardees notified.
- October/November 2024: Awardees announced.
- December 2024: Projects begin.
- December 2024–October 2025: Awardees share updates about project activities, outcomes, and lessons learned internally with NAAEE and Pratt & Whitney staff, and externally through blogs and other outreach.
- May 2025: Midterm reports due.
- October 2025: Projects end and final reports due.

Benefits

Awardees will receive:

- Funding to support their E-STEM programs.
- Global recognition of their organization's work through NAAEE and Pratt & Whitney's platforms.
- Professional development and peer learning opportunities with E-STEM awardees.
- Access to the NAAEE network and Pratt & Whitney nonprofit community.

Requirements

Awardees are expected to:

- Attend a virtual 1-hour awardee orientation in late 2024.
- Evaluate and report on project activities and outcomes related to STEM interest, STEM skills, environmental literacy, and any other project-specific outcomes through a midterm and final report. Provide periodic updates on the project's progress throughout the award year.
- Participate in quarterly opportunities to share project activities, outcomes, and lessons learned with NAAEE and Pratt & Whitney staff, fellow E-STEM Awardees, and the public (e.g., through blogs, social media, and/or other platforms).

Contact

For any questions, please email the Global E-STEM team at estem@naaee.org.

Application Process and Evaluation Criteria

To be considered for a Global E-STEM Award, please complete all required sections of the online application. Instructions for completing each section of the application are included below and **online through Submittable**. A panel of experts in E-STEM from around the world will review your responses using the criteria listed below (out of 100 points).

1. Project Description: Describe your proposed project, including objectives and key activities. The proposal should clearly describe how the project will help engage students in relevant, real-world, and student-directed environmental problem solving. We also want to know how your project promotes creative solutions and teamwork, improves STEM and environmental literacy, and emphasizes skills needed to pursue environmental careers. See Figure 1 in the article “[A new green learning agenda: Approaches to quality education for climate action](#)” for examples of skills needed for pursuing environmental careers. Your proposed project should also align with one or more of the target outcome areas listed under Outcomes and Evaluation. Your proposed project can be an expansion of a past project or program or an entirely new initiative, but it must include all key elements mentioned above. In addition, if you will work with partners, please describe any partner organizations that will be working with you on the project and their role in the project. (max 800 words)

Project Description Evaluation Criteria (40 points)

- Proposal objectives address one or more of the following solutions to environmental issues: climate change solutions, sustainable energy, and/or sustainable transportation.
- Proposal is interdisciplinary and includes at least one objective addressing at least one STEM discipline (science, technology, engineering, and/or math).
- Proposal clearly describes how the project will engage students in relevant, real-world, and student-directed environmental problem solving.
- Proposal describes how the project promotes creative solutions and collaboration, improves STEM learning and environmental literacy, and emphasizes the one or more skills needed to pursue environmental careers.
- Proposal identifies partnerships that will add to the success of the project (if applicable).
- Proposal aligns with one or more of the target outcomes as listed in the Outcomes and Evaluation section below.

Semi-finalists will be asked to provide a short video (max 3 minutes) providing more information about their organization and proposed project.

2. Letter(s) of Support (Optional but highly recommended) Provide at least one letter of support from any partners, donors, or other individuals or organizations who can attest to your organization's past and/or future work related to your Global E-STEM Awards submission. While letters of support are not required, they are strongly recommended. You may upload up to 3 letters of support. Letters of support should include the following:

- Name, address, and website URL of the organization (if applicable)
- Name and email of a contact person
- The individual's or organization's relationship to your organization
- If providing a letter from a partner working on the proposed project, please include the description of their role as a partner organization, including how they will work with your organization to design and implement the proposed project
- Signature of an organizational representative, if possible

3. Audience Reached/ Beneficiaries: Describe who your project will reach, including if and how it will reach underrepresented audiences (defined in the context of your country or region). Please include your estimated total audience reach and age range. (max 300 words)

Audience Evaluation Criteria (10 points)

- Proposal clearly defines your intended audience.
- Proposal explains how it will reach audiences considered underrepresented in STEM learning and/or environmental careers for your country or region.
- Proposal involves students ages 11–22.

4. Outcomes and Evaluation: What outcomes will you measure in your proposed project's audience? Outcomes should be focused on improving any of the following (select all that apply):

- Interest in E-STEM activities
- Proficiency in the skills, knowledge, and practices in E-STEM fields/topics
- Confidence in the ability to pursue a career in the E-STEM field
- Community engagement (focused on environmental issues and using E-STEM skills to address them)
- Other (please describe)

If awarded, you will be asked to evaluate the outcomes above (as applicable to your project) during the grant period.

Outcomes and Evaluation Criteria (5 points)

- The outcome(s) selected clearly align with the objectives listed in the project description.

Semi-finalists will be asked to provide a description about how they plan to measure and evaluate their proposed project's success.

5. Organizational Capacity: Describe your organization's relevant experience administering similar programs or E-STEM education programming, including past program activities, audience, outcomes, impact, and more. Please include brief biographies of the project managers. Please include your organization's operating budgets for the past two fiscal years (including 2024). (max 300 words)

Supporting Materials (Recommended)—Paste or upload up to three URLs to any photos, videos, diagrams, or websites that support your project or program.

Organizational Capacity Evaluation Criteria (20 points)

- Proposal demonstrates the organization's capacity to manage the project through experience administering similar programs.
- Proposal includes current and previous year's operating budgets, specifying the currency if not in USD.
- Proposal includes biographies of the project managers.

6. Risks and Challenges: Describe existing and potential future risks and challenges and how you plan to mitigate them. For example, COVID-19, other acts of nature, changes in partner organizations, delays in school approval, or staff changes can significantly influence the outcome of a proposed project. We are not evaluating you on these risks, but rather on your ability to foresee them and how you plan to mitigate them. We understand that all projects have risks and challenges! (max 200 words)

Risks and Challenges Evaluation Criteria (10 points)

- Proposal clearly identifies potential risks and challenges to project success and how the organization plans to mitigate them.

7. Timeline and Budget: Download and fill out our timeline and budget template and upload it to the online application in Submittable. The budget should include how you calculated the cost of each line item in the Description column. If your overall project budget is higher than \$15,000 USD, please list your additional sources of funding (including amounts) in the provided Matching Funds column.

Timeline and Budget Evaluation Criteria (15 points)

- Proposed timeline is reasonable and achievable during the one-year grant period.
- Proposed budget is presented in USD.
- Proposed budget is reasonable and includes staff time, indirect/overhead costs, as well as direct expenses that support the project.
- If the project budget exceeds the amount of funding requested, the proposal identifies additional matching funds support.

Apply here for a Global E-STEM Award

