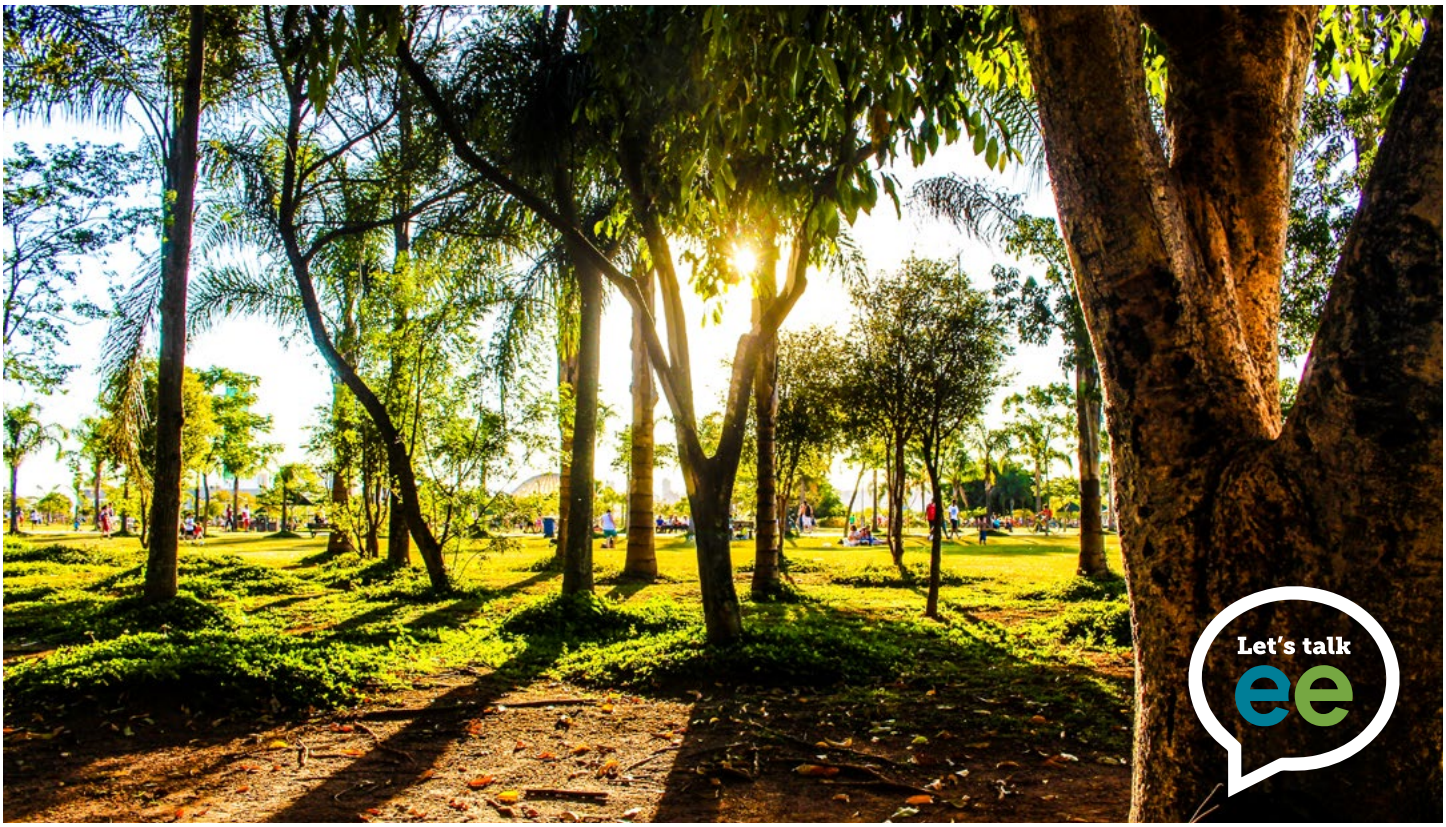
eeWORKS

From Anecdotes to Evidence: Demonstrating the power of environmental education

STANFORD UNIVERSITY

naaee North American Association for Environmental Education




# Promoting the Benefits of Environmental Education for K-12 Students—Messaging Guide

**Environmental education (EE) has a host of benefits for students of all ages. This document is designed to help you think about how to communicate these benefits to a number of different audiences, and how you might tailor your messages to resonate with the interests, values, and perspectives of the people you are talking to.**

These suggested talking points and messages are based on the findings of Stanford University researchers' systematic analysis of more than 100 peer-reviewed studies that measured the impacts of environmental education for K-12 students. Visit our **website*** to learn more about the review and access additional communication tools.

When approaching any audience about your work, it's important to **understand what they care about and be able to explain how environmental education can help them achieve their goals.** Use the following examples that best fit your needs.

*https://naaee.org/eepro/research/eeworks/student-outcomes

## Background & Summary of Message Points for Key Audiences

### K-12 Teachers, School Administrators, and School Boards

Environmental education is all about helping young people gain the knowledge, skills, and motivation to take an active role in protecting the environment, creating a more sustainable future, and becoming informed and engaged citizens. The benefits of environmental education for K-12 students include improvements in areas such as **critical thinking, 21st century skills, STEM topics, standardized test scores, social and emotional growth, leadership, citizenship, and confidence.** Given these findings, it's clear that environmental education is an effective tool for meeting key benchmarks and goals that school systems already have in place. It is also cost effective to implement, as there are existing supplementary curriculum materials that can be used in the classroom and outdoors, as well as professional development and curriculum guidelines for teachers.

Studies and teacher interviews have documented EE's significant impacts on students and benefits for teachers. Young people find that participating in environmental education activities can be more **fun and rewarding** than traditional classroom learning. In fact, many educators find that the kids who are hardest to reach become enthusiastic and absorbed in the learning process. For many children, environmental education ignites a **passion for learning** that can last a lifetime.

Further, EE engages teachers in **new and innovative pedagogical strategies** that both improve their practice and increase their enthusiasm for teaching. Educators have called environmental education an **"equalizer" for kids** who are struggling, as well as for those excelling or those with special needs.

### Funders

When approaching funders, it's important to **understand their motivations and how environmental education can contribute to their goals.** For example, foundations that support conservation initiatives might be most interested in how EE can create lifelong stewardship values in young people. Education foundations might be more focused on the specific academic outcomes that affect young people and teachers. Funders focused on at-risk youth will be impressed by the proven track record of environmental education to reach under-served children who need access to high quality education and experiences.

One point that may appeal to funders in general is that **money spent in environmental education is cost effective because the funding can have a broad and lasting impact,** as each program can contribute to multiple benefits. Environmental literacy is a definite benefit of supporting environmental education. But EE also can improve academic performance, foster civic engagement, reach under-served kids, contribute to individual and community health, help address social issues, encourage positive behavior changes, and more.

The bottom line when communicating with any funder is to **meet them where they are.** Where do EE's goals intersect with those of the funder? How might EE fit into the funder's broader strategy for achieving their goals? One of EE's greatest strengths is its adaptability across a range of contexts, audiences, and desired outcomes, meaning it can align with a broad array of funders' missions.

For more suggestions, please read ***Environmental Education: A Brief Guide for U.S. Grantmakers***.*

* https://naaee.org/eepro/resources/environmental-education-brief-guide-us

## Parents

Parents are interested in many of the same benefits of environmental education as other stakeholders, but naturally want to hear about how EE can affect their own kids and meet school requirements.

Environmental education can help young people learn about the environment and **develop skills that will last a lifetime**. Studies show that EE results in a wide array of benefits for children, such as increasing **confidence, academic performance, knowledge, perseverance, analytical skills, independence, teamwork, and leadership**.

Environmental education is designed to bring out the very best from every student and develop skills and dispositions that can help them **make informed decisions about real world issues**, including environmental, social, and economic challenges.

Because of its participatory approach, environmental education can be an "equalizer" for students with different skill sets. **Every student has an equal opportunity to succeed.**

## State Policymakers

As policymakers search for the most effective ways to meet complex societal challenges, positioning environmental education as a **natural complement to policy and science** is an effective strategy. Demonstrating how environmental education can work in tandem with other strategies will help policymakers recognize it as **a powerful tool for increasing impact**. For example, environmental education is an efficient and cost-effective way to help public schools meet academic achievement goals and build critical thinking and 21st century skills. It teaches students about civic engagement and what it means to be a responsible member of the community, simultaneously helping them develop important civic skills such as decision making, critical thinking, and problem solving.

Once again, emphasizing EE's multiple benefits and adaptability will help to frame it as an effective component of an overall strategy to address a specific environmental or social problem. Incorporating EE into a broader strategy can both contribute to the end goal over the long term and more **effectively engage the public in decision-making** moving forward.

## Detailed Message Points for Key Audiences

Conservation Funders | K-12 Teachers, Administration, and Board | State Policymakers | Education Funders | Parents

- **Widespread Support:** EE has entered the mainstream educational system in the United States, with widespread support from many Americans. For example, in 2011 the Public Policy Institute of California's statewide poll found that more than 90% of respondents thought that EE should be taught in public schools.[1] A separate nationwide study found that 95% of adult Americans (including 95% of parents) believe that environmental education should be taught in K-12 schools.[2]

- **High Quality Education:** The National Project for Excellence in Environmental Education developed a series of guidelines that set the standards for high quality environmental education. Well-designed environmental education that meets these standards is balanced, scientifically accurate, and built on decades of research supporting best practices in education, learning theories, psychological and socio-emotional development, and more. Through this comprehensive approach, EE supports work to improve the quality of public education—creating more motivated students with the knowledge, skills, and inclinations to make well-informed decisions, address complex problems, and exercise their rights and responsibilities as active and engaged citizens.

- **Supports K-12 Education Policy and Meets Key Benchmarks:** EE is a natural complement to education policy and is often an efficient tool to help meet many of the goals and requirements of public school systems. Because of its interdisciplinary approach, environmental education can be incorporated into existing curricula across subject areas—from science and social studies to art and music. Many EE resources (such as the award-winning curricula from Project Learning Tree and Project WILD) are correlated to state and national learning standards such as the Next Generation Science Standards (NGSS) and Common Core competencies. Search and find correlated lesson plans and additional resources for implementing and evaluating EE on eePRO, NAAEE's resource database. Available at **naaee.org/eepro.**

- **Improved Test Scores:** According to a number of studies, EE can improve student performance on tests (including standardized tests) across a range of subject areas. That's because it can help students think critically, solve problems, improve their creativity, and more.[3] One study, which compared 77 schools, found students in schools with environmental education consistently outperformed other schools on state standardized tests in math, reading, writing, and listening comprehension. Another study in Washington state found that 65 percent of the schools with environmental education programs performed significantly better in math.[4]

- **Environmental Literacy**: Environmental literacy refers to the capacity of an individual to understand and improve the relationship between human society and natural systems. The field of EE is spearheading the movement to develop and implement state environmental literacy plans and designing curriculum and professional development opportunities to help successfully execute them. These plans can help strengthen efforts to create more environmentally literate graduates. For example, the state of Maryland was the first in the nation to institute an environmental literacy graduation requirement, and many other states are exploring how EE in formal education can contribute to environmental literacy.

- **21st Century Skills**: EE helps young people learn more about the relationship between people and the environment. But it goes far beyond that, supporting creativity, enhancing critical and analytical thinking,[5] building leadership skills, and helping students learn how to effectively collaborate and work in teams.[6] Teachers, education experts, and business leaders have identified these as "21st century skills" that are necessary for students' future success in all areas of life.

- **Interdisciplinary Approach:** EE takes an interdisciplinary approach to learning based on systems thinking. It helps support the type of teaching that can be integrated across subject areas and shows the connections between disciplines. For example, designing and building a school garden is a fun way to learn biology and math, and can help students learn how to think critically and effectively solve problems by considering how the garden functions both as a system itself and as a component of larger connected systems, such as the school grounds, surrounding community, or broader ecosystem.

- **Civic Engagement and Empowerment:** EE can help students become more engaged citizens. Through its real world applications and problem solving, EE helps students learn their impact in the world, and that their decisions and actions are important. Stanford University researchers' analysis of peer-reviewed articles found that studies measuring civic outcomes report that EE has a positive impact in 92% of the cases. A dozen peer-reviewed studies demonstrated that EE has positive civic outcomes such as instilling learners with a sense of personal responsibility and motivation to address community and environmental issues. "Environmental education helps students gain skills in making a difference and an intrinsic belief that they can. That confidence and empowerment can spill over into other aspects of their lives."
– Dr. Martha Monroe, University of Florida

- **Stewardship Behaviors and Environmental Actions:** EE is designed to spark positive behavior change that helps protect the environment, contributing to the next generation of leaders and citizens with the skills and motivation to address environmental challenges. Stanford University researchers' literature review exploring the benefits of EE for K-12 students revealed that 83% of programs that seek to impact stewardship values and environmental behaviors successfully do so, and these values and behaviors are long lasting in cases where long term outcomes are measured. In the words of EE researcher Dr. Andrew Schneller, "Since becoming an environmental educator in 1995 I now believe that EE's ability to create changes in student pro-environmental behaviors and attitudes is what society will find to be necessary to create the next generation of environmental advocates and stewards."

- **Life Skills and Personal Growth:** EE's immersive approach helps students learn life skills that can't come from a worksheet in a classroom and go beyond improving academic performance. Emphasizing the whole student, EE seeks to increase students' success broadly and holistically—from helping them develop confidence, autonomy, and leadership, to building social skills in collaborative work, deliberative dialogue, and conflict management both inside and outside the classroom. A middle school teacher using EE observed, "The program really enhanced students' personal growth—they became more independent and more tolerant. They demonstrated greater problem solving and collaborative skills, as well as positive gains in social competencies like leadership, recognizing the value of cooperative efforts, enhancing capacity to get along with others, social negotiation, and cultivating leaders in the community."[7]

- **Increases Motivation and Interest in Learning:** EE helps motivate all students—from those who are excelling in school to those who are less inspired. Students naturally care about the environment and their surroundings, like the neighborhood they live in or the local park they play in. By drawing meaningful connections between curriculum content and the real world and providing opportunities for students to make an impact in their communities, EE can help make school a more relevant and valuable experience. The participatory approach and "real world" applications of EE make it one of the most effective ways to get students interested and engaged in their learning, making school seem less like work, and more like a treat. By infusing academic work into a meaningful and relevant context, EE can help students understand the importance of education. As a result, EE can affect students' attitudes about school more broadly, improving their performance, reducing tardiness, increasing participation and motivation, and more. Fourth-grader Megan from California described her project to protect shrimp, "I always thought kids meant nothing. I really enjoyed doing this, it was fun and I felt like our class just knew exactly what to do. I feel that it did show me that kids can make a difference in the world, and we are not just little dots."[8]

- **Equalizer:** Educators have called environmental education an "equalizer" for kids because it allows educators to cater to multiple student interests, skills, abilities, and special needs.[9] Its interdisciplinary approach provides opportunities for students with different interests to shine, and its student-led process allows them to focus their learning on topics that interest them and projects that showcase their strengths. For example, a 9th grade female student noted, "[EE has] changed the way I feel about school…and now I realize that I can pretty much do what anybody else can do. I have a better view of what I can be in the future." A middle school teacher reported, "I have students with a variety of learning styles and learning abilities… The kids who have trouble learning, and for the kids who are super advanced, they're all having the same discussions. There's more collaboration and engagement and it contextualizes what they're learning."

- **Engaged Teachers Using Effective Teaching Strategies:** EE helps teachers become more satisfied with their work, even helping to improve their teaching skills and classroom engagement overall. Its hands-on, experiential approach helps encourage teachers to guide their students to think effectively and solve complex problems rather than teaching them how to memorize facts. It can also provide educators with a more rewarding teaching experience because students take an active role in their learning and actually can see the results of their work. EE is an innovative tool in any teacher's toolbox, promoting best practices and encouraging the use of more engaging teaching strategies in the classroom.

  For example, Ohio-based teachers using environmental education curricula with middle schoolers reported using more inquiry-based methods with their students and advancing their skills in teaching for depth of understanding and contextualized learning.[10] One middle school teacher in Hawaii reports, "I think I'm a better teacher because of environmental education. It has kind of completed the 'whole package.' The framework unified all my best approaches and it made my instruction much easier."[11] Teachers using EE curriculum in Palm Beach County, Florida reported how they are inspired by the new instructional strategies and the improvements they are seeing in their students, and they feel this newfound inspiration is improving their teaching and reaffirming their commitment to providing high-quality education.[12]

- **Professional Development:** EE provides professional development support for teachers, helping to train more effective, well-rounded educators.[13] Resources such as **eePRO**, NAAEE's online platform for EE professional development, the ***Guidelines for Excellence in EE series***, and additional publications for implementing and evaluating EE, available at **naaee.org/publications** can help educators access the professional development and resources they need.

- **Cost-Effective Investment Promoting Multiple Environmental and Societal Benefits:** EE is an efficient use of funds as it can address a range of challenges simultaneously. Individual EE programs often have multiple benefits, from learning about the environment and systems thinking to building life skills and promoting actions that will create positive change from local to global levels. Audiences for EE programs also vary from preschoolers to adults, depending on school and community goals.[14] Because of its adaptability in content, strategic approach, and intended audience, EE can help support a range of desired outcomes—from improving academic performance, to fostering civic engagement, to reaching under-served kids, to contributing to individual and community health and well-being, and more.[15]

  EE can help spread messages and engagement in environmental and social problems beyond just the learners, creating a ripple effect to the broader community.[16] EE can also help people of all ages understand how environmental issues affect their lives and how they can help get involved in age-appropriate ways to help address specific challenges. EE can be an effective component of an overall strategy to address a specific environmental or social problem that enhances the impact of the effort. For example, a comprehensive project aimed at improving water quality might already have in place suggestions for technological improvements to prevent the release of pollutants and for legislative changes in regulations.

  Not only is public support key to the success of these strategies, engaging citizens in behaviors to mitigate their own contribution to water source pollution could multiply the impact of the project. Incorporating EE into a broader strategy can both contribute to the end goal over the long term and more effectively engage the public in decision-making moving forward.

• **More Help is Available:** Support is available for teachers and schools interested in implementing EE. "EE programs at local conservancies or agencies often make it their mission to find resources for teachers. There are groups outside of the school system championing to have kids experience great education and will bend over backwards to help support teachers who are trying."[17]- Dr. Alec Bodzin, Lehigh University Many mission-driven organizations partner with and fund educational programs and exhibits at other organizations, including museums, science centers, afterschool programs, and nonprofits. For example, in 2016 nearly 450 institutions increased their educational capacity through interpretive and educational centers, exhibits, or programs funded by the National Oceanic and Atmospheric Administration (NOAA). NAAEE Affiliate organizations, as well as other nonprofit organizations, state and local agencies, nature centers, zoos and aquariums, and other organizations can help provide field trips, professional development, and other types of support. NAAEE's Affiliate Network provides a forum for ongoing dialogue, shared learning, and joint activities to enhance EE capacity. **Find your NAAEE Affiliate organization** and get connected today!

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