ESTABLISHING AN ENVIRONMENTORS PROJECT TO GUIDE MINORITY STUDENTS INTO SCIENCE, TECHNOLOGY, AND ENVIRONMENTAL CAREERS


Date Published – January 2003

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ENVIRONMENTORS PROJECT
Washington, DC 20006

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I. INTRODUCTION

This report of the EnvironMentors Project (TEP) for the period February 1994 through December 1998, provides a summary of activities at our program sites and of our overall organizational accomplishments. Notably, the EnvironMentors Project matched 506 teens from under-resourced neighborhoods in Washington (DC), Trenton (NJ), and Baltimore (MD) with mentors, engaged more than 1,600 members of the public in informative discussions of environmental research, and presented interactive environmental education lessons to approximately 5,700 elementary and middle school children.

II. ORGANIZATIONAL BACKGROUND

HISTORY, MISSION, AND GOALS

TEP partners with teens from urban public schools and dedicated engineers, scientists, and researchers to investigate students’ questions about their environment – both in their own backyard and across the world.

Our mission is to equip the students to (1) increase their academic competency, particularly in science; (2) gain a greater understanding of local and global environmental challenges; and (3) identify and prepare for college and career opportunities, particularly in scientific, technical, and environmental fields.

TEP began in 1992 with 14 students. As of December 1998, more than 500 student-mentor pairs participated in our program. Originally a community-based nonprofit, TEP merged with the National Environmental Education & Training Foundation (NEETF) in November 2000.

PROGRAMS, ACTIVITIES, AND ACCOMPLISHMENTS

Since its inception, TEP has emphasized one-to-one mentoring mixed with environmental science and academic rigor, matching public high school students with scientists, engineers or researchers on a one-to-one basis. Over the course of a school year, each mentor provides guidance and support as the student designs and implements his or her environment-based research project. In the spring, the students participate in a competitive science fair and teach their projects to local elementary schoolchildren. TEP enhances the research focus with career seminars, environmental curricula, college counseling, and paid internships.

Our model works because we build our students’ success around the very tangible, hands-on framework of student-driven, locally-focused environmental investigations. This simple system has meant that 98% of the participating students finish high school, 90% go on to college, and 50% of our college attendees major in science, engineering, technology, or environmental studies.

TEP Partner Schools

- Ballou Senior High (DC)
- Cardozo Senior High (DC)
- Coolidge Senior High (DC)
- Eastern Senior High (DC)
- School Without Walls (DC)
- Wilson Senior High (DC)
- Princeton Senior High (NJ)
- Trenton Central Senior High (NJ)
- Northern Senior High (MD)
- Patterson Senior High (MD)
- Southwestern Senior High (MD)
- Western Senior High (MD)
RESPONSIBILITIES OF THE STAFF AND VOLUNTEERS

The TEP staff provides 27 hours of training for each mentor and student and an additional 28 hours of in-school support to each student. In addition, the staff oversees the Annual EnvironMentors Fair, coordinates the environmental teach-ins, recruits mentors and students, and executes the annual assessment.

Our volunteer mentors, who each donate 50 hours or more per year, usually meet with their students 3-5 times a month. The role of the mentor is to help the student develop a scope of work and project timeline, identify experts in the pertinent areas of research, collect data, use computer-based statistical packages to analyze the results, and compose a well-written, cogent research paper.

OUR STUDENTS

Although students in our program range from straight-A students to those in danger of repeating a grade, the majority of our students have B and C averages. Students are largely recruited from science classes at our partner schools. TEP's student recruitment effort focuses on those young people who express a desire to explore new topics. In collaboration with our partner teachers, we also recruit students who could benefit from one-on-one adult attention and academic reinforcement.

TEP students are the source and inspiration of the environmental investigations. The students bring their own focus and interests to the program and – with guidance from mentors and staff – identify and design a rigorous research project based on a topic of personal value and interest to them. The students are also the designers and producers of our environmental teach-ins that reach hundreds of elementary school children each year. Each teen applies his or her creativity and artistry in conjunction with research results to devise a hands-on lesson plan for approximately 20 to 30 children.

LINKS WITH OTHER ORGANIZATIONS

College Summit: Through a partnership with College Summit, TEP students participate in an intensive college immersion weekend. During this 3-day journey, the teens are encouraged, exhorted, and empowered to create viable, exciting college application packages. They leave with the motivation and knowledge to overcome the obstacles that may stand between them and college acceptance.

Agencies and Environmental NGOs: TEP has developed strategic partnerships with public and private organizations supportive of science education for young adults. These partners include the US Environmental Protection Agency, the National Park Service, NASA, IBM, Global Learning and Observations to Benefit the Environment (GLOBE), AT&T, US Fish and Wildlife, and the US Forest Service.
These organizations provide mentors, guest lecturers, and access to laboratories, field excursions, and research data. In addition, a number provide summer internships and college scholarships.

III. PROJECT GOALS

TEP addresses the significant shortfall in many efforts to engage children in the academic study and career pursuit of science: the older student. There are many science enrichment programs available for highschoolers; however, they tend to focus narrowly on high achievers. The problem is that this approach leaves few options for academic “middle-of-the-road” students and those teens that wait until high school to consider career options. The question is: can we effectively reach young people at this relatively late point in their educational career and encourage and equip them to succeed in science?

This question is particularly pertinent for urban public high school students, the majority of which are African American or Latino. People of color are disproportionately under-represented in science and technology. Although nationally African Americans and Latinos account for 27% of the population, the National Science Foundation reports that only 3.4% of our nation’s scientists and engineers are African American and only 3.1% are Latino. Our country must find ways to embrace and equip a diverse, qualified workforce, capable of sustaining our nation’s leadership in science and technology.

EnvironMentors Student High School Graduation Rates
In Comparison to Partner School Rates (SY 2000)

The main thrust of the TEP program is to advance learning and engagement in science by supporting students as they develop and execute an environmental science project of their own design. The short-term goals we expect to achieve include: (1) helping teens design and execute scientific research investigations; (2) providing interactive environmental science lessons to elementary school children; (3) ensuring that 80% of the participating seniors are accepted into college; (4) providing workplace-based paid internships in the natural resource and environmental science professions; and (5) supporting students working towards environmental science college degrees through provision of stipends and scholarships.

Longer term, we expect increased competency in science through the crafting of research strategy, rigorous scientific investigation, and analysis of research results associated with the teens’ research projects; increased preparedness for science and technology careers, both as educational
and professional options through one-to-one mentoring relationships with degreed scientists and researchers and workplace internships; higher college application and acceptance rates in comparison to their school peers through interaction with mentors who serve as role models; participation in College Summit, and college counseling from TEP staff; and a greater commitment to improving the neighborhoods in which they live through building on the students' focus on local natural resources and neighborhood environmental health issues.

IV. EVALUATION

TEP's evaluation program includes four components: an annual evaluation; our longitudinal survey; program metrics; and ongoing feedback from our students, mentors, and partner teachers.

Annual Evaluation: Our annual evaluation focuses on effectiveness in four areas: education, environment, career, and community. Students complete evaluation questionnaires at the start and at the end of each program year. (The questionnaires were designed with the assistance of American University faculty.) Changes in responses indicate changes in students' attitudes and behaviors specific to careers, college, community service, and environmental stewardship. In addition, we ask students to identify areas of needed improvement. Sample questions include:

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I'm interested in learning more about protecting, conserving, and enhancing the environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>It is very important to me that I get a college education.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I will choose a career that somehow involves science or environmental issues.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Longitudinal Survey: This study is conducted bi-annually to gauge the changing needs of the students, the mentors and the organization itself. TEP contacts former student participants to gather information about long-term outcomes. This assessment focuses on college attendance, career choice, and community service.

Metrics: TEP tracks a series of metrics to determine our effectiveness at attaining program goals. Examples include: attendance records at workshops and weekly school meetings; bi-weekly progress reports; a mid-term survey of project topics and research workplans; attendance at the EnvironMentors Fair, number of students placed in internships; and number of students attending college. Beginning in the 2002-2003 Program Year, TEP will also track grade point average, school attendance, and performance on the Stanford 9 Achievement tests.

Ongoing Feedback: TEP relies heavily in its program development on feedback provided by students, mentors, and our partner teachers. Students and mentors are queried at meetings with the Project Director, at the close of each workshop session, and through the annual evaluation. The Director also meets with partner teachers at the beginning and end of each school year to discuss the workplan and identify strategies for improving student outcomes.

The evaluation results are incorporated into the planning and execution of upcoming sessions. Longitudinal survey results are reviewed by staff and the steering committee to determine if...
additional program refinements are required. As appropriate, our student-mentor manual will be revised to incorporate the assessment and evaluation results.

V. ORGANIZATIONAL ACCOMPLISHMENTS

During the project period, TEP continued to demonstrate the effectiveness of its one-to-one, environment-based mentoring program. As of December 1998, TEP “graduated” more than 500 student-mentor pairs since its inception in 1992, becoming the premiere model for environment-based mentoring. And, thanks in large part to the Department of Energy’s support, we made significant progress towards testing, documenting, and strengthening the TEP model. Our students are finishing high school at close to a 100% rate, a majority are going on to college and they are developing critical skills to prepare them for life and careers.

TEP continues to build upon our tested model, enhancing services to better serve our students. We are creating stronger linkages with state colleges and college-based mentoring programs, so that our students will receive “seamless” academic support for college and beyond. We are also expanding our mentor base, establishing collaborative partnerships at both the national and local level with key corporations, government agencies, nonprofit organizations, and professional associations.

Finally, we are implementing Pathways for Career Success, a new initiative. The goal of the program is to provide clear career path development and generous college scholarships for EnvironMentors students pursuing careers in environmental studies and natural resource management. Key to this program is partnerships with federal environmental compliance and natural resource management agencies; environment-based and urban-youth serving nonprofits; and institutions of higher learning. These partnerships provide workplace-based paid internships, college scholarships, and entry-level professional jobs.

VI. STUDENT OUTCOMES

- During the period of October 1, 1994 through May 31, 1999, 506 high school students participated in the EnvironMentors Project, were matched with mentors, and received supplemental academic support.
- During the same period, 5,730 elementary school students participated in EnvironMentors-led environmental classes. These classes were developed and implemented by high school students in the TEP program.
- Approximately 1,755 community members attended the 1994 through 1999 EnvironMentors Fairs.
The follow-up survey of 350 graduates of the EnvironMentors Project (2000) showed a near-perfect high school graduation rate (100%) compared to 60% or less in participating schools.

91% of our 2002 seniors were accepted to college. This is especially inspiring when one considers that many of our young people are mired in schools with 40% to 50% high school graduation rates and where less than 25% of their peers even applied to college.

Declared majors include environmental science, biology, biomedical engineering, marine biology, pre-med, teaching, nursing, biochemistry, psychology, pre-law, political science, and early childhood education.

The schools the TEP alumni are attending include Bowie State, East Carolina State (NC), Frostburg State, George Washington University, Georgetown University, Howard University, Lehigh University, Missouri State, Norfolk State, Penn State University, Princeton University, Rutgers, University of Maryland and Wellesley.

VII. BALTIMORE ENVIRONMENTORS PROJECT

Staff
Tony Jordan, Project Coordinator

Schools
Northern, Patterson, Southwestern, and Western High Schools

The EnvironMentors Project expanded into Baltimore, Maryland in 1998. The program was housed at the Environmental Health Education Center at the University of Maryland School of Nursing. The University provided pro bono office space, phones, and access to office equipment as part of their commitment to support community-based organizations.

Twenty-six students were recruited from Northern, Patterson, and Western High Schools. The students met with their mentors over a five-month period to explore issues such as water pollution, urban ecology, and energy conservation. The mentoring relationship was supported by the EnvironMentors Project staff with field trips, educational seminars, monthly mentor seminars, and bi-weekly student meetings.

Other important components of the Baltimore EnvironMentors Project included canoe trips, camping excursions, community cleanups, and stream monitoring. Several EnvironMentors students also participated in the Environmental Health Youth Summit, a diverse coalition working to make children's environmental health protection part of the national agenda.

Baltimore EnvironMentors Project mentors included environmental scientists, engineers, and educators from ICF Kaiser, the Maryland Department of the Environment, the Army Corps of Engineers, the National Aquarium, and Maryland State Highway. Also on board were organic farmers, a psychologist, and an AmeriCorps volunteer.
In the spring, students participated in “teach-ins,” sharing their work with 300 public elementary schoolchildren. Students also participate in the local citywide Science Fair at Morgan State University.

The mentoring partnerships culminated in the Baltimore EnvironMentors Science Fair. This gala event was held May 11, 1999 at the University of Maryland School of Nursing. Co-hosted by the Environmental Health Education Center, this celebration was attended by students, scientists, environmentalists, special guests, sponsors, parents, family, and friends. Students were awarded college stipends for the most outstanding projects (Table 1).

Table 1: 1998-1999 Baltimore EnvironMentors Student Research Projects

| Monitoring the Water Quality of the Chesapeake Bay | How Do Riparian Forest Buffers Help Our Lakes, Streams, and Rivers? |
| The Effectiveness of Natural Wetlands versus Manmade Wetlands | The Impact of Environmental Noise on High Blood Pressure |
| The Territorial Behavior of Bearded (Lizard) Dragons | How to Protect the Herring Run |
| Trash: Where and Why? | Does the Loch Raven Distribution System Endanger the People? |
| How Can One Person Control Ozone? | Newsletter from Wagners’ Point |
| Possibilities for Natural Solutions on the Main Tributary to the Jones Fall | The Impact of Wastewater on the Back River |
| The Effects of Secondhand Smoke on Children |

VIII. NEW JERSEY ENVIRONMENTMEN TORTS PROJECT

Staff

Maureen Quinn, Program Director
Nicole Sistrunk, Student Coordinator
Vivian Bertrand, Administrator

Schools

Lawrence, Princeton, and Trenton High Schools

Established in 1994, the New Jersey EnvironMentors Project (NJEP) began with 10 students. The program has grown consistently over the years; forty students completed the program in 1999.

NJEP provides high school students from Trenton and Princeton with mentors from corporations, government, and non-profit organizations. These volunteer mentors, when matched with a high school student, commit to a mutually chosen eight-month project in which an environmental problem is researched and tested in a scientific way. (See Table 2).

Four workshops are offered for mentor/mentee teams throughout the year to increase the quality of research projects. The first and second workshops focus on the research process, the third workshop focuses on teaching, and the fourth workshop focuses on display board creation and presentation skills. A College workshop is also offered for parents/guardians of sophomores and juniors in our program who want assistance with the college application process.
Table 2: Companies Providing Mentors to the NJEP Program

<table>
<thead>
<tr>
<th>Arm &amp; Hammer</th>
<th>Hill Wallack</th>
<th>New Jersey Fish and Game</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF Corporation</td>
<td>Kean College</td>
<td>Office of State Planning</td>
</tr>
<tr>
<td>Betz Dearborn</td>
<td>Marathon Engineering and</td>
<td>Orchid Biosciences, Inc.</td>
</tr>
<tr>
<td>Bristol-Myers Squibb</td>
<td>Environmental Services</td>
<td>Princeton University</td>
</tr>
<tr>
<td>Civil Remedies &amp; Forfeiture</td>
<td>Mariner Business Solutions</td>
<td>Reed Smith, LLP</td>
</tr>
<tr>
<td>Bureau, State of New Jersey</td>
<td>Metro Employee Assistance</td>
<td>Rhodia</td>
</tr>
<tr>
<td>Ecological &amp; Environmental Learning Services</td>
<td>MIIX Insurance Co.</td>
<td>The Morris Museum</td>
</tr>
<tr>
<td>EnvironMentors Project</td>
<td>Omni Environmental</td>
<td>Tucker Associates</td>
</tr>
<tr>
<td>Excel Environmental</td>
<td>New Jersey Department of Environmental Protection</td>
<td>Whole Earth</td>
</tr>
</tbody>
</table>

The results of the research and fieldwork are organized into a classroom lesson that is taught by the high school student to an elementary or middle school class in Trenton or Princeton. The program concludes with an EnvironMentors Fair for which students prepare a creative display of their work along to educate the community (Table 3). The students, along with their mentors, receive certificates and are recognized for their accomplishments by community officials, teachers, parents, and friends.

Through the NJEP process, the students develop skills in critical thinking, and research techniques. They develop self-esteem, self-discipline, commitment, and they build a relationship with a professional adult. Thus, this program empowers them with many of the life skills necessary to reach their education and career goals.

In 1998, NJEP created a drop-in computer center for mentors and students. Most of the furniture for the Center was donated and the computers were donated and then upgraded by a volunteer. The center is used extensively throughout the year.

Table 3: Select NJEP Student Research Projects

| The Effects of Hazardous Waste on Flora & Fauna | The Effects of Auto Emissions on Indoor Ambient Air Quality | Municipal Waste Water Treatment |
| How Land Development Has Affected the Horse Industry | Recycling vs. Landfills and Environmental Education through Puppetry | The Effects of Fire on the NJ Pinelands |
| Computer Contaminants and Computer Recycling Methods | Landfill Design | Solar Energy |
| Passive Smoke | Recycling Computer Monitors | The Urban Drinking Water Crisis |
| Non Biodegradable Food Packaging | The Effects of Coal Combustion on Climate Change | Biogas Production: Comparison of Methane Output |
| Designing and Building an Alternative Transportation Model | The Effects of Air Pollution on the Athlete | A Biomonitoring Study to Determine the Effect of Treatment Plant Effluent on Water Quality |
| The Importance of Biodiversity in Rainforests | | Car Emissions |
Table 3: Select NJEP Student Research Projects

| Naturally Occurring and Manufactured Antibiotics | Heat Islands |
| Agricultural Pesticides | Osprey Populations |
| Is Photovoltaic Energy Economically Feasible in New Jersey? | The Process and Importance of Recycling |
| Grey Water | Hazardous Waste Management |
| | Does Road Salt Affect our Drinking Water? |
| | How to Grow Fresh Air? |

In 1998, NJEP enhanced the core program with a "college club." Participating students develop increased interest and preparedness for college; identify career opportunities in scientific and environmental fields; participate in a four-day college preparedness retreat; develop a personal statement essay and complete the universal college application. In addition, workshops are offered to the parents and guardians of sophomores and juniors in the program.

IX. WASHINGTON ENVIRONMENTORS PROJECT

Staff
Susan Carlson, Project Director
Heather Stewart, Project Coordinator
Robert Harris, Project Coordinator

Schools
Ballou; Cardozo, Coolidge, Eastern, the School Without Walls, Washington Math Science Academy, and Wilson High Schools

The Washington EnvironMentors Project (WEP) was initiated in 1992. Currently, WEP matches 100 students from Ballou, Cardozo, Coolidge, Eastern, and Wilson Senior High Schools; the Washington Science, Math and Technology Academy; and the School Without Walls with environmentally knowledgeable adult mentors for the duration of the school year (Table 4). During the year the pair initiates and implements a comprehensive environmental science investigation—a project that is the student’s brainchild. In the spring, the students present their research to approximately 400 scientists, researchers, and community members at a science fair (the EnvironMentors Fair). WEP students also teach their projects to 1,500 area elementary school students in April of each year.

The WEP program year tracks closely with the school year: recruiting students in September, core program activities from October through April, the EnvironMentors Fair in May, evaluation and analysis in May and June, planning activities in June, and recruiting mentors in July and August. Field trips, training activities, and meetings with participants continue throughout the year.

Beginning in October, each student/mentor team meets 3-5 times a month for a minimum of two hours each meeting. Our mentors receive extensive support from WEP staff and the Mentor Ambassadors. The Mentor Ambassadors are experienced former and current WEP mentors who assist new mentors with challenges including project design and communication with teenagers.

From October through April, WEP staff and invited experts provide students and mentors with 27 hours of workshop training on topics such as the scientific method and web-based research. Each student and mentor also receives a Student-Mentor Manual, providing step-by-step guidance for development and execution of the research project. The manual contents are aligned with the workshop schedule and is available online at www.environmentors.org.
Table 4: Partner School Demographics (SY99-00)

<table>
<thead>
<tr>
<th>Partner Schools</th>
<th>% eligible for free/reduced lunch</th>
<th>% Below Grade Level MATH</th>
<th>% Below Grade Level MATH and READING</th>
<th>SAT Scores</th>
<th>On-time Graduation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballou</td>
<td>68.0%</td>
<td>93.5%</td>
<td>82.3%</td>
<td>341 M 362 V</td>
<td>40%</td>
</tr>
<tr>
<td>Cardozo</td>
<td>79.0%</td>
<td>89.6%</td>
<td>76.7%</td>
<td>329 M 358 V</td>
<td>57%</td>
</tr>
<tr>
<td>Coolidge</td>
<td>22.0%</td>
<td>80.6%</td>
<td>61.8%</td>
<td>371 M 401 V</td>
<td>90%</td>
</tr>
<tr>
<td>Eastern</td>
<td>77.0%</td>
<td>82.0%</td>
<td>64.0%</td>
<td>355 M 393 V</td>
<td>65%</td>
</tr>
<tr>
<td>School Without Walls</td>
<td>11.0%</td>
<td>25.8%</td>
<td>13.1%</td>
<td>510 M 542 V</td>
<td>93%</td>
</tr>
<tr>
<td>Wilson</td>
<td>31.0%</td>
<td>46.3%</td>
<td>40.5%</td>
<td>478 M 478 V</td>
<td>75%</td>
</tr>
</tbody>
</table>

1 as indicated by % scoring below basic on Stanford-9 math
2 as indicated by % scoring below basic on Stanford-9 math and reading
3 National: 511 M/505 V
4 Based on annual reported attrition rate

To ensure that all students can fully execute their research, WEP provides - at no cost - all test kits, equipment, and analytical materials students need.

In the spring, students participate in “teach-ins,” sharing their work with hundreds of public school 3rd and 4th graders. Students also participate in the Washington DC citywide Science Fair and the competitive EnvironMentors Fair. In April and May, students are recognized for their hard work and the most outstanding projects are awarded modest college scholarships at the EnvironMentors Celebration Ceremony.

During the summer, students are placed in science, engineering, and environmental workplace-based internships. Rising seniors also participate in our College Club activities, focused on college applications, personal essays, and SAT preparation.

All WEP events are held in donated facilities such as George Washington University and PEPCO. WEP receives donations from retailers such as Patagonia and AT&T. Finally, for mentor recruitment, WEP uses donated radio time, newspaper and magazine space, Internet volunteer sites, and corporate and government e-mail networks.

X. SUSTAINABILITY

TEP is continuing in its effort towards developing a science education advisory board to lend organizational credibility and to help clarify goals, objectives, and strategies for organizational growth over the next five years.

TEP’s development strategy focuses on expanding our foundation and individual donor base, improving and strengthening relationships with existing funders, and finding opportunities for
funders to participate as advisors to the program. Specifically, EnvironMentors will identify three to five new foundations for support of TEP's core mentoring program. In addition, we will strengthen our relationships with existing funders and outreach to former funders. We will also expand our individual donor list, including former mentors and other volunteers.

Pathways for Career Success, the new initiative, will be inaugurated during the 2002-2003 program year. The goal of the program is to provide clear career path development and generous college scholarships for EnvironMentors students pursuing careers in natural resource management and environmental studies. Key to this program is partnerships with federal natural resource management and environmental compliance agencies; environment-based and urban-youth serving nonprofits; and institutions of higher learning. These partnerships provide workplace-based paid internships, college scholarships, and entry-level professional jobs.

In the long-term, TEP is exploring potential partnerships with local universities. Through the proposed partnership, we hope to strengthen our academic resources for students, enhance our on-staff resources with respect to science education, and provide students with more opportunities for college attendance.

XI. CONCLUSION

The EnvironMentors model combines the benefits of one-to-one mentoring within the comprehensive learning framework of environmental education. This model is particularly effective for those students whom too many programs ignore due to their age, lack of demonstrated achievement, or seeming disinterest. Our model works because we build our students' success around the very tangible, hands-on framework of student-driven, community-focused environmental investigations.

The nationwide study by Dr. Gerald Lieberman and Linda Hoody of the State Education and Environment Roundtable found that using the environment as an integrating context (EIC) can significantly improve student performance in reading, writing, math, science, and social studies. Compared to a control group of students enrolled in traditional courses, EIC students registered higher scores on standardized tests and grade point averages.

The critical ingredient seems to be that EIC is a comprehensive educational framework, rather than compartmentalized, as are traditional teaching methods. Researchers have also concluded that environment-based education fosters "a comprehensive understanding of the world, advanced thinking skills, and real-world problem solving," as well as less tangible outcomes such as the awareness and appreciation of diversity of viewpoints within a democratic society.

Add mentoring to EIC, and the outcome improves significantly. A Procter and Gamble survey of 133 Cincinnati students found that those with a mentor were more likely to stay in school and achieve better grades. Eighty-six percent of seniors enrolled in a mentoring program went on to college, compared to only 25 percent who were college-bound prior to the program. There are behavioral benefits that go with mentoring as well. Big Brothers/Big Sisters found that compared to
a non-mentored control group, children who met with a mentor at least three times per month for a year were less likely to begin using illegal drugs, skip school, or commit crimes.

Through the use of mentoring within the context of environmental science, EnvironMentors provides an effective way for young people to become active stewards of their lives, communities, and the environment, allowing all young people the opportunity to achieve and succeed.