

Opportunities to Strengthen Environmental Education's Outreach and Impact

Study Results from Community Resources for Science

A recent survey of educational research literature has revealed meaningful evidence that environmentally-based education using best practices can increase academic achievement. This finding is accompanied by some interesting opportunities to improve the learning experiences of public school students and strengthen outreach to teachers and administrators.

Key Features of Strongest Research

The literature review, funded by StopWaste.Org, looked at over 100 research studies to determine whether programs using the environment as a basis for teaching have resulted in any measurable academic gains in comparison to more traditional educational approaches. The relevance and quality of the research studies were ranked based on criteria drawn from the Education Science Reform Act of 2002 and subsequent federal research guidelines. The research reviewed included studies of a variety of program approaches, demographics, rural and urban settings, and measured outcomes. The strongest studies had the following factors in common:

- Regular use of the environment as a platform for learning
- Use of best educational practices such as active learning in groups and independently, integrated curriculum, problem-solving and inquiry, and constructivist teaching methods
- Evidence of higher gains in academic achievement in comparison to traditionally-taught programs as measured by standardized tests in language arts, math, social studies, and science

Supporting Academic Growth is Critical to EE goals

Public schools are under pressure to improve student performance. Environmental education will be valued more by the gatekeepers of public education – teachers, administrators and parents, if in addition to providing environmental content, it also can contribute to academic achievement in the core curriculum areas. In order to reach more students – and particularly more diverse students – it is important to involve children through public school programs. Strengthening the contribution to academic achievement will help maintain access to all students and foster a population capable of the critical thinking needed to sustain responsible environmental behaviors.

Supporting Academic Achievement

The contribution of EE programs to academic achievement can be strengthened in several ways:

1. Be familiar with state standards related to the grade level your program targets.
2. Learn from current educational research. Resources include: NSTA, CSTA, CRS, the Internet
3. Use the best teaching practices associated with positive academic outcomes in the literature, including active learning experiences, opportunities for problem solving and inquiry, use of a constructivist approach and integrated curriculum goals, and a mix of independent and collaborative learning.
4. Increase the impact of shorter programs through support for teacher extensions and collaborations with related or complementary programs.

Improving Research and Outreach

If EE can strengthen its contribution to academic performance, and improve the ability to show credible evidence of realistic outcomes from specific programs, it will be able to improve outreach to districts, principals, and teachers. Documenting academic outcomes will require more and better research, with improvements in study design and reporting. Program outreach can be then be improved by reflecting richer, deeper programs, showing evidence of connections to academic outcomes, and providing better descriptions of support that will ease use and extend the benefits of EE



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experiences. If you would like to know more about this research or get help accomplishing these goals, please see our website.



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