

The Impact of Environmental Education on Academic Achievement

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.

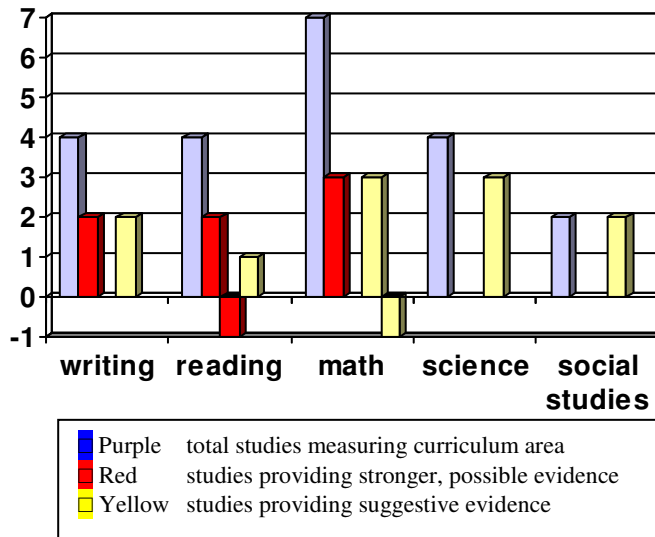


The literature review, funded by StopWaste.Org, looked at over 100 research studies to determine whether programs using the environment as a basis for teaching have resulted in any measurable academic gains in comparison to more traditional educational approaches. The relevance and quality of the research 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

The collective evidence of the eight strongest studies showed that the use of the environment as a setting for teaching could improve performance on standardized tests across all subject areas. Several studies showed even higher gains for under-performing students. As shown in the graph, of the four studies that measured writing achievement (purple bar over writing), there were two stronger evidence studies (in red) that measured better performance relative to traditionally-taught students and two studies showing suggestive evidence (in yellow) of better performance. Only two results indicated lower gains than traditional programs in specific subjects. While additional research is needed, initial efforts to isolate causal factors revealed that the use of the environment was a key factor in the relative academic gains.



These results point to an opportunity to improve the learning experiences of our students. Schools can pursue this opportunity by learning more about the benefits of environmentally-based, active learning and taking advantage of environmental education and teacher training programs that use these techniques to engage students. If your school or group would like to know more about this research or get help accomplishing these goals, please see our website. We're proud to support your work.



CRS

COMMUNITY RESOURCES FOR SCIENCE
practical support for great science teaching

1611 San Pablo Avenue, Suite 10B
Berkeley, California 94702

(510) 527-5212 • www.crscience.org