

Energizing Students and Schools with Green Schools

As schools reopen, there is an opportunity to not just go back to normal, but to go back to better through implementation of Green Schools programs in schools and districts. In the broadest terms, Green Schools are those which engage students, teachers, staff, parents and community members to investigate their school's environmental footprint and work collaboratively to make improvements. Exploring energy, waste and recycling, water, the schoolyard and school health offers multiple entry points for reading, writing, math, and science as well as opportunities to develop civic engagement skills in students. Having students lead this work provides an opportunity for development of soft skills like **collaboration and cooperation, critical thinking, problem-solving, and leadership**, while providing students with **real world and relevant learning opportunities**. In the process, **schools save money** and are **healthier and more productive** places to learn and work. Also, many state and national programs offer recognition for this work to schools, including the [U.S. Department of Education's Green Ribbon Award](#).

Recommendations

Ensure that every school engages students in leading activities to become a greener and healthier school.
Ensure that every PreK-12 student, no matter where they live, participates in some aspect of Green Schools work at least once a week.



Evidence Base for Green Schools

Students who are engaged in Green Schools are doing real world, problem-based learning, which benefits both student academics and health and can save schools money. The following are some key findings on engaging students to lead the way for greener and healthier schools:

- Engaging students in Green Schools investigations and action planning affords the same benefits as well designed problem-based learning, including: **increases long-term retention of content, helps students perform as well as or better than traditional learners in high-stakes tests, improves problem-solving and collaboration skills, and improves students' attitudes toward learning** ([Strobel & van Barneveld, 2009; Walker & Leary, 2009](#)).
- Engaging students in Green Schools investigations provides a context for real world learning, which is tied to positive effects on **critical thinking and lifelong learning** ([Kilgo, Ezell Sheets, & Pascarella, 2015](#)).
- Because of the collaborative nature of Green Schools, implementation in schools will facilitate cooperative learning opportunities for students, which "is itself an environment in which social skills are acquired or improved; this is mainly due to the key role played by social interaction in the **development, not only of academic intelligence, but also social intelligence**" ([Polo-del-Rio & Iglesias Gallego, 2017](#)).
- **Improvements to the school setting**, such as addressing daylighting has shown **positive impacts on student performance**. For instance, a 2002 study found "statistically significant effects of daylighting on human behavior, as evidenced in the standardized test scores for elementary school students" ([Heshong, Wright and Okura, p. 110, 2002](#)).

- Making schools more energy, water and waste efficient can result in **savings for schools**, sometimes in the tens to hundreds of thousands annually ([Gordon, 2010](#)).
- Greener schools are healthier schools, which can result in **reduced absenteeism**, especially for asthma related absences, the leading cause of absenteeism ([Gordon, 2010](#))

What are the Key Components for Success?

District wide Student, Teacher, Staff and Community Engagement and Leadership: While individual schools can engage students, teachers, staff and community members in Green Schools, working at a district level ensures teacher and student leaders have a support system and coordination which allows for larger impacts. At both the school and district level, a key factor for success is the establishment of a Green Schools Leadership Team. The Green Schools Leadership team should include students at all grade levels, teachers, school staff, administrators, parents and community members. It is especially key to engage maintenance and food service staff as they have direct involvement in nearly all the areas students may wish to investigate. Informal education partners, parents and community members can often serve as resource people and support Green School efforts.

Teacher Professional Learning and Connections to Curriculum: There are many state and national programs that can provide professional learning opportunities for teachers to learn about Green Schools implementation and connections to curriculum. Green Schools learning is ideal for integrating into existing reading and language arts, math and science curriculum with opportunities to explore concepts ranging from persuasive writing and presentations, collecting and analyzing data, to key elements of energy, water and human impacts on the environment. Conducted at a district level, professional learning provides opportunities for teachers to collaborate, one of the characteristics identified as necessary for effective professional learning ([Darling-Hammond, Hyler & Gardner, 2017](#)).

Connecting with State and National Green Schools Programs: A variety of national and state and local programs that are designed to provide guidance, support and professional learning, as well networking opportunities for students and educators. In addition, many of these programs offer recognition for Green School accomplishments.

How?

Allocate Recovery Act Funding to support Green Schools implementation, coordination and professional learning:

- Materials and Supplies for Green Schools Investigations: \$500 per school (one time cost)
- Professional Learning: # of Teachers x cost of workshop or conference
 - e.g. 125 educators per district x \$150 = \$18,750
- Green Schools District Coordinator = \$50,000 per district