Chapter 14
Toward a Green Curriculum: Transforming the Schoolhouse and Classroom

Dawn Putney  
University of West Georgia, USA

Robert C. Morris  
University of West Georgia, USA

Peter R. Sargent  
Asuncion Christian Academy, Paraguay

ABSTRACT
This chapter looks at a variety of topics affecting the development of a “Green School Curriculum” from kindergarten through high school. It places emphasis on teacher planning, involvement, and commitment, as well as offering a number of lessons and learning insights that support an “inquiry-based” curricular design. From elementary to middle to secondary classrooms, this chapter helps teachers explore instructional possibilities with numerous online sites to visit and probe in detail. A final emphasis is placed on the importance, utilization, and incorporation of technology into today’s schools highlighted through numerous resources.

INTRODUCTION
Any endeavor to establish green schools cannot and should not be limited to the construction of new schools. Education budgets infrequently allow for the replacement of buildings; therefore, efforts to make schools more environmentally compatible should include the transformation of existing schools. Involving children, young adolescents, and teenagers in the transformation process toward an environmentally friendly school can be the incredible thing. Likewise teachers working in traditional schools can simultaneously build environmental awareness and accomplish curricular goals, by transforming their classrooms into the kinds of settings where students can experience firsthand authentic environmental projects.

Environmental education is interspersed throughout the science curriculum in the next generation science standards. Integrating authen-
tic environmental projects into the curriculum can meet these standards and has the potential to have a long-lasting effect on student’s levels of environmental awareness. Students from kindergarten through high school can be expected to learn about the world in which they live and to gather, describe, and apply information about their world. Using grade appropriate projects to transform an older school and classrooms into more environmentally friendly places can easily meet these standards.

Young students can become involved by participating in simple changes like conserving water and electricity, using less paper, and recycling, to becoming more involved in projects like setting up a neighborhood recycling center or helping to develop a community garden. Projects like these can produce much greater benefits than merely teaching children concepts such as conservation and recycling. When students are engaged in activities that give them opportunities to construct and apply knowledge, they are more likely to apply their environmental awareness at home and adopt these practices as part of their everyday lives.

Students can get involved in more complex projects like re-painting walls using environmentally safe paints and investigating natural substances that can be used around the school to replace toxic chemicals that are often considered the only options for cleaning. Through research and planning, students can propose larger projects and solicit partnerships from within the community to support their endeavors.

Areas of the curriculum outside of science can also be integrated into environmental education. Students should have opportunities to engage in research as they gather data about their environment, investigate ways to improve their environment, and compare data as they implement changes. Learning about the effects of human life on the environment and creating alternatives enables students to create solutions to environmental problems they encounter at school and at home. The social sciences afford a teacher the opportunities to investigate recent conservation activities and to describe past and current environmental strategies with an eye for both successes and failures. Understanding historically how individuals and communities have handled environmental issues can give students of all ages a degree of understanding of the importance of their own life’s decisions and perspectives.

These kinds of standards-supporting activities go beyond just getting students involved in environmental activities and transforming existing school buildings. They have the potential to influence parents as their children discuss their school assignments and projects. As well the results of these kinds of engagements extend beyond the classroom and family to the larger community and can accomplish much more than what is outlined in the school’s curriculum.

This chapter will explore possibilities for transforming existing schools to be more environmentally friendly, consider the benefits of engaging students in authentic projects, and provide examples of ways to get students of all ages involved in sustainability projects that can extend environmental awareness from the school to home and into the community.

Establishing a Facilitative Environment for Creating a Green Schoolhouse

Learning is change and change can be hard. All learning involves change to some degree. In the case of environmental/conservation education change may be particularly uncomfortable. We know that when students feel totally at ease and comfortable in any learning environment, they are probably not learning—not being stretched or experiencing change.