



Could Every School Be Green?

Green building doesn't have to cost more, and green management habits save money.

The top factors to consider in creating a green campus.



By Jen Scott Curwood | May 2009

Go green in these six key areas to ensure the future health—and success—of your students.

We all know the buzzwords and slogans—our schools should go green, we need to reuse, recycle, and we must strive to reduce our carbon footprints. Amid the pressures that educators face—from testing to tight budgets—it's tempting just to point to the nearest recycling bin and say, “We’re doing our part.”

The U.S. Conference of Mayors predicts, however, that as our economy shifts to generating 40 percent of its electricity from alternative fuels, 4.2 million green jobs will arise within the next 30 years. Shouldn't we teach kids about sustainability and green technology to prepare them for the workforce?

Further, according to the Center for Disease Control, asthma accounts for 14 million days of missed school annually. Aren't we obligated to provide an environment free of mold and pollutants?

Without a doubt, many schools are working to address these questions. But “going green” is a complex, interrelated, and long-term process that must engage teachers and administrators as well as parents and students. There are six key areas that schools need to consider: green building and electricity supply, environmental contaminants and air quality, green school spaces, recycling, food, and the curriculum. But the first step is making going green part of your school's mission.

Laying the Groundwork

Let's start by defining what we mean by "green schools." As Rachel Gutter, senior manager of the education sector of the U.S. Green Building Council, says, "Green schools create a healthy environment that is conducive to learning while saving energy, resources, and money." By focusing on the school environment and the curriculum, this definition emphasizes that "going green" should be integrated into the school day.

That may sound overwhelming. But, says Deborah Moore, executive director of the Green Schools Initiative (GSI), "Kids learn best with hands-on activities. What better way for them to learn than changing their own school?"

She says that schools need to form "eco-committees" that include staff, parents, and, most importantly, students. "Far too often, green initiatives are led by one person. When that person moves on, the initiative dies out," Moore explains. "To ensure these changes are long term, you need a committee at the core."

Moore suggests the committee create a vision statement for the school, something that everyone can rally behind. After that, the group needs to enlist others—from students to local businesses and organizations—to assess the state of their school. This can involve analyzing garbage output, checking air quality, or looking for inefficiencies like leaking faucets or electronics that are left on.

Once that is finished, the committee is ready to develop an action plan. This identifies specific issues in the school, proposes solutions, and then sets forth a plan to make long-term changes. As Moore explains, "We're working for a day when a green and healthy school is just called a school."

Are you ready to get started? If so, here are the six crucial areas that you can take action on.

Green Building and Renovation

"It costs too much." That's the first response that many people have about green building. But when you consider both the construction costs and the long-term energy expenses associated with schools, it's not quite so simple.

Case in point: Average school construction costs are \$150 per square foot. The Northland Pines High School in Eagle River, Wisconsin, is a nationally recognized, energy-efficient green school—and it cost \$104 per square foot to build in 2006.

Superintendent Mike Richie explains that, while planning, "it was give and take on everything—not just where we wanted to go green." But by choosing to have more windows and a system that controls lighting according to the bell schedule, they've already seen a reduction in electricity costs. Since 40 percent of U.S. emissions of carbon dioxide comes from electric utilities, more schools are also exploring how to use renewable energy sources to reduce emissions. The reality is that green schools don't have to cost more in the short or the long term.

"Once we can debunk the cost myth, we'll be much further along," says Gutter, of the U.S. Green Building Council. "It's the one thing that's holding people back." She notes that the Northland Pines High

School was built for 24 percent less than regional averages—and it was the first public high school in the nation to attain gold certification from the Leadership in Energy and Environmental Design (leed) Green Building Rating System (it enables schools to attain silver, gold, or platinum ratings, based on the design and construction of their building).

The leed rating system addresses master planning, joint use of facilities, energy efficiency, classroom acoustics, and day lighting. “These are all best practices,” notes Gutter. leed has certified 115 green schools, with over a thousand currently in process. In fact, ten states and a number of districts now require that all new school construction be green.

leed also can apply to renovations. “We have over 126,000 existing schools in our country. When they undergo additions or renovations, they can opt to go green,” says Gutter. And if you think that this just applies to private schools or those in affluent public school districts, think again. “Nearly a third of leed-certified schools are Title I,” explains Gutter. A recent study of benefits of green schools in Washington state estimated a 15 percent reduction in absenteeism and a 5 percent increase in test scores that could be attributed to green building.



Healthy School Environments

One of the objectives of green building is to create a healthy school environment for all children. Pesticides, molds, asbestos, and chemicals from cleaning products can have a significant impact on the indoor air quality in schools. Children are particularly at risk due to such indoor air pollutants, since their bodies are still growing and they have higher metabolism and breathing rates.

Research by the U.S. Environmental Protection Agency found that students and educators typically spend 85 percent to 90 percent of their time indoors, and the concentration of pollutants is higher inside, sometimes by as much as 10 or even 100 times. To combat that, the EPA offers a free Indoor Air Quality Tools for Schools Action Kit. This allows schools to assess their indoor air and work to implement a plan to improve air quality.

Many schools are also turning to green cleaning products. In fact, some states and districts now mandate them. In 2005, New York became the first state to enact a green cleaning law when it required that school districts use green cleaning guidelines and standards established by the state. In recent years, other states have also proposed bills to mandate green cleaning practices in schools. “Not only does green cleaning improve the air quality in schools, but it doesn’t cost more,” says GSI’s Moore. “While some things may cost more up front—like microfiber mops and cloths—they last longer and clean more effectively.”

Making Room for Green Spaces

we hear a lot about attention deficit disorder—but what about nature deficit disorder? In his book *Last Child in the Woods*, Richard Louv examines how today’s children have a qualitatively different relationship with nature compared to previous generations. Between shrinking green spaces and growing fears of predators, children have little opportunity to spend hours playing in the woods and simply exploring the natural world.

Many schools are thinking critically about how to address these issues. Some—including the Willow School in Gladstone, New Jersey—have chosen to not have traditional playgrounds. Instead, their students play in the woods during recess, using natural objects to spark their imagination. Others are examining how their green spaces can serve as teaching tools.

One such initiative is the Earth Partnership for Schools. Founded in Madison, Wisconsin, this program undertakes ecological restoration projects on school grounds. By integrating restoration into the curriculum, children investigate indigenous plants and local habitats. “This fosters a responsibility of caring for the Earth,” says director Cheryl Bauer-Armstrong. “Kids need to feel like they can make a difference.”

Recycling and Composting 101

take a look around your school—how much recycling is really going on? Until recently, Jen Johnson says that her school was throwing everything into the garbage. A fifth-grade teacher at West Woodland Elementary School in Seattle, Johnson was inspired by another teacher in her district, Peter Hubbard, who got his school into recycling and composting. “After four years of working with students, parents, and staff, I’m happy to say that 75 percent of our waste is recycled or composted,” Johnson reports. “The key was that our students took ownership of the project and worked to mentor students at other schools on these issues.”

According to the National Recycling Coalition, the top ten items to recycle include aluminum, PET and HDPE plastic bottles, newspaper, corrugated cardboard, steel cans, glass containers, magazines, mixed paper, and computers. The NRC promotes every November 15 as America Recycles Day, and its website offers key information and ideas on how to get schools involved. Currently, the nation’s composting and recycling rate is around 33 percent. But since the average American discards 4.6 pounds of garbage every day, there is still a lot more work to be done.

At the Willow School in New Jersey, the building itself teaches kids about recycling. “For instance, all of the water used to flush our toilets comes from rainwater that is harvested on site,” says Kate Burke Walsh, head of the school. “Our second graders learn about the water cycle and our system on campus. Through this, they come to understand the water process, and how it even relates to how the Romans used aqueducts.”

The Cafeteria Line

proper nutrition is essential for students' health—especially when you consider that over 16 percent of children and adolescents are obese. Since many children eat one or two meals a day at school, they rely upon us to offer healthy and tasty meals.

Although soft drink manufacturers voluntarily agreed to remove their products from school vending machines by 2009, many schools still have high-calorie snacks and prepackaged meals as staples of their food program. But the tide is turning: According to Debra Eschmeyer of the National Farm to School Network, more schools are greening their cafeterias, too.

“Schools are committing to composting programs, they’re procuring local products, and they’re opting to include fresh fruit, vegetables, grains, and dairy in their menus,” she says. Over 2,000 districts in 39 states participate in the Farm to School Network by partnering with local farmers to offer fresh and in-season produce. While school staff may need to spend more time preparing meals, Eschmeyer explains that “we don’t have any indication that costs are higher. In fact, sometimes it is less expensive than buying comparable foods from mainstream suppliers. But this way, local farmers see more of the profit.” Eschmeyer says that such programs encourage children to visit the farms where their food is harvested. “It’s a whole new world that’s opened up to them. We need to see the cafeteria as a classroom as well.”

An Eco-Friendly Curriculum

ultimately, schools need to integrate ecological responsibility and sustainability into hands-on, meaningful parts of the curriculum. “The environment is an ideal link between content areas,” says Tim Grant, editor of Green Teacher magazine.

Ted Mitchell, a curriculum coordinator at Feinstein Middle School in Rhode Island, agrees. “Too often, our curriculum is so broad, the concepts aren’t tangible to our students.” Rather than starting with topics like global warming, Mitchell says, “I go from microcosm to macrocosm. That way, students can see how global issues affect their own lives.”

To begin incorporating environmental sustainability into your curriculum, try going online. The Facing the Future website (facingthefuture.org), for example, has free downloads to get you started. “Within six months, half of all schools who use our materials decided to purchase the entire curriculum,” says Wendy Church, executive director. “Through our work with teachers, we’ve found that in math class, for instance, they want real data sets to work with. We’re also in the process of creating a technology unit as well as a unit for ESL students.”

Explorer West Middle School in Seattle has used the Facing the Future curriculum successfully. “Sustainability is part of our school’s mission, and it’s important to have that present in our instruction and in our daily lives,” says social studies teacher Ben Wheeler.

Rachel Gutter calls this generation “sustainability natives.” She explains that our students are growing up with a heightened understanding of the environment, knowledge of Earth’s complex ecology, and an awareness of their carbon footprint. As Wheeler says, “This is an exciting time to be a teacher. It’s this generation that will be critical in tackling issues of climate change and sustainability. We just need to give our students the language and the tools, and they’re going to come up with the solutions.”

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