LEED SCHOOLS

WHERE WE LEARN MATTERS

School buildings have an enormous impact on people and the environment. Globally, 1 in 8 individuals sets foot in a school every day.

Today, there are nearly 100,000 public schools in the U.S. with more on the horizon. In fact, state and local governments invest more capital in K–12 public school facilities than in any other infrastructure sector outside of transportation. However, with an estimated 7.5 billion square feet to modernize and maintain, schools are falling behind. The nation as a whole is spending only two-thirds of what is needed in school facilities every year, underinvesting by a staggering $46 billion annually. School building conditions decline over time, and funding is inequitably distributed across communities with vastly differing wealth and resources.

School facilities have a direct impact on student learning, student and staff health, and school finances. Well-designed school facilities are proven to have dramatic effects on measurable academic outcomes as well as health indicators among faculty and students alike.

ABOUT GREEN SCHOOLS

Schools manage a staggering 2 million acres of land and the equivalent of half the square footage of the entire commercial building sector. Standard building practices use and waste millions of tons of materials each year; green building uses fewer resources and minimizes waste. Green schools save energy and water to reduce utility costs for schools, and they protect the health and well-being of students and teachers.

What does it mean to be a green school? A green school is successful in achieving 3 major goals:

1. Minimized environmental impact,
2. Improved occupant health, and
3. Environmental and sustainability literacy for all graduates.

STUDENT AND FACULTY HEALTH

The U.S. Environmental Protection Agency (2011) estimates that more than 46% of U.S. public schools have environmental conditions that contribute to poor indoor environmental quality, including allergens and respiratory irritants that can cause asthma, headaches, nausea, weight gain, general irritation and cognitive impairment. Lighting and noise have been shown to have impacts on children's daily physiology through altered hormonal cycles and impaired cognitive processing. Additionally, thermal comfort studies have revealed that warmer classroom temperatures contribute to stuffiness, headache, fatigue, reduced academic achievement, difficulties breathing and even influenza transmission.

Together, these environmental factors result in more nurses' visits and increased absences. Childhood asthma, for example, is the leading cause of student absenteeism and accounts for 13.8 million missed school days each year, according to the Centers for Disease Control and Prevention (CDC, 2015).

GETTING STARTED WITH LEED

The LEED certification process is designed to inspire project teams to seek innovative solutions that are better for our environment and better for our communities. Learn more: **usgbc.org/leed**.

STEP 1.

SELECT THE RATING SYSTEM THAT BEST FITS YOUR PROJECT.
There are 2 options for structures serving K-12 education:

1. **LEED for Building Design and Construction: Schools**
   Construction or renovation of buildings dedicated to K-12 learning
2. **LEED for Operations and Maintenance: Schools**
   Day-to-day operation of existing buildings dedicated to K-12 learning

STEP 2.

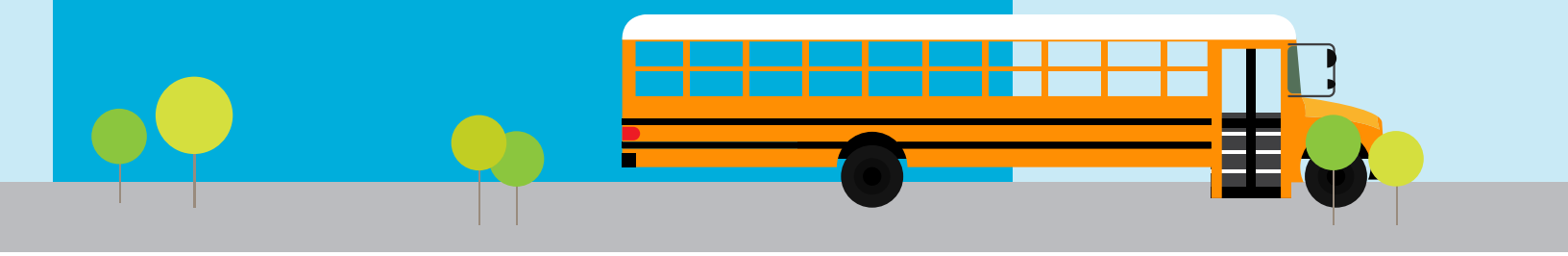
SET GOALS.
Woven throughout the newest version of LEED, project teams will find strategies to improve performance, both at the required (prerequisite) level and at the optional (credit) level. The team should set goals that make the most sense for their community and local environment and then match the credits that support those goals.

Using the LEED credit library, teams can support their goals by selecting the associated strategies.

STEP 3.

EQUIP YOUR PROJECT WITH THE RIGHT TOOLS.
LEED Reference Guides are available for each rating system to help project teams understand each credit and prerequisite. A comprehensive online toolkit also guides teams to key supplemental material for LEED projects like addenda and sample forms.

LEED CERTIFICATION FOR SCHOOLS



LEED® is the world's premiere green building certification system and is applicable to all buildings at all phases of development (design, construction, operations and maintenance). LEED buildings and communities can be found in over 160 countries around the globe, with around 2.2 million square feet being certified daily.

LEED projects are third-party verified, which proves performance and helps guarantee that each LEED project saves energy, water and other resources. Third-party verification also affirms the integrity of green building commitments by guaranteeing that project teams are delivering on design plans and goals.

To achieve certification, projects choose which credits within the system are right for their project. Teams first decide what is most important for their community and local environment and then apply strategies to earn points across several sustainability topics, including:

- **INTEGRATIVE THINKING:** promotes reaching across disciplines to incorporate diverse team members during the pre-design period
- **ENERGY:** focuses on reducing energy demand through efficiency, then rewards renewable energy.
- **WATER:** addresses indoor use, outdoor use, specialized uses and whole-building-level water metering
- **MATERIALS AND WASTE:** encourages using sustainable building materials and reducing waste and includes a special focus on usage, life-cycle and transparency
- **LOCATION AND TRANSPORTATION:** includes an emphasis on advanced performance metrics to reward projects within relatively dense areas, near diverse uses, with access to a variety of transportation options, or on sites with development constraints
- **SUSTAINABLE SITES:** rewards decisions about the environment surrounding the building, and emphasizes the vital relationships among buildings, ecosystems and ecosystem services
- **HEALTH AND HUMAN EXPERIENCE:** focuses on providing high-quality indoor environments that enhance productivity, decrease absenteeism and improve the building's value
- **INNOVATION:** recognizes innovative building features and sustainable building practices and strategies
- **REGIONAL IMPACTS:** encourages project teams to focus on their local environmental priorities

Based on the number of points achieved, a project receives 1 of 4 LEED rating levels: Certified, Silver, Gold or Platinum.

GREENING YOUR SCHOOL OR DISTRICT

The Center for Green Schools at USGBC® exists to assist schools and school districts who want to help students succeed while supporting student health and the health of the planet. Several resources are available on centerforgreenschools.org for those looking to build or renovate a school:

- **The Paid from Savings Guide to Green Existing Buildings:** Reviews strategies and case studies to help leverage utility cost savings to fund comprehensive green building retrofits.
- **Green Schools Investment Guide:** Details financing strategies for building projects, from small-scale improvements to major renovations, to help schools choose the right path for them.
- **Powering Down Guide:** Profiles schools that achieved 20-37% energy reduction through behavior strategies alone.
- **State of Our Schools: America's K-12 Facilities:** Compiles and analyzes the best available school district data about US K-12 public school facilities funding.
- **The Impact of School Buildings on Student Health and Performance:** A review of current research connecting school buildings with student health and performance.

THE CENTER FOR GREEN SCHOOLS AT USGBC

The Center for Green Schools at USGBC believes that everyone, from the kindergartener entering the classroom to the Ph.D. student researching in a lab, should have the opportunity to attend schools that sustain the world they live in, enhance their health and well-being, and prepare them for 21st century careers. The Center works with school decision makers, community volunteers, and green school champions in the public and private sectors to drive progress at the intersection of sustainability, education, public health, and the built environment. Learn more: **centerforgreenschools.org**.