Growing a Green & Healthy School

A guide for schools

Green & Healthy Schools Wisconsin

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Developed by

Green & Healthy Schools Wisconsin

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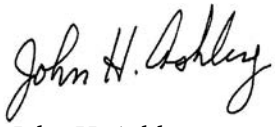
Foreword

The Wisconsin Association for School Boards is proud to support schools committed to providing safe, healthy, and environmentally responsible learning environments for our students. Schools committing to sustainability are saving money, creating a healthier environment for students and staff, and increasing environmental literacy. These schools are creating the optimum conditions for students to gain the knowledge, experience, and skills needed to address the 21st century challenges faced in this rapidly changing world. Sustainable schools provide the foundation for students to study the complex relationships between our communities, the state's economy, and our natural resources.

Green & Healthy Schools Wisconsin provides the pathway for schools committed to sustainability to receive the recognition they deserve. Green & Healthy Schools Wisconsin aligns to the U.S. Department of Education Green Ribbon Schools allowing the top schools to receive national recognition for their work and commitment to sustainability. The *Growing a Green & Healthy School Guide* lends support to lift schools up and provide models of achievement others can implement. This guide arms schools with a tool for success. Several of our schools are highlighted throughout the guide providing examples and sharing the successes others have experienced through sustainability initiatives. Each section provides tips, tools, and resources to consider for creating a more green and healthy learning environment. It also provides a connection to the many state and national resources that are committed to supporting schools.

Green & Healthy Schools are preparing our future generations to understand the complex interrelations between people, planet, and profit. These schools are preparing leaders of tomorrow to bring about a sustainable future. The Wisconsin Association for School Boards is proud to support all schools committed to sustainability and is pleased to present this guide to aid your success.



John H. Ashley
Executive Director
Wisconsin Association for School Boards

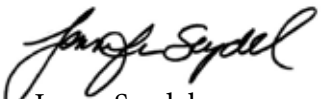
Foreword

The schools of today are meant to educate the leaders of tomorrow. By adopting green and healthy environments for students to learn and grow, schools and districts are investing in our children's future. *Growing a Green and Healthy School Guide* is an important tool for helping schools along the green and sustainable path.

The Department of Education's Green Ribbon Schools program has identified three pillars that serve as the foundation of a green school. This guide covers topics within each pillar to ensure schools have the tools needed to build, or improve on, their green schools program.

- *Reduce Environmental Impact and Costs.* By addressing issues surrounding facilities design, operations, and management, this guide will help schools improve their indoor air quality, reduce their energy and water use, and reduce waste in the classroom and cafeteria.
- *Improve the Health and Wellness of Students and Staff.* Integrating healthy eating and physical activity into the school day and curriculum is essential for academic success and helping students develop lifelong healthy behaviors. This guide provides the tips and resources needed to jump start these efforts.
- *Provide Environmental and Sustainability Education.* Giving students opportunities to engage in fieldwork and outdoor learning opens doors to STEM and green career pathways. This guide identifies professional development opportunities and curriculum that can help teachers integrate environmental and sustainability education into their classrooms.

I truly believe that the green schools movement is the most important education reform initiative of our time. We need to transform how we educate our students to inspire them to care for our communities and the environment, as well as be the leaders we need for a more sustainable future. *Growing a Green and Healthy School Guide* will help your school take the first steps to become greener and more sustainable.



Jenny Seydel
Executive Director
Green Schools National Network

Acknowledgements

Thank you to the schools featured in this guide and all their school staff, students, and community members working hard to grow more green and sustainable schools across the state.

Schools

Colby Elementary School - Colby School District
Dodgeville Middle School - Dodgeville School District
Greendale School District
High Marq Environmental Charter School - Montello School District
Houlton Elementary School - Hudson School District
Middleton High School - Middleton Cross Plains School District
Milwaukee Environmental Sciences Academy (MESA) - Milwaukee Public Schools
Sheboygan South High School - Sheboygan School District
Thoreau Elementary School - Madison Metropolitan School District
Tomorrow River Community Charter School (TRCCS) - Tomorrow River School District
Waunakee High School - Waunakee Community School District
Westlawn Elementary School - Cedarburg School District

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A special thanks to Evolution Marketing www.evmkting.com for the design and layout of this guide.

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How to Use This Guide

Embark on the journey to develop more green and healthy schools. This guide has been written to assist anyone working with or in a school to create a safer, more environmentally friendly and sustainable place to learn. The specific geographic focus is on Wisconsin, but information is relevant to schools across the nation and world.

Green & Healthy Schools Wisconsin supports and encourages schools to create safe and healthy learning environments, and prepare students to understand, analyze and address the major environmental and sustainability challenges now and in the future.

This guide will help schools:

- understand the Green & Healthy Schools Wisconsin program and structure,
- learn how to receive state and national recognition,
- discover resources available to support local efforts and to continue to grow as a green and healthy school, and
- provide tips and tools to aid in success.

Section 1

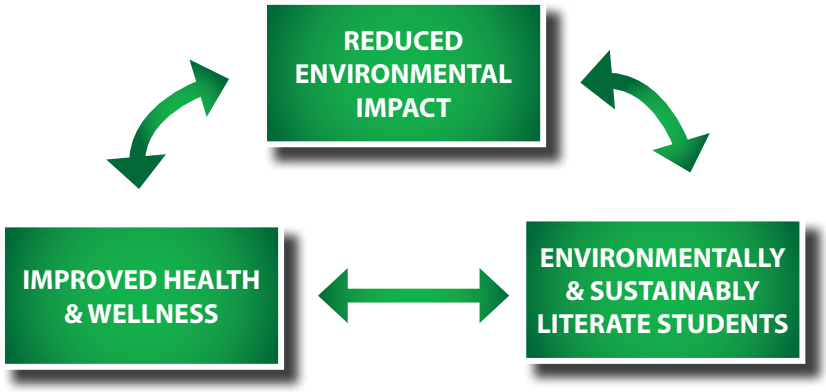
Green & Healthy Schools Wisconsin Overview

Growing a Green & Healthy School

A guide for schools

What is Green & Healthy Schools Wisconsin?

Green & Healthy Schools Wisconsin provides recognition for Wisconsin PK-12 public and private schools and early learning centers that provide 3-, 4-, or 5-year-old kindergarten (collectively referred to as "schools") working to reduce environmental impact and costs, improve health and wellness, and increase environmental and sustainability literacy through a self-paced, voluntary, web-based application.



Green & Healthy Schools Wisconsin serves as a gateway to the U.S. Department of Education's Green Ribbon Schools (ED-GRS) recognition. ED-GRS aims to inspire schools, districts, and institutions of higher education to strive for 21st century excellence by highlighting exemplary practices and resources that all can employ. ED-GRS has three guiding principles, or pillars:

1. **Reduce environmental impact and costs;**
2. **Improve the health and wellness of schools, students, and staff; and**
3. **Provide environmental education, which teaches many disciplines, and is especially good at effectively incorporating STEM, civic skills, and green career pathways.**

For more information on ED-GRS recognition, please visit their website at: www2.ed.gov/programs/green-ribbon-schools.

In Wisconsin, these pillars are embedded into Green & Healthy Schools Wisconsin, organized in a pathway for growth. Becoming a green and healthy school does not happen overnight; it starts with small steps and grows over time. Green and Healthy Schools Wisconsin recognizes schools across the growth continuum of sustainability with four levels of recognition. Through an on-line application (found at www.MyGHSWisconsin.org) schools document achievements in any or all of the nine focus areas: community involvement, energy, environmental health, environmental & sustainability education, health & wellness, recycling and waste management, school site, transportation, and water. Once an application is submitted, Green & Healthy Schools Wisconsin staff review the application and award the appropriate level of recognition. The recognition level determines eligibility for various incentives, including grants, signage, and acknowledgement from other partner programs.

Green & Healthy Schools Wisconsin is managed in partnership among the Wisconsin Department of Natural Resources, the Wisconsin Department of Public Instruction and the Wisconsin Center for Environmental Education. The ultimate goal is for all Wisconsin schools to be green and healthy.

Benefits of a Green & Healthy School

Innovation happens at schools committed to creating a safe, healthy, and more sustainable learning environment. Schools choosing to be more green and healthy create opportunities for students to connect to their communities, build 21st century skills, gain leadership skills, and feel like they CAN and DO make a difference. It provides a place where staff and students alike are proud to be and take more ownership in the school.

Schools that are green and healthy make sense for the students, staff and the communities who support them. Schools committed to green and healthy practices use less energy, water, and natural resources; create less waste; cost less to operate; and provide a healthier environment in which to learn and work (Olson and Kellum, 2003).

Green & Healthy Schools Wisconsin recognition provides a number of opportunities, some of which include:

Cool Choices for Green & Healthy Schools Game

Cool Choices for Green & Healthy Schools is an on-line, interactive game where school staff, students, and other members of the school community are awarded points for engaging in sustainable actions. The game makes choosing sustainable actions fun and rewarding! It is a unique and easy way to collect measurable impacts (i.e. behavior changes and savings) and to identify areas or gaps in need of attention. This fun team-building experience can help the whole school embrace a green and healthy mentality. The Cool Choices for Green & Healthy Schools game was developed with Cool Choices, (www.CoolChoices.com) a nonprofit created to inspire and assist individuals, communities and small businesses to adopt sustainable practices that reduce their greenhouse gas emissions.

PLT *GreenSchools!*

The "green school" landscape can be challenging to navigate with so many state and national programs available. Green & Healthy Schools Wisconsin has articulated agreements with national programs providing a clear path for schools to participate and benefit from multiple programs at once. When a school registers for Green & Healthy Schools Wisconsin, they will also be automatically registered for the Project Learning Tree (PLT) *GreenSchools!* Program (www.PLT.org/greenschools). This registration provides national recognition as well as additional grant opportunities. When a school receives "Sapling School" recognition, they will also become a certified PLT *GreenSchools!* Wisconsin schools don't have to complete any additional paperwork – Green & Healthy Schools Wisconsin does this for them!

U.S. Department of Education Green Ribbon Schools

Once a school has reached the highest level of recognition, Sugar Maple School, they are eligible to be nominated for U.S. Department of Education Green Ribbon Schools. To be considered, applications must reach Sugar Maple School level and submit their applications prior to December 1st each year (please see www.dpi.wi.gov/environmental-ed/green-ribbon-schools). After all applications have been received, a review committee determines which schools will be nominated for the awards.

Recognition is given at four levels:

Level	Requirements	Benefits
Sprout School	Complete online registration, prerequisites, and provide a short narrative expressing the desire to become a Green & Healthy School Wisconsin.	Welcome packet and certificate Eligible to play the "Cool Choices for Green & Healthy Schools Wisconsin" game Registered for Project Learning Tree (PLT) *GreenSchools!*
Seedling School	Complete Sprout School level and document achievement in at least one focus area.	Certificate
Sapling School	Complete Sprout School level and document achievement in at least five focus areas, including energy, water, school site, recycling & waste management, and environmental health.	Framed Certificate Certified as a Project Learning Tree (PLT) *GreenSchools!*
Sugar Maple School	Complete Sprout School level and document achievement in all nine focus areas.	Certificate Indoor/Outdoor Banner Eligible for ED-GRS nomination

*Schools **do not** have to move through the levels sequentially. If Seedling, Sapling, or Sugar Maple recognition is received, the school will be eligible for benefits of the previous levels.*

In order to maintain recognition as a Green & Healthy School Wisconsin, applications must be updated and re-submitted for review at least once every three years. If updates are not made within three years after registration, the school will be notified and considered "inactive."

No two schools are the same nor are the ways they implement green and healthy initiatives, but, all schools can operate through a sustainability lens. Creating a process for schools to achieve along a continuum and be rewarded throughout the process is the intent of Green & Healthy Schools Wisconsin. This continuum is illustrated below in four stories of schools demonstrating achievement at various levels – Sprout School, Seedling School, Sapling School, and Sugar Maple School.

Sprout School: Sheboygan South High School

Sprout School Requirements: Register, Confirm Certifications, and Pledge Commitment/Narrative
Sheboygan South High School began the Green & Healthy Schools Wisconsin process with a school courtyard clean-up. Now the courtyard has raised garden beds to use in numerous classes: biology, botany, culinary arts, family & consumer science education, technology, and special education. Food grown is used in classes and at lunch. The high school hopes to be a leader in its district and involve other schools. When Sheboygan South is ready to pursue a higher level of recognition, they may use their garden project in the school site, health & wellness, and/or environmental & sustainability education focus areas.

Seedling School: Thoreau Elementary School

Seedling School Requirements: Demonstrate achievement in one focus area in addition to Sprout School level requirements
Thoreau Elementary, part of the Madison Metropolitan School District, received its Seedling School Certificate. In addition to registering with Green & Healthy Schools Wisconsin previously receiving Sprout Level Achievement, they have documented achievement in one focus area, Recycling & Waste Management.
(Seedling School: Thoreau Elementary School Continued)

They are recycling many items including cardboard, milk cartons, plastic containers, plastic silverware, cups, and cans. For over three years, their Parent/Teacher Organization organizes a "Sport Swap Sale" to encourage families to reduce and reuse. Families can bring sporting goods like bikes, helmets, skates, skis, and other sports equipment to a swap sale. Families receive discounted prices on sporting goods and money raised is used for other sustainability efforts in the school. The Green Team, consisting of students in 4th and 5th grade, is involved with waste reduction and energy saving projects. This school is well on its way to demonstrating achievement in more Green & Healthy Schools focus areas.

Sapling School: Dodgeville Middle School

Sapling School Requirements: Demonstrate achievement in the focus areas of energy, water, school site, recycling & waste management, and environmental health in addition to Sprout School level requirements.

Dodgeville School District has a green and healthy school team with staff from each of its schools; they support each other's work in individual schools and work together on the online applications for their respective schools. Dodgeville Middle School, a Sapling School, has students participate in annual energy awareness programs that have resulted in significant cost savings and increased knowledge of how to reduce energy use in school and at home. Some of these efforts were simple and low-cost, such as turning off unneeded lights and electronic devices and reducing the number of small appliances in classrooms. Careful maintenance of plumbing and water fixtures, plus installation of a water bottle refill station have reduced water use and decreased the amount of water bottles in their waste stream. The middle school uses its existing school grounds and an adjacent wooded site for outdoor learning. The district has a detailed wellness policy in place and promotes healthy activities, including making healthy meal choices, learning proper hand washing, and biking to school.

Dodgeville Middle School has participated in numerous other activities over the years to further its green and healthy goals: electronics and ink recycling, annual Arbor Day tree planting, a community bike ride in partnership with Sustain Iowa County, and trash pick-up during Earth Week. The school has water and energy units in sixth and seventh grade curriculum. Family and community participation are part of many green and healthy activities. A community member participates on the district's green and healthy school team. Donations and financial support from area businesses, the local energy utility, and the local teachers' association have helped the school carry out several projects and connect to community.

Sugar Maple School: Houlton Elementary School

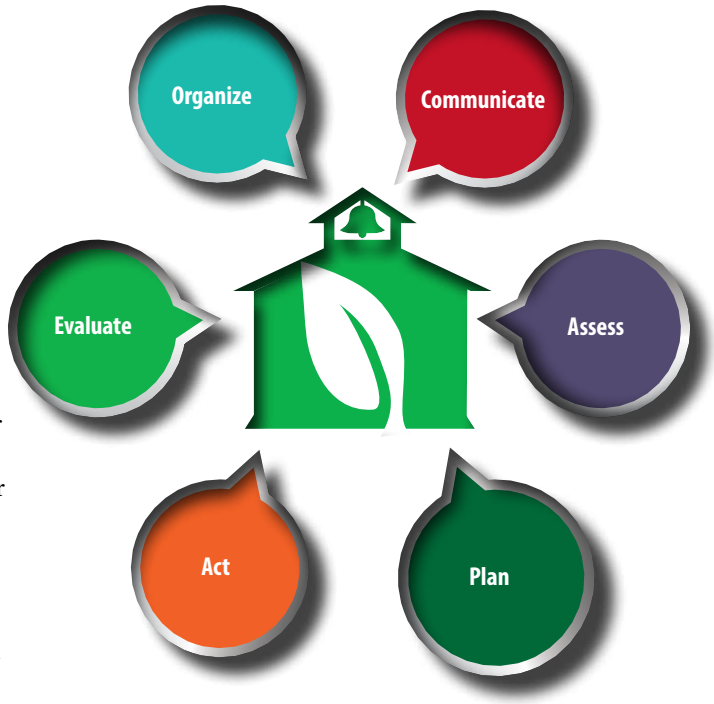
Sugar Maple School Requirements: Demonstrate achievement in all nine focus areas in addition to Sprout School level requirements.

Houlton Elementary, part of the Hudson School District, achieved Sugar Maple School recognition in 2013. Sugar Maple schools need to demonstrate achievement in all nine Green & Healthy Schools Wisconsin focus areas. Houlton Elementary's own goals are student leadership, health and wellness, and environmental sustainability. By setting up student leadership groups such as R3 Squad, health and wellness crew, outdoor learning committee, and garden club, Houlton students lead and learn together to be healthier and have a more sustainable school.

The R3 Squad is a group of students who teach classmates about recycling and composting. They create fun challenges during America Recycles Day and Earth Week. The R3 Squad also helps carry out the school's recycling program and manage the composting schedule. The health and wellness crew is very busy learning and sharing about nutrition and physical activity. They work with local businesses to promote and give out prizes during a "winter family fun & fitness" program. The school has also registered for Team Nutrition, an initiative of the USDA Food and Nutrition Service to support the Child Nutrition Programs through training and technical assistance for foodservice, nutrition education for children and their caregivers, and school and community support for healthy eating and physical activity. They are proud of the way Houlton students are willing to try healthy foods grown in their school's garden. The outdoor learning committee has been working with community members on long-range planning to enhance the school's outdoor space with gardens, an outdoor classroom, a prairie restoration project, a fitness trail, and a challenge course. The garden club, working with Master Gardener volunteers, leads in care of the food gardens at the school. Each grade level has a fun-themed garden project tied to core curriculum. For example, 4th graders grow a "three sisters" garden, and kindergarteners plant pumpkins in spring that they will harvest in fall as first graders!

Section 2

Tips to Get Started



Green & Healthy Schools Wisconsin is a process for schools to work through over time, always striving higher. Green & Healthy Schools Wisconsin is designed to allow schools to start where they are, go at their own pace, and get benefits along the way.

The framework described below, while not a required process, has helped many schools get started. This framework comes from the U.S. Environmental Protection Agency's Indoor Air Quality Tools for Schools, also known as IAQ Tools for Schools. Although originally developed for indoor air quality issues, this framework works well for work in any Green & Healthy Schools Wisconsin focus area.

The framework (www.epa.gov/iaq-schools) identifies actions that assist schools to build or further strengthen their green and healthy initiatives. This process is not linear; rather teams may move through these steps over and over again through time.

IAQ Tools for Schools framework outlines the six key drivers for successful implementation of school initiatives: Organize, Communicate, Assess, Plan, Act, and Evaluate. While organizing a team or outlining a school-wide plan to be more green and healthy, consider these key components and integrate them throughout the process.

Organize

Finding the right people to lead and build the support structure to carry out school initiatives is critical. Designate a responsible and motivated coordinator or co-coordinators to lead and track activities in the school. To support the leader(s), convene a leadership team including senior representatives to support the efforts. Attempt to diversify this team to include representatives from students, faculty, administration, and community members. Then communicate with the school community about this team and how it is organized.

- Develop a systemic approach
- Identify existing assets
- Design standard operating procedures
- Empower a leader to take charge
- Build an effective team
- Create champions
- Secure leadership buy-in

Communicate

Communicate with everyone, all the time. Share the intent, activities, results and next steps with the entire school community to build understanding and buy-in. Making transparent and inclusive communication a priority will help engage participants and program supporters from the community. Highlighting and sharing successes and results can help make program initiatives meaningful for the school.

- Share your goals
- Make the message meaningful
- Be transparent and inclusive
- Communicate results

Assess

Assess your environment (including the building and grounds). It would be important to talk with the facility managers if they are not already on the leadership team. List the assets of the school and grounds. Consider collecting information about the facility from the school staff. IAQ Tools for Schools has an action kit (www.epa.gov/iaq-schools/indoor-air-quality-tools-schools-action-kit) online to assist with this step. When assessments are complete, don't forget to communicate and share the walkthrough findings and action steps.

- Walk the grounds
- Listen to the occupants
- Use technology
- Determine a baseline
- Keep "customers" satisfied
- Identify and prevent risks

Plan

Develop a plan that includes goals, objectives, a timeline, and target standards for the green and healthy efforts at school. Be sure to communicate your plan — including a proposed timeline for action items — to the school community to generate feedback and promote collaboration. Update your plan on a regular basis to reflect new goals, objectives and policies.

- Prioritize actions
- Put goals in writing
- Start small
- Work in stages
- Plan for the future

Act

Act on goals and objectives outlined in the green and healthy school plan created above. Address any hurdles or issues that may delay the implementation of the green and healthy school plan. Prioritize initiatives. Communicate the actions you will take to improve green and healthy school efforts. Be sure to include lead team members, facility staff, teachers, students, and administrators. As you take steps to implement goals, tell your community what you have done and why it is important. This will help sustain your green and healthy initiatives, building community support for your program, and create a culture shift with sustainability as the norm.

- Build awareness and buy-in among students and staff about green and sustainability efforts
- Train occupants to practice more sustainable behaviors
- Overcome hurdles and address issues at the school

Evaluate

Evaluate your results by assessing your progress toward your goals and your program's impact on student and staff health, productivity and performance. Measure your program's impact by monitoring metrics, such as assessing attitudes and behaviors of the school community, compare the difference in school nurse visits, and document attendance and student test scores over time. Assessing the impact of your plan on student health and achievement is a critical step to constantly improving your program and capturing your return on investment. Evaluation can also identify opportunities to decrease costs through preventative maintenance. Consider your results and the metrics for tracking the program as you continue to refine your program strategy.

- Solicit feedback
- Record/document the return on investments made
- Analyze data against the baseline data

Whether or not a team uses the IAQ framework, there are several key tips for implementing a program and practical actions that schools can take to address a wide range of sustainability issues. Effective green and healthy school programs are built through collaboration among all members of the school community. A successful and well-coordinated green and healthy school program involves school administrators, teachers, staff, facility managers, and students who view environmental and health protection and promotion as an essential part of meeting the school's mission. The most successful green and healthy school programs will use an ongoing process to develop, implement, and evaluate policies, procedures, and practices that promote continuous improvement. The following eight tips will help a school build a structure that will support and sustain green and healthy initiatives.

1. **Secure Leadership Support**
   Securing support from an administrator, such as a principal or school district superintendent, is important for success. Administrators can support green and healthy school efforts in a number of ways:
   - Incorporating goals into the school's vision and mission statements;
   - Allocating resources specifically for program policies, procedures, and practices;
   - Communicating green and healthy school program goals to the school community.

2. **Establish a District or School Team or Committee**
   There may already be various committees in place at the school that support green and healthy schools initiatives, such as a transportation committee or a school health advisory council or wellness team. Many schools form "Green Teams" made up of many different members of their school community to complete the application; including but not limited to teachers, principals, business officials, facilities managers, curriculum specialists, school nurses, students, and food service personnel. Whether starting a committee or identifying an existing committee, it is important to establish the leadership within the school community to lead the green and healthy efforts.

3. **Inventory What You Are Already Doing**
   Many times, a great starting point is to simply document what is already happening in the school. Green & Healthy Schools Wisconsin recognizes schools for efforts already taken! Make a list of all the assets in the school that support being more green and healthy. Thinking about curriculum, physical space, building and grounds, community resources, staff, and programs will help you decide what to document first.

4. **Identify Priorities and Goals**
   Take time to set goals and establish priorities to ensure initiatives are implemented successfully. For some schools, that means starting small, such as expanding the recycling program in the school or starting a garden on the school grounds. For other schools, they might create a long-term vision for the school and tackle several aspects resulting in a complete transformation of the school and culture.
   There is no wrong approach to starting on the journey to sustainability in schools. It just takes a first step. Some things to consider when identifying priorities include:
   - Urgency of the issues present at the school;
   - Impact/benefit of addressing the issue;
   - Ability to make significant progress within a set timeframe;
   - Resource constraints; and
   - Stakeholder support.

   Consider setting SMART goals – those that are specific, measurable, achievable, relevant, and time-bound. Being able to see progress can help maintain a team's momentum.

5. Develop an Action Plan

Having a plan will help team members understand what is expected of them. In addition to the goals, the plan could include:

- The roles, responsibilities, and expectations for team members;
- Methods for implementing components (i.e., policies, procedures, practices, and regulations);
- Available resources and resource allocation;
- A budget;
- A timeframe for implementation; and
- Performance measures for evaluating program success.

6. Encourage Student Involvement

Enabling student participation throughout green and healthy school initiatives afford students a sense of ownership and accountability in the ultimate success of the effort, and provides unique learning experiences. Student involvement could include:

- Adopting environmental education and sustainability curricula in relevant courses (e.g., science and health);
- Encouraging high school seniors to incorporate green and healthy schools topics into senior projects;
- Establishing an environmental health club or a related student-led group;
- Offering extra-curricular activities that relate to the environment, environmental health, health and wellness, or environmental and sustainability education;
- Providing opportunities for students to run public service campaigns (e.g. asthma awareness and idling reduction campaigns); and
- Offering volunteer opportunities at the school or in the community that promote environmental stewardship.

7. Provide Faculty and Staff Training

Providing professional development opportunities to school and district faculty and staff prior to program implementation can greatly add to successful green and healthy school initiatives. Professional development can come from a partnership between governmental and non-governmental organizations or from within the school/district through peer training. Trainers should be able to speak from experience and communicate effectively with the target audience. Professional development can be provided in conjunction with other mandatory or recommended training (e.g., Occupational Safety and Health Administration's 1910.1200 Hazard Communication training or state equivalent). Initial topics should be tailored to a school or school district's areas of greatest need. Consider the following to help identify a focus for professional development:

- The purpose of school's green and healthy initiatives;
- The components of the program being implemented at the school or school district;
- How the school is complying with federal, state, and local environmental laws and regulations; and
- Meeting curriculum requirements and standards through sustainability initiatives.
- The benefits for students, faculty, and school staff; and
- The policies and procedures currently in place that support the program.

8. Promote Success and Celebrate

This tip cannot be emphasized enough. It is probably the most important and often overlooked step; yet it can be the most fun and rewarding step! Communicating program success is essential for schools and school districts to maintain and even increase support for a school's green and healthy program. Celebrating successes is fun for everyone! Consider using one or more of the following methods to promote program progress and success:

- Write a success story for the school newsletter or school newspaper;
- Give a presentation at a school board or parent-teacher organization meeting;
- Invite your local reporter to events or submit a story for print in the community newspaper;
- Have a booth at a community event highlighting the program and its accomplishments;
- Present an award to school faculty and staff who have contributed to the program's success; and
- Nominate a student, staff member, community partner, or the school for a statewide or national award to gain more recognition.

Every school begins their journey with a single step. Using the tools discussed above will help a school set its own goals, take those first steps, and launch an effective sustainable school program.

In the next section, consider the nine focus areas. There may be a focus area in which a school may more easily demonstrate achievement than other areas. Start there. Begin with existing successes and school initiatives, and then branch out. More detailed information for each focus area is provided to support new and ongoing efforts.

Section 3

A Closer Look at the Nine Focus Areas

Green & Healthy Schools Wisconsin provides recognition based on demonstrated achievement in nine focus areas. The focus areas help organize and categorize information despite efforts within these areas often overlapping.

This section of the guide describes each of the nine focus areas. Information provided includes:

- a brief description of and rationale for each area,
- an explanation of how each area contributes to creating safe and healthy learning environments for students and staff,
- educational opportunities and guiding questions to connect with curriculum,
- ideas for actions to get started or enhance green and healthy school initiatives,
- useful tips, resources, and materials to consider, and
- a school success story.

The ideas for action are presented in a tiered structure to demonstrate how every school, even those with little or no additional resources, can take actions to reduce environmental impact and costs, improve health and wellness, and increase environmental and sustainability literacy to ensure that students and staff have healthier places to learn, work, and play.

- **Sprouting Up Actions** are actions/fixes schools can make immediately, and are a good starting point for schools with little or no previous experience with Green & Healthy Schools initiatives.
- **Growing Strong Actions** are essential components of a comprehensive Green & Healthy Schools program.
- **Reaching Higher Actions** are provided for schools that have established a comprehensive Green & Healthy Schools program and are looking for ways to enhance their existing program.

Schools can record progress and achievements in each of these focus areas using the Green & Healthy Schools Wisconsin application. In the application, each of the focus areas has its own set of questions. Question types vary from checking boxes, to entering data, to describing activities in open-ended questions. The three basic categories of questions are:

1. **Student Involvement and Education:** explain how students are involved in taking action and how focus area topics are addressed in the school curriculum.
2. **Staff Training and Professional Development:** explain how staff is involved in taking action and what green and healthy school related training or professional development is available or that staff members have received.
3. **Building Infrastructure:** describe policies and aspects of the facilities that demonstrate or support green and healthy school initiatives.

The following sections will provide support to help address questions in the application and give ideas for sustainability initiatives to be considered in any school and district.

Direct assistance is available for each focus area. A statewide "focus area contact" has been designated to assist schools and aid in your success while going through the Green & Healthy Schools process. These contacts are available to provide resource recommendations (curriculum, related programs, grant opportunities, etc.), advice on planning and implementing projects, and/or answering general questions. For a list of contacts and resources for each focus area, visit www.GHSWisconsin.org.

COMMUNITY INVOLVEMENT

A Closer Look

Effective family and community engagement can help produce a range of positive outcomes including improved student achievement, increased attendance, greater community-wide support for school improvement, and innovative methods to address challenges (SEL, 2010).

Communities depend on a world-ready workforce with integrated critical thinking required to meet the challenges of an interconnected world. Students need to learn to apply knowledge and skills within the context of a global community, deepening their understanding and abilities to think critically and solve problems. The health of every community, small and large, improves as students understand that the content and skills they are learning in school have a direct application to making the world around them a better place (WI DPI, 2010).

EDUCATIONAL OPPORTUNITIES

There are several ways to connect the school to the greater community to provide deeper learning experiences and more relevant education. Service-learning, community service, and visits to community sites such as nature centers, natural/wildlife areas, police stations, fire stations, public health centers, recycling centers and water treatment plants can help educate students about green and healthy topics. Research different types of community resources located near the school and ask if they have tours or educational programs for schools. Set up a meeting with a staff member to learn more about possible collaborations.

Alternatively, invite the community into the school to build on sustainability efforts. Community members, organizations, and businesses can serve as resources to help students learn about health, safety and environmental topics and bring an aspect of "real life" into the classroom. Ask local professionals from community sites to come in and share their expertise. It may be surprising how many businesses and community centers are willing to assist with sustainability efforts in schools. It's likely, too, that parents fill these roles in the community. Invite parents to serve as professional resources to the school.

How well do you or your students know the community? Consider taking on a community mapping project to evaluate Community Involvement for your school's application. The "School Asset Mapping Worksheet" in the appendix may help generate ideas. Sample guiding questions that students could explore and map include:

- What organizations or businesses in our community relate to any of the nine focus areas?
- What organizations or businesses focus on sustainability?
- What organizations or businesses are partners with our school?

Learning about community and place encourages strong ties particularly with social studies learning. As students map out their community, they could look at the bigger picture through geographic patterns and essential questions such as "How does the past influence the present?" Encourage them to think about why their community is laid out the way it is; what does this tell us about our local place, and what was valuable to the people who started it?"Mapping is made easy using online GIS software - such as ArcGIS Online or Google Maps. All schools in Wisconsin have FREE access to ArcGIS mapping software (www.dpi.wi.gov/gis/schools). Community mapping can be as simple as having students complete a spreadsheet with the data collected above, including the business/organization name, address, and zip code and then a .csv file can be uploaded to add a new layer to your map!

IDEAS FOR ACTION

Sprouting Up Actions

- Organize guest speakers from the community to come into specific classes for various lessons
- Provide professional development for faculty and staff by visiting community resources and networking with staff at the various facilities
- Invite members from the community to be part of the "green team"
- Organize a "Green Apple Day of Service" (www.greenapple.org) and invite local businesses, organizations, and community members to volunteer or donate supplies

Growing Strong Actions

- Hold "green team" or other committee meetings at locations in the community that relate to the topic at hand and arrange a tour as part of the meeting
- Integrate community-focused student projects into the curriculum to provide real-life application of concepts learned in school
- Consider how local businesses might fit into the curriculum and implement ideas, and include a field trip to the business
- Host an open house at the school to invite community members into the school and highlight student projects

Reaching Higher Actions

- Create strategic partnerships with local businesses and organizations that provide ongoing support to schools and provide rich learning experiences for students, like internships, job shadowing, apprenticeships, and training

COMMUNITY INVOLVEMENT

LEARN MORE

High Quality Instruction that Transforms: A guide for implementing quality academic service-learning, (www.dpi.wi.gov/sites/default/files/imce/service-learning/pdf/high_quality_learning_web.pdf) by Wisconsin Department of Public Instruction
This document provides support to those wanting to create meaningful service-learning opportunities for schools in Wisconsin. It includes standards, indicators, and ideas for developing effective instruction that uses the community for "developing 21st century skills which will lead to a prepared workforce and civically engaged citizenry.

Working Systemically in Action: Engaging family and community by SEDL (www.sedl.org/ws/ws-fam-comm.pdf)
This guide is intended to help educators, families, and community members reframe the way they encourage family and community engagement—shifting from random acts of involvement to engagement within a systemic approach to support school improvement.

National Service-Learning Clearinghouse website by Generator School Network (www.gsn.nylc.org/clearinghouse)
This website is full of connections, resources, and ideas for integrating real-life, relevant, and engaging community involvement and service-learning opportunities in schools. Connect with a national network of schools and hear their stories.

Service-Learning, Learning by Doing: Students take greening to the community [PDF] by US EPA (nepis.epa.gov/Exe/ZyPDF.cgi/P100FEA5.PDF?Dockey=P100FEA5.PDF)
Read about stories of schools throughout the country implementing successful service-learning projects in local communities. Contact information is included to reach out to learn if there is a specific interest.

COMMUNITY INVOLVEMENT FEATURED SCHOOL

Tomorrow River Community Charter School (TRCSS) in Amherst Junction, a Sugar Maple School and 2014 U.S. Department of Education Green Ribbon Schools honoree, builds and maintains strong partnerships and connections with community members and area businesses. Examples include the Midwest Renewable Energy Fair, where TRCSS has a children's workshop tent, and Mid-State Technical College, with whom TRCCS works on energy conservation at its school site. Located at the Central Wisconsin Environmental Station, the school works collaboratively with staff on water conservation and lake quality, recycling and waste management, and environmental education. Parents work closely with the school on many projects, including efforts to improve carpooling and bus transportation options.

There are many other community partners the TRCCS engages to enhance and advance learning opportunities for their students including: neighbors, the local lake association, Wisconsin Center for Environmental Education, Boy Scouts, Tomorrow River School District, Wisconsin K-12 Energy Education Program (KEEP), Central Rivers Farmshed, and the Foundation for Sustainability & Innovation. It is through these connections that the school is able to involve their community in all of the Green & Healthy Schools Wisconsin focus areas.

Research has shown that service-learning is a promising strategy for dropout prevention (Billig, 2000; Billig, Root, & Jesse, 2005; Bridgeland, DiIulio, & Wulsin, 2008). Academic service-learning activities address various components or strategies identified as important to dropout prevention, such as engaging teaching and curricula, connections between school and work, adult and student relationships, communication skills, and community engagement.

In Wisconsin, service-learning is defined as "a teaching and learning method which fosters civic responsibility and links classroom learning and applied learning in communities" (WI DPI, 2010). The strongest service-learning experiences occur when the service is intentionally immersed in ongoing learning and is a natural part of the curriculum that extends into the community.

ENERGY

A Closer Look

Reducing energy use, encouraging energy-saving behaviors and purchasing energy efficient appliances conserves natural resources, reduces the carbon footprint and can save the school money. Simple measures a school takes with energy efficiency and conservation can have big savings on greenhouse gas emissions, reduced environmental impacts, and significant financial gains. According to the United States Environmental Protection Agency, schools spend approximately $75 per student on gas bills and $130 per student on electricity each year (U.S. EPA, 2008). By implementing energy efficiency measures, many K-12 schools have been able to reduce energy costs by as much as 30 percent in existing facilities (U.S. EPA, 2004b). Reducing energy consumption can also improve student performance. Daylighting can reduce lifetime utility costs 30-70% and improve student performance.

Energy use in school plays a large role in the performance of a building. To create high performing schools, several components are considered including: site design, daylighting and windows, energy-efficient building shell, lighting and electrical systems, mechanical and ventilation systems, renewable energy systems, water conservation, recycling systems and waste management, transportation, and resource-efficient building products. With energy systems being a large player in high performing schools, it is important to establish baseline energy performance as a first step to making improvements in the school. A widely used tool for assessing this baseline is EPA's online Portfolio Manager (www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager),which compares a building's energy performance to the performance of similar buildings across the country and tracks building energy data overtime. Armed with baseline consumption data, school districts can establish energy efficiency goals to help maintain momentum for energy management activities, guide daily decision-making, track and measure progress, and ultimately achieve green building certifications.

This section aims to answer some of the questions you may have regarding integrating more energy education in the curriculum, provide guidance into helping increase efficiency in the school, and provide training and professional development opportunities that are available as it relates to energy.

Research shows that students with the most daylighting in their classrooms progressed 20 percent faster on math tests and 26 percent faster on reading tests in one year than those with the least (Heschong Mahone Group, 1999).

ENERGY

EDUCATIONAL OPPORTUNITIES

School energy use and information can be used as a way to integrate real-life and relevant energy education into any curriculum at any grade-level. The **Wisconsin K-12 Energy Education Program (KEEP)** (www.KEEPprogram.org) has several standards-based lessons to help students explore energy education in the curriculum for all grade-levels. Here are some guiding questions and curricular ideas to consider with your students and staff:

- **Energy Sources:** Where does energy come from? How does energy flow in various types of systems (living and nonliving)? What are the effects of energy resource developments? What are the sources of energy used in the school? Who supplies the energy at the school? What is the local utility provider? Is there a utility representative available who can talk to a class or student group, or present during a staff meeting?
- **Energy Use and Data:** Recognizing and interpreting energy use patterns makes students aware of how people use energy at school. How do we use energy? How do we manage energy use? What audit opportunities are available for students to do in the classroom or in the school building? Can real school data on energy use be used to analyze in a STEM-related class? Who do we need to ask to access school energy data?
- **Involve students in calculating energy costs.** Have students compare the costs of buying and operating standard and energy-efficient products to enable them to make informed choices when purchasing products that use energy. (KEEP activity *The Cost of Using Energy.)* Consider having students graph your school's monthly electricity and natural gas usage. Typically 36 months of past utility data are analyzed to interpret demand. Ask students to examine a sample school electric bill and interpret a story to identify energy users and analyze peak demand. (KEEP activity *Demanding School Electric Bills.*)
- **Alternative Energy Sources:** Are there additional sources or technologies the school can use to meet our energy needs? What are the installation or up-front costs of these alternatives? Are there incentive programs available to assist with these energy projects?
- **Energy Related Trainings and Professional Development**: What training and professional development opportunities are there for students and staff to gain more knowledge, skills and experiences to address energy issues in our school and community? Are there staff who have specific training or skills in energy?

IDEAS FOR ACTIONS

Sprouting Up Actions

- Program computers (and monitors) to shut down when not in use
- Encourage school staff to use a staff break room where coffee makers and a fridge are located instead of each separate classroom having their own
- Offer staff professional development related to energy management and/or energy education
- Initiate an Energy Patrol Program whereby students monitor classrooms and other areas for energy waste

Growing Strong Actions

- Install motion sensors in bathrooms, storage closets, maintenance spaces and other low traffic areas
- Develop and implement district-wide energy management practices and policies through a School Energy Policy and Education Plan
- Work with a federal or state energy management services provider, such as CESA 10, Johnson Controls, McKinstry, or other private provider
- Purchase ENERGY STAR qualified products when equipment needs replacing

Did you know? Schools with effective conservation programs have reported reductions of as much as 25% in utility bills (Alliance to Save Energy, 2014).

Reaching Higher Actions

- Integrate energy education into the curriculum school-wide
- Generate or use renewable energy from on-site sources at school
- Certify school buildings to green building standards such as ENERGY STAR certified schools, LEED certification, Collaborative for High Performance Schools (CHPS) Certification
- Contact district administrators to request that a percentage of the dollars saved from energy efficient measures are applied to make additional energy efficiency changes (ASE, www.ase.org/resources/energy-saving-tips-schools)

LEARN MORE

Wisconsin's K-12 Energy Education Program (KEEP) (www.KEEPprogram.org) developed a **Conceptual Framework** to help guide the education leading to energy literacy specifically for Wisconsin. (www.uwsp.edu/cnr-ap/KEEP/Pages/Resources/Framework.aspx).
Schools can use this framework to inform local curriculum design. In addition, teachers can participate in KEEP courses to develop their own energy literacy and get the K-12 curriculum developed specifically for Wisconsin.

Energy Literacy: Essential principles and fundamental concepts for energy education by the National Office of Energy Efficiency & Renewable Energy (www.energy.gov/eere/education/energy-literacy-essential-principles-and-fundamental-concepts-energy-education)
This resource is the culmination of public listening sessions and thousands of experts from diverse fields of study contributing to a dialogue about what an energy literate person should know and understand. It provides essential guiding principles for integrating more energy literacy in schools.

National Energy Education Development Project (www.NEED.org)
Consider having your students conduct an in-depth energy survey of their school building, paralleling the tasks performed by engineers and other technicians in the energy management industry. Through the National Energy Education Development Project (NEED) School Energy Survey students will investigate all aspects of their school's energy consumption by conducting a comprehensive eenergy audit and developing an energy conservation plan to implement.

Energy Efficiency Programs in K-12 Schools: A guide to developing and implementing greenhouse gas reduction programs by the U.S. EPA and State and Local Climate and Energy Program (2011). (www.epa.gov/statelocalclimate/documents/pdf/k-12_guide.pdf)

National Best Practices Manual for Building High Performance Schools, The Best Practices Manual was written as a part of the promotional effort for EnergySmart Schools, provided by the U.S. Department of Energy, to educate school districts around the country about energy efficiency and renewable energy (2007). (http://energy.gov/eere/downloads/national-best-practices-manual-building-high-performance-schools)

GREEN BUILDING GUIDELINES AND RATING PROGRAMS

Collaborative for High Performance Schools Criteria, guides schools through criteria to increase school performance. (www.chps.net/overview)

ENERGY STAR certification by the U.S. Environmental Protection Agency. ENERGY STAR certified buildings and plants meet strict energy performance standards set by EPA. They use less energy, are less expensive to operate, and cause fewer greenhouse gas emissions than their peers. Starting with the first ENERGY STAR certified building in 1999, tens of thousands of buildings and plants across America have already earned EPA's ENERGY STAR for superior energy performance. (www.energystar.gov/buildings/about-us/energy-star-certification)

Green Building Initiatives' Green Globes, offers Green Globes environmental assessment and certification programs for commercial buildings. These online and on-site programs make flexible and affordable building rating system. (www.thegbi.org)

LEED Certification by the U.S. Green Building Council's, LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each rating system, and teams choose the best fit for their project. (www.usgbc.org/leed)

PROFESSIONAL DEVELOPMENT AND TRAINING

For Teachers

- KEEP Professional Development KEEPprogram.org
- Center for Green Schools: Green Strides Webinar Series www.greenstrides.org
- Center for Green Schools: Green Existing Schools (on-demand free web trainings) www.centerforgreenschools.org/resources
- Center for Green Schools: Green Classroom Professional Certificate Program (on-demand free web training) www.usgbc.org/classroom/gcp

For Facility Managers

- WASBO Facility Managers Program Certification and Designations
- Practical Energy Management (PEM) Several companies offer this training
- Building Operator Certification (BOC) www.theboc.info
- U.S. EPA: How to Apply for ENERGY STAR Certification and Portfolio Manager 101 (free webinars, registration required) www.energystar.gov/buildings/tools-and-resources/portfolio_manager_101_set_properties_and_meters_generate_reports
- Focus on Energy: Practical Energy Management Training for School and Government Facilities (face-to-face course, registration required, registration fee) www.focusonenergy.com/about/events
- U.S. Green Building Council Wisconsin www.usgbc.org/usgbc-wisconsin
- Seventhwave (on-demand free web trainings) www.seventhwave.org/education/webinars/accredited
- Operating and Maintaining EnergySmart Schools, www.doe.cefpi.org

ENERGY FEATURED SCHOOL

Middleton High School was recognized as a U.S. Department of Education Green Ribbon Schools honoree in 2012. Also recognized at the Sugar Maple School level with Green & Healthy Schools Wisconsin, Middleton High School documented achievement in each of the nine focus areas. In the energy focus area, they describe a multi-faceted approach.

The school has gathered information on their building with an energy audit and uses EPA's Portfolio Manager to track ongoing usage. They've achieved ENERGY STAR recognition five years running and have reduced their usage over 18%, substantially reducing energy costs for the school. Specific efforts include using solar energy to heat their swimming pool, using daylighting where feasible, upgrading lighting fixtures, installing occupancy sensors and vending misers, reducing hallway lighting when school is out, and upgrading the HVAC system.

In addition to work to improve the school building, Middleton High has promoted energy education, both for staff and students. The school's energy manager has completed several recognition courses, and educational opportunities are forwarded to staff. Several Middleton teachers were among the participants in KEEP courses conducted at Middleton High School.

Students are also an important part of the energy picture. The Advanced Placement (AP) Environmental Science students and Ecology Club members encourage their classmates to conserve energy. Energy is taught in all high school grades, most often in chemistry, physics, environmental science, and engineering coursework. AP Environmental Science students use data downloaded from the school's solar panels in their studies.

ENVIRONMENTAL HEALTH

A Closer Look

When a school environment is unhealthy, students may be exposed to harmful pollutants and chemicals that may cause their health, attendance, and academic performance to suffer. This focus area is about creating a healthy physical environment at the school. "Environmental health" is a broad topic and covers many areas including cleaning and maintenance, mold and moisture, chemical and environmental contaminant hazards, ventilation, and pests and pesticides. Poor environmental health can impact student learning and staff performance.

In Wisconsin, it is required that all public schools have an Indoor Environmental Quality (IEQ) Plan. It is important to find out who your IEQ Coordinator is and engage that person and the building custodians for this focus area. The facility director is beneficial as well, as there may be district policies that have to be addressed. Engaging whoever makes purchasing decisions is helpful to examine current practices and policies regarding cleaning supplies.

This section is broken up into five specific areas providing ideas for action in each.

1. Cleaning and Maintenance
2. Mold and Moisture
3. Chemical and Environmental Contaminant Hazards
4. Ventilation
5. Pests and Pesticides

EDUCATIONAL OPPORTUNITIES

Here are some guiding questions and curricular ideas to consider with your students and staff:

- **Cleaning and Maintenance:** How do cleaning practices and products impact health? What routine cleaning practices ensure a healthy environment? What types of cleaning products are used? How do "green products" compare to more harsh chemicals? How does room use impact cleaning practices (i.e., are there areas difficult to clean due to obstructions?)
- **Mold and Moisture:** What impacts can mold and moisture have on health? What potential sources for mold or moisture problems exist in the school? How can mold and moisture issues be avoided?
- **Chemical and Environmental Contaminant Hazards:** What types of chemicals are in the school? How are chemicals for classes like chemistry stored and managed? How are students and staff notified if there is an indoor or outdoor air quality issue?
- **Ventilation:** How does air flow into, through, and out of the school? Identify these areas around the school. Do all rooms seem to have the same air flow or are there variances (in humidity, temperature, etc.)? How does classroom use (i.e., furniture arrangement, wall hangings, clutter) impact ventilation? What are the benefits of good ventilation systems in schools? What are some possible concerns?
- **Pests and Pesticides:** What are potential sources for pest problems in the school? How can potential problems be avoided? Research various ways to manage pests and analyze environmental impact of each management practice.

Subtopic A: Cleaning and Maintenance

School environments are healthier when they are kept clean and well maintained. Unsanitary conditions attract insects and vermin, and irritants and allergens found in dust and dirt can have a negative impact on student health and performance in schools. Indoor air pollutants and allergens related to poor cleaning practices contribute to increased respiratory and asthma symptoms among children and adults (National Research Council, 2006). According to the Center for Disease Control, asthma is one of the leading causes of school absenteeism, resulting in nearly 14 million missed school days annually nationwide (Akinbami, 2006). Regular and thorough cleaning and building maintenance can prevent pest problems, minimize irritants and allergens, and create healthier learning and working environments for children and staff.

Choosing the right cleaning products and practices is critical for maintaining a healthy school environment and protecting the health of children and staff. The chemicals found in some cleaning products can cause health problems, including eye, nose, and throat irritation and headaches, and in some cases can trigger asthma attacks. Using green cleaning products and practices can help to avoid these health effects, improve indoor air quality, and increase the lifespan of facilities.

Maintaining the school facility is just as important as routine cleaning to ensure a healthy environment for students and staff. A regular inspection program can identify problems before they impact the school environment and the occupants' health. School building maintenance protocols should address the entire building infrastructure: the foundation, exterior and interior walls, windows and doors, and roofing.

IDEAS FOR ACTION

Sprouting Up Actions

- Maintain an up-to-date inventory of all cleaning products used
- Keep copies of Safety Data Sheets (SDSs) for all cleaning products in an accessible location
- Vacuum using high-efficiency vacuums and filters (e.g., high efficiency particulate air filters)

Growing Strong Actions

- Establish a green cleaning and preventive maintenance plan for your school. Involve teachers, administrators, purchasing officials, and custodians in designing and implementing the plan
- Train facilities and custodial staff on cleaning practices and policies, as well as procedures for handling a chemical spill
- Use EPA's IAQ Tools for Schools action kit checklists to assist with routine school building inspections and maintenance

Reaching Higher Actions

- Record number of nurse visits due to symptoms associated with exposure to cleaning products (e.g., eye, nose, and throat irritation, headaches, and asthma attacks)
- Incorporate information and updates on healthier cleaning into newsletters, school announcements, and other outreach material
- Encourage community use of natural products through fundraising efforts. Consider having students create their own environmentally friendly cleaners through classes or student organizations

Subtopic B: Mold and Moisture

The key to mold control is moisture control. Keeping the school environment dry is essential for maintaining a healthy school building, as well as promoting an environment conducive to learning and working. The presence of moisture within building structures stimulates the growth of molds and other biological contaminants, and damp schools provide a nurturing environment for mites, roaches, and rodents, which are associated with asthma, allergies, and other respiratory diseases. Moisture and mold can also damage building infrastructure and result in costly renovations. Individual school districts have incurred costs from $200,000 to as much as $13 million for remediating mold and mildew damage (NIOSH, 2003 & 2010; Scheel, Rosing, Farone, 2001; EPA, 2003; Velez and Broward County Grand Jury, 2002). A few hundred dollars of annual preventive maintenance can avoid the need for costly mold remediation, as well as the potential legal liability posed by the presence of mold and mildew and its health risk for children and staff.

IDEAS FOR ACTION

Sprouting Up Actions

- Conduct an initial inspection of the school environment. Identify immediate actions that can be taken.
- Fix leaking plumbing and leaks in the school building and roof as soon as possible
- Watch for condensation and wet spots. Address sources of moisture problems promptly
- Consult EPA's Mold Remediation in Schools and Commercial Buildings (www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide or www.epa.gov/sites/production/files/2014-08/documents/moldremediation.pdf) website for mold cleanup guidance and procedures

Growing Stronger Actions:

- Ensure ventilation systems are circulating the indoor air properly
- Maintain indoor humidity levels between 30% and 60%

Reaching Higher Actions:

- Develop and record measures specific to the school that will demonstrate improvement in adopting effective moisture management techniques. Examples include: Reduction in the number of mold findings within the school facilities and recording moisture levels in susceptible locations
- Integrate information on mold into the student curricula across all grades

Subtopic C: Reduce Chemical and Environmental Contaminant Hazards

Schools need to provide a safe and healthy learning environment for children by preventing unhealthy exposure to chemicals and environmental contaminate hazards. Children spend a significant portion of their time in school and might be more vulnerable to chemical and environmental contaminant hazards than adults because their bodily systems are still developing. They eat more, drink more, and breathe more in proportion to their body size than adults; and their behaviors can significantly increase their exposures to chemicals and potentially harmful organisms.

Schools use chemicals in classrooms, science laboratories, art studios, vocational education shops, and facility maintenance. Many of these chemicals are toxic to humans, animals, and the environment and should be managed in a manner that protects students and school staff from accidents and risk of exposure. Exposure to some chemicals can cause serious health effects, including cancer; brain and nervous system disorders; organ damage (i.e., liver, kidneys, and lungs); irritation of the eyes, skin, nose, and throat; and asthma attacks. Below is a list of potential environmental health risks for students with a short description of the threats posed if chemicals are not properly handled, stored, or completely removed from the school.

Thoughtful chemical purchasing and management contributes to a healthy school environment, so consider the possible health, safety and environmental implications before buying a particular chemical. Proper chemical use and management (e.g., storage, labeling and disposal) is critical for reducing chemical exposures and costly accidents which ultimately affect student learning and attendance.

Mercury

Mercury is a known neurotoxin and is used in many items found throughout schools, such as thermometers, barometers, switches, thermostats, fluorescent lamps, and laboratory reagents. The most common form of mercury found in schools is elemental mercury, and exposure primarily occurs when elemental mercury is spilled or when a product containing elemental mercury breaks and the mercury is exposed to the air. Symptoms of elemental mercury exposure include tremors, irritability, mood swings, insomnia, muscle weakness or atrophy, headaches, and performance deficits on tests of cognitive function. Higher exposures to elemental mercury can result in kidney damage, respiratory failure, and death.

Polychlorinated biphenyls (PCBs)

PCBs are found in a variety of building products, including fluorescent light ballasts, which were installed in schools built before 1979. Congress banned the manufacturing and use of PCBs in 1976, and EPA phased out their use, with some exceptions, in 1979. Many of the fluorescent light ballasts that were installed before the ban, however, could contain PCBs and might still be used in schools. PCBs are highly toxic and high levels of exposure might cause cancer and neurodevelopmental effects in humans. Although intact PCB-containing light ballasts might not pose an immediate health threat, failing or leaking fluorescent light ballasts in schools could result in unsafe levels of PCBs in the air children breathe over the long-term.

Lead

Lead-based paint is an additional concern for schools, especially those built prior to 1978. Lead exposure affects the nervous system and can cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Lead-based paint and lead contaminated dust are the main sources of lead exposure in U.S. children. Intact lead-based paint might not pose a hazard, but paint that flakes or becomes dust could result in unsafe levels of this dangerous chemical in the school environment.

Radon

Radon is a colorless, odorless, tasteless radioactive gas that occurs naturally in almost all soil and rock. Radon is found in outdoor air and can enter schools through cracks or other openings in the foundation. Exposure to radon is the second leading cause of lung cancer after smoking. (WHO, 2009) Although there is no evidence that children are at greater risk of lung cancer from radon exposure than adults, EPA recommends that schools test frequently occupied rooms at or below ground level for radon.

Asbestos

Students and school employees face significant health risks from lingering asbestos in schools and colleges across the U.S. One area of concern for parents and teachers is the prevalence of asbestos in U.S. school buildings. If a school was built before the 1980s, it's likely that it contains some form of asbestos. About half of all schools in the U.S. were built from 1950 to 1969, when asbestos materials were highly prevalent in construction. When maintenance work disturbs these materials, or they start to deteriorate over time, asbestos dust can enter the air and be inhaled. Exposure to the dust puts teachers and students at increased risk for mesothelioma, lung cancer and other serious lung conditions.

Diesel Emissions

Bus and truck idling at schools can produce concentrated diesel exhaust emissions both inside and outside school buildings. Diesel exhaust contains fine particulate matter that, when inhaled, can cause lung damage and aggravate pre-existing respiratory conditions, such as asthma. (EPA, 2012b) Diesel particulate matter has also been identified as a likely cause of cancer. (EPA, 2012b)The soot and gases emitted by diesel engines are associated with acute eye, throat, and bronchial irritation; exacerbation of asthma and allergies; and potential interference with lung development in children. (EPA, 2012b) In addition to impacting human health, diesel exhaust also harms the environment by contributing to smog formation and acid rain.

Ozone, Particle Pollution, and Air Toxics

Ground level ozone and particle pollution are the two air pollutants that pose the greatest threat to human health in the United States. Ozone, the primary component of smog, can cause throat irritation, coughing, chest tightness, shortness of breath, and aggravated asthma symptoms. (EPA, 2012c) Particle pollution, or particulate matter, can embed deep within the lungs and cause serious health problems, especially for those with respiratory conditions. Even healthy individuals can experience temporary symptoms from exposure to particle pollution, including irritation of the eyes, nose, and throat; coughing; phlegm; chest tightness; and shortness of breath.

IDEAS FOR ACTION

Sprouting Up Actions

- Do a yearly check for expired chemicals and properly dispose of them
- Prepare a chemical management plan. Have safety equipment and materials on hand in case of a chemical spill
- If the school was built before 1978, lead-based paint might be present on coated surfaces. If applicable, develop a list of rooms and areas that contain, or might contain, lead-based paint

Growing Stronger Actions:

- Ensure teachers and staff receive chemical management training as mandated under the Occupational Safety and Health Administration's laboratory safety standard
- Conduct a chemical cleanout. Use the school's chemical inventory to identify unused, unneeded, degraded, and unknown chemicals
- Switch to less hazardous alternative chemicals whenever possible

Reaching Higher Actions:

- Implement green curricula in the classroom. EPA's Safe Chemical Management in Schools Workbook includes a section on putting together and starting a green curriculum in the classroom
- Participate in the School Flag Program to help the school and its surrounding community know the daily air quality conditions. Schools in the flag program raise a brightly colored flag each day that corresponds to the air quality forecast. Based on the color of the flag (green, yellow, orange, or red), teachers and coaches can modify outdoor activities when the air quality is unhealthy.

Checklist for Lead Hazards

Pay attention to the following when inspecting for lead-based paint:

Interior painted areas – Examine walls and interior surfaces to see if the paint is cracking, chipping, or peeling, and check for areas on doors or windows where painted surfaces rub together.

Exterior painted areas – Check exterior paint, which can flake off and contaminate nearby soil where children might play.

Surrounding areas – Be aware of large, nearby structures with peeling or flaking paint that could contaminate the soil around play areas.

Play areas – Examine areas where children play to ensure they are dust free and clean. Outside, check for bare soil and test for lead.

Playground equipment – Check older equipment to determine whether it contains lead-based paint.

Painted toys and furniture – Make sure the paint is not cracking, chipping, or peeling.

Hazardous air pollutants (HAPs), or air toxics, are pollutants that are known or suspected to cause cancer, respiratory effects, reproductive effects, and birth defects. The Clean Air Act lists 187 HAPs, 33 of which EPA has identified as posing the greatest threat to public health and the environment. Of those 33, 13 are mobile source air toxics, which are emitted from vehicles. Excessive idling by school buses, passenger vehicles, and delivery trucks may cause elevated levels of air toxics in and around the school.

Subtopic D: Ensure Good Ventilation

Indoor air pollution has been demonstrated to have an adverse impact on public health. Poor indoor air quality can cause short- and long-term health problems such as coughing, eye irritation, headaches, asthma episodes, allergic reactions, and in rare cases, life-threatening conditions such as respiratory distress. Improperly managed ventilation and filtration systems can contribute to airborne mold, infectious diseases, and carbon monoxide poisoning. Poor indoor air quality can also impact the comfort and health of children and staff, which can in turn affect concentration, attendance, and classroom performance.

Indoor air can be two to five times more polluted than outdoor air and large populations of children might be more susceptible to indoor pollutants than the general population. The high occupant densities of schools and classrooms makes it particularly important for building designers to incorporate ventilation systems that provide adequate outdoor air in compliance with the industry's ventilation standard, American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE, 2010), control moisture, and minimize energy costs.

Good indoor air quality can help ensure a healthier and higher performance learning environment for students and school staff, and proper maintenance of ventilation and filtration equipment plays a big role in the quality of the indoor air. Adequate ventilation with outdoor air is a key component for good indoor air quality in schools and classrooms, and can contribute to mitigating the effects of radon and vapor intrusion. Furthermore, well-maintained air filtration systems capture and remove airborne particles that can be asthma triggers, allergens, and infectious or toxic to humans.

IDEAS FOR ACTION

Sprouting Up Actions

- Establish and implement a regular cleaning schedule for air supply diffusers, return registers, and outside air intakes
- Use EPA's IAQ Tools for Schools program resources to identify, correct, and prevent indoor air quality problems.

Growing Stronger Actions

- Ensure outdoor air ventilation meets or exceeds the industry's ventilation standard (ASHRAE 62.1-2010 Ventilation for Acceptable Indoor Air Quality) or local code

Reaching Higher Actions

- Apply the ASHRAE 62.1-2010 IAQ Procedure. The IAQ Procedure is a performance-based design approach in which a building and its ventilation system are designed to maintain contaminant concentrations at specified levels

Subtopic E: Prevent Pests and Reduce Pesticide Exposure

Droppings or body parts from cockroaches, rodents, and other pests can trigger asthma and can cause allergic reactions. Pests also can transmit infectious diseases. Pesticides contain chemicals that can be toxic to humans and the environment and pose a risk to human health, especially when people do not follow directions on product labels or if they use products irresponsibly (e.g., using pesticides when they are not needed, using pesticides for other than their intended use, or not following recommended application rates). Children can be especially vulnerable to pesticides because their internal organs are still developing and maturing.

Integrated pest management (IPM) is an effective and environmentally sensitive approach to pest management that uses current, comprehensive information on the life cycles of pests and their interactions with the environment, in combination with available pest control methods, to manage pests economically, and with the least possible risk to people, property, and the environment. IPM is a safer and sometimes less costly option for effective pest management in schools. IPM practices can effectively control pests in schools while reducing pesticide use by 70–90% (Green & Gouge, 2011). A school integrated pest management program uses common sense strategies to monitor and exclude pests while also reducing sources of food, water, and shelter for pests in school buildings and grounds. An IPM program should focus on prevention of pest problems first, and take advantage of all pest management strategies, including the judicious and careful use of pesticides, when necessary. The website, School IPM 2020: Reducing pest problems and pesticide hazards in our nation's schools (www.ipminstitute.org/school_ipm_2020/index.htm), is a good resource for schools and school districts to use in developing a school integrated pest management program.

IDEAS FOR ACTION

Sprouting Up Actions

- Review current pest management policies
- Conduct a general integrated pest management assessment at the school

Growing Stronger Actions

- Develop integrated pest management policies and procedures such as a fixed schedule for conducting monitoring routines year round
- Research and consider environmentally friendly options for controlling pests

Reaching Higher Actions

- Provide information to community members about IPM strategies

Follow these guidelines before applying pesticides: Use pesticides that present the least risk of exposure.

- Choose caulk and crevice pesticide applications, bait stations, or targeted spraying
- Carefully follow instructions on the label and use only the amount suggested
- Store all pesticides in a secure area of the building
- Do not use outdoor sprays and chemicals indoors
- Dispose of leftover pesticides and pesticide containers properly
- Do not transfer pesticides to other containers
- Do not spray during school hours, except in emergencies

ENVIRONMENTAL HEALTH

LEARN MORE

Cooperative Educational Services Agency 10 (CESA 10) Environmental Project Consulting Services: CESA 10 in Wisconsin provides schools several types of facility management services including services related to environmental health and performance contracting. Explore their facility management services on their website for details. www.cesa10.k12.wi.us.

EPA Region 2's Environmental Compliance and Best Management Practices: Guidance Manual for K-12 Schools (2006) is a helpful tool to remind schools of their key environmental requirements. EPA regulates many chemicals found in buildings, such as asbestos, lead, PCBs and mercury. It is important to note that additional, and sometimes more stringent, state and local environmental regulations might also apply to schools. www.ehs.columbia.edu/EPACD/k12-manual-epa.pdf

Hazardous Chemicals in Schools (website) helps schools properly manage various chemicals. Type the chemical of interest and information will be generated on proper management. www.hazwastehelp.org/educators/chemlist.aspx

OECD Substitution and Alternatives Assessment Tool Selector (website) The Tool Selector is designed to provide information on tools that can be used in conducting chemical substitutions or alternatives assessments. The filters below may be used to identify tools of greatest relevance to your substitution or alternatives assessment goals. www.oecdsaatoolbox.org/Home/Tools

Schools Chemical Cleanout Campaign – Lessons Learned Report. U.S. EPA, Region III (January 30, 2009) The Schools Chemical Cleanout Campaign (SC3) is a program designed with the objective of raising national awareness of the potential dangers posed by mishandled chemicals in schools. The Environmental Protection Agency (EPA), Region III, developed a pilot project to help promote this campaign in Pennsylvania schools. Ten schools were selected to participate in this pilot project.

ENVIRONMENTAL HEALTH FEATURED SCHOOL

Houlton Elementary School, a recognized Sugar Maple School, made indoor air quality, chemical management, and integrated pest management a priority when implementing sustainability measures in their school. Houlton staff use EPA's Indoor Air Quality Tool for Schools and meet the American Society of Heating, Refrigeration, and Air-conditioning Engineers ventilation standard. A number of actions contribute to indoor air quality improvement there: reducing exposure to asthma triggers, controlling humidity, using exhaust systems and moisture-resistant materials where needed, and inspecting combustion appliances for carbon monoxide releases. Houlton Elementary trains its custodial staff annually about its chemical management program and uses 75% certified green cleaning products. They follow an integrated pest management program, using a recognized pesticide applicator and following all notification, record-keeping, and other requirements for pesticide application (only done when school is not in session). In addition, they use marigolds and bat houses to help reduce garden pests and mosquitoes on the school grounds.

ENVIRONMENTAL & SUSTAINABILITY EDUCATION

A Closer Look

Time spent learning and playing outdoors can reduce incidence of obesity, reduce symptoms of attention deficient and hyperactivity disorder (ADHD), and reduce stress in general. Wisconsin has environmental education standards and a state mandate requires that "Environmental education objectives and activities shall be integrated into the kindergarten through grade 12 sequential curriculum plans, with the greatest emphasis in art, health, science and social studies education" (WisconsinAdministrative Code PI 8.01(2) (k)).

Environmental education (EE) is a lifelong learning process that leads to an informed and involved citizenry having the creative problem-solving skills, scientific and social literacy, ethical awareness and sensitivity for the relationship between humans and the environment, and commitment to engage in responsible individual and cooperative actions. By these actions, environmentally literate citizens will help ensure an ecologically and economically sustainable environment. (*Wisconsin Environmental Education Board, 1998*)

Integrating environmental and sustainability education into existing curriculum creates an opportunity to advance students' understanding of the world using a systems approach to explore and analyze their own communities. This type of integrated education transforms schools into places where students are proud and excited to be by placing the context and purpose for their learning into the local community. Students gain the awareness, knowledge, skills, attitudes, and experiences necessary to become lifelong learners who are literate in sustainability, socially responsible, and passionately involved in their communities.

EDUCATIONAL OPPORTUNITIES

Here are some guiding questions and curricular ideas to consider with your students and staff:

- How does where we live influence how we live? Examine the cultural, social, and economic factors that influence the choices made to address environmental issues. In what ways are our own personal choices positively impacting the local community? Global community? What personal choices can we change to create a more sustainable future locally? How do these local choices contribute to sustainability on a global scale?
- In what ways do humans alter the natural environment? Are humans a part of or apart from the environment? In what ways? What would happen in a world without humans? What would happen without natural resources?
- Are the principal and teachers aware of Wisconsin's environmental education mandate? Do teachers have opportunities for common planning time in order to integrate environmental education across curriculum and grade levels? Are teachers encouraged to attend professional development opportunities related to the environment and sustainability. For those who have received some professional development in this area, how is it applied in the classroom or at the school? Which opportunities exist in the curriculum to use the environment as a context for learning? How is that being done in the school curriculum, and in which classes/grades?
- How are students using the outdoors and real-world application to learn? Do students have opportunities to learn outdoors multiple times each year? In what ways can outdoor learning be expanded in the school? Do students have opportunities to pursue "green" interests outside of class through clubs or competitions?

ENVIRONMENTAL & SUSTAINABILITY EDUCATION

IDEAS FOR ACTION

Sprouting Up Actions

- Encourage each teacher to include teaching outdoors at least once per month
- Establish an environmental club or "green team" for students
- Invite a consultant to your school to model outdoor or EE-integrated teaching. Examples of providers include FIELD Corps , Earth Partnership for Schools, KEEP, and LEAF. For more information and contacts for these and other programs, visit the environmental education resources pages at www.GHSWisconsin.org

Growing Strong Actions

- Develop a school or district-wide scope and sequence that integrates environmental education as part of the regular coursework at all grade levels. Be sure to include regular opportunities for outdoor learning
- Develop your school grounds to maximize opportunities for learning.
- Provide opportunities for students to participate in environmental or sustainability-themed competitions or presentations, such as Envirothon, Youth Summit, Electrathon, Solar Olympics, Model UN, or Destination Imagination's Service Learning Challenge

Reaching Higher Actions

- Allow common planning time for teachers to develop school wide, cross-curricular units or projects that use the environment as a context for learning
- Encourage staff and faculty to attend, and perhaps present at, environmentally related conferences and professional networking events, such as those offered by Green & Healthy Schools Wisconsin, Wisconsin Association for Environmental Education (WAEE), Wisconsin Green Schools Network (WGSN), or North American Association for Environmental Education (NAAEE)
- Integrate EE concepts into assessments, and include environmental and sustainability-related careers into college and career readiness programs
- Encourage all student groups and clubs to integrate environmental and sustainability themes into their activities. Examples include FFA doing a project on local foods, an art club exhibiting a showcase of "upcycled" creations, an astronomy club creating a public service announcement about light pollution, or a debate team integrating environmental issues into their topics

LEARN MORE

Wisconsin has a long legacy of environmental education. There are many resources in the state available to schools, often at no cost.

DNR's EEK! Website Teaching Activities EEK! (Environmental Education for Kids) has a website (www.dnr.wi.gov/eek) for both children and educators. EEK's Teacher Pages provide various teaching activities in science, math, language arts and social studies that connect to the nature and environmental education stories on the children's pages.

EEinWisconsin.org (www.eeinwisconsin.org) is a clearinghouse available online to search for environmental education work. Find events, resources, grants, other organizations and schools offering environmental education programming, and much more.

Earth Partnership for Schools (www.arboretum.wisc.edu/learn/eps) offers ways to transform school grounds to include native plant species for creating educational opportunities without leaving school grounds. Their Rain Garden Curriculum Sampler(www.uwarboretum.org/eps/images/Rain_Garden/RainGardenSampler2011.pdf)is available online. They also provide consulting and professional development services.

Wisconsin Center for Environmental Education (www.uwsp.edu/wcee) fosters universal environmental and social responsibility through the sustainability and environmental education programs in pK-12 schools and communities. The WCEE is home to programs like KEEP and LEAF which each offer specific professional development in energy education and forestry education respectfully. The WI Nature Center Collaborative is coordinated out of the WCEE. Additionally, it manages the WI Environmental Education Resources Library which contains over 5,000 resources in environmental education. With over 20 professional development graduate courses (online and face-to-face), workshops, and in-services offered annually statewide, the WCEE has something to meet any teacher's environmental education needs.

Wisconsin Environmental Education Resources Library (www.uwsp.edu/cnr-ap/wcee/library) is located at UW-Stevens Point. This collection offers Wisconsin schools access to one of the largest collections of environmental education teaching materials in the world. Select from over 1,100 literature books, 1,200 curriculum guides, posters, DVDs, kits, trunks, and more! Online are posted bibliographies on over 15 environmental topics to help you get started. If you aren't sure where to start or are looking for suggestions, just ask the expert staff for great resources!

ENVIRONMENTAL & SUSTAINABILITY EDUCATION

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

- **Children and Nature Network**
  An organization involved in connecting all children, their families and communities to nature through innovative ideas, evidence-based resources and tools, broad-based collaboration and support of grassroots leadership. www.childrenandnature.org
- **Flying WILD**
  Workshops and curriculum offer a whole-school approach to environmental education using birds as the focus. www.flyingwild.org
- **Green Schools Conference and Expo**
  Organized by the U.S. Green Building Council-Center for Green Schools, this event brings together industry experts eager to share their knowledge and efforts to create healthy, sustainable teaching and learning environments. www.greenschoolsconference.org
- **Green Schools National Network**
  A nationwide organization of environmental educators with the collective goal of fostering sustainable K-12 schools across the US. www.greenschoolsnationalnetwork.org
- **KEEP (Wisconsin K-12 Energy Education Program)**
  Working toward a goal of contributing to statewide energy savings, KEEP provides curriculum and teacher training around K-12 energy education. www.KEEPprogram.org
- **LEAF (Wisconsin's K-12 Forestry Education Program)**
  With the mission of integrating learning in and about Wisconsin's forests into K-12 schools, LEAF provides curriculum and professional development to K-12 educators in the state. www.LEAFprogram.org
- **Leopold Education Project**
  Workshops and interdisciplinary conservation and environmental education curriculum based on the essays in Wisconsin author Aldo Leopold's *A Sand County Almanac.* www.aldoleopold.org
- **Project Learning Tree**
  Provides forestry-based environmental education curriculum and training for early childhood and K-12 educators. www.plt.org
- **Project WET**
  Provides water resource curriculum and training for K-12 educators. www.projectwet.org
- **Project WILD**
  Provides wildlife-focused conservation curriculum and training for early childhood and K-12 educators. www.projectwild.org
- **UW –Stevens Point M.S. and Ed.D. Degrees**
  UWSP offers a number of graduate degree programs related to environmental and sustainability education, including an M.S. in environmental education for K-12 Teachers, an Online M.S. in environmental education and interpretation, and an Ed.D. in Educational Sustainability. www.uwsp.edu
- **Wisconsin Association for Environmental Education**
  Statewide organization of formal and non-formal environmental educators; provides annual opportunities to network with other educators and learn about integrating environmental education into the curriculum. www.waee.org
- **Search "events" on EEinWisconsin.org for more possibilities.**

ENVIRONMENTAL & SUSTAINABILITY EDUCATION FEATURED SCHOOLS

The **Middleton-Cross Plains Area School District** is a model of integrated environmental and sustainability education. Their scope and sequence ensures that environmental education is apart of regular coursework at the K-12 level. In addition, projects, clubs and outdoor learning opportunities provide real-life experience in topics such as wildlife biology, invasive species, and composting. District faculty and staff have many opportunities for environmental education-related professional development, including training with KEEP, LEAF, Projects WET and WILD, Project Learning Tree, and many others. More details about the Environmental & Sustainability Education efforts of the Middleton-Cross Plains Area School District can be found at Park Elementary (http://goo.gl/g3oy4C)and Middleton High School (http://goo.gl/pgTrEB).

And!!

With weekly field experiences and environmental education across the curriculum in all grade levels, students at **High Marq Environmental Charter School, Montello School District**, learn to make intelligent and forward-thinking choices. Examples of field day projects carried out by this 7-12 grade school include shelter building, forestry, birding, species identification, and exploring lakes and rivers. Field day locations include the school site, school forest, local water bodies, parks, and other natural areas. Students keep weekly field journals and monthly phenology journals.

Seventh and eighth graders do independent research projects, most of them with an environmental focus. Each year, high school students do a capstone project that involves consulting with a local expert on their subject. The school participates in Envirothon and programs from the Wisconsin Green Schools Network (field biologist program and Youth Summit). Several High Marq staff members have participated in professional development through the LEAF Program, the Leopold Education Project, and No Teacher Left Inside. To connect their curriculum to career & post-secondary school readiness, High Marq has had visits from professionals at the WI Department of Natural Resources, the Aldo Leopold Foundation, and several colleges. Some student projects center on career exploration.

HEALTH & WELLNESS

A Closer Look

Healthy, sustainable schools create an environment where students and staff can become active participants in their school, at home and in the community. These schools help students achieve their full academic potential as well as support them in developing lifelong healthy behaviors. Health and wellness not only includes proper nutrition and physical activity; it also includes social and emotional wellbeing, safety and spending time outdoors and within the community. Research has shown that school health programs can reduce the prevalence of health-risk behaviors among young people and have a positive effect on academic achievement. There are three overall areas of focus for the Health and Wellness focus area in Green & Healthy Schools Wisconsin: food and nutrition, social/emotional wellbeing, and physical activity and fitness.

1. Within the area of **food and nutrition,** schools evaluate their efforts to provide proper and balanced nutrition during school lunch and breakfast (if applicable). It is known that healthy eating helps prevent high cholesterol and high blood pressure, and helps reduce the risk of developing chronic diseases such as cardiovascular disease, cancer, and diabetes. Good nutrition also promotes brain development, better concentration, and improved memory and focus. School gardens and farm to school efforts have proven to be effective programs to bring more awareness to healthy foods and nutrition.
2. **Social and emotional wellbeing** among students and staff is very important in schools. Research, since the 1990s, shows that children who are bullied are more likely than their peers to develop mental and physical health problems. Schools are increasingly doing better providing assistance to meet the needs of students diagnosed with disorders like attention deficit hyperactivity disorder (ADHD). It is now known that students who can handle their emotions and behaviors effectively are more resilient to change, are better at handling stress, and have an easier time planning for their future.
3. The third aspect **to health and wellness** in schools is regarding **physical activity and fitness**. Regular physical activity reduces feelings of depression and anxiety and promotes psychological wellbeing. Regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem, and may improve blood pressure and cholesterol levels.

Addressing these three areas of health and wellness can create a better learning and teaching environment for students and educators.

EDUCATIONAL OPPORTUNITIES

Here are some guiding questions and curricular ideas to consider with your students and staff:

- **Food and Nutrition:** What is a food system? Where does food come from? What impacts do our food choices have? What is the future of food? What fruits and vegetables are regularly available to students? What is the school doing to encourage healthy eating habits both at school and at home? What policies has the school implemented related to foods and beverages available outside of the school meal programs (fundraisers, snack, celebrations)?
- **Social/Emotional Wellbeing**: Discuss the effects of bullying at the schools. How does it impact individual students? How does it affect the whole school culture? Have the students and staff been introduced to the support staff at the school and do they understand the services available to the school community? What ways can positive behaviors and choices be reinforced and rewarded? Explore the "seven dimensions of wellness" with the students and staff.
- **Physical Activity and Fitness:** How does physical health impact mental or emotional health? How are physical activity and fitness related to food? How can my daily choices regarding physical activity impact the environment? Does the school offer a wide variety of options for students and staff to be physically active? Do students, staff, and community members have access to fitness equipment and structured workout facilities or tracks (indoor or outdoor)? What sports, clubs, or groups are there at the school to help organize physical fitness activities? If someone is not involved in a competitive sport, what alternatives does the school offer?

IDEAS FOR ACTION

Sprouting Up Actions

- Encourage school staff to model healthy behaviors
- Establish a School Health Advisory Council (SHAC) or wellness committee
- Set policies or limitations on sugary drinks and snacks in the classroom
- Attend a "Smarter Lunchrooms" training and implement some of the strategies
- Promote walking and biking to school for students and staff

Growing Strong Actions

- Review your district's wellness policy and consider adopting one specific to your school - be sure to share this with your community
- Implement the DPI Active Schools: Core 4+ strategies to increase student physical activity
- Complete the Alliance for a Healthier Generation assessment and create an action plan to improve your school environment
- Install a salad or fresh fruit and vegetable bar for students and staff to access during school meals
- Ensure that all students spend at least 120 minutes per week in school-supervised physical education

Reaching Higher Actions

- Adopt CDC's Whole School, Whole Community, Whole Child model to strengthen the school's approach to learning and health
- Ensure that the school's on-site indoor and outdoor physical activity facilities are available to students, staff, and the community
- Install a school garden that supplies food for students, offers opportunities for outdoor education, and is open to the community
- Apply for the Wisconsin School Health Award or the USDA Healthier US School Challenge

LEARN MORE

Bullying Prevention Program: Excerpted from time to act and time to react by WI DPI
This guide provides information, tips, suggestions, lessons, and resources for addressing bullying specifically in grades 3-5 and 6-8. www.wistatedocuments.org/cdm/ref/collection

Core 4+ Toolkit by WI DPI
Core 4+ is a set of strategies to increase student physical activity. This website is full of additional resources for addressing physical education and activity in schools. www.dpi.wi.gov/sspw/physical-education

Nutrition Education by WI DPI
Nutrition education and the promotion of healthy eating behaviors and lifestyles are essential to students' health, wellbeing, and educational success. Healthy, well-nourished students are better able to reach their full academic and physical potential, are absent less often, and have higher test scores. Through education, Wisconsin students can become empowered to choose healthy lifestyle behaviors to help them excel. DPI recognizes the extra effort it may take to bring nutrition education in the classroom and the School Nutrition Team is available to support and assist schools. The following resources provide lessons and activities that can be easily incorporated into your classroom today.
www.dpi.wi.gov/team-nutrition/nutrition-education

Sustainable Food System Framework by the Wisconsin Center for Environmental Education and UW-Extension
Wisconsin Food Systems Education Conceptual Framework to help incorporate food systems education into your school-wide curriculum.

Wisconsin Farm to School Program part of the National Farm to School Network
The Wisconsin Farm to School Program encourages healthy lifestyles in children and supports local economies. In Wisconsin, comprehensive farm to school programs combine local procurement efforts, nutrition and agricultural education, and student engagement activities such as school gardening, in order to provide students with the broadest benefits. Farm to school activities in Wisconsin have been gaining momentum since 2002, with local food served in more than 200 school districts across the state. Through the commitment of a strong network of partners — including state agencies, schools, farmers, distributors, nonprofits, parents and students — farm to school has become a vibrant movement connecting kids to healthy, local food and connecting farmers to happy, local customers. www.farmtoschool.org/our-network/Wisconsin

Wisconsin Safe and Healthy Schools Center
The Wisconsin Safe & Healthy Schools Training & Technical Assistance Center builds the capacity of Wisconsin public school districts to implement programs in prevention and intervention of alcohol, tobacco, and other drug abuse, mental health, and promote school safety in order to reduce barriers to learning. www.wishschools.org

HEALTH AND WELLNESS FEATURED SCHOOL

Greendale School District won a 2014 U. S. Dept. of Education District Sustainability Award. Their extensive work in the health & wellness focus area was part of their winning application. The school district established an in-school clinic, with a nurse practitioner available for staff and students to help with minor illnesses, asthma and diabetes care, prescriptions if needed, and wellness coaching. The nurse practitioner works with the school nurse to provide numerous other health-related services and educational programming. In addition, the district sponsors a student and family assistance program to meet individual counseling needs. Each school has a number of programs to promote student health, including education about mental health, tobacco, and healthy food choices; sports and fitness clubs and camps; and an increased variety of activities in physical education classes. The district also took on a newer effort to offer additional free after-school physical activities for kids such as basketball, soccer, and yoga.

The District has an extensive staff wellness program. The program provides annual on-site health assessments, wellness challenges, availability of the on-site nurse practitioner, an employee assistance program, discounts on area health clubs, a benefits fair, weekly yoga, personal training advice, and appointments with a Registered Dietitian. The staff program has a 98% participation rate and has led to reduced absenteeism and improved health screening numbers.

RECYCLING & WASTE MANAGEMENT

A Closer Look

Schools generate significant amounts of waste, from paper and computers to food and books. By learning how to handle these wastes as a resource, schools have an opportunity to save on costs and positively influence the future of the school and district, while preserving the environment. Reducing waste, reusing materials, and recycling and buying recycled products lessens a school's impact on the environment by saving energy, cutting greenhouse gas emissions, diminishing the need for raw products to make new materials, and decreasing the amount of materials put into landfills. In many cases, recycling services cost less than trash disposal. Schools and districts can see significant savings through efficient waste management practices.

Recycling and Waste Management topics are divided into three specific areas, each with background information, ideas for action, tips and resources:

A. Recycling and Waste Reduction
B. Composting
C. Hazardous Waste

EDUCATIONAL OPPORTUNITIES

Here are some guiding questions and curricular ideas to consider with your students and staff:

- **Recycling and Waste Reduction:** For most schools in Wisconsin, there exists some form of sustainable waste management strategies already being implemented in schools. It is the reason many schools find this focus area a good starting point for expanding their green and healthy school efforts. Recycling is the law in Wisconsin, so determining ways to expand on efforts and divert more waste from the landfill can save money and reduce impact in the community. Consider the following explorations and questions to address recycling in your school.

1. Refer to the resource in the appendix "Five Steps for Creating a Successful Recycling Program"
2. Contact the local recycler and ask them the following questions:
   - How do they adjust the schedule to reduce collections based on increased recycling?
   - What materials are collected?
   - Does the hauler offer exterior and interior signage?
   - What other educational publications do they offer?
   - Could a representative come to speak to staff about the recycling process and program?
3. Is the school community aware of what materials can be recycled? Can recycling go on forever? What limitations does it have? Have students explore what "planned obsolescence" means. Have them analyze the relationship between product lifecycle and waste. What roles do the 3 Rs (reduce, reuse, recycle) play in my life? Is one more important than another?

4. Curricular ideas for student inquiry around recycling and waste reduction. Guide students through a school survey assess the knowledge and awareness among the school community on what materials can be recycled. Have students develop an advertising campaign for different items. Have students reflect, study, and analyze the 3 R's (reduce, reuse, recycle) and determine the effect on their life and others. Consider adding another "r" for "refuse" (do I actually need this?), "rot" (compost), or "rethink." As students think more critically about the waste hierarchy, have them explore the limitations of recycling and "planned obsolescence". Have students analyze the relationships between these aspects of a product's lifecycle and the waste they generate.

- **Composting:** One of the fastest growing activities in schools related to waste management is composting. The topic allows for many curricular integrations and educational opportunities whether conducted on a small scale, in the classroom vermicompost, demonstration site on the school grounds, or full cafeteria composting program. An idea many schools start with is conducting a food waste audit in the lunchroom to determine how much compostable food is entering the waste stream. No matter the scale, there are simple steps for composting successfully:
  1. Develop a plan
  2. Assess your food waste
  3. Learn what is compostable and what is not
  4. Determine if the project will be led by staff/students or volunteers
  5. Determine if it will be an on-site or off-site project
  6. Be safe and avoid potential health issues

For more details for implementing a school composting program, see "*Steps for Creating a Successful School Composting Program*" in the appendix.

- **Hazardous Waste:** It is important for the health of students and staff to maintain a clean learning environmental free of hazardous wastes. Consider the following ideas and guiding questions to tackle potential issues related to hazardous waste in school.
  1. Has a waste audit been done to identify types and amounts of waste produced in the school? If so, what hazardous materials were identified? If a waste audit hasn't been conducted, consider organizing one.
  2. What policies are in place for managing hazardous waste? How can risks be minimized or eliminated?
  3. Are there alternatives available instead of hazardous chemicals used in the school?

RECYCLING & WASTE MANAGEMENT

Subtopic A: Recycling and Waste Reduction

Recycling protects the environment. Reducing waste, reusing materials, recycling, and buying recycled products reduces a school's impact on the environment by:

- Saving energy and water
- Diminishing the need for raw products to make new materials
- Decreasing the amount of materials put into landfills
- Cutting greenhouse gas emissions

Recycling reduces costs and may even generate funds. Like other organizations, schools pay for waste disposal. In many cases, recycling services cost less than trash disposal. Schools that make an effort to recycle can see significant savings in trash disposal costs. In some cases, recycling may even allow schools to raise revenue through the sale of recyclables. Decreasing the use of materials such as office paper also reduces purchasing, handling, and storage costs.

Wisconsin Recycling: It is the Law

Recycling is enforced by banning a material from disposal at all Wisconsin landfills. Some communities go above and beyond what is required by law. Check with your school's waste hauler to find out what additional materials are accepted for recycling at your school.

Did you know?

The following items are banned from landfills and incinerators statewide and should be reused, recycled or composted:

- Aluminum, glass, steel and bi-metal containers (tin)
- Plastic containers #1 and #2, including milk jugs and detergent, soda and water bottles
- Magazines, catalogs and other materials printed on similar paper
- Newspaper and office paper
- Corrugated cardboard
- Computers, televisions, desktop printers, computer peripherals, DVD players, VCRs, digital video recorders, fax machines, and phones with video displays
- Major appliances including air conditioners, clothes washers and dryers, dishwashers, refrigerators, freezers, stoves, ovens, dehumidifiers, furnaces, boilers, and water heaters
- Yard trimmings, including grass clippings, leaves, yard, and garden debris
- Lead acid vehicle batteries, automotive waste oils, and waste tires
- Oil absorbents and used oil filters

E-Waste

Electronics are a big part of 21st century living. Many students may have cell phones and laptops, and homes often have many electronic devices. It is important to educate students about the environmental impacts of electronics and how to dispose of them responsibly.

Being up to date with new technology is important in schools. While trying to stay current with their equipment needs, schools are faced with important decisions of what to do with the old equipment. A number of electronics, including computers, printers and TVs, are banned from Wisconsin landfills and incinerators. All schools must either recycle electronics or manage them as hazardous waste. Managing used electronics as hazardous waste is expensive and requires schools to follow state and federal hazardous waste rules. Reuse and recycling are usually the most efficient and cost-effective options.

Most of these electronics are made of valuable resources such as precious metals, plastics and glass. Many of these materials require energy to manufacture. Disposal of electronic equipment wastes these valuable resources that could otherwise be reclaimed and reused and instead generates more pollution in order to manufacture new products.

Recyclers registered with E-Cycle Wisconsin receive funds from electronics manufacturers. Because the manufacturers cover some of the costs for recycling electronics, the cost to schools may be lower with an E-Cycle Wisconsin recycler. This is not always the case, and if a school already works with a reputable recycler, they do not need to change to a new recycler.

If a school decides to choose a new recycler, the DNR's (WI DNR, Electronic Recycling in Wisconsin, www.dnr.wi.gov/topic/ecycle) guide to electronics recycling may be a helpful resource. It is recommended to contact two or three recyclers to make sure their services fit the school's needs.

The following are questions you should ask recyclers:

- Do you accept e-waste from schools?
- Do you accept all electronic items?
- What do you charge?
- Do you pick-up the items at our location?
- How do you destroy data?
- Are you part of the E-Cycle Wisconsin program and do you give discounts to schools?

Did you know?

The following electronics cannot be put in the trash in Wisconsin, or sent to Wisconsin landfills. These items should be reused, donated or recycled.

- Televisions
- Computers (desktop, laptop, netbook and tablet computers)
- Desktop printers (including those that scan, fax and/or copy)
- Computer monitors
- Other computer accessories (including mice, keyboards and speakers)
- DVD players, VCRs and DVRs
- Fax machines
- Cell phones

RECYCLING & WASTE MANAGEMENT

IDEAS FOR ACTION

Sprouting Up Actions

- Place recycling containers in all classrooms
- Organize students and talk with facilities staff to manage recycling pick-up schedules
- Assess the contents of the school trash by: Get down and dirty conducting a waste assessment to identify types and amounts of waste the school produces. Identify and discuss ways materials can be diverted from the landfill by reducing, reusing, composting or recycling.
- Participate in E-Cycle Wisconsin: K-12 public schools and
  - Parental Choice Program schools may take advantage of the E-Cycle Wisconsin program to recycle their electronics. Other schools may also use the registered E-Cycle Wisconsin recyclers and may be able to recycle electronics at a low cost, but are not eligible for the manufacturer-subsidized recycling. Another option is to check with the manufacturers of the school's computers to inquire about potential "take-back" programs for schools. E- Cycle Wisconsin provides a network of electronics recyclers in the state. For more information, visit www.dnr.wi.gov/topic/ecycle/schools.html

Growing Stronger Actions

- Organize a Working Team: This team should include at least one person who is familiar with the school or district's overall operations, such as a custodian or an administrator. Having one team member act as a liaison with local community recycling staff or a Department of Natural Resources regional recycling specialist will help with assistance as needed and ensure compliance with all local and state ordinances. The size of the team will depend upon the size of the school and its individual departments/operations. Schools can ask for volunteers or appoint members.
- Set up recycling opportunities at your school through TerraCycle (www.terracycle.com/en-US) for common items such as pens and markers.

Reaching Higher Actions

- Create a plan including the following: goals, targeted materials, logistics for collecting/storing materials, tracking system for waste diverted, budget, signage and communication plan, contacts with the hauler, curriculum integration, and assessment
- Host an electronic recycling drive for the community

Involve Students

Encourage students to participate through classroom lessons and extracurricular activities. By actively contributing to the school program, students will gain a sense of ownership and will likely enlist their peers. Students can be involved in many ways, including the following example activities from Wisconsin school recycling programs:

- Encourage other students to join an environmental club
- Collect or sort materials by type through Terracycle
- Monitor recycling bins to reduce contamination
- Participate in school-wide assemblies to increase enthusiasm for the recycling program
- Enter school-wide or district-wide contests to name the program or design a poster or other educational material
- Write articles for the school, district, or community newspaper about the program or the importance of waste reduction and recycling
- Manage parts of the schools recycling program. Don't forget to ask for volunteers and reward students for their participation, if not already part of a classroom lesson

Subtopic B: Composting in Schools

Composting is a natural recycling process that uses decomposition to break down organic waste – like food scraps, soiled paper, leaves, and grass. With the help of beneficial "decomposer" organisms, such as insects, worms, and bacteria, organic debris is decomposed to form a nutrient-rich soil enhancer called compost. Composting transforms organic waste from an unstable and rotting state into a stable, rich, earthy state. Involvement ranges from simple classroom worm bins to large, school-wide operations that produce tons of compost a year.

Benefits of Composting

Composting can help schools reduce their waste and is an activity that can be integrated into school curriculum, providing hands-on learning opportunities in science, math, and other disciplines. Every school day each student generates about two pounds or more of compostable materials. (NERC, 2010) Composting diverts valuable nutrients, which would otherwise be wasted in landfills, and puts them to use directly back in gardens, flower beds, and farms.

IDEAS FOR ACTION

Sprouting Up Actions

- Add an assignment for the students to research composting and consider the benefits

Growing Stronger Actions

- Establish a demonstration compost site on the school grounds or vermicompost in the classroom
- Partner with a local organization that will take compostable waste from the school

Reaching Higher Actions

- Establish a cafeteria composting collection system of taking post-consumer compostable materials from the school kitchen and cafeteria for composting on the school site or to give a local hauler

RECYCLING & WASTE MANAGEMENT

Subtopic C: Hazardous Waste, Universal Wastes, Medical Waste, and Used Oil

Hazardous waste is a special class of solid waste that must be managed properly to protect human health and the environment. Federal and state laws regulate how businesses, institutions, governments and other non-households must manage this waste. In Wisconsin, there are currently about 11,000 businesses, schools, and government institutions that generate varying quantities and types of hazardous waste.

All generators must make a hazardous waste determination and properly dispose of their hazardous waste. Additional requirements apply based on the generator classification. Some generators must file an annual report with the DNR.

Some of the common frequently asked questions in relation to hazardous waste can be found on the WI DNR website. www.dnr.wi.gov/topic/Waste/HazardousFAQ.html

It's important to be aware of another category of regulated wastes called universal wastes. These are commonly generated wastes that have streamlined requirements intended to encourage recycling. The list of materials that can be managed as universal waste in Wisconsin includes:

- hazardous waste batteries, such as lithium, nickel-cadmium, silver oxide, lead-acid;
- hazardous waste pesticides that are either recalled or collected in waste pesticide collection programs;
- thermometers and mercury-containing equipment;
- hazardous waste lamps, such as fluorescent bulbs; and
- antifreeze, which is a Wisconsin-specific universal waste if it is recycled.

For schools generating any of these universal waste types, WI DNR has publications and web pages for specific waste types to provide information on properly managing them. WI DNR also has a video to help identify these wastes and implement best management practices. See the video at the bottom of this web page: www.dnr.wi.gov/topic/Waste/Hazardous.html

Some schools or districts may wish to take advantage of the state hazardous waste disposal contract. This contract is available to municipalities and schools under a cooperative purchasing agreement for hazardous wastes and used oil. Universal wastes, fluorescent lamps, batteries, mercury containing equipment and certain pesticides, are covered under another contract. The contracts can be found on www.vendornet.state.wi.us/vendornet.

Free Trainings!
Each spring, the Wisconsin Department of Administration offers a no-cost hazardous materials awareness and waste disposal training for employees working at state-owned or operated facilities and to employees of municipalities, tribal governments, public K-12 schools, technical colleges and universities. This training would be most useful for maintenance and custodial staff, groundskeepers, and administrators (as leaders with responsibility for student and staff safety at school).

Wisconsin Administrative Code requires employers to provide training to workers who use hazardous chemicals to ensure the employees are thoroughly familiar with proper handling, disposal and emergency procedures relevant to their responsibilities. The training covers the management and proper disposal of products such as fluorescent lamps, batteries, laboratory chemicals, oils, antifreeze, paints, thinners, cleaners, corrosives & poisons. These training sessions meet the state regulatory requirements in NR 662.192(1)(e)(3) for Small Quantity Generators of Waste and NR 673.16 for Small Quantity Handlers of Universal Waste.

Medical and infectious waste have special management and disposal requirements. For schools, these wastes would most likely be sharps, blood or bodily fluids, some types of lab waste, and materials used to clean up any of those substances. The following link provides information on these wastes and how to reduce and manage them www.dnr.wi.gov/topic/healthwaste/infectious.html

Motor oil and used oil filters are banned from landfills in Wisconsin and need to be recycled instead of put them in the trash. For the most recent information on this topic, we refer you to recycling motor oil, oil filters and other automotive products on the DNR's website. www.dnr.wi.gov/topic/recycling/oil.html

There are numerous possible sources of regulated waste in a school setting: laboratories, art rooms, tech/industrial arts/wood shops, building maintenance, cleaning, health office, pesticides, and others. What's the best way to reduce the potential regulatory burden from these wastes? Plan ahead by buying substances and products that do not need to be managed as regulated waste following their use.

IDEAS FOR ACTION

Sprouting Up Actions

- Do a waste audit to identify types and amounts of waste the school produces. Examine each process at school that generates hazardous waste, and identify where changes can be made.
- Start a hazardous waste minimization program
- Only buy what is needed. A sale on chemicals may only result in more hazardous waste to dispose of if the chemical exceeds its shelf life
- Waste Exchanges – if the chemical is still good, can another company use it?

Growing Stronger Actions

- Check EPA's website for additional hazardous waste minimization ideas www.epa.gov/osw/hazard/wastemin/minimize/faqs.htm.
- Waste Exchanges – if the chemical is still good, can another company use it?

Reaching Higher Actions

- Eliminate all materials that would be hazardous waste when ready for disposal
- Scale up and implement a school or district-wide zero waste program

LEARN MORE

Connecticut Department of Environmental Protection Recycling Program - Town of Mansfield.
School Composting: A Manual for Connecticut Schools – The Next Step in Recycling (2002) This manual outlines the steps start to finish for developing composting in schools.
http://www.ct.gov/deep/lib/deep/compost/compost_pdf/schmanual.pdf

Cornell Waste Management Institute - *Health and Safety Guidance for Small Scale Composting. (2005)* This factsheet provides answers to the many questions school may have for establishing a compost at a school. www.cwmi.css.cornell.edu/health.pdf

Is Your Waste Hazardous? (www.dnr.wi.gov/topic/Waste/Hazardous.html**)** is a very useful publication to help determine if a school is generating hazardous waste. If a school does generate hazardous waste, they must follow certain requirements, depending on the quantity of hazardous waste generated during any month. There are three hazardous waste generator categories:

- very small quantity;
- small quantity; and
- large quantity generators.

See www.dnr.wi.gov/topic/Waste/Definitions.html for specific details.

U.S. Environmental Protection Agency has several resources to help with recycling and waste management in schools. They published a detailed case study of hazardous waste management at a school in Burlington MA: www.nepis.epa.gov/Exe/ZyPDF.cgi/000002BL.PDF?Dockey=000002BL.PDF. They also have a Toolkit for Safe Chemical Management in K-12 Schools and information on chemical purchasing and management.

Wisconsin Department of Natural Resources - *Home Composting -The Complete Composter. (2001)* This brochure outlines simple steps to establish a home composting site that can easily be applied to schools looking to establish a demonstration site at their school.
http://dnr.wi.gov/files/pdf/pubs/wa/wa182.pdf. They also provide a list of waste management specialists around the state who are available to address questions as needed. www.dnr.wi.gov/staffdir/_newsearch/contactsearchext.aspx?exp=hazardous+waste+requirements.

Classroom Activities
The Wisconsin Department of Natural Resources has created numerous curriculum resources and educational pamphlets to support schools and teachers to address recycling and waste management topics in schools. Here is a list of materials to consider.

Ecycle materials

- How Much E-Waste? E-Cycle Wisconsin activity for grades 6-8 (WA-1731)[PDF] (http://dnr.wi.gov/files/PDF/pubs/wa/wa1731.pdf)
- What's in Our Electronics? E-Cycle Wisconsin activity for grades 6-8 (WA-1673)[PDF] (http://dnr.wi.gov/files/PDF/pubs/wa/wa1673.pdf)
- Whose E-Waste Is It, Anyway? E-Cycle Wisconsin activity for grades 9-12 (WA-1730)[PDF] (http://dnr.wi.gov/files/PDF/pubs/wa/wa1730.pdf)
- E-Cycling in Wisconsin, by the numbers (WA-1716)[PDF] (http://dnr.wi.gov/files/PDF/pubs/wa/wa1716.pdf)
- Other free E-Cycle Wisconsin outreach materials (http://dnr.wi.gov/topic/Ecycle/outreach.html)
- "World of difference" educational poster (WA-1629)[PDF] (http://dnr.wi.gov/files/PDF/pubs/wa/wa1629.pdf) order free printed copies through our DNR's Keepin' it in the Loop (http://dnr.wi.gov/org/caer/ce/eek/teacher/recyclingstudyguide.htm) has activities and curriculum materials about general recycling and electronics recycling.

RECYCLING & WASTE MANAGEMENT FEATURED SCHOOL

Colby Elementary, a 2015 U.S. Department of Education Green Ribbon School, recycles as much as they can, composts cafeteria food waste and landscape materials, and properly manages hazardous chemicals and waste. One of their most noticeable waste diversion efforts has come from recycling milk cartons. Students are involved with helping during lunch periods to be sure straws are removed and milk is emptied before placing cartons in proper and well labeled containers. It was so successful at the elementary school, that the program was expanded to the middle and high school. Additional items that are properly recycled in the district includes: paper, glass, metals, plastic containers, ink cartridges, cell phones, batteries, deodorant sticks, schools, chargers, and computers/electronics.

Their composting program is also very successful. The school received funds from the Parent/Teacher Club and IDEA Foundation to purchase bins for composting and recycling at the school. They compost cafeteria waste and landscape waste material. They use this practice as an educational tool, teaching students about food waste and how nature can turn it into garden food.

To manage their hazardous waste, they follow proper guidelines in the Materials Safety Data Sheet to dispose of hazardous chemicals and waste. Their e-waste is taken to Helping Hands Recycling Facility. The Colby School District has greatly reduced its volume of trash to the point that they have reduced the need for an additional waste bin on their property. Their efforts save the district money and serve as a model for other schools to follow.

SCHOOL SITE

A Closer Look

School sites provide excellent educational opportunities when designed, managed and used correctly. Various research papers in outdoor education have revealed significant improvements in cognitive development, self-discipline, imaginative and creative expression, language skills, and social interactions (Blair, 2009; Dyment, 2005; Lieberman & Hoody, 1998). Each school has unique school grounds offering endless opportunities to extend the classroom beyond four walls. Many schools even have school forests.

This section aims to answer some of the questions you may have regarding integrating school sites into your school or district curriculum. Also, it will provide resources to help your school or district move forward in the School Site focus area.

School site can be divided into three categories:

1. **School Forests** –A school forest is land registered through the state community forest program and owned or controlled by a public school and used for environmental education and natural resource management.
2. **School Gardens** –Used for growing vegetables and fruit, school gardens provide many educational opportunities. Note: Some Farm to School information will be in "Wellness" section as well.
3. **School Grounds** – Any outdoor area around your school, including playgrounds, can be used for outdoor learning opportunities.

EDUCATIONAL OPPORTUNITIES

Here are some guiding questions and curricular ideas to consider with your students and staff:

- What benefits do outdoor learning opportunities have on curriculum outcomes and student engagement?
- How can the school grounds or school forest provide a local context to learning? Are there citizen science programs students can be involved in that can be conducted at the school to gather data for larger state and national studies?
- How could the school grounds support what is already being taught?
- What resources do teachers at your school need to incorporate outdoor learning across the curriculum?
- What is your goal for how often students have opportunities for outdoor learning?
- Involve students or staff in conducting a school site assessment to identify more educational opportunities using the school grounds. What corner of your school lot could be used for a garden? Composting demonstration site? Outdoor learning area?
- Do you have a school forest, or a parcel of land that could become a school forest?

IDEAS FOR ACTION

Sprouting Up Actions

- Go outside for a lesson. Outdoor learning can take place on any school site, even if all you have is a small patch of grass or just a paved play area.
- Find out if your school has guidelines for outdoor learning. These may include principal notification, consent forms, etc.
- Add a short presentation about outdoor learning into the agenda of an upcoming staff meeting. Include information about your school's outdoor learning guidelines, as well as pointers for classroom management outdoors. (See the LEAF Program website at www.uwsp.edu/cnr-ap/leaf/school-grounds/Pages/Step-Outside.aspx for help.) Take teachers and staff outdoors during this meeting to point out locations that may be appropriate for outdoor learning. Encourage all teachers to include an outdoor learning component into at least one lesson in the month following this meeting.
- If your school owns a school forest, share maps and/or photographs of the site with all teachers to encourage use of the school forest for teaching and learning
- In the spring or fall, plant some quick-growing vegetables, like radishes or peas, in pots. Encourage teachers to visit the pots with their students. Provide teachers with easy examples for including the vegetables into their content (i.e. measuring in math, soil testing in science, observational writing in ELA, etc.).
- Establish a school garden committee and/or a school site committee—don't forget to ask parents and community members to join. Share *LEAF's School Ground Development Handbook* (www.uwsp.edu/cnr-ap/leaf/SiteAssets/Pages/Develop-Your-Site/School%20Grounds%20Development%20Handbook.pdf) with the members of your school site committee.

Growing Stronger Actions

- Use the site inventory found at www.uwsp.edu/cnr-ap/leaf/school-grounds/Pages/enhance-your-site.aspx to determine additional ways that you might use your existing grounds to teach content
- Make simple site enhancements that will add depth to outdoor learning experiences. Examples include planting trees, shrubs and flowers, or installing a birdhouse.
- Work with your facilities staff to decide a location for school gardens
- Invite LEAF, Earth Partnership for Schools, or a similar organization for a school in-service centered around outdoor learning
- If your school or district does not have a school forest, establish a committee to look into the process of acquiring one

Reaching Higher Actions

- Create a permanent outdoor classroom
- Establish an annual tree planting event on your school ground or school forest
- Provide opportunities for teachers to use common planning time to design interdisciplinary student projects using the school site
- Leverage parent and community members to establish a collection of donated outdoor wear. This may include rain boots, rain coats, winter boots, winter coats, snowshoes, etc.
- Work with your kitchen staff to feature produce from the school garden in lunches or snacks
- Utilize your school forest more than one time each year

LEARN MORE

Community Groundworks (www.communitygroundworks.org) offers hands-on learning opportunities and connects individuals to urban agriculture and natural lands. The Wisconsin School Garden Network, a project of Community Groundworks, offers training for teachers, technical support, grant opportunities and other resources for youth gardens. Their publication, *Growing Healthy Children: Garden-based nutrition interventions that support the health of Wisconsin's youth* by Community Groundworks and Northwoods LEAN (2015), includes several ideas, resources, and stories of schools across Wisconsin using garden-based initiatives to advance student achievement. www.communitygroundworks.org/sites/default/files/GrowingHealthyChildren_web.pdf

Earth Partnership for Schools (www.arboretum.wisc.edu/learn/eps) offers ways to transform school grounds to include native plant species for creating educational opportunities without leaving school grounds. Their *Rain Garden Curriculum Sampler* (www.uwarboretum.org/eps/images/Rain_Garden/RainGardenSampler2011.pdf) is available online. They also provide consulting and professional development services.

LEAF, Wisconsin's K-12 Forestry Education Program, provides workshops, customized in-services, free curriculum, and model teaching to support learning on the school grounds and school forest. Relevant resources include:

- **School Forest Program** – See the *School Forest Handbook* for development and implementation ideas. (http://www.uwsp.edu/cnr-ap/leaf/Documents/School%20Forest%20Handbook%202013.pdf)
- **School Grounds Program** – See the School Grounds Development Handbook for a six step process for developing your school site. (www.uwsp.edu/cnr-ap/leaf/SiteAssets/Pages/Develop-Your-Site/School%20Grounds%20Development%20Handbook.pdf)
- **Project Learning Tree (PLT)** - LEAF administers PLT Wisconsin offering professional development for educators statewide.

Wisconsin Department of Health Services produces *Got Dirt?* (https://www.dhs.wisconsin.gov/physical-activity/foodsystem/gotdirt.htm), designed to assist with the implementation of school, community, and child care gardens, and *Got Veggies?* (www.dhs.wisconsin.gov/physical-activity/foodsystem/gotveggies.htm), a garden-based nutrition education curriculum.

Wisconsin Green Schools Network (WGSN) (www.wisconsingreenschoolsnetwork.org) is committed to helping teachers take students outside to use the environment as a context for learning to develop environmental literacy while increasing academic achievement. WGSN offers networking, student events and professional development events, including No Teacher Left Inside and Youth Summit.

SCHOOL SITE FEATURED SCHOOL

Westlawn Elementary School in Cedarburg, a 2013 U.S. Department of Education Green Ribbon School, has done a lot of great work with its forest. Two big efforts were removing invasive species and making trails. Students have planted over 500 native trees in the forest, in collaboration with a nearby nature center and neighboring church. Westlawn's garden won a "Mayor's Beautification Award". The garden features a variety of plants, amphitheater-style outdoor seating, and art created by students.

Learning and teaching in the garden and the forest includes read-alouds, descriptive and poetry writing, and science lessons using the 5 senses, recording plant observations, and plant classifications. In the forest, students also observe habitat throughout different seasons, make observations, and write about their learning. They test temperatures of air and soil, do soil rubbings, find evidence of plant and animal life, and measure leaf litter.

Teachers took part in a professional development opportunity before the start of the school year in which a plant expert from Riveredge Nature Center walked them through the woods and identified plants. Additionally, grade level representatives spent two full days at a teacher in-service at Riveredge Nature Center. Their goal was to develop monthly student activities that would highlight the environmental education curriculum. Each grade level completed a unit for teachers to use with their students in the Westlawn forest. Teachers are also creating outdoor classroom kits for student use. Their kits include hand lens, cardboard "clipboards", soil augers, soil thermometers, anemometers, spoons, containers, and other exploration materials.

TRANSPORTATION

A Closer Look

The transportation choices we make can have a great effect on the environment and our health. Vehicles such as cars, SUVs, trucks and buses release harmful gases into the environment, which can cause both air pollution and health problems. Making sustainable choices for transportation can lead to improved air quality, lower fuel costs, and reduced traffic at school. Wherever there is a safe route, students can enjoy some time outdoors as they walk or bike to school. Some schools have organized Walking School Bus routes or bike "trains" (both options led by adult volunteers) to get kids to school safely and in the company of friends. For families or schools where this is not a workable option, school buses and carpools reduce the number of individual vehicles needed to get kids to school.

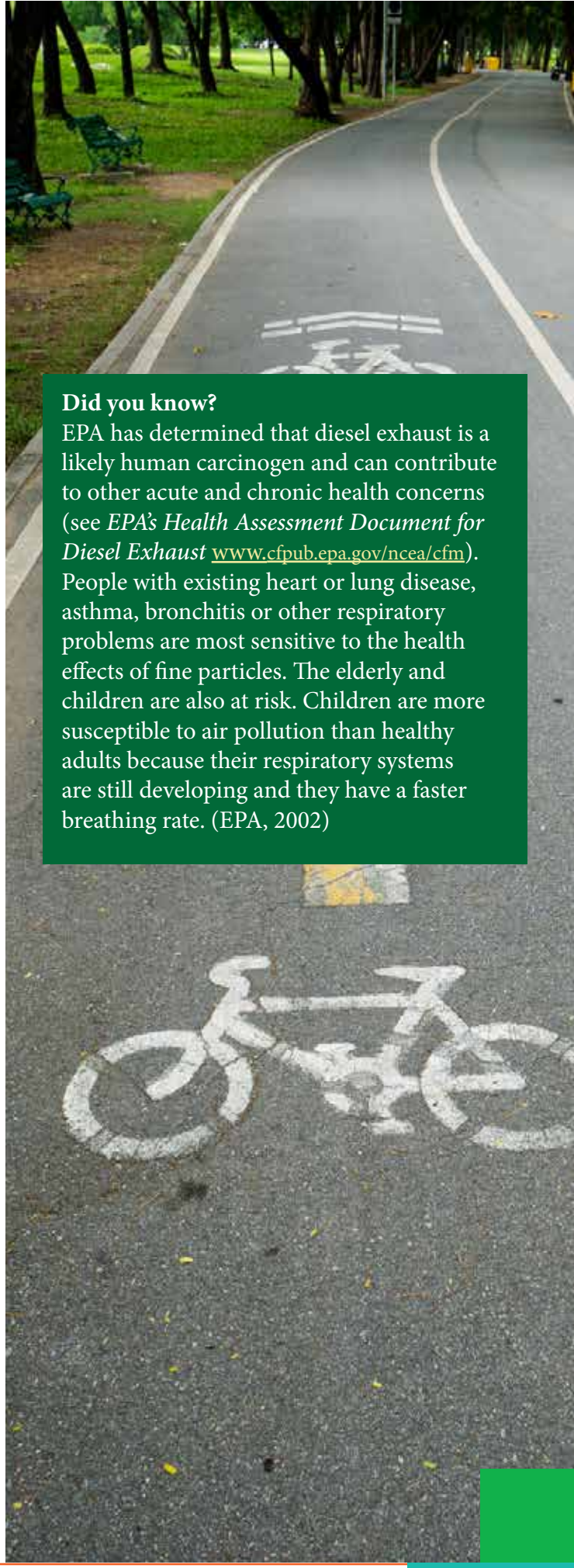
Schools can make a lot of progress on their green and healthy initiatives by creating, encouraging, and rewarding those who opt for more sustainable transportation options such as biking, walking, or carpooling more. To encourage staff and students to select more sustainable transportation options, consider designating parking stalls for those driving efficient vehicles or carpooling. Of course, there is the bus system at most schools that can be further encouraged by all eligible students to ride each day. Creating these more sustainable options encourage healthy and active lifestyles, improves safety and reduction of traffic, reduces overall school fuel consumption, and reduces air pollution in the vicinity of schools.

A big air quality issue at school occurs most before and after school when a larger amount of air pollution from vehicles are created during vehicle idling. Idling of school buses and other passenger vehicles creates fumes that are not only harmful to the environment, but also to humans. Unnecessary bus and car idling affects human health, pollutes the air, wastes fuel, and causes excess energy use.

Creating a school bus idling policy can help reduce vehicle idling, especially in areas where students and staff gather. Be sure the vehicle loading/unloading zone at the school is at least 25 feet from building air intakes, doors, and windows. Post signs to remind people to turn their vehicles off or wait further from the buildings to reduce exposure to harmful emissions.

Use the websites and resources to help implement a school bus idling policy at your school.

- **U.S. EPA's Clean School Bus** www.epa.gov/cleandiesel/clean-school-bus
- **Earth Day Network** – No Idling Campaign www.earthday.org/noidling contains a *No Idling Toolkit for Schools*, lesson plan ideas for grades 1-8, and downloadable data sheets.



Did you know?
EPA has determined that diesel exhaust is a likely human carcinogen and can contribute to other acute and chronic health concerns (see *EPA's Health Assessment Document for Diesel Exhaust* www.cfpub.epa.gov/ncea/cfm). People with existing heart or lung disease, asthma, bronchitis or other respiratory problems are most sensitive to the health effects of fine particles. The elderly and children are also at risk. Children are more susceptible to air pollution than healthy adults because their respiratory systems are still developing and they have a faster breathing rate. (EPA, 2002)

EDUCATIONAL OPPORTUNITIES

Everyone should be aware of the different transportation options and the financial, health, and environmental impacts of their transportation choices. Here are some guiding questions and curricular ideas to consider with your students and staff:

- How has the American transportation system changed over the past two centuries?
- How is the American transportation system similar or different to other developed countries?
- What impact does our transportation system have on land use?
- How do transportation choices impact health?
- How could our local transportation system be improved?

Vehicles and Parking: Perform an assessment of the school parking lot. How does water run off the surface and flow into surrounding areas? Are there permeable surfaces that can be considered or 'bioswales" that can help with runoff? What are some alternatives to blacktop surfaces for parking lots? In what ways could the school encourage sustainable transportation options? What alternatives are there in the community?

Alternative Transportation Options: Does the school have safe routes to school to encourage walking and biking? What individual and community benefits are there to alternative transportation options? What safety concerns may need to be considered? What role might groups like a parent group, PTO, or other volunteers in town play to assist with programs like a "walking school bus" or "bike train?" Involve students in developing a school plan for National Bike/Walk to School Day or Week in May.

Idling: What impacts might excessive idling have on the school community? What ways can the school work to implement a no-idling policy or encourage a reduction of idling in front of the school?

TRANSPORTATION

LEARN MORE

KEEP's Sustainable Transportation Conceptual Framework (www.uwsp.edu/cnr-ap/ClimateChange/Pages/ST-Framework/default.aspx) Developed in partnership between the Wisconsin K-12 Energy Education Program (KEEP) and Cool Choices, this framework provides educators with a resource to improve understanding of sustainable transportation, guide lesson development related to these subjects, and to provide assistance with linking these challenging topics to various subject-areas and content standards.

National Safe Routes to Schools (www.saferoutesinfo.org) Encouraging sustainable transportation at schools provides great benefits. The National Safe Routes to Schools has been formed to assist in re-thinking their transportation routes to schools. This program has three main goals:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school;
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Their website offers a number of resources, tips and tools to create a "safe routes to school" initiative.

National Walk to School Day (www.WalkBikeToSchool.org) This site allows schools to register for the Walk to School Day and provides information related to safety, planning the event, and keeping it going!

TRANSPORTATION FEATURED SCHOOL

Waunakee High School focused on transportation when it played the Cool Choices sustainability game. The initiative was started by the staff/student Green Team at Waunakee H.S. About 25% of Waunakee's students and staff participated in this quarter-long effort, logging more than 1,200 miles of commutes that were more sustainable than past commuting behaviors. Because the school surpassed its goal for percentage of staff and students playing, they purchased a water bottle refill station for their all-school prize, which has proven to be popular with students.

IDEAS FOR ACTION

Sprouting Up Actions

- Promote walking, biking, busing, and carpooling by posting information, reminders, and resources in newsletters, on the website, and on social media
- Sign up for the National Bike/Walk to School Day in May and get everyone outside to bike/walk at recess or another time during the day
- Create school maps that show routes for walking and biking safely. Be sure to include locations of bike racks. Disperse maps to parents and students at the start of the school year
- Determine if the school has sufficient bike racks and assess their condition and location at the school

Growing Strong Actions

- Implement a no-idling policy for school buses, passenger vehicles, and delivery trucks, and post signs stating all vehicles are prohibited from idling on school premises
- Promote or provide professional development for staff focused on transportation. Some options include KEEP's Energy Efficient Vehicles course, Project Learning Tree, and Air Quality Workshop for Teachers
- Set up Walking School Bus routes around the school's neighborhood
- Dedicate parking spaces for carpooling, electric, and/or hybrid vehicles

Reaching Higher Actions

- Work with your local utility or renewable energy provider to install a solar charging station for electric vehicles
- Reassess the busing routes to see if there are routes you can eliminate or combine with other routes, potentially reducing a bus or mileage
- Instill an incentive program for students and staff such as a punch card for carpooling or biking/walking
- Set up busing or other carpool options for parents/families to utilize for out-of-town sporting or other events. This is a great way to reduce cars on the road and it enhances the school community/networking opportunities!

WATER

A Closer Look

Water is a shared natural resource in Wisconsin and one under increasing demand. It is essential to carefully manage water consumption to help assure an ample supply for drinking and other uses. Land use affects both groundwater and surface water quality statewide. Rivers and lakes are important resources for fishing, wildlife habitat, and recreation. Wetlands are important wildlife habitat and help reduce flooding.

Safeguarding water quality protects both human health and the environment. Conserving water saves money on utility bills. Many practices that protect water can be implemented for little or no cost and offer real-world knowledge to students about their part in the water cycle.

Following are ideas for taking action and integrating water into the curriculum, and examples of what others have done in this focus area.

The Benefits of Safeguarding Water

Protecting Water Quantity: As the population grows, conserving water can help ensure there is enough water available to meet demand. Conservation may take many forms, including individual and organizational efforts to use less water, use of rain gardens to divert stormwater from surface flow to groundwater recharge, protection of wetlands, and keeping water within its original watershed. The Great Lakes Compact (www.dnr.wi.gov/topic/greatlakes/compact.html) protects the Great Lakes basin through joint water management among states and provinces and by banning water diversion out of the basin.

Protecting Water Quality: Eroding soil, fall leaves, trash, spilled liquids, and other substances from the land surface can all end up in lakes, streams, and wetlands, changing the water chemistry in undesirable ways. Groundwater quality can be affected by land use in aquifer recharge areas and anywhere pollutants can infiltrate through the ground to an aquifer. Sometimes pollutants take a "shortcut" to an aquifer from an underground source or through a sinkhole or improperly sealed well. Protecting drinking water has long-term benefits, helping ensure a clean supply in the future and reducing the potential cost of reconstructing or replacing a water supply system because of contamination.

Reducing Costs: Like other businesses, schools pay for their water use, either from operating their own water and septic systems or directly to a utility. Schools and districts that make an effort to conserve can see savings in water use and wastewater treatment costs. In some municipalities, stormwater management costs are part of the utility bills. In this case, schools may be able to reduce this portion of their utility bill by decreasing the amount of impervious surface on their property.

WATER

EDUCATIONAL OPPORTUNITIES

Here are some guiding questions and curricular ideas to consider with your students and staff:

- Why does water matter? How much fresh water is there in the world? How do we use it? Why do we care about its quality and how much we use?
- What is the water cycle? Figure out how we fit in one of our world's most important natural recycling efforts.
- Where does your water come from? Trace it back to its original source in groundwater or surface water.
- Where does water go when we are done with it? How is wastewater treated? If your wastewater goes to a septic system, what happens to it there?
- How do storm water runoff, flooding, and wetlands fit into the water cycle? How can they make a difference in water quality?
- How much water (and money) did our school save with conservation efforts?
- Does my community have a wellhead protection program? What is that, and why does it matter?
- By doing a water use audit and carrying out water-related programs in schools or districts, teachers and administrators demonstrate environmental responsibility and good decision making. Involving students in assessing water use and implementing conservation and protection measures also offer hands-on, project-based learning opportunities to teach students about sustainability.

There are many opportunities for service-learning when learning about water. For example, students might participate in water-themed fundraising (sale of native plants, low-flow showerheads, etc.), share how what they've learned might apply at home, or create a rain garden at a community site to reduce runoff and increase groundwater infiltration. Similarly, students can participate in service-learning projects related to water quality. For example, students may put on a water quality expo for other students or their community, work on beach cleanups, or help restore a stream bank. Students could also share water protection tips with student-prepared news articles, flyers, and posters.

IDEAS FOR ACTION

Sprouting Up Actions

- Check fixtures for leaks
- Use faucet aerators
- Use mulch to help landscaping and flower beds retain moisture and suppress weeds
- Redirect rooftop downspouts away from paved areas to grassy or vegetated areas
- Use only the amount of deicing salt needed to make sidewalks and parking lots safe

Growing Strong Actions

- Do a water audit to explore the school's water use
- Document the amount of water used and water costs. This establishes baseline data to reference and document in subsequent years.
- Use native plants on school grounds to reduce watering needs
- Set up rain barrels to collect water for garden and landscaping needs
- Put in a rain garden to increase infiltration, reduce drainage problems, and protect lakes and streams from polluted stormwater runoff

Reaching Higher Actions

- Have students prepare diagrams, posters, or interpretive signs showing the differences on school grounds before and after putting in a rain garden installation, redirecting stormwater, or other water project
- When it's time to upgrade, consider automatic shut-off faucets and low-flow toilets
- When it's time to replace, consider replacing paved playground surfaces with a porous surface material
- Pour unused milk (and other beverages) into a sink in the lunchroom and compost food waste to keep it out of the garbage

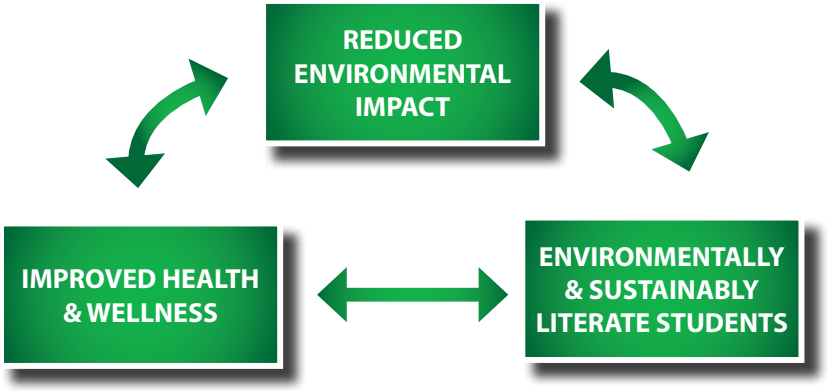
WATER FEATURED SCHOOL

Milwaukee Environmental Sciences Academy (MESA), has completed the first phase of its Stormwater Re-Use Project--the installation of a clear system of pipes that diverts stormwater from a 2,000 square foot section of the roof to two cisterns located on the school's playground and courtyard.

The project was funded by the Fund for Lake Michigan and the Metropolitan Milwaukee Sewerage District in an effort to create a pathway for other schools to install similar stormwater re-use systems in schools throughout the Milwaukee area. To support these replication efforts, MES and its partners--Stonehouse Technologies, Rozga Plumbing, and Reflo Sustainable Water Solutions--have convened a Green Schools Consortium for Milwaukee group and develop a set of resources that include a replication resource guide, a curriculum framework and a water impact report.

In total, the project will re-use 30,000 gallons per year of stormwater that would otherwise enter the area's combined sewer system. School staff, students, parents and community members were engaged in the design of green infrastructure site features and educational efforts. Education includes community outreach that informs surrounding community members, many of whom are currently faced with basement flooding, about the value of stormwater re-use.

This project has been used as a model and is being replicated in other schools in Milwaukee to expand the impact.



Section IV: A Step-by-Step Guide to the Application

To be recognized as a Green & Healthy School, schools complete an online application. The application is structured to demonstrate achievement toward three goals:

1. reduced environmental impact,
2. improved health and wellness, and
3. increased environmental and sustainability literacy.

To start, visit www.MyGHSWisconsin.org to set up a login and password. Before beginning the application, 1-3 questions will be asked to confirm your school or district's eligibility.

Once determined to be eligible, the school's application will appear with a registration section and nine separate focus area forms to complete. Schools do NOT have to fill out every focus area section of the application, nor do they have to answer every question within those sections. The application is self-paced, and schools should complete only what is applicable. After completing registration, the school will be reviewed for Sprout School level recognition. While that review is taking place, schools can continue on to the focus area forms if they wish.

The application portal allows school teams to work together to document achievement. Multiple users can work on the focus area forms, and everyone can see recent changes. The application can be saved and edited at any time. There is no deadline for Green & Healthy Schools Wisconsin recognition. However, to be considered for the annual U.S. Department of Education Green Ribbon School award nomination, schools must submit a complete application by December 1 of that year.

When the application is ready to be reviewed for a recognition level, simply click the "Submit Your [Name of Level] Application" button. The application will be automatically placed in a queue for Green & Healthy Schools Wisconsin staff to review. If desired, schools may continue to work on other focus areas in the application while it is under review.

Applications are reviewed in the order they are submitted and rated based on a rubric (see appendix).The Green & Healthy Schools team reviews the application and awards the appropriate recognition level or contacts the school for additional documentation. It is recommended that schools review this rubric before filling out the application.

Step 1: Logging In and Eligibility

USERS OF OUR PREVIOUS ONLINE APPLICATION SYSTEM – HOW TO LOG IN:

1. Go to myghswisconsin.org
2. Log in with your email address. You will be asked to create a password the first time you log in. If you don't remember which email address you used in our previous system, contact the Green & Healthy Schools Coordinator at DNRGHSWisconsin@wisconsin.gov or 608-267-7622.
3. If you worked on an application in the previous online system, you should see it listed on the user information page that appears after you log in. If not, please contact us for assistance.
4. More in "All Users" section below.

NEW USERS – HOW TO LOG IN:

1. Go to myghswisconsin.org.
2. Sign up for a user account.
3. You will be presented with user information page. More in "All Users" Section below.

ALL USERS:

If you are joining the team for an existing application, you should see it listed; if not, please contact the Green & Healthy Schools Coordinator at DNRGHSWisconsin@wisconsin.gov or 608-267-7622.
If you want to start a new application, click the "Get Started" button at the bottom of the page.

a. Complete the Eligibility section.
b. Read through the information on your application page.
c. Look for the task labeled Eligibility and click "Start."
d. The first step for a new application is to determine if your school (or district) is eligible. You will have 1-3 questions to answer to see if you are eligible and get you into the correct category (some applicants will be eligible for U.S. Department of Education Green Ribbon Schools awards but not Green & Healthy Schools Wisconsin recognition although the same forms are used for both purposes).
e. If eligible, you will be returned to the main page of the application.

Step 2: Registration/Sprout School Requirements

This section is comprised of four screens.
On Screen 1 you will provide basic information about your school and contact information for the principal and lead applicant.

On Screen 2 you will be asked additional demographic data about your school, such as the CESA location and number of students and staff. Additionally, you will be asked if your school has a profile on www.eeinwisconsin.org. If you create a school profile there, any information you put on your profile will be taken into consideration for your recognition level. EEinWisconsin is your one-stop-shop for EE teaching resources, events, grants, awards/contests, organizations, and school profiles.

On Screen 3 you will also be asked about several prerequisites to show compliance with existing state requirements. If you are unclear about any of the requirements, check with your school or district administration.
Please note: The Indoor Environmental Quality (IEQ) Plan requirement applies to all public schools and to private schools participating in the Milwaukee, Racine, or Wisconsin Parental Choice Programs. Typically IEQ plans are prepared at the district level.

Screen 4 asks the applicant to provide a brief narrative describing the desires to become recognized as a Green & Healthy School, including addressing the three listed goals.

Step 3: Focus Area Sections

Applicants must complete the registration section before moving on to the focus area sections. (The questions are available for download under the "Resources" link at top-right of the application screen.) The questions in each focus area concentrate on that specific topic. For instance, if you're working on the Water Focus Area, questions pertaining to lessons involving water, the school's use of water, stormwater runoff, rain gardens, etc. will be asked. You may fill out as few or as many of the focus area sections as you like. Likewise, you may answer as few or as many of the questions in each of the focus areas as are applicable. The number of focus areas completed and the thoroughness of information provided will help the Green & Healthy Schools team award appropriate recognition.

Generally, the focus area questions relate to three areas:

- Education for students (including curriculum integration)
- Professional development for staff
- Physical building and grounds features, policies, and practices

Documenting work in the focus area sections

Recognition is awarded based on evidence of achievement. Please refer to the rubric for more information.

If the work you would like to document could fit in multiple focus area sections, please choose the most appropriate area to document the work. For instance, if your school has installed a rain garden, you could document the storm water mitigation in the water section and then the educational value of learning about habitat in the school site focus area section.

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Section VII: Appendix

Planning Worksheets

1. School Asset Mapping Worksheet

2. Action Plan Worksheet

3. Sample Green & Healthy Schools Initiative:
   Steps for Creating a Successful School Recycling Program

4. Sample Green & Healthy Schools Initiative:
   Steps for Creating a Successful School Composting Program

School Asset Mapping Worksheet

School and Surrounding Community Assets

Use the following six categories to brainstorm assets in your school and surrounding community that can be utilized to support your green and healthy school efforts:

Individuals	Organizational	Cultural
Skills Talents Guest Speakers Professionals Networks	Citizen Groups Businesses Clubs Community Centers Nature Centers Non-profits	Arts Tourism Museums Historical Markers
Institutions	**Physical/Land**	**Governmental**
Colleges Universities	School Building Other District Buildings State/National Parks Community Parks Trails Rivers/Lakes/Streams	State/City Government DNR

Map Your Community Assets

Create a "My Map" using Google Maps to tag your school community assets. For instructions for creating Google Maps, visit https://support.google.com/maps/?hl=en#topic=3093585 or create your own. The worksheet attached can be used as a guide.

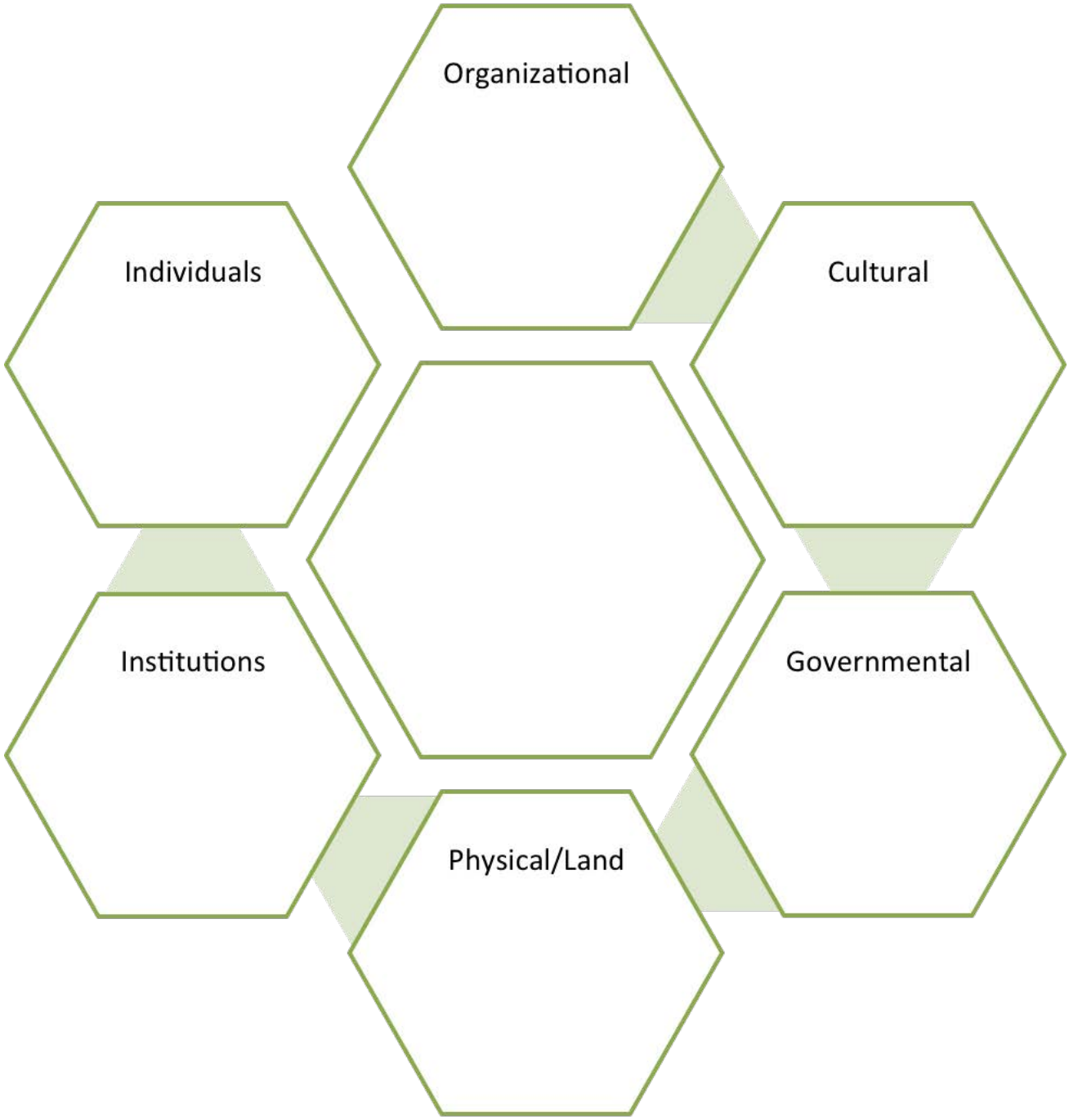
Reflection

As you identify assets, use the following reflective questions to guide your brainstorm.

a. What is your school's relationship and connection to the community?

b. How do you plan to use some of the community assets you mapped in your sustainability efforts?

c. What is the school community's sense of responsibility to the assets that you identified and mapped?


Organizational
Individuals
Cultural
Institutions
Governmental
Physical/Land

ACTION PLAN WORKSHEET

Project Title:

Start Date:
Event Date (if applicable):
Anticipated end date:

Project Goal:

Project Objectives:

Timeline:

Costs/Budget:

Stakeholders/contacts:

Task Checklist:

Task	Responsible Party	Deadline	Notes	Complete

Evaluation:

Planned Methods for Evaluation:

Metrics Used:

Documented Successes:

Method(s) to Communicate Successes:

Recommendations for next time:

Comments:

SAMPLE GREEN & HEALTHY SCHOOL INITIATIVE

Five Steps for Creating a Successful Recycling Program

1. Organize a Green Team

Identify team members — Organize a team to help plan, design, implement, and maintain your recycling program. Your team should meet as needed to keep the program moving forward.

Your team should include at least one person who is familiar with the school or district's overall operations, such as a custodian or an administrator. Having one team member act as a liaison with local community recycling staff or a Department of Natural Resources regional recycling specialist will help you get assistance as needed and ensure compliance with all local and state ordinances. The size of your team will depend upon the size of the school and its individual departments/operations. Schools can ask for volunteers or appoint members.

Members might be responsible for activities such as:

- Gaining support from school officials to initiate a recycling program
- Working with school officials to set the preliminary and long-term goals of the recycling program
- Gathering and analyzing information relevant to the design and implementation of the program
- Promoting the program to other employees and students and educating them on ways to participate
- Monitoring program progress
- Reporting to school officials about the status of the program

2. Assess Your Trash

Conduct a waste assessment to identify the types and amount of waste your school produces. This activity can be as simple as asking your cafeteria and custodial staff to calculate or estimate the amount of waste your school or district throws away. This assessment will help identify current methods of handling waste and start you thinking about how these methods can be modified to make your school more environmentally friendly, efficient and sustainable.

For a sample waste assessment, visit the Wisconsin Green & Healthy Schools Program (www.GHSWisconsin.org) in the Recycling & Waste Management Focus Area webpages.

During a waste assessment, schools typically find:

- Paper (office and other mixed paper, magazines, catalogs, and newspaper)
- Corrugated cardboard
- Aluminum and steel cans
- Plastic bottles
- Milk cartons
- Toner and ink cartridges
- CDs and DVDs
- Food scraps from the cafeteria
- Computers, TVs, printers, and other electronics
- Fluorescent light bulbs
- Garden debris

3. Create a Plan

Identify materials to target —

Using the waste assessment results, determine which material(s) your program will focus on. Remember to take into consideration any local programs that will make it easier to find options for reusable and recyclable materials.

Consider options for collecting and storing materials —
You will need to gather or purchase bins to collect recyclables in classrooms, cafeterias, and other areas. You may also need large containers to store recyclables before they are picked up by a hauler or sent to a recycling center.

- Decide if you will need different bins for different materials.
- Determine which type of bins will be used to collect materials in classrooms, offices, halls, the library, and the cafeteria.
- Label your bins. Signs should be used to identify which materials are collected in which bins. Download recycling signs at www.dnr.wi.gov (search: Recycling Education)
- Place your bins appropriately. Recycling bins should always be placed next to a trash can–never alone.

Depending upon the program, materials may need to be collected from bins throughout the school and moved to an onsite storage facility. To make sure this type of collection is possible, determine:

- If storage space is available for the collected materials.
- If the school or district has indoor space to use as a collection and storage center.
- And, alternately, if there is room for a large container outside with truck access.

Establish a tracking system —
Data on the recycling program will be important to track effectiveness, identify successes, and show its strengths and weaknesses. Before starting, develop a way to track progress. Simple spreadsheets detailing collection efforts work well for individual schools. Another option would be to join EPA's WasteWise program, which provides forms, instructions, and technical assistance.

Set goals —
Goals can be numerical (e.g., collecting X tons of paper annually), activity-based (e.g., collecting a new material or undertaking a new effort), or monetary (e.g., saving a certain amount of money on disposal costs). The entire program focus can be on one material generated in large quantities, such as paper or plastic bottles, or perhaps a once-a-year issue, such as old textbooks. Whatever they may be, make sure goals can be tracked and measured.

Develop a budget —
As you develop the budget, evaluate the availability of material resources and services at the school.

Ask yourself:

- Does the school already have recycling bins or will you need to purchase new ones?
- Can you apply for a grant to purchase recycling bins? Check the Wisconsin Green & Healthy Schools Program for information on recycling bin grants.
- Can you adjust your current waste management contract to cover recycling collection?
- Do you need to hire a hauler or can you drop the materials off at the local recycling center?
- Can the school team up with other schools to share transportation and/or storage costs?

Materials pickup —
Different options to transport collected recyclables include:

- School personnel or volunteers drop off recyclables at a vendor or municipal recycling center
- Work with the current waste hauler to include recycling in your contract
- Hire a recycling or waste company to pick up recyclables

The best option for a school will depend upon the program type, budget, and school or district policies.

Hiring a company to pick up materials —
Start by asking your current waste hauler if they offer recycling services and what materials they accept. If not, contact local recycling staff. A local hauler doing pickups in the neighborhood may offer decreased pickup costs since the company is already servicing the area.

After speaking with the vendor, be sure to check references! Obtain and thoroughly check the company's references with existing contract holders, asking these organizations specifically whether the company is fulfilling all contract specifications.

Communicate the plan to the school community —
Notify the entire school community about your recycling program. Explain how it will run, why you have a program, and how students, staff and parents can get involved.

Suggestions to jump-start the program include:

- Send emails, flyers or letters home with students to inform parents of program specifics
- Display posters and written messages (on chalkboards or in chalk on sidewalks) around the school
- Make announcements during school, at staff meetings, and at PTO meetings
- Hold a special assembly or presentation to kick off the program
- Send press releases to local newspapers and radio and TV stations to encourage the community to participate, if applicable
- Use materials created by the Wisconsin Department of Natural Resources (DNR) about reuse, recycling, and composting Search Recycling Education on the DNR's website, www.dnr.wi.gov
- Create a "reduce, reuse, recycle" website, e-newsletter, or listserv
- Run articles about the recycling program in a school newspaper or newsletter

4. Implement Your Plan

A great way to get the whole school involved and excited is to hold a school-wide kick-off event. These events provide an opportunity to encourage participation and explain what the program seeks to accomplish.

Monitor and measure progress —
Program monitoring and evaluation is a crucial element of any recycling program. Through routine evaluation, problems like contamination can be dealt with immediately. Monitoring the program also makes it easy to track results and measure progress. Gather information on the amount of materials recycled, expenses, and cost savings to quantify the environmental and economic benefits of the program.

Celebrate success —
Within the school, consider setting up a competition among classrooms or grades and offer the winner a reward. A reward system can provide stronger incentives to make your recycling program successful. Also, provide regular program updates to parents through email, school or community newspaper articles, and at school events.

5. Evaluate

Ask for feedback from students, faculty, and staff to determine which activities work and which do not. Expand on successful activities. Be flexible and make changes as the program grows or circumstances change. Asking students, faculty, and staff some of these questions will help determine the success of the program:

- What is successful about the program? What isn't successful?
- Are there an adequate number of recycling bins?
- Are they easily accessible? Are they clearly labeled and identifiable?
- Did you notice any contamination problems? If so, what kind of contamination?
- Is the educational aspect of the program helpful?
- Do the incentives help motivate participants?
- Do you have any suggestions for improving the program?
- What questions or concerns do you have about the program?

SAMPLE GREEN & HEALTHY SCHOOL INITIATIVE

Steps for Creating a Successful School Composting Program

Getting Started

Whether constructing a worm bin for a classroom, putting a simple wire compost bin in the back of a school, or encouraging a school district to implement a district-wide, zero-waste program, there is somewhere for everyone to start.

Develop a Plan

The first step in planning will be to bring together a planning or coordination team. This group will be tasked with gaining support for the program, defining roles and responsibilities, in addition to setting up and monitoring a program. It is important to include representatives from administration, food service staff and janitorial staff as part of the planning team. This group may determine a project budget and raise funds to get the project off the ground.

Assess Your Food Waste

Food waste can generally be divided into three categories based upon how it is generated: food preparation waste, food prepared but not served, and food served but not eaten. The volume of food waste generated by the school should be determined early in the planning process. This information will help as decisions are made regarding collection bins, composting equipment or a contract with a local composter.

While composting is often the first thing that comes to mind, consider if there are some steps that can be taken to reduce or reuse food waste. For example;

- Can food preparation wastes be reduced?
- Will more accurate meal counts reduce food waste?
- Can unserved food be donated to a local food bank?

WHAT TO COMPOST?
Along with garden and landscaping materials, certain food scraps can also be easily composted at schools. Be sure to follow recommendations on what types of food scraps can be composted in order to prevent odors and avoid attracting animals and other pests.

What to compost	What not to compost
• Yard materials such as leaves, straw, hay, small twigs/ chips, dried grass and weeds • Vegetable and fruit scraps • Plant trimmings, hedge clippings • Grass (small amounts) • Coffee grounds, Tea bags and filters • Rice & pasta • Eggshells • Clean, unwaxed paper, such as newspaper and cardboard • Paper towels & napkins	• Meat or fish scraps, bones and packaging • Dairy products (milk, cheese, egg yolks, etc.) • Fats and oils or foods containing fats and oils • Pet waste • Diseased or insect-ridden plants • Invasive plants

Staff vs. Volunteers

School composting programs often begin as the result of an individual or group willing to volunteer their time to make it happen. However, many composting programs have failed when these key volunteers leave. A sustainable program often requires dedicated individuals who perform key tasks as part of their normal job functions.

Another option is to use a service-learning approach. In this instance one or more grades takes on the project and assists in the collection and composting of the food scraps. Composting can be incorporated into lesson plans for math, science and other curriculums.

On-Site vs. Off-Site

One of the most critical decisions that will be made is to decide where to compost the food scraps. If your community has a compost facility that is able to accept food scraps this may be your best option. This offsite option will allow your team to concentrate on issues related to collecting and transporting the food waste to the compost site.

On-site composting will require space for the composting, additional materials (paper, straw, sawdust, etc.) for mixing with food waste, as well as an individual(s) to manage the process. You will also need to decide how the compost that will be produced will be used. The planning team will need to come up with a composting system that will accommodate the volume of food waste generated and fit in the space available.

Health and Safety

Compost piles are built to provide optimal conditions for certain bacteria and fungi to thrive. A possible health concern with composting is the possible presence of human pathogens. With that in mind, the following are some guidelines that can lessen the possibility of becoming ill due to working with a composting system:

- Practice good personal hygiene when handling compost, hand washing is a must and wearing gloves is helpful as well. Keep compost moist to minimize dust.
- Avoid including materials such as raw meat and plate scrapings from people who are ill.
- Following good composting practices will reduce pathogen levels.
- Persons with weakened immune systems should use caution when handling compost materials.

Cornell University has a factsheet entitled “Health and Safety Guidance for Small Scale Composting” (www.cwmi.css.cornell.edu/smallscaleguidance.pdf) that provides additional information.

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RECYCLES