



## Education for Sustainability

Education for Sustainability aims to equip learners with knowledge and skills to develop new ways of thinking that bring the larger context of the environment, economy, and social equity into consideration. It aspires to cultivate a new generation of young people with the awareness, responsibility, and ability to take action for a beautiful, prosperous future.

**“EfS helps teachers bridge grade levels and subject areas, curriculum and school operations, parent and community partnerships.”**

“Education for Sustainability: Sustainable Schools Project.” Education for Sustainability | Sustainable Schools Project, [sustainable-schoolsproject.org/education](https://sustainable-schoolsproject.org/education).

## Green Schools Quest Educators’ Guide

This Educators’ Guide aims to enhance the connection between Green Schools Quest projects and school curriculum.

A great number of quality materials exist to support Education for Sustainability (EfS) and whole-school sustainability. This guide highlights a handful of go-to resources to get you started.

### Inside you’ll find:

- **Introductory guides to EfS concepts and practices.**
- **Frameworks for applying the ‘Lens of Sustainability’ to your work.**
- **Professional Development opportunities that incorporate all three core areas that are commonly used to define a ‘green school’:**
  1. reduced environmental impact and costs;
  2. improved the health and wellness of schools, students, and staff; and
  3. provides effective environmental and sustainability education
- **Green Schools Frameworks, Programs, and Recognitions that can help your school chart a path towards whole-school sustainability.**
- **And additional noteworthy resources.**

# Shelburne Farms Sustainable Schools Project

Shelburne Farms is a nonprofit organization whose mission is to inspire and cultivate learning for a sustainable future. Based out of a 1,400-acre working farm in Vermont, they offer a wide variety of sustainability-related programs for schools and educators. The resources highlighted here are part of their Sustainable Schools Project.

All content and resources on this page have been sourced from and are available for free at:  
[www.sustainableschoolsproject.org/education](http://www.sustainableschoolsproject.org/education)

## The Big Ideas of Sustainability

### The Big Ideas of Sustainability

are important concepts and ideas used to help frame curriculum, projects, and build student understanding.

- Ability to make a difference
- Change over time
- Community
- Cycles
- Diversity
- Equilibrium
- Equity/Fairness
- Interdependence
- Limits
- Place
- Systems



You can download the Big Ideas of Sustainability poster (11x17) to hang in your classroom!

### Scope & Sequence of Big Ideas K-12

The Big Ideas lend themselves to curricular inclusion in a variety of ways, and Shelburne Farms offers a sample scope and sequence illustrating one possibility of how these big ideas can build upon one another across grade levels.

## EfS Guide & Framework



**The Guide to Education for Sustainability** (updated in 2015) offers introductory tools, background, and examples to help educators of all grade levels and subject areas use the "lens of sustainability" to strengthen classroom curricula and community projects. It has been updated to integrate Common Core State Standards as well as Next Generation Science Standards.



### Education for Sustainability Framework

When students have an understanding that the world is interconnected, are connected with the natural and human communities that they are a part of, and have had opportunities to improve the quality of life in their community here and now, then we are nurturing the development of citizens engaged in creating sustainable communities.

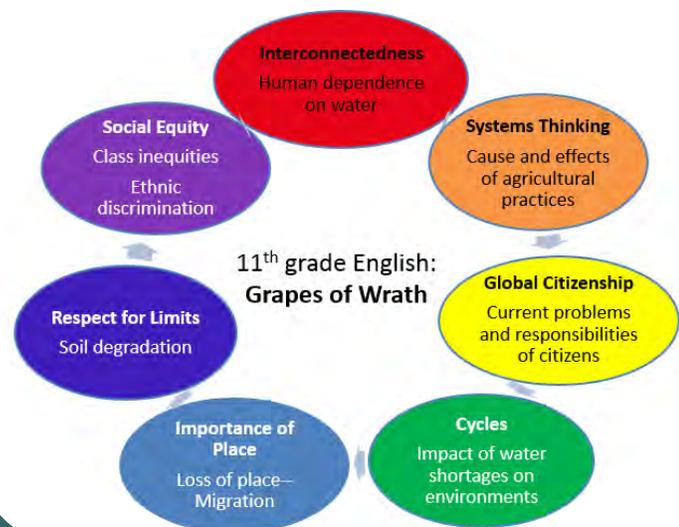
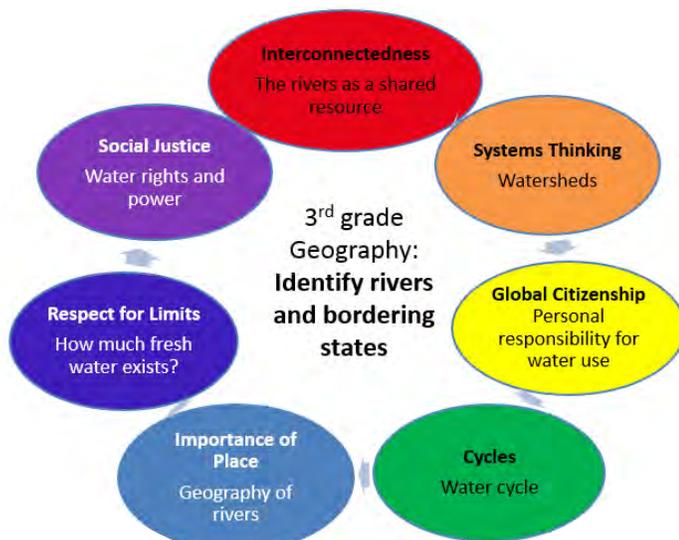


# Rainbow of Sustainability

Developed by Lori Diefenbacher of Webster University, the Rainbow of Sustainability is a tool for applying the lens of sustainability to your curriculum. Further exploration of this tool and how it can be applied to your work is offered at the Sustainability Institute for Educators held in St. Louis each June.

See professional development section for more info

All content on this page is sourced directly from Diefenbacher, Lori. "Rainbow of Sustainability." 2010, St. Louis, Webster University.



## Principles of Sustainability

### Interconnectedness

Sometimes people forget that our Planet is a web of life, where everything is connected to everything else. Humans are only one part of the web. Every community is made up of systems that revolve around one another, be they economic, environmental or social. We need to recognize and honor the connections, always striving for sustainable solutions to conflict and poor practices.

### Systems Thinking

Systems are dynamic, responsive to changes over time. When we think in terms of connected systems, we consider the impact of actions beyond the immediate, looking ahead to changes over time and space. When we view systems using cause-and-effect feedback loops, behavior-over-time graphs, and other tools of systems thinking, we can better project future consequences.

### Global Citizenship

When injustice or ignorance drives a community, individuals can take action to effect change or impact the system in a positive way. We all have a responsibility to honor and respect each other and the environment that supports us.

### Cycles

A cycle is a pattern that repeats over time with regularity. In nature we can study the water cycle, the carbon cycle, the rock cycle, and the cycle of life and death. Cycles are generally resilient because of the diversity on Earth. Loss of biodiversity is disruptive to cycles.

### Importance of Place

Every Place has its own history and needs. Awareness of local history, both natural and human, can generate a sense of unity and environmental stewardship.

### Respect for Limits

Every system has a carrying capacity, a point at which it can sustain no more. A quick reference to depleted oil reserves, fish stocks, and overpopulation demonstrates our lack of respect for limits. It is our job to maintain a state of balance within natural and human systems.

### Social Justice

All resources need to be shared with equity and fairness to meet the needs of living beings across places and generations.

## <<< Applying the tool

Examples pictured to the left illustrate how two standards may be viewed through the lens of sustainability as an opportunity to explore the important sustainability issue of water.

## Professional Development

Each of the following conferences offers sessions, speakers, and resources to support growth across all three pillars of a green school.

### Sustainability Institute for Educators



**SUSTAINABILITY  
INSTITUTE**  
FOR EDUCATORS

**This three-day Institute held in St. Louis each June challenges participants to examine current issues in sustainability while considering how people and schools are connected to these issues.**

Built upon the EfS approach, the Institute begins by increasing participants' awareness, knowledge, and understanding pertaining to the issues, principles and science of sustainability surrounding a focused subject matter. Participants then explore how to construct learning environments that connect to real-world problems facing the 21st century with an end goal of taking action and effecting positive change in school communities.

The Institute is designed for all members of the educational community including teachers, non-formal educators, and administration from public, independent, and non-formal learning environments.

Founded in 2011, the annual Sustainability Institute for Educators is collaboratively planned and hosted by: Webster University, Missouri Botanical Garden, Saint Louis Zoo, U.S. Green Building Council – Missouri Gateway Chapter, Madison County Government, Mary Institute and St. Louis Country Day School, St. Louis County Department of Public Health, and Missouri Environmental Education Association.

“Sustainability Institute for Educators.” *Sustainability Institute for Educators* | School of Education | Webster University, [www.webster.edu/sie](http://www.webster.edu/sie).

### Missouri Environmental Education Association Annual Conference



The Missouri Environmental Education Association (MEEA) helps educators inspire Missourians to care about, understand and act for their environment.

The MEEA conference is held each fall at a different location within the state of Missouri. The 2019 conference will be held November 1 - 3 in St. Louis surrounding the theme of Care - Understand - Act. The 2020 conference will be in Springfield and 2021 in Kansas City.

The Missouri Green Schools recognition program is an initiative of MEEA and resources to support schools' pursuit of sustainability initiatives are incorporated into the conference each year.

*Missouri Environmental Education Association Annual Conference,* [www.meea.org/conference.html](http://www.meea.org/conference.html).

### Green Schools Conference & Expo



The Green Schools Conference & Expo is a national conference which brings together a wide range of people and perspectives involved in making green schools a reality: people who lead, operate, build and teach in U.S. schools.

The annual three day event offers inspiring keynote speakers, informative workshops and breakout sessions and the chance to network with sustainability-minded colleagues from across the country. It is presented by the Center for Green Schools at the U.S. Green Building Council, in partnership with the Green Schools National Network.

“Advancing Sustainable Schools for All.” Home | Green Schools Conference & Expo, [greenschoolsconference.org/](http://greenschoolsconference.org/).

## Green Schools Frameworks, Programs, and Recognition

The following programs and tools can help your school chart a path towards whole-school sustainability. Several offer opportunities for recognition of your achievements.

### The Whole-School Sustainability Framework

Successfully advancing whole-school sustainability requires districts to not only change practices and policies but also culture. This framework developed by researchers at Colorado State University's Institute for the Built Environment helps school leaders and community advocates to focus in on those necessary cultural shifts.

The framework is organized into the three components of schools: organizational culture, physical place and educational program. Within these three components, there are a total of nine principles identified. The report defines each principle, gives relevant research findings (social science, business, education and building science fields), and includes a short case study of a school or district.

"Whole School Sustainability Framework: 2014: Institute for the Built Environment: Colorado State University." *Whole School Sustainability Framework | 2014 | Institute for the Built Environment | Colorado State University*, [ibe.colostate.edu/whole-school-sustainability-framework/](http://ibe.colostate.edu/whole-school-sustainability-framework/).



## U.S. Department of Education Green Ribbon Schools



The aim of U.S. Department of Education Green Ribbon Schools (ED-GRS) is to inspire schools to strive for 21st-century excellence by highlighting promising school sustainability practices and resources that all can employ. To that end, the award recognizes schools that:

1. reduce environmental impact and costs;
2. improve the health and wellness of schools, students, and staff; and
3. provide effective environmental and sustainability education

Combined progress in ALL three of these areas, known as Pillars, serves as the basis for recognition.

"U.S. Department of Education Green Ribbon Schools." *Home*, US Department of Education (ED), 24 Aug. 2018, [www2.ed.gov/programs/green-ribbon-schools/index.html](http://www2.ed.gov/programs/green-ribbon-schools/index.html).

### Missouri Green Schools



**Missouri Green Schools (MGS) is an initiative of the Missouri Environmental Education Association (MEEA).**

The MGS program is aligned with and uses the criteria suggested by the

US Department of Education's Green Ribbon Schools program and its three pillars. An assessment and tracking tool that is at the heart of the program splits the criteria within each pillar into three levels that reflect increasing commitment to green goals: Emerging, Progressing, and Advanced. Requirements and benefits for recognition at each level are currently under development. Stay tuned for more developments to be released in fall/winter 2019!

*Getting Started*, [missourigreenschools.org/getting-started.html](http://missourigreenschools.org/getting-started.html).

## Additional Resources

Below you'll find a handful of additional resources you'll want to be sure to check out.

### World's Largest Lesson United Nations Sustainable Development Goals



World's Largest Lesson introduces the Sustainable Development Goals to children and young people everywhere and unites them in action. The website includes lesson plans, creative materials, films, comics and books, games, ideas for taking action, whole school approaches, and more!

"The Worlds Largest Lesson." *The Worlds Largest Lesson*, [worldslargestlesson.globalgoals.org/](http://worldslargestlesson.globalgoals.org/).

### EarthWays Center



The EarthWays Center is a leader in the field of educating for sustainability, and its staff and programs have been a regional resource since 1988. By making materials and topics relevant to today's learner and providing interdisciplinary, hands-on instruction for audiences of all ages, the EarthWays Center promotes wise resource use through shaping students' behavior and changing school cultures.

"In Schools & Universities." *Missouri Botanical Garden*, [www.missouribotanicalgarden.org/sustainability/sustainability/sustainable-learning/in-schools-universities.aspx](http://www.missouribotanicalgarden.org/sustainability/sustainability/sustainable-learning/in-schools-universities.aspx).

## Learning Lab K-12 Sustainability Curriculum

# LEARNING LAB

Learning Lab is USGBC's online education platform for K-12 teachers and school leaders to find lessons, activities and resources that encourage student leadership, sustainability literacy and real-world action.

With more than 600 lessons available in English and Spanish, educators from across the globe can access Learning Lab for comprehensive, interdisciplinary K-12 project- and STEM-based (Science, Technology, Engineering, Mathematics) curriculum for a green school and a sustainable future.

"Learning Lab." *Home | Learning Lab*, [learninglab.usgbc.org/home](http://learninglab.usgbc.org/home).

## Green Schools Catalyst Quarterly



The Green Schools Catalyst Quarterly (GSCQ) is only publication dedicated to the advancement of green, healthy, sustainable K-12 schools. GSCQ is a peer reviewed, high interest digital magazine that highlights evidence-based practices for replication in green, healthy, sustainable schools. GSCQ explores issues in-depth, including qualitative and quantitative research, and includes columns that report on and explore emergent issues.

"GSCQ." *Green Schools National Network*, [greenschoolsnationalnetwork.org/gscq/](http://greenschoolsnationalnetwork.org/gscq/).

## GSQ Resources List

A compilation of additional resources can be found on the Green Schools Quest webpage. The 'Resources List' contains local, regional, and national resources includes a number of non-profit organizations to consider reaching out to for assistance, and more.