

Maryland Sustainability Initiatives



Environmental Literacy

Environmentally literate students understand environmental and physical processes and systems, including human systems. They analyze global, social, cultural, political, physical, economic, and environmental relationships and weigh various sides of environmental issues to make responsible decisions as individuals and as members of their community and citizens of the world.



Environmental Education Vision

2014 Chesapeake Bay Watershed Agreement

1. Environmental Literacy
2. Student Outcome (MWEE)
3. Sustainable Schools



Code of Maryland Regulation 13A.04.17(COMAR)

1. Every student graduates from high school environmentally literate
2. Environmental literacy in Maryland includes multiple, interdisciplinary opportunities to engage the outdoors for learning

Maryland Green Schools



MAEOE

Maryland Association for
Environmental & Outdoor Education



Nationally recognized, the Maryland Green Schools Award Program (MDGS) allows schools and their communities to evaluate their efforts in environmental sustainability.

Participating schools empower youth to make changes to reduce environmental impact, encourage sustainability and foster environmental literacy.



Why Become a Maryland Green School?

**INCREASE ACADEMIC
ACHIEVEMENT**



**RECEIVE NATIONAL &
STATE RECOGNITION**



GROW COMMUNITY



**MAKE SCHOOLS MORE
SUSTAINABLE**



**CONNECT STUDENTS TO
THE ENVIRONMENT**



**ENGAGE STUDENTS TO
BECOME STEWARDS**



MDGS School Statistics



Water Conserved	648,415 gal
Rain Garden/Bio-retention area planted	26,298 ft ²
Stream Bank Planting	25,925 ft ²
Stream Cleaning	86,197 ft ²
Energy Use Reduction	2,157,757 kwh
Green Energy Used	2,365,008 kwh
Composting	61,975 lbs
Recycled Materials	1,729,076 lbs
Created Native Habitat	25,961 ft ²
Created/installed bird houses	360 houses
Native Plants (shrubs and trees)	3,203 plants
Invasive Plant Removal	43,149 ft ²
Outdoor Classroom	150 classrooms
Outdoor Environmental Art	666 pieces
No-idling Zone	55 schools
Plants for indoor air quality	3,468 plants
Edible Garden	13,162 ft ²
Outdoor running events and environmental festivals	528 events

MDGS Application Objectives



Objective 1

Systemic Sustainability

Outdoor, environment-based instruction, through hands-on, authentic lessons focused on environmental issues



Objective 2

Student-Driven Sustainability Practices

Student environmental actions and practices planned, implemented, and led by students



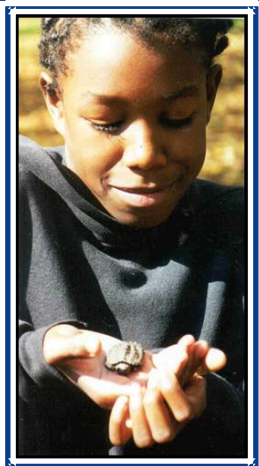
Objective 3

Community Partnerships

Community partnerships help schools to build successful, long-term sustainable practices

Systemic Sustainability

Objective 1



1.1: Environmental Issue Instruction

1.2.1: Professional Development: Full Staff Awareness

1.2.2: Professional Development: 10% of teaching staff with recent environmental education

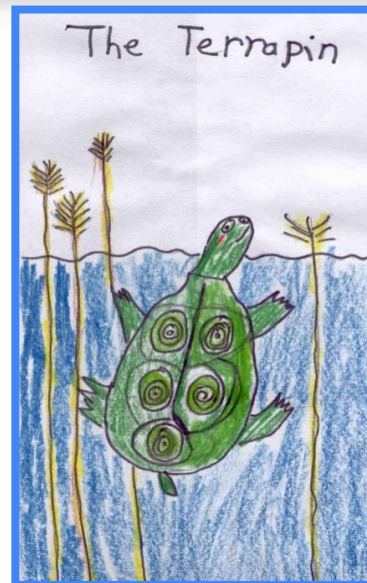
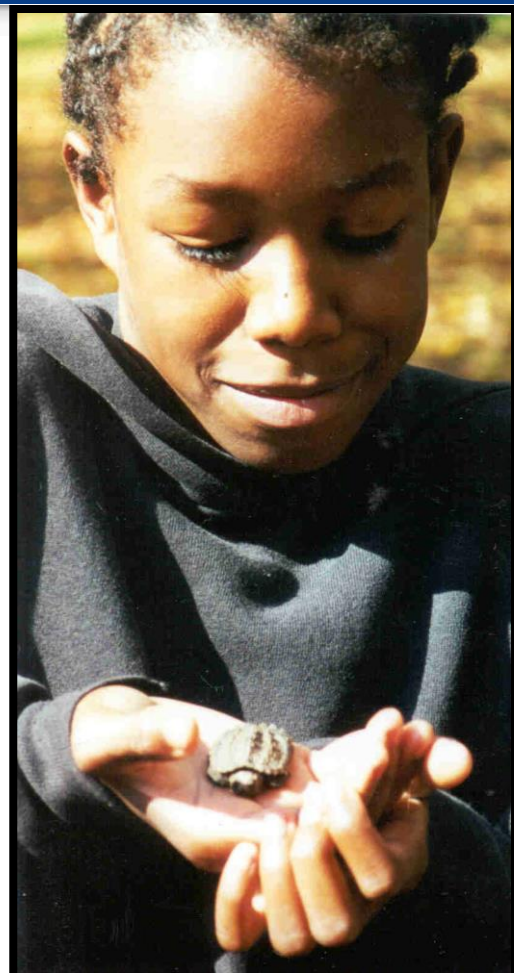
1.2.3 Additional Professional Development
(Optional, as in years past)

1.3.1: Sustainable Schools - Schoolwide Environmental Behavior Change (Optional)

1.3.2 Sustainable Schools - Systemic Partnership
(Optional)

1.4 Celebration

1.1. Environmental Issue Instruction



- ES/MS -instruction in all grades
- HS- Instruction in at least 4 subject areas
- Environmental Literacy/Climate Change Education

Grade	Environmental Instruction
6	Art recycled project, English poetry contest
7	Science Fair Projects related to global warming
8	Science lessons on sustainability

1.3.1 Sustainable School: School-Wide Environmental Behavior Changes

1.3.2 Sustainable School: Systemic Partnership

- NON-STUDENT driven Sustainable Practices
- Examples:
 - Installation of energy efficient lighting
 - Staff carpooling or public transportation incentive program
 - Reduction of impervious surfaces (blacktop, concrete) in the schoolyard
 - Teachers using green cleaners in classrooms
 - Installation of solar panels

SYSTEMIC PARTNERSHIPS

- Demonstrate one partnership within the school system that supports an aspect of the Maryland Green School Program.
- This partnership needs to reach beyond your individual school to the “higher” or Central Office level; Food & Nutrition, Health Education; Physical Facilities, School System Outdoor Education



Objective 2

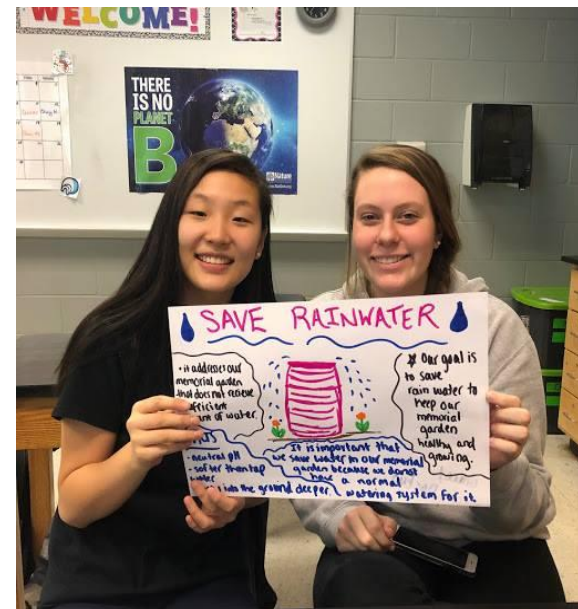


Student-Driven Sustainability Practices = Stewardship and Civic Action

- 2.1: Water Conservation/Water Pollution Prevention
- 2.2: Energy Conservation
- 2.3: Solid Waste Reduction
- 2.4: Habitat Restoration
- 2.5: Structures for Environmental Learning
- 2.6: Responsible Transportation
- 2.7: Healthy Home/School Environment
- 2.8: Citizen Science/Community Science

2.1. Water Conservation/Pollution Prevention

- Rain gardens and other erosion control measures
- Storm drain stenciling
- Students install, paint and/or use rain barrels
- Students do a litter clean-up and learn about protecting the waterways
- Students conduct erosion control projects such as installing riparian buffer zones and planting trees



2.2 Energy Conservation



- Student-made reminders to turn off the lights and devices
- Student classroom jobs help turn off lights and computers
- Students calculate the school's carbon footprint, take action to reduce that footprint
- Students promote actions to reduce 'phantom' energy loss
- Students plant trees to shade the building



2.3 Solid Waste Reduction

- Students organize a recycling drive for ink cartridges, old cell phones, etc
- Students help set up outdoor composting
- Students plan an indoor or outdoor clean-up day
- Students create labels for recycling stations
- Students participate in no-waste lunch days



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- Students help set up outdoor composting
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2.4 Habitat Restoration



- * Students plant native trees/shrubs/perennials
- * Students install bird, butterfly, or bat boxes
- * Students help remove turf or impervious paving
- * Students construct brush piles or natural decomposing areas

Invite local business/watershed organizations to join in and help!

2.5 Structures for Environmental Learning

Students use structures for environmental learning regularly

- * Students make interpretation signs for bird, bat, and butterfly boxes
- * Students plan and using Outdoor Classrooms
- * Students create native Maryland tree ID tags
- * Students create outdoor art: sculptures, murals



2.6 Responsible Transportation

- Students plan carpooling programs
- Students create signage for no-idle zones
- Students analyze school transportation issues /carbon footprint using schoolyard report card
- Students routinely go on walking field trips or use public transportation
- Students attend the annual “Walk to School” day



2.7 Healthy School Environment

- Students promote the use of indoor plants
- Students create or promote natural products
- Students participate in healthy local foods programs
- Students organize an outdoor running or other health club that **utilizes the school grounds and encourages the students to spend time outdoors.**



Community Partnerships, Awards, and Special Recognition

Objective 3



3.1.1: School Active in Community

3.1.2: Community active in the School

3.2: Awards and Recognition (Optional)



Examples of Community Partnership

- A campus cleanup day, advertised to the community, with the local waste management agency
- Bringing in a county recycling coordinator to speak to the staff
- Working with a Master Gardener to design a habitat
- Working with MD DNR on a grant to install a stream buffer



MDGS Awards

- New School
- 1st Recertification
- 2nd Recertification
- Sustainable
- Sustainable Bronze
- Sustainable Silver
- Sustainable Gold
- Sustainable Evergreen






Resource Library

Information and Training to Support Environmental Literacy and Schoolyard Projects

Here you will find information on environmental literacy; local, state & national green school programs; environmental education resources; and a comprehensive collection of schoolyard project instructions and resources to help you plan, utilize & sustain a variety of environmental projects on school grounds. Schoolyard project resources are featured through the [School Grounds for Learning Project](#), a partnership with [Chesapeake Bay Program Bay Backpack](#) and local, regional & national organizations, funded by the NOAA Bay Watershed Education and Training program (B-WET).

Free Resources and Programs

- [Home-Based Environmental Education Resources \(teachers, parents and guardians\)](#)
- [Energy Tools Worksheet](#) 
- [MAEOE Energy Tools Loan](#) 
- [MD DNR's Wild at Schools](#) 




Diversity, Equity, Inclusion, and Justice (DEIJ) Resources

- [Anti-Racism Education Resources](#)




Newsletters

- [Green Schools Newsletter](#)
- [MSDE Weekly Communications](#)
- [Engaging with Nature](#)

Meeting Recordings

- [Sustainable Schools Info Session](#) 
- [Green Leader Info Session](#) 
- [Green Schools Info Session](#) 
- [GS Committee Meetings](#)
- [EE Collaboration Meetings](#)
- [Wednesday Lunch & Shares](#)

Healthy School Projects

- [Healthy School Environment Project Resources](#)
- [Healthy School Projects](#) 
- [Case Study: Broadneck High School](#) 
- [Case Study: Annapolis Middle School](#) 



Projects to Conserve Resources

- [Conserve Resources Project Resources](#)
- [Projects to Conserve Resources: Projects](#) 




Wildlife Habitat Projects

- [Wildlife Habitat Project Resources](#)
- [Wildlife Habitat Projects](#) 

Clean Water Projects

- [Clean Water Project Resources](#)
- [Clean Water Projects](#) 
- [Case Study: Crellin Elementary School](#) 

Outdoor Play and Learning

- [Outdoor Learning is Essential: Resources to Aid Planning](#) 
- [Creating an Outdoor Classroom](#) 
- [Nighttime Adventures Programming](#) 
- [Outdoor Play & Learning Project Resources](#)
- [Outdoor Play and Learning](#)

<https://maeoe.org/resource-library>

U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools



Pillar I: Reduce environmental impact and costs

Pillar II: Improve the health and wellness of schools, students, and staff

Pillar III: Provide effective environmental and sustainability education

Contact: Kirsten Jackson, Environmental Literacy Specialist, Science
Division of Curriculum, Instructional Improvement and Professional Learning
Maryland State

<http://marylandpublicschools.org/programs/Pages/Environmental-Education/mgrs.aspx>



Maryland U.S. Department of Education Green Ribbons Schools Honorees

Nineteen schools

- Eight elementary, five middle, four high

Three school districts

- Anne Arundel County, Calvert County, Montgomery County

Pillar I: Reduced Environmental Impact and Costs



- Reduced or eliminated greenhouse gas emissions (GHG), using an energy audit and/or emissions inventory and reduction plan, cost-effective energy efficiency improvements, conservation measures, and/or and on-site renewable energy and/or purchase of green power;
- Expanded use of alternative transportation, through active promotion of locally-available, energy-efficient options and implementation of alternative transportation supportive projects and policies.
- Improved water quality, efficiency, and conservation; and
- Reduced solid and hazardous waste production through increased recycling, reduced consumption, and improved management, reduction, or elimination of hazardous waste.

Pillar II: Improved Health and Wellness

- An integrated school, district or postsecondary institutional environmental health program based on an operations and facility-wide environmental management system that considers student, visitor and staff health and safety in all practices related to design, construction, renovation, operations, and maintenance of buildings and grounds; and
- High standards of coordinated school, district, or postsecondary institutional health, including social and psychological services, nutrition, fitness, and quantity of quality outdoor time for both students and staff.



Pillar III: Effective Environmental and Sustainability Education

- Interdisciplinary learning about the key relationships between dynamic environmental, energy and human systems;
- Development of civic engagement knowledge and skills and students' application of such knowledge and skills to address sustainability and environmental issues in their community; and
- Use of the environment and sustainability to develop STEM content knowledge and thinking skills to prepare graduates for the 21st century technology-driven economy.



Additional Information



Maryland Green Schools: <https://maeoe.org/green-schools-and-green-centers>

U.S. Department of Education Green Ribbon Schools: ed.gov/green-ribbon-schools & www.greenstrides.org

Questions?

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