



2021-22 P₃ Eco-Challenge Preserving our Planet for Posterity SCHOOL RESOURCES

Note: The following resources are specifically for each school categories, however, for a more comprehensive list, also download the Educator Environmental Resources for local, state and national from the main P3 website.

I. SCHOOL GROUNDS ENHANCEMENT

A. Outdoor Learning Labs/Structures

Use of school grounds as a learning environment is encouraged. Areas of the school grounds are built and/or maintained to be specifically used as a location for regular, on-going learning.

Ideas:

- On one afternoon, a third-grade class plays a recycling relay race.
- One or more teachers use outdoor school areas several times a year as part of the curriculum.
- Gardening activities (vegetable, flower, butterfly, etc.)
- Students are actively engaged in several schoolyard-learning initiatives, such as butterfly garden maintenance and monitoring, litter patrols, etc.

Resources:

Broward County Farm Bureau [Activities in the Classroom](#)
(954) 972-2525

- Vegetable gardening education
- Assisting with garden grant applications

[Florida Agriculture in the Classroom](#) – Teaching Resources

- [Gardening for Grades](#)
- [Gardening for Nutrition](#)
- [STEMming Up Gardening](#)

[Broward County NatureScape](#)

(954) 519-1239

- Garden and Design Consultation
- Participation in campus workdays
- Outdoor programming
- Schoolyard Habitat Certification

[National Wildlife Federation – Schoolyard Resources](#)

- [Creating Schoolyard Habitats](#)
- Webinar: [Creating a Schoolyard Habitat: How to Create, Maintain and Teach in an Outdoor Classroom](#)
- Webinar: [Designing Your Schoolyard Habitat Project](#)
- Webinar: [Summer Maintenance: Planning Your Schoolyard Habitat](#)

National Wildlife Federation's Eco-School's USA program. Information about this award program can be found at: <http://www.nwf.org/Eco-Schools-USA/Become-an-Eco-School/Pathways.aspx>

Lessons – [see CPALMS lessons](#) – end of this document

[Next Generation Sunshine State Standards and Common Core Standards Alignment in the Elementary level.](#)

[Next Generation Sunshine State Standards Alignment](#) for Middle and High

Body of Knowledge	Standard(s)	Benchmark9s)
Nature of Science	1. Practice of Science	SC.6.N.1.1, SC.6.N.1.3 SC.7.N.1.1, SC.7.N.1.3 SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3 SC.8.N.1.1, SC.8.N.1.5 SC.8.L.18.1, SC.8.L.18.2, SC.8.L.18.4 SC.912.N.1.1 SC.912.N.1.3
	4. Science and Society	SC.912.N.4.1, SC.912.N.4.1

Common Core State Standards Connections for Literacy in Science for Middle and High
 LACC.68.RST.1.3
 LACC.910.RST.1.1
 LACC.910.RST.1.3
 LACC.910.WHST.1.2
 LACC.910.WHST.3.9

Common Core State Standards Connections for Mathematical Practices for Middle and High
 MACC.K12.MP.3: Construct viable arguments and critique reasoning of others
 MACC.K12.MP.4: Model with mathematics
 MACC.K12.MP.5: Use appropriate tools strategically
 MACC.K12.MP.7: Look for and make use of structure

I. SCHOOL GROUNDS ENHANCEMENT, cont.

B. Habitat Improvement/Restoration

Areas of the school grounds and/or nearby community are managed to enhance ecological integrity that has been diminished by human activity.

This gives students first-hand experience repairing compromised ecosystems. This is an essential skill they will need as adults if we are to have an ecologically healthy future.

Ideas:

- Native planting around school flagpole.
- After inventorying existing schoolyard areas, and after researching appropriate habitat species, students plant, maintain and monitor butterfly and other bird attracting plants.
- Students install plant labels or interpretive signage in NatureScape gardens
- Students collaborate with Audubon Society to conduct bird counts for the Habitat Oases project.

Resources:

[Broward County NatureScape](#)

(954) 519-1239

- Garden and Design Consultation
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Next Generation Sunshine State Standards Alignment for Middle and High

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	4. Science and Society	SC.912.N.4.1, SC.912.N.4.1
Earth Structures	(human impact)	SC.7.E.6.6
Life Science	17. Interdependence	SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3 SC.912.17.4, SC.912.17.8
Health Science		HE.912.C.1.3

Common Core State Standards Connections for Literacy in Science for Middle and High

LACC.910.RST.1.1
LACC.910.RST.1.3
LACC.910.WHST.1.2
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II. SCHOOL SUSTAINABILITY

A. Energy

Energy conservation behaviors related specifically to reducing greenhouses gases are relatively easy practices to implement and have an enormous impact on the environment. *This area represents the largest opportunities for quick and significant financial savings.*

Ideas:

- School registers for the How Low Can You Go Challenge
- Implementation of energy conservation checklist for every classroom.

Resources:

Register for the Miami Heat-SBBC Initiative “How Low Can You Go” challenge
Applied Learning Department – STEM+CS – Dr. Lisa Milenkovic

[BCPS Environmental Health & Safety](#)

- [Energy Tools & Quick Links for Schools](#)

[Broward County Air Quality – School Programs](#)

(954) 519-1260

- [EPA – Learning and Teaching About the Environment](#)

[Broward County Energy and Sustainability Program](#)

(954) 519-1265

- Classroom programming: Energy, Efficiency, Conservation and Climate Change Issues

Lessons – [see CPALMS lessons](#) – end of this document

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[Next Generation Sunshine State Standards Alignment](#) for Middle and High

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	4. Science and Society	SC.8.N.4.1, SC.8.N.4.2 SC.912.N.4.1, SC.912.N.4.2
Life Science	17. Interdependence	SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3 SC.912.L.17.4, SC.912.L.17.8, SC.912.L.17.12, SC.912.L.17.16, SC.912.L.17.17

Common Core State Standards Connections for Literacy in Science for Middle and High
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B. Water

Clean water is an increasingly scarce resource.

Water conservation, both indoor and out, is one of the easiest ways to have a very positive impact on the environment. Follow Florida-Friendly Landscaping principles and year-round water rules.

Ideas:

- Faculty and students regularly monitor for and report leaking faucets.
- Faculty and students develop signage for restrooms, water fountains, etc. with water conservation messages.
- Water savings achieved through repairs or adjustments in irrigation system, in response to an initial irrigation system evaluation.
- School installs cistern, micro-irrigation, or hooks up to reuse water.

Resources:

[BCPS Environmental Health & Safety](#)

- [Energy Tools & Quick Links for Schools](#)

[NatureScape Irrigation Service](#)

(954) 519-1270

- Indoor water audits
- Irrigation System Evaluations

[Central Broward Water Control District](#)

(954) 432-5110

- Educational programming to fourth and fifth grade students within the District's boundaries

[South Florida Water Management District/educators](#)

800-432-2045

- Classroom education
- Website resources for teachers

Lessons – [see CPALMS lessons](#) – end of this document

[Next Generation Sunshine State Standards and Common Core Standards Alignment in the Elementary level.](#)

[Next Generation Sunshine State Standards Alignment](#) for Middle and High

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	4. Science and Society	SC.8.N.4.1, SC.8.N.4.2 SC.912.N.4.1, SC.912.N.4.2
Earth Structures	(human impact)	SC.7.E.6.6
Life Science	17. Interdependence	SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3 SC.912.L.17.11, SC.912.L.17.15, SC.912.L.17.17, SC.912.L.17.20,
	18. Matter and Energy Transformations	SC.912.L.18.12

Common Core State Standards Connections for Literacy in Science for Middle and High

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II. SCHOOL SUSTAINABILITY, cont.

C. Solid Waste

Students and staff learn through regular practice that “Reducing” is more effective than “Reusing”, and “Recycling” is only a last ditch effort.

This saves money and resources.

Ideas:

- Administration is reviewing practices to reduce the waste generated.
- Every classroom and office has a recycling bin. The Student Council or designated group empties the recycling bins weekly. Classrooms make a policy to implement two-sided copying.
- School starts a campaign to collect cell phones and cell batteries.
- Students research reusable food trays and propose idea, costs and environmental impact savings to school administration.

Resources:

[Broward County Waste and Recycling Services](#)

(754) 321-4200

emshelpdesk@browardschools.com

- School-wide education
- Distribution of recycling bins

[BCPS Environmental Health & Safety](#)

- [Energy Tools & Quick Links for Schools](#)

Lessons – [see CPALMS lessons](#) – end of this document

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II. SCHOOL SUSTAINABILITY, cont.

D. Air Quality and Transportation

Develop transportation programs that reduce emissions and benefit air quality within school, such as carpooling and bike/walk to school programs involving both students and staff. Transportation is responsible for 1/3 of the nation's greenhouse gas emissions, which damage our natural environment and individual health.

The promotion of transportation alternatives is a vital part of environmental sustainability.

Ideas:

- Participate in a Character Education E-Newsletter activity.
- Write a summary about a presentation received from Air Quality Division.
- Give presentation on how climate change will affect Florida environment.
- Create a debate panel to discuss climate change issues.

Resources:

[Broward County Air Quality – School Programs](#)

(954) 519-1260

- [EPA – Learning and Teaching About the Environment](#)

[Broward County Transit](#)

(954) 357-8347

- School presentations and visits to bus depots.

[Environmental Conservation / Utility Management](#)

(754) 321-4220

- Energy saving tips for elementary, middle and high schools
- Additional links to environmental websites
- Web-based utility tracking software – [schooldude.com](#)

[BCPS Environmental Health & Safety](#)

- [Energy Tools & Quick Links for Schools](#)

[South Florida Commuter Services](#)

(954) 731-0062

- Provide free walking, biking and carpool matching services.

Lessons – [see CPALMS lessons](#) – end of this document

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Earth Structures	(human impact)	SC.7.E.6.6
Life Science	17. Interdependence	SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3 SC.912.L.17.11, SC.912.L.17.17, SC.912.L.17.18, SC.912.L.17.20

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III. CURRICULUM INTEGRATION

A. Interdisciplinary Approach

Local, state, and/or national learning standards are met through an integrated and interdisciplinary approach that organizes curriculum mostly around environmental themes, concepts and projects. *This addresses diverse student learning styles and reflects the broad interconnected nature of environmental topics.*

Ideas:

- Guest presenter from resources mentioned
- A single grade level adopts a six week unit of inquiry on the Water Cycle and Conservation. The teachers create curriculum based on that concept and apply it to reading, math, writing, and science.
- Multiple grade levels initiate interdisciplinary units of studies that apply to reading, math, writing and science etc. with environmental themes.
- The entire school employs units involving curriculum that applies to concepts with environmental themes and reading, math, writing, etc.
- High School: Enters the regional Envirothon competition that studies environmental issues.

Resources:

[Broward County Air Quality – School Programs](#)

(954) 519-1260

- [EPA – Learning and Teaching About the Environment](#)

[Broward County NatureScape](#)

(954) 519-1239

- Indoor and outdoor classroom programming.

[Broward County Parks and Recreation](#)

(954) 357-8100

- Fieldtrips into a variety of nature centers.

[Broward County Transit](#)

(954) 357-8347

- School presentations and visits to bus depots.

[Broward County Waste and Recycling Services](#)

(754) 321-4200

emshelpdesk@browardschools.com

- School-wide education
- Distribution of recycling bins

Central Broward Water Control District

(954) 432-5110

- Educational programming to fourth and fifth grade students within the District's boundaries

Envirothon - <http://eco-tan.org/EnvAbout.html>

Florida Agriculture in the Classroom – Teaching Resources

- [Gardening for Grades](#)
- [Gardening for Nutrition](#)
- [STEMming Up Gardening](#)

Kids Ecology Corps

(954) 524-0366

- Classroom presentations
- School projects

National Wildlife Federation – Schoolyard Resources

- Webinar education.

Sawgrass Nature Center

(954) 752-9453

- Environmental education on-site and in the classroom.

Science Eye

(954) 257-2872

- In-class science safaris.
- Everglades experience field trips.

South Florida Water Management District/educators

(800) 432-2045

- Classroom education
- Website resources for teachers

Tanawha Presents

(248) 933-1069

- Science and education for students and teachers.

Youth Environmental Alliance

(954) 382-0188

- Outdoor education and community events.

Lessons – [see CPALMS lessons](#) – end of this document

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	2. Characteristics of Scientific Knowledge	6.N.2.3
	4. Science and Society	SC.8.N.4.1, SC.8.N.4.2 SC.912.N.4.1, SC.912.N.4.2
Life Science	17. Interdependence	SC.7.L.17.1, SC.7.L.17.2, SC.7.L.17.3 SC.912.L.17.11, SC.912.L.17.14, SC.912.L.17.15, SC.912.L.17.17, SC.912.L.17.18, SC.912.L.17.20

Health Science: HE.912.C.1.3.

Common Core State Standards Connections for Literacy in Science for Middle and High

LACC.68.RST.1.3

LACC.910.RST.1.1

LACC.910.RST.1.3

LACC.910.WHST.1.2

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III. CURRICULUM INTEGRATION, cont.

B. Environmental Topics/Issues

Students study current environmental topics/issues and explore possible local, state, national or global solutions with a focus on community-oriented approach.

Ideas:

- Guest presenter from local resource.
- Students study current environmental topics and ask questions about the issue which drives the teacher's instruction.
- Students in each grade level study a current environmental topic in a four to six week unit study through each discipline. Students begin their unit by asking questions about the topic/concept, which drive the teacher's instruction.
- Students work to educate the local community on issues of household and workplace toxics, alternatives, and health/safety issues
- High School: Enters the regional Envirothon competition that studies environmental issues.

Resources:

[Broward County Air Quality – School Programs](#)

(954) 519-1260

- [EPA – Learning and Teaching About the Environment](#)

[Broward County Energy and Sustainability Program](#)

(954) 519-1265

- Classroom programming: Energy, Efficiency, Conservation and Climate Change Issues

[Broward County NatureScape](#)

(954) 519-1239

- Participation in campus workdays
- Outdoor programming

[Broward County Waste and Recycling Services](#)

(754) 321-4200

emshelpdesk@browardschools.com

- School-wide education
- Distribution of recycling bins

[Central Broward Water Control District](#)

(954) 432-5110

- Educational programming to fourth and fifth grade students within the District's boundaries

[Environmental Conservation / Utility Management](#)

(754) 321-4750

- Energy saving tips for elementary, middle and high schools

- Additional links to environmental websites
- Web-based utility tracking software – schooldude.com

Envirothon - <http://eco-tan.org/EnvAbout.html>

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- [Gardening for Grades](#)
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- [STEMming Up Gardening](#)

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(954) 257-2872

- In-class science safaris.
- Everglades experience field trips.

[South Florida Water Management District/educators](#)

(954) 452-4814

- Classroom education
- Website resources for teachers

[Tanawha Presents](#)

(248) 933-1069

- Science and education for students and teachers.

[Youth Environmental Alliance](#)

(954) 382-0188

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III. CURRICULUM INTEGRATION, cont.

C. Field Studies

Students learn about their local natural and built environments through guided first-hand investigation. *Direct, personal, sensory experience is essential for many aspects of learning and knowledge development.*

Ideas:

- Participate in a naturalist lead field trip
- Students make presentations to younger grades about field trip visit
- Students list species observed in their outdoor classroom or fieldtrip.
- Students create a map of the school and its major ecological features

Resources:

[Broward County Parks and Recreation](#)

(954) 357-8100

- Fieldtrips to a variety of Broward County nature centers.

[Sawgrass Nature Center](#)

(954) 752-9453

- Environmental education on-site and in the classroom.

Lessons – [see CPALMS lessons](#) – end of this document

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	2. Characteristics of Scientific Knowledge	6.N.2.3
Earth Structures	(human impact)	SC.7.E.6.6

Common Core State Standards Connections for Literacy in Science for Middle
LACC.68.RST.1.3

IV. COMMUNITY INVOLVEMENT

A. Partnerships within the School Building

Students model and practice successful collaboration and partnership building skills. *The school environment can be a safe and nurturing venue for incrementally mastering the complex skills for working well and effectively with others.*

Ideas:

- 4th graders teach 1st graders larval and host species of butterflies in garden
- Eco-club inventories sinks and provide “Save Water Please” stickers to each
- Students are active participants on their school’s “Green Team”.
- Students form a club to address community-wide environmental issues.

Resources:

[Broward County NatureScape](#)

(954) 519-1239

- Garden and Design Consultation
- Participation in campus workdays
- Outdoor programming
- Schoolyard Habitat Certification

[Broward County Parks and Recreation](#)

(954) 357-8100

- Eco-action days.

Lessons – [see CPALMS lessons](#) – end of this document

IV. COMMUNITY INVOLVEMENT, cont.

B. Service Learning Projects

Students meet curriculum learning goals by initiating and participating in real-life problem solving projects that directly benefit the community outside the school. *This helps students see why the curriculum skills and knowledge are important to real life situations while simultaneously bringing student resources to genuine community improvement.*

Ideas:

- The ecology club participates in an annual beach cleanup, or monthly Beach Sweep cleanup through Solid Waste and Recycling Services.
- Some classrooms communicate and work directly with non-school affiliated community partners.
- School can cite a number of environmental service learning projects conducted each year.
- Students volunteer at different environmental organizations once a month, or at annual events such as Water Matters Day.
- Participate in Eco-action day at any Broward County Park.

Resources:

[Broward County Parks and Recreation](#)

(954) 357-8100

- Fieldtrips into a variety of nature centers

[Coastal Cleanup](#)

(954) 519-1270

- International Coastal Cleanup

[Waterway Cleanup](#)

(954) 524-2733

- Remove trash and debris

Lessons – [see CPALMS lessons](#) – end of this document

IV. COMMUNITY INVOLVEMENT, cont.

C. Community Partnerships in School Activities

Outside community groups such as non-profits, Environmental Learning Centers (ELCs), government agencies, and other civic/community groups actively and regularly support students and teachers, and are invited to actively help plan and implement learning projects for and with students.

This brings more experience and resources into the school for specific projects and also builds strong community relationships that result in long term support for school activities.

Ideas:

- School newsletter includes monthly water or energy saving tip learned from local resources.
- Students, parents and community members do a campus workday or cleanup.
- School has created and/or uses a resource directory to assist teachers in identifying community resources; School has coordinated with Solid Waste and
- School has coordinated with community members to create a special Beach Cleanup, initiated by the school, and for school students/employees only.
- Community donated time and materials for green school projects are measured and increasing.

Resources:

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(954) 519-1260

- [EPA – Learning and Teaching About the Environment](#)

[Broward County Energy and Sustainability Program](#)

(954) 519-1265

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[Broward County NatureScape](#)

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- Outdoor programming
- Schoolyard Habitat Certification

[Broward County Waste and Recycling Services](#)

(754) 321-4200

emshelpdesk@browardschools.com

- School-wide education
- Distribution of recycling bins

Central Broward Water Control District

(954) 432-5110

- Educational programming to fourth and fifth grade students within the District's boundaries

Environmental Conservation / Utility Management

(754) 321-4750

- Energy saving tips for elementary, middle and high schools
- Additional links to environmental websites
- Web-based utility tracking software – schooldude.com

Florida Agriculture in the Classroom – Teaching Resources

- [Gardening for Grades](#)
- [Gardening for Nutrition](#)
- [STEMming Up Gardening](#)

Kids Ecology Corps

(954) 524-0366

- Classroom presentations
- School projects

Sawgrass Nature Center

(954) 752-9453

- Environmental education on-site and in the classroom.

Science Eye

(954) 257-2872

- In-class science safaris.
- Everglades experience field trips.

South Florida Water Management District/educators

(954) 452-4814

- Classroom education
- Website resources for teachers

Tanawha Presents

(248) 933-1069

- Science and education for students and teachers.

Youth Environmental Alliance

(954) 382-0188

- Outdoor education and community events.

Lessons – [see CPALMS lessons](#) – end of this document

V. ADMINISTRATIVE SUPPORT

A. School Philosophy and Culture

Environmental themes, concepts and Green School Projects are at the core of how staff and administration think about curriculum and building operations.

Successful projects are easier to develop and sustain when approaches that build a green school culture achieve a critical mass of support (especially among those with decision-making authority)

Ideas:

- School annually recognizes Earth Day/Arbor Day with a school wide event.
- Administration invites solid waste or recycling firm or local government agency to speak to all students. Each year they design a new solid waste unit, which is enriched with appropriate labs for each of the different science classes.
- School literature and website talk about the importance of their green school initiatives.
- Administration provides green messages as part of morning announcements or has green booth at school events.

Resources:

[Broward County NatureScape](#)

(954) 519-1239

- Provide ideas for earth day events

[Broward County Energy and Sustainability Program](#)

(954) 519-1265

- Classroom programming: Energy, Efficiency, Conservation and Climate Change Issues

[Broward County Waste and Recycling Services](#)

(754) 321-4200

emshelpdesk@browardschools.com

- School-wide education
- Distribution of recycling bins

Lessons – [see CPALMS lessons](#) – end of this document

V. ADMINISTRATIVE SUPPORT, cont.

B. Professional Development

Training of school staff is used intentionally as a way to build Green School capacity. *Providing focused and ample staff training on any strategy is one of the most effective and essential ways to achieve desired student performance results.*

Ideas:

- Staff attends a NatureScape Broward teacher or custodial training.
- Teachers implement lesson to students based on training acquired.
- Teachers are strongly encouraged to continually develop their own personal Green School instructional strategies through attendance of professional development. Staff attends workshops that enhance their knowledge of green initiatives, community building and local endangered habitats.
- Teacher becomes a Habitat Steward through NatureScape Broward training.

Resources:

[Broward County NatureScape](#)

(954) 519-1239

- Professional development for teachers and custodians

[Broward County Public Schools](#)

(754) 321-2620

- Professional Development for teachers and administrators.

Lessons – [see CPALMS lessons](#) – end of this document

C. Planning

Green School activities are systematically included as core components of major planning efforts.

Long range visioning and planning significantly strengthen and guide current activities.

Ideas:

- Teachers organize a poster contest to promote green goals of the school.
- All second graders sign agreement to make sure lights are turned off every time everyone leaves the classroom.
- School has formed a school-wide Green Team consisting of teachers, administrators, students, SAC members, parents and community to coordinate the systematic planning and implementation of ongoing and new Green School activities.
- Being a Green School is formally incorporated into the School Improvement Plan. It is a standing agenda item at SAC and/or faculty meetings.

Resources:

[Broward County NatureScape](#)

(954) 519-1239

- Provide ideas for earth day events

[Broward County Energy and Sustainability Program](#)

(954) 519-1265

- Classroom programming: Energy, Efficiency, Conservation and Climate Change Issues

[Broward County Waste and Recycling Services](#)

(754) 321-4200

emshelpdesk@browardschools.com

- School-wide education
- Distribution of recycling bins

Lessons – [see CPALMS lessons](#) – end of this document

D. Sharing Success and Lessons Learned

This indicator will address how schools share with other schools and the community what they are doing to “green” their school. This indicator emphasizes the importance of communication and networking throughout Broward County and beyond to promote Green Schools

Ideas:

- Morning announcements highlight Green School success stories
- Student created posters are displayed at school entry points making visitors aware of school wide green practices.
- Schools log their success stories onto the “official” Green Schools web site – <http://browardschoolsgogreen.com> or for charter schools, their own website.
- School representative makes presentation at Florida Association of Science Teachers Conference.

Resources:

[Broward County NatureScape](#)

(954) 519-1239

- Networking with teachers

Lessons – [see CPALMS lessons](#) – end of this document

VI. INNOVATION

2021-22 School Environmental Story Map using ArcGIS

- Create or revise your school environmental story map using ArcGIS. A story map is an interactive map that tells a story using images and text. If you applied for last year's P3 challenge and created a story map, you can revise/update it for this year's Innovation category.

- This is your school's chance to shine! Show us through pictures and stories your school gardens, environmental initiatives, projects, environmental events, etc.
- [Instructions on how to access and create your school story map.](#)
- Check out the [schools that submitted a P3 Eco-Challenge BCPS Environmental Stories using ArcGIS](#) from the 2021-22 challenge.

RESOURCES:

Project Learning Tree - <https://www.plt.org/>

North American Association for Environmental Education - <https://naaee.org/get-involved>

National Ocean Service - <https://oceanservice.noaa.gov/education/>

National Wildlife Federation - <https://www.nwf.org/Home/Educational-Resources>

NatureScape - <https://www.broward.org/NatureScape/Pages/Default.aspx>

Citizen Science Resources - <https://www.citizenscience.gov/#>

Citizen Science Toolkit: <https://www.calacademy.org/educators/citizen-science-toolkit>

Citizen Science Lesson Plans - <http://sciencenetlinks.com/lessons/citizen-scientists-be-part-scientific-discovery-your-own-backyard/>

Citizen Science SciStarter projects - <https://scistarter.com/educators>

Lessons – [see CPALMS lessons](#) – end of this document

Elementary level [Next Generation Sunshine State Standards Alignment](#)

Body of Knowledge	Big Ideas/Standard(s)	Benchmark(s)
Nature of Science	1. Practice of Science	SC.K.N.1.1, SC.K.N.1.2, SC.K.N.1.3, SC.6.N.1.1, SC.K.N.1.4, SC.K.N.1.5, SC.1.N.1.1, SC.1.N.1.2, SC.1.N.1.2, SC.1.N.1.3, SC.1.N.1.4, SC.2.N.1.1, SC.2.N.1.2, SC.2.N.1.3, SC.2.N.1.4, SC.2.N.1.5, SC.2.N.1.6, SC.3.N.1.1, SC.3.N.1.2, SC.3.N.1.3, SC.3.N.1.4, SC.3.N.1.5, SC.3.N.1.6, SC.3.N.1.7, SC.4.N.1.1, SC.4.N.1.2, SC.4.N.1.3, SC.4.N.1.4, SC.4.N.1.5, SC.4.N.1.6, SC.4.N.1.7, SC.4.N.1.8, SC.5.N.1.1, SC.5.N.1.2, SC.5.N.1.3, SC.5.N.1.4, SC.5.N.1.5, SC.5.N.1.6
Earth and Space Science	6. Earth Structures	SC.1.E.6.1, SC.1.E.6.3, SC.2.E.6.1, SC.2.E.6.2, SC.2.E.6.3, SC.3.E.6.1, SC.4.E.6.1, SC.4.E.6.2, SC.4.E.6.4, SC.4.E.6.5, SC.4.E.6.6
Life Science	14. Organization and Development of Living Organisms	SC.K.L.14.1, SC.K.14.2, SC.K.14.3, SC.7.L.17.1, SC.1.L.14.1, SC.1.L.14.2, SC.1.L.1.3, SC.3.L.14.1, SC.3.L.14.2
	16. Heredity and Reproduction	SC.2.L.16.1.1, SC.4.L.16.2, SC.4.L.16.4

	17. Interdependence	SC.2.L.17.1, SC.2.L.17.2, SC.3.L.17.1, SC.3.L.17.2, SC.4.L.17.1, SC.4.L.17.2, SC.4.L.17.3, SC.4.L.17.4, SC. 5.L. 17.1
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Common Core State Standards Connections for Literacy in Science

LACC.K.SL.1.1, LACC.K.W.3.8
 LACC.1.SL.1.1, LACC.1.W.3.8, LACC.1.RI.2.4
 LACC.2.SL.1.1, LACC.2.W.3.8
 LACC.3.SL.1.1, LACC.3.RI.1.3, LACC.3.RI.2.4
 LACC.4.SL.1.1, LACC.4.RI.1.3, LACC.4.W.3.8
 LACC.5.RI.1.3, LACC.5.W.3.8

Common Core State Standards Connections for Mathematical Practices

MACC.1.MD.3.4 Organize, represent and interpret data
 MACC.2.MD.4.10 Draw a picture graph and bar graph to represent data
 MACC.3.MD.1.2 Use appropriate tools strategically
 MACC.5.MD.2.2 Represent and interpret data
 MACC.5.G.1 Graph points on a coordinate plane

P3 ECO-CHALLENGE USEFUL CPALMS LESSONS

SC.K.N.1.2 : What Parts are there to a Plant?

<http://sciencenetlinks.com/lessons/what-parts-are-there-to-a-plant/>

SC.1.N.1.2 : Have you ever met a Tree?

<http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/arb/meetatree.html>

SC.K.N.1.5: What is Water?

<https://serc.carleton.edu/sp/mnstep/activities/27059.html>

SC.1.N.1.2 & SC.1.N.1.3 : Tree Observations

<http://www.cpalms.org/Public/PreviewResourceUpload/Preview/13354>

SC.1.N.1.1: Investigating Local Ecosystems

<http://sciencenetlinks.com/lessons/investigating-local-ecosystems/>

SC.2.E.6.3: Investigating Soil Composition – Soil Soaks Up Water

<https://serc.carleton.edu/sp/mnstep/activities/34950.html>

SC.2.N.1.2: Introduction to Nature Journaling

<https://serc.carleton.edu/sp/mnstep/activities/26558.html>

SC.3.L.14.2: If You Build It, It Will Grow

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/154547>

SC.3.L.14.1: Fertilizing Fun!

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/51137>

SC.4.P.10.4: What Makes 'Em Move: By Water or Air

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/45964>

SC.4.P.10.4: Wind at Work: Wind as a Renewable Resource

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31170>

SC.4.E.6.3: Going Green - Renewable and Non-Renewable Florida Resources

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/149229>

SC.4.E.6.4 : Dune or Doom: The Effects of Wind Erosion on Sand Dunes

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/154135>

SC.4.E.6.3 :Greener School Cafeteria

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/47491>

SC.4.E.6.3 : It's in the Bag!

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73152>

SC.4.E.6.3 & SC.5.N.1.1: Town of Newberry: Alternative Energies MEA

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/47378>

SC.5.N.1.1: Introduction to the Nature Journal

<http://www.cpalms.org/Public/PreviewResourceUrl/Preview/25167>

SC.5.P.8.2 & SC.5.N.1.1: Icky, Icky, No More Slicky

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/149429>

SC.5.N.1.1 : Vegetables for Our Farm

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/47986>