



# Take It Outside! Tips and Tools for Outdoor Classrooms

April 5, 2016



# AGENDA AND SPEAKERS

**Donna Drewes**, Co-Director, Sustainable Jersey for Schools

## ***Overview of Sustainable Jersey for Schools' program and related actions***

- Biodiversity Plans and Projects
- School Gardens
- Education for Sustainability



**Marc Rogoff**, Environmental Education Specialist with the New Jersey Department of Environmental Protection

## ***Tips and resources for making your outdoor classroom successful***

- Location, Location, Location – A Sense of Place
- Involving Students with Design to Development
- Common Outdoor Classroom Components
- Seasons, Safety and other Considerations
- Teamwork and Partnerships
- Curriculum Resources
- Outdoor Classroom Connections, Tools and Resources



# Sustainable Jersey for Schools



# Why Participate?



- Framework for action
  - Best practices, guidance and training
  - Technical support resources
  - Small grants
- Positive impact on school community
  - Cost savings
  - Healthier learning environments
  - Student and staff performance

# Why Participate?

- Move towards a sustainable future

- Increase recognition and understanding of current and future challenges
- Arm students with knowledge and insights to make wise choices
- Connect STEM education with real-life
- Expose students to future career paths



- Recognize and reinforce progress

- Celebrate accomplishments
- Share successes
- Distinguish your district and school



# Municipal Schools



432 towns, 193 certified



155 Districts, 400 Schools

## Sustainable Jersey Program Participants



# Levels of Certification

150

Bronze

- Green team
- 2 out of 11 priority actions
- Actions completed in 6 of 17 categories

350

Silver

- Green team
- 3 out of 11 priority actions
- Actions completed in 8 of 17 categories



# Program Actions: Where Can We Start?

## PEOPLE

### STUDENT & COMMUNITY OUTREACH

#### Green Team\*\*

#### Community Education & Outreach\*

Green Fair

“Green” Your Green Fair or School Event

Green Challenges

Civic & Stewardship Volunteer Initiatives

Enrichment Programs through Partnership

### DIVERSITY & EQUITY

Breakfast After The Bell

Accessible Communications

Diversity on District Task Forces & Committees

### FOOD & NUTRITION

Healthy Food Choices

School Gardens

Promote Locally Grown Foods

### STUDENT SAFETY

Safe Routes to School District Policy

School Travel Plan for walking & biking

Pedestrian and Bicycle Safety & Promotion Initiatives

Safe Driving Awareness Programs for High School Students

### STUDENT & STAFF WELLNESS

#### School Wellness Council\*

School Health Assessment

Policies to Promote Physical Activity

## PROSPERITY

### ENERGY EFFICIENCY

#### Energy Audit\*

#### Building Efficiency Measures\*

Energy Tracking & Management

Sustainable Energy Transition Plan

### LEADERSHIP & PLANNING

#### Professional Development for Sustainability\*

School Community Asset Mapping

Green Facilities Management Checklist

Green Enhancement of District Strategic Plans

Strategic Plan Implementation of Green Initiatives

District Sustainability Policy

School District Foundation

### STUDENT LEARNING\*

*(only one action in this category will be counted toward priority requirements)*

#### Education for Sustainability K-3\*

#### Education for Sustainability Grades 4-12 Science\*

#### Education for Sustainability Grades 4-12 Math\*

#### Education for Sustainability Grades 4-12 ELA\*

#### Education for Sustainability Grades 4-12 Social Studies\*

#### Education for Sustainability Grades 4-12 Creativity/Arts\*

#### Education for Sustainability Grades 4-12 Health\*

## PLANET

### CLIMATE MITIGATION & RENEWABLE ENERGY

#### School Carbon Footprint\*

On-site Renewable Generation System-Solar

On-site Renewable Generation System-Geothermal

Buy Renewable Electricity

Collaborate with Municipality on Government Energy Aggregation Program

### SCHOOL GROUNDS

Biodiversity Audit & Management Plan

Biodiversity Project

Green Infrastructure Assessment & Plan

Green Infrastructure Installation

Sustainable Landscape Design

### GREEN DESIGN

#### Green Building Policy\*

Green Building Training

Green Building Survey

Bid New Construction & Major Renovations using Green Standard

Build New/Renovated Project that meets Green Standard

Commissioning Approval for New/Existing Building that meets Green Standard

### GREEN PURCHASING

#### Green Purchasing Policy\*

## POINTS

10

(5-40)

10

10

10

10

10

10

10

10

10

10

10

10

20

20

10

# 2016 Certification Cycle

- **January 15** – Initial Application Deadline
- Late February – Reviewer Comments
- **April 8** – **Second Application Submission**
- Early May – Reviewer Comments
- **June 24** – Final Application Submission
- Mid July – Certified Schools Notified
- **October** – Certified Schools Celebration



# Biodiversity Plans and Projects

**10 Points – Plans School Action**

**10 Points – Projects School Action**

**Biodiversity plans and projects enable schools to address issues such as invasive species proliferation, habitat restoration, and ecological diversity through targeted biodiversity projects on your school grounds.**

Projects can include native species gardens, butterfly gardens, birdhouses, ponds or water features, invasive species removal, or any other habitat elements necessary to support specific wildlife species.



# Biodiversity Audit and Management Plans



- **Complete a biodiversity survey** using the audit tool developed by the National Wildlife Federation's Eco Schools program (or similar tool). Biodiversity audits give schools a snapshot in time that addresses key aspects of local habitats and ecosystems that promote biodiversity.
- **Create an action plan** that includes monitoring activities, and identifies future biodiversity projects.
- The **biodiversity audit report** must include: a school site map, site survey information that includes tree and shrub, habitat data (plants and habitat areas) and a mammal, reptile, and amphibian species observation. The audit must also include the documentation of the site biodiversity index.

# Biodiversity Projects



**Involve students** in the installation of the biodiversity project. The biodiversity project must **include a classroom learning component.**

**Create a Biodiversity Team:** Schools may find assistance from a variety of sources such as landscape architects, conservation organizations, and local businesses willing to donate their technical expertise, equipment, and supplies to support the project installation.



# School Gardens

## 10 Points – School Action



In order to earn points for this action, the garden needs to have been active during the current or previous growing season and include plantings that produce fruits, vegetables and/or herbs that could be consumed by students.

The garden must be utilized to teach environmental and/or nutrition education involving students interacting with the garden for learning activities during the school year.

# School Gardens

**There many ways to connect the garden to the classroom:** Involve students in designing a garden plan, measuring and staking out garden beds, making garden signs, constructing a solar greenhouse, and/or analyzing soil for pH and nutrient content.

## ***School Garden Checklist:***

- 1. Plan the garden**
- 2. Purchase Tools and Materials**
- 3. Build the garden**
- 4. Maintain the garden**
- 5. Manage the garden**



# Education for Sustainability

## 10 point – School action

This action awards points for under multiple disciplines for lessons that have delved into a sustainability-related issue, employed effective methods to engage students, and assessed student learning of sustainability core principles (or the enduring understandings of sustainability) in the current school year.



# Education for Sustainability Grades

## 10 Point – School Action

1. Identify areas within the 4th-12th grade arts curriculum or specific grade level lessons that are linked to sustainability issues (climate change, energy, water, waste, ecological systems, food systems, economic systems, health and wellness, social and cultural systems, or the built environment) and which lend themselves to teaching approaches that are inquiry-based, experiential, interdisciplinary and/or place-based.
2. Determine the **enduring understanding(s) related to sustainability** (see [Efs Questionnaire](#)) that the students are to gain from the lessons (the learning objective).



# Education for Sustainability

**Develop a significant sustainability lesson plan or unit. The sustainability lessons need to employ at least one of these instructional approaches:**

***Inquiry-based:*** Ask questions, plan and carry out investigations, analyze and interpret data, construct explanations, engage in argument based on evidence.

***Experiential:*** Students learn through doing—participating in projects, events, challenges, experiments and other learning activities.

***Place-based student learning:*** Students participate in investigations and learning activities in school grounds, neighborhoods, or natural areas that engage them with real-life scenarios that are tangible, observable and meaningful to them.

***Interdisciplinary:*** Two or more teachers covering different academic disciplines design and/or present related lessons that integrate subject matter from two or more academic disciplines.

**Design tools—such as a rubric—and methods to properly assess whether students have grasped the sustainability enduring understanding(s) of the lesson.** The assessment must be aligned with the sustainability-focused enduring understanding. The "Resources" section of the action provides references to effective and aligned assessment



# Education for Sustainability

## What to Submit:

- A **copy of the lesson plan** that documents the planning and delivery of a significant lesson or set of lessons, and assessment of student learning of the sustainability enduring understanding (see [EfS Questionnaire](#)).
- **Samples of student work** and graded rubrics that demonstrate the students' learning of the enduring understanding(s) of sustainability.
- **Completed Education for Sustainability Questionnaire ([EfS Questionnaire](#))** where you check off: sustainability-related topic taught; enduring understanding of sustainability incorporated; and the instructional approach used to create a significant lesson or set of lessons. A short narrative summary of the learning objectives of the sustainability lessons, and a description of how student learning was assessed.
- **Optional:** Additional documentation of the lessons such as relevant photographs, videos, and news articles may also be submitted.

Sustainable Jersey for Schools  
**Education for Sustainability Questionnaire**

Answer these questions about the **significant lesson or set of lessons** that you are submitting for points under the Education for Sustainability (EfS) action.

1. The lesson(s) must have addressed at least one of the sustainability topics listed below. Examples provided under the sustainability topics are meant to be illustrative and not a comprehensive list of subtopics. Check off the sustainability topic(s) addressed by the lessons, and for which there are documented results:

\_\_\_\_\_ **Ecological Systems**  
Investigating natural environmental processes and systems – Learning about the physical and living systems of our planet (e.g., understanding about the inter-connectedness and natural links of these systems and inform solutions to environmental problems). Students can investigate ecological systems at a local level – e.g., biodiversity in the school grounds – or link to studies occurring further away.

\_\_\_\_\_ **Climate Change**  
Acquiring climate literacy – Learning climate science to understand the causes and consequences of global climate change; studying the impact of human activity on the climate and adaptations of man-made and natural systems in the face of climate change. Students can take action to address climate change by reducing their "carbon footprints."

\_\_\_\_\_ **Waste**  
Reducing, reusing, recycling and cradle-to-cradle design – Re-thinking consumption and product design and use to eliminate the very idea of "waste." Any school or community can reduce its environmental impact by analyzing the full life cycle of the products it uses, and acting to reduce packaging and transport distance, and to recycle or re-purpose as many items as possible.

\_\_\_\_\_ **Energy**  
Addressing sustainable energy supply and use – Learning about the multiple factors that play a role in energy demand, supply and use and the impacts on ecosystems and socio-economic systems. In some municipalities, schools are the largest energy consumers, but up to 30 percent of that energy may be used inefficiently.

\_\_\_\_\_ **Health and Wellness**  
Addressing issues that impact human health – Eliminating toxic and hazardous materials, while maximizing elements that promote health (e.g., providing clean air and good ventilation, providing clean water, promoting outdoor time and physical activity) will improve the home, work and school environment for everyone.

\_\_\_\_\_ **Food Systems**  
Improving nutrition and food sustainability – Many of the systems for producing, processing, and delivering the food we eat rely on practices that have deleterious effects on the environment, on livestock, on farm workers and on consumers. Choosing local and whole foods impact both human health and the environment.



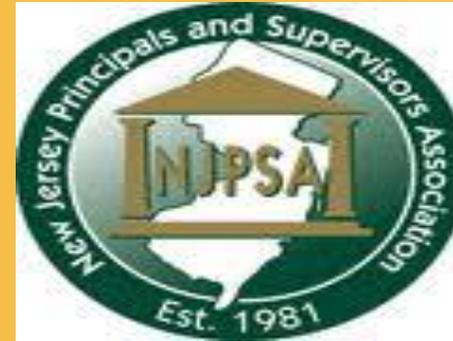
Marc Rogoff: *Tips and resources for making your outdoor classroom successful*

Visit <http://www.nj.gov/dep/seeds/syhart/outclass.htm> for links related to outdoor classrooms



**Bring the Classroom  
Outside!**

# Program Partners



# Questions?

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# For More Information

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