



Webinar description for Outdoor Classrooms – April 5 from 3-4 PM

Take It Outside! Tips and Tools for Outdoor Classrooms

- Using Your School Grounds as an Outdoor Classroom
- Creating an Outdoor Classroom on your School Site
- Place Based Learning in an Outdoor Classroom
- Using an Outdoor Classroom to Inspire Student Learning

Webinar Agenda:

Learn about Sustainable Jersey for Schools' actions that relate to outdoor classrooms:
Biodiversity Projects - School Gardens - Education for Sustainability

Notes from this page continue on the next page →



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Cont.

What makes a successful outdoor classroom?

Location, Location, Location – A Sense of Place

Outdoor Classroom Benefits

Common Outdoor Classroom Components

Seasons, safety and other Considerations

Involving Students with Design to Development

Teamwork and Partnerships

Curriculum Resources

Outdoor Classroom Connections, Tools and Resources

Speakers: Donna Drewes, Co-Director of Sustainable Jersey or Heather McCall, Director of Sustainable Jersey for Schools and Marc Rogoff, NJ DEP

If this proves to be popular, would you consider offering an Outdoor Classroom Series?

Webinar B: Take It Outside! Curriculum Connections and Resources

Webinar C: Take It Outside! Outdoor Classrooms in Action (4 site profiles)



There are many definitions but they all have the following in common:

- An outdoor classroom is an outdoor educational facility that can be developed into a natural study grounds for educators, students and anyone interested in the natural environment.
- All subjects or curriculum can be presented in an outdoor classroom.
- Outdoor classrooms also provide alternatives for all to gain a better knowledge of what natural resources are and to understand the interconnectedness of these resources.
- Opportunities are available in an outdoor classroom to educate youth on the importance of taking care of the environment.

Focus on ecology, sustainability, interconnectiveness - stewardship



TAKE IT OUTSIDE



**HOW CAN I ESTABLISH AN
OUTDOOR CLASSROOM
AT MY SCHOOL**



Advance to next slide...



TAKE IT OUTSIDE



Where Should It Be Located?



A Sense of Place

Placed Based Education

Location, location, location...

Regional maps.... Flora fauna – topography, geology



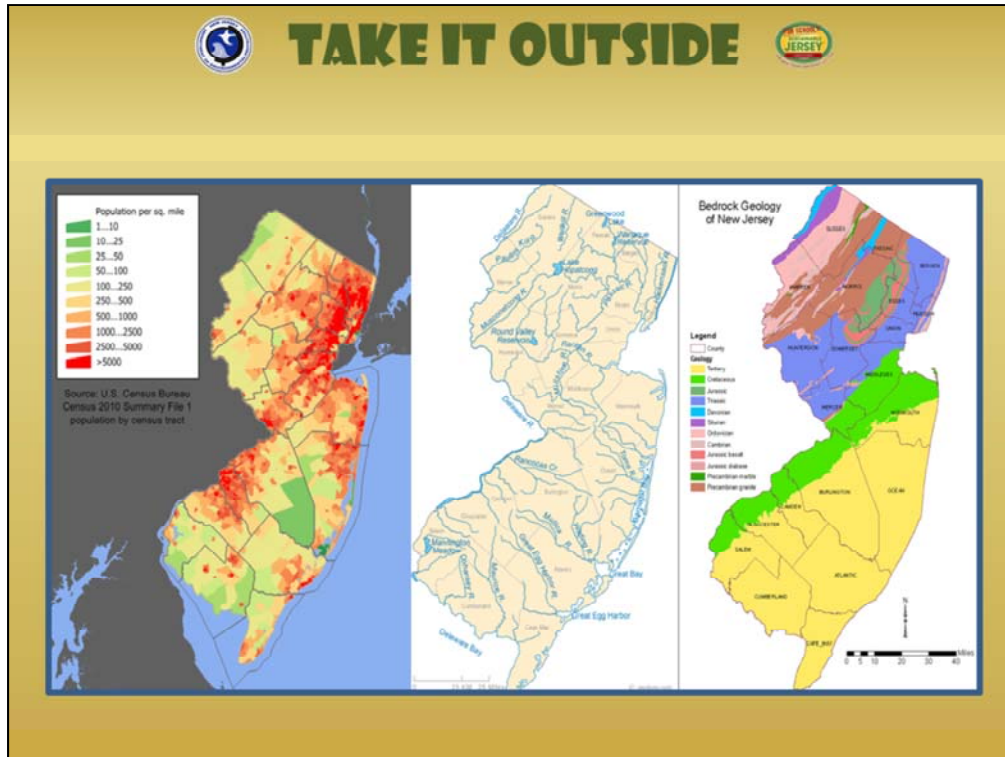
TAKE IT OUTSIDE



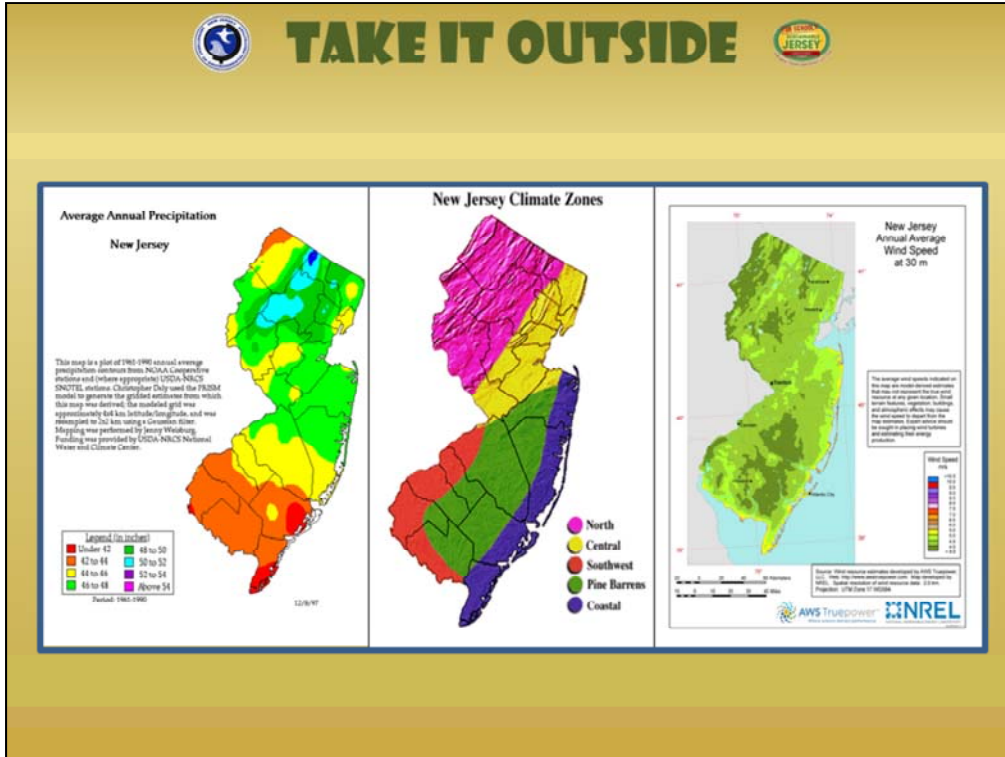
Some Important Things To Consider:



- Local geography/geology
- Soil composition
- Drainage
- Previous/current vegetation
- Amount of sunlight/shade
- Size
- Location
- Accessibility/maintainability
- Safety/Liability
- Seasonal variations
- History of site
- Community impacts on the site



Use maps to show pertinent information on population density, waterways, and geology



Precipitation, climate zones and windspeed



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What Features Can We Include?

STEM



Recycling



Bird Feeders



Beautification



Ponds



Green Roofs



Rain Gardens



- Recycling Stations
- Bird baths
- Food plots
- Feeding stations
- Nature trails
- Gazebo / Seating
- Vegetable garden

- Nest boxes
- Greenhouse
- Butterfly gardens
- Trees
- Compost station
- Green roofs
- Fruit trees

- Brush and rock piles
- Ponds
- Shrubs and bushes
- Flower gardens
- Herb garden
- Rain gardens

See website for more options...



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Let's Take A Closer Look...



Advance to next slide...



Test local waterways, public water supply etc.

Use less water

Assess need

Use water saving devices

Water early in the day

Use drought tolerant plants

Retain water

Use mulch

Capture runoff (rain barrels/gardens)

See the NJDEP web site for more information on water conservation.

www.nj.gov/dep/seeds/drought/drought.htm

Barnegat Bay Rain Barrel Challenge:


<http://www.nj.gov/dep/barnegatbay/rbc.htm>




BENEFITS OF USING NATIVE PLANTS

- They perform better in our local soil, moisture, and light conditions
- They do not require supplemental water, fertilizers, pesticides, or excessive labor
- Trap pollutants—Native plants can store and filter runoff and can remove 94% of sediment, 43% of phosphorus, and 70% of nitrogen pollution from rainwater – USEPA
- Contributes to desirable wildlife habitat
- They have deep root systems (8'–15') that help soils infiltrate better.


Native Plant Society of NJ: <http://www.npsnj.org/>



TAKE IT OUTSIDE




Rain Gardens



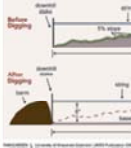
The Native Plant Society of New Jersey

DO NOT WASTE IT!

Rain gardens are just what they sound like - gardens that soak up rain water, mainly from your roof, but also from your driveway and lawn. They are landscaped areas planted with wild flowers and other native vegetation to replace areas of lawn. The gardens fill with a few inches of water and allow the water to slowly filter into the ground rather than running off to storm drains. Compared to a patch of conventional lawn, a rain garden allows about 30 percent more water to soak into the ground.




Between 1% and 8% slope here



BUILDING A RAIN GARDEN

Key steps in the process include siting, choosing the appropriate plants, site preparation, planting, and maintenance. You may do all or some of the steps yourself or have a professional landscaping contractor help you. The following photographs are from several different rain garden projects that show a few of the steps in the process.



TIPS FOR A PRODUCTIVE RAIN GARDEN

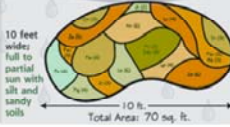
Keep in mind that a rain garden is a garden, not a drain. The focus is on flowers, although some grasses can be used.

When planting the rain garden, ask some friends to help. A few people working for an hour can be fun for all and will allow you to get the planting done in a couple hours.

In the weeks after planting, you may want to hoe dandelions and other weeds until the mature garden plants crowd them out. As the rain garden matures, you will need to thin the population of some plants to allow others to grow.

Leave the dead or dormant plants standing over the winter. Many of the plants will provide seeds and shelter for birds. In spring, cut back or mow the weeds to allow new shoots to emerge.

Installation of a rain garden is slightly more work than a comparable area of lawn, but maintenance is low once plants mature.



10 feet wide
full to partial sun with silty and sandy soils

Total Area: 70 sq. ft.

Number	Species Name	Common Name	No. of Plants
01	Asclepias tuberosa	Orange Butterfly Milkweed	2
02	Coreopsis lanceolata	Red-top	2
03	Eupatorium altissimum	Spotted New York Aster	2
04	Helenium autumnale	Autumn Crocus	2
05	Junonia sp.	Blue Jay Butterfly	2
06	Asclepias speciosa	White Butterfly Milkweed	2
07	Asclepias tuberosa	Orange Butterfly Milkweed	2
08	Asclepias tuberosa	Orange Butterfly Milkweed	2
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Explain

See what a rain garden is and links to step-by-step guides to making them.

<http://www.nj.gov/dep/seeds/syhart/index.htm>



All wildlife needs the following elements to thrive!

FOOD WATER COVER PLACES TO RAISE YOUNG

BUTTERFLY GARDENS

Attracting these “flying flowers” is easy to do!

Your Butterfly Garden needs to provide:

- water; a mud or sand puddle is recommended,
- shelter from wind and rain,
- open sunny areas for basking and
- appropriate plants rich in nectar!

BAT HOUSES

- A single bat can eat hundreds of insect pests each night!
- Bats rarely carry rabies and no bat in the USA feeds on blood!
- Place your bat house(s) near, but not within, vegetation.
- Multiple houses often encourage nursery colonies.

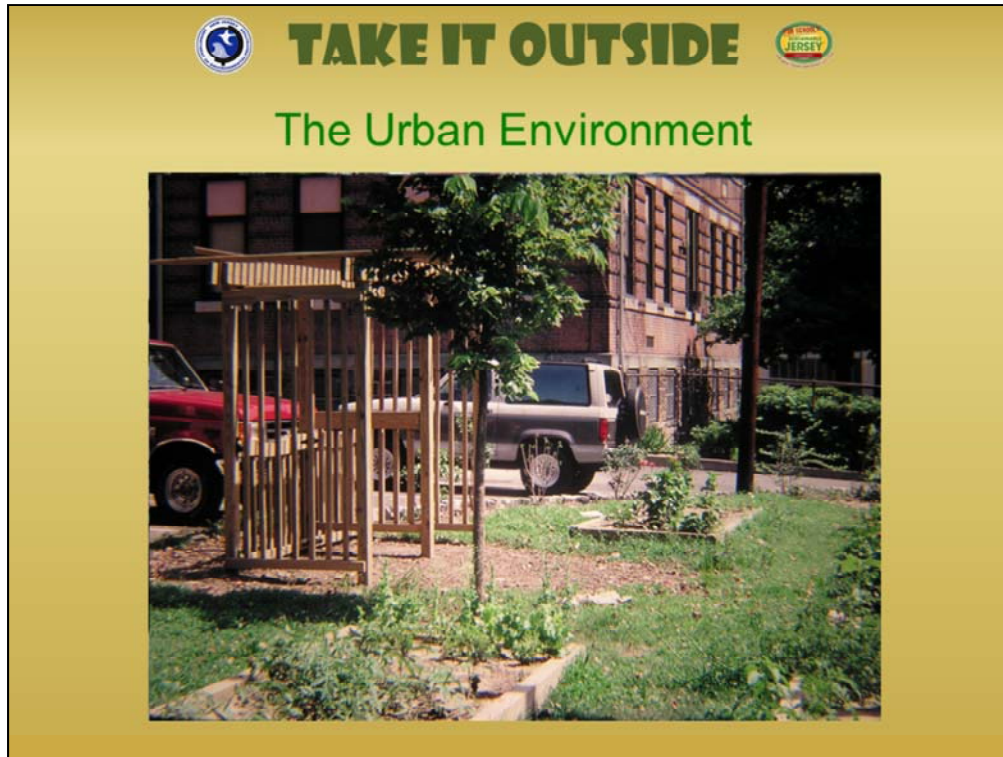
FOR THE BIRDS!

Birds will be your most frequent and obvious visitors to your garden. Even more will come if you provide:

- multiple feeders with different types of seeds,
- hummingbird feeders,
- suet, natural peanut butter or fresh fruit

- crushed eggshells for calcium
- protection from predators

[http://www.nwf.org/How-to-Help/Garden-for-Wildlife/Create-a-Habitat.aspx?campaignid=WH14F1ASCXX&s_src=700000000082645&s_subsrc=NWF_Habitats%7cNWF_Backyard_Habitat&ssource=700000000082645&kw=NWF_Habitats%7cNWF_Backyard_Habitat%3Cvaries%3E&gclid=CjwKEAjw1riwBRD61db6xtWTvTESJACoQ04QKPkmCXQA78sYtDU5tKlrtgY3aZdyA2mYLSomvWP38BoCvwXw_wcB?s_src=700000000082645&s_subsrc=NWF_Habitats%7cNWF_Backyard_Habitat&ssource=700000000082645&kw=NWF_Habitats%7cNWF_Backyard_Habitat&gclid=CLOe4N2T-ssCFUxZhgodqRkB8g&gclid=CjwKEAjw1riwBRD61db6xtWTvTESJACoQ04QKPkmCXQA78sYtDU5tKlrtgY3aZdyA2mYLSomvWP38BoCvwXw_wcB?s_src=\[*EngineAccountID*\]](http://www.nwf.org/How-to-Help/Garden-for-Wildlife/Create-a-Habitat.aspx?campaignid=WH14F1ASCXX&s_src=700000000082645&s_subsrc=NWF_Habitats%7cNWF_Backyard_Habitat&ssource=700000000082645&kw=NWF_Habitats%7cNWF_Backyard_Habitat%3Cvaries%3E&gclid=CjwKEAjw1riwBRD61db6xtWTvTESJACoQ04QKPkmCXQA78sYtDU5tKlrtgY3aZdyA2mYLSomvWP38BoCvwXw_wcB?s_src=700000000082645&s_subsrc=NWF_Habitats%7cNWF_Backyard_Habitat&ssource=700000000082645&kw=NWF_Habitats%7cNWF_Backyard_Habitat&gclid=CLOe4N2T-ssCFUxZhgodqRkB8g&gclid=CjwKEAjw1riwBRD61db6xtWTvTESJACoQ04QKPkmCXQA78sYtDU5tKlrtgY3aZdyA2mYLSomvWP38BoCvwXw_wcB?s_src=[*EngineAccountID*])



Did you notice that there actually was a tree in that picture.

The built environment does not always include vegetation, but it does include air, water, sunlight, and lots of people.

Does this imply that an urban center is not a good location for a Schoolyard Habitat?

On the contrary, the built environment is the best place for a Schoolyard Habitat!!!

It may be difficult to create a Schoolyard Habitat in a city, where open space is at a premium. But plantings are not the only thing students can do. The urban environment has its own native wildlife.

A small amount of space is all you need!

Wildlife in the City!

Bats Skunks Raccoons Opossums Moles Squirrels

Numerous Insects Birds (not just Pigeons)

The NJDEP Peregrine webcam website: <http://www.state.nj.us/dep/fgw/peregrinecam/index.html>



TAKE IT OUTSIDE



Incorporate Technology



Weather Stations

Plotting land measurements

Air Monitoring (website)

Irrigation

Air Monitoring Project: <http://www.nj.gov/dep/seeds/airqed/SAMP/>



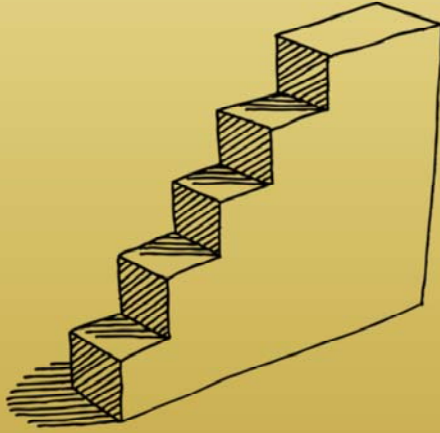
What students learn at school can be applied at home as well.



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Tips for the Proper Steps
or Pathways to Success...



Advance to next slide...



Green Teams !!!

Highlight the many benefits of a schoolyard habitat program:

Unique hands on experience

Can be used continually year after year.

Allows students to develop an appreciation for the environment.

Provides students with a sense of ownership, which usually fosters an increase in pride for the school.

Develops unity, social skills, and responsibility.

Enhances students knowledge of various plant and wildlife species.

Succession, communities, the importance of preservation, land management, biodiversity, and adaptation can be studied.

Photosynthesis, food production in plants, seasonal cycles, and regeneration of plants can be seen first hand.

Opportunities for cross curricular learning.

Relaxing environment for reading and writing in language arts.

Physical education through actual laboring.

Art education

Math: budgeting funds, measuring plots, growth percentages, etc.

Technology: researching development on the internet, graphic representations, etc.

Social studies: working with community officials, researching laws/ordinances, discovering the history and heritage of the state.



Get faculty and maintenance on board.

- Faculty donations / suggestions
- Divide tasks among faculty

Cooperation from groundskeepers
Community involvement

Involvement of students:

Provide students with indigenous plant life information. Explain land development.

Allow students to develop ideas.

Provide scale model of land for student use.

Allow students to tour the area.

Provide incentives and recognition for engaging ideas.

Create a panel to review student proposals.

Select teachers to compile the most outstanding ideas into a developed layout.

Present the culmination to the students, administration, and the community.

Get outside assistance if needed.

Plant produce (this can also be used as a great fundraiser in the future).

Students can Add elements to it over time – multi year process.



Check Local Ordinances

Stay away from “attractive nuisances” such as ponds, etc.

Consider accessibility for the handicapped.

Liability and safety: consider possible hazards for students/visitors.

Use caution when selecting fertilizer.

Puddle/ice boots in mud....

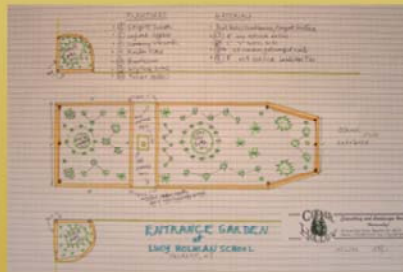
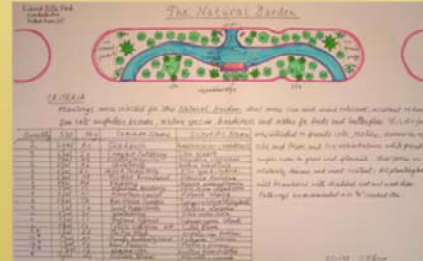
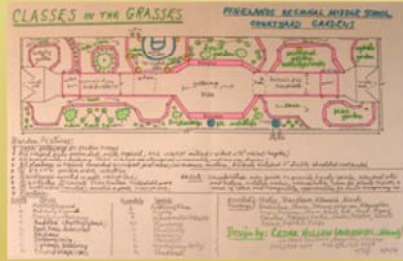
Loss of involved staff member may lead to lack of attention or use....



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Design A Landscape/Blueprint



i-tree: <https://www.itreetools.org/>



I'm glad you asked....



- Native Plant Society
- New Jersey Audubon Society
- National Wildlife Federation
- National Gardening Association
- Outdoor Classroom Network
- NJ Green Bldg. Council
- ANJEE

- Outdoor Classroom Network: www.nj.gov/dep/seeds/schhabs.htm
- Alliance for NJ Environmental Education: www.anjee.net
- National Wildlife Federation: www.nwf.org
- Natural Resources Conservation Service: www.nj.nrcs.usda.gov/
- Soil Conservation Districts



Other community members to approach:

- Parent / Teacher Organization
- Local businesses
- Senior citizens
- Civic groups
- Local environmental groups
- College students
- Scout groups

Approach local businesses for donations:

- Hardware stores / Landscape architects / Nurseries / Banks

Offer public recognition in exchange for support.

County / City Public Works Department - Mulch, Wood chips, etc.

Local government

Nature / Outdoor education centers or parks

Workshops

Native Plant Society

ANJEE: Alliance for NJ Environmental Ed.

Outdoor Classroom Network
New Jersey Audubon
Private Consultants

Clean Communities Council and County Coordinators
Scout Groups
Watershed Ambassadors
...etc.



- Over fund! - No matter how much funding you receive, you will always find yourself needing more.
- Don't be surprised at how fast money disappears.
- S-t-r-e-t-c-h, a little can go a long way!

Possible Grant Options:

Environmental Organizations	State and Local Agencies	NRCS
National Gardening Association	The Nature Conservancy	Educational Awards
National Tree Trust Community	Granting Foundations	Federal Agencies

Many national and regional organizations provide grants that support Schoolyard Habitats. Because Schoolyard Habitats accomplish so many goals, they are often qualified for many types of grants. Go to www.nj.gov/dep/seeds/schhabs.htm for more information!

Environmental Services Grant	BASF Grant	NJ BISEC Grant
School Community Association	Harmon Foundation	Eckert Grant
National Youth Gardening Grant	Walmart Environmental Grant	
Cape Education Fund Grant	Earth Stewards: USF&WS	Dodge Foundation

Ramsey Foundation
Land

VOICES Grant

Trust for Public



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Begin Development...





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Tasks & Maintenance



Hold different classes / students responsible for different tasks.
Accountability will ensure that things get done.

Watering, weeding, soil improvements

Mulching

Planting

Protecting plants (especially from the grounds crew)

Most importantly, summer break!



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Plan a "Field Trip"



Visit often!



TAKE IT OUTSIDE



Document Your Progress



Better documentation leads to better grant applications!



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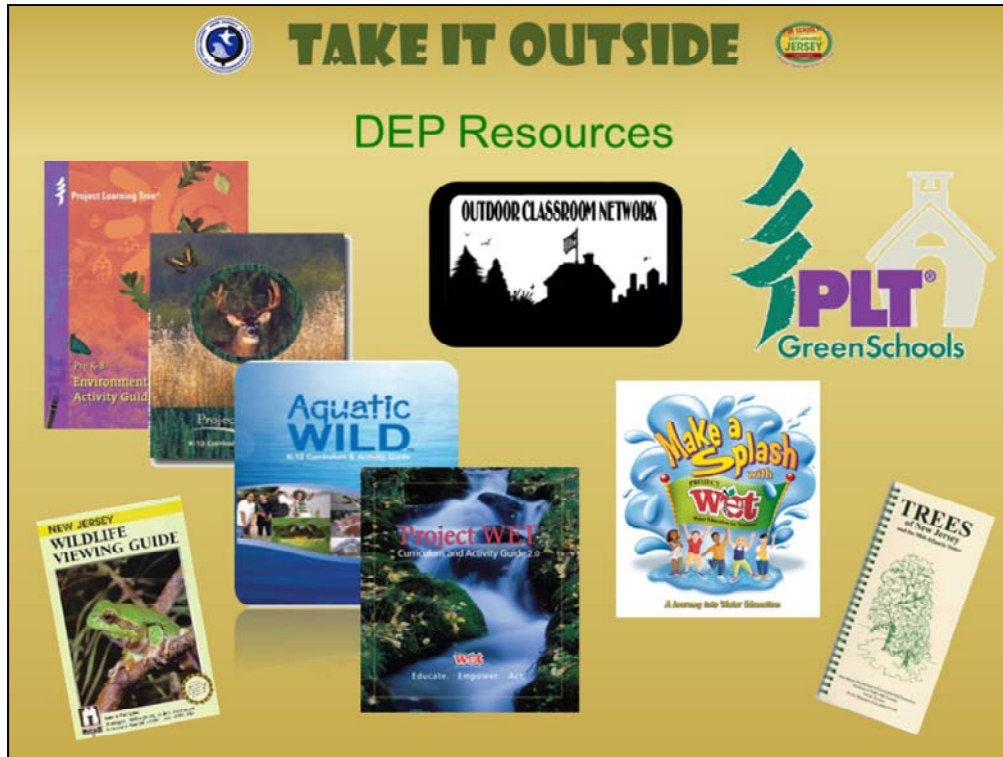


Attend a Workshop



Outdoor classroom workshops are offered throughout the year in various locations all over New Jersey.

www.teachnjenv.org



Existing activities and hands-on lessons can be found in the following guides:

Project Learning Tree / Project WET / Project WILD / Aquatic WILD

Bridges to the Natural World / New Jersey WATERS / Down Jersey / Access Nature

Special needs students:

ACCESS NATURE is an inclusive outdoor education curriculum guide prepared by the National Wildlife Federation that addresses the needs of students with a variety of disabilities.

ACCESS NATURE Workshops are offered throughout the year.

- Homes for Wildlife
- Greening School Grounds
- Schoolyard Habitats - A How-to Guide for K-12 School Communities
- NJ Wildlife Viewing Guide
- Green Teacher
- Audubon Society Newsletter
- National Wildlife Newsletter

www.nj.gov/dep/seeds





EEdNews sign up!

<http://www.nj.gov/dep/seeds>


<http://www.nj.gov/dep/school/>

<http://www.state.nj.us/dep/seeds/njcee/eednews.htm>



TAKE IT OUTSIDE


New Jersey Audubon Resources


- Site visits by ecological experts
- Place-based professional development
- New Jersey-specific ecological lessons



NEW JERSEY
AUDUBON
www.njaudubon.org



Eco-Schools



NATIONAL
WILDLIFE
FEDERATION

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Green Ribbon Schools – USDOE: <http://www.eirc.org/programs-services/nj-sustainable-schools-consortium/2015-green-ribbon-schools-home/>

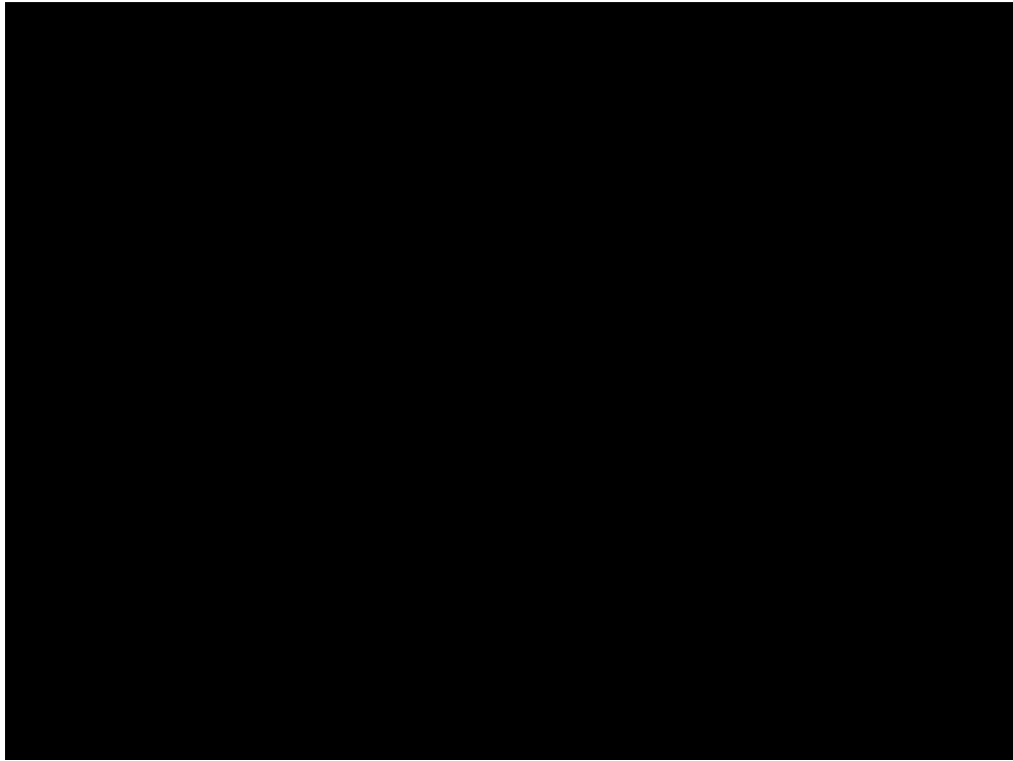
Sustainable Jersey for Schools

GEEA: <http://www.nj.gov/dep/eeawards/>

Multiple other awards!!!



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Fade out . . .

End program here.