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Fact Sheet

Meadowscaping for Biodiversity. MS4B is an outdoor, project-based, environmental education program that provides students age 7 - 17 with real-world experiences in STEAM learning (Science, Technology, Engineering, Arts and Math), while inspiring and empowering them to address challenges to the environment and our society.

Challenge: Lack of Biodiversity. Over the past 60+ years, man-made changes to the American landscape have significantly compromised the biodiversity essential to support life. Only 4% of landscaped areas in the United States remain as undeveloped native plants. Over 80% of landscaped area is resource-intensive lawn. Invasive plants and animals are overwhelming and destroying native flora and fauna, upsetting the balance of nature. In this program, we emphasize the need to increase wildlife habitat by planting native species that provide food, safety and habitat for native flora and fauna.

Challenge: Nature deprivation. Today, few children spend time experiencing Nature and the benefits of outdoor recreation, education, and contemplation. Founder of the Children and Nature Network Richard Louv coined a phrase for this, "nature-deficit disorder." Study results published on the Child and Nature Network (CN&N) website show that reduced outdoor time can have serious negative impact on children's physical health, mood, aggressiveness, and intellectual development.

Challenge: Climate change. Research shows that frightening children with dire predictions does not engender change in their behavior or expectations. Instead, children need to feel close to nature—to develop a "compassionate concern for our natural world." To counter children feeling separated from nature, MS4B programs provide gloves so that children can get clean after spending hours in the garden. We bring children nose-to-nose with toads, lady bugs, grasshoppers, earthworms, butterflies, and all sorts of fascinating creatures.

Why meadowscaping? Meadows filled with hardy, drought tolerant native plants that appeal to bees, caterpillars, butterflies, and birds help restore biodiverse habitats essential to plant, animal, and human life. Meadows also supplant invasive species, cool the earth, and soak up rainwater, preventing deluges from polluting our streams, rivers, and oceans—and, thus, protect our water supply. In addition, after the first month, native plants thrive without intensive watering.

Highlights of MS4B Accomplishments:

- Waltham Y Meadow Club: Guided 120 summer campers, age 7 – 13, through an eight-week, engaging, all-outdoor curriculum resulting in a Meadow garden at the Y (2016). The program was featured on August 22, 2016, in *The Boston Sunday Globe* (Globe West section, page 1 above the fold!!!) with the headline "Cultivating Knowledge: Children plant a meadow at the Waltham YMCA and get a lesson in biodiversity." Here's a link to the online version:
<http://www.bostonglobe.com/metro/regionals/west/2016/08/12/waltham-ymca-cultivates-learning-through-meadowscaping/YbSbKSCoFmbbW75a9zoQPJ/story.html>
- Timilty Middle School After-School Program: Through a 10-week, 30-session program offered by Sociedad Latina, MS4B staff taught 12 middle school students, age 11 through 14, the concepts of biodiversity, native plants, and climate change. The students planted a Pollinator Patch (native plants planted next to vegetables attract pollinators and increase productivity) at the Tobin Community Center Garden in Boston (2015).
- Christ Church Episcopal Meadow: MS4B staff taught Waltham Cub Scouts and adults about meadowscaping while creating a 400 sq. ft. urban, native-plant meadow on the church lawn, 750 Main Street, Waltham, MA. Site received Wildlife Habitat Certification from the National Wildlife Federation in October 2015 (summers 2014, 2015). MS4B staff expanded the meadow to 600 sq. ft. (2016). First and second graders from the Waltham Boys and Girls Club visit the meadow to draw flowers, listen to books about nature, run around in the playhouse, and explore the garden. A group meditates while sitting on the benches. Another group reads to each other. We participated in Waltham Day, the Community Impact Fair at Brandeis University, and the Mayor's Youth Summit (2016).
- Educational Programs and Workshops: MS4B staff developed and delivered workshops on soil, pollinators, native plants, and biodiversity at *Massachusetts Environmental Educators Society Conference* (MEES 2015, 2016); *Cambridge Science Festival* (2015, 2016); *Massachusetts Horticultural Society Teachers' Professional Development Day* (School Gardens, 2016); and *Northeast Organic Farmers Association* (NOFA) Summer Conference (2016).

Program Partners & Supporters: Waltham YMCA; Greater Boston YMCA; Christ Church Episcopal Waltham; Dr. Eric Olson, Senior Lecturer, Entomology, Heller School, Brandeis University; Dr. Doug Tallamy, Department Chair, Entomology and Wildlife Ecology, University of Delaware; Russell Cohen, Environmentalist and Naturalist; Laura D. Eisener, Lecturer and Landscape Designer; Northeast Organic Farmers Association (NOFA); Waltham Garden Club.