

Fairchild Challenge for Middle Schools Challenge Resources 2011-2012

How to Guide for Teachers Challenge 8 – School Garden/Habitat Restoration

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I. Overview

The school garden/habitat restoration challenge is an engaging and creative way for students to beautify their school or community. Moreover, this challenge offers many possibilities across the curriculum for teachers to use the garden as an outdoor classroom. Not only is the garden an enjoyable place where students can relax during the school day, but a school garden also offers physical, emotional and social benefits.

As your students participate in this challenge, remember the following important points: (1) the garden project and report should be student-driven; (2) all requirements for the challenge (garden and portfolio) must be met to be eligible for first place for this challenge (see the Fairchild Challenge booklet or website for details); (3) the involvement of as many students (and teachers) as possible, and interdisciplinary use of the garden are highly encouraged. For any school garden-specific questions, contact challenge6-8@fairchildgarden.org.

II. Approaching the Challenge

- A. Encourage as many **teachers** as possible to participate in the various challenges.
 - Consider creating a teachers' sign-up poster for display in a teachers' common area so that teachers can see who else is participating.
 - Consider creating a shared calendar of use for different teachers and their classes.
- B. Identify potential stakeholders and partners:
 - Administrative and maintenance staff at your school; school parent association; local resources such as universities, county extension offices or garden clubs; potential volunteers, donors and funders, including local businesses.
 - Many grant opportunities exist for school garden projects. Visit the grant resource section of <http://www.kidsgardening.org/> for more information.
 - Check The Fairchild Challenge website link [Grant Opportunities](#) often as we are constantly updating it.
 - Tap community resources! Hold a school fundraiser; announce a parents' plant/tool drive.

- C. It is highly recommended that one or more teachers from your school attend a [School Garden Workshop](#) at Fairchild. Limited space is available, registration is required, and TEC credits are available for M-DCPS teachers. For more information, contact Kiki Mutis at kmutis@fairchildgarden.org.
- D. Students choose a theme for the garden. This is a chance to be creative, and find ways to integrate the garden into the curriculum.
- Sample themes include, but are not limited to: edible, medicinal, Native American, Florida-friendly landscaping, container, aquatic, and pollinator gardens.
- E. Students create a design plan and list of plants for the school garden.
- Consider a student assignment to create a garden design (on paper). Lead a class discussion on the diverse elements of garden design. This can be a great opportunity to involve art and design students in the school garden.
 - Choose appropriate plants for the theme, dimensions and location of your garden.
 - Choose plants that are well-adapted to our climate. Consider a student assignment to research area plant nurseries, interview plant growers and research plant growth requirements.
- F. The garden/habitat restoration **project must include interpretive materials**.
- This might include, but is not limited to: creating and installing interpretive signs, or writing a guided tour to be used by visitors to the garden/habitat.
- G. Have students document the entire process - start to finish, for the portfolio.
- Follow all requirements for this challenge including the format specifications for the completed report: title page, table of contents, list of plants used, etc. (see The Fairchild Challenge booklet for requirements).
 - Use various types of documentation, including pictures, sample designs/illustrations, recipes, examples of student work from different disciplines, etc.
- H. Prepare for Fairchild Challenge staff person to visit your garden.
- Choose a date that works for you and at least some of your students, so they can present the garden to the staff person. Email challenge6-8@fairchildgarden.org to schedule the visit a appointments will be made on a first come, first-served basis.
 - Visits will take place from Monday, March 5 through Friday, March 30.

III. Incorporating the Garden into your Class

There are many ways to incorporate cross-curricular connections into the school garden. **The following examples are provided as suggestions** and originality is encouraged. For a detailed list of specific standards that can be incorporated, visit www.fairchildgarden.org/ms/standards.

- A. Science:
- Study and compare the growth requirements of different plants
 - Learn about plants and their pollinators
 - Establish a native species habitat in your school garden and teach students about the dangers of invasive species.

B. Math:

- Include math in the garden design, both when planning on paper and when measuring and mapping the actual garden.
- Keep a plant-growth journal for a certain period of time; include plant measurements in both metric and standard units.
- Use charts to compare plant germination and growth.
- Calculate cost differences between different approaches to the garden (i.e., native vs. non-native plant management).

C. Language Arts:

- Use your outdoor classroom for journal entries and creative writing exercises, in English/Language Arts or a foreign language.
- Study plant names and Latin roots of words and their meanings.
- Create interpretive signage or guided brochures for garden visitors.

D. Social Studies:

- Learn about Florida's natural history and the influence the natural landscape has had on the community.
- Study ethnobotany and the interactions of culture and the environment.
- Select two cultures and compare and contrast their lifestyles in relation to plants (i.e. are they contemporary or more traditional?).

E. Art/Performing Arts:

- Use the garden as inspiration for a 2D or 3D art piece or mural.
- Design interpretive signage for visitors to your garden.
- Host themed art exhibits/installations in your outdoor garden space.
- Consider these 3-D garden-art projects: mosaic stepping stones, plant stakes or signage, murals, wind chimes or spinners, planters, weathervanes, bird baths or feeders. Use eco-friendly materials and methods to teach another environmental lesson!
- Stage a garden-themed play or musical

F. Culinary Arts:

- Grow your own vegetables and herbs/spices and use the plants from the garden in your dishes.
- Study food plants and recipes from different cultures.

IV. Habitat Restoration and the Connect to Protect Network (CTPN)

Habitat restoration projects provide a unique opportunity to incorporate the local environment and conservation efforts into the school garden. If your school is interested in undertaking a habitat restoration project as part of this challenge, you can obtain information and resources through Fairchild Tropical Botanic Garden's [Connect To Protect Network](#) (CTPN). This program works with members of the community, including schools, to re-create, restore and maintain pine rockland habitats in South Florida, as well as to collect important data about the rare species that grow in this highly endangered habitat. **Fairchild staff is available to consult,**

guide, provide expertise, and provide plant materials for schools participating in the program.

For more information, visit www.fairchildgarden.org/connecttoprotect or contact Devon Powell at dpowell@fairchildgarden.org.

V. Checklist

- Garden has a clear theme supported by plants selected
 - Garden includes interpretive/educational materials for visitors and incorporated into portfolio
 - Contact The Fairchild Challenge staff (challenge6-8@fairchildgarden.org) to schedule a garden visit
 - Portfolio is student-authored and is non-scrapbook style
 - Eco-friendly materials are used for preparing and presenting the portfolio
 - Review entry requirements before submitting one entry per school
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VI. Resources

Books:

Barrett, Katharine D.; White, Jennifer M.; and Manoux, Christine. (2008). *Botany on Your Plate: Investigating the Plants We Eat*. South Burlington, VT: National Gardening Association.

Barrett, Katharine D.; Johnson, Katie; Kopp, Jaine; et al. (2006). *Math in the Garden, Hands-on activities that bring math to life*. South Burlington, VT: National Gardening Association.

Bucklin-Sporer, Arden & Pringle, Rachel. (2010). *How to Grow a School Garden, A complete guide for parents and teachers*. Portland: Timber Press, Inc.

Hannemann, Monika; Hulse, Patricia; et al. (2007). *Gardening with Children*. New York: Brooklin Botanic Garden, Inc.

Jaffe, Roberta & Appel, Gary. (2007). *The Growing Classroom: Garden-Based Science*. South Burlington, VT: National Gardening Association.

National Gardening Association. (2002). *Schoolyard Mosaics, Designing gardens and habitats*. South Burlington, VT: National Gardening Association.

Texas Agricultural Extension Service. (2004). *Wildlife GardenerSM: A Junior Master Gardener® Golden Ray SeriesSM*. College Station, TX: JMG® Kids.

Waters, Alice. (2008). *Edible Schoolyard, A universal idea*. San Francisco: Chronicle Books LLC.

Websites:

Kids Gardening www.kidsgardening.com/

School Garden Wizard www.schoolgardenwizard.org/

The Edible Schoolyard www.edibleschoolyard.org

Junior Master Gardener www.jmgkids.us/

Outdoor Classroom www.outdoorclassroom.org/

Youth Gardening California School Garden Network www.csgn.org/index.php

Chicago Botanic Garden www.chicagobotanic.org/schoolgarden/index.html

Florida Department of Education www.fldoe.org/BII/CSHP/schoolgar.asp

South Florida Plant Species and Habitat Conservation at Fairchild

<http://www.fairchildgarden.org/centerfortropicalplantconservation/>

Florida-Friendly Landscaping www.floridayards.org/landscape/index.php

Plant Real Florida <http://dev.plantrealflorida.org>