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TOOLKIT FOR RI SCHOOL GARDENS

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Best Practices for RI School Gardens

The Garden

● Properly site the garden.

● Include some essential components of a school garden: a gathering space or an outdoor classroom area with seating if possible, sun for plants and shade for people, beds for each grade, communal beds of herbs and flowers, experimental or digging beds, tool storage, a compost area and a wild natural area, all with walkways clearly defined.

● Include food crops for nutrition education.

● Include native perennials to attract pollinators and provide wildlife habitat creating ecosystems for science curriculum connections.

● Be very clear about rules and expectations in the garden.

● Outfit the garden--support teachers and garden learning with tools and equipment.

Garden Management

● Get buy-in from the school.

● Consider a Community Garden-School Garden hybrid.

● Incorporate the garden into the daily routine of the school.

● Include the school in the seasonal cycle of the garden.

● Take advantage of the overlap between the RI climate and the school-year calendar.

● Tend the garden organically. Period.

Curriculum Integration

● Consider RI climate when integrating school garden into curriculum.

● Incorporate the garden into multiple academic disciplines.

Resources

● Learn what resources are available.

Planting Calendar for RI (URI MGs, 2002)

See http://web.uri.edu/ceoc/files/RI-Planting-Calendar.pdf

Recipes for RI School Gardens

Easy recipes students can make with garden-grown ingredients

Tomatillo Salsa

Ingredients
1 lb fresh tomatillos, husked, rinsed, and chopped
1 fresh serrano chile, seeded (for less spiciness) and finely chopped
1/2 cup finely chopped white onion
1 garlic clove, minced
1/2 cup finely chopped fresh cilantro
1 1/2 tablespoons fresh lime juice
1 teaspoon salt

Preparation
Ingredients can be chopped by hand or with a food processor. Stir together all ingredients and let stand, covered, about 1 hour. (Salsa can be made 1 day ahead and chilled, covered.)

Pesto without Nuts

Ingredients
1/3 cup parmesan
1 bunch basil
1/2 cup olive oil (start with 1/4 cup and work your way up)
3 cloves garlic
1-2 tsp lemon juice
salt and pepper to taste

Preparation
Pull all the leaves off the basil stems and roughly chop the garlic. Put the basil, cheese, and garlic in a food processor. Set the speed to low and drizzle in your olive oil. Start with 1/4 cup, check the consistency, and add more if you like. Scrape down the sides and add a generous pinch of salt, some pepper, and a bit of lemon juice. Pulse this together and taste. Keep adding and pulsing until you like the way it tastes. Serve on pasta or crackers.

Home-grown Salad with Tony's Famous Dressing

Dressing
1/3 cup of olive oil
1/3 cup of champagne vinegar
2 tbsp maple syrup
1 tbsp dijon mustard
fresh ground pepper
2 cloves of minced garlic
(optional) chopped herbs (dill/parsley/basil)

Mix all ingredients in a jar. Shake vigorously.

Lettuce
Use a mix of your favorite types of lettuce (mesclun, arugula, spinach). Tastes best when you grow it yourself! Sprinkle with edible flowers (nasturtiums, johnny jump-ups, calendula petals). Toss with dressing before serving.

Common Garden Weeds

Identification Sheet 1

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Crabgrass
Digitaria spp.

Yellow Wood Sorrel (Sour Grass)
Oxalis spp.

Purslane
Portulacca oleracea

Sheep Sorrel
Rumex acetosella

Carpetweed
Mollugo verticillata

Lamb's quarters
Chenopodium album

Spotted Spurge
Euphorbia maculata

Deadnettle (Henbit)
Lamium purpureum

Redroot Pigweed
Amaranthus retroflexus

Horseweed
Conyza canadensis

Broadleaf Plantain
Plantago major

Poison Ivy! Do not touch.
Toxicodendron radicans

Common Garden Weeds

Identification Sheet 2

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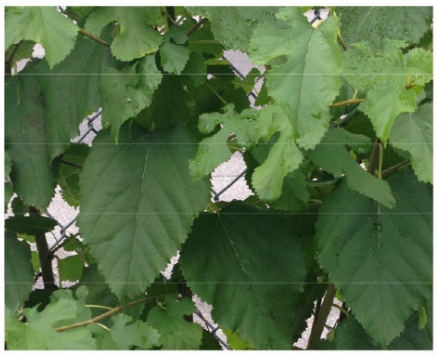
Field Bindweed
Convolvulus arvensis

Poke Weed
Phytolacca americana

Tree of Heaven
Ailanthus altissima



White Mulberry
Morus alba

Norway maple (sapling)
Acer platinoides

Yellow toadflax
Linaria vulgaris

Quick Weed
Galinsoga ciliata

Asian Bittersweet
Celastrus orbiculatus

Chickweed
Stellaria media

Prickly Lettuce
Lactuca serriola

Common Ragweed
Ambrosia artemisiifolia

Abutilon theophrasti
Velvetleaf

Curriculum Connections for RI School Gardens

Science: observe, record, collect, investigate, hypothesize, experiment, conclude, study life cycles, ecosystems, parts of plants, seed dispersal, pollination, compare species within a genus and varieties within a species, sexual v. asexual plant reproduction, sketch, collect data, observe weather, seasons, look for signs of erosion, differentiate between living and non-living, compare weeded and unweeded beds, save seeds in the fall, identify invasive plants, insects and common types of weeds

● **The Growing Classroom –** Garden and Nutrition Activity Guide (New Edition) - See more at: http://www.lifelab.org/store/curriculum/#tgc Lesson plans are referenced to the NGSS and Common Core at the life lab standards database: http://www.lifelab.org/standards-database/

Math: count, estimate, measure, collect, graph, find area of garden beds, perimeters of garden spaces, lengths of paths, measure and graph plant growth, determine mean, median and mode, make seed tapes using seed spacing requirements, order compost for garden converting inches per bed into cubic yards, measure worms, graph food preferences, try square foot gardening, determine volume of soil needed to fill raised beds and pots, calculate germination rates, have a scavenger hunt in the garden for geometric shapes, track the cost of gardening and compare to value of harvest, use problem solving skills to create a planting schedule

● **Math in the Garden: Hands-on Activities that Bring Math to Life** by Jennifer White & Katharine Barrett

Reading/Writing: imagine, connect, read, write, keep garden journals, make connections to literature, make a how-to manual related to garden tasks, develop a sense of wonder by observing life in the garden

● **Books in Bloom: Discovering the plant biology in great children's literature** by Valerie Bang-Jensen & Mark Lubkowitz:

Books that accompany the Books in Bloom curriculum book:

A Fruit is a Suitcase for Seeds by Jean Richards
Plant Secrets by Emily Goodman
Pumpkin Circle: The Story of a Garden by George Levenson
Blueberries for Sal by Robert McCloskey
Wanda's Roses by Pat Brisson and Maryann Cocca-Leffler
Swirl by Swirl: Spirals in Nature by Joyce Sidman and Beth Krommes
Miss Rumphius by Barbara Cooney
Pick, Pull, Snap by Lola M. Schaefer and Lindsay Barrett George
The Wind's Garden by Bethany Roberts and Melanie Hope Greenberg
Tell Me Tree, All About Trees for Kids by Gail Gibbons

Social Studies: study food in history, plant corn, beans and squash together (aka "the three sisters" companion planting by Native Americans), study other ways plants were used by different cultures

Art: observe, sketch, study Andy Goldsworthy and make similar installations from materials in the school garden, make a weed identification or insect identification manual, draw nutrient, oxygen and water cycles based on observations in school garden, draw a garden plan to scale using graph paper, paint garden signs

Health/Physical Education: nutrition education, environmental education, proper tool use, garden maintenance activities, become familiar with fruits and vegetables grown in school garden to be more likely to eat familiar healthy food

Resources for RI School Gardens

Note: This is not meant to be an exhaustive list.

Online Technical Resources for RI School Gardens

• **RI Native Plants Guide from URI:** http://web.uri.edu/rinativeplants/ Choose plants that suit your garden conditions & support wildlife & pollinator habitat.

• **UMass Soil and Plant Tissue Testing Laboratory:** https://soiltest.umass.edu/ Check for lead and other heavy metals as well as pH, nutrients and organic matter.

• **Slow Food USA:** www.gardens.slowfoodusa.org Free "School Garden Guide"

• **Life Lab:** http://www.lifelab.org/ offers a wide range of school garden support on their website. Curriculum Integration as well as Getting Started: A Guide for Starting a School Garden, Spanish language resources and gardening how-to videos. (They are based in California so not everything applies to our climate.)

• **Ecoliteracy:** http://www.ecoliteracy.org/ offers publications on the topics of ecological education, rethinking school lunch and guides for building school gardens and outdoor classrooms. http://www.ecoliteracy.org/sites/default/files/uploads/getting-started-2009.pdf

• **School Garden Initiative**—Website coming soon!

Online Funding Resources for RI School Gardens

• **Kids Gardening:** http://www.kidsgardening.org/ offers school garden grant opportunities as well as curriculum resources and child-sized gardening tools for sale.

• **Flower Power Bulb Fundraiser:** http://www.flowerpowerfundraising.com/ Earn 50% profit with this online fall fundraiser.

• **Lowe's Toolbox for Education:** http://www.toolboxforeducation.com/ offers grants of up to $5,000 for school gardens twice per year.

• **Kitchen Gardeners International:** http://kgi.org/ offers small garden grants and helpful videos and tutorials.

• **Other School Garden grants:** Whole Foods Foundation, Clif Bar Family Foundation, Captain Planet Foundation, Annie's, Fiskars, etc.

• **Grant Gopher:** www.grantgopher.com, limited free resources or pay monthly for full access.

Local Resources for RI School Gardens

• **Free Seeds:** URI Master Gardeners distribute Burpee seeds leftover from the previous year, donated by Job Lot. Orders are due by the end of Feb. Look for info on URI website http://web.uri.edu/ceoc/ (Remember to be selective. You don't have to plant them just because they were free.)

• **Low Cost Seeds:** Job Lot offers this year's Burpee seeds discounted 50%. (Bonus: You get to choose the seeds you want to plant!)

• **Seedlings:** Southside Community Land Trust has an annual plant sale in May. Choose from a wide variety of organic seedlings or ask about free seedlings for school gardens after the plant sale. http://www.southsideclt.org/

• **Gardening Supplies:** Cluck Urban Farm Supply 399 Broadway Providence RI 02909 (401) 274 1160 Visit Cluck for garden supplies and good advice. They offer educational workshops as well. http://cluckri.com/

• **Compost:** The Compost Plant offers food scrap collection for your school, the costs of which may be offset by the reduction in the amount of trash collection. They donate a cubic yard of finished compost to participants in their collection program. They also sell Earth Care Farm compost and raised bed mix by the yard. http://www.compostplant.com/

• **Free Compost:** Rhode Island Resource Recovery offers free compost to RI schools (but you have to pick it up). http://www.rirrc.org/school/composting/

• **Mid-range Compost & Raised Bed Mix:** Smithfield Peat, www.smithfieldpeat.com, 401-231-1111

• **Worm Composting:** The Worms Ladies of Charlestown, http://www.wormladies.com/ are both an online & local resource. Order worm bins online or join them for workshops & special events around the state.

• **Chicks in the Classroom:** Casey Farm's Project Chick program sends a farm educator to the school along with eggs and an incubator. Students observe the eggs as they hatch in three weeks and then return the chicks to the farm. http://www.historicnewengland.org/school-youth-programs/k-12-programs-resources/rhode-island/copy_of_projectchick.htm

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