

Best Practices for Rhode Island School Gardens

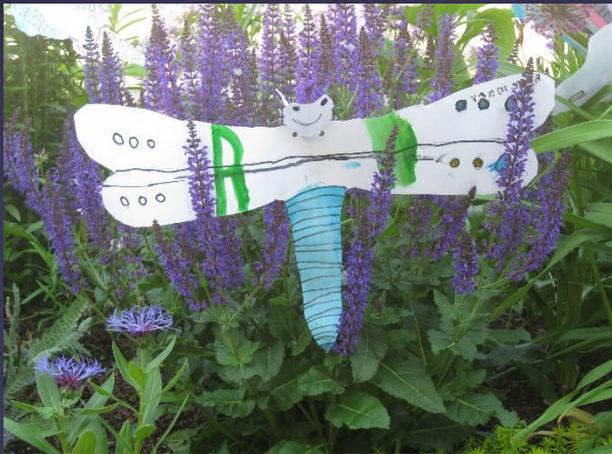




International Charter School (ICS), Pawtucket, RI (c. 2006)







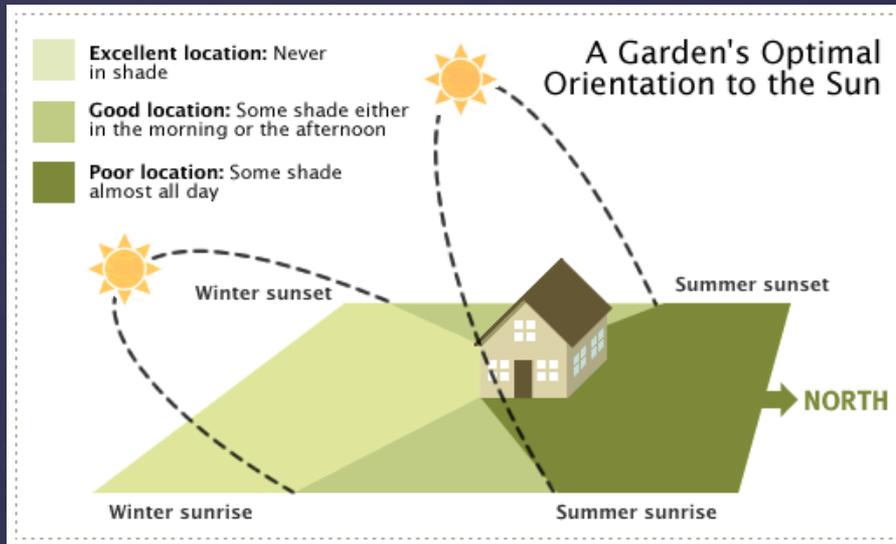


Best Practices Toolkit for Rhode Island School Gardens



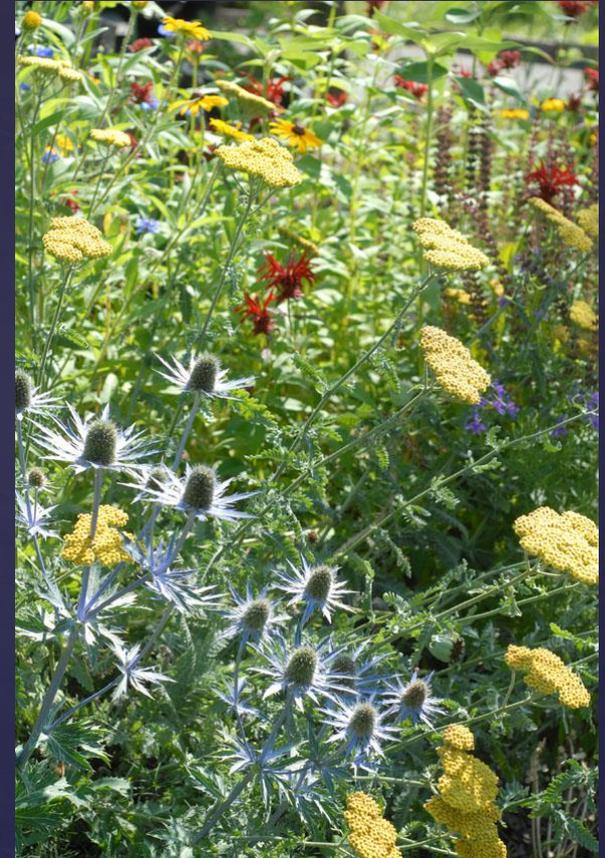
Best Practices Toolkit for RI School Gardens: The Garden

● Properly site the garden.



Best Practices Toolkit for RI School Gardens: The Garden

- **Include some essential components.**



Best Practices Toolkit for RI School Gardens: The Garden

- **Grow food.**



Best Practices Toolkit for RI School Gardens: The Garden

● List the rules.



Best Practices Toolkit for RI School Gardens: The Garden

- **Outfit the garden.**



● Get buy-in from the school.

ICS International CHARTER SCHOOL

Teaching in the languages of our community: English, español, Português

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Los alumnos de ICS se dedican a aprender en nuestro creciente salón de clases al aire libre.

English Español Português

ICS's Garden Continues to Grow

Started in 2007, ICS's Children's Garden was designed to provide our students with opportunities to learn and explore in an outdoor classroom. The garden promotes environmental awareness and an appreciation of the natural world in our students; provides hands-on experiences of planting and caring for a garden; helps students understand and appreciate the beauty of the natural world-from seasonality and the cycle of life, to the age old question: "Where does our food come from?". The garden also strengthens ties to our neighborhood, helps to raise awareness of our school, and gives students a sense of pride that they are capable of growing their own food. Annually each grade plants a food garden, including a salad garden, pizza garden, popcorn garden, potato garden, salsa garden, and sunflower garden.

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Best Practices Toolkit for RI School Gardens: Management

- Consider a school garden-community garden hybrid.



Best Practices Toolkit for RI School Gardens: Management

- **Incorporate the garden into the daily routine of the school.**



Best Practices Toolkit for RI School Gardens: Management

- **Include the school in the seasonal cycle of the garden.**



Best Practices Toolkit for RI School Gardens: Management

- *Fall: observe, weed, water, mulch, plant late crops, plant garlic, plant cover crop, save seeds, put garden to bed*
- *Winter: observe, plan, start seeds, grow in greenhouse/cold frame*
- *Spring: observe, spring clean-up, plant seeds, plant seedlings, weed, water, mulch, make signs*
- *Summer: observe, plant, weed, water, mulch, late summer clean-up*



Best Practices Toolkit for RI School Gardens: Management

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

Rhode Island Planting Calendar for Fruits and Vegetables

Fruit or Vegetable	Days til Harvest	Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
ASPARAGUS (purchase crowns)	1-2 Yrs						CR	CR	CR										
BEANS, BABY LIMA	60-100								S	S	S	S	S	S					
BEANS, PINTO	60-80								S	S	S	S							
BEANS, SNAP	60-80								S	S	S	S	S	S					
BEETS	60-80					S	S	S	S	S	S	S	S	S	S				
BLACKEYED PEAS	90-120								S	S	S	S							
BOK CHOY	45			S	S	S	S	S	S						S	S	S		
BROCCOLI	60-90 from transplant		I			T							I	T					
BRUSSEL SPROUTS	100-120 from transplant										I		T						
CABBAGE	80-90 from transplant			I			T				I		T						
CABBAGE, CHINESE	45 from transplant			I			T					I		T					
CARROTS	60-80				S	S	S	S	S	S	S	S	S						
CAULIFLOWER	80 from transplant						I		T	I		T							

Best Practices Toolkit for RI School Gardens: Management

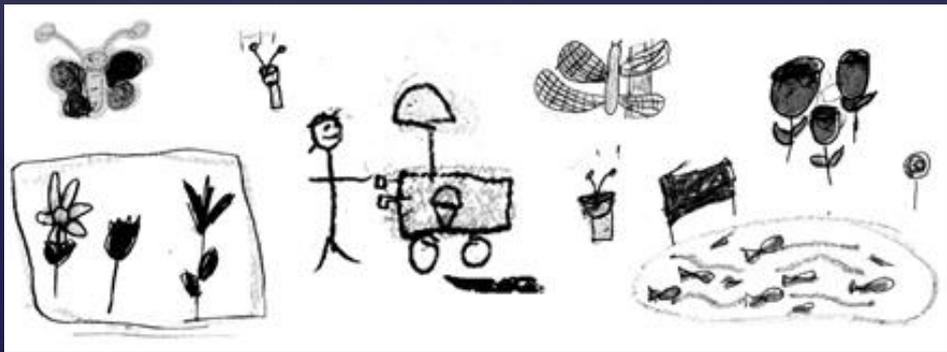
- **Tend the garden organically.**



- **Consider the RI climate.**

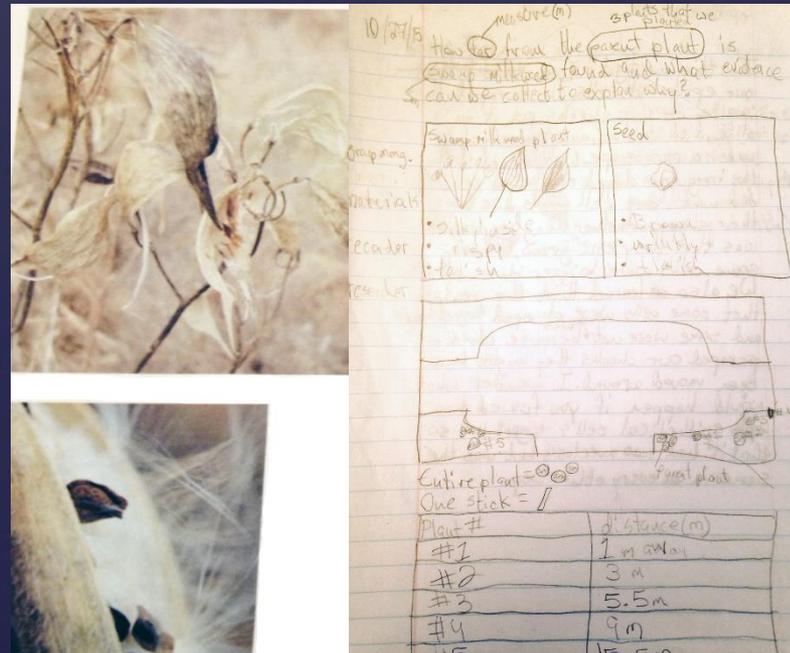
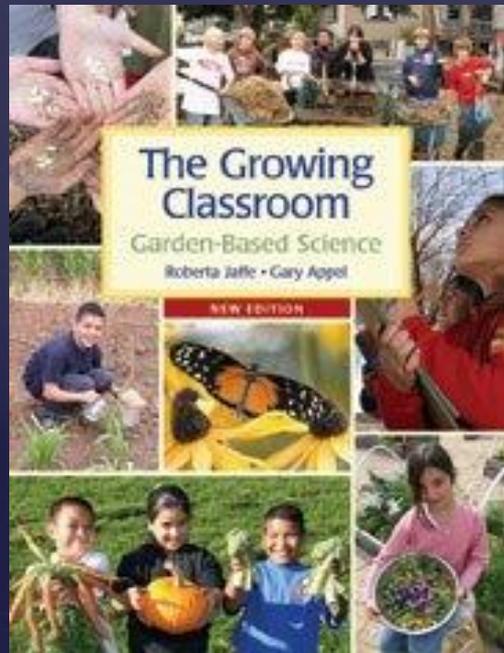


- Incorporate the garden into multiple academic disciplines.

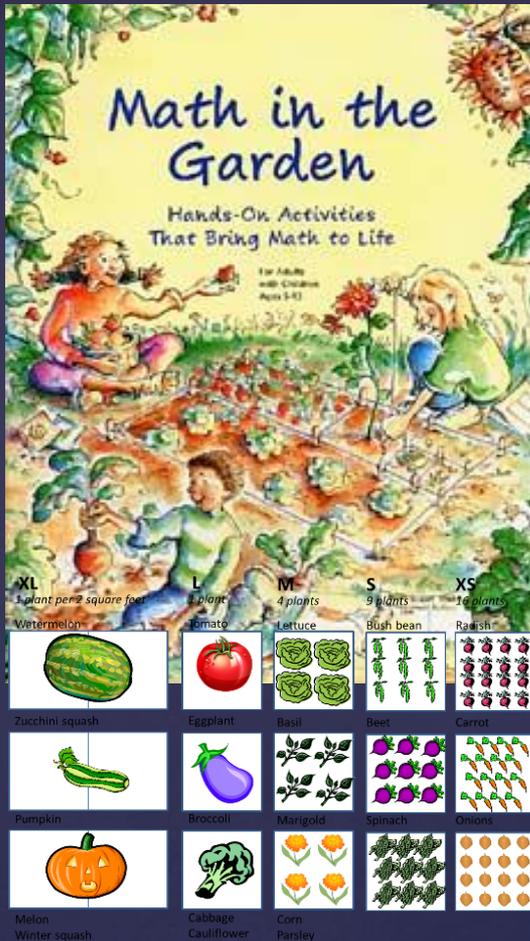


Best Practices Toolkit for RI School Gardens: Curriculum Integration

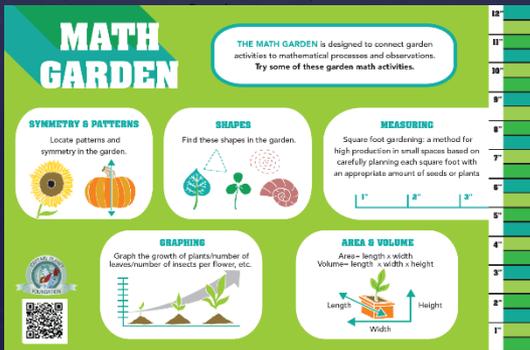
Science: observe, record, collect, investigate, hypothesize, experiment, conclude, study ecosystems, life cycles, parts of plants, seed dispersal, pollination, compare species within a genus and varieties within a species, sexual v. asexual plant reproduction, sketch, collect data, observe weather, seasons, 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



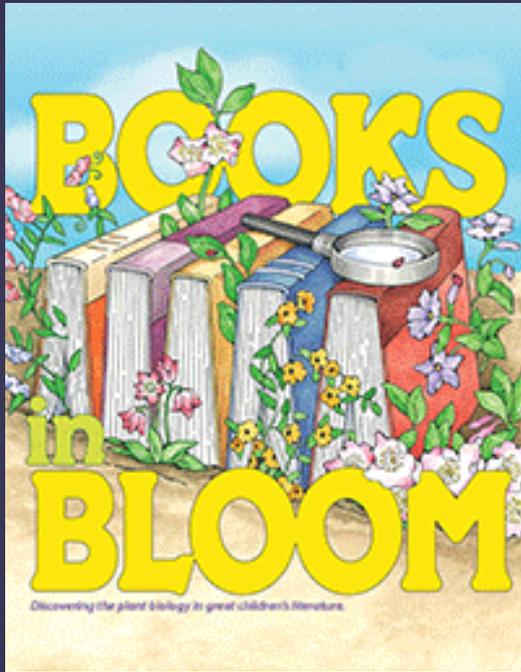
Best Practices Toolkit for RI School Gardens: Curriculum Integration



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



Best Practices Toolkit for RI School Gardens: Curriculum Integration



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

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



Best Practices Toolkit for RI School Gardens: Curriculum Integration



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

● Find resources.

Common Garden Weeds Identification Sheet 1



Crabgrass
Digitaria spp.



Yellow Wood Sorrel (Sour Grass)
Oxalis spp.



Purslane
Portulacca oleracea



Field Bindweed
Convolvulus arvensis



Poke Weed
Phytolacca americana



Tree of Heaven
Ailanthus altissima



Sheep Sorrel
Rumex acetosella



Carpetweed
Mollugo verticillata



Lamb's quarters
Chenopodium album



White Mulberry
Morus alba



Norway maple (sapling)
Acer platanoides



Yellow toadflax
Linaria vulgaris



Spotted Spurge
Euphorbia maculata



Deadnettle (Henbit)
Lamium purpureum



Redroot Pigweed
Amaranthus retroflexus



Quick Weed
Galinsoga ciliata



Asian Bittersweet
Celastrus orbiculatus



Chickweed
Stellaria media



Horseweed
Conyza canadensis



Broadleaf Plantain
Plantago major



Poison Ivy! Do not touch.
Toxicodendron radicans



Prickly Lettuce
Lactuca serriola



Common Ragweed
Ambrosia artemisiifolia



Abutilon theophrasti
Velvetleaf

Common Garden Weeds Identification Sheet 2



Best Practices Toolkit for RI School Gardens: Resources

Online Technical Resources for RI School Gardens

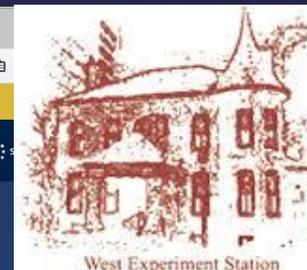
RI Native Plants Guide from URI: <http://web.uri.edu/rinativeplants/> Choose plants that suit your garden conditions & support wildlife & pollinator habitat.

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.)

RI Food Hub, School Garden Initiative—Website coming soon!



Best Practices Toolkit for RI School Gardens: Resources

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.

Best Practices Toolkit for RI School Gardens: Resources

Curriculum Integration Resources for RI School Gardens

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

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

Best Practices Toolkit for RI School Gardens: Resources

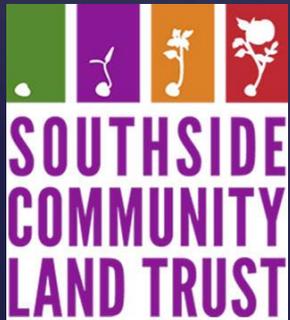
Local Resources for RI School Gardens

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/>



Best Practices Toolkit for RI School Gardens: Resources

Local Resources for RI School Gardens (continued)



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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