



Healthy Gardens, Healthy Youth Educational Toolkit Framework

The Educational Toolkit was developed to provide 19-20 lessons over an 18-month period for interventions schools in **Healthy Gardens, Healthy Youth**, the People's Garden School Garden Pilot Project Research Grant (USDA CN-CGP-11-0047). The lessons began in the early spring 2012, and extended through the next school year, ending in Spring 2013.

A team of extension specialists in nutrition, horticulture and youth development reviewed 17 (see references) curricula, numerous garden implementation resources and other materials to select appropriate resources for this project. Criteria used to select curricula for consideration included 1) experiential learning 2) age-appropriate nutrition, food, and gardening content and skills 3) research-based content and standards alignment, 4) Science, Technology, Engineering and Math (STEM) area focus, 5) support for the school garden.

Lessons were selected from ten curricula (detailed below) to meet the necessary topic areas for the two years. Permission from the original authors was sought for reproduction in the Educational Toolkit. Additional activities directly related to the garden were developed to enhance the lesson. Since each state has slightly different educational standards, a compendium of content standards and benchmarks compiled by Mid-continent Research for Education and Learning, a private nonprofit corporation was used as standards. During this grant period, the Common Core Standards were introduced and the USDA introduced MyPlate to replace MyPyramid. Some lessons may contain references to MyPyramid.

The Toolkit provided 10-11 lessons to be taught in 2012 between February and the end of the school year in weekly sessions, and nine lessons to be taught through the month from September 2012 – May/June 2013. Because classes in the Arkansas and Washington could begin gardening earlier in the year than Iowa and New York, it was suggested that they start in 2012 with the garden planning and planting lessons, and then cover the first few lessons later in the spring.

The Toolkit included information and safety guidelines to create, maintain and harvest gardens; store, use and sample garden produce; take the garden through the summer; build community capacity; and sustain and grow the program. In addition it provided tasting and snack suggestions and information on the use of produce in the school cafeterias.

All Toolkit resources were available on a password-protected website. Lessons were introduced through webinars posted to the secure website and videos on our YouTube channel <https://www.youtube.com/user/ExtSchoolGarden>. Other supplementary materials, such as donated books, were delivered to the schools by the local Extension Educator.





Lesson Sequence

Spring 2012, February – May/June (depended on school end dates)

Lesson	Grade 2	Grade 4/5
1	Plant Parts Become Me	My Lunch Came from Soil
2	Rock to Ice Cream: Keep Soil Alive	Get the Scoop on Soil & Composting
3	Our Food Garden Plan	Our Healthy Garden Plan
4	Seasons through the Year	Our Healthy Garden Plan (continued)
5	Germination	Banking on Seeds
6	Planting the Garden & Nutrition Super Hero	Planting our Healthy Garden
7	Seeds and Sprouts	Photosynthesis
8	Salad Gardens	Watering in the Garden
9	Life in the Garden	A Butterfly's Life
10	Garden Patrol	WANTED: Out of My Garden
11	Salad Party	Eating from the Garden

Fall 2012 – Spring 2013

For Grade 2 students who went into Grade 3

For Grade 4/5 students who went into Grade 5/6

Lesson	Grade 3	Grade 5/6
September	Harvest	Harvest
October	Post-Harvest, Garden Clean-up	Post-Harvest, Garden Clean-up
November	Apples and Squash	Root Vegetables and Pears
December	MyPlate	Making Healthy Food Choices
January	My Food Garden Plan	My Food Garden Plan
February	Winter Vegetables and Mulch	Winter Vegetables and Mulch
March	Planting Our Garden	Planting Our Garden
April	Food for Plants and People	Food for Plants and People
May/June	Celebrate the Harvest	Celebrate the Harvest, Jeopardy
Optional	Harvest Party	Harvest Party





HGHY Educational Toolkit Lesson Summaries

Grade 2	Objectives	Activities	Movement
<p>Lesson 1: How does food relate to plants? Source: “Plant Parts Become Me” from <i>Growing In The Garden</i>, Iowa State University Extension and Outreach</p>	<p>Identify the basic and edible parts of plants and their functions. Make connections between plants and food choices.</p>	<p>Songs, actions, and fruit and vegetable identification and tasting</p>	<p>Classroom activity: students start out as seeds curled up in the soil waiting for water so that they can sprout roots, stems, leaves, and flowers.</p>
<p>Lesson 2: How does healthy soil relate to food? Source: “Rocks to Ice Cream” and “Keeping Soil Alive” from <i>Growing In The Garden</i>, Iowa State University Extension and Outreach</p>	<p>Discover and describe how most of our food starts with soil and how soil can remain healthy. Explain why the decomposition cycle and healthy soil are important for plants, animals and people.</p>	<p>Songs, soil composition activity, worm farm observation, making ice cream in a ziplock bag and predicting outcomes Ice cream tasting Book: <i>Diary of a Worm</i> by Doreen Cronin</p>	<p>Classroom activity: students standing in a circle and moving based on their part in the cycle; skit or puppet show.</p>
<p>Lesson 3: How do we make a garden plan? “Our Food Garden Plan” from <i>Growing In The Garden: Local Foods And Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Identify and select locally grown fruits and vegetables to plant, grow, harvest and eat. Use a variety of mathematics and science concepts and skills to create local garden plans and calendars.</p>	<p>Develop a garden plan; Square Foot Gardening. Rank fruits/ veggies to plant. Determine a calendar for planting. Fruit/veggie tasting Book: <i>The Vegetables We Eat</i> by Gail Gibbons</p>	<p>Classroom activity: students develop their garden on the floor, moving around to “plant” different items in the masking-taped floor area.</p>
<p>Lesson 4: How do we make a garden calendar? “Seasons Through the Year” from <i>Food, Land & People: Resources For Learning</i>, Food Land & People</p>	<p>Identify the seasons in cycle order and describe at least three things that occur in each season in gardens or fields, in their own community, and in an urban area.</p>	<p>Classify seasonal activities, make a seasonal mural, create books, discuss seasonal activities and growing, seasonal fruit/veggie tasting. Book: <i>The Reasons for Seasons</i> by Gail Gibbons</p>	<p>Classroom activity: students stand to divide into lines by seasons.</p>





Grade 2	Objectives	Activities	Movement
<p>Lesson 5: Where do seeds come from? “Sunflower House” and “Germination” from <i>Growing In The Garden</i>, Iowa State University Extension and Outreach</p>	<p>Describe the seed to seed cycle. Understand how one seed can produce many seeds. Understand how different things affect seed germination.</p>	<p>Sunflower life cycle, seed germination experiment and record, diagram seed, seed tasting Books: <i>A Seed is a Promise</i> by Claire Merrill; <i>A Seed is Sleepy</i> by Dianna Hutts Ashton</p>	<p>Classroom activity: students move to collect activity parts; do stomp, chant and clap activity.</p>
<p>Lesson 6: How do we plant a garden? Source: “Planting” and “Nutrition Super Heroes” from <i>Seed To Salad</i>, Cornell University Garden-Based Learning and Ithaca Children’s Garden</p>	<p>Identify and use special tools and techniques to mark and plant a garden. Identify garden crops and match them to their nutritional contributions for good health.</p>	<p>Planting, Garden Rules, Garden Tool Safety, taste a healthy snack Garden Journal</p>	<p>Plant the garden; participate in the Garden Tool Safety game or an obstacle course game based on nutrients.</p>
<p>Lesson 7: What do plants need to grow? Source: “Seeds and Sprouts” from <i>Got Veggies?</i>, Wisconsin Department of Health Services – Nutrition, Physical Activity and Obesity Program with support from University of Wisconsin Extension</p>	<p>Identify what plants and people need to live and grow (sun, soil, water, and air). Identify and make a healthy food from a garden.</p>	<p>Role play, observation/ recording plant growth, journaling, snack preparation Garden Journal</p>	<p>Students use simple props and role play how plants need sun, soil, water, and air in order to grow. Students water the garden.</p>
<p>Lesson 8: How do we help the plants to grow in the garden? Source: “Salad Garden” from <i>Growing in The Garden</i>, Iowa State University Extension</p>	<p>Understand and apply strategies to water and maintain a garden. Describe garden crops. Determine and organize garden maintenance tasks.</p>	<p>Watering the garden Know Your Crops game, vegetable tasting Garden Journal</p>	<p>Students water and weed in the garden.</p>





Grade 2	Objectives	Activities	Movement
and Outreach	Learn about, prepare and eat a garden crop.		
<p>Lesson 9: What do insects and other animals do with the food growing in the garden? Source: "Life in the Garden" from <i>GROWING IN THE GARDEN</i>, Iowa State University Extension and Outreach</p>	<p>Identify creatures found in the garden. Describe how creatures and plants interact in the garden.</p>	<p>Read a book, write a story, do counting exercise. Participate in a melodrama, vegetable tasting. Garden Journal</p> <p>Book: <i>Cucumber Soup</i> by Vickie Leigh Krudwig Optional: <i>Oddhopper's Opera: A Bugs Garden of Verses</i> by Kurt Cyrus, <i>Over in the Garden</i> by Jennifer Ward</p>	<p>Students become plant and animal actors as they perform a garden melodrama.</p>
<p>Lesson 10: How do we manage pests in the garden? "Garden Patrol" from <i>Growing In The Garden</i>, Iowa State University Extension and Outreach</p>	<p>Identify garden creatures that can harm garden plants. Create ways to protect plants.</p>	<p>Songs, garden patrol investigators and agent team activity, drawing Garden Journal</p> <p>Books: <i>How Groundhog's Garden Grew</i> by Lynne Cherry, <i>Eddie's Garden</i> by Sarah Garland</p>	<p>Students do Garden Patrol Charades and go into the garden.</p>
<p>Lesson 11: When and how do we harvest our salad garden? How do we clean and prepare salads? How do we plan and have a Salad Party? "Harvesting" and "Salad Party" from <i>Seed To Salad</i>, Cornell University Garden-Based Learning and Ithaca Children's Garden</p>	<p>Apply harvesting, cleaning, and salad mixing strategies for salad crops. Plan and implement a Salad Party.</p>	<p>Harvest in the garden, plan a party.</p>	<p>Students work in the garden.</p>





Grade 3	Objectives	Activities	Movement
<p>September: Harvest “The Color of Harvest from Got Veggies!” Source: from <i>Got Veggies?</i>, Wisconsin Department of Health Services – Nutrition, Physical Activity and Obesity Program with support from University of Wisconsin Extension</p>	<p>Students harvest vegetables in the garden. Taste and identify a variety of fruits and vegetables. Understand that some plants are sources of food. Develop descriptive vocabulary for specific characteristics of food. Collect and analyze data.</p>	<p>Taste vegetables from the garden, complete tasting chart, vote for favorite, create graph or chart to show results. Garden Journal. Book: Read <i>Growing Vegetable Soup</i> by Lois Ehlert</p>	<p>Students harvest in the garden.</p>
<p>October: Post-Harvest: What do you do with the garden after the harvest? Put Your Garden To Bed, University of Maryland; Questions About Composting Iowa State University Extension; Tool Safety Game, <i>Growing in The Garden: Local Foods And Healthy Living</i>, Iowa State University Extension and Outreach; “Preparing for Next Year” from <i>Got Dirt?</i> Wisconsin Department of Public Health</p>	<p>Learn steps to put the garden “to bed” at the end of the season. Review compost and tool safety.</p>	<p>Tool safety, garden clean-up, compost spreading, reading Books: <i>Compost! Growing Gardens From Garbage</i> by Linda Glaser <i>Composting: Nature’s Recyclers</i> by Robin Koontz</p>	<p>Students play a Tool Safety game, go into the garden for clean-up and composting.</p>
<p>November: Apples! Network for Healthy California’s <i>Harvest of The Month: Apples</i></p>	<p>Identify recommended amounts of fruits and vegetables for ages. Describe how plants grow from seed. Discuss what nutrients plants need for optimal growth.</p>	<p>Apple tasting, How Much Do I Need activity, How Do Apples Grow, read books about Johnny Appleseed</p>	<p>Grab the Apple!</p>





Grade 3	Objectives	Activities	Movement
	Compare plant nutrients with the nutrients humans need.		
<p>December: How do you make your plate look like MyPlate? Source: "Healthy Hop 'N Shop" from <i>Growing in The Garden Local Foods And Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Categorize favorite foods into food groups. Develop a plan to "Eat right – Exercise – Have Fun."</p>	<p>Hop 'N Shop Grocery Store Food Group Wrap tasting</p>	<p>Students exercise with Reach for the Sky and Food Group Marching activities.</p>
<p>January: How do you plan a garden? Source: "Our Food Garden Plan," from <i>Growing in the Garden: Local Foods and Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Identify and select locally grown fruits and vegetables to plant, grow, harvest, and eat. Use a variety of mathematical and science concepts and skills to create local garden plans and calendars.</p>	<p>Plan the garden using space taped off on the floor and the Square Foot Garden template. Determine space that vegetables needed and growing calendar</p>	<p>Student move around the classroom for garden planning.</p>
<p>February: The Magic of Mulch and Mulch More, Source: "Our Food Garden Plan," from <i>Growing in the Garden: Local Foods and Healthy Living</i> Iowa State University Extension and Outreach; Exploring Cabbage, Network for Healthy California's <i>Harvest of the Month: Cabbage</i></p>	<p>Identify benefits, types and uses of mulch. Identify cruciferous vegetables and associated nutrients especially phytochemicals. Use science concepts to determine if a substance is acid or base.</p>	<p>Mulch plants, conduct science investigation. Cabbage taste test Book options: <i>The Cabbage Solution</i> by Erika Oller, <i>Tiny Green Thumbs</i> by C.Z. Guest, <i>What is a Plant?</i> by Bobby Kalman</p>	<p>Students learn Chinese jump rope activity.</p>
<p>March: How do you a plant a school garden (second year)?</p>	<p>Identify and implement efficient and productive methods to prepare the</p>	<p>Garden rules, garden tool checklist, garden matching game, plant</p>	<p>Student s do the Sunflower Seed Cycle activity, garden tool</p>





Grade 3	Objectives	Activities	Movement
<p>“Planting Our Food Garden” from <i>Growing in The Garden: Local Foods And Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>soil for gardening; mark a garden; plant seeds, sets, or transplants; and water the garden for the first time.</p>	<p>and watering</p> <p>Garden Journal</p> <p>Fruit or veggie tasting</p>	<p>safety game, and work in the garden.</p>
<p>April:</p> <p>What do plants need to grow?</p> <p>“Photosynthesis” from <i>Growing In The Garden</i>, Iowa State University Extension and Outreach; “Caring for the Garden” Year from <i>Got Dirt?</i> Wisconsin Department of Public Health</p> <p>Optional: Action Project from <i>Garden Mosaics</i>, Cornell University Cooperative Extension Service</p>	<p>Define photosynthesis, Identify the basic ingredients in photosynthesis and where they come from, Describe the basic photosynthesis process, Give reasons why photosynthesis is important to plants and animals, When to water the garden.</p>	<p>Photosynthesis experiment, diagram; weeding and watering the garden; drip irrigation for garden plants.</p> <p>Green Smoothie tasting</p> <p>Garden Journal</p> <p>Book: <i>Photosynthesis: Changing Sunlight Into Food</i> (Nature's Changes) by Bobbie Kalman</p> <p>Optional: culminating project for garden learning</p>	<p>Students do a plant and animal search and a skit.</p>
<p>May:</p> <p>Let’s Celebrate our Garden Harvest!</p> <p>“How do you harvest garden produce?”</p> <p><i>Growing in The Garden: Local Foods And Healthy Living</i>, Iowa State University Extension and Outreach;</p> <p>“Healthy Harvest Celebration” from <i>Growing Healthy Kids</i> Oregon State University Extension</p>	<p>Harvest foods from the garden; demonstrate ability to plan a meal with healthy foods.</p>	<p>Harvesting in the garden, planning a meal using MyPlate guidelines, food adventurer game, salad preparation and tasting</p> <p>Garden Journal</p> <p>Plant Part Salad Tasting</p>	<p>Students harvest in the garden and do the Plant Part Dance.</p>





Grade 4-5	Objectives	Activities	Movement
<p>Lesson 1: How does food relate to plants? Source: "My Lunch Came From Soil" from <i>Growing In The Garden, Local Foods and Healthy Living</i>, Iowa State University Extension and Outreach; "Carrot Tops" from <i>Science Projects of the Week (S.P.O.W.)</i>, Nimitz Middle School, LA</p>	<p>Describe how most foods start in the soil and then go through several steps before we eat it. Understand the implications of how little soil is left to grow food for a growing population. Identify ways to have access to healthy foods. Understand characteristics of carrots and conduct an experiment.</p>	<p>Students conduct experiments and prepare a healthy recipe with carrots.</p>	<p>Soil to Food relay Food Group March</p>
<p>Lesson 2: How does healthy soil relate to food? Source: "Get the Scoop on Soil" from <i>Growing in The Garden</i>, Iowa State University Extension and Outreach "Composting" from <i>Garden Mosaics</i>, Cornell University Cooperative Extension</p>	<p>Describe sand, silt and clay. Explain why loam is a good mixture of soil to grow plants. Define composting and describe what compost organisms need to grow and multiply. Explain how to build and care for a compost pile.</p>	<p>Examine local soil, conduct soil testing, learn how to compost and make the soil healthier. Taste melon salad or perfect parfait. Read <i>Dirt</i> by Steve Tomecek and <i>Diary of a Worm</i> by Doreen Cronin</p>	<p>Soil Game - movement in the class room</p>
<p>Lesson 3 AND 4: How do we make a garden plan and a garden calendar? "Our Healthy Garden Plan" from <i>Growing in The Garden: Local Foods and Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Identify and select locally grown fruits and vegetables to plant, grow, harvest and eat. Use a variety of mathematical and science concepts and skills to create local garden plans and calendars.</p>	<p>Make seed catchers, develop garden plan and calendar, make garden labels. Lettuce Wraps and Salsa tasting Books: <i>The Vegetables We Eat</i> by Gail Gibbons, <i>Too Many Pumpkins</i> by Linda White</p>	





Grade 4-5	Objectives	Activities	Movement
<p>Lesson 5: Where do garden seeds come from? “Banking on Seeds” from <i>Food, Land & People: Resources for Learning, Food, Land & People</i></p>	<p>Give examples and compare the use of seeds by people in the past, today, and in the future. Gather, store and plant seeds. Create a seed bank and explain its importance. Label the basic parts of a seed.</p>	<p>Examine squash and seeds, seed experiment, draw observations of seed growth. Seed Medley tasting</p>	
<p>Lesson 6: How do you plant a garden? “Planting Our Healthy Garden” from <i>Growing in The Garden: Local Foods and Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Identify and implement efficient and productive methods to prepare the soil for gardening. Mark a garden. Plant seeds, sets, or transplants. Water the garden for the first time.</p>	<p>Garden rules, garden tool checklist, garden matching game, planting and watering the garden Garden Journal Fruit or veggie tasting</p>	<p>Students do the garden tool safety game, and work in the garden.</p>
<p>Lesson 7: What do plants need to grow? Source: “Photosynthesis” from <i>Growing in The Garden</i>, Iowa State University Extension and Outreach</p>	<p>Define photosynthesis. Identify the basic ingredients in photosynthesis and describe the process. Give reasons why photosynthesis is important to plants and animals.</p>	<p>Photosynthesis experiment, diagramming, song Leafy vegetable tasting</p>	<p>Students move in the classroom based animal and food questions.</p>
<p>Lesson 8: How do you water the garden? Source: “Water in the Garden” and “Watering the Garden” from <i>Garden Mosaics</i>, Cornell University Cooperative Extension Service</p>	<p>Describe the steps in the water cycle. Explain why plant roots need both water and air. Identify signs of water stress in plants, Demonstrate when, how, how much a garden should be</p>	<p>Learn the water cycle, conduct a PERC test. Vegetable tasting</p>	<p>Students water the garden.</p>





Grade 4-5	Objectives	Activities	Movement
	<p>watered. Explain how to conserve water in the garden.</p>		
<p>Lesson 9: What do butterflies and other flying insects have to do with producing food? "A Butterfly's Life" from <i>Growing in The Garden</i>, Iowa State University Extension and Outreach</p>	<p>Name and describe the four stages in the complete life cycle of Butterflies. Explain and give evidence of plant and animal inter-dependence. Review and demonstrate the process and sequence of plant pollination.</p>	<p>Butterfly lifecycle models, songs, making and planting a paper seed pot, butterfly secret code word activity</p> <p>Book: <i>Caterpillars and Butterflies</i> by Stephanie Turnbull</p>	<p>Students visit the garden.</p>
<p>Lesson 10: How do you manage pests in the garden? Source: "WANTED: Out of My Garden" from <i>Growing in The Garden: Outdoor Classrooms For Young Gardeners</i>, Iowa State University Extension and Outreach</p>	<p>Identify creatures and the damage they do to garden plants. Manage harmful creatures in the garden.</p>	<p>Learn the characteristics of different gardens pests and how they damage the garden.</p> <p>Make a Creative Critter Snack.</p>	<p>Students check the garden for 'outlaws.'</p>
<p>Lesson 11: When and how do we harvest our salad garden? How do we clean and prepare salads? How do we plan and have a Salad Party? "Garden Celebration" from <i>Eating From The Garden</i>, University of Missouri Extension</p>	<p>Apply harvesting, cleaning, and salad mixing strategies for salad crops. Plan and implement a Salad Party. Review the importance of eating fruits and vegetables</p>	<p>Eating from the Garden Jeopardy</p> <p>Garden harvest tasting</p>	<p>Students harvest in the garden.</p>





Grade 5-6	Objectives	Activities	Movement
<p>Lesson 1 September: Harvesting Your Edible Garden. Source: “Harvest and Sampling Ideas and Recipes: from <i>Growing in The Garden: Local Foods and Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Harvest vegetables in the garden. Collect and analyze data.</p>	<p>Garden harvest, garden yield records, garden math activity. Vegetable tasting Garden Journal.</p>	<p>Students harvest in the garden.</p>
<p>Lesson 2 October: Post-Harvest: What do you do with the garden after the harvest? “Put Your Garden To Bed,” University of Maryland; “Improve Your Soil with Cover Crops,” Cornell University; “Composting” from <i>Garden Mosaics</i>, American Community Gardening Association and Cornell Garden-based Learning; “Questions About Composting,” Iowa State University Extension; “Tool Safety Game,” <i>Growing in the Garden: Local Foods and Healthy Living</i>, Iowa State University Extension and Outreach</p>	<p>Learn steps to put the garden “to bed” at the end of the season. Define composting. Describe what compost organisms need to grow and multiply. Explain how to build and care for a compost pile. Describe cover crop use. Review tool safety.</p>	<p>Tool safety, garden clean-up, compost science</p>	<p>Students do the Tool Safety game, start garden clean-up, build a compost pile and plant a cover crop.</p>
<p>Lesson 3 November: Exploring Root Vegetables: Source: “Root Vegetables” Network for a Healthy California <i>Harvest of the Month</i></p>	<p>Compare and contrast the content of predominant nutrients – including vitamins and minerals – in different root vegetable varieties (e.g., jicama, parsnips,</p>	<p>Taste testing root vegetables, examine nutrient labels, compare and contrast nutrients, discuss the six subgroups of root vegetables and their</p>	<p>Students continue putting the garden to bed, IF it not finished yet.</p>





Grade 5-6	Objectives	Activities	Movement
	rutabagas, turnips, yams, sweet potatoes, potatoes). Describe the parts of the tuber plant, explain root crop growing needs.	parts and growing needs. Pear tasting; Jicama Cucumber Salad	
Lesson 4 December: Making Healthy Food Choices Source: <i>"Eating from the Garden"</i> University of Missouri Extension	Identify the amount of food from each food group needed each day; recognize how much food they are eating.	Food group matching; vegetable tasting (beets); portion size activity MyPlate Roll-up tasting (recipe called MyPyramid Roll-Up)	
Lesson 5 January: How do you plan a garden? Source: <i>"Our Healthy Garden Plan"</i> from <i>Growing in the Garden: Local Foods and Healthy Living</i> , Iowa State University Extension and Outreach	Identify and select locally grown fruits and vegetables to plant, grow, harvest, and eat. Use a variety of mathematical and science concepts and skills to create local garden plans and calendars.	Identify plants that will grow in the climate, space and timeframes; do seed catcher activity; create a garden plan and garden calendar. Lettuce Wraps	
Lesson 6 February: Mulching for Water Conservation Source: <i>"Mulching for Water Conservation"</i> from <i>Kids Cook Farm Fresh Foods</i> , California State Department of Education; Exploring Cabbage, from: <i>Harvest of the Month: Cabbage</i> , Network for a Healthy California	Describe the role of mulch in conserving water. Identify benefits, types and uses of mulch. Conduct experiment to compare water evaporation with and without mulch. Identify cruciferous vegetables and associated nutrients especially phytochemicals.	Evaporation experiment; student sleuth activity; cabbage taste test and graphing exercise; make a plan; acid-base activity Book options: <i>Green Power: Leaf and Flower Vegetables</i> by Meredith Sayles, <i>100 Vegetables and Where They Came From</i> by William Woys Weaver, <i>A Seed Is Sleepy</i> by Dianna Hutts Aston	Students learn Chinese jump rope.





Grade 5-6	Objectives	Activities	Movement
<p>Lesson 7: March: How Do You Plant a Garden? Source: "Planting Our Healthy Garden," from <i>Growing in the Garden: Local Foods and Healthy Living</i> Iowa State University Extension and Outreach</p>	<p>Plant a garden using "Our Healthy Garden Plan" from Lesson 5 and the most appropriate planting methods according to the type of garden and the plants selected.</p>	<p>Transplanting, seeding, choosing tools, garden and tool safety, garden planting matching game</p>	<p>Students plant the garden.</p>
<p>April: Plants, Animals and Food "Photosynthesis" from <i>Growing in The Garden</i>, Iowa State University Extension and Outreach; "Caring for the Garden" Year from Got Dirt? Wisconsin Department of Public Health; "Action Project," from <i>Garden Mosaics</i>, Cornell University Cooperative Extension Service</p>	<p>Review photosynthesis to identify and describe process and reasons why it is important to plants and animal. Garden culmination project for students to do background research, create and complete a project.</p>	<p>Photosynthesis experiment, diagram; weeding and watering the garden; culminating project Green Smoothie tasting Garden Journal</p>	<p>Students work in the garden and do a skit.</p>
<p>May: Let's Celebrate Our Garden Harvest! "How do you harvest garden produce?" <i>Growing in The Garden: Local Foods And Healthy Living</i>, Iowa State University Extension and Outreach; "Garden Celebration" from <i>Eating From The Garden</i>, University of Missouri Extension</p>	<p>Apply harvesting, cleaning, and salad mixing strategies for salad crops. Plan and implement a Salad Party. Review the nutrition and gardening concepts.</p>	<p>Eating from the Garden Jeopardy Garden harvest tasting</p>	<p>Students harvest in the garden.</p>





HGHY Lessons Selected

Lessons from the following garden curricula were included in the HGHY toolkit. The specific lessons selected and information about accessing the curricula are listed below.

Eating from the Garden - written for 5th grade, but they use it in 4th grade.

Karen Elliott et. al. University of Missouri Extension

<http://extension.missouri.edu/p/N755>

2011

\$80.00

Eating from the Garden provides research-based information through nutrition and gardening activities to increase consumption of fruits and vegetables, and promote healthier food choices, gardening knowledge and physical activity.

Grade 4 Lesson used: Garden Celebration

Grade 5 Lessons used: Choosing From the Food Groups, Making Healthy Food Choices (portions), Harvest Celebration

Food, Land & People: Resources for Learning

www.foodlandpeople.org

2003, however lessons are being updated continually

55 lessons or 950 pages shrink wrapped and 3-hole punched = \$56.25

55 lessons on CD = \$45.00 20 lessons in a Spanish edition

These individual lessons available as digital downloads at \$4.00 each:

Grade 2 Lesson used: Seasons through the Year

Grade 4 Lesson used: Banking on Seeds

Got Veggies?

Nutrition, Physical Activity & Obesity Program Wisconsin Department of Health Services

http://www.dhs.wisconsin.gov/health/physicalactivity/pdf_files/GotVeggies.pdf

2009





Got Veggies? is a garden-based nutrition education curriculum with the primary goal of getting children to eat more fruits and vegetables.

Grade 2 Lesson used: Seeds and Sprouts

Grade 3 Lesson used: The Color of the Harvest

Got Dirt?

http://www.dhs.wisconsin.gov/health/physicalactivity/pdf_files/gotdirt_09.pdf

2005

Got Dirt? Is a garden toolkit for implementing youth gardens.

Grade 3 Lessons used: Preparing for Next Year, Caring for the Garden

Grade 5 Lesson used: Caring for the Garden

Growing Healthy Kids - - Garden Enhanced Nutrition Education Curriculum

http://extension.oregonstate.edu/nep/garden_nutrition/

2011

An 11 lesson hands-on, activity rich curriculum for elementary aged (grades 2nd through 3rd) children focused on nutrition education and the connection to plant parts. With the addition of the supplementary activities the series can be extended to 22 lessons. For school and non-school sites. GHK includes options for mural, indoor and outdoor gardens.

The GHK curriculum may be used for free, as long as OSU Extension is credited appropriately (i.e. the OSU Extension logo and a statement crediting OSU Extension, must appear on handouts, Parent Letters, etc.), and the curriculum is used as written and/or intended. OSU Extension would appreciate knowing who is using GHK, in part to send along updates. Please send a note to the following address if using GHK: nep@extension.oregonstate.edu

Grade 3 Lesson used: Healthy Harvest Celebration

Iowa's Growing in the Garden: Local Foods and Healthy Living

Janet Toering, Linda Naeve, Suan Cook. Iowa State University Extension

<https://store.extension.iastate.edu/Product/Growing-in-the-Garden-Local-Foods-and-Healthy-Living-Curriculum>

2014





\$75.00

A comprehensive guide with a solid research base that integrates food gardening and outdoor classroom activities with engaging activities that meets young people "where they're at."

Grade 2 Lesson used: Plant Parts Become Me!, Rocks to Ice Cream and Keeping Soil Alive, Our Food Garden Plan, Sunflower House, Germination, Garden Patrol, Garden Salad

Grade 3 Lessons used: Healthy Hop 'N Shop, Our Food Garden Plan, Planting Our Food Garden, The Magic of Mulch and 'Mulch' More, Photosynthesis

Grade 4 Lessons used: My Lunch Came From Soil, Get the Scoop on Soil, Our Healthy Garden Plan, Planting Our Healthy Garden, Photosynthesis, A Butterfly's Life, Wanted: Out of My Garden

Grade 5 Lessons used: Our Healthy Garden Plan, Planting Our Healthy Garden, Photosynthesis

See also <https://store.extension.iastate.edu/Product/Growing-in-the-Garden-K-3-Curriculum>
Growing in the Garden: K-3 Curriculum, 2012 \$50.00

Seed to Salad

Ithaca Children's Garden & Cornell Garden-Based Learning

<http://blogs.cornell.edu/garden/get-activities/signature-projects/seed-to-salad/>

2010

Seed to salad is an adaptable 8-week project that emphasizes: A high level of youth decision-making and a multidisciplinary approach; activities that involve nutrition, physical activity, art, democratic processes, planning and problem solving, math, science, developing horticulture skills, and language arts; harvest in June, before the end of the school year. The use of minimum garden space, youth decision-making and a high level of youth participation keeps students interested and committed. Contains a range of activities that lets adult leaders adapt Seed to Salad to meet their goals.

Grade 2 Lessons used: Nutrition Super Heroes, Salad Party





Garden Mosaics

<http://communitygardennews.org/gardenmosaics/>

Garden Mosaics is a youth and community education program that combines science learning with intergenerational mentoring, multicultural understanding, and community action. Garden Mosaics was created at Cornell University and is now maintained and hosted at the American Community Gardening Association.

Grade 3 Lessons used: Watering in the Garden, Action Projects

Grade 4 Lessons used: Composting, Water in the Garden

Grade 5 Lessons used: Composting, Watering Garden Plants, Action Projects

Harvest of the Month

<http://www.harvestofthemonth.cdph.ca.gov/>

These strategies are designed to motivate and empower students to increase consumption and enjoyment of a variety of colorful fruits and vegetables and to engage in physical activity every day. It is comprised of four key monthly elements: Educator Newsletters, Family Newsletters, Menu Slicks and Press Release Templates.

Educator newsletters used: Apples, Squash, Cabbage, Pears, Root Vegetables

Kids Cook Farm Fresh Food

California State Department of Education

<http://www.cde.ca.gov/ls/nu/he/kidscook.asp>

2002

Activities engage teachers and students in grades two through seven in exploring fresh, seasonal, locally grown produce through direct experience. Using tested recipes and farm profiles, *Kids Cook Farm-Fresh Food* links agriculture and the culinary arts to reading, mathematics, social sciences, and geography.

Grade 5 lesson used: Mulching for Water Conservation





Curricula Reviewed for the HGHY Toolkit

Eating from the Garden <http://extension.missouri.edu/p/N755>

Food, Land & People: Resources for Learning www.foodlandpeople.org

Got Veggies? http://www.dhs.wisconsin.gov/health/physicalactivity/pdf_files/GotVeggies.pdf

Got Dirt? http://www.dhs.wisconsin.gov/health/physicalactivity/pdf_files/gotdirt_09.pdf

Growing Healthy Habits <http://md.nutrition-education.org/>

Growing Healthy Kids http://extension.oregonstate.edu/nep/garden_nutrition/

Iowa's Growing in the Garden: Local Foods and Healthy Living (Revised 2014)
<https://store.extension.iastate.edu/Product/Growing-in-the-Garden-Local-Foods-and-Healthy-Living-Curriculum>

Iowa's Growing in the Garden: K-3 Curriculum
<https://store.extension.iastate.edu/Product/Growing-in-the-Garden-K-3-Curriculum>

Seed to Salad <http://blogs.cornell.edu/garden/get-activities/signature-projects/seed-to-salad/>

Garden Mosaics <http://communitygardennews.org/gardenmosaics/>

Harvest of the Month <http://www.harvestofthemonth.cdph.ca.gov/>

Kids Cook Farm Fresh Food <http://www.cde.ca.gov/ls/nu/he/kidscook.asp>

A Farmer Plants a Rainbow <https://www.agclassroom.org/rainbow/>

Gardening for Grades <http://faitc.org/teachers/gardening-for-grades/>

Health and Nutrition from the Garden <http://imgkids.us/curriculum/health-nutrition-from-the-garden/>

Junior Master Gardener <http://imgkids.us/curriculum/>

Cooking Up Maine Foods (no longer available)

Science Projects of the Week (no longer available)

