Engaging Your Entire School in the Garden

March 17  3:30-4:30
Iowa Dept of Education – Bureau of Nutrition & Health

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• Improve children’s eating and physical activity habits through nutrition education based on the principles of the Dietary Guidelines

- Training and Technical Assistance
- Fun and Interactive Nutrition Education
- School Wellness Policy Development, Implementation and Assessment
Susan DeBlieck, State Program Assistant, Iowa Master Gardener Program
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SUCCESS: AMOUNT OF FOOD HARVESTED

Photo from Franciscan Sisters of Little Falls, MN
SUCCESS: CURRICULA CONNECTIONS TO GARDEN

Photo from Mount Desert Islander
SUCCESS: STUDENT INVOLVEMENT

Photo from AgCulture
BEST PRACTICE: Define Garden Goals
BEST PRACTICE: Outline Roles
BEST PRACTICE: Seek funding
Spinach, lettuce, carrot, kale, kohlrabi (50 days)

Onion, winter squash, sweet potato, tomato, kale (80 days)

BEST PRACTICE: Harvest in session
Volunteer
(20 hrs)

Education
(10 hrs)
Learn it  Grow it  Teach it

Susan DeBlieck, deblieck@iastate.edu
www.mastergardener.iastate.edu
School Garden Tips from FoodCorps Iowa

Marlie Wilson, Iowa FoodCorps Fellow
Classroom Management in the Garden
School garden environments that promote behavior:

- Seating area (tables are a plus)
- Canopy for temporary shade
- Clear boundaries between growing space and walkways
- Garden signage that students will understand
Set expectations clearly:

• Walk instead of running
• Listen for directions
• Treat all living things with respect; that includes plants, bugs, and people!
• Share with others and work together
• Don’t be afraid to get dirty

Use a visual aid if possible!
Let a little chaos happen!
Engaging Parents and Community

Wait.....
FAMILY NIGHT!
5:00 - 6:00
Sweet Potato Party

[Image of children picking vegetables]

[Image of harvested vegetables]

[Image of FoodCorps logo]
Sharing ownership

• Involve families in ownership of garden project from the beginning
• Invite representatives to serve on school garden committee
• Ensure that parents are involved in decisions of how school garden produce is used
• Identify families with expertise in gardening and cooking to lead workshops for teachers and/or students; highlight the assets in your school community and celebrate them
Promotion and awareness

• On site signage: make sure passersby can learn more and contact someone
• Publicize your garden to the PTA/PTO, community organizations, and businesses
• Connect with other school and community gardeners around the city
• Utilize Master Gardeners
Recipes for success

- Host a regularly scheduled event to engage parents and other volunteers— even in off-season
- Incorporate garden and healthy taste tests into “Family Nights”
- Provide info at parent-teacher conferences; open houses
- Host a mock farmers market
- Allow parent volunteers to take produce home with them
Bringing the Garden to the Classroom
Cooking with kids

• Hands-on way to teach students about healthy eating and nutrition, understanding where food comes from
• Opportunity for teaching core curriculum
• Build teamwork and collaboration in classroom
Classroom cooking ideas
Indoor garden activities

- Seed dissection
- Worm bins and composting
- Starting transplants
- Potato sprouting
- Celery/carnation coloring experiment
- Garden planning
- Invite a farmer to visit/skype!
Garden to Cafeteria
Involve kids & food service

• **Students can participate with:**
  – Harvest
  – Preparation
  – Promotion

• **Work with the kitchen:**
  – Follow safety protocols
  – Learn where to find supplies
  – Clean up when finished

• **Voting jars at the end— I tried it, I liked it, I loved it**
Make sure the whole school knows…
Iowa Farm to School Workshops

• Council Bluffs: April 6th
• Altoona: May 1st
• Teachers, administrators, food service staff encouraged to attend; CEUs available
• $10 unless Iowa Nutrition Network School
• To register: [www.ncat.org/events](http://www.ncat.org/events)
Linking the Garden to Learning

Cindy Hall
Program Manager
Iowa Ag Literacy Foundation
Science – Life Science

• What are the differences between living and non-living things.

How does a plant grow? Observe the lifecycle of plants.

• What do plants need to grow? Do all plants need the same thing?

• How do plans use energy from the sun to make food? Discuss photosynthesis.

• Research adaptations of seeds for dispersal and adaptations of flowers for attracting pollinators
Science – Life Science

• Observe pollinators in the garden.

• Investigate functions of different plant structures.

• Investigate the impact of environmental changes on plants.

• Study wildlife and insects and their habitats. Where do certain creatures live in the garden? Why?

• Investigate how plants are the primary source of energy for all food chains.
Science – Earth Science

• Create a garden weather station. Record daily measurements and compare conditions with plant growth.

• How are some soils different from others? Compare and contrast the properties of different types of soils (density, air spaces, presence of living organisms, composition, texture, smell, appearance).

• Look for signs of soil erosion in the garden. Simulate soil erosion.
Science – Physical Science

• What is pH? How does it affect plants? Use litmus paper or a test kit to test the pH of different soils. Investigate how plants respond to soils with different pH levels.

• Simulate the water cycle in the indoor garden by covering it with a “dome” of clear plastic. Study and observe the transpiration, evaporation, and condensation of water.

• What are the properties of different types of light? Cover pots with cellophane of different colors to screen out all but one wavelength of light from plants. Observe plant growth.
Math

• Measure the growth rates of plants and display results on different types of graphs. Make predictions regarding future growth.

• Using information from seed catalogs, predict dates of germination and maturity.

• Plan backward from a desired harvest date to determine when each crop should be planted.

• Measure your garden perimeter and calculate the area. Use graph paper to make a map to scale of your garden.
Math

• Calculate amounts of fertilizer to use per quart and per liter of water.

• Count the number of seeds planted and the number of seeds that sprout and calculate the germination rate.

• Measure the height of a group of plants and determine the mean, median, and mode.

• Make a recipe that uses fruits and vegetables from the garden and requires various measuring techniques.
Math

• Chart temperatures of the air and soil in your garden in Fahrenheit and centigrade.

• Determine the weight and volume of soil mix when wet and dry. Determine the volume of soil in a rectangular window box.

• Investigate vegetable prices in a supermarket. Track the amount of produce harvested in your garden and use the market prices to determine the value of your harvest.
Social Studies

• Research and report on cultural or ethnic differences in food consumption and gardening practices.

• Research agricultural history and create a timeline of important events.

• Interview local farmers about choice of crops, growing practices, marketing, and farm history.

• Study the contribution of Native American foods and other cultures’ foods to our history and diet. Grow samples in the school garden.
Social Studies

• Research the histories of classroom garden plants. Discover where they originated, how today’s varieties differ from the original plants. Locate their origin on a map and then trace their movement around the world.

• Create a map of the school garden noting important futures and directions.

• Trace the path of a fruit or vegetable from the field to the table.

• Use the classroom garden to complement a study of the influence of climate on food production.
Language Arts

- Keep daily garden journals documenting observations, weather conditions, and classroom activities.

- Research the growing habits of the school garden plants using the Internet and reference material. Create a planting schedule based on the information.

- Write letters to local merchants explaining the school gardening project and asking for donations.

- Write thank you notes to volunteers and garden sponsors.
Language Arts

• Brainstorm different adjectives to describe each plant in your garden.

• Study new vocabulary that relates to plants and gardens.

• Publish a class newsletter with student articles about the garden and distribute it to other classrooms and parents.

• Write step-by-step instructions for common garden activities.
Resources

• ISU’s Connecting Living & Learning
  • http://www.extension.iastate.edu/4h/page/curricula-info-ordering

• National Ag in the Classroom
  • http://www.agclassroom.org/teacher/matrix/

• Edible School Yard
  http://edibleschoolyard.org/resources-tools

• Iowa Ag Literacy Foundation
  • www.iowaiowaagliteracy.org
Iowa Ag Literacy Foundation Resources

- Lessons and support materials
- Lending Library
- Teacher Supplement Grant
  - 2015: Social Studies & Literacy
  - 2016: 21st Century Skills & Literacy
  - 2017: Science & Literacy
- Professional Development Workshops
- Student Reader
  - Iowa Agriculture Today
Agriculture is Everywhere

When you woke up this morning, you
had your first encounter with agriculture.
Your sheets and pajamas were probably
made with the fibers from cotton plants.

Did you wash or shower with soap? That soap
was made from fats from cattle and oil from
plants such as palms, corn and soybeans.

Did you have cereal, eggs, milk, bacon,
pancakes, buttered toast or juice for breakfast?
Thank agriculture again!

Did you pick a lunch in a
paper bag, or finish your math by writing
on paper? That paper comes from another
agricultural crop—trees. Corn and
soybean by-products may go into the ink
in your books.

Did you ride to school today? The bus
car you rode to school likely ran
on biodiesel made from soybeans
or ethanol made from corn,
and tires are made from
the rubber plant. Did you pass
a city park, a golf course, an
orchard or nursery? Do you see
a windbreak or a red farm? All of
these are agriculture too.

WHAT IS
Agriculture?
The business, science and
practices of growing and selling
plants and animals to be used
for food, fiber and fuel.

• FOOD comes from plants
and animals.

• FIBER is the raw material
from plants and animals that we
use to make cloth and clothing,
rope and more. Fiber can be
made from cotton, wood, wool,
and even soybeans!

• FUEL can be made from crops
products like corn, soybeans,
and sugarcane. Fuel made from
plants grown on farms is called
renewable.
St. Joe’s Catholic School – New Hampton

• Donated Seeds from Seed Savers Exchange
• Last year 2,000 pounds of produce!
  • School meals
  • Teachers – cooking cart in the classroom
  • Community Spaghetti Dinner
    • 300 lbs of tomatoes made 125 quarts

• Amy Kloberdanz
  • akloberdanz@stjoesph-nh.pvt.k12.ia.us
Growing a School Garden

- Curriculum
- Breaking New Ground
- Composting
- Planting Day Checklist
- Planting Schedule
- Herb Guide
- Planting Guide
- Diseases & Pests
- School Gardens 101
- Garden Care Checklist
- Keeping Track of Garden Maintenance
- Food Safety
- Supplies & Equipment
- Harvest Log Template

Use of School Foodservice Funds

- Garden serves the purpose of operating or improving the school meal program (Memo Code: SP 06-2015)
  - Supplies, equipment, and staff time to support the garden may be purchased with foodservice funds

- Foodservice Benefits from a School Garden!
  - Increasing consumption of fruits and vegetables
  - Providing quality fresh produce
  - Increasing school meal participation
Team Nutrition Funding

• $500 Sub-Grants
  • Seeds/seedlings
  • Grow Lights
  • Potting Soil
  • Starter Pots
  • Structural Supplies
  • Signage
  • Nutrition Education

• Deadline: March 31
A Garden is the Way to Grow

• Iowa Department of Agriculture and Land Stewardship
• Each Sub-Grantee Receives:
  • $150
  • Garden Tools: Watering Wand, Soaker Hose, Weed, Disease and Insect Guide, Pollinating Wand, Stirrup Hoe, and Low Tunnel
• Tammy Stotts: tammy.Stotts@iowaagriculture.gov
• http://www.iowaagriculture.gov/AgDiversification/AgardenIsTheWaytoGrow.asp
Nutrition Education Curriculum - FREE

Grow It, Try It, Like It! Preschool
Introduces peaches, strawberries, cantaloupe, spinach, sweet potatoes, and squash through nutrition education activities.

The Great Garden Detective Adventure 3rd and 4th Grade
Investigations connecting the school garden to the classroom, school cafeteria, and home.

Dig In! 5th and 6th
Lessons that engage students in growing, harvesting, tasting, and learning about fruits and vegetables.

http://tn.ntis.gov/
Dig In Poster Set FREE!

http://tn.ntis.gov/
You've Got the Power!
Want to get your engine going?
Eat your colors!
Make half your plate fruits and veggies.

Take Your Game to the Next Level
Get points for eating your colors!
Choose fruits and veggies at meals and snacks.
They'll help you be your best at school and at play.

They're Tasty and They Know It!
Taste a tomato.
Crunch a carrot.
Savor a sweet potato.
Rock your colors!
Choose dark-green, red, and orange veggies at meals and snacks.

Want To Eat Smart To Play Hard?
Snack on bean dip.
Try a bean burrito.
Warm up with veggie chili.
Fuel up with beans and peas for protein and energy.

Explore a world of possibilities in the garden and on your plate.
Iowa Kids LOVE Iowa Foods
Sample Tasting Schedule
Food Tasting Instructions
Strategies and Tasting Code
Fact Sheets
Hand Washing and Food Safety Tips
Words to Describe Food
Fruit and Veggie Announcements
Promotional Ideas

https://www.educateiowa.gov/fruit-and-vegetable-resource
Food Tasting Instructions

Trying a new food can be fun!

- When offered food, be polite and say, “Yes, thank you” or “No, thank you.”
- Try it! At least one small bite.
- If you like it, think of other ways you could eat the food at home and school.
- If you don’t like it, you may politely remove the food with a napkin.
- It is OK not to like something, but please be kind. No yucky faces or mean words.
- Be willing to try the food again! Sometimes it takes a while to like a new food.
Cultivate Iowa

- Donate to garden produce to food pantries and other groups
- Guide that provides practical strategies that support gardening and produce donation
- http://www.cultivateiowa.org/partner-resources/
Food Safety Education – School Gardens

• Fundamental agricultural practices that keep food safe

• On-line tools include:
  • Two 1-hour videos
  • Activities
  • Quizzes
  • Instructional Guide

www.safeproduce.cals.iastate.edu/elementary