Creating Healthy Schools and Communities

Making the healthy choice the easy choice!

Wellness Wednesdays Virtual Training Series

SCHOOL GARDENING

Benefits of having a school garden

Learning:

- Hands on learning opportunities
  - **2-LS2-1.** Plan and conduct an investigation to determine if plants need sunlight and water to grow.
  - **5-LS1-1**. Support an argument that plants get the materials they need for growth chiefly from air and water.
  - **MS-LS2-1**. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
  - **HS-LS1-3**. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
  - **PAN.E.2** Individuals begin to acquire and establish healthy eating and physical activity behaviors during childhood and adolescence. Learning standard 1 in Health and FaCS.

Health:

- Physical activity
- Healthy eating
- Improved immunity
- Mental health

Community & Environment

- Provides opportunities to engage the community
- Helps foster environmental stewardship

How to create a school garden

1. Form a garden committee or club
2. Decide on the goals for your garden
3. Design the garden
4. Buy supplies
5. Building the garden
6. Planting the garden
7. Maintenance
8. Harvest

Form a Garden Committee or Club

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Who should be on the committee:

- Your school's administration (at least their support)
- Teaching staff
- Students
- Parents
- Community volunteers
- Maintenance

Decide on the Goals for Your Garden

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- Provide outdoor or hands on learning.
- Cultivate food for school programs.
- Send fresh produce home with students.
- Provide a therapeutic place for students.

Determine what type of garden will best meet your goals?

- Traditional or hydroponic?
- Vegetable or flower or fruit?

Design the Garden

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How-To-Garden Videos (1/4) - Planning Your Garden - YouTube

Think big, yet start small!

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Space:
- How many garden beds? What type (in ground, raised bed, container, tower)
- What other structures do you need?

Light?
- How much sunlight does the area get?
  - Need at least 6 hours a day to grow most vegetables

Water?
- Where is the nearest water access?

Fence?
- Do you need to keep the area secure from animal pests or vandalism?

What plants?
- Decide based on: garden goals, timing, space and light availability, participants.

Think big, yet start small!

Find out the soil type in your area

[Web Soil Survey (usda.gov)]

Map Unit Legend

Erie County, New York (NY029)

Erie County, New York (NY029)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NfA	Niagara silt loam, 0 to 3 percent slopes	13.5	100.0%
Totals for Area of Interest		**13.5**	**100.0%**

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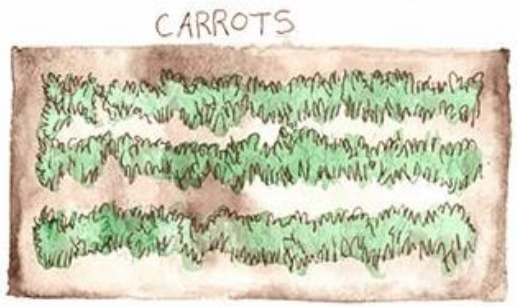
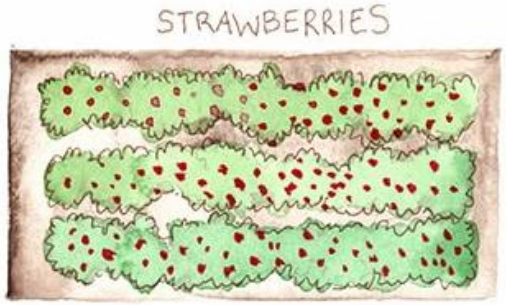
4 × 8′

4 × 4′



SUNFLOWER
CONEFLOWER
BLANKET FLOWER
ASTER
SEDUM



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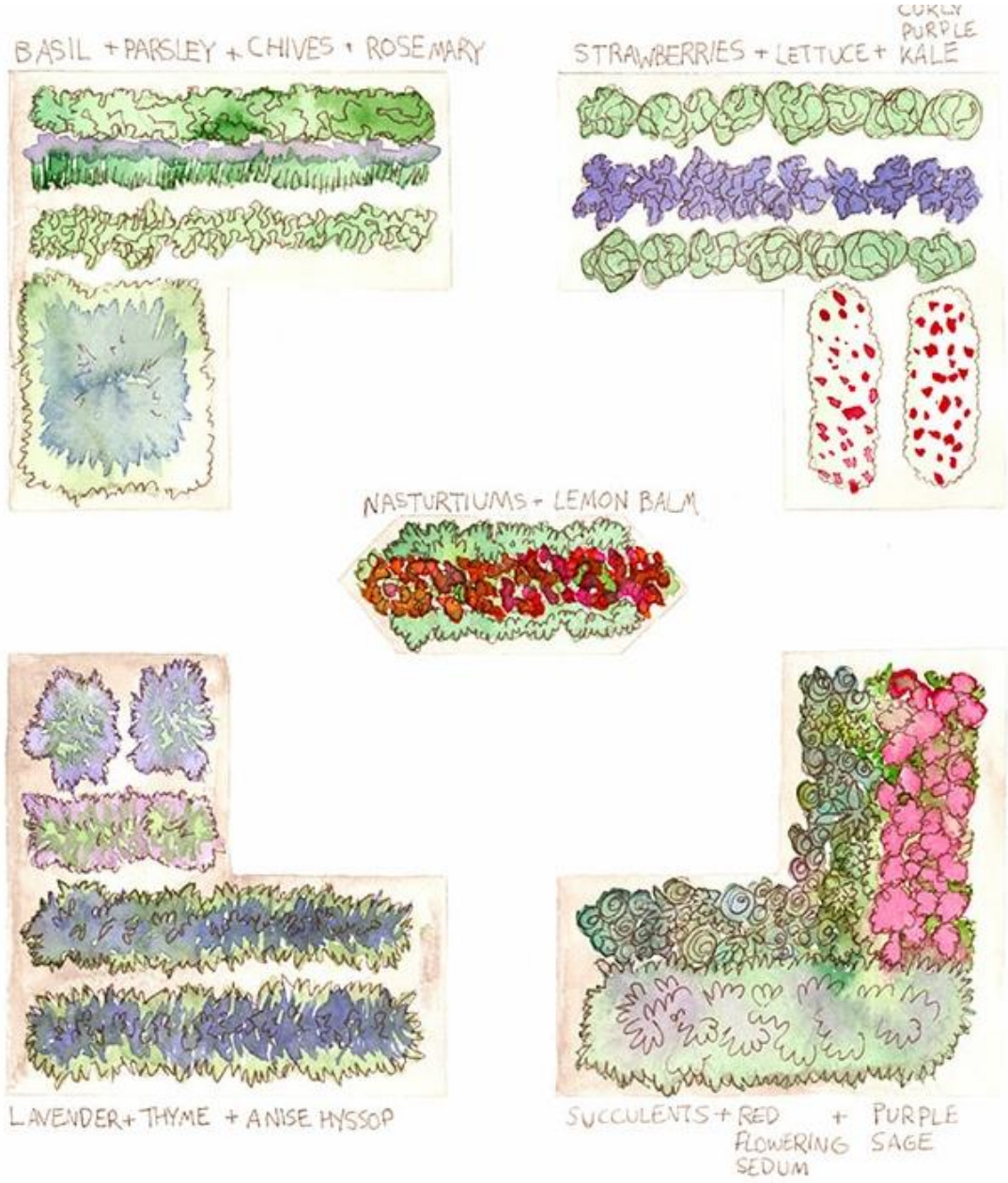

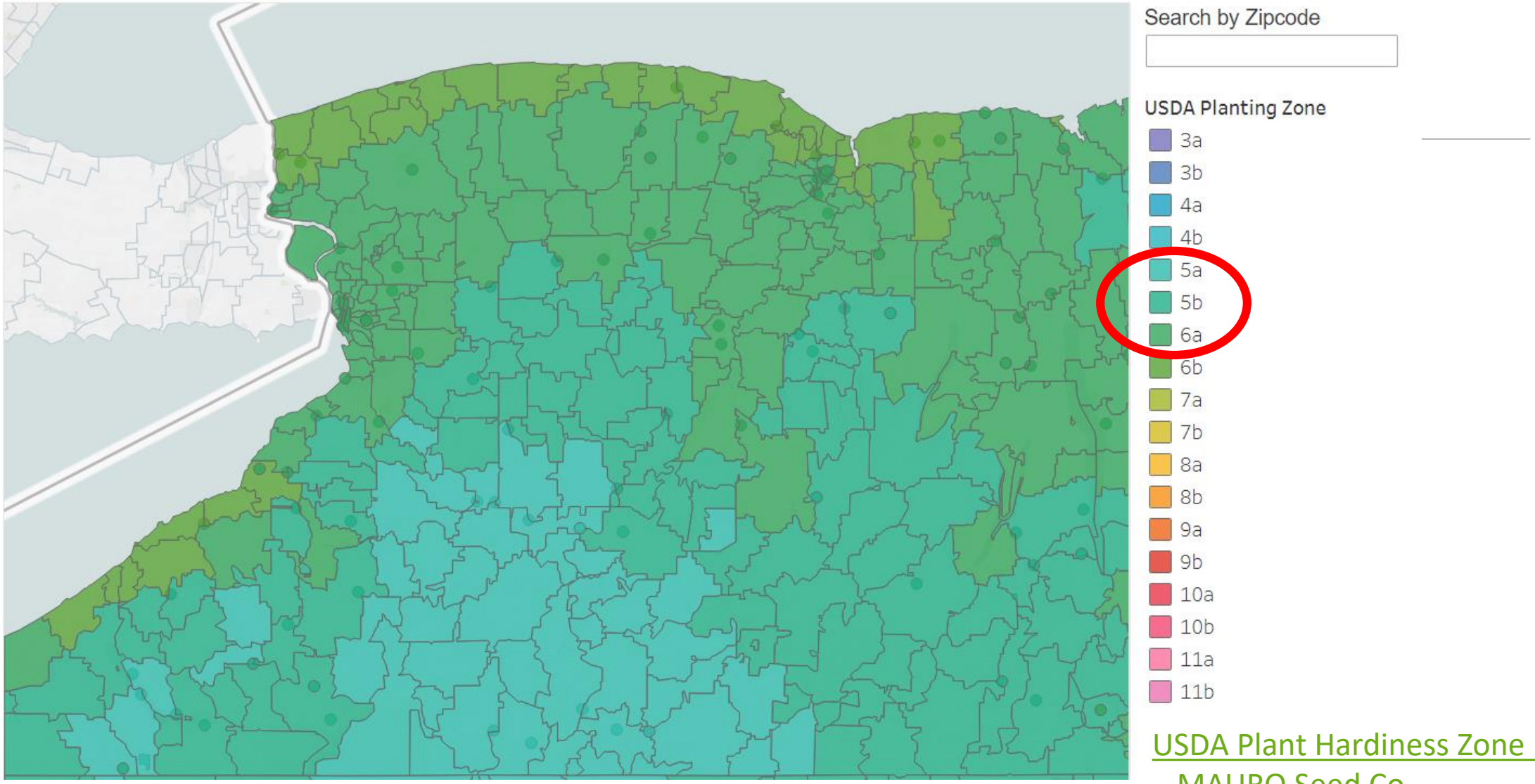

[USDA Plant Hardiness Zone Map – MAURO Seed Co.]

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Plants that grow well in zone 5/6

Vegetables:

- Asparagus
- Beets
- **Beans** (Pole and Bush)
- Cabbage
- **Carrots**
- Celery
- Cucumber
- **Lettuce & greens**
- Onions
- **Peas**
- Peppers
- Potatoes
- Pumpkins
- Radishes
- Rhubarb
- **Squash** (summer and winter)

Herbs and Flowers:

- Aster
- Delphinium
- Echinacea
- Lilies
- Salvia
- Hollyhock
- Coral Bells
- Chives
- Hostas
- Lavender
- Foxgloves
- Bee Balm
- Hyacinth

Buy Supplies

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- Wood (or other material) to build raised beds
- Soil
- Fertilizer
- *Fencing
- Irrigation
- Signs

Tools (enough for a class):

- Watering can (3)
- Hand trowels (25-30)
- Round shovel (2)
- Flat shovel (2)
- Garden hoe (2)
- Digging fork (2)
- Drinking water safe hose (1)
- Garden twine (1 200ft roll)
- Gardening gloves (25-30)
- Plant labels (50)
- 1 wheelbarrow
- 1 spray nozzle

The grant money can be used to purchase all of these materials with the exception of some types of fencing.

Building the Garden

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Younger children can't do much of this work.

- Parent or community volunteers.
- Middle or high schoolers

Borrow tools and equipment that you will only need for construction.

- Drills
- Saws
- Wheelbarrows

Planting the garden

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This is the fun part!
Plan your planting day based on what you are planting.

Some tips for planting with kids:

- Recruit extra adult volunteers.
- Outline your design in the soil prior to planting (with a stick, white sand, stones).
- Put up labels first.
- Demonstrate.
- Use spice containers as shakers for small seeds.
- Have a designated clean up space.

Maintenance

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Make a schedule:

- Watering
- Weeding
- Checking for pests
- Harvesting

Have a leader

Don’t forget to plan for summer break:

- Summer school classes
- Summer camps
- Volunteers from the community

Plan a day to prep the garden for winter:

- Just like the planting day this is a good time to recruit some extra adult volunteers.

Harvest

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Some crops all become ready for harvest at the same time. Who is going to pick everything?

What are you going to do with the food?

- Cafeteria
- Classroom
- Donate it
- Taste tests

Seed to Salad Program

School garden curriculum available from Cornell Cooperative Extension

- Salad garden with harvest in June
- A high level of youth decision-making and a multidisciplinary approach
- Small garden space required
- Designed for New York climate
- Elementary/middle school focused
- Comes with curriculum ideas for multiple areas

Seed to Salad (cornell.edu)

Tower gardens

Indoor system for growing plants available to purchase

- Year round, indoor option
- No dirt, no mess
- Can include grow lights so it can be moved around the school.

- Limited types of plants
  - Greens and herbs only for indoors
- Seeds need to be started and then transplanted into the tower.

Tips for integrating a garden into curriculum

Science:

- What do plants need to grow? Do all plants need the same things? Study the various conditions that different plants need to grow. Compare the things people need to the things plants need. Create experiments investigating what happens when plants are exposed to different amounts of light, water, air, space, and nutrients.

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

MIG (csgn.org):

Tips for integrating a garden into curriculum

Math:

- Measure the growth rates of plants and display results on different types of graphs. Make predictions regarding future growth. Use standard and nonstandard units of measurement.
- Count the number of seeds planted and the number of seeds that sprout and calculate the germination rate.

MIG (csgn.org):

Tips for integrating a garden into curriculum

Social science:

- Study the contribution of Native American foods and other cultures' foods to our history and diet. Grow samples in the school garden.
- Complete a site analysis of the school garden and create a garden map noting important features, including a north arrow.

MIG (csgn.org):

Tips for integrating a garden into curriculum

ELA

- Research the growing habits of the school garden plants using the Internet and reference material. Create a planting schedule based on the information.
- Write step-by-step instructions for common garden activities

MIG (csgn.org):

Tips for integrating a garden into curriculum

Art:

- Make prints using paint and stamps made from various plant parts.
- Using a movie camera with single-frame capability, make a time-lapse film of a plant growing.

MIG (csgn.org):

Tips for integrating a garden into curriculum

Health:

- Conduct a blindfolded taste test using classroom-grown vegetables and supermarket vegetables.
- Experiment with food preservation techniques, such as drying, freezing, and canning.

MIG (csgn.org):

Resources

School Garden Program • Slow Food USA –general overview and links to academic studies

Starting a School Garden Program: Overview (kidsgardening.org) – step by step guide to starting a school garden

How to Start a School Garden: Your Complete Guide | Eartheasy Guides & Articles – examples of garden designs

School Gardening 101: Session 1 » New York Botanical Garden (nybg.org) – lesson plans and tips

Whole Kids Foundation | School Gardens – step by step guide

School Gardens - Growing in the Classroom with Tower Garden – tower garden information

School Gardens and Student Nutriton: Best Practices for Schools to Encourage Kids to Eat and Live Healthfully (harvard.edu) – school gardens as a way to teach nutrition

Resources for Building a School Garden (nature.org) – great 5 minute youtube videos

Seed to Salad (cornell.edu) – simple, elementary level, garden club curriculum

MIG (csgn.org) – tons of ideas to incorporate a garden into class curriculum