

# School Garden Checklist

School gardens are a great way to tangibly introduce S.T.E.M subjects to students, promote environmental stewardship, while encouraging nutrition and healthy behaviors. Before constructing a garden at your school, below are a few factors to consider to ensure a successful garden program. While this list is not meant to be completely exhaustive, these points will steer you in the right direction. Happy planting!

## School Garden Considerations



### Administration and Teacher Support

- Admin. and teacher support are vital for a successful school garden!
- Try to identify 2 -3 teachers that will assist in leading garden efforts
- Find a PTA liaison that can help with volunteer and funding efforts
- Integrate the garden within the academic curriculum
- Contact WCPSS facilities staff if modification form/request is required



### Student Involvement

- Get students involved from the very start!
- Involvement creates a sense of ownership and heightens engagement
- Beyond plant science, the garden is great for math lessons, understanding climate, or even how pollinators contribute to our ecosystem
- Allow students to participate in watering and routine garden maintenance



### Garden Location and Space

- Gardens need approximately 8 - 10 hours of sunlight to thrive
- Use long lasting materials, such as cedar, stone, or brick
- Locate garden near a convenient water source
- Large pots or vertical planters are a great if you have limited space
- Make sure your soil is healthy - raised planters help control soil health



### Garden Funding and Ongoing Support

- Initial and ongoing funding is key to start and maintain your school garden
- Solicit help from local hardware stores and nurseries
- Gauge PTA support and organize a school wide fundraiser
- Apply for school garden grants - for more grant resources visit Poe & Grow School Resource website.

This material was funded by the USDA's Supplemental Nutrition Assistance Program -- SNAP.  
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# Design Guidelines

When creating your school garden, you should consider a number of design factors. These factors include adequate sun exposure, access to a reliable water source, nutrient rich soil, and accessible paths for students to walk and explore. Detailed design recommendations are below or visit our interactive garden site at [www.poehealth.org/poe-grow-garden](http://www.poehealth.org/poe-grow-garden) for much more!



## Design Considerations

### Adequate Sunlight

8-10 hours of sunlight is ideal for optimal vegetable production

### Water Source

A close water source is essential for sustaining a garden

### Wide Paths

3' foot wide paths are suggested for accessibility and flow

### Pollinator Garden

Pollinators enhance the garden's growth. Adding pollinating attractants provide educational opportunities and increase your production.

### Educational Signage

Allows visitors to independently learn about the garden, seasonal plants, and other features found in the garden.

### Accessibility

Wide hard-packed paths (at least 3'), raised beds, and standing planters allows those with limited mobility to also enjoy the garden.

### Sustainable Practices

Composting, incorporating rain barrels, or adding low drip irrigation system are great sustainable practices and awesome educational opportunities.

### Planter Variety

Use lasting materials such as cedar, stone, or brick; Do not exceed 4' in width to allow easy access the plants; Containers and pots are great for small spaces.












































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# Companion Planting

Companion plantings can help to increase soil vitality and in some cases reduce the need for pesticides. A companion planting guide, such as this one, will show you which vegetables and fruits can support or inhibit the growth of other plants.

Crop	Companions	Incompatible
 Asparagus	 Tomato, Parsley, Basil	
 Beans, Bush	 Most Vegetables and Herbs	 Onion
 Beans, Pole	 Corn, Radish	 Onion, Beets, Sunflower
 Cabbage	 Aromatic Herbs, Celery, Beets, Onion Family, Spinach, Chard	 Dill, Strawberries, Pole Beans, Tomato
 Carrots	 English Pea, Lettuce, Sage, Tomato, Onion Family	 Dill
 Cucumber	 Beans, Corn, English Peas, Sunflowers, Radish	 Irish Potato, Aromatic Herbs
 Eggplant	 Beans, Marigold	
 Lettuce	 Carrot, Radish, Strawberry, Cucumber	
 Onion	 Beets, Carrots, Cabbage Family	 Beans, English Peas
 Pea, English	 Carrots, Radish, Turnip, Cucumber, Corn, Beans	 Onion Family, Irish Potato
 Potato, Irish	 Beans, Corn, Cabbage Family, Marigolds	 Pumpkins, Squash, Tomato, Cucumber
 Pumpkins	 Corn, Marigold	 Irish Potato
 Radish	 English Pea, Lettuce, Cucumber	
 Spinach	 Strawberry, Faba Bean	
 Squash	 Corn, Marigold	 Irish Potato
 Tomato	 Onion Family, Marigold, Asparagus, Carrot, Parsley, Cucumber	 Irish Potato, Cabbage Family, and Fennel



# Composting Tips

Compost is decomposed organic material that plays a crucial role in the garden ecosystem and provides great educational opportunities for students. Compost consists of a mix of “greens” (nitrogen rich materials) and “browns” (carbon rich materials) - about 4:1 browns to greens. Using compost greatly improves your garden’s overall soil structure and health. Remember, compost should remain slightly moist, have proper ventilation (oxygen), and decomposers.

## Composting Basics



Green compost material includes: lawn clippings, raw produce scraps, egg shells, tea bags, and coffee grounds. Green material is nitrogen rich and should only make up 1 part of your compost mixture.



Brown compost material includes: dried leaves, straw, wood chips, and shredded newspaper. Brown materials are carbon rich and should be about 4 parts of your mixture.



Moisture and oxygen are essential to composting. Keep your pile as moist as a damp sponge. Moisture helps keep microbes alive and prevent pests.



Turn the pile at least once a week - this helps aerate your compost.

## Hot Composting



Approximately 3' - 6' wide

Approximately 3' - 6' tall



A hot compost pile is made up of equal amounts of green and brown materials, proper moisture, and oxygen



Ensure that the pile retains proper moisture; as moist as a damp sponge.



When built properly, the pile will heat up to 160 degrees, but yields compost quite quickly - about 8-12 weeks.



Turn the pile about 2 times a week.

# Pollinator Gardens

The most popular pollinators are bees, butterflies, and hummingbirds. However, any animal that collects and moves pollen from flower to flower to help fertilize a plant can be considered a pollinator. Our crops rely heavily on pollinators to successfully produce a harvest. Try adding a number of pollinating attracting plants throughout your garden. Popular pollinator attractants include lantana, black eye susan, purple coneflower, lavender, and sunflowers. Additionally, opt for a native wildflower seed blend that you can plant together with your students.

## Popular pollinator flowers:

- Lantana
- Lavender
- Coneflower
- Cosmos
- Butterfly Bush
- Sunflowers



Bees are an important garden pollinator. They carry pollen from plant to plant. 1/3 of the food we eat relies on bee pollination.



Like bees, pollen collects on the butterfly's body as it is feeding on a flower's nectar. As the butterfly moves on to a new flower, it carries the pollen with it.

Birds carry pollen on their bill. As they fly between plants they help to pollinate. Birds also help the spread of seeds by way of digesting and expelling them in new places.



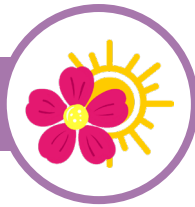
For More Information Visit:  
[www.fs.fed.us/wildflowers/pollinators/](http://www.fs.fed.us/wildflowers/pollinators/)



# Drought Tolerant Plants

Maintaining a consistent watering schedule is often a struggle for some school gardens. Before planting your crop, think about your watering needs ahead of time. Below are a list of plants that are typically resistant to occasional dryness, once they are established. For low water gardens, planting at the right time is key! For warm season crops, plant early in the season but also harvest early before hot and drier weather appears. Cool season crops should be planted later in the fall to minimize the need for irrigation and to take advantage of seasonal rains.

## Warm Season Crops



- Beans (Bush and Pole)
- Cowpeas
- Cantaloupe
- Eggplant
- Leeks
- Okra
- Peppers (sweet and hot)
- Sweet Corn
- Watermelon (Sugar Baby)
- Tomatoes (Cherokee Purple, San Marzano, Ozark Pink)
- Woody Stemmed Herbs (Oregano, Rosemary, Sage, Thyme)

## Cool Season Crops



- Arugula
- Asian Greens
- Asparagus
- Broccoli (Sun King Hybrid)
- Cabbage
- Chards
- Endive
- Lettuces
- Garlic
- Onions
- Pumpkins
- Rhubarb
- Spinach
- Squash
- Sweet Potatoes
- Woody Stemmed Herbs (Oregano, Rosemary, Sage, Thyme)

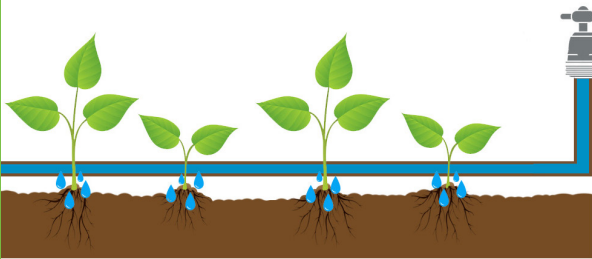
## Additional Considerations

Mulching your plants will help retain moisture, keep your soil cooler, and will help keep weeds under control. Use grass clippings, straw, marsh hay, newspaper, and cardboard. Consider companion planting, which allow your crops to benefit from one another. Also, water your garden strategically. Choose to water very early in the morning or late in the evening - allowing roots to absorb moisture.

# Sustainable Watering

Sustainable watering methods such as low drip irrigation systems or rain barrels, help reduce the amount of water needed to maintain your garden, and is an environmentally conscious approach to garden care. While these systems take a bit of planning and additionally work to install, once in place, their benefits are long lived. Remember to water very early in the morning or in the evening to allow your roots to absorb water. Mulch also helps your soil to retain moisture.

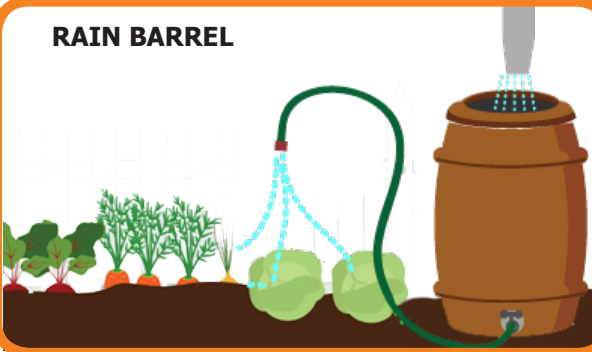
## LOW DRIP IRRIGATION



### Low Drip Irrigation

- Connects directly to water spigot
- Multi-part installation /Easy modification
- Can function on a timer system
- Parts easily accessible online and local hardware stores

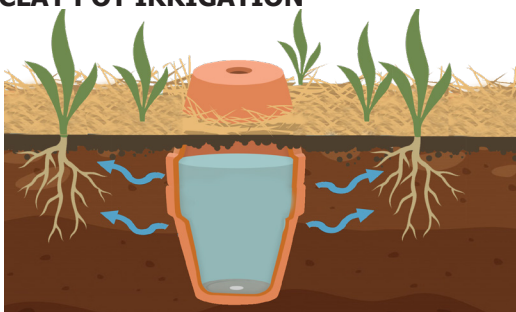
## RAIN BARREL



### Rain Barrel

- Connects to building downspout or freestanding
- Attaches to typical garden hose
- Small footprint required
- Relatively inexpensive

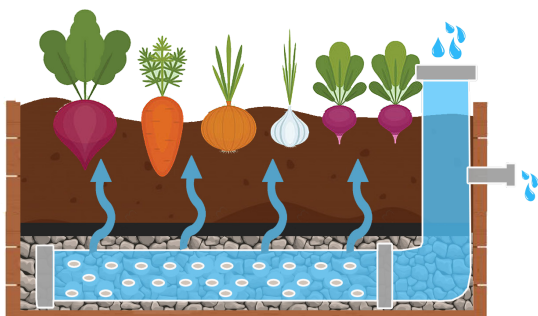
## CLAY POT IRRIGATION



### Clay Pot Irrigation (Ollas)

- Minimum cost and construction required
- Slow and gradual water release
- Promotes healthy root growth
- Effective watering method during droughts

## SELF WATERING PLANTER



### Self Watering Planters

- Requires upfront construction and engineering but is a long lasting watering solution
- Conserves water
- Encourages healthy root growth
- Retains soil nutrients