

# **Garden Master Vegetable Planting Guide for Beans, Beets, Broccoli, Carrots, Herbs, and Leafy Greens (lettuce, chard, spinach, kale)**

## **Overview**

- Educate children on the life cycle of plants (seed, seedling, flower, vegetable/fruit, to seed again)
- Educate children on what plants need to grow (water, sun, air, soil)
- Teach students how to plant seeds, care for seedlings (water, thinning plants, pull weeds from root)
- Teach students how to wash/prepare produce to take home, give to teacher or for the produce stand sales
- Label bed with type and variety of produce being grown (use masking tape on garden sign)
- Planter GMs are responsible for all aspects of bed maintenance (planting, watering, weeding, etc..)
- Work with Lead GM to have students taste test vegetables grown
- Children will rotate about 2-3 times during the school year

## **Supplies (set out before students arrive)**

- Seed packets, gloves, square foot gardening (SFG) templates (crop type printed on template), 1 bag of potting soil, watering cans with rosettes

## **Planting Instructions:**

- Before your first visit to the garden, read your seed packet thoroughly and refer to it throughout the season. We recommend you keep seed packets as they have important information on germination, thinning seedlings, days to harvest, etc...
- Before kids come out to the garden, smooth down the soil with a leaf rake – pull back irrigation hose if one is located in your garden bed and place back on top of bed
- Greet kids, ask about their garden experience (what did they plant, how did it do, did they get to eat it, did it get sold, etc)
- Explain what a seed is: a baby plant sleeping inside the seed covering (a mini root, stem and leaves are actually inside the seed)
- Explain what a seed needs to 'wake up': ask the kids what they think it needs; answers are soil (which is plant food), sun, water, air
- For raised beds, you may use the Square Foot Gardening (SFG) plexiglass templates. Templates are located in the red barn on the shelves to the right. Show students the SFG template, explain how to place it (inner row first); drop 2-3 seeds in each hole; move template to next space by flipping over.
- Classes PLANT ½ OF BED PER VISIT so more children have planting experience. Remember to start from inner row.
  - Line kids up; have them make one hand into a 'cup', place appropriate number of seeds in 'cup', go one at a time to bed and place 2-3 seeds in template openings.
  - Kids return to end of the line when finished. GM LIGHTLY SPRINKLES potting soil over seeds to depth indicated on seed packet.

- Kids water the seed-bed with watering can that has a rosette (use this type so seeds are not displaced.)
- Keep soil moist until seeds have germinated and seedling is established; 7 to 21 days (refer to seed packet for germination times).
- Seeds must be kept moist until they germinate, depending on the weather, this may require a morning and an afternoon watering (possibly coordinate watering schedule with Planters from other classes)
- If seeds do not germinate within expected germination time, re-seed – discuss with children why seeds did not grow
- Its helpful to label bed with variety of produce being grown

## Growing Notes

- For raised planter beds, keep soil at  $\frac{3}{4}$  bin height. For the fall, this will be done for you. For the spring rotation, you will need to do this yourself.
- Use snail bait if you see snails (in shake cans in red barn on the shelves to the right)
- Once plants produce their second set of true leaves, start thinning. Refer to seed packet for appropriate spacing. Children may eat mini veggies that have been thinned.
- Once plants are established, have children mulch. Depending on what is obtained, this can be straw, Kellogg mulch, or loose mulch near red barn. Make sure they mulch around plants, making sure it does not touch plant stem. This helps keep weeds at bay and keeps the soil moist.
- Once seedlings emerge and a second set of leaves have appeared, you may fertilize your bed. Fertilizing is optional and should only be done by adults. Check the red barn to see what the garden has obtained. Read instructions thoroughly before applying. Again, fertilizing is optional.
- For optimum growing conditions, have children weed in and around the outside of the beds.

## Controlling Common Garden Pests

- Snails & slugs - Organic snail bait is located in the red barn. Sprinkle as directed on the canister. Only GMs are to use the product.
- Cabbage worms - These are green caterpillar worms laid by moths on the leaves of leafy greens. You can either pick them off by hand and squish them or use a organic product called *Bacillus thuringiensis* (BT). While the product is not harmful to humans, only GMs are to use BT. BT is a naturally occurring bacteria that attacks larvae of moths. It is packaged as a concentrate and therefore, must diluted in water before spraying on to plant leaves. It is located in the red barn on the shelves along with a spray bottle labeled BT. Be sure to read labeled instructions for use.
- Aphids - You can pick them off by hand or blast them with a strong jet of water. You may have to do this repeatedly, especially with broccoli. To combat expanding colonies, you can treat plants with a solution of 1 tablespoon of dishwashing liquid per gallon of water, gives good control of aphids by removing their waxy coating, which causes them to die from desiccation. Be aware that soap sprays can taint the flavor of leafy greens, and can damage leaves when applied in bright sun.

## Harvesting and Taste Testing

We encourage you to have children harvest and sample vegetables grown. Jennifer Whyte will contact you if she would like to harvest some produce from your beds for weekly produce stand sales. We also encourage you to have children give harvested produce to their teacher.

## Example Planting Timeline

**October:** GM discusses with students what vegetable is to be grown, how long it takes to grow, what part of the plant we eat, etc... Have students plant half of bed with seeds. Water well. Make sure your bed stays moist during germination period. Depending on the weather this may require daily checks. There will be a weekend garden volunteer to take care of weekend watering.

**November:** As you will have a new group of students, repeat above discussion as well as ask students why some seeds did not grow. Students may harvest, thin seedlings, and weed in and around garden bed and then plant other half of garden bed. Again, for new seeds sown, make sure bed stays moist.

**December:** Repeat what was done in November. If you have any seeds left, have students plant them. During the winter break you will not have access to the garden. A garden volunteer will be assigned to watch over the garden during the break.

**January:** Harvest all plants from garden bed and prepare bed for spring planting. You will probably need to add more soil to keep the bed 3/4ths full of soil. Use any of the Kellogg soils (Harvest Supreme, Planting soil, Potting Soil, or Amend). Students may help you do this. There will be another Spring GM training in late January and you will be given different vegetable seeds to plant.

**February:** GM discusses with students what vegetable is to be grown for the spring rotation, how long it takes to grow, what part of the plant we eat, etc... Have students plant half of bed with seeds. Water well. Make sure your bed stays moist during germination period. Depending on the weather this may require daily checks. There will be a weekend garden volunteer to take care of weekend watering.

**March:** Repeat above discussion as well as ask students why some seeds did not grow. Students may harvest, thin seedlings, and weed in and around garden bed and then plant other half of garden bed. Again, for new seeds sown, make sure bed stays moist.

**April:** Repeat what was done in March. If you have any seeds left, have students plant them. During the winter break you will not have access to the garden. A garden volunteer will be assigned to watch over the garden during the break.

**May:** This will be the last month for garden. Remove all plants from the bed and place class garden sign in the barn. Cover bed with a layer of newspaper followed by straw.

## General Info for all Garden Masters

- **To request repairs or supplies: Call or text Daniel Roberts (949) 285-9323**
    - Barn, shed and gate codes 5278 – no children inside
    - Close and lock barn & shed
    - South gate to remain locked during school hours
  - Supplies and tools
    - Return clean tools to where you found them
    - Have children fold left and right glove together before returning to bin
    - Rinse dirty rags in trough and hang to dry, put away dry rags
  - Water
    - FINGER TEST SOIL BEFORE WATERING – don't assume it needs water
    - Use cistern water first
    - Turn valves inside barn and at hoses off
  - Trash and Weed Disposal
    - Trash, weeds, cuttings, and cut branches go in the school trash bins that are around the garden.
    - Trash bins  $\frac{3}{4}$  full go into hallway between garden and playground, between Shenton and Hayden classrooms. Mr. Rangel and the Custodial Staff will take them from there.
  - Green Bucks
    - Reward for the 3 E's: Engaged, Enthusiastic and Extra hard work
    - Redeemed for \$0.50 at Tuesday Produce Stand
  - **All GM info and class visitation calendar are at [TMAGARDEN.ORG](http://TMAGARDEN.ORG)**
  - [TMAGARDEN@GMAIL.COM](mailto:TMAGARDEN@GMAIL.COM) is email address to contact Brandon Dove or Suzie Won
- Volunteer hours, teachers sign for garden visits, Garden Team signs for trainings