

## Workshop #2

### How to Plant Fruits/Vegetables in Garden Beds

**Age Groups:**

- 5-8 year-olds
- 9-13 year-olds
- 14+ year-old

**Learning Objectives:**

- Students practice sharing gardening materials and working in pairs.
- Students gain a basic understanding on how to garden in an urban setting.
- Students use their creativity to analyze a certain fruit or vegetable.

**Materials/Resources Needed:**

- Hand Trowels (one per two students)
- Watering Can (students may need to share among pairs)
- “Faux” Seeds (ex. Sesame seeds)
- Construction Paper and Markers

Estimated Time Needed	Activity
15-20 Minutes	<ul style="list-style-type: none"> <li>● Students will break into pairs and grab the materials needed for this activity (Hand Trowels, Watering Can, Seeds)</li> <li>● Each pair will be assigned a fruit/vegetable               <ul style="list-style-type: none"> <li>○ <i>(A list of fruits and vegetables grown in NYC can be found in Workshop #1)</i></li> </ul> </li> <li>● They will do a mock gardening practice. This will include:               <ul style="list-style-type: none"> <li>○ Digging a hole in the gardening bed</li> <li>○ “Planting” respective Seeds</li> <li>○ Covering the hole with dirt</li> <li>○ Patting it down</li> <li>○ Water the spot</li> <li>○ <b>14+:</b> <i>Engaging Questions to Ask:</i> How frequently do you water your plant? When is the fruit/vegetable ripe to pick? How long does it take to grow?</li> </ul> </li> <li>● Students will then learn about seed harvesting.               <ul style="list-style-type: none"> <li>○ <b>9-13/14+:</b> <i>Engaging Questions to Ask:</i> Why save seeds after your plant harvests?                   <ul style="list-style-type: none"> <li>■ <i>Answers can Include:</i> biodiversity preservation, saving money, continuation of plant species, independently continuing garden across harvest seasons</li> </ul> </li> <li>○ <b>14+:</b> Stages of Seed Harvesting:                   <ul style="list-style-type: none"> <li>■ 1. Timing - Seeds should be collected right before the fruit or vegetable is overripe.</li> </ul> </li> </ul> </li> </ul>

	<p>Dependent on the vegetable/fruit, the seeds should either be wet or dried out.</p> <ul style="list-style-type: none"> <li>■ 2. Gathering - If the seeds are wet, then you scoop them out in the masses and place them in a jar of water for a couple of days until they separate for the inviable seeds. If the seeds are dry, all you need to do is collect them (there is not extra step).</li> <li>■ 3. Clean Seeds - Seeds need to be clean and dry before being stored. Remove excess plant debris by shaking seeds over screens or kitchen strainers. Dry the seeds on sheets of newspaper or screens kept indoors out of breezes. Small seeds will dry within a week or two; larger seeds take a little longer.</li> <li>■ 4. Storing - It is important to label seeds with their name and the date they were harvested. Then store them in a cool, dry place in an airtight container.</li> </ul> <ul style="list-style-type: none"> <li>○ <b>9-13/14+</b>: Seeds should be viable for planting for 1-2 years <ul style="list-style-type: none"> <li>■ To test, place seeds on a wet paper towel and keep damp for 1-2 weeks</li> <li>■ If the seed begins to sprout, it's still viable</li> </ul> </li> </ul> <p><i>(Note: If you have some kind of screen or kitchen strainer, the students can practice straining either seeds or dried beans to practice what it would look like to actually harvest the seeds.)</i></p>
5-10 Minutes	<ul style="list-style-type: none"> <li>● <b>5-8</b>: Draw what you think your fruit or vegetable will look like once it is fully grown <ul style="list-style-type: none"> <li>○ <b>**Side Note</b>: No fruit or vegetable is perfect. They can be funny shapes or have spots on them or bruises, this does not mean that they are necessarily bad to consume.</li> </ul> </li> </ul>

**Important Variables to Planting (for 14+, introduce to 9-13):**

**Temperature:** Most plants require a certain temperature range of the surrounding climate in order to grow

- Some plants can tolerate more shade, some direct sunlight, some a combination of both
- Some plants, like perennials, have adapted to colder temperatures and require a dormant period of freezing temperatures between fruiting seasons in order to re-blossom.
- Temperature can influence the growth rate of plants: depending on ideal temperatures for differing species some plants will grow slower in extreme heat or cold.

**Watering/Precipitation:** Plants require adequate water in order to complete the process of photosynthesis

- Water helps nutrients be absorbed by a plant's roots, stems and leaves from inside the ground: how plants eat.

- Best to water in the afternoon/evening because the plants will evaporate less water as the sun goes down.
- Most important to water plants and seeds in the first two weeks after being planted to provide aquifer for nutrient access to seeds and roots.
- There are no hard or fast rules for water, it depends on the type of plant, the soil and the weather. In summer heat, most plants require more moisture.
- If too much water is applied at once, it won't be accepted by plant roots
- Focus on the root zone when watering
- Mulching plants annually can cut down on the need to water by retaining water.

**Soil:** Healthy soil is the best way to ensure healthy plants.

Soil Composition - sand, silt, clay, loam. Good soil is made up of a combination of all of these

- Ribbon Test - rolling a sample of soil back and forth in your hands
  - If it sticks together easily, it high in clay. If it falls apart it's higher in sand.
  - Clay doesn't drain well, difficult for roots of plants to penetrate
  - Sand drains well but doesn't retain nutrients.

pH Levels - a scale to measure the concentration of hydrogen ions in a solution from 0-14. Acidic substances have a smaller pH number and more hydrogen ions. Basic substances have a larger pH number and fewer hydrogen ions. 7, the middle of the scale, is neutral.

- By measuring pH, you can indicate how plants will perform. Different kinds of plants thrive across the pH scale.

Organic Material - by adding substances like compost and mulch to soil you can balance the pH levels as well as improve nutrient retention and drainage.

*\*\* Sources:*

Urban Gardening Help: Soil Basics for Urban Gardeners <http://www.urbangardeninghelp.com/soil-gardening/>

Burpee Garden Advice Center: Gardening 101

[https://www.burpee.com/gardenadvicecenter/areas-of-interest/flower-gardening/gardening-101/gardening\\_101.html](https://www.burpee.com/gardenadvicecenter/areas-of-interest/flower-gardening/gardening-101/gardening_101.html)

Gardeners.com When To Water

<https://www.gardeners.com/how-to/when-to-water/8108.html>

The Spruce, New York Season Fruits and Vegetables

<https://www.thespruce.com/new-york-seasonal-fruits-and-vegetables-2217192>

Mother Earth Living, Seed Saving

<https://www.motherearthliving.com/vegetable-gardening/seed-saving-how-to-save-seeds>