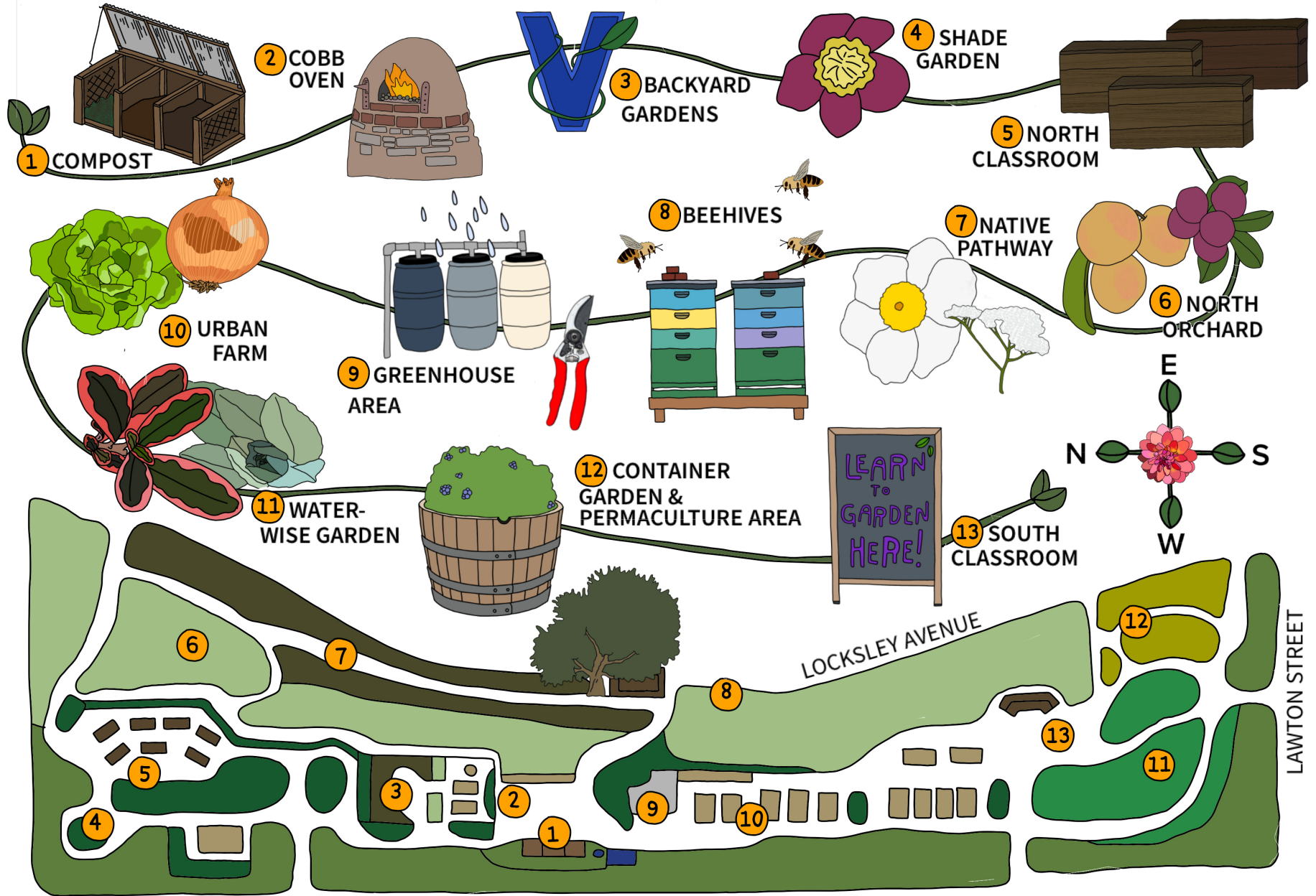


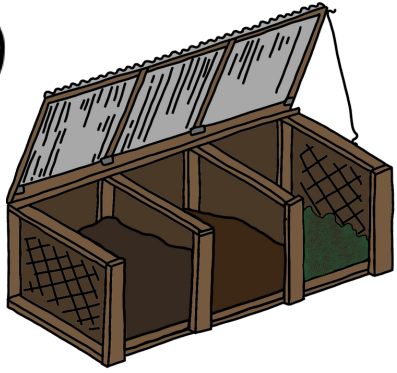
GARDEN FOR THE ENVIRONMENT Walking Tour



7th AVENUE

JORDAN KUSHINS

1



Compost

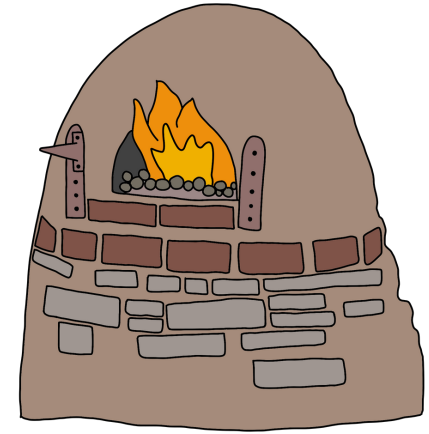
This tour starts at the hallmark of Garden for the Environment - our three-bin compost system! We use these bins to produce our own compost, which is a nutrient-rich soil amendment that then gets returned to the garden. Here's how it works:

- **Bin #1:** Organic plant material gets chopped by hand into small pieces. Layers of this fresh, green, nitrogen-rich material then gets layered with brown, carbon-rich material.
- **Bin #2:** The organic material is mixed with water and manure. Through the activity of fungus, bacteria, and invertebrates, the mixture heats up and begins to decompose. Ideally, the compost will reach a temperature of 160 degrees Fahrenheit at its peak.
- **Bin #3:** The decomposing organic material gets moved to the third bin and cools down to air temperature. From there, we sift out the larger sticks to be used as nutrient-rich mulch, and use the smaller pieces as compost in our veggie beds and newly planted perennials.

**Put your hand over bin #2. Can you feel the compost warming up?
Can you find any organisms helping with decomposition?**

2

Cob Oven



This is an oven made of clay-rich soil, water, and straw. This ancient building technique uses only natural, found materials and retains heat extremely well. We generally use the cob oven to make pizzas during our community events by lighting a fire inside the dome-shaped compartment.

Feel free to open it up and take a look inside!

3



Backyard Gardens

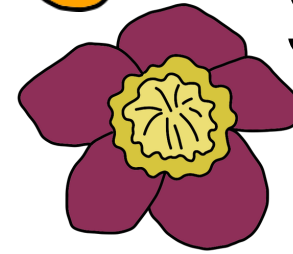
These gardens are roughly the size of a typical San Francisco backyard. We call the south side of this area the **Victory Garden**, named after the movements during World Wars I and II when the government urged the public to transform their backyards into urban farms as a way to grow food for their families to lessen pressure on the food supply.

The north side is our **Backyard Native Garden**. It models how San Franciscans can save water and sequester carbon with their gardens by planting perennial native California plants, which do not require any additional water and pull down carbon from the atmosphere and stores it in their roots.

Notice the apple trees separating these two spaces. These trees are grafted, meaning branches from different types of apple trees were adhered to a base trunk when the plant was young. Try to find where each main branch connects to the trunk – each of these branches grows a different kind of apple. These trees grow six different varieties! Notice how the apple trees are growing flat along the fence – this style of growing trees is called espalier. It allows more space and sun for other plants to grow.

If you visit in the summer, you will notice a patch of dahlias planted in front of the Victory Garden fence. Did you know dahlias are the official flower of San Francisco? It was decreed in 1926.

4



Shade Garden

Shrouded by two ornamental pear trees looming above, this area of the garden is one of the more shaded areas of the garden. Here we feature plants that thrive with less sun, such as ferns, hellebores, foxgloves and begonias.

Look around this area for 1) a stone with a face in it, 2) a plaque dedicated to a member of SLUG (the previous organization that operated the garden), and 3) the two large ornamental pear trees.

Have a seat on the bench and take a couple of deep breaths. Notice the contrast in the sights, sounds, and smells between where you're seated and busy 7th Avenue next to you.

5

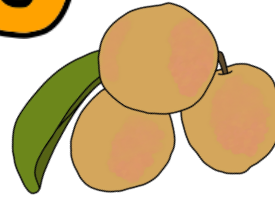


North Classroom

In this outdoor classroom, we host many of our weekend workshops and classes such as Urban Composting and Beekeeping. It is also the home base for our yearly **three-month intensive garden training program called Get Up!** Behind the benches you'll see a long, narrow raised bed. We call this the "Wildly Successful Bed" because every plant that grows here is easy to grow and propagate. The mosaic on the southern edge of this bed was installed by artist and GFE instructor Kat Sawyer in 2005.

Take a moment to imagine yourself learning here on a Saturday morning, bundled in the cool morning air until the sun reveals itself from behind the buildings and trees to the east and south. **Looking to the south, where in this area do you think the sun will hit first in January? What about June?**

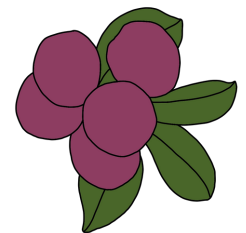
6



North Orchard

As you walk up the stairs, notice the trees on either side of you. This is one of our main orchard areas - where we grow fruit! GFE has 47 fruit trees, and this area contains apple, pear, and plum trees. Each fall when the fruit ripens, we harvest several hundred pounds of fruit that gets donated to those in need. With the help of our workshop attendees and volunteers, we prune these trees in both summer and winter to maximize fruit production and keep them healthy.

We aim to prune these trees to a "Sun Bowl" shape - can you spot any trees that look like they have a big empty space in the center? This helps maximize light and air flow to make as much fruit as possible. Keep an eye out for more fruit trees as you walk through the rest of the garden.



7

Native Plant Pathway



As you walk down this pathway, notice the plants growing to your left. These are all **native plants to San Francisco and northern California**, meaning that they are indigenous to this area and not brought in from other parts of the world that share our climate. Because these plants are native, they are best **adapted to our unique climate** and require very little water. Many of these plants have medicinal properties, used by the **Ohlone people** who inhabited this land long before us.

Look for a plant that grows in clusters with feather-like leaves and small bunches of white flowers – this is Yarrow. Among many uses, it is used by the Ohlone for the alleviation of toothaches and reduction of wound swelling. Other plants to look for include Yerba Buena – a mint-like groundcover that was San Francisco’s original namesake, and Matilija Poppy, the flower that looks like a fried egg. **Can you recognize any other California native plants?**

8 Beehives

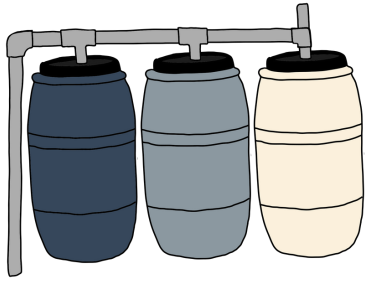


GFE has had beehives since the early 2000s. This secluded spot is ideal for them, as the bees can come and go over the garden without human interference. While honeybees are generally docile creatures, too much human foot traffic close to hives can cause them to become defensive of their hive. Feel free to observe the bees from outside the hives’ surrounding fence. On sunny, warm days, they are very active, and on chilly days, they are less active and stay inside their home. This isn’t so different from what humans do (or would like to do!) in the same conditions.

Our bees are tended to by three beekeepers who are also swarm catchers. Bee colonies produce **swarms** as a natural reproductive process when a colony gets too large for the hive, its home. A swarm is a new colony that forms in a log, hive, or other enclosed space when the original queen from the parent colony leaves with some of the other bees from the hive. Many of our colonies began from captured swarms. GFE’s hives produce some honey that we occasionally sell, and also give to graduates of our programs.

Bees are amazing creatures that **pollinate** flowers, many of which become many of the fruits and vegetables we eat! Bees collect nectar, which they turn into honey. One honeybee produces 1/12 of a teaspoon of honey in her lifetime (all bees that collect food are female worker bees). Bees fly about 55,000 miles and visit 2 million flowers to collect the nectar to make one pound of honey – busy bees indeed!

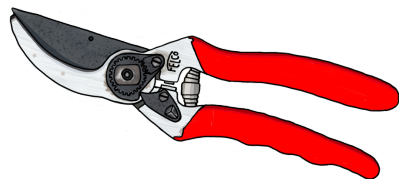
9 Greenhouse



Area

The greenhouse is where we start vegetable from seed and propagate perennial plants. It provides a warm, controlled environment for seeds to germinate and allows us to water them more frequently than the irrigation in the raised beds. Just outside of the greenhouse you'll notice four large plastic barrels. Can you trace the pipes connecting the barrels back up to the roof? This is a **rainwater harvesting system**, designed to capture rain during San Francisco's wet winter months, conserving it for use when the weather is drier over the summer.

Knock on the barrels to try and figure out how much water is inside.



10 Urban Farm



This central part of the garden is where we demonstrate **urban agriculture**, or growing food in the city! Notice the **raised beds** around you - we grow food in these structures to ensure our food is safe to eat and not contaminated by any toxins that might be in the existing soil. In the cool, foggy environment of the garden, we grow food year-round, and leafy greens like kale, chard, and arugula do extremely well. GFE produces about **500 pounds of fruits and vegetables per year**, and this food gets donated weekly to a local substance abuse shelter.

Look for the raised beds that have wooden structures resting on top. These A-frame structures are custom-built **rodent barriers**, keeping our vegetables safe from the hungry animals of the city. Staff opens the sides of the barriers to ensure pollination and beneficial insects can access the plants.

Try to locate the black, hose-like tubing in the raised beds. Look closer and you will find many small holes on each of these tubes. This is our **drip irrigation** system! It delivers water directly to the roots of the plants on an automatic timer, saving lots of water that might otherwise evaporate or be wasted with other watering systems.

Keep your eye out for more drip irrigation as you walk through the rest of the garden.

11



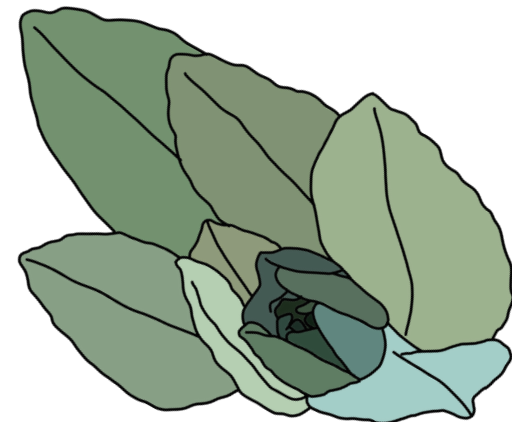
Water-Wise Garden

In this southernmost section of the garden, we demonstrate plants that are “Water Wise.” The thriving plants in this area use very little water - once established, they only need water about once a month, compared to a lawn (like the one across the street), which needs water every other day. Notice the many colors, shapes, sizes, and textures of the plants in this area. These **drought-tolerant plants** provide interest and beauty in the garden, especially in the late summer when few plants are blooming. Each plant here is adapted to live in San Francisco’s unique climate with wet, mild winters and cool, dry summers. Look for these two common water-saving properties in the plants in this area:

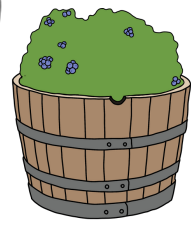
Fuzzy leaves - the fuzz on the outside of leaves acts as a water collector when water is suspended in the air as fog.

Waxy leaves - the wax on the outside of leaves acts as a sealant that allows plants to hold water inside their leaves.

Take a close look at the remainder of the plants. Can you identify any other properties of these plants that might allow them to save water?



12



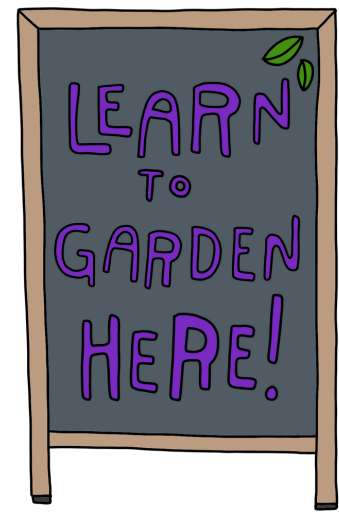
Container Garden & Permaculture Area

This area demonstrates some principles of permaculture, or “permanent culture.” In a nutshell, permaculture focuses on creating agricultural systems that are resilient and enduring, and use patterns present in **natural ecosystems**. In this area we focus on growing perennial food plants such as fruit trees and shrubs, artichokes, herbs, and berry plants. This aligns with the permaculture principle of using “slow and small solutions” to produce more long-term and lower-effort solutions to producing food. The area also observes the permaculture principles of layering - having plants of different heights to increase ecosystem diversity, and zones - having the plants you use most often or need the most care closer where you can access them.

We also have plants in pots and wine barrels here to demonstrate **container gardening**, which can be done on balconies or indoors with herbs if you do not have yard space, something common for San Francisco residents. Not only do the plants demonstrate some of the principles of permaculture, but the barrels help raise them off the ground so animals don’t get to them so easily, but human hands can! Visitors are delighted to care for and sample our blueberries, both also made easier by being in elevated containers. If there are any berries on the plants when you visit, feel free to try one or two so there will be plenty for others who’d like to try them as well.

13

South Classroom



We end the tour at GFE’s other outdoor learning place, the South Classroom. This is where groups of adults and children gather for our many educational offerings. People come to rest, meet, picnic, and meditate here, too! Feel free to further explore the garden, and please visit us at **www.gardenfortheenvironment.org** to learn more about our programs.