



Bronx Green-Up •

THE NEW YORK BOTANICAL GARDEN

Bronx Green-Up, the community gardening outreach program of The New York Botanical Garden, provides horticultural advice, technical assistance, and training to local gardeners, urban farmers, school groups, and other organizations interested in improving neighborhoods through greening projects. At the heart of Bronx Green-Up are the community gardens, school gardens, and urban farms of the Bronx. For additional information, contact Bronx Green-Up at 718.817.8026 or bronxgreenup@nybg.org, or visit www.nybg.org/green_up

Garden Planning and Design

Whether you are building a new garden or revitalizing an established area, the first step in planning and design is to thoroughly evaluate your site to determine what you have, what you want to do, and what is needed to accomplish your goals. Many resources that can help you make the most of your community garden, including free classes and materials, are available.

1. Site Analysis

→ Start with a sketch

Draw your site and include basic measurements. Note surrounding buildings, streets, large trees, electrical lines, and points of access. Show existing plantings or objects that cannot be moved. Include notes about sun and shade at different times of day. Make several copies of your drawing, and keep an original for future planning.

→ History

Research the history of the site. What was it before it was a garden? Has it been actively used for many years? Is it overgrown or neglected? Are gardeners currently working the site? What is the garden's relationship with the community? The site's history may provide clues as to soil quality and whether the soil is contaminated. You can look up your garden by block and lot number on the Oasis NYC Web site and through the Property Records Department of the City Registrar (see accompanying resource handout).

→ Light, Water, Soil, and Drainage

Light: How is the garden oriented (north, south, east, west)? How many hours of sunlight does each area of the garden receive? The answers to these questions will help you choose the right plants for the site.

Water: Is there access to a water source? Community gardens registered with the NYC Parks Department's GreenThumb Program are eligible for a hydrant permit. You may also ask your building management for spigot access or build a rainwater harvesting system.

Soil: With a shovel, dig down at least one foot in several places. What is the soil like? Is it rocky, sandy, or heavy and clay-like? Is the soil loose or compacted? What is its pH? In many urban lots, there are layers of debris or old pavement under the topsoil. This may influence where and how you decide to plant or build. Have your soil tested (for more information, see Bronx Green-Up's resource list on soil contaminants). Raised beds are an option for sites with possible contamination or large amounts of rubble. How will you amend the soil? Adding organic matter in the form of compost can greatly improve soil quality and fertility. Natural and synthetic amendments are also available to adjust pH or to increase a specific soil nutrient such as nitrogen or phosphate. The soil test will help you determine what, if any, soil amendments your garden requires.

Drainage: Observe patterns of water flow after a rainfall. Do you see standing water in any areas? Do certain areas dry out quickly while others remain wet? Are there roads or parking lots that cause runoff to enter the garden? Look for areas of soil compaction. Wet areas may be good sites for a rain garden.

2. Determining the Purpose and Use of the Garden

→ Consider...

- Who will use the space: seniors, children, school-groups, others, a mix of populations?
- Whether the garden needs to be wheelchair accessible
- What people will do in the garden: grow, cook, eat, relax, play, perform?
- How many people will be in the garden at one time
- If growing food is the goal, is there enough space and adequate sunlight (about 6 to 8 hours per day) for a vegetable garden? Who will tend the vegetables: adults, children, seniors, people with physical limitations?
- Whether you want to make your own compost; is there a site to build compost bins?

→ Pathways

How do people move around the garden? Do you need to create new pathways or make existing ones wider, re-route them, or make them wheelchair accessible?

→ Existing and desired structures

Structures can provide shade, a place to sit, and storage for tools. Many community gardens have benches, pergolas or arbors, tool sheds, and rainwater-harvesting systems. For gardens devoted to food production, a greenhouse can extend the growing season. If the garden will hold events or performances, a stage might be an important feature.

3. Design and Planning

→ Selecting Plant Material

Plants are the decorative material of your garden, but they also serve practical functions. Plants, including trees, can provide shade in the summer, sustain wildlife and pollinators, add winter interest, and provide food for the community. Choose plants best suited for the conditions in your garden. A low-maintenance garden might include trees and native plants that have minimal water needs. A vegetable garden, on the other hand, will require much greater maintenance, including tasks such as regular weeding and watering, seed-sowing, and harvesting.

→ Choosing and placing plants:

Size: Arrange plants to allow for the greatest visibility and so that larger plants don't shade out smaller plants. A technique called layering creates contrast among different plant forms. For instance, a tall lilac shrub might be placed behind a dwarf rhododendron. In urban gardens where space is limited, choose dwarf or semi-dwarf plant varieties, or ones that may be pruned more vigorously.

Color and texture: Enhance the overall look by combining plants of different textures, and brighten up areas with plants of different colors. For example, ornamental grasses mixed in with flowering plants such as iris, echinacea, and black-eyed Susan can provide a meadow effect.

Light: Determine whether your plants require full sun (6–8 hours or more per day), partial shade (4–6 hours of sun per day), or full shade (3 or less hours of sun per day) and plant accordingly. Most vegetables and herbs need full sun.

Water: Select plants that don't require a lot of water, especially if no one is available to water regularly. Native plants tend to be good at adapting to local conditions once they are established. Ornamental grasses such as the non-native feather reed grass (*Calamagrostis x acutiflora* 'Karl Foerster') is beautiful and especially tough in sunny, dry areas; it also has sterile seeds so won't become invasive.

Bloom time: A well-planned garden contains plants that bloom from early spring to late fall. Witch-hazel is a shrub that blooms in winter!

Annuals and Perennials: Annuals are plants that last only one season (and need to be replaced), while perennials go dormant in winter and grow again the following spring. Zinnias are annuals and so are most vegetables. Asters are perennial flowering plants, of which there are several native species such as New York aster (*Aster novi-belgii*) and New England aster (*Aster novae-angliae*). Many herbs are perennial and will come back for many years. Combine perennial and annual plants in a garden as there are benefits to growing both. Annual flowers tend to bloom for longer periods throughout the season, while perennials bloom at different times of year. Also, because annuals must be purchased each year, by growing perennials you will lower costs over time.

Deciduous and Evergreen: Deciduous trees such as maples lose their leaves in fall. Evergreen trees such as pines keep their leaves or needles all winter. Combine evergreens for winter interest with deciduous trees for shade and fall color.

Putting It All Together

After giving thought to all of the above, you now should be ready to design or redesign your garden. Remember these additional important tips.

→ **Design the community garden as a group effort.**

- Involve as many people as possible.
- Ask those who will use the garden for ideas.
- Be imaginative and creative.

→ **Develop a timeline and delegate responsibilities.**

- Post workdays in advance so others can participate.
- Be flexible and break down projects into smaller steps.

→ **Be economical.**

- Use recycled materials wherever possible.
- Use materials already on hand or ones that are easy to get.
- Ask for donations.