

# Container Gardening

Few of us have considered growing plants and trees directly on concrete or asphalt, but by using growing containers gardens can thrive almost anywhere, bringing diversity to the most barren setting. They can also be easily constructed and maintained at minimal cost. Gardening in containers is ideal for those with little to no garden space, or for gardeners who are unable to maintain a large garden area. From the school ground to the rooftop, the educational, recreational, ecological and aesthetic benefits of container gardening are being realized in many locations around the world. Container gardening has many benefits:



Collège Français



Westvale Public School

- Containers can be built over existing tarmac, saving costs.
- Smaller and lighter container styles can be moveable, adding versatility to your garden.
- Container gardens can be built from a variety of materials to meet budgets, aesthetic preferences and project needs.
- Large container gardens can be planted with a number of tree, shrub and wildflower species that attract wildlife. This provides an accessible hands-on example to study the interdependent relationship of plants and wildlife in a mixed forest or meadow community.
- Container gardens create an easily supervised outdoor classroom with built in seats and desks that are accessible to all students, including those with special needs.



# Design details

## Materials

Consider your needs, available resources and the size of your space when choosing a style of container. Container gardens can be constructed from the following materials:

- 1) **Square-cut timber blocks** — Check local lumberyards for end scraps large enough to meet your requirements. Timber blocks can be stacked to any depth, making them suitable for either shallow-rooting wildflowers, or for large shrubs or trees with varying root depths. Cedar timbers are an excellent choice since they are not treated with chemicals and are durable.
- 2) **Reused materials** — Generally, containers made from reused materials make smaller, moveable beds. The possibilities are endless, but some popular ideas include wooden packing crates, plastic pails, stacks of old tires, concrete sewer tiles, hollow logs or large fruit baskets.



## Building Your Container Garden

To build a basic timber block or reused container garden, follow these few steps:

- Line the inside of recycled containers with landscape filter fabric or thick plastic sheeting with drainage holes (not needed for timber containers).
- If drainage holes are placed at the bottom of the container, make sure there is space under your container for proper drainage. Otherwise, place drainage holes an inch or two from the bottom on the side of the container so there is a supply of water at the bottom of the container, allowing for less frequent watering cycles.
- Fill the bottom with a coarse aggregate like gravel, broken clay or pieces of concrete to help with water drainage.
- If the containers are going to remain outside year-round, use styrofoam lining to avoid repeated freezing and thawing.
- Fill with soil and plants and watch them grow!



### **AVOID USING PRESSURE TREATED LUMBER**

*The treatment, designed to inhibit rot, seals the wood's outer surface with several toxic chemicals, including arsenic. It poses a health risk to anyone who might get a sliver of it under their skin, and the long-term contamination in your garden renders it an unsuitable building material for container gardening.*

# Practical Tips for Growing Plants in Container Gardens

Anything that will grow in a regular garden can be grown in containers; the size and depth of the container will dictate the type and number of plants feasible. Many wildflowers, mosses and hardy grasses will grow in as little as eight centimetres of soil, yet larger shrubs or trees could require over one metre of soil to ensure healthy growth. It doesn't take much to keep container plants happy. Since you control the soil, water and light, it's easy to provide nearly perfect growing conditions.



*did YOU know...*

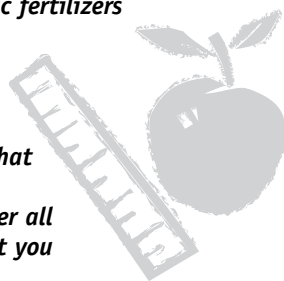
*Plastic containers do not dry out as quickly and are lighter than clay or wood planters. This makes plastic containers ideal for rooftops where weight is a concern, or in hot, sunny locations on your school grounds.*

## **Water**

**1** Container gardens need more water than plants in the ground. The amount and frequency of watering will depend on the size of your container and its location on the school grounds. Generally, container gardens require watering once a day and sometimes twice per day in hot weather. Monitor your container gardens carefully to develop a watering schedule that is based on the needs of the plants. Try conserving moisture for your plants as well by watering during the cooler parts of the day (morning or evening) when the sun's hot rays will not evaporate the water. Water thoroughly (until water comes out of the drainage holes) so the plants always have moist soil. Cover the soil with mulch, such as shredded bark, or even with a black plastic sheet to help slow evaporation. Remember that your container gardens will need water over the summer when you are away from school. Plan to recruit summer volunteers or select plants that are drought tolerant.

## **To Fertilizer or Not to Fertilize?**

*Even with the right soil mix, plants in container gardens (especially the smaller ones) will become nutrient deficient. You will need to add nutrients after a month or so to help keep your plants healthy. Use organic fertilizers such as compost or compost tea, worm castings from vermicomposting, fish emulsion or liquid kelp. Using organic fertilizers is especially important when growing vegetables that you will be eating – after all you are what you eat!*

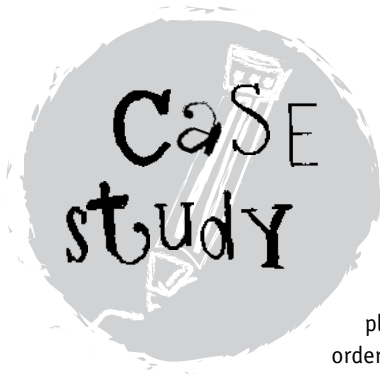


## **Keep it simple**

**2** Group plants with similar needs in the same container. Don't put shade plants with sun-loving plants; drought resistant species with plants that require lots of water; or every type of vegetable together. Try planting a combination of shallow and deep-rooted plants to minimize competition for water and nutrients. Take time to learn what works for you.

## **Use the right soil mix**

**3** Plain garden soil is too heavy and dense for use in container planting. In most gardens and in a natural setting, plants have the ability to "search" for nutrients by extending their roots into other areas. In a container, plants are restricted to that area and therefore require a soil mix that drains well, retains moisture and provides nutrients and support for plants. You can buy pre-mixed growing medium or create a soil mix yourself by combining one part potting soil with two parts organic matter, such as the compost you have been creating all year, peat moss, or composted manure. To improve drainage, builder's sand is a good addition. Remember, always tailor the soil mix to the plants' needs; the proportions of the mixes can vary depending on the plants.



## *Dirt Day* *Windsor School, Winnipeg, Manitoba*

Some schools have been really creative when creating container gardens — especially when filling them with soil. Here is one example from a school in Manitoba.

“When it came to filling the planters we could have simply ordered the soil and had it deposited directly into the planters — but we didn’t. To reinforce the curriculum integration, a class was asked to measure the planters, calculate the volume and estimate the soil required. These calculations were used to order the soil. When the soil arrived it was dumped on the adjacent asphalt. And, then, to instill in students a sense of ownership of the project, ‘Dirt Day’ was held. All children, kindergarten to Grade 3, brought in ice-cream pails and formed a brigade to fill the planters. Consequently, not a speck of soil has been removed from the planters since!”



Windsor School



## *Where to go from here?*

### **Sources for this fact sheet**

Berman, Laura. *How Does Our Garden Grow? A Guide to Community Garden Success*. Toronto, Ontario: FoodShare Metro Toronto, 1997.

Berman, Laura. *Simple Steps to Successful Container Gardening*. Fact Sheet. Toronto, Ontario: FoodShare Metro Toronto, 1997.

Kuhn, Monica. *Resource Package*. Toronto, Ontario: Rooftop Gardening Resource Group, 1994-1995.

### **Organizations and Web sites**

The Toronto Community Garden Network and FoodShare: [www.foodshare.net/grow.html](http://www.foodshare.net/grow.html)

### **Example projects**

Ecole St. Luke, Calgary, Alberta: (403) 284-4827

Ossington Old Orchard Public School, Toronto, Ontario: (416) 393-0710

Windsor School, Winnipeg, Manitoba: (204) 237-4057