

# About the Garden Lessons

Over the course of the Garden Lessons, we will walk educators and young gardeners through the process of starting a garden from planning to harvest to putting the garden to bed for the winter. **Inside, you will find activity guides, curriculum connections, and tips and strategies for successful school gardening.** This hands-on series of Garden Lessons will support educators, youth leaders and students to start and tend to a garden project. These lessons were originally adapted from the Nova Scotia School Garden Resource Guide (2014).

This series is ideal for the integrated learning nature of Nova Scotia elementary curriculum; however, these activities can engage an all ages audience. Throughout the series that spans a full growing season, participants will keep a garden journal for planning, observation, and creative expression. Each student can have their own journal, or a group can keep one together.

**Getting youth in the garden offers them opportunities to shape their food system, learn healthy food choices and connect with nature, all while building resiliency in a changing climate and having fun along the way.**

## Lesson Goals

- Engage in hands-on learning
- Gain food literacy skills
- Learn climate action connections
- Support emotional well-being and connection to the non-human world

# Gardening and Climate Action

Look for these climate action icons in Grow Eat Learn resources to make connections between gardening and the climate!



**Habitat Creation & Biodiversity**



**Waste Reduction & Circular Systems**



**Soil Stewardship**



**Water Stewardship**



**Food Security & Sovereignty**

Adapting to climate change is critical for our food system. By engaging in the garden, students can learn about food production and its interdependence with plants, animals and weather.

## Garden Lesson 3

# Planting a Garden

## Introduction

Complete this lesson between Mid-May and June.

Lesson 3 will guide young gardeners through the process of transplanting seedlings into the garden or into larger pots to make room for growing roots, as well as how to gently transition seedlings to living outside. Gardeners will need their Sun Map to assist in planting.

When a seed begins to sprout, it grows tiny "seed leaves" (cotyledons) which will eventually wither and fall off to make room for the "true" or adult leaves. Depending on how fast your seedlings grow and the space you have, youth may transplant or "Pot Up" the seedlings into an intermediate container, like a used plastic cup or small pot. This is optional. If your seedlings will stay in their original plugs, go to section 3.2: "Harden Off" Seedlings.

### 3.1 Potting up seedlings (optional)

1. Prepare each plant container by filling it about  $\frac{3}{4}$  of the way with pre-moistened soil.
2. Pop or tilt the seedling out of the plug, gently pulling, removing it without pulling on the plant stem. If there is more than one seedling in a single cup, have a container prepared for each seedling (or simply choose the tallest/healthiest seedling to keep and discard the others).
3. Gently scoop the seedling and attached soil into your hand. Be careful with the roots!
4. Place both the plant and soil into the prepared pot and add more soil to fill the remaining space around the seedling. Gently pat the soil down to get rid of trapped air.
5. Repeat as necessary for each seedling.
6. Put the pots in the place chosen for them in the previous activity. Keep the pots in a waterproof tray to catch excess water.

## Learning Connections

### Science

Question, Observe, Monitor

### Mathematics

Collect Data, Model

### Language Arts

Comprehend, Read, Write

### Visual Arts

Design, Create, Draw, Colour

### Climate



Water  
Stewardship



Habitat Creation  
& Biodiversity



Soil Stewardship

### 3.1 Materials:

- Plant pots
  - If using recycled containers, poke a few small holes in the bottom.
- Potting soil
  - You can also use dirt from outside mixed with compost.
- Waterproof tray
- Seedlings

7. Transplanting can be stressful for seedlings, so water generously. As they grow, keep the soil moist but not soaking wet. Wait until the seedlings are 7-10 cm tall before completing the following activity (3.2).

### 3.2 'Harden off' seedlings

1. Plants can be transitioned outside as soon as after the last frost date. Research online or using a farmer's almanac to find out the last frost date is in your area. Start the hardening off process a week before the intended planting day.

2. The transitioning process the plants will need to undergo to live outside is known as "hardening off." This will make them strong enough to survive in changing weather. There are three factors/steps to consider when hardening off:

**Sunlight:** Start putting the plants outside on mild days. Place them in partial shade to avoid sunburn. Move them back inside in the evenings when it gets cold.

**Temperature:** Check the upcoming temperature online every night. When the nights are consistently warm enough (over 10°C), plants can safely stay outside overnight.

**Water:** Begin to water plants less frequently (about every few days), unless there is a heat wave. Forcing them to search for water with their roots allows them to strengthen their root system.

### 3.3 Planting out the seedlings

1. Once the process of hardening off is complete, the plants should begin to thrive outdoors. It's now time to consult your pre-season Garden Map from Lesson 1 and plant the seedlings outside where they can continue to live comfortably.

2. Before planting, you must prepare the beds. This means removing weeds, adding compost or other soil enhancements, and turning over the soil to loosen it. You may even need to add some garden soil if the raised bed is depleted.

### Tips and Tools

Consider planting on a Friday so that you can harden off plants during one school week and plant at the end of that week. Just make sure to thoroughly water and check on them first thing the next Monday morning.

When "hardening off" plants, start by putting them outside for only a few hours at a time. Gradually increase the time outside every day. This allows them the time they need to adjust to varying temperatures.

#### 3.3 Materials:

- Shovel
- Garden fork or rake
- Compost
- Soil
- Planting bed or pots
- Sticks
- Measuring tape
- Trowel

#### Optional:

- Seaweed, chicken manure.
- Mulch (ex: straw)
- Black plastic weed barrier
- Supportive sticks
- Peat or Coco Coir
- Fencing

3. Water the prepared soil unless it has just rained. Use garden tools to mix the water into the soil before making holes for your plants.
4. Refer to the Garden Map to see the layout you planned before planting. Perhaps some seedlings have not made it and adjustments must be made to the plan. Make sure to measure out the spacing your seedlings require and use sticks to plot out exactly where plants will go before making any holes.
5. With a trowel, have youth each dig a hole that is the same depth as the length of the plug. The goal is for the top of the seedling's soil to be level with the garden bed soil.
6. Carefully remove the plug from the seed tray. If the plant roots are tangled or dense, gently massage and pull apart the roots. This helps them reach out and down into the soil as sometimes the roots curve up in the seed tray.
7. Have the youth place the plugs in their prepared holes. Gently fill in the soil around the plug once it is placed. Press gently on the soil around the plant to get rid of any air pockets.
8. Gently water the newly planted seedlings.
9. Cover the ground with mulch, if using, so that bare soil disappears. Be careful around the plant as mulch is laid.

## Tips and Tools

Mulching the garden helps keep weeds down and also helps the soil hold water better. The garden can thrive with less effort if you mulch.

Click for next lesson:

## **Garden Lesson 4: Critters in the Garden**