

# 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.

Printable worksheets accompany each lesson and can be compiled into a single **Garden Journal to practice record-keeping and support future growing success.** 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).

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.



## Goals of Lessons

- Grow food and engage in hands-on learning
- Gain food literacy skills
- Demonstrate connections between the food web and climate action
- Support youth well-being and connection to the more-than-human world

## Gardening & Climate Action

Adapting to climate change is critical for our food system. Through gardening, students participate in the food web. They learn about food production and its interdependence with plants, animals and weather.

Look for these **climate action icons** in Grow Eat Learn resources to learn more about the connections between gardening and the climate!



Habitat Creation  
& Biodiversity



Waste Reduction  
& Circular Systems



Growing &  
Processing Food



Water Stewardship



Soil Stewardship



Climate Justice

# Planning a Garden

## Introduction

Complete this lesson between January and March. We encourage you to work through *Creating a Garden Goal* first.

Anyone can grow a garden! As long as the essential components are present—sun, water, soil, and nutrients—any garden space can thrive. In this lesson you'll learn how to plan and map out a garden to meet your goals. Start your Garden Journal with activities to learn about what foods grow locally, how they grow and what these plants need to be healthy. This lesson will help set you up for a successful growing season ahead!

## NS Curriculum Outcomes

### Grade 1 **Mathematics**

- Students will be expected to demonstrate an understanding of repeating patterns (two to four elements) by identifying, describing, reproducing, extending, and creating patterns.
- Students will be expected to demonstrate an understanding of measurement as a process of comparing by: ordering objects, filling, covering, or matching.

### Grade 3 **Science**

- Investigate factors that affect plant growth.
- Classify food items according to the plant part used.

### **Mathematics**

- Practice measuring and recording length, width, and height.

### Grade 4 **Science**

- Students are able determine the impact that various amounts of light have on plants.
- Investigate factors necessary for survival of a plant in a local habitat.

## Skills

### Science

Question, Observe, Plan, Investigate

### Mathematics

Measure, Map, Estimate

### Social Studies

Comprehend, Read, Write, Describe

### Visual Arts

Design, Draw

## Climate Connections



### Soil Stewardship

By keeping soil moist and healthy (not too moist!), students learn the importance of caring for soil to grow food.



### Growing & Processing Food

Starting seeds is the first step in growing food in the garden. Learning to grow food is a resiliency skill and sharing food strengthens communities.



### Habitat Creation & Biodiversity

Adding pollinator plants to the garden provides food and shelter for important insects like bees, butterflies and moths.



## Tips and Tools

Think outside the box! Beyond the three common garden types that we've listed, other possibilities could include edible landscaping with perennial plants and trees (for example, rhubarb, berry bushes and fruit trees) and pollinator gardens.

### 1.1 Materials

Pencil or pen, coloured pencils or crayons

### Garden Location Considerations:

- At least 6 hours of full sun
- Near a water supply
- Visible to community
- Protected from wind, wildlife, snow plows and other foot/vehicle traffic



## Nourish Resource Features



### NS School Growing Calendar



### Fruit & Veggie Colouring Book



## 1.1 How and where food grows

Eating food that grows locally and in season helps the planet—food that travels far creates more pollution - and growing your own food is fun! Before planning your garden, have students explore the connections between the garden, the climate, the food they eat and the world around us using 1.1 worksheets.

1.1.1 – Local Food Matching Game is suited for **ages 6+**

1.1.2 – How Does It Grow Matching Game is suited for **ages 8+**

1.1.3 – Where In The World is suited for **ages 10+**

## 1.2 Common Garden Types

Container gardens, in-ground plots and raised planter boxes are all great ways to grow a garden. Choose the option that works best for your space and gardening goals.

### Pots

#### Benefits

- Mobile
- Less risk of weeds/pests/diseases
- Eco-friendly if using recycled containers
- Can be placed on any type of soil or surface

#### Drawbacks

- Soil dries out quickly
- Garden is limited by size/number of containers
- Expense of soil, amendments and pots

### Plots (in-ground)

#### Benefits

- Better retention of water and nutrients
- Makes use of what is there and may be less expensive
- Can provide more space

#### Drawbacks

- Potential lack of nutrients in soil or contamination
- Risk of stepping on plants/compacting soil
- Potential risk of weeds/pests/diseases

### Planters

#### Benefits

- Less risk of stepping on plants & compacting soil
- Easier on the body, accessible design possibilities
- More space/depth for plants to grow, less rocks

#### Drawbacks

- Takes work to build planter boxes
- Expense of building materials/soil
- Difficult to move once in place





## Tips and Tools

Research companion planting to learn which plants grow well together.

For raised beds, try square foot gardening to make the most of small spaces.

Start small with easy-to-grow plants and add more in future years as you gain confidence and skill.

Keep summer break in mind—plant crops in the spring that can be harvested in the fall.

Plant pollinator plants in and around your garden for beauty and pollinator habitat.

Have students research the connection between pollination and plant productivity.

### 1.3 Materials

Pencil or pen, Internet, books, knowledge keepers for research

### 1.4 Materials

Pencil or pen, seed packets, Internet, books, regional planting guides

### 1.5 Materials

Pencil or pen, measuring tape or meter stick to measure garden space

## 1.3 Start your Garden Journal (optional)

Printable worksheets accompany each Garden Lesson and can be compiled into a single Garden Journal to practice record-keeping and support future growing success. Each student can create their own or everyone can collaborate on one Garden Journal.

If creating a Garden Journal, use the Garden Journal cover template to begin. Write your name on the line, then fill the page with drawings of the plants you want to grow and the pollinators you hope will visit. Use colours, doodles, and your imagination—make it your own!

## 1.4 Research what plants need

Now that you know what can grow in our region, think about what plants you'd like to grow in your garden. Using the Research What Plants Need worksheet, gather information about these plants. Consult regional planting guides to know which plants you will start indoors ahead of time and which can be directly seeded into the garden. Research the space, soil and temperature needs of the plants, using seed packages, online resources and books, etc. Find at least one native pollinator plant that you can grow in or near your garden.

## 1.5 Create a garden map

1. Measure your garden area from one end to the other (width, length). If using containers, how big is each container? If building a raised bed, what will the dimensions be?

2. Using the Create a Garden Map worksheet, map your garden space. Include garden measurements and take into account space and possible trellis requirements for each type of plant. Draw and label your crops. On the bold lines around the edges, indicate which direction each side of the garden is facing (i.e. east, west, north or south). If possible, plan to plant the tallest crops on the north side of the garden and shortest plants on the west or south side to maximize sunlight (see examples below).

3. Make sure the seeds for the plants you have mapped out are ready for seeding day! Source seeds that have been grown in your region and have students research or share information about the benefits of local seeds, such as being adapted to the local climate.





## Tips and Tools

### Garden theme ideas:

Choose a favourite veggie-filled recipe (such as salsa) and plant a garden based on the ingredients. For a salsa garden, try planting peppers, tomatoes, onions and cilantro.

See **Activity 1.5** for an example of a salsa garden map.



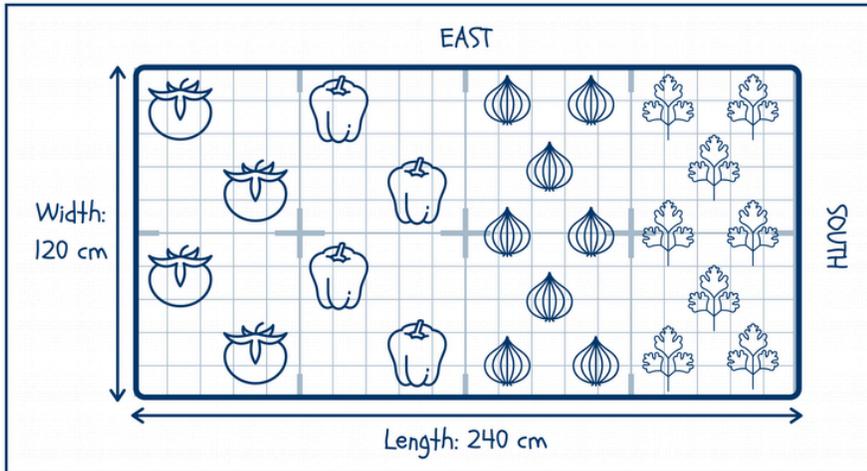
## Nourish Resource Features



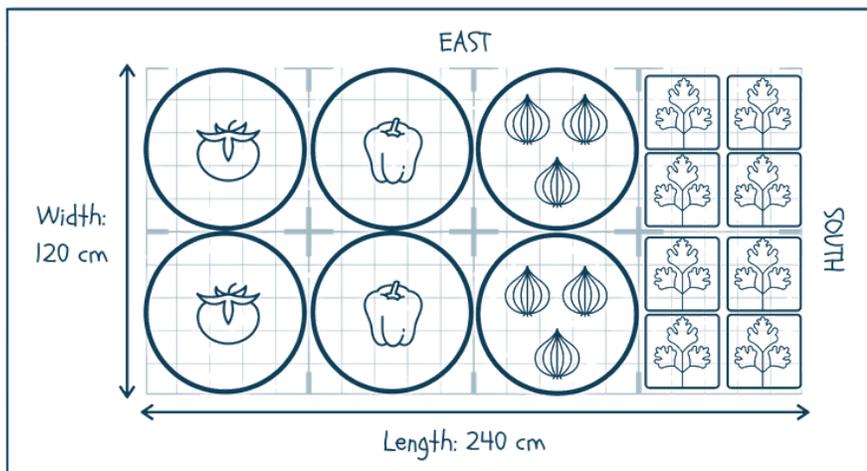
### Dips & Spreads Facilitation Guide

Use this resource to run a Garden Salsa session using ingredients from the salsa garden.

### 1.5.1 Example: In-ground plot or raised garden bed



### 1.5.2 Example: Garden in pots



Tomatoes



Peppers



Onions



Cilantro

## Additional Resources



### How to Start a Garden for Kids (Video)

<https://www.youtube.com/watch?v=35Ucz4aOCyw>



### Regional Growing Charts (within Canada)

<https://www.westcoastseeds.com/blogs/regional-planting-charts>



### Sourcing Local Seed

<https://acornorganic.org/localseed>



### EDventure Kids: DIY Square Foot Gardening (Video)

<https://www.youtube.com/watch?v=DbTw8ml3qTk>



## 1.1.1 Local food matching game



What foods do we eat these fruits, vegetables, and seeds in?

Draw a line to match the local fruits, vegetables and seeds in the left column to the correct food dishes listed in the right column.

Low bush  
Blueberry



Pickles

Apples



Sunflower  
seeds

Cucumbers



French fries

Tomatoes



Blueberry  
muffins

Sunflowers



Apple  
sauce

Potatoes



Salsa

# 1.1.2 How does it grow matching game



## How do different fruits, vegetables and seeds grow?

Draw a line to connect the fruits, vegetables and seeds with the type of plant they grow on (a vine or climbs, on a tree or bush, under ground or above ground).  
Optional: underline the fruits and vegetables that can grow in our climate.



**On a vine or climbs**  
Example: peas



**On a tree or bush**  
Example: peach



**Under ground**  
Example: carrots



**Above ground**  
Example: lettuce



## 1.1.3 Where in the world



What type of climate do the following foods need to grow (**tropical, dry, temperate, continental** or **polar**)? Name places foods can grow based on the climate needed.

	Climate type	Name a place it can grow
Grapes	_____	_____
Lettuce	_____	_____
Peach	_____	_____
Broccoli	_____	_____
Lemon	_____	_____
Mango	_____	_____
Cherry	_____	_____
Orange	_____	_____
Cabbage	_____	_____
Carrot	_____	_____
Strawberries	_____	_____
Spinach	_____	_____
Rhubarb	_____	_____
Low bush Blueberries	_____	_____

Which of these can grow where you live? Which are in your dream garden?



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# Garden Journal

## 1.4 Research what plants need



What are you planting and what will each plant need to thrive? Use this worksheet to record and learn about the plants you hope to grow and map out where the plants will live. Seed packages often share this information.

What is being planted? (name of plant)	How much space between each plant?	Where will this plant grow? (garden bed, pot, etc)	Will it need specific nutrients, amendments, a trellis, or something else to thrive?

# 1.5 Create a garden map



This map will become a guide for you when it's time to plant! It will help you remember what you're planting and where, including the spacing and if you'll need trellis supports. Knowing the direction your garden faces will help you keep sunny southern exposure in mind.

1. Draw the garden from above—like you're a bird looking down. Add measurements of the garden.
2. Use a pencil to sketch the garden beds, pots, grow bags, or any containers you'll plant in.
3. On the bold lines around the edges, mark North, South, East, and West.
4. Draw and label your plants where you want them to go. Space the plants based on what you learned from the Researching What Plants Need worksheet (1.3).

**Example:**

