Growing Up Organic operates on traditional and unceded territory of the Algonquins: now known to many as Ottawa, and now home to many from across Turtle Island and beyond.

Grades 6-7

Planting for a Spring Salad Workshop

Mindfulness minute: If it speaks to you, take two minutes with your students before this workshop to slow down and root down with this mindfulness minute.

LESSON FOCUS AND GOALS

In this workshop, students assess the existing biodiversity in the garden space and implement the plan they developed in the previous workshop, aimed at increasing biodiversity and creating a working garden ecosystem. They plant spring crops, including lettuce, peas, radishes and spinach.

LEARNING OBJECTIVES

Grade 6

Science and Technology: Understanding Life Systems

OVERALL EXPECTATIONS:

- 3 - Demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans

SPECIFIC EXPECTATIONS:

- 2.2 - Investigate the organisms found in a specific habitat and classify them according to a classification system
- 3.2 - Demonstrate an understanding of biodiversity as the variety of life on earth, including variety within each species of plant and animal, among species of plants and animals in communities, and among communities and the physical landscapes that support them
- 3.4 -Describe ways in which biodiversity within and among communities is important for maintaining the resilience of these communities
- 3.5 - Describe interrelationships within species, between species, and between species and their environment, and explain how these interrelationships sustain biodiversity

Mathematics: Measurement

OVERALL EXPECTATIONS:

- E2- Compare, estimate, and determine measurements in various contexts

SPECIFIC EXPECTATIONS:

- E2.1 - Measure length, area, mass, and capacity using the appropriate metric units, and solve problems that require converting smaller units to larger ones and vice versa

Mathematics: Operations

OVERALL EXPECTATIONS:

- B2- Use knowledge of numbers and operations to solve mathematical problems encountered in everyday life

SPECIFIC EXPECTATIONS:

- B2.1 - Use the properties of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and whole number percents, including those requiring multiple steps or multiple operations
- B2.10 - Divide whole numbers by proper fractions, using appropriate tools and strategies

Grade 7
Science and Technology: Understanding Life Systems

OVERALL EXPECTATIONS:

- 1 - Assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts;
- 2 - Investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem;
- 3. - Demonstrate an understanding of interactions between and among biotic and abiotic elements in the environment

SPECIFIC EXPECTATIONS:

- 3.1 - Demonstrate an understanding of an ecosystem as a system of interactions between living organisms and their environment;
- 3.2 - Identify biotic and abiotic elements in an ecosystem, and describe the interactions between them
- 3.3 - Describe the roles and interactions of producers, consumers, and decomposers within an ecosystem (e.g., Plants are producers in ponds. They take energy from the sun and produce food, oxygen, and shelter for the other pond life. Bacteria and fungi are decomposers. They help to maintain healthy soil by breaking down organic materials such as manure, bone, spider silk, and bark. Earthworms then ingest the decaying matter, take needed nutrients from it, and return those nutrients to the soil through their castings.);
- 3.8 - Describe ways in which human activities and technologies alter balances and interactions in the environment

Mathematics: Operations

OVERALL EXPECTATIONS:

- B2- Use knowledge of numbers and operations to solve mathematical problems encountered in everyday life

SPECIFIC EXPECTATIONS:

- B2.2 Understand and recall commonly used percents, fractions, and decimal equivalents

MATERIALS NEEDED

Biodiversity Count Worksheets
Garden Planning Cards
Clipboards and pencils
Twine
Stapler
Measuring tape
Open-pollinated organic seeds for spring crops (spinach, radishes, peas, lettuce, beets, turnips, kale, Swiss chard).
Various materials to implement the garden plan.

STRUCTURE / ACTIVITY

Introduction

Review important concepts with students before getting started: ecosystem, consumers, producers and decomposers, biotic and abiotic (Grade 7). Review some of the connections already discussed between companion plants in the previous workshops and explain that this workshop will seek to uncover even more connections between living things and between living and nonliving things in the garden.
Briefly explain the concept of square foot gardening. Have the students divide the garden bed into square feet using the twine and stapler; transpose the map created in the planning workshop onto the garden space. Use the garden planning cards to determine seed spacing requirements in each square. Explain the stations and divide the students in two groups. Allow 20 minutes per station.

Station 1 Students take turns sowing seeds and creating plant markers, as well as implementing other components of their garden plan (e.g., installing a toad shelter or bird feeder).

Station 2 Students will assess biodiversity in the space prior to the implementation of their plan. They will re-assess biodiversity 2 months later during the transplanting workshop to evaluate the impact of their plan.