



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.

Grade 9-10

Into to Organics, Planning the Garden and Spring Planting

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 work in groups to develop a plan for the garden. We begin to discuss how the garden will differ from most conventional farms. In particular, we discuss how plant diversity contributes to a sustainable garden. We build on concepts from lower grade level garden workshops around companion planting to discuss in more detail how we can use a diversity of plants to our benefit in the garden. Students choose the vegetables they wish to plant in the garden and justify their choices with companion planting principles.

LEARNING OBJECTIVES

Grade 9-10

Health and Physical Education: Healthy Living

Overall Expectations

- C1- Demonstrate an understanding of factors that contribute to healthy development;
- C2- Demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being;
- C3- Demonstrate the ability to make connections that relate to health and well-being - how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being

Specific Expectations

- C3.1 - Assess the nutritional implications of a variety of dietary choices, including those reflecting current dietary trends, and explain how they can make personal choices that will provide the nutritional requirements for a healthy, active life
- C2.2 - Demonstrate an understanding of how they, as consumers, can have an impact on food and beverage choices at school and in the community (e.g., promoting availability of healthy choices in restaurant and cafeteria menus and in grocery stores, raising awareness of ethical and environmental considerations related to food choices)
- C3.1 - Analyse the influence of social and environmental factors on food and beverage choices (e.g., financial status, culture, religion, media influence, peer influence, family food traditions, accessibility of different kinds of food, restaurant choices, proximity to where food was produced, environmental impact of food production methods)

Science: Biology and Chemistry

Overall Expectations

B1- Assess the impact of human activities on the sustainability of terrestrial and/or aquatic ecosystems, and evaluate the effectiveness of courses of action intended to remedy or mitigate negative impacts;

B2- Investigate factors related to human activity that affect terrestrial and aquatic ecosystems, and explain how they affect the sustainability of these ecosystems;

B3- Demonstrate an understanding of the dynamic nature of ecosystems, particularly in terms of ecological balance and the impact of human activity on the sustainability of terrestrial and aquatic ecosystems.

C1- Assess social, environmental, and economic impacts of the use of common elements and compounds, with reference to their physical and chemical properties;

Specific Expectations

B1.4 – Evaluate the effectiveness of government initiatives in Canada (federal, provincial, municipal)...

B2.1 – Use appropriate terminology related to sustainable ecosystems, including, but not limited to: bioaccumulation, biosphere, diversity, ecosystem, equilibrium, sustainability, sustainable use, protection, and watershed

B2.3 – Plan and conduct an investigation, involving both inquiry and research, into how a human activity affects soil composition or soil fertility....

B2.4- Plan and conduct an investigation, involving both inquiry and research, into how human activity affects water quality

C1.1 –Assess the usefulness of and/or the hazards associated with common elements or compounds in terms of their physical and chemical properties

C1.2 –Assess social, environmental, and economic impacts of the use of common elements or compounds



MATERIALS NEEDED

GUO Garden Planning Cards
GUO Garden Planning Calendar
Food Choices and the Media Slide Deck
Video: "Michael Pollan's Food Rules" - available on YouTube.
Staple gun
Twine
Open-pollinated organic seeds for planting
Trowels

STRUCTURE / ACTIVITY

1. Food choices: personal or political? (15 minutes inside)

With the slide deck as a guide, discuss with the students what it means when we say that eating is a personal choice. What are the kinds of things we consider when we buy and eat food? How do our food choices reflect our personal values?

Time Magazine's photo essay "What the World Eats" took snapshots of families from around the world with the food they would typically consume in one week. We can understand a lot from these photos about the numerous factors that affect food choices in different contexts. Flip through the photos with the students.

What do you first notice about each family's photo? What is most obvious to you?
Is it whole food or processed? Will the food nourish the body? If it isn't nourishing, why is it there?
What can you tell about what influences each family's food choices?
Can you tell how the ingredients / food got there? Where was it grown? Who grew it and for whom?

Michael Pollan wrote that eating is a political act. He was riding on the coattails of Wendell Berry, a predecessor of his who said: eating is an agricultural act.

What do you think these two men meant when they said that?
How does what we choose to eat have an impact beyond our personal bodies?

In order to vote with our forks, we need to know a lot more than we generally do now about the food that we consume. We hear a lot these days that it's important to know where your food comes from. Why is that important? What are some other questions we need to answer?



2. What is organic (15 minutes inside)

Understanding how our food is grown is amongst the most important pieces of information in understanding our food choices as political acts, and in aligning what we eat with the kind of economy and environment we want to support. So, before starting to plan the garden, take some time to discuss with the students to reflect about what “organic” means.

View “Michael Pollan’s Food Rules” video.

What do we mean when we say our garden is organic? (not-certified)

What does it mean when the food we buy at the store is organic? (certification)

What are some common perceptions about organic? Where do these perceptions come from?

What are some reasons people choose organic food?

- concerns about the environment, concerns for farm workers, concern for health, concern for taste, concern for their local economy, to support a particular farmer

3. Planting (25 minutes outside)

Using the twine and the staple gun, divide the allocated portion of the garden bed into 30cm by 30 cm squares. Explain the concept of “companion planting” and the role it plays in organic gardening.

There are different types of ways plants can be each other’s companion:

Attractors: Some (like flowers) plants attract pollinators (like bees) bringing them close to the garden where they help other plants reproduce. Some plants attract predators (like bugs) so that they stay away from your vegetables. (Examples: Nasturtium, Parsley)

Confusers: These are the masked bewilders and tricksters! These plants confuse pests away from other vegetables. Parsley for example has the same wispy tops as carrots and so confuses white flies away from carrots.

Enchanters: These are the good neighbour plants, they help other vegetables grow, and improve their flavor and size. Basil improves the taste and size of tomatoes.

Protectors: These plants are the guardians of the garden and protect others from nature’s havoc, like too much wind or sun. For example, peas and bean climbing up poles and nets provide shade for vegetables like lettuce that don’t like the heat.

Depending on the time of year, some vegetable seeds may be sown directly into the garden. Instruct the student to use the garden planning cards to design the garden plan, paying attention to each vegetable’s companions. Use the garden planning cards to fill in the garden calendar with the varieties from your plan, including dates when seeds will be sown outside, inside and transplanted (when applicable), as well as when the vegetables will be ready for harvest.