

# **Project Introduction**

**Summary:** In this lesson, students are introduced to the central project for the unit: developing a planting proposal for the garden. They will take an inventory of what they already know that might help them with this project, define the criteria and constraints for the project, and develop a list of questions they need to answer in order to be successful. This lesson frames all of their learning for the rest of the unit. This is the first of a 12-lesson series in which students will explore the basic ecological principle of interdependence through the lens of common organic farming practices.

#### Time: 45 minutes

#### **Teacher Notes:**

- The "READ" and "DISCUSS" sections of this lesson plan can be used as talking points or a script to introduce activities.
- This lesson will have students explore the four core values of organic through discussion before diving into an exploration of ecology in the garden. The other values of care, fairness, and health could be further explored through discussion as well.
- If you are teaching this lesson in the garden, we suggest completing the sections as a whole class or in small groups. The garden is a great place for discussion-based lessons.
- This lesson is designed both to help students start to wrap their heads around this project in a more structured way, but also to prompt excitement and enthusiasm about the driving question. Encourage students to really get all their thinking on the table here, especially during the brainstorm section. At this stage in the process, the more possibilities the better! You never know what kind of creative solutions or ideas may arise from something that at first seems completely unrealistic or "out there".
- In a number of questions in this lesson we use the word "crop". It can be helpful to review the word "crop" with students by asking them if they know what the word means.



### Vocabulary:

- **Crop:** a plant that is intentionally grown as food.
- **Prior knowledge:** something you already know or understand.

**THINK-PAIR-SHARE:** Imagine your dream garden. What plants (crops) are you growing there? What other plants or animals live there? Now imagine you plant your garden and you need to take care of it. What do you think it takes to care for your garden? What skills or knowledge might you need? What questions might you have about growing your garden?

**READ:** In this unit you will work in pairs or small groups to develop a planting proposal for our garden. Today you will start this project. Your final proposal should answer the questions below, **but you don't have to answer them today**—instead, we will spend some time reading the questions, and then brainstorming what we already know, and what we still need to learn in order to answer them.

- What crops do you plan to grow? Why did you choose these crops?
- When do you plan to plant each crop?
- Where in the garden will you plant each crop? Why?
- What kind of care do you anticipate each crop might need? What farming techniques might you use?
- When do you anticipate each crop will be ready for harvest?
- Do you plan to plant any other plants? Which kind(s) and why?
- What challenges might you encounter while growing your crops? (For example, do your crops have any common pests, or specific nutrient needs?). For each challenge, discuss how you might approach it.

As part of answering these questions, you will sketch a diagram illustrating where you plan to plant each crop and why. You will also create a timeline that outlines important moments in the life cycle of each crop, and notes on how you plan to care for your crops.

## BRAINSTORM: As a class, fill out this Garden Planning Brainstorm Chart. The chart includes:

- 1. **Prior knowledge**—things you already know about gardening or growing food that might help you complete this project.
- 2. **Ideas** you have about the project. These don't have to be perfect. Now is the time to get all your thinking on the table!
- 3. **Questions** you have about the project or things you need to learn in order to complete this project. (The chart already includes a couple example questions).

**ELABORATE:** In order to complete this project, we will explore a few common organic farming techniques: **cultivating and tilling**, **companion planting**, **hand weeding**, and **composting**. Consider the questions below and add notes on these organic farming techniques to your **Garden Planning Brainstorming Chart**.

- Have you heard of these techniques before? Do you have any experience practicing them?
- What ideas do you have about why they are used and what effects they have on crops and gardens?
- What questions do you have about them?

**IDEATE:** Draw diagram of your initial ideas for the garden. Your diagram should take into consideration the size and features in your garden, but feel free to get creative as well.

- What crops would you be interested in growing and where might you plant them?
- Are there any other plants or garden features you would want to include?
- What do you know about what it would take to care for these crops? What questions do you have?

**SHARE:** Share your ideas with a partner or in small groups. As you share, explain your thinking behind which crops you want to grow and where you chose to plant them.

**READ:** We will continue working on this project over the course of this unit. Each lesson will focus on a different aspect of how crops grow best. For example, how can you know which crops will grow well in your garden? Where should you plant these crops in order for them to grow well? What kind of care will they need, and when and how can you provide that care? Everything you learn in the next 9 lessons will go towards making a plan for your garden that will allow your crops to thrive. Keep the questions you generated today in mind, and make note of new questions that arise throughout the process. Any questions you don't have a chance to answer over the course of the next 9 lessons, you'll have time to research at the end of the unit as you work on developing your plan.



**RESEARCH (optional):** If you have time, work in your small group to investigate the answers to some of the questions you came up with during class. You may do this through observation in the garden, talking with your peers or the teacher, or conducting research online or in books.



# Garden Planning Brainstorm Chart

In this unit you will work in pairs or small groups to develop a planting proposal for our garden. By the end of the unit, you should be able to answer these questions in your proposal:

- What crops do you plan to grow? Why did you choose these crops?
- When do you plan to plant each crop?
- Where in the garden will you plant each crop? Why?
- What kind of care do you anticipate each crop might need? Describe the farming techniques you plan to use.
- When do you anticipate each crop will be ready for harvest? (an estimate is fine!)
- Do you plan to plant any other plants? Which kind(s) and why?
- What challenges might you encounter while growing your crops? (For example, do your crops have any common pests, or specific nutrient needs?). For each challenge, discuss how you might approach it.

As part of answering these questions, you will sketch a diagram illustrating where you plan to plant each crop and why. You will also create a timeline that outlines important moments in the life cycle of each crop, and notes on how you plan to care for your crops.



GARDEN PLANNING BRAINSTORM

SHEET

Fill out the chart below to get started:		
<b>Prior Knowledge</b> —things you already know about gardening or growing food that could help you complete this project.	<b>Ideas</b> you have about the project. These don't have to be perfect. Now is the time to get all your thinking on the table!	<ul> <li>Questions you have, or things you need to learn in order to complete this project. (The chart already includes a couple example questions).</li> <li><i>How much space do we have to grow food?</i></li> <li><i>When is the earliest we could begin planting crops?</i></li> <li><i>When is the latest we should be harvesting crops?</i></li> <li><i>What resources do we have? (ie. seeds, tools, water, informational books etc.)</i></li> </ul>