

VICTORY GARDENS: THE PARTS OF PLANTS

INTRODUCTION

Victory gardens were an incredibly important part of the Home Front effort in World War II. Gardening was very important for morale, but it also eased concerns about nutritional consequences of rationing. Gardening is a great way to learn, and to apply lessons from botany. In addition teaching the parts of plants using produce makes natural connections to lessons about nutrition, food, and health.

MATERIALS

You'll need lots of produce from the grocery store or farmer's market. Purchase a variety of fruits and vegetables from the grocery. You will need enough so that students have at least one from each category. For example—

- + Roots—sweet potatoes, potatoes, ginger, carrots, radishes, beets, onions
- + Stems—celery, broccoli, kohlrabi
- + Leaves—cabbage, kale, chard, lettuce
- + Flowers—cauliflower, broccoli
- + Fruits—cucumbers, tomatoes, peppers, squash

Some listed above can have multiple plant parts in one product (green onions, broccoli for example).

STANDARDS

NGSS 4 LS1-1

Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

NGSS MS LS1-4

Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

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From elementary to middle school, students develop concepts of the parts and structures of plants, their functions in survival and reproduction, and their role in the carbon cycle. This activity provides them opportunities to identify those parts and their functions. Because it uses produce, it connects to later lessons on food and nutrition and the carbon cycle. This engages students in the Crosscutting Concepts of Form and Function, and Energy and Matter, and the Science and Engineering Practices of Developing and Using Models, and Constructing Explanations.

NAME:

DATE:

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Where do you see plants that you eat? In the schoolyard? Do you have a garden at home? How about in the produce part of the grocery store?

During World War II, people grew vegetable gardens to supplement rationed food from the grocery store. They not only knew how to cook fresh vegetables but also how to grow them too. Let's learn about the parts of plants in order to grow a vegetable garden and cook produce from it.

Take the plant parts that your teacher has given you. Answer the questions below, using drawings of the plant parts in your notes. Ask for the name of anything you don't recognize.

Which ones do you recognize? Which have you eaten before?

Which ones are roots? Draw pictures and show how they function as roots:

Which ones are stems? Draw pictures and show how they function as stems:

Which ones are leaves? Draw pictures and show how they function as leaves:

Which ones are flowers? Draw pictures and show how they function as flowers:

Which ones are fruits*? Draw pictures and show how they function as fruits*:

Which one will you try eating now that you've learned about it?

**Botanists and nutritionists define fruits differently. To a botanist, a fruit is a ripened flower and contains seeds.*