

# Plant Parts: Exploring *Oliver's Vegetables*

**Overview:** This lesson plan provides activity ideas to accompany the delightful children's book *Oliver's Vegetables* by Vivian French. Students will discover we eat many different plant parts and that vegetables are an important part of our diet providing essential nutrients and fiber.

**Grade Level/Range:** Prek – 1<sup>st</sup> Grade

## Objectives:

Students will:

Read *Oliver's Vegetables* by Vivian French (recommended for ages 3-6)

Discuss the edible parts of plants.

Learn the health benefits of vegetables and why they should eat some every day.

**Time:** 30-60 minutes

## Materials:

- The book *Oliver's Vegetables* by Vivian French
- An assortment of fruits and vegetables representing the different parts of a plant (see list below)

## Background Information

Plants come in a variety of shapes, sizes, and colors, just like people. Plants also share some key traits, such as having roots, stems, and leaves. Parts may vary greatly in appearance and number among plant types, but they carry out similar functions. The following is an overview of common plant parts divided into two categories: vegetative and reproductive.

### Vegetative Plant Parts

**Roots:** found underground; absorb water and nutrients for growth; store food for plant

**Stems:** connect leaves to roots; carry water and nutrients from roots to leaves, and carbohydrates and other substances from leaves to roots for growth; some provide food storage

**Leaves:** catch the sun, which gives plants energy to photosynthesize and grow; release moisture and oxygen

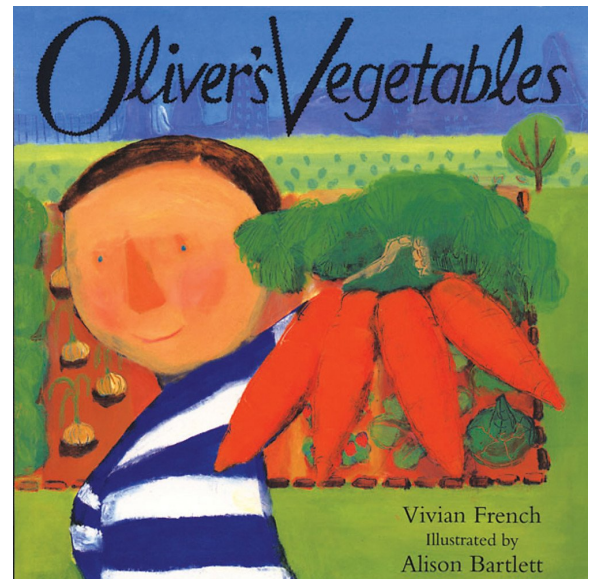
### Reproductive Plant Parts (involved in the job of making new plants):

**Flowers:** where fruits/seeds form

**Fruits:** contain seeds

**Seeds:** form inside fruit; when put in soil, grow into a new plant

Our commonly consumed fruits and vegetables represent all the different plant parts, however we do not eat *all* parts of *all* plants. For example tomato fruits are a staple in our diet; however, the leaves



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are toxic. It is important for young students to learn that just because one part of a plant is edible, that does not mean all the other parts should be eaten.

## Fruits vs. Vegetables

A common question when talking about plant parts is, **Why are some things we call vegetables actually considered fruits?** The botanical definition of a fruit is *a structure formed by a pollinated flower that contains the seeds*. This may be confusing for young children because many foods we call vegetables — tomatoes, cucumbers, and squash, for example — are actually fruits. Botanically speaking, vegetables are foods that come from plants' vegetative parts: stems, roots, and leaves. However, we don't use botanical definitions in the kitchen or grocery store. Instead, we call a zucchini a vegetable because it's not sweet, and because we usually eat it as part of the main course at a meal. In layman's terminology, a fruit is something that comes from a plant that is sweet and usually eaten as a dessert or snack.

## Laying the Groundwork

Review the different parts of the plant with your students using the Background Information above. Bring in a couple of potted plants to provide live samples of each part, or take a walk in the classroom garden or schoolyard and identify roots, stems, leaves, and flowers on plants you find outside. To investigate roots, look for aboveground tree roots or a weed you can pull up and study. Talk about the differences in size, shape, and color of the parts on each plant. For example, hold up two different leaves side by side and ask the class to compare them. Emphasize that even though these leaves look different, all leaves, stems, roots, and flowers complete the jobs students learned about in class.

Post a classroom list of all the plant parts for students to review.

## Exploration

1. As a class read *Oliver's Vegetables* by Vivian French. Ask your students the following questions:  
What was Oliver's favorite vegetable?  
What other vegetables did he eat at his Grandparents' house?  
What is your favorite vegetable? Why do you like it?

Create a class chart or graph of your students' favorite vegetables.

2. Next, show them examples of vegetables representing each part of the plant and ask them to sort them into different piles by part. Examples you may want to include:  
Roots: carrots, beets, radishes, turnips, sweet potatoes  
Stems: asparagus and celery  
Leaves: lettuce, spinach, cabbage, kale  
Flowers: broccoli, cauliflower  
Fruits: tomatoes, cucumbers, peppers, squash  
Seeds: corn, peas, dried beans, sunflower seeds
3. Continue your discussion of *Oliver's Vegetables* by asking why his grandparents wanted him to eat his vegetables? Why do we need to eat vegetables?

Explain to students that fruits and vegetables provide important vitamins and fiber. These nutrients help make you healthy and grow strong. Introduce them to common vitamins: Vitamin C and Vitamin A. Explain how they help us and what fruits and vegetables we can get them from:

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Vitamin	Health Benefit	Vegetable Sources
Vitamin A	Helps your vision; helps build strong bones and teeth; important for healthy skin	Carrots, sweet potatoes, spinach, broccoli, apricots, cantaloupe, peaches
Vitamin C	Helps your body fight off infections like colds; helps you absorb iron and calcium	Oranges, cantaloupe, strawberries, dark leafy green vegetables, broccoli, cabbage, green peppers

4. Tell students that different fruits and vegetables provide different health benefits. Ask them if they all provide different nutrients, how can we make sure we get what we need? The answer is to eat a variety of fruits and vegetables every day not the same thing over and over again just like Oliver!

## Making Connections

Make a recipe card for a Plant Parts Salad for students to take home. If possible, use the vegetables from the Exploration to create a plant parts salad for the students to enjoy at school, too.

### Plant Parts Salad

Ingredients:

Roots - carrots and/or radish

Stems- asparagus and/or celery

Leaves - lettuce, spinach, and/or kale

Flowers - broccoli and/or cauliflower

Fruit - avocados, cucumbers, peppers, and/or tomatoes

Seeds – peas and/or sunflower seeds

Instructions: Wash each fruit or vegetable in cold water and dry thoroughly. Cut into bite-sized pieces. Toss all ingredients in a bowl and then put into individual dishes. Top with your favorite salad dressing.

## Branching Out

Continue your lessons on healthy eating by teaching students about [Eating a Rainbow](#).

## Standards addressed

K-LS1 From Molecules to Organisms: Structures and Processes

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

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