Lesson name: Parts of plants that we eat (or something more creative!)
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For 1st grade
CA Science Standards: Life Science: how plants meet needs

Vocabulary/definitions
Photosynthesis, nutrients, leaf, stem, roots, fruit, seeds

Personal introduction

- I'm a crazy scientist with a funny lab coat
- I'm a student studying to be a plant doctor
- I love to eat vegetables
- I enjoy walking in the woods and looking at plants

Building connections to kid's experiences

- How many of you think plants are important?
- I will present the students with a number of things (a piece of wood, bread, a vegetable, jelly, rice, walnuts, cinnamon) and ask them to identify which items are *not* made up of plants? The purpose here is to stress our dependence on plant products for our diet and survival.

Learning experiences
I will briefly present the students with a generic drawing of a plant or with a real plant and we will review the major anatomical structures: leaves, roots, stems, flowers, fruits, and seeds. We'll note that some parts of the plant are aboveground and others are belowground.

Then, I will assign a plant part to pairs of students and ask them to assign that plant to the correct category. I may display drawings of each plant part and ask the students to use those drawings as a visual guide. Some plant parts that I hope to have with me are:

- Leaf vegetables like lettuce, kale or leeks
- Root vegetables like carrots, beets, and radishes
- Stems like fennel and asparagus
- Flowers like artichokes and broccoli
- Fruits like squash, apples, tomatoes, green beans
- Seeds like rice/grains, dried beans, sunflower seeds and nuts

Wrap up and summary
Once the students have placed their vegetables in the appropriate piles, we will go through each pile and quickly talk about the role each structure plays in the survival of a plant:

- Leaves capture sunlight and make sugars/food for the plant by a process called photosynthesis
- Roots capture nutrients and water from the soil so it can grow
- Stems are important for plant structure and for transport of water, sugars and nutrients.
- Flowers grow fruit and seeds to make new plants
- Fruits are the houses for seeds. Fruits can help the seed travel to new places if something eats it and moves someplace else.

- Seeds are baby plants that can grow into an entirely new plant!

Possible follow-up activities

- Have students bring something made of plants from home and try to figure out what part of the plant it is. Students could bring in processed food or fruits and vegetables. Everyone can eat the leftovers!
- Have students draw a picture of each plant part. They can cut out these parts and assemble them into a single plant or display them separately on a mobile.
- Go for a walk outside and see if students can identify different plant parts on a tree and a shrub and an herbaceous plant. Show students that these plant parts are nearly universal but some plant parts are only visible during part of the plant's life. For example, flowers and fruits are ephemeral; roots are difficult to see because they are below ground and seeds often disappear as the plant grows.
- Ask students to tell/write a story about a plant that is important in their life.
- Have students try to germinate seeds in class. Soak beans in water and plant them to see if they will sprout!

Materials and preparation

Volunteer brings:

- Drawings of plants
- Example food items
- Plant parts for students to sort
- A knife for cutting open fruits
- Wacky lab coat

Classroom needs:

- Space for the volunteer to lay out the different examples
- "stations" where students can place their plant parts as they sort them