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# Plant Parts

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**Purpose:** The purpose of this lesson is to explore the structure and function of plants and gain a deeper understanding of the patterns of plants.

**Objectives:** Students will identify basic plant parts and explain their function.

## Materials:

### Provided:

- Laminated plant cards
- “The Reason for a Flower Book”

### Not provided:

- blank paper
- colored pencils
- Fresh produce: sweet potatoes (tubers), carrots (roots) radish (roots) broccoli (flowers), onion (leaves), lettuce (leaves) and celery or asparagus (stem), tomato (fruit)

**Time Required:** 1 hour

**Appropriate grades:** 1st-4th grade

**NGSS and Common Core Standards:**

1-LS1-1.

Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

4-LS1-1.

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



**ENVIRONMENTAL  
EDUCATION** GRADUATE  
PROGRAM  
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## Activity:

<p><b>Introduction</b> 10 minutes</p>	<ol style="list-style-type: none"> <li>1) Review objective: ask what plant parts they know.</li> <li>2) Read the book “The Reason for a Flower” to introduce plant parts and life cycle or if limited on time do a picture walk.</li> </ol>
<p><b>Body</b> 40 minutes</p>	<p><b>Part 1</b></p> <ol style="list-style-type: none"> <li>1) Hand out a laminated plant card to each student (or go outside to draw/collect plants if weather permits). Some students may need to share a card or may want to draw from the imagination.</li> <li>2) Ask them to label the parts of the plant (This is to gather students’ prior knowledge on plant parts). Have them use their imagination and add in any parts that may not be shown (ex: roots).</li> <li>3) After they have finished, students share out the different parts of the plant they labeled.</li> <li>4) Add any plant parts students missed. Create a chart with the different parts of a plant, define them, and explain their function.</li> </ol> <p><b>Part 2</b></p> <ol style="list-style-type: none"> <li>5) In groups, give students a variety of different common food items (ie. potato, celery, carrot, tomato, lettuce, broccoli, etc) Have students identify what part of the plant each food belongs to and justify their answer.</li> <li>6) After groups have finished, ask students what they think a potato is and why it has ‘eyes.’ <i>Answer: A potato is a stem because it produces new vegetative growth.</i> New stems will grow out of the ‘eye’ a potato.</li> <li>7) You can grow a new potato plant by placing a piece of a potato with just one ‘eye’ in the ground.</li> </ol>
<p><b>Closure</b> 10 minutes</p>	<ol style="list-style-type: none"> <li>1) Have students choose their favorite fruit or vegetable to eat and share with a partner what part it is.</li> <li>2) Discuss how some parts of plants are edible to us while others poisonous (for example: tomato leaves are poisonous while their fruits are edible)</li> </ol>

## Modifications:

- **Middle School:** An optional extension is to show examples of scientific illustration and encourage students to deepen the detail of their illustrations, showing not only the parts of each plant but



also their function and potentially their pollinator as well. Plant or plan a garden for the school or their home.

- **High School:** Older students can do multiple illustrations and model a children's story after the "Reason for a Flower" book to teach younger students what they know about plant parts. Connect to cell structure, genetic variation, and adaptation.

## Extension:

- 1) This can be done at the end to leave in the classroom and observe for a few days.
- 2) Use celery with a leafy top, to demonstrate the movement of water up the petiole.
- 3) Cut off an inch or so off the bottom and place in a glass of water with some food coloring added (blue or red work best).
- 4) In a couple days you should see the coloring showing in the leaves and if you look at the bottom of the stem the xylem should be dyed.

