

# The Plant Part Factory

## **Description:**

Students create a “Plant Part Factory” to act out the functions of the different plant parts.

## **Standards:**

Students know plants have structures that serve different functions in growth, survival and reproduction. (3<sup>rd</sup> grade, Life Sciences 3a).

## **Objectives:**

After this lesson, students will be able to:

- Identify the six basic plant parts and their functions.

**Time:** 20-30 minutes

## **Materials/Preparation:**

Prepare plant part cards to assign roles to students (one per student). For a group of 20, you may have:

- 2-3 roots
- 3-4 stems
- 3-4 leaves
- 3-4 flowers
- 3-4 fruits
- 3-4 seeds

You will also need something to represent the sun, and the kids acting as flowers will need some sort of prop to wave around (real or fake flowers, bandanas, etc).

A plant part poster or chart is a nice visual aid for presenting the plant parts

## **Instructions:**

1. Explain that there are six different plant parts, and that each part has an important job to do to help the plant grow, survive or reproduce. In this activity, we are going to create a plant part factory to show how all of the parts work together.
2. Using a poster or real plant as a visual aid, introduce or review the six basic plant parts and functions:  
Roots – Hold the plant in the ground. Get water and nutrients from the soil.
  - Stems – Support the plant. Move water and nutrients throughout the plant.
  - Leaves – Use sunlight to make food for the rest of the plant. If appropriate, explain photosynthesis: During photosynthesis, leaves use energy from sunlight to convert carbon dioxide (from the air) and water (from the soil) into sugar (food) for the rest of the plant.
  - Flowers – Make seeds. Attract birds, insects and other pollinators.
  - Fruits – Protect the seeds. Disperse seeds.
  - Seeds – Make new plants—“reproduce” themselves.

3. Pass out plant part cards to students, and explain the role of each of the parts. Have students practice the parts as they are described.
  - Roots – Sit or lie down on the ground and make a very loud slurping, sucking sound to represent absorbing water and nutrients from the soil.
  - Stems – Stand up straight and tall to represent supporting the plant and move their arms up and down, while chanting “up and down, up and down” to represent moving water and nutrients throughout the plant.
  - Leaves – Reach towards the sun, as if they are grabbing something, then make a stirring motion and chant “take and make, take and make” to represent taking energy from the sun and making food for the plant.
  - Flowers – Wave their props around and chant “Hey bee, look at me!” to represent attracting birds, insects and other pollinators.
  - Fruits – Make a circle with their arms to represent a big, fleshy fruit like an apple that is surrounding its seeds OR Make a “rocking the baby” motion to represent protecting the seeds.
  - Seeds – Jump out from the plant and crouch down to the ground. Then slowly stand up raising your arms. Chant, “Pop out, grow up!” to represent seed falling and the growth of a new plant.
4. Once everyone knows their part, it’s time to assemble the plant part factory. Make sure you have enough open space for the whole group to gather. Call up the roots and ask them to start doing their action, then add the stems, leaves, etc. until you have a complete plant part factory. This may be loud and chaotic!
5. It’s useful to use the sun as a cue for moderating or ending the activity. Since the leaves can’t do their job without sunlight, when the sun goes down or is covered by a cloud, it’s time for the plant part factory to take a break.
6. You may want to repeat the activity, allowing students to act out a different role.

**Extensions or References:**

Listen to the Banana Slug String Band’s “Six Plant Parts” song.

This activity was inspired by the Tree Factory activity from Project Learning Tree’s Environmental Education Activity Guide, 2004.

## **Roots**

- hold the plant in the ground
- get water and nutrients from the soil

## **Stem**

- supports the plant
- moves water and nutrients throughout the plant

## **Leaves**

- make food from sunlight

## **Fruit**

- protects the seeds
- helps the seeds disperse

## **Flowers**

- make seeds
- attract pollinators such as bees and birds

## **Seeds**

- make new plants
- reproduce themselves

