

Holiday Plant Factory

Objective: To educate students on the parts and functions of plants, specifically focusing on the most popular holiday flower, the Poinsettia.

Curriculum grade: K –3rd

Materials:

Holiday Plant factory worksheet

Pencil

Coloring materials (markers, pens, color pencils etc.)

Duration: 30 mins

Discussion (before activity):

Can you describe a plant for me?

- Student may guess a seed, green leaves, flowers...

What does a plant need to live?

- Sun, water, soil, food (carbon dioxide, water, and sunlight)

Did you know that plants are made up of many parts?

- Plants usually have five major structural parts: roots, stem, leaves, flowers, and fruits. Each part is very important to a plant because each part has an important job to do.

Does any particular flower come to mind when you think of the holidays?

- The poinsettia is a very popular flower used during the holiday season. The red poinsettias, also known as “Prestige Red,” are by far the most popular; however, it is interesting to know that there are 100 varieties of poinsettias. From holiday sales alone, Poinsettias are the best-selling potted plants in the United States and Canada.

Let’s discuss each part of a poinsettia and see what its functions are!

Activity:

As you discuss each part of the plant have students identify and label it on page 1 of the worksheet and then fill out its importance on page 2 of the worksheet.

ROOTS:

Why roots are important? What do roots do?

They drink/absorb water from the soil.

STEM:

What about the stem? Why is the stem important?

It gives support to the plant and delivers food and water.

LEAVES:

Now, what about leaves? What do leaves do?

Leaves are very important because they make food. When a leaf starts to make food, it is called photosynthesis. When photosynthesis happens, leaves use sunlight, carbon dioxide and water to make sugar (glucose). Photosynthesis is important because it provides two main things: food and oxygen. When plants make food, they absorb the carbon dioxide from the air and release oxygen during the photosynthesis process.

Poinsettias are unique due to the fact that the colored part of the plant, most commonly thought to be the flower, are actually modified leaves known as bracts.

FLOWERS:

Ok, now let's talk about flowers. The yellow part in the center of the poinsettia is actually the flower. What is the job of flowers?

Flowering plants have a specific type of system that allows it to make flowers to reproduce. Flowering plants produce seeds within a fruit and are the reproductive organs of the flowering plant. To reproduce a plant, insects and birds must pollinate the plants. As the insects and birds move from plant to plant, they move the pollen from one plant to another. This allows for the plants to reproduce by creating new seeds. Not all plants produce flowers. Plants such as ferns and moss use spores to reproduce instead of seeds.

SEEDS:

Last part, why do some plants make fruit?

Fruits are a way many plants spread their seeds. Fruits are formed after the flower is fertilized with pollen and are an important source of food for humans and animals.

Poinsettia seeds are small and dark and found in the center flower of the flower.

Now that we have seen what each part of the plant is and why it's important, let's get moving!

Have students come up with a movement/dance for each part of the plant.

For example: The stem of the plant provides support to keep it standing, therefore it must be very strong. The student can pick their arms up and flex their muscles nice and strong!

Once the student has come up with movements for each part, call them out as quickly or as slowly as you would like and have fun!

Discussion (after activity):

Just like our own bodies, plants have many different parts that keep them healthy and strong! Now that you know each one, be sure to give your plants enough water, soil and sunlight to keep them growing! Fun fact: Poinsettias can grow outdoors in mild coastal climates; they are not frost-tolerant. California is the top U.S. poinsettia producing state.

Next Generation Science Standard Connections

Kindergarten

- K-PS3 Energy
- K-ESS3 Earth and Human Activity

1st Grade

- 1-LS1 From Molecules to Organisms: Structures and Processes
- 1-LS3 Heredity: Inheritance and Variation of Traits

2nd Grade

- 2-LS2 Ecosystems: Interactions, Energy, and Dynamics
- 2-LS4 Biological Evolution: Unity and Diversity

3rd Grade

- 3-LS1 From Molecules to Organisms: Structures and Processes
- 3-LS3 Heredity: Inheritance and Variation of Traits

Common Core State Standards Connections

Kindergarten	ELA/Literacy	RI.K.1, W.K.2, SL.K.3, SL.K.5, W.K.7
	Mathematics	MP.2, MP.4, K.CC, K.MD.A.2
1st Grade	ELA/Literacy	RI.1.1, RI.1.2, RI.1.10, W.1.7, W.1.8
	Mathematics	MP.2, MP.5, 1.MD.A.1, 1.NBT.B.3, 1.NBT.C.4, 1.NBT.C.5, 1.NBT.C.6
2nd Grade	ELA/Literacy	W.2.7, W.2.8, SL.2.5
	Mathematics	MP.2, MP.4, MP.5, 2.MD.D.10
3rd Grade	ELA/Literacy	RI.3.7, SL.3.5, RI.3.1, RI.3.3, RI.3.2, W.3.2, SL.3.4
	Mathematics	MP.4, 3.NBT, 3.NF, MP.2, MP.4, 3.MD.B.4

Label the parts of the plant in the boxes provided below



Describe the function or importance of each part of the plant in the lines below.











