

**KINDERGARTEN
SEPTEMBER
PLANTING THE GARDEN and PLANTS UNIT**

TOTAL TIME: 45 Minutes (15 minutes per station)

STATION 1: PLANTING THE GARDEN

STATION 2: LABEL THE PARTS OF A PLANT

STATION 3: EXAMINE DIFFERENT TYPES OF LEAVES AND STEAMS

MATERIALS

Station 1: Planting the Garden

- Seeds
- Garden tools
- Garden Map
- My Album of Vegetables

Station 2: Label parts of a plant

- Straw
- Sunflower seeds
- Small paper plate
- Yarn
- Leaves (**bring your own from home**)
- Glue
- Construction paper
- Scissors

Station 3: Examine different types of leaves and stems and understand their functions.

- Different types of leaves (**bring your own from home**)
- Leaf cards
- Leaf category cards (Smooth, Toothed and Lobed)
- Soft and hard stems
- Stem cards
- Stem category cards (Woody and soft)

Station 1: Planting the Garden

Materials: Seeds, garden tools, garden map, and My Album of Vegetables.

Activity 1: Discussing Plants

Before we plant the garden, let's talk a bit about plants.

1. Where do we see plants?

Plants are everywhere. There are big plants (trees) and small plants (flowers).

2. What are the 7 things a plant needs to grow?

Warmth, light, water, air, nutrients, time, and space

3. What are some uses for plants?

- Clothing- cotton and rayon are produced from plants.
- Shelter - In many parts of the world, houses and furniture are made of wood. Wood is a plant product.
- Paper - Trees can be used to produce paper. Almost any plant that is found to be high in cellulose is considered excellent for making the pulp which produces paper, the most common today being trees such as aspen and pine varieties.
- Fuel - Plants are the origin for coal, oil and gas for heating
- Medicine - Many medicines come from plants.
- Food -
 - Cereal grain such as corn, rice, oats, barley and rye.
 - Vegetables
 - Fruit
 - Seasonings such as nutmeg and pepper come from plants
 - Beverages - steeping plants in hot water produces coffee, tea, hot cocoa

● Have you eaten any plants recently?

You can eat certain plant parts. Plants provide important food sources for both humans and other animals. Pictures of some of the things in the list below can be found in "My album of vegetables" and can be shared with the kids.

<p><u>ROOTS</u></p> <p>carrots beets turnips rutabagas</p>	<p><u>SEEDS</u></p> <p>lima beans peas green beans sunflower seeds black-eyed peas pinto beans</p>
<p><u>FRUITS</u></p> <p>tomato apple cucumber strawberries blueberries</p>	<p><u>FLOWERS</u></p> <p>broccoli cauliflower squash blossoms nasturtiums</p>
<p><u>LEAVES</u></p> <p>kale Mustard lettuce Collards spinach cabbage</p>	<p><u>STEMS</u></p> <p>celery rhubarb onions</p>

Activity 2:

- Take the children outside.
- Assist the children in planting the garden. Have fun!

Steps for Planting

1. Take a look at the garden map to find your garden and the kind of seed that your class is planting. (Each class will plant one kind of flower or vegetable.)
2. Prepare the Garden Soil - pull the weeds, turn over the soil with a large shovel, and then smooth out the soil for planting.
3. Add three bags of new soil. You will find them in the children's garden.
4. Take one kind of seeds. Plant according to the directions on the pack.

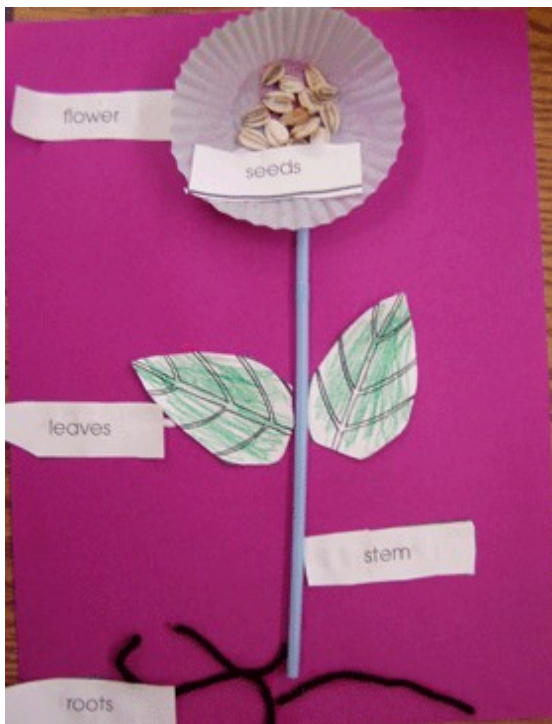
Station 2: Label parts of a plant

Materials:

- Straw
- Sunflower seeds
- Small paper plate or a cupcake paper form
- Yarn
- Leaves (you have to bring your own from any plant)
- Glue
- Construction paper
- Scissors

Activity:

Give each child a sheet of construction paper and have them make a plant on it using the cupcake form as flower with sunflower seeds in the middle, yarn for roots and straw for stem. Real leaves can be used for leaves. Have them label the stem, roots, flower, seeds and leaves.



Station 3: Plants have different observable features: Examine different types of leaves and stems and understand their functions.

Materials:

- Different types of leaves
- Leaf cards
- Leaf category cards (Smooth, Toothed and Lobed)
- Soft and hard stems
- Stem cards
- Stem category cards (Woody and soft)

Activity 1: Examine different kinds of leaves

Begin the activity by explaining to students that the leaves on different plants maybe be very different in appearance. For example, leaves can be different colors, shapes, and sizes. Ask them to explain what they think a leaf does for a plant. Share with them that the leaf performs the same function for most plants: making food.

Continue the discussion by explaining that a leaf can be identified by the shape of its edge. Broadly **there are 3 edge shapes: smooth, toothed and lobed**. Show them example of each kind. Next pass out the remaining leaf cards and have them put the leaf under the right category.

Further discussion points:

Toothed leaves help the plant get rid of extra water. In some plants, young toothed leaves release a liquid that protects the plant from insects. The lobed leaves of some plants help heat escape from the leaf. Smooth edged leaves are common on plants found in warm climates.

Activity 2: Examine different kinds of stems

Begin by having kids think about and describe a plant stem. Share some of the stem cards and have them point out each stem in the picture. Next ask them to explain what they think a stem does for a plant. Share that the stem has several functions.

1. It connects the leaves and roots.
2. It supports the flowers and leaves.
3. It carries water and nutrients from the roots to the leaves.

Ask them whether all stems look alike. Point out some stems are hard and woody and while others are soft and flexible.

Share the stem cards again and this time have them classify each leaf as either hard and woody or soft and flexible. Conclude that all trees and shrubs have woody stems and all the others are flexible.