

## LESSON GOALS-

This investigation is designed for kindergarten- second grade students. The primary goal of the lesson is to have students identify the parts of plants & their function, and how people use plants. The information presented will inform that plants have a dual role, adding beauty & oxygen to the environment and the best area for plant growth.

Title	Schoolyard Investigation Program Plants
Age Group	Primary Grades
Lesson Duration	
Year	2002
Cost	\$10.72

The investigation will be interesting to students because it will give them the opportunity to see plants germinate and how important it is that plants get their specific needs.

## MATERIALS-

*Whole Class-* hula-hoops, measuring cups, large plastic trays, rulers, food coloring, school yard, trowels, masking tape, name plates, flower bed edging fence,

Books- Vegetable Soup, Franklin Plants a Tree, Rain, Rain, Rain, Arnold's Apple Tree

*Individual-* four seeds (plant), clear plastic cup, potting soil, pencil, chart, journal, white daisy, scissors, clip board, crayons, paper bowls, large paper bag, paint (green & brown), small & large elastic bands, two small square sponges, four popsicle sticks, four labels, data sheet, unfix cubes (amount of cubes will vary)

## QUESTIONS

- What are the parts of a plant?
- What do plants need to grow?
- How do people use plants?
- Where do plants live?
- What area is best for plant growth?

## PROCEDURE-

*Question: Which area is best for plant growth?*

*Hypothesis: Plants will grow best in areas with rich soil, water, air, and sunlight.*

*Prediction: If plants grow best in areas with rich soil, water, air and sunlight, then plants planted in the front area will germinate first and grow at a faster rate than the other plants planted.*

- Use paper bowls & bags to make camouflage hat & backpack outfit.
- Label hat & bag with student's name first, then place small elastic hand in the hats (bowl), large elastic in the backpacks (large bags)

- Use green & brown paint and two small square sponges, 1<sup>st</sup> square sponge dip into green paint, dab onto hat & large paper bag, repeat with 2<sup>nd</sup> but dip into brown paint dab on to hat & bag, overlapping the green squares slightly.
- Students will walk the nature trail in their camouflage outfit in preparation for the lesson.
- Students in the outside classroom, read Franklin Plants a Tree
- Have students recall the function of roots and the white daisy experiment (white daisy experiment- each student had a clear plastic cup filled with water & a white daisy, measured five teaspoons of food coloring {any color but yellow/orange}, placed the daisy with roots in the water over night to observe the functions of the root & stem, white area will be the color of the food coloring to show roots pull water from the soil and travel through the stem)
- Students begin this lesson by experimenting with four seeds and observing the process of germination
- This will be a controlled experiment
- Label the clear plastic cup, they will put two of potting soil and four seeds in their clear plastic cup
- Use unifix cubes to measure each plant before planting it outside
- Using prior knowledge obtain on plants, students will observe, measure and write in their journal about the seeds (plant) activity
- After germination, students will plant the plant in four different locations in the schoolyard
- For planting, the areas will be marked by hula-hoops, front yard, nature trail entrance, playground, hill area by fence, each student will plant one plant in the assigned areas, then label their plant with a popsicle stick, flower bed fencing will be used for long term marking.
- Using prior knowledge obtained on plants, students will observe plants on Mondays and Fridays, use unifix cubes to measure the growth, record measurements on data sheet and write in journal about the plants.
- The plants will be observed for four weeks.

## RESOURCES-

*Where Plants Live*, Destinations In Science, Addison-Wesley, 1999.

Plants for Kids- [sage.edu/division/education/plants/genec.html](http://sage.edu/division/education/plants/genec.html)

## BUDGET-

2 packs of bowls \$5.78, elastic bands \$2.56, sponges \$2.38, other items from school science kit.