

# Little Green Thumbs

## THEME

Gardening connects us with the origin of our food.

## SUB THEMES

1. The food we eat grows in the dirt.
2. Plants must have their basic needs met to grow.
3. Anyone can learn how to grow a productive garden.

## VOCABULARY

Seed, roots, stem, leaves, flower, soil, water, light, air, *germinate*, *carbon dioxide*, *nutrients*, *photosynthesis* (for 4<sup>th</sup> and 5<sup>th</sup> graders).

## ACTIVITY MATERIALS

Bean seeds, canned vegetables, pictures of vegetables on the plant, vegetable seeds, water bucket, water, gardening tools, labels for the class's plantings

## INTRODUCTION

Introduce yourself and state the title of the activity. Preview the main points of the activity and give students an idea of what they will be doing. Conversationally state the theme and sub themes. Ask: **What did you eat for breakfast? Where did it come from?** Explain that although we buy our food from a grocery store or restaurant, our food actually comes from the Earth. Every vegetable, bean, fruit, and grain grows out of the dirt. Even our cows and chickens rely on the dirt to provide their meals. When we think about it, dirt is very important to our every day lives.

## ACTIVITY

Pass around the bean seeds for the students to hold. Explain that the plants we eat start out as seeds. Ask: **What are some fruits and vegetables you have eaten that contain seeds** (tomatoes, oranges, apples, grapes, peppers, etc.)? Explain that as the seed grows, roots reach down into the soil to take up nutrients and water from the soil. Have the students carefully extend their legs out in front of them to demonstrate the growth of the roots. Then, from the top of the seed, the stem reaches out from the soil to hold the plant up and move water to the rest of the plant. Leaves form off of the stem to help the plant make food. Have the students stand and carefully stretch their arms upwards to demonstrate the growth of the stem. Explain that some plants even form a flower, which is where our fruits come from and where the seeds are made. Have the students cup their extended hands together to demonstrate a flower. Collect the seeds and have the students return to their seats.

Next, pass out a canned food prop to each student. Ask each student

## Teacher's Corner

### Grade Level(s)

1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup>

### Grade Level Expectations

#### GLE 0107

- 1.1: Recognize that living things have parts that work together.
- 1.2: Use tools to examine major body parts and plant structures.
- 2.1: Distinguish between living and non-living things in an environment.
- 3.1: Recognize that plants and animals are living things that grow and change over time.

#### GLE 0207

- 1.1: Recognize that plants and animals are made up of smaller parts and use food, water, and air to survive.
- 3.1: Recognize that animals eat plants or other animals for food.

### State Performance Indicators

#### SPI 0307

- 1.1: Identify specific parts of a plant and describe their function.
- 2.1: Distinguish between living and non-living things.
- 3.1: Identify the basic needs of plants and animals.

#### SPI 0407

- 3.1: Determine how different organisms function within an environment in terms of their location on an energy pyramid.

#### SPI 0507

- 3.1: Identify photosynthesis as the food manufacturing process in plants.
- 3.2: Compare how plants and animals obtain energy.

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### ACTIVITY (cont.)

to identify what he or she is holding (carrot, lettuce, tomato, asparagus, potato, pepper, etc.). As they make their identification, hold up the corresponding picture and explain to which part of the plant their item belongs. When completed, collect the props.

Before heading over to the garden, explain that plants need four things to live and grow. Without these things, we cannot get food from plants. Ask: **What are the four needs of plants** (light, water, soil, and air)? Encourage the group to look for these things when you move to the garden.

*For 4<sup>th</sup> and 5<sup>th</sup> graders, ask: **We know from where our food comes now, but from where do plants get their food?** Explain that plants make their own food using the sun's energy. This is called photosynthesis and it happens in the leaves of a plant.*

Next, bring the group to the garden and give them a tour of the different plots and a brief explanation of the goals of the garden. End at the student plot and explain that they are going to be planting some vegetables in the garden. Break the larger group up into smaller groups of two or three if needed. Go through how to use the garden tools and do a demonstration planting for the group to see. Have a some student volunteers till the ground to prepare it for the planting. Once each group has planted their seeds, bring everyone back together and review the process and how the four basic needs of plants have been met. Students should notice that one crucial step has been missed in the process, water. If they do not mention this, gently remind them that plants get thirsty just like people. Since it is not raining at that moment, explain that they will give each planting a little water. After the watering is completed, have the group put their tools back.

Bring the group back together for the discussion.

### DISCUSSION

Help the students to label their class's plantings. Have the students point out the living and non-living things within the garden. Explain that the living things depend upon the non-living things to live and grow. Ask: **How would the living things grow if the non-living things like water and soil were polluted with chemicals?** Explain some of the sustainable practices used in the BVNC garden, such as not using pesticides or fertilizers.

### WRAP-UP

Let the group know that the activity is coming to an end. Conversationally review the theme and sub themes. Give the teachers any of the materials that students are able to take home with them.

### ACKNOWLEDGEMENTS

- Copyright © 2008 Healing Stones Foundation. All rights reserved.
- Activity developed by Melissa Squirlock; February 2008.
- Reference material, vocabulary, and definitions from:  
Science: Grade 1. (2003). Unit A: Plants and Animals All Around. Harcourt: Orlando, pp. A20-33.  
Science: Grade 4. (2003). Unit A: A World Of Living Things. Harcourt: Orlando, pp. A68-85.