



Activity One

Have You Seen My Seeds?

GRADE LEVEL

First – Third

SUBJECTS

Reading in the content area, science and language arts

OBJECTIVES

By the end of these activities, the students will be able to:

- Read for understanding
- Understand the science of seed germination
- Record and interpret data
- Apply knowledge of seeds, soil and sun to the larger concept of agriculture
- Answer questions and make predictions based on given data

NATIONAL LEARNING STANDARDS

- NL-ENG.K-12.2 Reading for Understanding
- NS.K-4.1 Science as Inquiry
- NS.K-4.3 Life Science
- NM-REP.PK-12.1 Create and Use Representations to Organize, Record, and Communicate Mathematical Ideas

MATERIALS

- Clear plastic cup (6"-12"), black construction paper, paper towels (1 each per student)
- Pea or Bean Seeds
- Additional Seed packets
- Magnifying Glass (hand lens)

BOOK

SEED SOIL SUN Earth's Recipe for Food
– by Cris Peterson ISBN# 978-1-59078-713-7

GENERAL INTRODUCTION

Option 1: If volunteer producers are conducting this lesson, introduce yourself and describe your farm or agricultural business.

Option 2: If classroom teachers are conducting this lesson, proceed to activity introduction.

ACTIVITY ONE



INTRODUCTION

Read the entire book *SEED SOIL SUN Earth's Recipe for Food* and show students the pictures. Refer back to the first page that shows all the hands holding different types of seeds (as pictured above). This page starts the section of the book that deals with seeds and how much of our food comes from seeds planted in the spring by farmers and what it takes for a seed to germinate.

ACTIVITY BACKGROUND

A great amount of the food that humans and animals eat starts from seeds. Every spring farmers plant millions of seeds in the soil. Inside each seed is a new plant waiting for the right conditions to grow. With moisture from water or rain and heat from the sun those seeds swell and split open. From the seed a root grows down into the soil



and a shoot (or primary leaf) grows up to the sun. The soil provides a home for the seed to grow into a plant. There are many types of seeds that grow into the food we eat.

ACTIVITY INSTRUCTIONS:

Have You Seen My Seeds?

Make sure each student has each of the following:

- clear plastic cup (6"-12")
- half sheet of black construction paper
- paper towels, pea or bean seeds
- magnifying glass (hand lens)

Use a clear plastic cup that is 6-12 inches tall. Cut black construction paper so that it fits inside, up against the cup walls. The black construction paper serves as a background to show the seed's germination. Fill the center with wadded up paper towel. "Plant" bean seeds between the cup walls and construction paper, about 1/2 - 2/3 of the way down. Water the paper towels and keep moist. Bean seeds will grow and you can view root growth, what happens to seeds, etc. They can grow quite large and will be fine as long as you keep the paper towels moist.

PLANTING SEEDS

Plant a variety of seeds including pea and bean seeds and keep track of their daily growth. Plant them in clear plastic cups so the root system can be observed. Chart how many days it takes each type of seed to sprout.

SEED OBSERVATION

Using a magnifying glass, observe a variety of sizes of seeds.

LESSON EXTENDER:

1. Show students the different types of seeds you have provided, but do not tell them which kind of seed/plant they are. Give each student one seed. Allow the students to examine the seeds for physical characteristics.
2. Discuss that different seeds have certain characteristics. Some seeds are round or oval, some brown, black or even striped, etc.
3. Have students stand up as you describe their seed. Example: How many of you have a seed that is round in shape? Ask students to get into groups, according to the characteristics of their seeds. You may do this by using a Venn diagram where characteristics overlap like round and black. You may also choose to form a simple human (student) bar graph, for example, students with black seeds all line up in one row, white or striped seeds in another, side by side.
4. Finally, allow the students to make an educated guess as to which plant this seed will grow into. Then reveal the answers and observe how even though the seeds may look the same they grow into many different plants.