



Seeds & Sprouts: **Children's Garden** Key Concepts, Key Activities
REVISED 9/06

Big Idea

K-1 students participating in the Seeds & Sprouts program should come away from the experience understanding that **plants need light, soil, and water to grow**. They should also be able to **identify roots, leaves, stems, and seeds**. These are the most important concepts. We would also like to try to help them to make the connection between plant features and plant needs by understanding that **roots take in water and nutrients**, and **leaves make food from water and light**.

Secondarily, we want to encourage students to understand the role of a gardener: to provide for the basic needs of chosen plants so that they may grow. The students would understand that they, too, could be a gardener.

The Lesson: Soil (10 min)

Key Concepts

Soil is made up of **many components**, including different sized pieces and also **minerals**. **Plant needs soil** to grow because: it provides **water, air, and nutrients** to roots.

Key Activities

- Examine and collect different size rocks (inc. sand) in sandbox. Different sizes help make space for air and water in soil. Discuss and then drop into chimes.
- The mineral components of soil include things like the magnetic sand. Explore and discuss. Minerals are like vitamins for the plant.

The Lesson: Water (10 min)

Key Concepts

Plants need water to grow. A plant's **roots take in water and nutrients**. Plants get water from **rain, mist, snow, humans, etc.**

Key Activities

- Assess students' knowledge of how plants get water. Use papyrus or an uprooted weed to help guide conversation about underground roots.
- Roll up sleeves and feel water in water bells and vortex. Students can pretend they are the part of the plant that takes in water. What if you could take in water through your hands like plants take it in through their roots?
- Explore how plants in (this and other) gardens get water. How do we know they have enough water?
- Look at water plants in pond. Compare how they get water to how papyrus (etc.) nearby gets water. Show the roots on the hyacinth or the water fern if possible. Water is still used for the same purpose.



The Lesson: Light (10 min)

Key Concepts

Plants need light to make food. They “**catch**” **light** with their leaves. Light is made up of many **colors**.

Key Activities

- Examine the tunnel (before entering). Why there are not plants growing inside. What is missing (if there was soil, could they grow then?)? What does a plant use light for? Make sure there is an understanding that plants need light to make food to grow.
- Learning more about light: walk through tunnel.
 - If it is making rainbows, ask what colors they saw. Those colors make up the light that comes from the sun. How does a plant use that light?
 - If not, proceed to the second activity.
- Use the flashlight and CD or water to “search” for rainbows in light. They can see a rainbow anytime by doing this.
- Students can also look for and share their favorite colors from the rainbow in the plants surrounding the tunnel and topiary volcano areas.

Wrap-up (5 min)

Key Activities

- Convene in grass. What did they like best? What senses did they use? What colors did they see? What did they learn about light? Etc.