



## SPRING | Soil

# What Works Best: Experimenting with Different Growing Mediums

### Summary:

Soil comes in all types: sandy, rocky, clay, wet, dry, hot, and everything in between. Gardeners will have the opportunity to explore the properties of soil by running their own soil experiment. Gardeners will also have the opportunity to practice writing scientific observations and following the scientific method.

### Before Visiting the Garden:

**Gather:** Four clear plastic cups or containers of sand, rocks, and clay (leave one cup empty); a seed packet, watering can, and notebook. If needed, follow this recipe to make clay: [http://www.ehow.com/how\\_12091715\\_make-homemade-clay-airdries.html#page=0](http://www.ehow.com/how_12091715_make-homemade-clay-airdries.html#page=0).

**Explore:** *Rivers and Tides* by Andy Goldsworthy (images available here: <http://visualmelt.com/Andy-Goldsworthy>)

**Read:** *Dig and Sow, How Do Plants Grow?* by Janice Lobb

### In the Garden:

Plants are an essential part of our ecosystem. Just like we need the proper nutrients to live and be healthy, so do plants. Look at your containers of soil types: sandy, rocky, clay. Explore what they look and feel like.

#### Observations:

- What do you notice about each soil type? How are they similar? How are they different?
- Describe each soil type by creating a four square chart in your gardening notebook. In your chart write down a few adjectives about the way each soil looks and feels.
- Take some time to hypothesize what soil type will make our plants the most happy. Use your observations to form a hypothesis, your guess about what you think will happen, that you will later test.

### Questions to Explore:

- What do you think a seed needs to grow?
- Describe a handful of garden soil.
- What do the other types of soil feel and look like?
- Would you use the different materials for different uses? If so, what?
- Which type of soil will the seeds like the most?

### Activity:

1. Take some loam (soft, healthy dirt) from the garden and place it in a new plastic cup or container.
2. Place one seed in each plastic container and mark on the outside of the container where in the soil the seed is.
3. Over the next few weeks, keep the seed consistently watered and track the seed's growth.
4. Write your growth observations in a new four-square chart each day. What do you notice? Which soil did the seeds like the best?
5. When at least one seed has grown to the surface of the soil, write a summary about your findings. Which soil did the seeds grow well in? Was your guess, or hypothesis, about the best soil correct?
6. Now, take your cup back to the garden, and plant your seedling into a bed with other plants.

### Beyond the Garden | Soil Analysis Around the Neighborhood

As you wait for your plants to grow, take some time to explore other kinds of soil around your neighborhood. Look at a garden in a park near your home. Look for places where plants are growing. When you find one, stick your finger into the soil. What does this soil feel like? Do the plants seem to grow well here? Use this information to help you make more observations in your garden journal about the kinds of soil plants prefer to grow in.



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### Continue Exploring | Supporting Materials

To take your exploration even further, you can begin to test your soil's pH level and find out how acidic or alkaline it is using one of these methods: <http://www.wikihow.com/Test-Soil-pH>

Junior Master Gardener Resources: <http://jmgkids.us/>