

Seed Sprouting Science

As a starting point for a great variety of explorations regarding plants (including the difference between living and non-living things), basic seed sprouting can provide practice in observation, description, data collection, and experimental design.

This lesson adapted from <http://www.housingaforest.com/sprouting-seed-activity/>

Materials needed:

- Base (pie tin, paper plate, Tupperware, etc.)
- Seeds, at least 2 different types
- Paper towels
- Spray bottle
- Plastic (veggie bag, sandwich bag, plastic wrap)



Begin with a discussion of seeds. *What are seeds? Are they living or non-living things? Why does a student think they are living, or non-living?*

Write student observations on chart paper, or have students write and draw individually in their science notebooks.

Pass around seeds for students to observe and compare. (In clear plastic bag or container, or in table groups) Again, note observations on class chart paper or whiteboard, or have students write/draw their observations in their science notebooks.

Questions for students to discuss and write about:

How are these seeds alike? How are they different?

What will happen if the seeds are placed on damp paper towels and left in the sunlight? How long will it take for something to happen? Will both types of seeds have the same thing happen?

Next, “plant” the seeds. Have students line the “tray” (pie tin, paper plate, etc) with two paper towels. Spray the paper towels lightly until they are damp. Arrange seeds on the paper towel, with some space between each seed. You might choose to have students work in small groups and have each group place seeds of one type on one side of the tray and the seeds of another type on the other side. Or, use two separate trays, one for each type of seed.

Place the tray gently inside a plastic veggie bag, or cover with plastic wrap, to create a mini green-house. Set on a counter where the tray will get some sunlight during the day. (You will need to check a couple times each day to make sure the paper towel stays slightly damp – not too soggy, and not dried out.)

Every day, allow time to check the trays. What is happening to the seeds?

Once the seeds begin to sprout, you can collect some data – again, either on the whole-class chart or in individual student notebooks.

Data students might collect:

- How many days did it take for Seed 1 to sprout? For seed 2?
- What do they observe when the seed sprouts? What happens over the course of several days?
- How long does it take for a leaf to appear?
- There seem to be two different types of “sprouting” taking place? What is happening (roots and leaves).



Based on these observations, revisit the initial conversation about seeds. Are they living things? Why or why not?

Going further:

These observations can lead to new questions to investigate.

(CRS can provide lesson plans and resources – contact us if you’d like specific lesson plans. Some ideas are here: <http://www.crscience.org/volunteers/lessonarchive>)

- What’s inside a seed? (“Dissect” a lima bean that’s been soaked in water – what do you find?)
- Seeds we eat: look inside to discover the seeds in green beans, peas, bell peppers, cucumbers, etc. Where are the seeds on a strawberry?
- Investigation: Does (amount of light, amount of water, type of soil – select one variable) impact seed sprouting?
- Investigation: Do seeds sprouted on a paper towel in a mini greenhouse sprout faster or slower than seeds within a planting mix?