



Nurturing Seeds Experiment

Part 2

NGSS Addressed

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.



Materials

Bean seeds, paper towels, receptacle (like a microwave meal dish), different types of liquid to “water” the seed.



Challenging Question

How do environment and resources make a difference in seed germination?

(K-5) Access Prior Knowledge

Say: Last week, we designed our own experiments based on some general background information they have about seed germination.

- You have been monitoring your seeds in the last week.
- Today you will share what you noted in your journals.



Explore

Kindergarten through Fifth Grade Explore

Ask: What do we know about seeds? Talk to your shoulder partner (or table group) about seeds. What do seeds need to *germinate* or sprout?

- Lead a discussion (K-1) about what the seeds did and when.

Ask: Did seeds germinate without soil? Did seeds germinate when “watered” with something other than water? How long did it take for seeds to germinate?

- **2nd-5th:** Have students gather all their information for their seed. Each group should present their observations.
- Have students come up with an answer to: If this seed was placed in dirt and watered with the chosen liquid, would a plant grow? Use knowledge gained from this experiment to support your claim.
- Share outcome of the seed that received water.

Kindergarten and First Grade Revision and Reflection

All students draw a picture of the end result of their seed germination experiment. Describe what happened to your seed.

Second and Third Grade Revision and Reflection

All students draw a picture of the end result of their seed germination experiment. Compare your choice of location with another group. Would a different location choice result in a more successful germination?

Fourth and Fifth Grade Revision and Reflection

All students draw a picture of the end result of their seed germination experiment. Observe another seed outcome. Is there any other germinating seed that did as well as the seed that was watered with water? Why do you think that seed did as well?

