



Seed Starting Workshop

Start seedlings for the garden while exploring the differences and similarities between various seeds.

Grade Levels

Grade 3

Curriculum Objectives

Grade 3

Science and Technology: Understanding Life Systems

Specific Expectations

- 2.3 – Germinate seeds and record similarities and differences as seedlings develop;
- 3.1 – Describe the basic needs of plants, including air, water, light, warmth, and space
- 3.2 – Identify the major parts of plants, including root, stem, flower, stamen, pistil, leaf, seed, and fruit, and describe how each contributes to the plant's survival within the plant's environment;
- 3.3 – Describe the changes that different plants undergo in their life cycles.

Materials:

- Lima or kidney beans (soaked overnight)
- Variety of seeds including common seeds (sesame, corn, rice, acorns, peas, pumpkin seeds, kidney beans), less common seeds (lentils, flax); very small seeds (poppy seeds) and very large seeds (acorn; coconut).
- Seed parts diagram
- Jiffy pots
- Soil-less seed starting mix
- Seeds (recommended: pumpkin, zucchini, squash)
- Popsicle sticks or clothespins
- Plastic tray
- One Seed Starting Worksheet per student

Activity

Part One: What is a seed?

Have the students assemble around dishes filled with various seeds from the mix.

Discussion points:

- Think about all the different seeds you see in the mix... How many can you identify? Seeds are just as diverse as the vegetables and fruits they produce!
- Which seed is the smallest? Which one is the biggest?
- Point out the different varieties of a single species (black and white rice; red and yellow corn; red and brown lentils); there are hundreds of varieties within a single species!

Students use the first space in the worksheet for drawing and recording observations from this station/activity.

Part two: Inside the Seed

Distribute the pre-soaked kidney beans and magnifying glasses to the students; instruct them on carefully removing one half of its shell.

Discussion points:

- Look inside – what do you see? How many different parts?
- What do you think each part is for? What does each part become?

Using a diagram, identify the parts of the seed and ask students to find the equivalent part in the kidney bean. Big or small, seeds all have three things in common related to their structure:

- 1) Hard protective shell outside called the seed coat;
- 2) Dormant embryo inside;
- 3) Nutrition (stored food) to keep it viable.

Students use the second space in the worksheet for drawing and recording observations from this station/activity.

Part three: Planting Seeds

Distribute the jiffy pots to students and prepare the soil-less mix by adding water to moisten it. Have the students fill their jiffy pots and plant a seed in each one. Identify what vegetable has been planted on one side of the Popsicle stick or clothes pin, and the student's name on the other side. Place the jiffy pots on a plastic tray and keep the seedlings in a warm spot for germination (a light table is ideal); water daily.

Students use the third space in the worksheet for drawing and recording observations from this station/activity. Over the course of the next several weeks, students can record their observations as the seeds germinate and the seedlings grow.