



Seeds-Parts and Germination

Grade Level: K, 1st, 2nd

Time: 35-65 minutes

Materials: Seed Grow Kit, water, seeds, sticky pad, paper, construction paper, hole punch, yarn, scissors, Book Plus Science Models *From Seed to Plant*, Handout: *A Trip Inside a Bean Seed*, crayons, and cups.

Introduction

This activity will teach children about seed anatomy and germination. In addition, students will learn how to craft a hypothesis and increase their observation skills.

Activity

15 minutes

Introduction

K, 1st Grade: [The Tiny Seed](#) by Eric Carle or [Seeds](#) by Gail Saunders-Smith

2nd Grade: [The Magic School Bus Plants Seeds](#)

If there is not time to read a book prior to the activity; begin the class with a general 5 minute question /answer period about seed development and lifecycle.

10 minutes

Seed Anatomy and Germination Experiment

Explain to class that they are going to watch a seed germinate. Show the “From Seed to Plant” model. This model illustrates how a seed becomes a plant.

Pass out, *A Trip Inside a Bean Seed* handout. The handout labels the basic anatomy of a seed. The **cotyledons** are the first true leaves* that grow within a seed. These first leaves will always remain within the seed. The **embryo** (a part of the cotyledon) is the vessel in which nutrition called the **endosperm** is fed to the cotyledon which will then create a plant. The **seed coat** is a hard protective layer surrounding the seed to protect the embryo.

*2nd Grade: If interested in an extension look at monocot and dicot information attached.



SAWTOOTH BOTANICAL GARDEN
School Outreach Program
Botany Trunk

Activity Cont.

10 minutes

Open Seed Grow Kit

Pass out:

petri dishes

foam

cup of water

seeds (from kit or trunk)

sticky note

In front of classroom demonstrate how to set up the seed germination experiment.

1. Open petri dish
2. Soak foam with water
3. Place foam into petri dish
4. Place 2-3 wetted seeds in dish 1 inch apart on top of foam
5. Close cover
6. Write name on sticky note and place on the bottom of the dish

Place in light but not in direct sun

15-20 minutes

Observation Journals

Create *Seed Journals*.

Use construction paper as the cover and white paper in the center.

Punch 3 holes and tie together using yarn provided.

In these seed journals students will:

Draw and label the anatomy of a seed

Record weekly observations of the germination process through drawing.

Record expected outcome or hypothesis for the upcoming week.

Magnify lenses (11) are provided in the trunk.

After roots have started to grow you can transplant your seedling into small pots of soil.

Conclusion

Students should now understand the function of a seed and how a seed germinates. They also have learned how to become a scientific observer. If you liked this activity there are several variations of this experiment found in the Seed Grow Kit Instruction Sheet. This company highlights various experiments such as eliminating light or water to show children what a seed needs to germinate. Another fun activity is to sprout salad sprouts using lentil seeds. Simply soak the seeds over night then rinse them twice a day there after. In about a week and a half you will have sprouts! The children will enjoy the fruit of their labor in a salad when the experiment has ended.