



Ag Experience Learning Kit

Farm in a Glove Lesson Plan

Students will investigate the properties of five different crop seeds, hypothesize the type of each seed, and observe the germination process.

Time Required

1 hour for the initial activity and observation recording. 20 minutes each for 3 subsequent observation recordings.

BACKGROUND

Crop production is a critical aspect of agriculture in Saskatchewan and the foundation of many of the foods we eat everyday. In this fun investigation, students will take on the role of plant scientists. Using keen observation skills, students will illustrate and describe 5 different mystery seeds and attempt to guess the kind of crop each will become. Students will “plant” each of the seeds in their personal mini-farm (plastic glove) then observe the magic of germination over a period of 10 days–2 weeks.

Materials Provided for Each Student

- Clear plastic glove
- 5 cotton balls
- 5 types of Mystery Seeds, 2 seeds of each type
- 1 twist tie
- Farm in a Glove worksheet (printed master copy and digital file provided)

Additional Materials Required

- Permanent Marker
- Cup or recycled vessel with water

Suggested Resources

- Foundations of Saskatchewan Agriculture: Crops. PDF Information Sheets and Interactive E-Learning Modules. <https://aitc.sk.ca/resources/foundations-of-sk-agriculture>
- Explore Sask Ag– Kid’s website: Present, Field Crops <https://exploresaskag.ca/present/field-crops/>





ACTIVITY INSTRUCTIONS

1. Distribute a plastic glove and a twist tie to each student. Using a permanent marker, have students label each finger of the glove with a number, 1-5; then label the glove with their name.

2. Distribute five cotton balls to each student. Using a plastic cup or recycled vessel containing water, have each student wet their cotton balls 1 at a time, then squeeze the excess water out. The cotton balls should be moist but not dripping wet. Have students place a cotton ball in each finger of the glove.

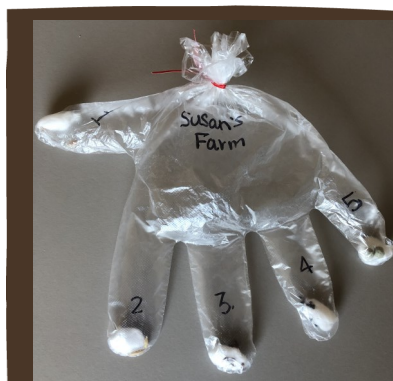
3. Distribute a Farm in a Glove worksheet to each student (a master copy of the worksheet is provided with this lesson plan for photo copying, alternately, a digital file is available to print). Working in numerical order, distribute seeds of each type to every student, one seed type at a time. Distribute two each of the larger seeds in bags #1, 2 and 5. Distribute a small pinch (~5) of the smaller seeds in bags #3 and 4. As the seeds tend to roll on hard surfaces, it may be helpful to place seeds on a folded paper towel for observations. Students will draw each type of seed in the corresponding spot on their worksheet. Students will record the physical characteristics of the seed including size, shape, colour, and any defining traits. Students will make a guess as to the kind of seed, and a brief description of why they have guessed that type. After students have finished drawing and recording their observations and hypothesis, they will “plant” the seed in the appropriately labeled finger of the glove, tucked in with the cotton ball

4. Students will blow up the plastic glove and close it with a twist tie.

5. The gloves may be stored/displayed by taping them to a window, chalkboard, or wall. You may want to hang a “clothes line” under a whiteboard ledge and use clothes pins or paper clips to hold the gloves in place. Keep in mind that students will occasionally need to access their gloves to make updated observations.



Tip: It may be helpful to use the eraser end of a pencil to get the cotton ball all the way to the tip of the glove fingers.



Students will learn about SK crops by planting their very own tiny farm!



The seed should be in contact with the cotton ball for the water to initiate germination.



Ag Experience Learning Kit

ACTIVITY INSTRUCTIONS CONT.



Glove-farms on display for keen observers!



Explore the Foundations of SK Agriculture resource to identify foods and other products made from each crop!

6. The seeds will germinate in 3 to 5 days and reach their full glove-farm capacity after about 10 days. Students will regularly observe their 'farm', looking for changes in the seeds. Observations can be illustrated and/or described on their worksheet. Beyond two weeks, the plant has used up the nutrients provided by the seed and will need soil and more space to continue growing. Few further developments will occur.

7. Wrap up: For the final observations, students may "harvest" their crops by gently removing the seedlings from the glove. This may provide better access for viewing structures and changes. They will revisit their seed type hypothesis and assess if they would like to stick with their initial guess or change it now that they have seen the seedling. Using the Mystery Seed Key below, reveal the identity of each seed by number. Invite students to share their correct (or incorrect!) guesses, and what led them to the hypothesized identity. The seeds and cotton balls may be composted after the activity is complete.

Extension: If you have access to a grow light, the seedlings could be transplanted after about 1 1/2 to 2 weeks. To help keep the seedlings intact, begin by cutting the tips of the fingers off the glove. Transplant the cotton ball and small plants into potting mix. Students may continue to make observations as the plants mature.

Seed Identification Key

Package Number	Seed Type
#1	Wheat
#2	Oats
#3	Flax
#4	Canola
#5	Green Peas