



# 4-H Club Sample Agenda - Gardening in a Glove

## Agenda Outline

### WELCOME

As people are arriving, have each person list a plant that begins with the letter of their first name and another plant that begins with the letter of their last name. If a member struggles to think of a plant, ask other members of your club to help.



### MEETING PURPOSE

Brainstorm club goals to finalize charter and learn about seed germination!

### BUSINESS (5-10 MINUTES)

Remember if too much business is planned, members might not come back! Below is just a sample. See other [optional business items](#) on our Leading a 4-H Club web page.

- [4-H Pledge](#)
- Roll Call: Make a gesture that represents your favorite plant!
- Recap what we did last time
- Finalize charter (brainstorm club goals with members)
- Celebrate any member accomplishments!

### EDUCATIONAL ACTIVITY - [Gardening in a Glove](#) (20-40 MINUTES)

### [RECREATIONAL ACTIVITY](#) (10-15 MINUTES)

### [REFLECTION](#) (5 minutes)

- How did we do?
- How did we live out the 4-H Pledge today?

### REFRESHMENTS

Pop corn



# Educational Activity - Gardening in a Glove

## 4-H project area

Gardening, Agronomy, Plant Science

## What it is

Learn what seeds need to germinate and observe how a seed sprouts in the right conditions.

## Why it matters

Understanding how seeds grow into plants, we can create our own little gardens anywhere!

## Getting started

**Time:** 20 minutes if doing just the main activity; add 20 minutes for **Take it Further** activity

**Materials:** (per person)

- Food service glove (clear, no elastic) or clear plastic sealable bags (snack or sandwich size)
- Cotton balls
- Water
- Seeds
- Permanent marker

**Prep for virtual participants:**

- Make sure to let families know ahead of time to bring the supplies listed above or make arrangements to get materials to families.

## Background

This activity provides an opportunity to closely observe **germination**, the process a seed goes through to develop into a plant.

"In the germination process, moisture softens the seed's outer protective covering, called the seed coat. The embryo pushes through the softened seed coat and the new plant begins to grow. The roots push further down into the soil, and a shoot, which contains the new plant's stems and leaves, pushes up towards the surface.

The germination process can be somewhat mysterious because it typically occurs underground where it cannot be observed. The clear plastic glove and cotton balls used in



this activity provide an opportunity to view the germination process and the plant's beginning growth and root system."<sup>1</sup>

One easy way youth can remember what seeds need to grow is by using the acronym P.L.A.N.T.

**P** = Place - seeds need a place to grow (typically soil), but have youth seen plants grow in places other than soil? How about a crack in the sidewalk?

**L** = Light - seeds need light (sun) to grow

**A** = Air - seeds need air/oxygen to grow

**N** = Nutrients - seeds need to have some sort of food/nutrients to grow, often provided in the soil

**T** = Thirst-quenching Water - seeds need water to grow

## How to do it

1. To promote safety protocol, separate materials for each youth before youth arrive.
2. Ask youth what gardeners and farmers need to provide in order to help their seeds grow. After hearing their ideas, sum up by sharing that one easy way youth can remember what seeds need to grow is by using the acronym P.L.A.N.T.
  - P = Place: Seeds need a place to grow (typically soil), but have youth seen plants grow in places other than soil? How about a crack in the sidewalk?
  - L = Light: Seeds need light (sun) to grow.
  - A = Air: Seeds need air/oxygen to grow.
  - N = Nutrients: Seeds need to have some sort of food/nutrients to grow, often provided in the soil.
  - T = Thirst-quenching Water: Seeds need water to grow.
3. Ask if youth know what **germination** is (the process of a seed sprouting to become a plant).
4. Explain to youth they will be starting their own seeds with everything that they need in order to grow, but in a mini version—a garden in a glove.
5. If using different types of seeds, have youth write, using permanent marker, on the finger and thumb of the glove what type of seed it is. (If you are unable to get food service gloves, you can use a sealable plastic bag for each seed. Have youth label each bag.)
6. Instruct youth to dip cotton balls into water. Have them squeeze the excess water out.
7. On each cotton ball, have them place 1 or 2 of the same variety of seeds until they have 5 cotton balls with 5 different seeds on them.
8. Place the “seeded” cotton balls into each correctly labeled finger of the glove.
9. Have them fold down the opening of the glove and tape it shut.
10. Challenge youth to record daily observations of their mini garden.
11. Reflect as a group:

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<sup>1</sup> Knott, S., Spielmaker, D., Wallin, L. (n.d.) *Farming in a glove*. Agricultural Literacy Curriculum Matrix. <https://www.agclassroom.org/matrix/lesson/66/>



- What is germination?
- What do seeds need in order to germinate?
- What will happen if seeds do not have all the things necessary to grow?
- What do you need to do to make sure your garden in a glove grows?
- If doing the **"Take it Further"** activity, ask youth to make predictions about which of the seeds will germinate.

## Take it Further (an optional science investigation!)

1. Have youth perform the same process but neglecting all but one of the things that seeds will need to survive.
2. Label the fingers of the glove as follows:
  - Thumb: label "C" for control
  - Pointer finger: label "NW" for no water
  - Middle finger: label "NA" for no air
  - Ring finger: label "NH" for no heat (warmth)
  - Pinky: label "NL" for no light
3. Dip 4 cotton balls into a bowl of water.
4. Place the 5 seeds into the 5 different cotton balls.
  - The thumb will be the "control," or the seed that receives everything it needs to survive.
  - The pointer finger will be the seed without water.
    - Do not put the cotton ball in the water.
  - The middle finger will be the seed without air.
    - Squeeze out as much air as possible and then wrap the rubber band or twist tie around the finger, just above the cotton ball.
  - The ring finger will be the seed with no warmth.
    - Cut the glove finger off and put it in a refrigerator, tape the hole shut.
  - The pinky will be the seed with no light.
    - Cover the seed with a dark piece of paper.
4. Fold down the opening of the glove and secure it with tape.
5. Let youth know what they are doing is an example of a practice that scientists and engineers use: planning and carrying out an investigation.
6. Challenge the youth to watch their mini farms and record their observations, and to compare and contrast the 2 different gloves.
7. Once the seeds have sprouted, carefully remove them from the glove and transplant them to a pot (with soil) and continue to let them grow.





## Recreation Ideas

Moving plants: Stand in a circle. Have some people represent daisies, some represent pumpkins, and the others tomatoes. Say, "Daisies, move!" Daisies must quickly change places. Continue the game, calling out different plant names.

Musical flowers: Ahead of time, cut out several construction paper flowers and water droplets. Use several different colors, but make sure that each flower has a matching water droplet. To play, place the flowers on the floor. Give each person a paper water droplet. This game is played much like musical chairs, but without competition. Youth must walk around the flowers until the music stops. When the music stops, each water droplet must find its matching flower. Before starting the music once again, youth may exchange their water droplets. For younger children, you can play with only two colors of flowers and water. To add competition, set the water droplets aside. For this version, the youth are the water droplets. Remove one flower from the floor so that you have one less flower than there are people. Play like musical chairs--when the music stops, everyone must find a flower to stand on. If you don't find one, you sit out. This version is more appropriate for older youth, grades 3 and up.

## Additional Resources

Farmers 2050 (<http://www.farmers2050.com/>) - Free game! Grow crops, raise livestock, craft and sell goods and engage with local and global partners as you level up. Feeding the world relies on balancing your economic, social and environmental sustainability so strive to be a leader.

Gardening in a Glove activity adapted from Knott, S., Spielmaker, D., Wallin, L. (n.d.) *Farming in a glove*. Agricultural Literacy Curriculum Matrix. <https://www.agclassroom.org/matrix/lesson/66/>

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