

Growing Gloves

OVERVIEW: Transparent plastic gloves serve as the container for seed germination in this seed-sprouting experiment. Students place a different type of seed on moistened cotton balls inside each finger of a glove. This activity is perfect for comparing the germination rates of five types of seeds.



GRADES: 2-5

OBJECTIVES: Students will be able to:

- Observe and describe the process of plant growth from root to leaves
- Compare the growth process of different seeds
- Graph the growth of each seed and compare them
- Write a paragraph detailing their observations of how seeds grow

MATERIALS:

Transparent latex or plastic gloves

Five different types of seeds for each student

Bowls or other open containers for seeds

Cotton balls

Bowl filled with water

Twist ties or string

Permanent markers

Growing Glove Growth Record worksheet (below) for each student

Graph paper for each student

PROCEDURE:

Discuss the process of plant growth with your students. What do they think happens first after a seed is planted? What part of the plant will appear first? What part of the plant will appear last? How long do they think it will take to see the seed start to grow? Do they think big seeds or small seeds will germinate faster?

Explain to students that you are going to plant seeds in a way that the students will be able to watch the entire growth process and how long it takes different seeds to grow.

Students begin by choosing the five types of seeds for their glove and writing the name of a different seed on each finger and thumb of the glove with permanent marker. Advise students to write these labels near the top of the glove, so the writing doesn't obscure the view of the seeds sprouting.

Next, dip a cotton ball into some water and squeeze it gently to remove excess water. Press the moist cotton ball into one of the containers of seeds.

Slip the cotton ball into the correctly labeled finger carefully so the seeds don't dislodge. Pushing the cotton ball into the finger with a pencil makes it easier. Do the same for each of the five seeds. For large seeds such as pea or pumpkin seeds, place the seed in the middle of the cotton ball and fold the sides up around the seed to secure it in place. Seal the top of the glove with a twist tie or string.

There is no need to water the seeds. The cotton ball contains enough water for the seeds to grow. You can even experiment with the best placement of the gloves – is there a difference in the germination rate if the gloves are placed in a dark closet or on a bright windowsill? In a cool place or a warm place?

Students should see the seeds begin to send out roots in about a week. Next the seeds will send out a stem, and last they will develop leaves.

Ask the students to record their observations of their seeds' growth progress daily on their *Growing Glove Growth Record* worksheet. They should record the number of days it takes each seed to send out a root, to sprout a stem, and to develop leaves. When all five plants have leaves, the students can graph the different growth rates, compare them, and calculate the differences between the rates.

When the small sprouts have leaves, you can remove the tiny plant from the glove and replant it in a small pot with soil to keep the plant growing. Plant the cotton ball with the roots into the soil.

Evaluation:

Students' written observations on *Growing Glove Growth Record*

Students' graph of the number of days it took each seed to grow.

Students to write a paragraph or several paragraphs explaining the differences they observed in the germination of the different seeds.

New Jersey Learning Standards

Science: 2:LS2.A 3:LS1.B 4:LS1.A 5:LS1.C

English Language Arts: 2:W.2.2,4,8 3:W.3.2.A-D; W.3.4,8 4:W.4.2.A-E; W.4.4,8
5: W.5.2.A-E; W.5.4,8

Math: 2.MD.D 3.NF.A 4.NF.B,C 5.NF.A

Name _____

Growing Glove Growth Record

Write the name of each of your five seeds in the one of the five boxes at the top of the chart. Then daily, write your observation of that seed in the box below it.

<i>Date started</i>	<i>Seed type</i>	<i>Seed type</i>	<i>Seed type</i>	<i>Seed type</i>	<i>Seed type</i>
Day 1					
Day 2					
Day 3					
Day 4					
Day 5					

Day 6					
Day 7					
Day 8					
Day 9					
Day 10					
Day 11					

Day 12					
Day 13					
Day 14					
Day 15					
Day 16					
Day 17					
Day 18					