



SCIENCE TAKE-HOME KITS FACILITATOR'S GUIDE

GARDEN IN A GLOVE

- **Aim:** To see the life cycle of plants and discover what seeds need to germinate.
- **Materials required:**
 - ✓ 1 Clear plastic glove
 - ✓ Lettuce and tomato seeds (3-4 each). The lettuce seeds are black and tomato seeds are beige.
 - ✓ 1 Pipe cleaner
 - ✓ 5 cotton balls
 - ✓ *Scissors
 - ✓ *Bowl of Water
 - ✓ *Permanent marker

*These materials are not provided in the kit. Gather these materials from home.

- **Watch the experiment video on the website at www.pta.org/stem/athome**
- **Questions to think before you start:**
 - ✓ Have you ever grown a plant from the seed?
 - ✓ What do seeds need to germinate?

- **Instructions:**

Make sure to perform the experiment as a team (parent and student). Please read the instructions out loud.

Step 1 - Student: Write your name and the date with a permanent marker on the clear plastic glove.

Step 2 - Parent: On each finger and thumb of the glove, write the type of seed that you plan to put into each of them.

Step 3 - Team Work:

- ✓ Wet five cotton balls in the water and squeeze out the excess water. Cotton balls should be moist but not dripping wet.
- ✓ Place 1-2 seeds of the same kind in each cotton ball.
- ✓ Place a cotton ball with the seeds attached into each finger of the glove. Make sure you match the seeds to the labels you have put on the glove. Use the marker to push the cotton balls to the end of the fingers of the glove.

Step 4 - Student: Blow into the glove so air fills it completely. Close it with a pipe cleaner.

Step 5 - Parent: Place the glove close to a window or any other place which gets ample amount of light and is warm. You can also tape it to a wall, window or chalkboard.

Step 6 - Parent and Student: Check your seeds each day. In 3-5 days, you should see them beginning to germinate. You can also note your observations in a notebook.

Step 7 - Parent: After about 1.5 to 2 weeks, cut the tips of the fingers off the glove and carefully take out the germinated seeds.

Step 8 - Team Work: Transplant the germinated seeds into the soil.

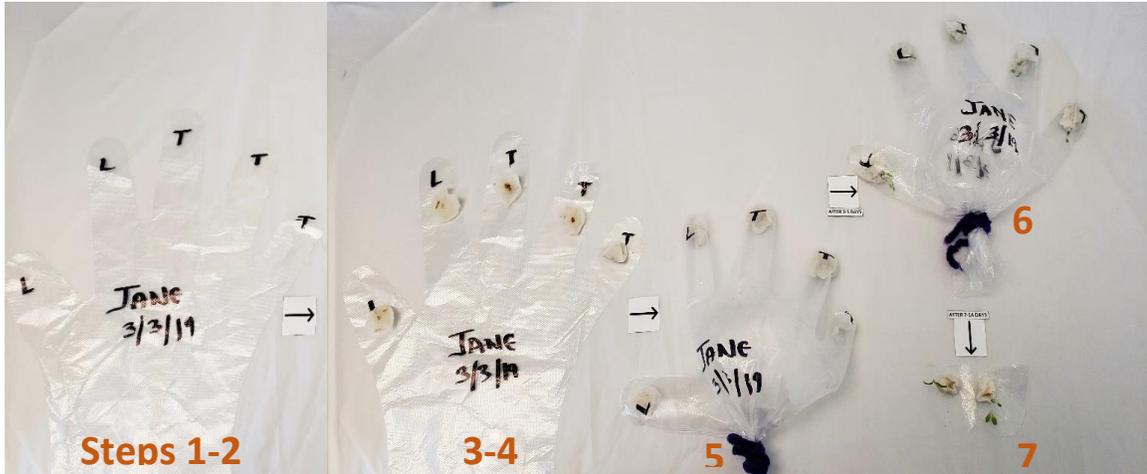
HELPFUL TIPS

Cotton balls should be moist through the germination process.

Add little water, if cotton balls dry out.

Don't keep the glove in the intense sun.

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- **The science behind the fun:**
Seeds need light, correct temperature, water and air to germinate. A seed in the glove has all the required things and hence it germinates, and you can see tiny leaves coming out of the seeds. Once these leaves reach adequate size they can be transplanted to nutrient-rich soil to grow.
- **Real World Application:**
Many fruits, vegetables are grown from the seeds. Generally, gardeners start growing their plants in this way. And once, the seeds have germinated they transplant it into the soil. Gardeners grow their mini gardens consisting of various types of vegetables, fruits like tomato, lettuce, cucumber, broccoli, peas.
- **Expand your knowledge:**
 - ✓ What happens if you keep the glove in the dark closet?
 - ✓ Try and perform this experiment with dry beans.


Did you know?

- Seeds contain nutrients that help it to sprout.
- The very young plant that grows from the seeds is called seedling.
- Most seeds germinate under dark conditions, but all seedlings require sunlight to grow.
- Beans sprout quickly if you soak them overnight in water.

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