

Indoor Greenhouses

Objectives: This lesson is designed to show students what is needed for a seed to germinate and begin to grow. By testing different conditions, they will see what works best and grows the largest plants. Measuring and comparison skills will be developed, as well as an opportunity to learn more about the natural world.

Examples of Foundations Covered in Lesson: ELA.4.101 - Copy a vertical line; ELA.4.102 - Copy a horizontal line; ELA.4.29 - Use symbols or objects to communicate; M.5.18 - Use common measuring tools in correct context; SE.3.25 - Stay with an adult-directed activity or story for 10-15 minutes; SE.3.38 - Make simple cause/effect predictions; SC.1.57 - Compare characteristics of living things; SC.1.65 - Express ideas and share observations with others; SS.3.34 - Talk about and be curious about the weather; FA.1.55 - Show individuality in artwork

Materials:

- 1 quart-sized plastic bag per student
- 3-4 cotton balls per student
- 3-4 Lima bean seeds per student (soaked overnight beforehand)
- 1 sheet of construction paper per student, cut into greenhouse shape (see photo)
- Tape
- Spray bottle with water or a small bowl of water
- Markers, crayons, or colored pencils
- Rulers

Activity:

1. Prepare greenhouses for students by cutting construction paper into greenhouse shapes. Making a template to trace can help make these more uniform.
2. Dampen cotton balls in the bowl of water or with the spray bottle. Place the cotton balls at the bottom of the plastic bag. Make sure cotton balls are not dripping wet; they only need to be damp/moistened.
3. Have students place 3-4 lima beans at the bottom of the bag and seal it closed. Keeping the bag sealed will trap the moisture and create a microenvironment for the plants to germinate.

4. Have students create a ruler on their greenhouses to measure the growth of the plant as it develops. They should also write their name on the greenhouse and can decorate however they would like.

5. Tape the bag with the seeds to the back of the greenhouse. Hang the greenhouses in a south or west-facing window that receives light.

6. Check on the greenhouses once a day and have students describe the differences they see. Also make sure that none of the cotton balls have dried out completely. They can measure and chart growth, compare plants and how well they're doing based on how much water or space they received, and other activities. Teachers can discuss life cycles of plants and what is needed for plants to grow.

7. Students can eventually take the plants home to plant. They could also be used at the end of the lesson as paintbrushes for an art project.



Adapted from teachpreschool.org