Let's Build a Greenhouse

Preschool  Science  70 minutes

by Beth Weckel  April 18, 2015

It's time to go green! Explore the wonders of greenhouses by building your own. This simple science project is a surefire way to get your students excited about plant growth.

Learning Objectives
Students will understand that greenhouses can be used as temporary homes for plants.

Materials and Preparation

- Pictures of greenhouses
- Different types of seeds
- Chart paper
- Marker
- Scissors
- Green construction paper
- Paper towels
- Recloseable sandwich bags
- Eye droppers
- Cup of waters
- Beans
- Tape

Key Terms:

- greenhouse
- seeds
- plant
- saturated

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Lesson

Introduction (15 minutes)

- Let your students know that today's lesson will involve making a green house and learning about how plants grow.
- Hold up the picture of a greenhouse. Explain that some plants are placed into **greenhouses**, because greenhouses help them grow until they can be moved outside.
- Show the class the different types of seeds. While students examine them, talk about how the **seeds** can grow with water and soil, eventually becoming plants.

Explicit Instruction/Teacher Modeling (20 minutes)

- Using the marker and chart paper, create a picture of a plant. Explain that a **plant** is what a seed grows into. Some examples of plants to mention are flowers, trees, and grass. On the plant you drew, label the following parts: root, stem, and leaf.
- Tell students that they'll be making greenhouses in order to grow their own plants.
- Demonstrate the greenhouse construction process to your students. Begin by folding a piece of green construction paper in half widthwise, or in "hamburger style."
- Draw a diagonal line (at about a 30° angle) from the fold at the top of the paper to the outside edge. Cut along the line to create the roof.
- Draw a large half-square along the inside edge. Cut out the shape to create a window.
- Unfold the paper to reveal an outline of a house with a big window in the center.
Guided Practice/Interactive Modeling (10 minutes)

- Distribute to each student a pair of scissors, a sheet of green construction paper, a paper towel, a resealable sandwich bag, an eye dropper, and a cup of water.
- Ask students to repeat the greenhouse construction process, and guide them through each step.
- Once they've finished, tell them to ready the rest of their materials. They'll now begin preparing the inside of their greenhouses. (To make the setup go more smoothly, you can model the following steps and have students copy your actions.)
- Have students fold their paper towels into quarters. Explain that this means folding them in half one way, then folding them in half the other way.
- Have students place their folded paper towels into their resealable sandwich bags.
- Have each student use her eye dropper to transfer water from her cup to her bag until the paper towel inside it is saturated, or completely wet.
- Distribute a bean to each student, then have students drop their beans into the bags and seal them.
- Have students tape their bags to the upper middle of their greenhouses, making sure that the beans are visible through the windows.

Independent Working Time (15 minutes)

- Ask each student to make a journal entry about what her bean looks like.
Extend

Differentiation

- **Enrichment**: Allow students who complete their greenhouses quickly to make more greenhouses with different seeds.
- **Support**: If a step seems too difficult for a student to complete on her own, assist her with it. For example, if a student has trouble cutting the construction paper, either guide her hand or cut it for her.

Related Books and/or Media

- *Up, Down and Around* by Katherine Ayres and Nadine Bernard Westcott
- *Growing Vegetable Soup* by Lois Ehlert
- *Bean Time Lapse* by Oreste Gaspari

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Review

Assessment *(5 minutes)*

- Observe students over the course of the project, and keep the following questions in mind:
  Did students understand the meaning of the word "greenhouse"? Did they show curiosity about the beans? Did they concentrate during the project and work well independently?
- Note down situations where students seem confused or uninterested, and think about ways to make those situations more engaging.

Review and Closing *(5 minutes)*

- Bring the class together. Review your plant chart and the picture of a greenhouse. Explain to students that the greenhouses they made will help their beans grow into plants like the one you drew.
- Allow volunteers to share their journal entries.
- Encourage students to check on their beans even after they bring them home. Ask them to make notes in their journals whenever they see their beans changing.