

Project FOCUS
Best Lessons
KINDERGARTEN

Title of Lesson: Green Thumbs!

Theme: Life Science

Unit Number: Unspecified **Unit Title:** Plants (Living and Nonliving Things)

Performance Standard(s) Covered (enter code):

SKL1

SKL2

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Plant growth, seeds, needs of plants, parts of plant

Learning Activity (description in steps)

This lesson was a lesson that evolved as a result of the students struggling with the concept of plants and trees being living things. In order to prove this fact, I used a lesson that I performed when I was their age: the Bean in a Bag experiment. The students should be able to visualize each part of a plant and explain the role of each part.

Abstract (limit 100 characters): Students will perfect their knowledge on plants as living things and distinguish between plant parts and roles.

Details: The students were given 4 lima beans, a paper towel, and a Ziploc bag to grow their plant. The lima beans were lined in a row and rolled into the paper towel. The paper towel was placed in the Ziploc bag. Students were allowed to spray water into their bag. Student wrote their name on each bag and we taped them in the window space in the classroom. I let each student decide the conditions of their bag: the boys wanted to squirt as much water as possible into their bag and were more likely to want to place their bag at the highest possible level on the window. Both of these preferences had negative effects on the plant growth. Those who put their bags up higher received less sunlight because of structural effects on the building. Those who sprayed way too much water in their plant also had minimal growth. This showed the students that environmental conditions must be ideal in order for the plant to grow at an optimal level. The next week, we were able to look at our plants under magnifying glasses and visualize each part. It was during this time that we went over the role of each of these parts: leaves are needed for the

plant to breath, stem needed for the plant to grow, roots needed for the plant to stay nourished with food and water. Those whose plant successfully grew were able to transfer their plant into a cup with soil.

Materials Needed (type and quantity): clear Ziploc bag, lima beans (4 per student), water source (I used spray bottles), paper towels, cups, soil, tape, sharpie, window for sunlight

Notes and Tips (general changes, alternative methods, cautions): If I could do this experiment again, I would definitely not use spray bottles. I thought it would be a much easier method of wetting the paper towels. However, the kids were super excited about spraying the bottles. This took their attention off of the experiment. Additionally, we did the project the week before Spring Break and could not manage our plants during the break. Therefore a lot of the results could have been affected by the fact that the plants were unattended for 2 weeks. Although allowing the children to decide the conditions of their bag was to facilitate comparison between environments, those students whose plant did not grow, reacted negatively. In the future, I might plant extras to remedy this situation.

Sources/References:

1) http://www.ehow.com/how_5973047_grow-lima-bean-bag.html