

## What do plants need to survive and reproduce?

Background:

Plants are an essential part of the ecosystem. Without plants an ecosystem is not balanced and that particular food web will be destroyed. What do plants need to survive? Plants need 5 essential things to survive sunlight, soil(nutrients), water, space, and air. Like humans, plants need essential items to thrive in their environment. If the soil is not nutrient enough the plant will not grow or survive. If the plant acquires too much water, a plant drowns because the cells cannot absorb all the water. If the plant lacks sunlight (light in general) photosynthesis will not occur. Plants are producers and make their own food called glucose(sugar). Plants need room to grow and can experience over population, which is called overcrowding. The last essential item plants need, air. Air for the plant is in the form of carbon dioxide, which they remove from the air.

Producers are vital to life because they can help reduce the Greenhouse Effect by removing carbon dioxide from the atmosphere, which is poisonous to humans and animals. Although the flower, leaf, and stem need carbon dioxide the roots need oxygen. With the kit the small black bags we use are biodegradable and allow the roots of the plant to breathe with the small holes in the fiber. Most plant holders only have the exit for water at the bottom and no air holes throughout the container for the roots to breathe.

**What is soil? Where does it come from? Why is it important to provide a plant with rich soil?**

## Procedures:

1. Make sure to use gloves when working with the soil.
2. Pick 3 types of seed.
3. Label root pouch with your name and type of seed.
4. Place one scoop of Soil<sup>3</sup> in the bottom of your root pouch, which should be halfway.
5. Place the seeds in the soil (decide if you want to spread them out).
6. Place a scoop of soil on top of your seeds.
7. You will notice that Soil<sup>3</sup> is moist, if needed add a small amount of water.
8. Place container in the window sill for sunlight.
9. Record daily growth on the chart along with things that were added to the soil and how much.

Day	Growth in Inches	Journal-Observations for each day
1		
2		
3		
4		
5		
6		
7		





# Growing My Own Garden With Soil<sup>3</sup>

## Challenge Questions:

1. What day did you see the most growth? Why?

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2. What day did your plant bloom? \_\_\_\_\_ Take a picture and post it here.

3. Compare your plant to your partners, what similarities and difference did you notice? Why?

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4. What essential thing did you realize your planted needed the most? Why?

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5. If you had a friend in another country, how would you explain what you have learned this far about plants?

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6. What was your favorite part about the lab? Why?

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