

What Does a Plant Need to Grow?

What you'll need:

1. Four small plants (plants that need full sun)
2. Shoe box
3. Scissors
4. Four dishes or saucers (large enough for the pot to sit on)
5. Clear plastic bag
6. Paper
7. Markers (4 different colors)
8. Tape

Directions:

1. Label each plant by cutting 4 small strips of paper and writing:
Plant 1 – Control Plant 2 – No Water
Plant 3 – No Sun Plant 4 – No Air
2. Decorate the labels and place one label on each plant.
3. Place each plant on a dish or saucer.
4. Water each plant just until the soil is moist.
5. Place Plant 1 and Plant 2 in a sunny spot.
6. Take the shoe box and cut small squares into it so air can get into the box. Place Plant 3 into the shoe box.
7. Place Plant 4 in the clear plastic bag and tie the bag closed (keep the plant upright).
8. Place Plant 3 and 4 next to Plants 1 and 2.



Over the next week (or until you see changes in the plants):

1. Check plants everyday to check whether the soil is dry. If soil is becoming dry, water the plant.
2. Water all of the plants except Plant 2. Make sure to water Plants 3 and 4. Remember to put Plant 3 back in the shoe box once you've watered it and place Plant 3 back in the plastic bag after watering.
3. Record what each of the plants look like everyday. Write down all of your observations (there is a Daily Plant Log for you to fill out).

What did you see?

Plant 1: This plant should have stayed healthy and green.

Plants 2, 3, and 4: You should have seen some changes in these plants. They may have droopy leaves, dry soil, dry leaves, yellow leaves, or other signs that they are not doing too well.



Discussion: Why did you see what you saw?

Plants need three basic things to survive:

- water
- sun
- carbon dioxide
- nutrients from the soil like nitrogen



People also need some basic things to survive:

- food in the form of carbohydrates, protein, and fat.
- water, oxygen, exercise
- to grow your best you need healthy foods and exercise everyday

- When the doesn't get its basic needs, it will show signs of poor health
- The sun provides energy the plant needs to perform photosynthesis. Photosynthesis is a process plants use to make their own food.
- Photosynthesis cannot occur without carbon dioxide, water and sunlight. Did you know, oxygen is a waste product of plants.
- Just like plants, people also show signs of poor health if they are deprived of their basic needs.
- People can survive for a long time without the right amount of carbohydrates, protein, fat, and other nutrients, but over time, you see the negative effects of a poor diet.
- So go home, eat well, get moving and have fun!

Daily Plant Log

Write down your observations for each plant in each column for at least seven days.
Think about why you are seeing those changes.

Day	Plant 1	Plant 2	Plant 3	Plant 4
Example: Monday	Bright leaves	Yellow leaves	Soil Dry	Droopy