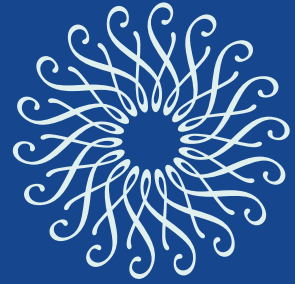


What Do Plants Like to Drink? Activity



Materials Needed

- 3 plants or seeds (all of the same variety and roughly the same size)
- 3 different liquids – examples:
 - Tap water
 - Rain water
 - Salt water
 - Carbonated water
 - Soda
 - Juice
- Potting soil
- 3 pots (that allow for drainage)
- Measuring cup
- Ruler
- Masking tape or painters' tape
- Marker
- Observation sheet
- Pencil

At a Glance

Have you ever wondered what might happen if you watered a plant with salt water? Or soda? Put on your lab coat as you experiment with plants by watering them with different liquids.

Did You Know?

Scientists use the scientific method to study, learn and discover answers to their questions. There are six steps to the method:

1. Make observations

2. Come up with a question

3. Develop a hypothesis

- A hypothesis is a prediction, a statement of what you think will happen based upon the information you have gathered.

4. Conduct an experiment

- In a successful experiment, only one thing should change. In the experiment below, you will be changing the type of liquid used to water the plants.

5. Make observations and record what happens.

6. Draw conclusions based on the results.

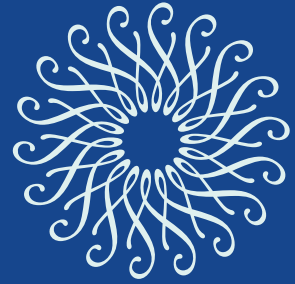
Plants make their own food from water, carbon dioxide and light during the process of photosynthesis. Watering plants with a liquid other than water, will change how the plant photosynthesizes. This could impact the plant's growth.

Have fun experimenting with plants like a real plant scientist!

Extension Activity

Wanting to do other experiments? Try repeating this experiment with other liquids, using different soil types, or using light versus dark conditions. Visit the following website for more ideas:
<https://www.seedyourfuture.org/diyvideos>

What Do Plants Like to Drink? Activity



Directions

1. Before beginning, write down your hypothesis on the observation sheet.
2. Plant each plant in a pot with soil. Be sure to use approximately the same amount of soil in each pot. Plants should be of the same variety and roughly the same size. If using seeds, plant the same number of seeds in each pot at approximately the same depth.
3. Using the masking tape or painters' tape and marker, label each pot with what kind of liquid you plan to water with. One plant should be watered with tap water. Make sure to record any mixed liquids (for example one teaspoon of salt mixed with one cup of water).
4. Using the ruler, measure the height of each plant and record the information on the observation sheet.
5. Water each plant with the chosen liquid. Be sure to use the same amount of liquid for each plant. Approximately $\frac{1}{4}$ cup should be appropriate, depending on the size of the pot you are using. Each liquid should also be about the same temperature. For example, if you put one liquid in the fridge, they all should be put in the fridge.
6. Put the plants in a sunny window space being sure that each plant receives the same amount of sunlight.
7. Water the plants every two to three days using the same amount of liquid as you initially watered them with. Be sure soil is dry before watering again.
8. Measure the growth of the plants each day and make observations about each plant.
9. At the end of your experiment, write out your conclusions. Was your hypothesis correct?

Did you enjoy experimenting with plants?

Check out this cool career opportunity as a plant scientist:
<https://www.seedyourfuture.org/careers>

What Do Plants Like to Drink?

Observation Sheet

Hypothesis: _____

Day 1 – Planting Day

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 2

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 3

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 4

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 5

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 6

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 7

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 8

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 9

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Day 10

Liquid Used	Height of Plant	Observations	Drawing of Plant
Tap Water			

Conclusion: _____

