

# Death By Acid



# Background

- ▶ I decided to do this project because plants are very important in our society and I wanted to make sure that we are providing the best atmosphere for them that we can.
- ▶ I wanted to see how the acidity of an environment affected the acidity of the water.

# Variables

- ▶ Independent Variable (IV) – types of water (Fiji, Well, Creek, Tap)
- ▶ Dependent Variable (DV) – Philodendron plant growth
- ▶ Constant Variable (CV) – amount of water, amount of sunlight, amount of air, type of plant, type of container, same temperature

# Problem

- ▶ How will different levels of pH affect plant growth?

# Hypothesis

- ▶ I believe that the creek water will have the best results because it is the most naturally-found source of water

# Materials and Other Resources

- ▶ 8 Philodendron pieces
- ▶ 4 glass beakers
- ▶ 225 mL of Fiji water
- ▶ 225 mL of Well water
- ▶ 225 mL of Creek water
- ▶ 225 mL of Tap water



Tap

well

Fiji

creek  
water

# Procedure

- ▶ Cut eight pieces off a Philodendron plant
- ▶ Fill four beakers with four different types of water to the 225 ml mark
- ▶ Put two cut offs of the Philodendron into each type of water
- ▶ Label on plants, plant 1 and 2 in each type of water
- ▶ Set a date and measure at a constant rate of once per every two weeks
- ▶ Record your measurements and make a graph/table to compare measurements

# Data/Observations

Type of water	Level of pH
Fiji water	7
Well water	9
Creek water	8
Tap water	6

**Starting test: Thursday, January 20**

Type of water	Plant 1	Plant 2
Fiji water	2.4 grams	2.2 grams
Well water	2.0 grams	3.3 grams
Creek water	1.3 grams	3.1 grams
Tap water	1.8 grams	2.0 grams

# Data/Observations

## Second test: Thursday, February 3

Type of water	Plant 1	Plant 2
Fiji water	2.1g	2.5g
Well water	2.1g	2.7g
Creek water	1.2g	3.5g
Tap water	1.2g	2.2g

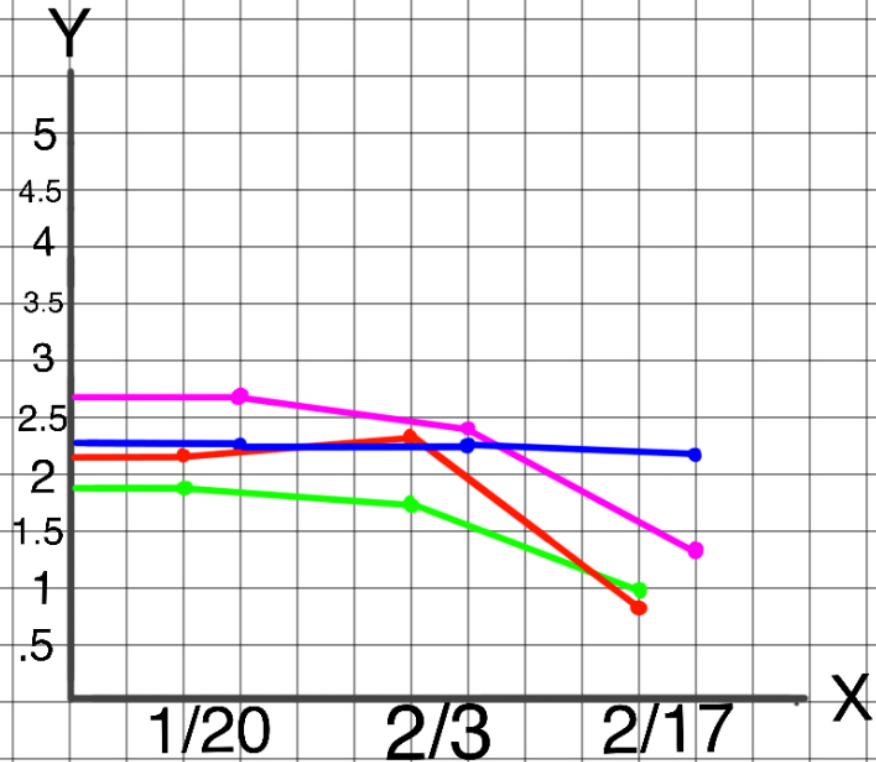
## Third test: Thursday, February 17

Type of water	Plant 1	Plant 2
Fiji water	2.5g	2.3g
Well water	.8g	2.0g
Creek water	.5g	1.1g
Tap water	1.2g	.7g





## Averages of Plant 1 and Plant 2



Data/Observations

# Conclusion

- ▶ My hypothesis was incorrect, I thought it would be creek water but it turned out to be Fiji water.
- ▶ It was Fiji water because, of all the waters I tested, Fiji water had the most neutral pH level.

# Bibliography

▶ <https://www.usgs.gov/media/images/ph-scale-0>