

A collection of various indoor plants in pots, including Monstera, Pilea, and ferns, arranged on a white surface against a light background. The plants are lush and green, with some showing signs of growth and new leaves.

# Plant growth

Fall 2021 Honors Principles of Biology.

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# Project overview.

- Plants have needs, those include water, air, soil and light.
- Unlike humans they use photosynthesis, which converts sunlight and water and carbon dioxide to produce energy. It is using this energy that they can undergo cell growth and cell division to grow in size, the equation for photosynthesis is ; $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ ,
- Water is a key component, this experiment will test if a change on its pH will affect the pansy's plant growth.

# Hypothesis ang project goal

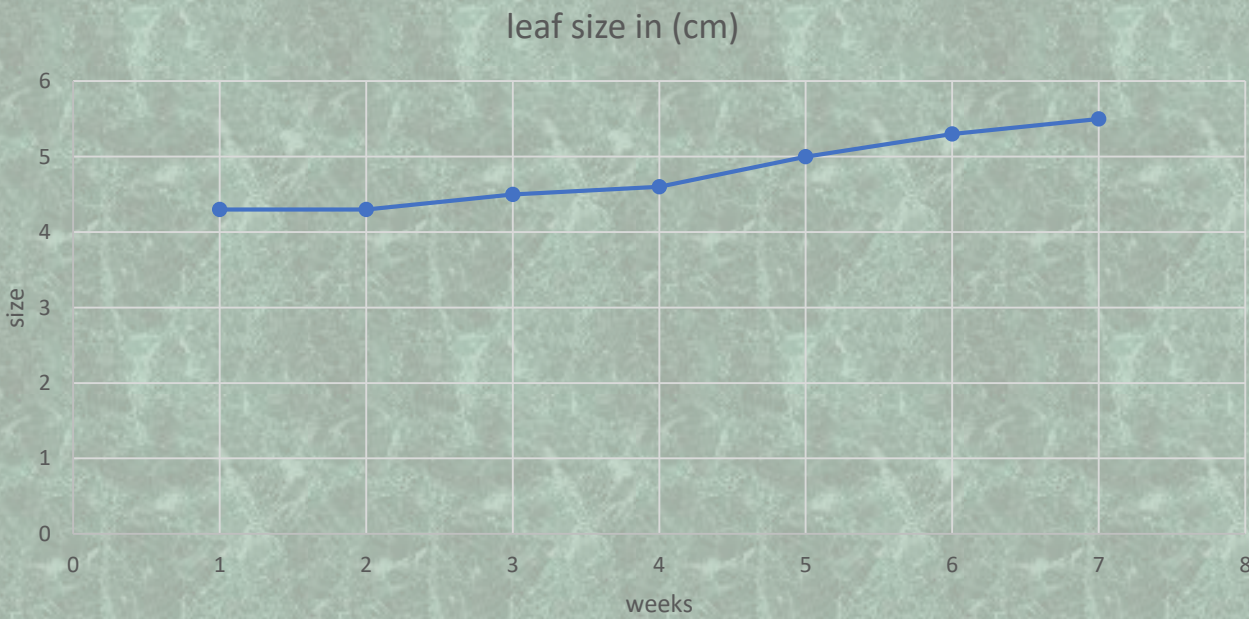
- $H_0$  ; pH has no effect on a plant's growth
- $H_A$  ; Ph does affect plant growth.
- The goal of this project is to further understand the importance of photosynthesis and its components.

# Methods

- 2 pansy plants
- Same sun time same amount of water
- Different pH in the water. (measured with strips)
- Tap water and citric juice + water.

# graphic results

## Weeks on y and leaf size (control )

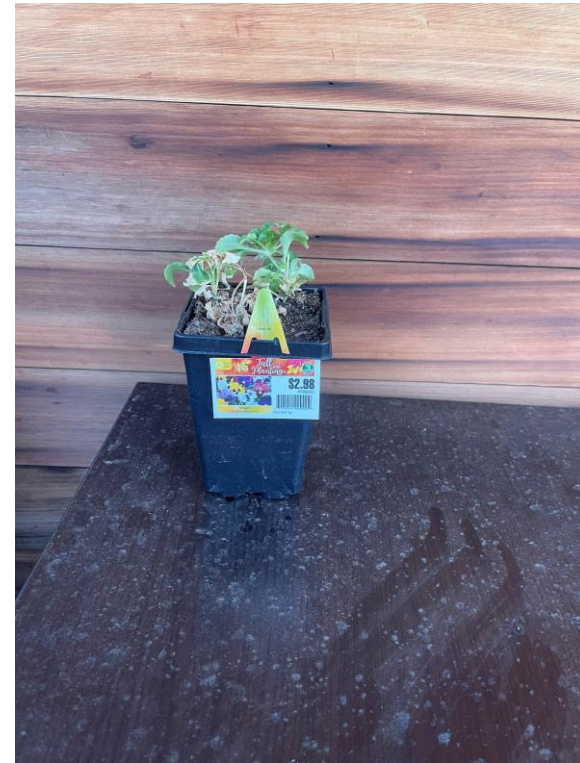


## Experimental group ( low pH)



# Results

- Control pansy grew without a problem and was changed to a transferred to another pot.
- Experimental died within a month.



# Conclusion

- Without photosynthesis the plant can't get any nutrients and therefore can't grow.
- Lower pH does not allow plant to go through photosynthesis and it dies.
- Regular pH of 7 and sun time allowed control pansy to grow and survive.