

# Grow the Plants!

T35

# PURPOSE & HYPOTHESIS

The purpose of this experiment is to learn which water helps plants grow the best. I tested three different types of waters: tap, distilled, and filtered.

My hypothesis is that the plant in filtered water will grow the longest roots.

# RESEARCH

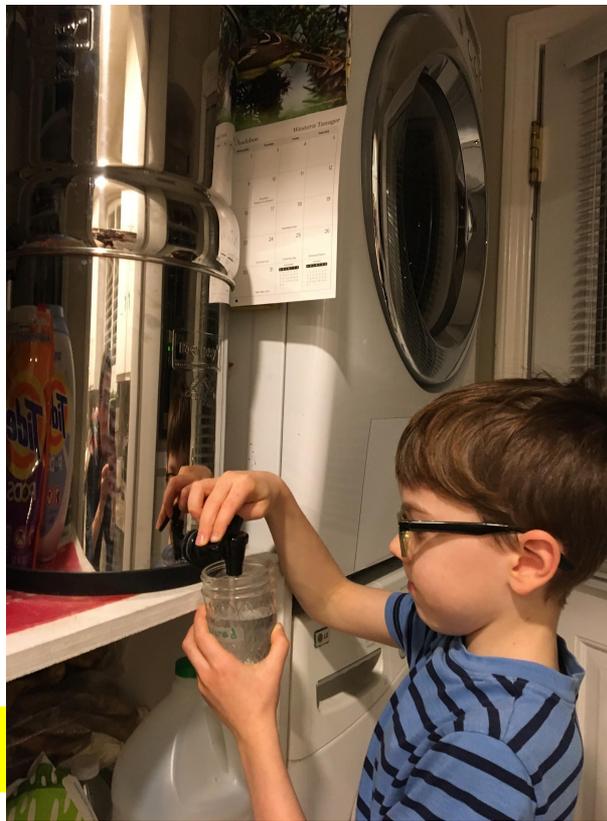
This experiment interests me because my mom and dad love plants. We have many plants in my home. Based on my research, I think that filtered water is better for us, so I think it's better for plants. Tap water has too many chemicals and distilled water does not have enough nutrients. Filtered water does not have as many bad chemicals and has some nutrients.

# MATERIALS

- Pothos plants
- Distilled water
- Tap water
- Filtered water (Berkey filter)
- 3 jars
- 1 ruler

# EXPERIMENT

1. Find the nodes on the plant.
2. Cut the plant near the node with a leaf on top.
3. Fill three jars - one with tap water, one with filtered water, and one with distilled water.
4. Put at least two nodes in each jar with the leaf hanging out the top of the jar.
5. Set all three jars by the window for sun.
6. Change water every two weeks to give the plants more oxygen.
7. After six weeks, take the plants out of the jars and measure how much the nodes grew.
8. Plant the plant.





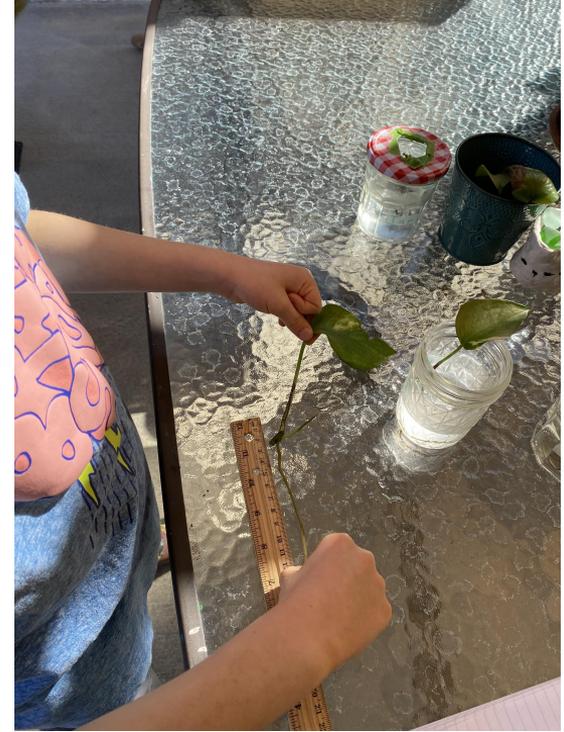
1/18  
Changed water  
Tap - one dead leaf, no root growth  
one node 1 o...

1/23

12/13  
We cut the pothos and  
put in water.

12/20  
Distilled and Filtered  
the root nodes are getting  
bigger and Distilled is getting  
white nodes.

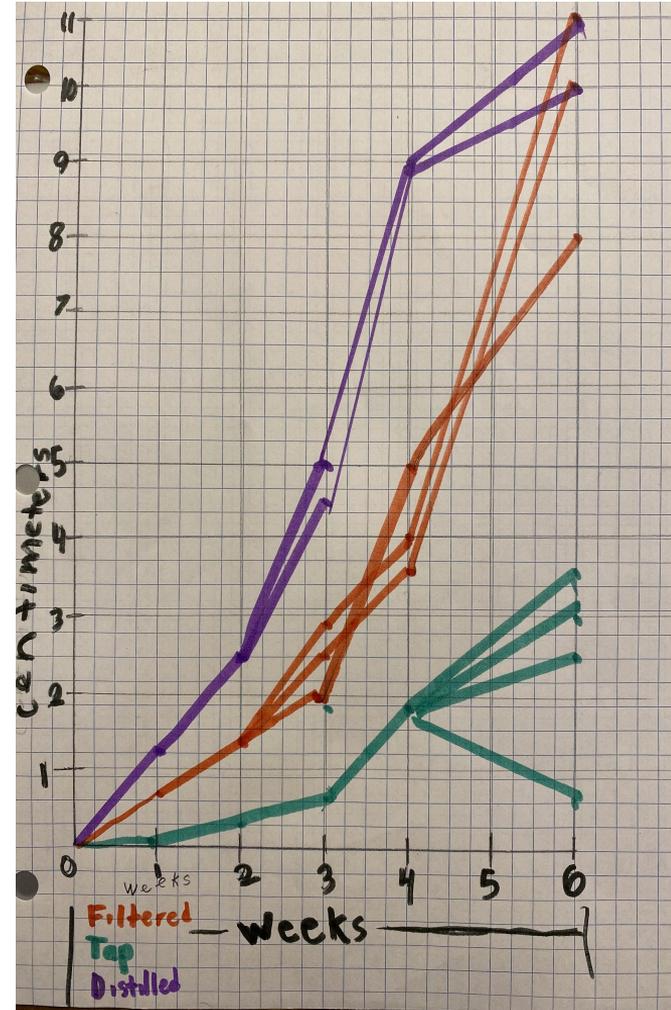
12/27  
Filtered has white about a  
1/4 of an inch and Distilled on 1 node  
has 1/2 of an inch growth and  
no growth on another node.  
Tap has growth on 1 node, but  
it is very small, the smallest  
growth and we changed the  
water to give the plants more  
oxygen.



## My Observations

# ANALYSIS

All of the nodes grew roots. The longest roots were equal to 11 cm, which were filtered and distilled waters' roots in a tie. Tap water, sadly, had a node that died and stopped growing, and the other nodes in tap grew less than 4 cm. The ends of distilled roots were black.





The black end of the distilled root



# CONCLUSION

My hypothesis was partly correct. Filtered and distilled tied for the longest roots. Both had roots equal to 11 cm. I would not recommend using tap for watering plants. From my research, I learned that distilled's roots may have been turning black because of root rot, a disease that kills plants. In conclusion, I would use filtered to help plants grow.

# REAL WORLD CONNECTION

This experiment is important because it showed what water to use to grow plants the best. Plants give us oxygen to breathe. Plants are also good companions and bring some joy. They drop nutrients and that nutrients keeps the soil good. It makes the top of the soil stay in place. Plants provide shelter and medicine as well. We eat plants. Plants are used to make furniture, houses, clothes, weapons and MUCH MUCH more.

# WORKS CITED

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