



PTMC
To Infinity and Beyond
Team ID#16287

Describe what happened?

- Our class meets once a week on Tuesdays. During our class time, we watered our plants with 100mL of distilled water, measured their height in centimeters, and counted the number of leaves growing on each plant. Plants were housed in our greenhouse.
- During our Fall Break, our teacher watered and measured our plants for us.
- We met on Oct. 17th. We had three plants growing at that time, so we decided not to replant. Our Control Pot was 1.6 cm (still a sprout). Pot 7 was 4.5 cm with 10 leaves, and Pot 8 was 7.5 cm with 8 leaves.



WEEK 8

Results:



Pot #7 5.6 cm and 10 leaves
Pot #8 16.4 cm and 16 leaves



The official challenge ended week 8. However, we did not have time to unpot and check for taproots until week 9. Below are our results from Week 9.



The plant in our Control Pot ended up dying, but Pot #7 & Pot #8 kept growing. We didn't get any growth in any of our other pots. Pot #7 Pot #8 both had 75% regolith and 25 % potting soil. Pot #9 also had 75% regolith and 25% potting soil, but it did not grow.



By the end of 9 weeks, we had two pots with growth. Pot #7 was 8 cm tall with 10 leaves, and Pot #8 was 23 cm tall with 23 leaves.





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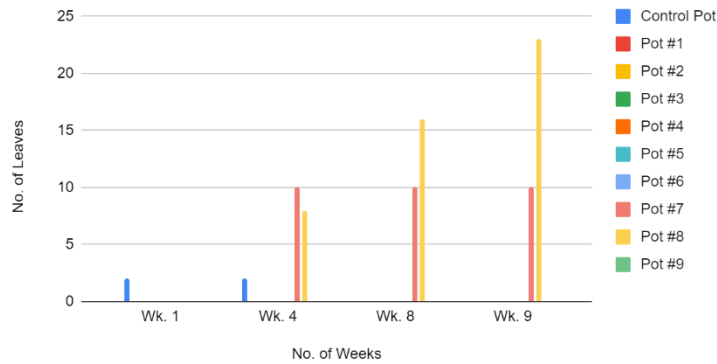
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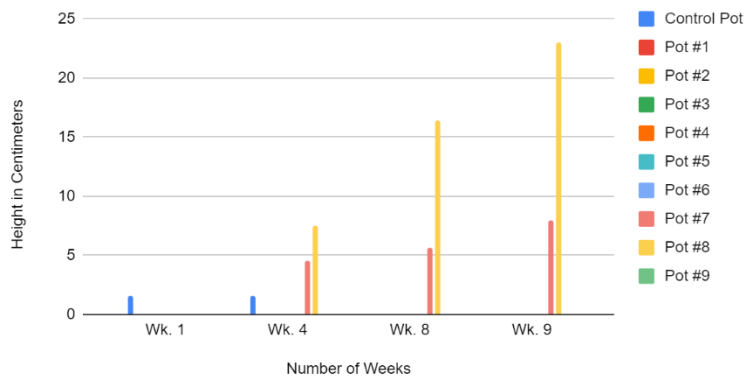


We thought we found some taproots, but we decided later that they were not taproots. We thought the longest root might be a taproot, but it wasn't either. We did research on Dwarf Sunflowers and learned that they take a long time to grow a taproot and need very moist soil.

Plant the Moon Challenge
Team: To Infinity & Beyond



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*** We only measured at the beginning, midpoint, 8 weeks and then again at 9 weeks when we had time to open the pots and look for taproots.**



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What Would We Do Differently?

- Add fertilizer.
- Have more control pots.
- Water at least 2x a week, so the soil stays moist and can grow a taproot.
- Try different amounts of regolith and potting soil.
- Move the greenhouse inside and add a heat lamp on a timer to expose sunflowers to more heat and light.

What Did We Learn?

- Never give up.
- Sunflowers need more sun, heat, and water.
- In our school garden and pulled up sunflowers to see what a large taproot looks like.
- Sunflower roots can grow in regolith.
- How to measure with a ruler using centimeters and a graduated cylinder.
- How to set-up a graph.
- We learned that NASA can't take loads of soil and water to the moon, so we are trying to help them find a way to grow plants on the moon.

Coollest Thing We Discovered

- The 75% regolith/25% potting soil felt and looked like kinetic sand.
- Roots can grow through regolith, so it could be possible to plant the moon.

What Would You Tell Others About Your Experiment?

- Give your plants a lot of sun and keep the soil moist.

Final Grow Set-Up

