



GROWING PLANTS IN CLAY SOIL VERSUS SANDY SOIL



Name: _____ Date: _____



QUESTION

How does the type of soil—clay soil versus sandy soil—affect plant growth?



HYPOTHESIS

I think _____
because _____.



MATERIALS

- 2 small pots or clear plastic cups (with drainage holes or poke holes)
- Clay soil
- Sandy soil
- 2 bean seeds (or similar easy-to-grow seeds)
- Water
- Ruler
- Measuring cup or spoon
- Labels or tape and marker
- Notebook for observations



OBSERVATIONS

Record your observations each day.

Day	Clay Soil			Sandy Soil			Notes / Observations
	Plant Height (cm)	Number of Leaves	How Does It Look?	Plant Height (cm)	Number of Leaves	How Does It Look?	
1							
2							
3							
4							
5							
6							
7							



BACKGROUND

Plants need water, air, nutrients, and support to grow. Different soils hold water and nutrients in different ways. Clay soil has tiny particles and holds water well. Sandy soil has larger particles and drains water quickly.



EXPERIMENT SETUP

1. Label one pot "Clay Soil" and the other "Sandy Soil".
2. Fill one pot with clay soil. Fill the other pot with sandy soil.
3. Plant one seed about 1 inch (2-3 cm) deep in each pot.
4. Water each pot with the same amount of water (e.g., 1/4 cup).
5. Place the pots in the same location with the same amount of light.
6. Water each pot with the same amount of water every day.



VARIABLES

- **Independent Variable:** Type of soil (clay vs. sandy)
- **Dependent Variables:** Plant height, leaf number, overall health
- **Controlled Variables:** Type of seed, pot size, amount of soil, amount of water, sunlight, location, time



ANALYSIS – THINK ABOUT IT

1. Which plant grew taller?
2. Which plant had more leaves?
3. Which plant looked healthier? Why do you think that is?
4. How did the soil type affect how the water behaved?
5. What did you learn from this experiment?



CONCLUSION

Write a conclusion using your results.

My conclusion: _____

_____.