



Growing Plants in Different Soil Amendments

Comparing plant growth in sand, clay, silt, and potting soil (control)

Name: _____ Date Started: _____ Date Completed: _____



QUESTION

How do different soil amendments (sand, clay, silt) affect plant growth?



HYPOTHESIS

If a plant is grown in _____,
then _____
because _____



MATERIALS

- 4 small pots or cups (with drainage holes if possible)
- Sand
- Clay
- Silt
- Potting soil (control)
- 4 fast-growing seeds (e.g., radish, bean, or grass seed)
- Water
- Ruler
- Labels and marker
- Tray or plates (to catch water)



VARIABLES

- Independent Variable: Type of soil amendment
- Dependent Variable: Plant growth (height)
- Controlled Variables:
 - Type of seed
 - Number of seeds
 - Amount of water
 - Sunlight
 - Pot size
 - Time



PROCEDURE

1. Label 4 pots: Sand, Clay, Silt, Potting Soil (Control).
2. Fill each pot with one type of soil amendment.
3. Plant the same number of seeds (e.g., 3–5) at the same depth in each pot.
4. Water each pot with the same amount of water.
5. Place all pots in the same location with the same amount of sunlight.
6. Water daily with the same amount of water.
7. Measure plant height (from soil to tallest point) every day.
8. Record your data in the table below for at least 7–14 days.
9. Observe and record any other differences (color, leaf size, etc.).



DATA TABLE – PLANT HEIGHT (cm)

Day	Sand	Clay	Silt	Potting Soil (Control)	Notes
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					



OBSERVATIONS

Describe what you see happening in each pot.



CONCLUSION

What did you find out? Which soil amendment worked best for plant growth? Why do you think so?



SCIENCE TIP: Different soils hold water and nutrients in different ways. This affects how well plants can grow!

