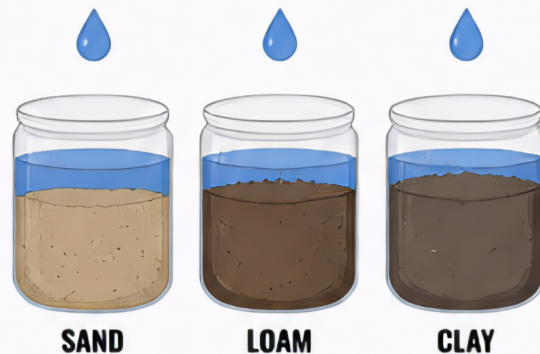


TESTING WHICH TYPE OF SOIL RETAINS THE MOST WATER



QUESTION

Which type of soil retains the most water?

HYPOTHESIS

Before the experiment, predict which type of soil you think will retain the most water and why.

MATERIALS

- 3 clear cups or jars
- Sand
- Loam (garden soil)
- Clay soil
- Water
- Measuring cup (1 cup / 240 mL)
- Spoon
- Coffee filters or paper towels
- Rubber bands
- Ruler (optional)
- Marker



PROCEDURE

1. Label your cups or jars: Sand, Loam, Clay.
2. Add 1 cup of each type of soil to the labeled cups.
3. Place a coffee filter or paper towel in each cup and secure it with a rubber band. This will hold the soil in while allowing water to drain out.
4. Place all three cups over empty containers to catch the drained water.
5. Using the measuring cup, slowly pour 1 cup (240 mL) of water onto the soil in each cup. Pour the same amount at the same speed for each soil.
6. Let the water drain for 30 minutes.
7. After 30 minutes, measure the amount of water collected in the container under each cup. Record your results in the data table.
8. Calculate how much water each soil retained by subtracting the drained water from the 240 mL you poured.
9. Compare the results and determine which soil retained the most water.

DATA TABLE

Type of Soil	Amount of Water Poured (mL)	Amount of Water Drained (mL)	Amount of Water Retained (mL)
Sand	240 mL		
Loam	240 mL		
Clay	240 mL		

VARIABLES

- Independent Variable: Type of soil
- Dependent Variable: Amount of water retained
- Controlled Variables:
 - Amount of soil in each cup
 - Amount of water added
 - Time allowed for draining
 - Size of cups/containers

RESULTS

Which type of soil retained the most water?

Which type of soil retained the least water?

CONCLUSION

What do your results show?

Why do you think this soil retained the most water?



THINK FURTHER!

How might the type of soil affect plant growth or gardening? What other factors can affect how well soil holds water?