

VARIABLES IN AN EXPERIMENT

Read each passage and answer the questions associated with each situation.

M. John's Science class performed an experiment to determine how the amount of salt in a salt solution affects the rate of water evaporation. The students prepared five solutions:

Amount of water (ml)	Amount of salt(g)
100	0
100	10
100	20
100	40
100	80

They placed the solutions in five identical dishes and put the dishes side by side in a closed room. After five days, they measured the amount of liquid remaining in each dish.

1. What is the dependent variable in the experiment?
 - a. Amount of salt.
 - b. Amount of liquid left.
 - c. Amount of water
 - d. Length of time.
2. What is the independent variable in the experiment?
 - a. Amount of salt.
 - b. Amount of liquid left.
 - c. Amount of water.
 - d. Length of time.
3. What is the constants?
 - a. Amount of salt.
 - b. Amount of liquid left.
 - c. Amount of water and length of time for each solution.
4. Which vase was the control group?
 - a. Vase with 0g of salt.
 - b. Vase with 20g of salt.
 - c. Vase with 40g of salt.
 - d. Vase with 10g of salt

II. A florist wanted to find out whether adding table sugar to water placed on vases of cut flowers would extend the freshness of the cut flowers. She prepared five vases of identical size and type flowers and placed them in each vase. Then she placed them in solutions of water and table sugar in each five vases, as described below.

	Water (ml)	Sugar (g)
Vase 1	200	0
Vase 2	200	25
Vase 3	200	50
Vase 4	200	75
Vase 5	200	100

Three days later she compared the quality of the flowers in each vase.

1. What is the constant in this experiment?
 - a. The amount of sugar.
 - b. The freshness of flowers after three days.
 - c. Amount of water and the length of time.
2. What is the dependent variable?
 - a. Amount of sugar.
 - b. Freshness of the flowers after three days.
 - c. Amount of water.
 - d. Length of time.
3. What is the independent variable in the experiment?
 - a. Amount of sugar.
 - b. Freshness of the flowers after three days.
 - c. Amount of water.
 - d. Length of time.
4. Which vase was the control group?
 - A. Vase 1 with 200 ml of water and 0 g of sugar.
 - B. Vase 2 with 200 ml of water and 10 g of sugar.
 - C. Vase 3 with 200 ml of water and 20 g of sugar.
 - D. Vase 1 with 200 ml of water and 100 g of sugar.
 - E. Vase 4 with 200 ml of water and 75 g of sugar.