

Science Toolkit: Grade 8 Objective 1.A.1.e

Student Handout: Science: Grade 8 Objective 1.A.1.e

Standard 1.0 Skills and Processes

Topic A. Constructing Knowledge

Indicator 1. Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.

Objective e. Explain that if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one of the variables.

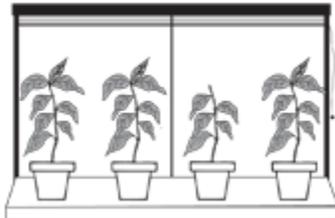
Selected Response (SR) Item

Question

Use the information below to answer the following.

In a lab study, eight bean plants are grown from seeds in individual containers. After a few leaves are visible on each plant, the plants are separated into two groups. One group is placed in a room that gets sunlight, and the other group is placed in a dark room. All of the plants receive the same amount of water daily. After two weeks, the plants are observed.

PLANTS GROWN IN SUNLIGHT



PLANTS GROWN IN DARK ROOM



OBSERVATIONS

Plant Feature	Plants Grown in Sunlight	Plants Grown in Dark Room
Leaves	Dark green	Light yellow
Stem	Green and sturdy	Yellow and wilted
Average Plant Height	30 cm	18 cm

All the plants in this investigation were bean plants because

- A. the plants were the same color
- B. plant type was not a tested variable
- C. each plant received the same amount of sunlight
- D. a different amount of water was not used for each plant

Correct Answer

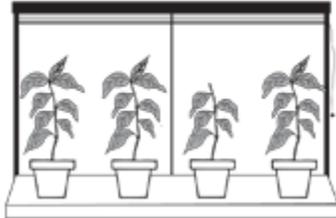
- B. plant type was not a tested variable

Question

Use the information below to answer the following.

In a lab study, eight bean plants are grown from seeds in individual containers. After a few leaves are visible on each plant, the plants are separated into two groups. One group is placed in a room that gets sunlight, and the other group is placed in a dark room. All of the plants receive the same amount of water daily. After two weeks, the plants are observed.

PLANTS GROWN IN SUNLIGHT



PLANTS GROWN IN DARK ROOM



OBSERVATIONS

Plant Feature	Plants Grown in Sunlight	Plants Grown in Dark Room
Leaves	Dark green	Light yellow
Stem	Green and sturdy	Yellow and wilted
Average Plant Height	30 cm	18 cm

All the plants in this investigation were bean plants because

- the plants were the same color
- plant type was not a tested variable
- each plant received the same amount of sunlight
- a different amount of water was not used for each plant