



Science Toolkit: Grade 7 Objective 3.E.1.c

Student Handout: Science: Grade 7 Objective 3.E.1.c

Standard 3.0 Life Science

Topic E. Flow of Matter and Energy

Indicator 1. Explain that the transfer and transformation of matter and energy links organisms to one another and to their physical setting.

Objective c. Investigate and describe the processes that enable plants to use the energy from light to make sugars (food) from carbon dioxide and water.

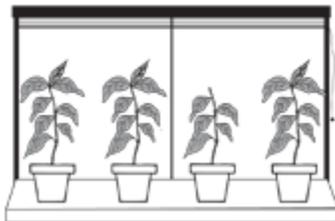
Selected Response (SR) Item

Question

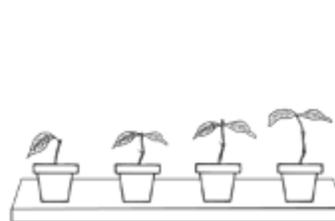
Use the information below to answer the following.

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

Plants use energy from the sun to convert

- A. sugars to oxygen and water
- B. oxygen and water to sugars
- C. carbon dioxide and water to sugars
- D. sugars to water and carbon dioxide

Correct Answer

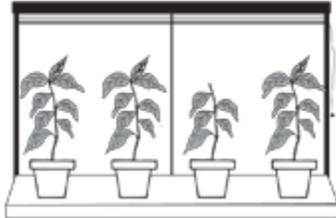
C. carbon dioxide and water to sugars

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