

Name _____

The Mysteries of Plant Behavior: Can They Perform Photosynthesis at Night?

Short Answer Key

1. Cellular respiration in plants involves using the glucose produced during photosynthesis to release energy (ATP) by breaking down glucose in the presence of oxygen.
2. CAM plants open their stomata at night to capture carbon dioxide while minimizing water loss, as they close their stomata during the day to prevent water loss.
3. Energy reserves in plants, such as starch and sucrose, are crucial for plant survival, as they support growth and maintenance during the night when photosynthesis is not active.
4. An example of a C4 plant is maize (corn), which has additional photosynthetic cells that efficiently capture carbon dioxide, even in low light conditions.
5. The balance between photosynthesis and respiration ensures that plants have a continuous source of energy and carbon dioxide, allowing them to adapt to changing light conditions and maintain basic functions.

