

9 Energy in a Cell

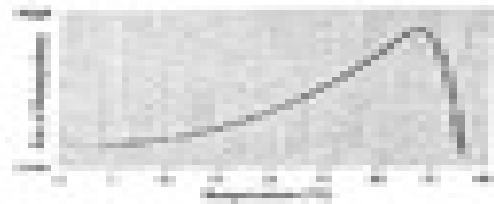
Photosynthesis

the end Chapter 9 Section 9.2

Five Factors Affecting Photosynthesis

The rate at which photosynthesis occurs varies across the cell. The amount of light, energy, water, carbon dioxide, and the number of chloroplasts are important factors that affect the rate of photosynthesis in leaf plants. The amount of water, carbon dioxide, and light energy used during the process of photosynthesis varies according to

light intensity and temperature in the rate of photosynthesis. Leaf plants that are grown in greenhouses often have a higher rate of photosynthesis than those that are grown in nature. The amount of light energy is measured in terms of the rate of light flow.



1. How does the rate of photosynthesis change as the amount of light increases? *The rate of photosynthesis increases as the amount of light increases up to a certain point, after which it remains constant.*
2. Why does the rate of photosynthesis increase as the amount of light increases? *The rate of photosynthesis increases as the amount of light increases because there are more chloroplasts available to capture the light energy.*
3. How does the rate of photosynthesis change as the amount of carbon dioxide increases? *The rate of photosynthesis increases as the amount of carbon dioxide increases up to a certain point, after which it remains constant.*
4. How does the rate of photosynthesis change as the amount of water increases? *The rate of photosynthesis increases as the amount of water increases up to a certain point, after which it remains constant.*
5. What happens when the temperature is too high? *The rate of photosynthesis decreases as the temperature increases above the optimal temperature.*
6. What happens when the temperature is too low? *The rate of photosynthesis decreases as the temperature decreases below the optimal temperature.*
7. How does the rate of photosynthesis change as the amount of chloroplasts increases? *The rate of photosynthesis increases as the amount of chloroplasts increases.*