

SCIENCE LITERACY: READING PASSAGES AND ACTIVITIES (PRINT & DIGITAL) BUNDLE

Recall Questions

Skills & Concept

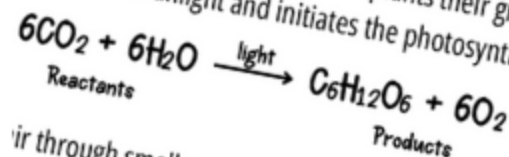
Strategic &
Extended Thinking

Understanding Cellular Energy

Cells are the building blocks of life, tirelessly working to sustain living organisms. Among their many functions, one of the most crucial is the production and management of energy. Cellular energy is produced through two essential processes: photosynthesis and cellular respiration.

Photosynthesis

Photosynthesis is a process that happens in plant cells, using sunlight to create energy. Inside the cells are tiny organelles called chloroplasts that work like little food factories. They contain a green pigment called chlorophyll that gives plants their green color. Chlorophyll traps the sunlight and initiates the photosynthesis process.



Plants take in carbon dioxide through small openings called stomata on their leaves and release oxygen through their roots. The sunlight, captured by chlorophyll, helps in the production of the sugar molecule glucose and oxygen. This whole process consists of two main stages: light-dependent reactions and the light-independent reactions, also known as the Calvin cycle, in making and storing energy needed for sustaining life.

Cellular Respiration

Cellular respiration is the process by which the nutrients from food are broken down in the cell's cytoplasm and mitochondria to produce energy. It involves a series of chemical reactions that convert glucose and oxygen into carbon dioxide and water. The energy is stored in the form of adenosine triphosphate (ATP), which is used for various cellular functions. Cellular respiration is a chemical equation that can be represented as follows:



Symbiotic Relationships in Nature

In the following passage about Symbiotic Relationships in Nature, answer the following using evidence from the text.

2. What are the names of the three types of symbiotic relationships?

3. How do you demonstrate mutualism?

4. Describe the relationship between barnacles and whales, and why it's classified as commensalism?

