

Photosynthesis is a process that occurs in plants and other organisms to convert light energy (from the Sun) to chemical energy (stored in sugars and other organic molecules). The energy from the light helps plants to create organic molecules, such as glucose (sugar). This process also releases oxygen into the atmosphere, which is essential for sustaining life on Earth. During photosynthesis, six molecules of carbon dioxide (CO₂) and six molecules of water (H₂O) react together to produce one molecule of sugar (C₆H₁₂O₆) and six molecules of oxygen (O₂). The overall equation for photosynthesis is: $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$.