

Photosynthesis is the process by which green plants, algae, and some bacteria convert light energy into chemical energy. During photosynthesis, these organisms use sunlight to transform carbon dioxide and water into glucose (a sugar) and oxygen. This process is essential for life on Earth, as it provides the primary source of energy for autotrophs (organisms that produce their own food) and indirectly supports heterotrophs (organisms that consume other organisms). The term "photosynthesis" comes from the Greek words for "light" (phōs) and "putting together" (synthesis), reflecting the role of light in this vital process