Photosynthesis is the process through which plants, some bacteria, and some protists use the energy from sunlight to convert carbon dioxide and water into molecules that contain energy. It takes place in the chloroplasts, located in the cells of green plants. During the process, light energy is converted to chemical energy, which is stored in the form of sugars. This energy is then used for the growth and development of the plant. Photosynthesis is a crucial component of the global carbon cycle and is essential for all life on Earth.