

Name _____

Solar Sparks: Can We Harness Photosynthesis for Energy?

Short Answer Key

1. Photosynthesis in plants involves sunlight, carbon dioxide, and water as inputs, and it produces glucose and oxygen as outputs.
2. Photosynthesis faces challenges related to space and location, time constraints, and overall efficiency. Scientists are addressing these challenges through artificial photosynthesis, biohybrids, and genetic engineering.
3. Artificial photosynthesis is a technology that replicates the process of natural photosynthesis but is more efficient and adaptable. It has applications in hydrogen production and carbon capture.
4. Biohybrids combine biological components, like plant cells, with synthetic materials to create energy-producing systems. These hybrids aim to combine the efficiency of photosynthesis with the flexibility of human-made technology.
5. Real-world applications include hydrogen production, carbon capture, and sustainable biofuel production.

