

Name \_\_\_\_\_

## Solar Sparks: Can We Harness Photosynthesis for Energy?

### Open-Ended Response Answer Key

1. Using photosynthesis for energy generation can significantly reduce greenhouse gas emissions because it captures and converts carbon dioxide while producing clean energy. This process can help mitigate climate change and reduce our reliance on fossil fuels.
2. Genetic engineering of plants for enhanced photosynthetic efficiency raises ethical questions about the potential ecological impact and the potential for unintended consequences in agriculture. It requires careful consideration and regulation.
3. Scaling up photosynthesis-inspired technologies for large-scale energy production presents challenges in terms of infrastructure, cost, and energy storage. These technologies play a crucial role in transitioning to a sustainable energy future.
4. Continued research and innovation in harnessing photosynthesis are essential to explore new possibilities for renewable energy. The process has the potential to revolutionize our approach to sustainable energy production and reduce our environmental footprint.

