

Name \_\_\_\_\_

## The Sun's Sparkling Role: How It Powers the Water Cycle

### Open-Ended Response Answer Key

1. Answers may include discussions of how the Sun's energy drives ocean currents like the Gulf Stream and their influence on regions like Europe's mild climate.
2. A world without the Sun's energy would be extremely cold and dark, with frozen oceans and a lack of liquid water. Life as we know it would be unsustainable.
3. Reflect on the benefits of harnessing solar energy, such as reducing greenhouse gas emissions and providing a renewable energy source. Discuss challenges like energy storage and intermittency.
4. The ongoing research on the Sun's variability can provide valuable insights into long-term climate trends. Understanding solar cycles and their potential effects on Earth's climate is essential for making informed decisions in climate science and policy.

