

Name _____

The Solar Wind: A Cosmic Breeze and Its Impact on Space Weather

Open-Ended Response Answer Key

1. Answers may vary but could include collecting data on solar wind speed, density, and composition to better understand its behavior and predict space weather events.
2. The cultural significance of auroras varies, with many indigenous societies viewing them as spiritual or mythological phenomena. Throughout history, auroras have been associated with various legends and beliefs.
3. Challenges during a geomagnetic storm in space may include increased radiation exposure and potential spacecraft system malfunctions. Strategies to ensure astronaut safety might involve staying in well-protected areas of the spacecraft and temporarily suspending spacewalks.
4. Advancements in space technology can help us prepare for the solar wind's impact on space weather by improving monitoring and prediction systems, enhancing spacecraft resilience, and developing emergency response protocols.

