

Name \_\_\_\_\_

## The Sun's Magnetic Magic: How it Influences Earth

### Open-Ended Response Answer Key

1. Answers may vary but could include potential challenges such as increased radiation exposure and the need for spacecraft shielding. Precautions might include staying in well-protected areas of the ISS and temporarily suspending spacewalks.
2. The auroras are essential for studying the Sun's magnetic activity and have cultural significance for indigenous peoples in polar regions. They are often seen as spiritual or mythological phenomena.
3. Prolonged magnetic storms can damage power grids and communication systems, leading to widespread outages. Possible solutions include reinforcing infrastructure, developing backup power sources, and improving space weather prediction.
4. Advancements in space technology can help us better predict and prepare for the Sun's magnetic influence through improved monitoring systems, earlier warnings, and more resilient technology.

