

Name _____

Dancing with the Sun: The Mystery of Solar Flares and Sunspots

Open-Ended Response Answer Key

1. Answers may vary but could include gathering data on sunspot size, frequency, and location to understand the Sun's magnetic activity better and its potential impact on space weather and Earth.
2. Potential dangers during a solar flare include increased radiation exposure, damage to spacecraft electronics, and communication disruptions. Precautions may include taking cover in a shielded area of the spacecraft.
3. Sunspots and solar flares can disrupt Earth's magnetosphere, potentially causing power grid failures and satellite communication disruptions. Measures include shielding technology and satellite repositioning.
4. Challenges in predicting solar flares include the complexity of magnetic interactions on the Sun's surface and the need for advanced monitoring technology.

