Name _____

Exploring the Variety of Moons in Our Solar System

Open-Ended Response Answer Key

1. Answers may vary but could include challenges like navigating irregular orbits, planning for unpredictable changes, and conducting research under varying gravitational forces. Scientific discoveries may include insights into the moon's composition, history, and potential resources.
2. The discovery of life in subsurface oceans on icy moons would have profound implications for astrobiology and our understanding of habitability beyond Earth. It would suggest that life can exist in extreme environments and increase the possibility of life elsewhere in the universe.
3. A mission to study mini-moons might include objectives like characterizing their composition, origins, and orbital dynamics. Instruments could include spectrometers, cameras, and landers for sample collection.
4. A moon's size influences its gravitational pull, geological activity, and potential for retaining an atmosphere or subsurface ocean. Diversity in moon size allows for varied geological processes and conditions that can inform our understanding of planetary evolution and habitability.