

Name _____

The Largest Moon in the Solar System: Ganymede

Open-Ended Response Answer Key

1. Ganymede's subsurface ocean raises the possibility of habitable environments beyond Earth. If conditions are suitable, it could potentially host microbial life or provide insights into the habitability of icy worlds in our solar system.
2. Ganymede's surface features, such as grooved terrain, differ from those of other moons. For example, Earth's Moon has impact craters but lacks Ganymede's extensive ridges and valleys. Europa also has a unique icy shell, but its features are distinct from Ganymede's.
3. The study of Ganymede has contributed to our understanding of the diverse environments within the outer solar system, including the presence of subsurface oceans and magnetic fields on icy moons.
4. Establishing a permanent presence on Ganymede would involve challenges such as radiation protection, extreme cold, and resource utilization. Opportunities could include scientific research, resource mining, and serving as a stepping stone for further exploration.

