

Name _____

Could Humans Call the Moon Home?

Short Answer Key

1. Lunar conditions that pose challenges include the lack of a breathable atmosphere, extreme temperature fluctuations (from scorching heat to freezing cold), radiation exposure, and the need for life support and shelter.
2. Potential risks related to radiation exposure for lunar inhabitants include increased cancer risk, DNA damage, and the need for shielding materials in habitats. Concerns arise due to the Moon's lack of a protective atmosphere and magnetic field.
3. Lunar missions under the Artemis program aim to gather data, conduct experiments, and test technologies necessary for lunar living. They will advance our understanding of the Moon's environment and human adaptability.
4. A lunar habitat would require well-insulated structures equipped with life-support systems, radiation shielding, renewable energy sources (solar panels), food production systems (hydroponics or farming), waste recycling systems, and psychological support measures.
5. Living on the Moon could impact psychological well-being due to isolation, confinement, and the lunar landscape's desolation. Countermeasures could include regular communication with Earth, recreational activities, and mental health support.

