

Name _____



Volcanoes: Critical Thinking

Directions: Answer the questions below in complete sentences. Use your knowledge of Earth, other planets, and moons to explain your reasoning.

1. Why is Earth volcanically active, while some planets like Mercury and the Moon are not?
2. Mars has giant shield volcanoes like Olympus Mons, but they are no longer erupting. What does this tell us about Mars' internal heat and plate tectonics?
3. Io, one of Jupiter's moons, is the most volcanically active place in the solar system. What causes this extreme activity?
4. Venus has many volcanoes, but scientists are unsure if they are still active. Why is it difficult to confirm volcanic activity on Venus compared to Earth?
5. If a planet or moon loses its internal heat, what will eventually happen to its volcanic activity?

Reflection Question: Why do you think studying volcanoes on other planets and moons can help us understand Earth better? Write 3-4 sentences.
