

Name _____

Exploring the Cosmic Ingredients: The Composition of Comets

Open-Ended Response Questions

1. Comets have been described as "time capsules" of the early solar system. Explain why this analogy is appropriate and discuss what specific information comets provide about the early solar system.
2. Imagine a scenario where scientists discover complex organic molecules on a comet. How might this finding impact our understanding of the potential for life beyond Earth?
3. Comets have two types of tails: gas tails and dust tails. Explain the differences between these two types of tails and how they form.
4. If you were a scientist planning a space mission to study a comet up close, what would be your main objectives, and what challenges might you encounter during the mission?

