

Name _____

Why Earth: Exploring the Mystery of Life's Existence

Open-Ended Response Questions

1. Imagine you are an astrobiologist tasked with searching for signs of life on another planet. What specific conditions or factors would you look for to determine if life could exist there, and why are these conditions important?
2. While Earth's atmosphere is essential for life, it is not the only possible environment where life could exist. Discuss some alternative scenarios for life beyond Earth, considering different planetary conditions and adaptations life forms might have.
3. Earth's unique geological processes, such as plate tectonics, have played a crucial role in shaping its environment. Choose one geological process and explain how it impacts the planet's surface and the distribution of life.
4. Reflect on the passage's mention of the immense timespan Earth has had for life to evolve. How has this long history influenced the diversity of life on our planet? Compare it to a hypothetical planet with a shorter history.

