

Name _____

Why Earth: Exploring the Mystery of Life's Existence

Short Answer Key

1. The "Goldilocks zone" is where conditions are just right for liquid water to exist on a planet's surface. Liquid water is essential for life as we know it, so Earth's location in this zone allows for a stable climate with water, making it suitable for life.
2. Earth's atmosphere acts as a protective shield by absorbing harmful solar radiation, preventing it from reaching the surface. It also regulates temperature by trapping heat and preventing extreme temperature fluctuations.
3. Oceans cover 71% of Earth's surface and support diverse ecosystems. They play a crucial role in climate regulation by absorbing and releasing heat, influencing weather patterns, and serving as a habitat for countless species.
4. Organic molecules are the building blocks of life as we know it. Their presence on a planet is a key indicator that the necessary chemical ingredients for life exist. Organic molecules are essential for the formation of biological molecules like DNA, proteins, and carbohydrates.
5. Plate tectonics is one geological process discussed. It shapes landscapes, creates mountains and valleys, and recycles essential nutrients. This recycling of nutrients is crucial for the growth of plants and the entire food chain, making it possible for diverse life forms to thrive on Earth.

