Name _____

Lifespan Mysteries: Exploring the Duration of Amphibian Lives

Open-Ended Response Answer Key

1. Environmental factors such as temperature and humidity can influence the lifespan of amphibians by affecting their metabolism, growth rates, and susceptibility to diseases. Warmer temperatures may accelerate metabolism and growth, leading to shorter lifespans, while cooler temperatures may slow down metabolism and extend lifespans. Higher humidity levels can also reduce water loss and stress on amphibians, contributing to longer lifespans.
2. Limited availability of food can impact the lifespan of amphibians by causing malnutrition and stunted growth. In environments where food resources are scarce, amphibians may struggle to find enough food to sustain themselves, leading to shorter lifespans and reduced reproductive success.
3. Human activities such as habitat destruction and pollution can have detrimental effects on the lifespans of amphibians. Habitat destruction can reduce available habitat and food resources, increase exposure to predators, and disrupt breeding and migration patterns, all of which can contribute to shorter lifespans. Pollution can also contaminate water sources, leading to increased mortality rates and reduced reproductive success among amphibians.
4. Scientists can study the lifespans of amphibians in their natural habitats by conducting long-term monitoring studies, collecting data on population dynamics, growth rates, and reproductive success, and analyzing environmental factors that may influence lifespan. They can also use techniques such as mark-recapture studies, radio telemetry, and genetic analysis to track individual animals and gather information on their movements, behaviors, and survival rates over time.