Name _____

Unraveling the Secrets of Population Genetics

Open-Ended Response Answer Key

1. Answers may vary. Example: "Genetic drift may have a significant impact on the genetic diversity of a small population if it undergoes a population bottleneck, where only a few individuals survive and reproduce, leading to a loss of genetic variation."
2. Studying the genetic diversity of endangered species is important to assess their risk of extinction and develop conservation strategies to preserve their genetic uniqueness.
3. As a scientist studying population genetics, I would want to investigate questions about the effects of habitat fragmentation, climate change, and human activities on the genetic diversity and connectivity of populations.
4. The study of population genetics can contribute to the development of new agricultural crops by identifying genes associated with desirable traits such as yield, disease resistance, and stress tolerance, and incorporating them into breeding programs to improve crop performance and sustainability.

© ReadingDuck.com