Environmental Situations

FOR STUDENTS

1. A farmer has been trying to protect his wheat fields by exterminating prairie dogs. Very little prey is available. Given its genetic makeup, how would your population survive?

2. A golden eagle hunts from high above and will prey on available animals such as the black-footed ferret. Prey with precise vision can better avoid being captured. Given its genetic makeup, how would your population survive?

3. Black-footed ferret young (called kits) disperse from their home territory and are able to establish new populations in nearby prairie dog towns. Given its genetic makeup, how would your population survive?

4. An interstate highway has been built near your prairie dog town. How does this road affect your black-footed ferret population? Given its genetic makeup, how would your population survive?

5. Fleas carrying bacteria that cause sylvatic plague have infested your prairie dog town. Biologists have not yet vaccinated the black-footed ferrets in your population. Given its genetic makeup, how would your population survive?

6. A new generation of captive-born black-footed ferret kits has been preconditioned to live in the wild and are ready to be released at a nearby reintroduction site. Given its genetic makeup, how would your population survive?

7. A plague has hit your prairie dog town, and most of the prairie dogs die from the disease. How does your black-footed ferret population adapt to a reduction in food supply? Given its genetic makeup, how would your population survive?

8. As a coyote silently prowls nearby, only its odor might warn of its presence. Will your population be able to detect and avoid the coyote? Given its genetic makeup, how would your population survive?

9. Black-footed ferrets eat prairie dogs and use prairie dog burrows for shelter. Is your ferret population agile enough to catch an aggressive prairie dog in its dark, narrow, winding tunnel system? Given its genetic makeup, how would your population survive?

10. Black-footed ferrets are nocturnal creatures that leave their burrows at night to feed. Does your ferret population have the ability to stay well-hidden from the bobcat hunting for its dinner? Given its genetic makeup, how would your population survive?

11. A badger is moving quietly around the prairie dog town. Does your population have acute hearing to detect and avoid this predator? Given its genetic makeup, how would your population survive?

12. A prairie dog colony has just been established in a state park only a few miles away. How does the colony affect your populations of ferrets? Given its genetic makeup, how would your population survive?

13. It will be difficult for your population to take over and adapt to prairie dog burrows in hard soils without strong claws and forelegs. Given its genetic makeup, how would your population survive?

14. Humans who are building homes have wiped out a prairie dog town 3 miles away. The surviving black-footed ferrets from that area are moving into your territory. Given its genetic makeup, how would your population survive?