

Coyote Problem

A scientist was studying coyotes, animals that prey on rabbits and other small wild animals. Coyotes also prey on farm animals. The scientist found that coyotes cost farmers and ranchers millions of dollars each year. Destroying coyotes reduces the loss of farm animals, but also disturbs the natural balance of the environment. The scientist wanted to know if coyotes could be prevented from killing farm animals without upsetting the natural balance in the wild.

The scientist talked to others doing similar research, as well as to the ranchers, about the problem. He also checked in scientific books and magazines to find research that had already been done. After doing this research, he thought that coyotes made slightly ill by eating farm animal meat treated with chemicals will not kill and eat farm animals in the future.

The scientist tested this idea by giving one group of coyotes meat treated with a chemical that made them slightly ill, and by giving another group of coyotes meat that had not been treated with the chemical. He found that the group which had received the meat which had no chemicals killed 400 sheep, but that the group that received the meat treated with chemicals killed only 150 sheep.

Because the data supported his hypothesis, the scientist reported in the Journal of Range Management that feeding coyotes meat that makes them ill reduces their killing and eating sheep.

1. What problem is the scientist trying to solve?
2. How did the scientist gather information before making his hypothesis?
3. What was the scientist's hypothesis?
4. How did the scientist test his hypothesis (experiment)?
5. What was the variable in his experiment?
6. What was the control group?
7. What was the experimental group?
8. What results did the scientist obtain?
9. What was the scientist's conclusion?
10. How did the scientist communicate his results?