

Science Activity

Disclaimer: This is a fictitious experiment with fictitious data. It should not be attempted or replicated in any way. Professor Lexi Kahn and Professor E. Seemy are Word Generation characters and not actual scientists.

Target words:

notion, whereas, capable, compatible

Background information:

Most people are of the notion that we can tell how dogs feel by watching how they act. For example, people usually think dogs are happy when they are wagging their tails, whereas they are scared or stressed when they cower, or lower their body and look down. Professor Seemy noticed that his dogs wagged their tails whenever he took them for walks down his busy city street, whereas Professor Kahn's dog always cowered in the city. Were his dogs more compatible with the ongoing city noises or were they more used to it? Was Professor Kahn's dog stressed or just not sure how to get around all the people? They designed an experiment to find out. As scientists, they knew that animals release the natural chemical cortisol into their saliva when they feel stressed. Lower cortisol levels, therefore, mean happier dogs.

Question:

How much "happiness" do dogs feel under a variety of conditions?

Hypothesis:

Strangers and unexpected noises will cause dogs more stress and they will have higher levels of cortisol.

Materials:

Whistle, chew-toy, dog-owner, 1 scientist, control room, 2 Chihuahuas, 2 Huskies

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Procedure:

1. The dog's owner will enter the control room with his or her dog. Professor Kahn will record the actual cortisol level.
2. The owner and Professor Kahn will then leave the room. After two minutes, Kahn will return and measure the dog's cortisol level again.
3. Kahn will then blow a whistle, wait two minutes, and record the cortisol level.
4. Kahn will then provide the dog with its familiar chew-toy, wait two minutes and record the cortisol level.
5. Kahn will repeat the procedure with each dog.

Data:

Cortisol Levels in Dogs

Dog	Initial level	Without owner	After whistle	After chew-toy
Husky 1	24%	36%	45%	28%
Husky 2	18%	25%	34%	24%
Chihuahua 1	36%	57%	76%	49%
Chihuahua 2	42%	53%	88%	54%

Conclusion:

Was the hypothesis correct?

Yes.

What is the evidence that supports your conclusion?

All four dogs' cortisol levels increase when Dr. Kahn (a stranger) re-enters the room.

All four dogs' cortisol levels increase even more after the whistle (an unexpected noise).