

The Cat's Meow

What color laser will catch the cat's attention for the most time?

Abstract:

The purpose of the experiment was to determine what color laser house cats like most. I presented house cats with three colored laser toys and timed them playing it. I hypothesized based on my research that they would like green the most but instead my results show that the cats like the red laser most.

Narrative:

I love cats! Cats are great at feeling emotions, having people personalities, and comforting you when you are sad or sick. I have two cats named Chevelle and Eva. Chevelle is a very old cat, probably 17 or 18 and he is a big cuddler. He loves to hang around your neck and keep a paw on your face. Eva is about 10 years old and she is crazy and wild. She licks people and chews their hair. My grandparents and aunt have three more cats that I spend a lot of time with and love. Ariel is an attention seeking cat who gets stressed sometimes. Koby is a floppy ragdoll cat. He is shy. Cinder is a warrior cat that prefers to hide. She doesn't like people at all. These cats are important to me and spending play time with them is one of my favorite hobbies. That was what guided my science fair project.

In third grade I did a project on animal adaptations. My project focused on cat adaptations. I learned a lot but I also had more questions. I also wanted to make sure my project helped me make the most of cat play time. I came up with the question "What color laser will catch my cat's attention for the most time?"

First my mom ordered lasers. She got a pack of red, blue and green. I just wanted to pull them all out and play with all of them with all the cats. My dad made me stop and think about variables. For an experiment we need to control the entire process and only change 1 thing. We decided we needed to control the shapes we made with the laser that way we could rule out pattern or human error as the cause to the cat's interest or disinterest. We also needed to make sure we used the right colors equally and we needed to control the time of day. My research told me that the cats would be most likely to play at night so we made sure to test each color at three different times of day so their activity level didn't influence the laser interest.

To test our 5 cats' interest we ran the laser for 120 seconds total with each cat. We did 40 seconds on each shape; circle, line and leading squiggles. We did this with each color and timed how long during those 120 seconds the cat actively played. In order to be actively playing they had to be watching it, chasing it or attacking it. To repeat this experiment with a minimum of 5 trials we calendared out 6 days of testing. We planned out one different color for each time of day; morning, midday and evening. We planned it so each color got two opportunities at each time of day. Each cat was tested 6 times with each color.

It was fun to play with the cats. It was also interesting to see their different personalities in how they played. Cinder and Chevelle had no activity or interest in the lasers. The both interacted with the laser pointer pen by rubbing it but they didn't give the laser point any attention. Ariel consistently played with the laser throughout the experiment. Eva played a lot at the beginning of the experiment but lost interest over time. Kobe had little interest in the beginning but started playing with it towards the end of the experiment. Before I did the experiment I expected all the cats to play with it. Since some cats didn't play I don't have as much data as I planned. If I were to do this experiment again I would use more cats and make sure that the cats I tested had interest in laser play.

Based on my research I made the hypothesis that green would be the most effective. It is a mixture of a cats two favorite colors blue and yellow. My hypothesis was wrong according to my experiment results. The most popular color was red. Out of the total time played 43.3% was spent on the laser. That means almost half the play time was with red. Blue was played with 26.9% of the play time. Green was played with 29.8% of the play time. My research actually said red was the color they saw the least vibrantly. I think that maybe because that color is familiar and less bright they feel safer playing with it.

My research told me that cat obesity was a rising concern in cats. I thought that laser play could be a great way for cat owners to help keep their house cats active and healthy. My experiment suggests if your cat likes laser toys a red laser might be the best laser toy to use.

Resources (ABA)

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"Obesity." *Cornell University College of Veterinary Medicine*, 22 May 2018, <https://www.vet.cornell.edu/departments-centers-and-institutes/cornell-feline-health-center/health-information/feline-health-topics/obesity>.