



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

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| Name(s) MacKenzie M. Hart | Project Number 22289 |
| Project Title Contracting Pupils: Are Cat Eyes Faster than Human Eyes? | |
| Abstract Objectives/Goals The objective of my project was to determine whether or not the pupils of cat#s eyes contract faster than the pupils of human#s eyes when exposed to light. Methods/Materials My test subjects were three humans and three cats. The equipment used was a Sony DCR-TRV900 digital video camcorder. I focused the camera on each subject#s eye to clearly see the pupil. I turned off the light to allow the pupils to dilate. I turned on the light and recorded the subject#s pupil as it contracted. I conducted five trials for each of the subjects. When all trials were complete, I played back the recorded video to watch the pupils contract frame by frame and recorded the contraction times. I averaged the results for each test subject. Then, I averaged the results for all cats and for all humans. Results The average response time of the cat#s pupil to the light turning on was 4.7 frames. Human#s average response time to the light turning on was 5.1 frames. The time it took for cat#s pupils to complete contracting was 37.1 frames. The time it took human#s pupils to complete contracting was 39.1 frames. Conclusions/Discussion Cat#s pupils and human#s pupils contract approximately at the same rate and have a similar response time to light. | |
| Summary Statement I researched whether or not cat#s pupils responded faster to light than human#s pupils. | |
| Help Received Mom and dad helped me hold the cats and work the camera; Mom loaned me the camera and helped with Adobe Photo Shop; Dad helped me with Microsoft Excel and with analyzing the data. | |