



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Olivia Burkhalter; Ty Koebler	Project Number 36563
Project Title Super Powers: The Study of Brain Lateralization through Paw Preference in Dogs	
Objectives/Goals We wanted to learn if dogs showed paw preference similar to human handedness. Abstract Methods/Materials We performed two tests for paw preference, ten trials each, on twenty different dogs. The first test was a walking test, in which we observed which paw the dog led with in coming towards us from a seated position. We repeated that test seven times. The second test was the Kong test. It used a Kong toy filled with treats and we observed over three minutes whether a dog used one or both of its paws to stabilize the toy in trying to extract the treats. Our main materials were several dehydrated liver treats used in calling the dogs and the Kong toy stuffed with liver treats. Results 35% of dogs showed a preference for the left paw, 35% showed no paw preference, 20% showed a right paw preference, and 10% showed ambidexterity. Conclusions/Discussion Our results indicated that some dogs do show a preference for one paw over the other. As we learned in our research, this could help people working with animals decide which dogs might make better service dogs, because paw preference has been linked to certain behaviors. In addition, this knowledge might help people address behavioral problems in their dogs because they will understand them better by knowing their preference.	
Summary Statement Our experiment explored brain lateralization in dogs by looking at whether dogs display paw preference.	
Help Received Our teacher helped us develop our methods and reviewed our results.	