



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Taylor L. Kerr	Project Number J1113
Project Title How Does Grooming Affect a Horse's Heart Rate?	
Abstract Objectives/Goals To observe the effect grooming has on heart rate after exercise as compared to no grooming. Methods/Materials I took each horse's heart rate before exercise using a stethoscope. I then exercised each horse for 3 minutes, waited one minute, and took the heart rate again. Next, I repeated the previous steps, but this time I worked each horse for 30 seconds and groomed each horse for one minute after exercising before taking their heart rate. I repeated this experiment with all horses 3 times. The materials I used were a stethoscope, 8 horses, round pen, stopwatch, paper, pen/pencil, and a clipboard. For Trial 2, at the judges' suggestion, I plan to repeat the experiment, but will exercise them for 3 minutes instead of 30 seconds. Results The results of this project indicate that when a horse's heart rate is high, and you groom it, the horse will relax and the heart rate will slow down more quickly than with rest alone. The average heart rate before grooming and exercise is 45.88. The average heart rate after exercise and grooming is 53.38, and the average heart rate after exercise and no grooming is 73.33, which gives a difference of 19.95 heart beats per minute. This data shows that grooming a horse after exercise acts as a way to cool them down faster than just rest alone. Conclusions/Discussion My hypothesis was supported because grooming causes a horse to relax, which in turn causes the heart to beat less often. While this is common knowledge when grooming horses in general among most horse owners, these results show that it should also be applied as a method of cool down after exercising horses. In order to cool a horse down quicker it is better to groom them than letting them rest without grooming. Grooming horses after exercise is a much more efficient way to reduce heart rate, and cool a horse down.	
Summary Statement My project is about how grooming affects a horses heart rate after exercise as compared to regular resting.	
Help Received My mother gave ideas, Mrs. Coffing helped with data, Jan Reid let me use her horses, stethoscope, and round pen, Lori Uhler let me use her horses, my dad helped me with the design of the board, my sister helped collect my data after I worked the horses, Chelsea Reid helped me deal with the rowdy horses.	