



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Noel C. Garcia	Project Number J1510
Project Title Kinetic Energy	
Abstract Objectives/Goals My project was to determine if weight distribution inside a cylinder affected the speed of the cylinder while traveling down a slope. Methods/Materials The speed of three cylinders was measured at the end of a 6 meter slope. One cylinder had no washers. The second cylinder had washers positioned along the perimeter of the cylinder. The third cylinder had washers stacked in the center of the cylinder. The speed in meters/second was measured 10 times each for all three cylinders. Results The cylinder with the washers stacked in the center traveled the fastest with an average speed of 1.99 m/s. The cylinder with washers positioned along the perimeter traveled an average speed of 1.75 m/s. The cylinder with no washers traveled the slowest with an average speed of 1.72 m/s. Conclusions/Discussion My conclusion is that all the cylinders had the same potential kinetic energy. However, the cylinder with the washers positioned along the perimeter used more of its original kinetic energy just to get the cylinder rolling. The cylinder with the washers stacked in the center had more translational kinetic energy available at the 6 meter mark which resulted in a faster speed. The cylinder with no washers had less mass, therefore less original potential kinetic energy at the top of the slope.	
Summary Statement My project was about how weight placement in a cylinder affects the speed of a cylinder when in motion.	
Help Received Father helped roll cylinders down driveway.	