



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Salvador Eligio; Elio Gonzalez; Lily Leighton	Project Number J1506
Project Title Let It Roll	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our objective was to find out if the diameter of a PVC pipe would effect the speed of a small metal ball travelling a pre-set length of 6'. We were exploring the relationship of friction and gravity inside the pipe.</p> <p>Methods/Materials We constructed a testing board made of plywood and three 6' lengths of PVC pipe of the following diameters: 1/2", 1", and 2". We attached the pipes to the board with metal straps making sure they were parallel. We propped up one end of the board to create a slope. We ran a series of tests simultaneously releasing one ball into each pipe and recording the time it took the ball to come out at the other end. We did this ten times and then averaged the times for each diameter pipe.</p> <p>Results We found out that the ball rolled fastest in the 2" pipe, second fastest in the 1" pipe and slowest in the 1/2" pipe.</p> <p>Conclusions/Discussion We concluded that this happened because in the 2" pipe the ball had less contact with the pipe wall which caused less friction than in the other smaller diameter pipes. In the smaller diameter pipes there was more contact between the ball and the pipe causing more friction which slowed the ball.</p>	
Summary Statement Our project is about gravity and friction working against each other.	
Help Received Salvador Garcia was part of our original team. Our teacher helped us with editing the conclusion and our classmate, Lucero Jimenez, help us decorate the board.	