



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Sami J. Kirkpatrick	Project Number J0212
Project Title Wheel Friction	
Abstract Objectives/Goals The goal of this experiment was to see if expensive fingerboard wheels go farther and create less friction than less expensive wheels. Methods/Materials Four wheels were tested: Tech Deck non-bearing wheels, FingerDecks single bearing wheels, G6e single bearing wheels with bushings and G7.1e duel bearing wheels. To test this experiment the wheels were all put on the same fingerboard and rolled down a ramp. The distance that the fingerboard traveled was then measured to see how far it rolled. A backstop was used to make sure that the wheels started at the same spot every time. Each set of wheels was rolled down the ramp 30 times and the mean was calculated for each pair. Results From shortest distance traveled to longest distance, the results were as follows: the Tech Deck non-bearing wheels traveled the shortest distance at an average of 116.15 inches. Next, the FingerDecks single bearing wheels traveled 129.9 inches, the G7.1e duel bearing wheels went 165 inches followed by the G6e single bearing wheels with bushings which went 195.17 inches. Conclusions/Discussion Expensive wheels are supposedly much better than the cheaper wheels, but the G6e wheels are twenty dollars less then the G7.1e and go a lot further. This proves that even if something is expensive, it doesn't always mean it's better than the less expensive version.	
Summary Statement My project is about the effects that ball bearings have in reducing sliding friction in fingerboard wheels.	
Help Received My dad helped me build the ramp.	