



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Jayson G. Renge	Project Number 28308
Project Title Splat	
Abstract Objectives/Goals The purpose of my investigation is to determine if barrel diameter affects the accuracy of a paint ball. Barrel diameter has a lot more to do with paintball accuracy than the length of a barrel. More people believe that the longer barrel you have the more accurate shooting will be, this is partly true. The diameter has a lot more to do with the accuracy of a barrel than length. Barrel diameter has more to do with accuracy, because it controls the flight pattern. Longer barrels give you less muzzle velocity which will make your paintball drop faster. If you want to find an accurate barrel you have to know the size of your paintball, even though it says that the paintball is a 65 caliber paintball they are not always that size. Different companies have there own size that can be a little bigger or smaller than the size that is stated on the box it came in. You can buy a pipe kit so you do not have to have certain barrels for different sizes of paint. With a pipe kit it allows you to adapt your barrel to pretty much any size or brand of paintball. Velocity also plays a big role in accuracy. Methods/Materials Materials: 1. paintball marker with paintball rest; 2. pipe kit; 3. paintballs; 4. board; 5. ruler; 6. note book; 7. co2 tank with co2. Procedure: 1. obtain materials to build paintball marker stand; 2. obtain paintballs and paintball marker; 3. build paintball stand; 4. mount paintball marker; 5. fire three shots three times at board; 6. measure grouping size; 7. record grouping size; 8. switch out barrel diameter piece and repeat steps six through eight until all the barrel diameters have been tested. Results After my investigation I've concluded that there is a tie between barrel diameters .692, .690, .688. This conclusion does not support my hypothesis which states that the smallest barrel diameter will do the best. Conclusions/Discussion For my further research I will check the velocity and use more paintball brands.	
Summary Statement Barrel Diamaters in Paintball Markers	
Help Received Mother helped with testing	