



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Nicholas K. Ida	Project Number J2212
Project Title Ready, Aim, Geyser!	
Abstract	
Objectives/Goals My objective was to determine if there is a maximum explosion size of the Mentos and Diet Coke reaction where adding more Mentos will no longer increase the size of the explosion.	
Methods/Materials 60 packs of Mentos Mints and 66 2-liter bottles of Diet Coke were used with Steve Spangler Science Geyser Tubes to create explosions which were measured for both maximum geyser height and expelled weight loss. Three trials were performed for each of 1-20, 25&30 Mentos added for a total of 66 trials. An HD video camera was used to measure explosion height. A digital weight scale was used to record before and after explosion weight.	
Results The height of the geyser increased slowly between 1-10 Mentos. A significantly higher explosion was seen with the addition of 11-30 Mentos compared to 10 Mentos. The average height of the explosion plateaued off between Mentos 11-30 at approximately 142 inches. An unusual spike in height was seen with 17 Mentos. The average weight of expelled Diet Coke increased slowly between 2-10 Mentos. For trials of 11 Mentos or greater, the expelled weight appeared to plateau.	
Conclusions/Discussion My conclusion is that there is a maximum explosion size of the Diet Coke and Mentos reaction where adding more Mentos does not increase the size of the explosion. From 11-30 Mentos, the effect of increasing the number of Mentos had little effect on increasing the height of the explosion and little effect on the amount of Diet Coke and Mentos expelled from the bottle. This plateau means that the Mentos and Diet Coke reaction only works to a certain point and does not increase forever when more Mentos are added.	
Summary Statement The maximum explosion size of the Diet Coke and Mentos reaction is reached by adding eleven or more Mentos.	
Help Received Mr. Hobbs helped me organize and review data. Dad helped me design and perform the project.	