



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

<b>Name(s)</b> Nicholas G. Wong	<b>Project Number</b>  35007
<b>Project Title</b> <b>What Factors Influence Public Participation in Currency Bill Tracking? Application for Monitoring Population Movement</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b>          Where's George is a non-profit website (wheresgeorge.com) set up for hobbyists to track the natural flow of currency by entering a bill's information, spending the bill normally, and then waiting for another person to enter the bill again at a later time (a "hit"). Users often write or stamp the website on their bills to increase the number of "hits." The main goal of this study is to observe what factors such as stamp color and position can influence the number of "hits." A secondary goal is to investigate if the city that the bills are spent in can influence the number of "hits" and whether a study can track the movement of bills from that city.</p> <p><b>Methods/Materials</b>          Dollar bills were marked 3 different ways using 2 different types of rubber stamps containing information about the Where's George website. In addition, these bills were stamped with red, blue, or black ink to give a total nine different combinations of being marked along with an unmarked control. Sets of bills which contained each of the ten possible combinations were spent (or exchanged with others) in 4 different cities in California (Sacramento, Davis, Monterey, and San Francisco). For 10 months, these bills were monitored for "hits" using the Where's George website.</p> <p><b>Results</b>          The combination of using red stamps on both the front and back of the bills had a "hit" rate 70% higher than any of the other 9 combinations. City comparisons showed that bills spent in Sacramento had the highest percentage of "hits" followed by Davis, Monterey, and San Francisco. However, bills spent in Monterey and San Francisco tended to travel greater distances over time. For Davis and Sacramento, a majority of the bills spent stayed within each respective county.</p> <p><b>Conclusions/Discussion</b>          Bills marked on the front and back with red ink are the best for maximizing the number of "hits." Bills spent in San Francisco and Monterey had very few hits compared to Davis and Sacramento but the pattern of distribution indicates that perhaps many of these bills were being transported by non-locals and tourists. Bills spent in Davis tended to either stay within the county or distributed to very far locations which might be indicative of the university population. Bills spent in Sacramento migrated slowly to neighboring counties in a Northeast direction toward Nevada.</p>	
<b>Summary Statement</b> Discovering the best way to mark a dollar bill with a website so that others will notice it and then allow researchers to track where it goes over time to study population movement patterns.	
<b>Help Received</b> Parent's, parents coworkers, relatives, teachers, classmates who exchanged money with me for the marked bills and then spent them normally	