



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Kristen B. McLane	Project Number S0311
Project Title An Experiment to Investigate the Effects of Carbohydrates on Spatial Memory Recall	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals This experiment investigates the effects of carbohydrate intake on spatial memory recall. The participants used in the experiment were male and female eleventh and twelfth graders from a rural high school in the northwest United States, all between the ages of 16 and 18. The intent of the experiment is to identify a positive relationship between carbohydrate intake and the ability to recall word placement. It attempts to prove that the higher the intake of carbohydrates, the more likely the participant will remember the placement of different words.</p> <p>Methods/Materials The experimental design compares the means of two independent opportunity samples using the t-test. The independent variable in this experiment is whether or not the participants received carbohydrates prior to testing. The dependent variable is the number of correctly placed words.</p> <p>Results The t-test did not show significance at the .05 level because the experiment needed to meet the critical value of 1.684. Therefore, the null hypothesis was accepted: There will be no relationship between participants who consume carbohydrates and those who do not when tested on their ability to recall word placement.</p> <p>Conclusions/Discussion This determines whether consuming carbohydrates prior to testing improves participation and therefore may be applied to improve testing abilities.</p>	
Summary Statement My project tests the participants' ability to recall word placement depending on the amount of carbohydrates recieved prior to experimentation.	
Help Received Friend presented test to control group.	