



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Matthew J. Choi	Project Number J1205
Project Title Impact of Nutrition on Mice	
Objectives/Goals The goal of the project is to understand how different types of food affect mice's weight.	
Abstract Methods/Materials 1. Prepare 4 mice cages with toys, shredded paper for bedding and label cage as Control, Vegetable, Junk Food, and Animal Products. 2. Label each mouse 3. Put each mouse in their cages and never mix them up. The groups should always be separated. 4. To make sure all the mice stay healthy during the experiment feed all the mice 50% of the doctor recommended daily nutrition requirement. This means at least 2.5 grams of mice feed mix which is made up of dried vegetable, nuts, and seeds sold in pet stores. So feed the mice at 7:00 AM. Since 2.5 grams of feed is needed for each mouse and there are 5 mice in each cage, put a total of 12.5 grams of healthy mice feed mix in each cage. Put the feed in the meal bowl. 5. Evenings and nights are when mice feeds the most so at 7:00 PM put the following feed in each cage's meal bowl: Control Group: 12.5 grams of doctor recommended mice feed mix (2.5 grams per mouse) For the Veggie, Junk Food, and Animal Product Group we want to put enough food in the cage so that they don't run out. We want to have them eat as much as they want. Put up to 50 grams of the mixture. If the mice do not eat all the food start reducing the amount so that food is not wasted. Veggie Group: Put a mixture of carrots, cucumber, broccoli, califlower, and apple that are cut up. Junk Food Group: Put a mixture of potato chip, cheetos, cakes, cookies and sugar coated cereals. Animal Product Group: Put a mixture of hotdog, spam, butter, and cheese. 6. Make sure there is enough water in the water bottle everyday. 7. Weigh them every week by sticking each mouse in a weighing bowl so that they don't run away. Their should be 5 records for 20 mice at the end of the experiment. 9. Analyze the data and write report.	
Results Mice on vegetarian pellet diet maintained their weight during the 4 week experiment. Mice on animal products diet gained 18.6% and mice on junk food diet gained 27.5% of their original body weight.	
Conclusions/Discussion If we assume abnormal weight gain is unhealthy, mice that were fed animal products and junk food became unhealthy. Mice on vegetarian pellet diet maintained their weight and stayed the healthiest. Since mice and humans are genetically similar we may assume that diets of mainly animal products and junk food lead to abnormal weight gain in humans.	
Summary Statement The goal of the project is to understand how different types of food affect mice's weight and understand how the results can impact humans.	
Help Received Science teacher Mr. Nelson helped with his advice; Father helped with purchasing supplies and experiment supervision; Sister Claire help with weighting mice; Grandma helped with cleaning and feeding mice	