



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Aditi Bharti	Project Number J1505
Project Title Hurray! Plastic Just Passed Away! The Effect of Selected Catalysts on the Rate of Plastic Degradation	
Abstract Objectives/Goals The objective of this experiment is to find out which catalyst would degrade plastic pieces fastest between the microorganisms: Bacilli, Cocci, and Spirilla (soil/compost), Lactobacillus Bulgaricus and Streptococcus Thermophilus (yogurt), and Amoxicillin-Penicillin (anti-biotic). Methods/Materials Four two-gallon containers, a Kirkland plastic garbage bag, and a homemade tensile strength measuring device were used for my experiment, in which I put six 6-in x 1/2-in plastic strips (from the Kirkland plastic garbage bag) in each of the four containers with their catalyst and left them how they were for about eight weeks after which I tested their tensile strengths. Results The plastic strips in soil/compost degraded the most at 16%, the plastic strips in yogurt degraded second most at 10%, and the plastic strips in anti-biotic degraded least at 8%. Conclusions/Discussion The bacteria in soil/compost degraded plastic the most (16%), the bacteria in yogurt degraded plastic second most (10%), and anti-biotic degraded plastic the least (8%). The results of this experiment support my hypothesis since the catalysts degraded the plastic strips from fastest to slowest in the order I hypothesized.	
Summary Statement The purpose of this experiment was to find which catalyst would degrade the plastic pieces fastest between the microorganisms found in soil/compost, yogurt, and anti-biotic.	
Help Received I would like to thank my science teacher, Mrs. Mackewicz, for helping me throughout my project by reviewing my work and providing valuable feedback.	