



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> <b>Aditi Bharti</b>	<b>Project Number</b>  35655
<b>Project Title</b> <b>Hurray! Plastic Just Passed Away! The Effect of Selected Catalysts on the Rate of Plastic Degradation</b>	
<b>Abstract</b> <b>Objectives/Goals</b> 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). <b>Methods/Materials</b> 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. <b>Results</b> 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%. <b>Conclusions/Discussion</b> 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.	
<b>Summary Statement</b> 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.	
<b>Help Received</b> I would like to thank my science teacher, Mrs. Mackewicz, for helping me throughout my project by reviewing my work and providing valuable feedback.	