



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>J. Alejandra Alvarez</b>	<b>Project Number</b> <b>J1102</b>
<b>Project Title</b> <b>The Power to Recycle</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this project was to test the effects of recycling water on three different kinds of plants. For that purpose I used three different kinds of water: white water, gray water, and black water. My goal was to find out if plants could grow when watered with water that has already been used in a household. Water is one of the most important natural resources that is vital for our living, and at this time that water levels are going down we need to save as much water as possible. We have the power to recycle water!</p> <p><b>Methods/Materials</b> I used three different kinds of seeds: tomato, sunflower, and bean. I planted each one of them four times in order to water them with white water, gray water from the laundry, gray water from the kitchen sink, and black water. I observed them for 21 days, and each day I recorded the temperature and height of the plant. I repeated the experiment once more to get a more accurate result.</p> <p><b>Results</b> According to my data the tomato plant grew better with black water, the sunflower plant grew better when watered with white water, and the bean plant also grew better when watered with white water. Even though plants watered with gray water didn't grow the fastest, it is still a good way of recycling water.</p> <p><b>Conclusions/Discussion</b> The purpose of my project was to find out if plants watered with reused water will grow. In my hypothesis I stated that I thought plants watered with kitchen sink gray water will grow perfectly fine because of the food bits that contains a lot of nutrients. I, also, thought that gray water coming from the laundry would also grow fine because laundry gray water that contains a low concentration of soap could actually help the plants grow. And finally, I thought that black water would kill the plants because it has a lot of bacteria. My hypothesis was half right and half wrong. Both gray waters did help the plants grow, but the plants watered with black water didn't die. If iwere to do this experiment again I would like to test different plants. Also I would like to test them with gray water coming from the bath and ad he bathroom sink, instead of the kitchen sinkand the laundry. I would also be able to have more time so I could analyze the fruit of the plant to see if it is edible when watered with gray and black water.</p>	
<b>Summary Statement</b> The purpose of this project was to test the effects of recycling water on three different kinds of plants.	
<b>Help Received</b> Mother helped by buying materials	