



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Primavera Leal Martinez	Project Number J1507
Project Title Investigating if Different Soil Types and Ash Additives Are Effective in Removing Bacteria from Polluted Water	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my science project is to investigate if different soil types and ash additives are effective in removing bacteria contaminants from polluted water. The reason I am conducting this experiment is to investigate if filtering contaminated water through different soils and ash additives will remove bacteria from polluted water.</p> <p>Methods/Materials 5 plastic bottles, 5 plastic cups, 90 nutrient culture dishes, puddle water, top soil, ash, sandy soil, clay soil, ruler, measuring cup, oven, disposable aluminum trays, disposable gloves, goggles, lighter, sharpie marker, 5 test tubes, test tube rack, glass, finger, bowl, bent glass rod, methanol, glass beaker pipette, test tube cleaning brush, labels, plastic trays, 10 milliliter syringe, 3 milliliter syringe, pipette mouthpiece with tube.</p> <p>Results Ash is the most effective in removing bacteria from polluted water. Top soil had an average of 10,347 bacteria colonies. Clay soil had an average of 9,473 bacteria colonies. Sandy soil ha an average of 12,713. The control had an average of 10,347. Clay soil filtered the most bacteria contaminants = 9,473. Top soil filter the least amount of bacteria = 17,207. Ash had an average of 1,640 bacteria colonies. The ash/sandy soil combination had an average of 27,587 bacteria colonies. The 50/50 sandy soil and ash combination filtered the least amount of bacteria = 27,587</p> <p>Conclusions/Discussion Sandy soil was not the least effective in removing bacteria from contaminated water. The top soil was the least effective in comparison to the clay and sandy soils. The top soil had an overall average of 17,207 bacteria colonies; however sandy soil had an overall average of 12,713 colonies. I stated that the clay soil will be the most effective soil in removing bacteria from contaminated water. When compared to the control the overall averaged of 10,347 bacteria colonies,the clay soil only had 9,973. I stated that the fireplace ash will be the most effective in filtering bacteria from contaminated water. The fireplace ash only had an overall average of 1,646 bacteria colonies. This was a difference of 8,707 bacteria colonies. For my results, the fireplace ashes was extremely effective in removing bacteria contaminates. I stated that the 50/50 sandy soil/ash combination will create a better filtration for removing bacteria from contaminated water. The overall average of the sandy soil/ash combo was 27,587 bacteria colonies.</p>	
Summary Statement . The reason I am conducting this experiment is to investigate if filtering contaminated water through different soils and ash additives will remove bacteria from polluted water.	
Help Received Received nutrient culture dishes from high school science teacher.	