



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Daniel S. Sakakini	Project Number J0921
Project Title Can a Remote-Controlled Vehicle Create a Firebreak?	
Abstract Objectives/Goals As people move out to more remote areas and naturally dry regions, fires become more and more devastating to humans and their property. The fire department has been using the same fire fighting techniques for a long time. I have personally experienced three major wildfires in my lifetime in San Diego County. If the fire department were able reduce the number of firemen needed to fight large fires, it could be very beneficial. My question was: #Could a remote-controlled vehicle create a fire break?# My hypothesis was that, yes, this vehicle could be built, even if I myself could not build a complete, full-scale operational model. Methods/Materials In my experiment, I used an M41 Walker Bulldog model tank as my concept vehicle. I mounted my blade arm and SPYKEE camera onto my vehicle. I used an Erector motor for my original blade motor. I used a full water bottle as a counterweight, which could also be used to wet down the surrounding area. I tested my tank at a canyon much like the terrain of a real fire zone. Results My results supported my hypothesis. My tank was able to cut down small brush, and worked much like a weed whacker. Although I could not get the camera to work, a camera would be a critical feature in a real-life operation. Conclusions/Discussion I was able to move the plants out of the way, but I realize a very powerful vehicle would be needed to remove dense or woody brush. Still, based upon my results, the vehicle I designed performed well, and I believe there is potential a full-scale model could be utilized in wildfire situations	
Summary Statement The goal of my project was to construct a remote-controlled vehicle prototype thatt could create a firebreak in the event of a wildfire.	
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