



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Ryan P. Dupras	Project Number J1710
Project Title Radiant Radishes	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Discover effect that microwave radiation and heat from a conventional oven has on the germination of White Icicle radish seeds. "If I place 10 White Icicle radish seeds into a microwave for 10 seconds, and 10 other white icicle radish seeds into a conventional oven at 250 degrees F for 10 minutes, which group of seeds will germinate over the course of 6 days?"</p> <p>Methods/Materials White Icicle Radish Seeds, oven, microwave, napkins, marker, tape, clear Zip-lock bags, water and a dropper, sunny window, microwave safe dish, cookie sheet, timer, and hot mit. Pre-heat oven to 250 degrees F. 2nd, with marker label 1 each of bags Control, Microwave 10 seconds and Oven 10 Minutes. Add 8 drops of water to each napkin in bag. Next set up Control group. Use 10 white icicle radish seeds and place on control bag napkin. For microwave group a small microwave dish and ten white icicle radish seeds. Place 10 white icicle radish seeds into microwave dish. Place dish in microwave and cook for 10 seconds. Before starting Oven group, place 10 white icicle radish seeds into tray put tray onto cookie sheet. Place seeds in a horizontal line on one side of napkin in bag labeled Oven 10 Minutes. Seal all bags closed, tape to sunny window. Leave bags taped to window 6 days. After the 6 day period note number of sprouted and un-sprouted seeds on the bag. Finally, document results in graphic form.</p> <p>Results In the 3 trials conducted in this experiment the control group had no seeds germinate on the 1st day. On the 2nd day this group had a total of 4 seeds germinate over the 3 trials. On 3rd day a total of 24 seeds germinated and by 4th day all 30 seeds had germinated in group. The microwave oven group had no seeds germinate on 1st day of any trials. On the 2nd day this group had a total of 2 seeds germinate, and on 3rd day it had 27 seeds germinate. On 4th day all 30 seeds had germinated. The conventional oven group had no seeds germinate at all in any of the trials on any of the days.</p> <p>Conclusions/Discussion It was noted in 1/2 the time that it took to finish each trial for each group that the conventional oven seeds would not germinate. All other seeds from other trials did not even need 6 days for seeds to germinate. So, my hypothesis was proven valid. Microwave oven seeds will germinate more than conventional oven seeds. They not only germinated, but conventional oven seeds did not germinate at all.</p>	
Summary Statement My project is to determine the effect of heat and radiation on radish seeds.	
Help Received Dad assisted with materials purchase, graphic display, and supervision of project.	