



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Merna H. Mikhail	Project Number 31958
Project Title The Effect of Different UV Light Machines on Radish Seed Germination	
Objectives/Goals Objectives: This experiment investigates the effect of different UV light machines on radish seed germination. Hypothesis: #If we expose radish seeds to the three UV light machines, less germination may happen in the powerful group, but the low and medium groups are not going to get affected as much.# Abstract Methods/Materials Materials: #Divide the seeds into four groups of equal number so as to make one control group and three experimental groups. #Expose each group of the radish seeds in the experimental groups to varying strengths of UV light over a period of one hour. #Germinate the seeds of the four groups, the control and the experimental, in zip-lock baggies. #Compare and contrast the observations collected from both the control group and the three experimental groups. Materials: Three UV machines, Paper towels, Marker, Radish Seeds, Zip-lock baggies. Results The powerful UV machine decreases the germination rate for a while but does not stop it. On the other hand, the medium machine fastens the rate of germination. The low group does not get affected as much because it shows very close results to the control group. Conclusions/Discussion -The hypothesis is proved to be incorrect. The medium UV light machine has the strongest effect on the seeds' germination. Although the medium and the powerful machines make the seeds germinate faster with longer sprouts, the sprouts grow crooked and unhealthy. This shows the dangerous effects of radiation on the germination of seeds and, accordingly, the development of plants. This may foresee the hazards of the ongoing exposure of plants to radiation which, eventually, may affect our own lives. -For further investigations and scientific experiments, radish seed germination is also being tested after exposing it to three different lasers. This will expand our knowledge of the effect of radiations on the germination of radish seeds.	
Summary Statement This experiment investigates the effect of different UV light machines on radish seed germination.	
Help Received My classmate, Paula, provided me with one of the UV machines. The other materials were provided by the school.	