



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

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Project Title How Will the Regeneration Process of Planarians Be Affected by Exposure to Microwave and Ultraviolet Radiation?	
Abstract Objectives/Goals This experiment was conducted to discover the effects of different types of radiation on the regeneration process of planarian. The expectation was that the regeneration process would be slowed down because of previous experimentation. Based on the result of the tests conducted on mealworms, radiation released from microwave ovens has been proven to stunt the growth of the worms. So, it is a likely possibility that exposure to radiation released from a microwave oven and a UVC light will also slow down the regeneration process of planarian. Methods/Materials To conduct this experiment, ten planarians were exposed to microwave radiation, ten planarians were exposed to UVC radiation, and ten planarians were exposed to no radiation. The planarians were cut in half so that the head and tail ends were both five millimeters long. We observed different aspects of the regeneration process for ten days such as the length of the planarians, speed of regeneration, and any mutations. Results After testing the effects of radiation on planarian, we concluded that the microwave radiation caused for the regeneration of the planarians to slow down, however they grew longer than the control. The UVC light radiation caused the planarians to grow their heads and tails back at a faster rate, but grew to be shorter than the control. The overall effects of both types of radiation caused for the planarians to grow darker and fatter than expected. Conclusions/Discussion The exposure to radiation led to negative consequences for the planarian, which could eventually lead to negative consequences for humans. Planarians regenerate their bodies, while humans regenerate their liver and skin cells. Consequently, exposure to radiation can cause for the regeneration of the liver and skin cells to not be as speedy and efficient which has proven to be unhealthy for humans.	
Summary Statement It has been proven that exposure to microwave and UVC radiation drastically changes the regeneration process of planarians, which can be compared to the skin and liver cells of humans.	
Help Received None	