Mobile Waves and Water Fleas: A Daphnia Study

Anderson, Bailey (School: Simms High School)

The purpose of my project is to explore the effects of radiation on daphnia, and the radiation emitted under different apps and settings. What if the part of the reason people got tumors was from their phone? This leads me to the question: Does radiation have a negative effect on daphnia colonies? In order to answer my question I first had to find something to test the effects of radiation with. I decided that daphnia would be perfect to test because they have a genetic makeup to our own. When I first started testing I had my control and the two independent variables. For the first test I placed ten equally sized daphnia into a petri dish and recorded the amount still living twice a day. For the next two tests I replicated the tests just like the control, except the daphnia were exposed to cellphone radiation and WiFi. After I had collected the data I ran a t-test and found out that the control compared to the daphnia exposed to wifi and radiation had a statistically significant difference in the data while the daphnia just exposed to radiation did not. This means that my question was answered: radiation did have negative effects upon the daphnia. In order to have more clearly defined results I will need to complete more tests and record the levels of radiation emitted by the phone. As radiation is a very prevalent problem I will create three sections for the next step. The first section will cover the effect that radiation has on a person's eyes and ears. The second section would cover the relationship that radiation has with cancer, and the final section would cover other effects radiation has upon the human body.

Awards Won: