CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
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Project Number
S1827

Project Title
The Cellular Scarinnng!

Abstract

Objectives/Goals
The purpose of my project is to observe the effects of cell phone radiation on plants, looking for any abnormalities that could possibly occur in their growth patterns or appearance from the cell phone radiation exposure. From there, the results can be compared to the effects and impact that cell phone usage can have on DNA and cells, such as mutations, that can affect the composition and characteristics of the plants.

Methods/Materials
The basic materials for this project included 2 cardboard containers, potting soil, 9 small gardener dishes, a cell phone, 2 lamps, cherry belle radish seeds, 2 full-spectrum lightbulbs, an electornic kitchen scale, measuring spoons, and water.
To do this experiment, I had four dishes in each cardboard container, with one cell phone in the middle of only one of the containers (the cell phone radiation exposed container). Each of the four dishes in each container were given the same amount of soil, radish seeds, light (from the lamps with the full-spectrum lightbulbs), and water, yet the only difference between the dishes in both containers, was that one of the containers was exposed to cell phone radiation, while the other dishes in the other container were just grown regularly without that exposure.

Results
In the container that was exposed to the cell phone radiation, the plants in dishes 1 and 3 (which were located where the bottom of the cell phone was) were abnormally tall, while the plants in dishes 2 and 4 (which were located where the top of the cell phone was) were abnormally short, compared to the other plants in the non-exposed radiation side that were all in average about the same height.

Conclusions/Discussion
My results led me to believe whether or not the cell phone radiation caused a stunt or spurt in the plants growth development or a change in their genetic makeup. The cell phone radiation either could have caused the plants to grow taller or shorter than normal, or it could have even gone both ways depending on where the dishes were situated around the cell phone. In some way, though, it must have affected all the plants in the dishes because the plants height differed greatly from the height of the regular plants whether taller or shorter. Overall though, longer testing would need to be conducted to actually know how the cell phone radiation affected the plants growth.

Summary Statement
My project tested the impact of cell phone radiation on plant growth and DNA to compare it to how cell phone radiation can affect humans and their DNA.

Help Received
Aunt helped with material purchases and finances; Mother helped with board creation; Teachers helped with experimental design