

CALIFORNIA STATE SCIENCE FAIR 2004 PROJECT SUMMARY

Name(s)

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Project Number

J0711

Project Title

Is Your Cell Phone Cooking Your Brain?

Abstract

Objectives/Goals

To determine the relative radiation power emitted by various types of cell phones at three different distances away from the phone as a potential measure of safety.

Methods/Materials

After obtaining a radiation power meter that measures cell phones, with the help of my dad, I built a small wooden stand to keep the meter and cell phone stationary at one inch, six inch, and twelve inch distances. I went to two different shopping centers on many different days to test peoples cell phones. At my house, we have two phone lines. My dad unplugged one of them, so no one would answer. For each test I dialed the unanswered line and let it ring with no answer for all three of the tests. I took three readings at every distance for each phone. I then recorded the cell phone type and model next to the recorded data.

Results

All cell phone types showed a large drop in radiated power as the phone was moved away from the meter (your head!). The older cell phone types showed the largest amount of radiated power during the test.

Conclusions/Discussion

My conclusion is that keeping the phone farther away from your head reduces the amount of radiation to your head. The use of earpieces or speakerphones can help accomplish this because the phone would be father away from your head.

Summary Statement

Testing different types of cell phones for radiation power at different distances.

Help Received

Father helped construct a stand to hold a cell phone and radio-frequency meter.