POPPING CORN WITH MOBILES

MYTH

Mobile phone radiation can pop popcorn

OBJECTIVES

Investigate the change in current produced by mobile phone radiation

WHAT YOU NEED

- 8 mobile phones
- Popcorn kernels
- Shallow dish
- Low stand or second shallow dish
- Salt
- Water
- Multi meter

WHAT TO DO

Part I

1. Set up four mobile phones on a table or flat bench so that the receivers/transmitters are all pointing towards a central point.
2. Place 3-4 popcorn kernels at the central point.
3. Use the remaining four mobile phones to ring the mobile phones that are set up on the bench until they transfer to message bank or ring out. Record your observations. This can be tested with more mobile phones or by ringing the stationary phones more than once.

Part II

4. Fill the shallow dish with salt water.
5. Place the dish on a stand or on another inverted shallow dish. Place four of the mobile phones underneath.
6. Measure the resistance and current (multimeter will need to be set to micro Amps, µA, scale) in the salt water using the multimeter. Leave the probes set up in the salt water.
7. Use the remaining four mobile phones to ring the mobile phones that are set up under the salt water and record any changes in current.

QUESTIONS

1. Calculate the amount of power transferred to the salt water from the mobile phone radiation.
2. In what parts of the method are errors likely to occur? Discuss how these might affect your results.
3. What other variables might you test to further investigate this myth?

RESOURCES USED TO DEVELOP THIS ACTIVITY

1. *Crazy Popcorn - mobile phone and corn [streaming video recording].* (2008). Retrieved on 20 November, 2009 from http://www.youtube.com/watch?v=TOLNiBVyGyA
2. Carroll, J. (2008). *Phone popcorn secrets revealed [streaming video recording].* Retrieved on 20 November, 2009 from http://www.cnn.com/video/#/video/tech/2008/07/09/carroll.cellphone.popcorn.cnn