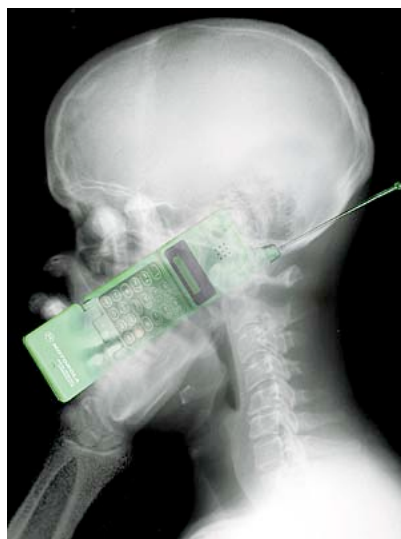


## Real-World Application Activity

Based on our experimental results, how could we use cell phones in a safer way?



Credit: University of Queensland, Australia



Credit: Arts & Opinion

We started this lab activity by asking, “Am I frying my brain with my cell phone?” Now that you have completed the Radioactivity iLab, and know the relationship between radiation and distance, do you have an answer to this question? **Based on our experimental results, how could we use cell phones in a safer way?** What can be learned from your experiment? Using the data you collected and analyzed, what would you recommend to other cell phone users?

In this activity, your goal is to apply your experimental findings to the real-world problem of cell phone safety. On the next page are instructions for the activity. Be sure to:

- Provide background information about your experiment and cell-phone radiation.
- Draw direct connections between your experimental data and cell phone safety.
- Include evidence from your investigation.

### **Activity Description:**

Based on your experimental results showing how radiation changes over distance, create an informative report about how people can more safely use their cell phones. Then share your information with your school community. You can do this activity independently, or in groups. This report can be in the following forms:

#### **Forms for Activity**

- Written report
- Poster
- Flyer
- Pamphlet
- Article
- Public Service Announcement
- PowerPoint presentation
- Podcast
- Video podcast
- Blog entry
- Webpage

#### **Methods of Communication**

- Publish in your school newspaper
- Speak on your school radio station
- Present on your school TV station
- Post on your school's or teacher's website (with permission)
- Post on your personal website
- Post in your school hallways
- Present in another class or a school community meeting
- Send your report to a cell phone company

### **Requirements:**

- Gather research about how the public is currently made aware of cell phone radiation levels and safety. Your research can be done through the Internet, libraries, or visiting a cell phone retail store and conducting a brief interview with a salesperson. (If an interview is done, include your questions with your final report.) In your research, address the following questions:
  - How is cell phone radiation measured, and which phones tend to present a particularly high or low risk due to these radiation levels? (For example, you could create "High Risk" and "Low Risk" lists of cell phones models for consumers).
  - Are the dangers of cell phone radiation made accessible and clear to the public?
- Make connections to your experimental findings. Explain the context of your experiment and your results, and then address the following questions:
  - What evidence do you have from your experiment to show that certain actions would help people avoid strong exposure to radiation?
  - Based on your experimental evidence, what can people do to use cell phones more safely?
- Disseminate your report in one of the ways listed above, so that people can benefit from your research.

## Activity Rubric

Total Possible Score: 30 points

Score	Content
30	<p><b><u>Final product:</u></b></p> <ul style="list-style-type: none"> <li>○ Provides <b>good background information</b> about cell phone radiation and your Radioactivity iLab investigation.</li> <li>○ Makes <b>thoughtful and direct connections</b> between experimental results and cell phone safety.</li> <li>○ <b>Includes strong evidence</b> (such as data, analysis, and interpretation) from your Radioactivity iLab investigation.</li> </ul>
25	<ul style="list-style-type: none"> <li>○ Provides <b>some background information</b> about cell phone radiation and your Radioactivity iLab investigation.</li> <li>○ Makes <b>some connections</b> between experimental results and cell phone safety.</li> <li>○ <b>Includes some evidence</b> (such as data, analysis, and interpretation) from your Radioactivity iLab investigation.</li> </ul>
20	<ul style="list-style-type: none"> <li>○ Provides <b>minimal background information</b> about cell phone radiation and your Radioactivity iLab investigation.</li> <li>○ Makes <b>weak connections</b> between experimental results and cell phone safety.</li> <li>○ <b>Includes poor evidence</b> (such as data, analysis, and interpretation) from your Radioactivity iLab investigation.</li> </ul>
15	<ul style="list-style-type: none"> <li>○ Provides <b>no background information</b> about cell phone radiation and your Radioactivity iLab investigation.</li> <li>○ Makes <b>no connections</b> between experimental results and cell phone safety.</li> <li>○ <b>Includes no evidence</b> (such as data, analysis, and interpretation) from your Radioactivity iLab investigation.</li> </ul>