

## MEMORANDUM

To: Allison Jaenicke  
From: Wayne Liu  
Subject: A Detailed Analysis on “The Life Cycle of a Cell Phone” Against Markel’s Measures of Excellence  
Date: September 8, 2010

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This memo analyzes the publicly distributed brochure “[The Life Cycle of a Cell Phone](#)” published by the Environmental Protection Agency (EPA) in August 2004, found on the website <[www.epa.gov/osw/education/pdfs/life-cell.pdf](http://www.epa.gov/osw/education/pdfs/life-cell.pdf)>. The quality of the document is assessed using Mike Markel’s six measures for excellent technical writing, as presented in his book “Technical Communication” 9<sup>th</sup> ed.

### Summary

The educational brochure, “The Life Cycle of a Cell Phone” successfully informs high school students about the benefits of reducing toxic wastes from cell phones. The document was published in order to educate high school students about the dangers of toxic wastes from cell phones. By using a variety of design features, graphics, and activities, the EPA positively reflects their goals and culture and aims to reduce toxic wastes from cell phones by promoting recycling, reusing, and responsibility to young cell phone users.

### Addresses particular readers

The brochure “The Life Cycle of a Cell Phone,” published by the EPA, primarily addresses children who are attending high school. Children who are younger than high school will most likely be too young to own a cell phone. The bright colors and artwork of the brochure, as well as phrases such as the beginning phrase, “You have one, your parents have one, your friends each have one...” demonstrate that the document primarily addresses audiences not older than high school. However, secondary audiences of the brochure may include teachers who want to use the material for related teaching, parents who are concerned about their children’s cell phone usage, and siblings who are below or above cell phones. Government and environmental agencies is also interested in how this brochure will reduce pollution made by cell phones.

### Helps readers solve problems

The overall goal of the document is to reduce the global pollution problem by reducing toxic waste from cell phones. On an individual basis, the brochure educates readers regarding the dangers of toxins from cell phones, and recommend steps in which the toxic emissions may be reduced in order to alleviate the global pollution problem. For example, the brochure’s front side begins with a detailed introduction to materials used in creating a cell phone. The key materials for each component of the cell phone is explained, and is then followed by another section highlighting the dangers and toxicity of these same materials. Many of the activities on the back of the brochure, such as the crossword and mathematics activities, further extrapolate the importance in managing toxic waste from cell phones.

### Reflect an organization’s goals and culture

The document was published by the government organization EPA. According to epa.gov, EPA's five goals focus on clean air and global climate change; clean and safe water; land preservation and restoration, healthy communities and ecosystems; and compliance and environmental stewardship. The document "The Life Cycle of a Cell Phone" positively reflects all of these goals. The document discusses the production of plastic and their negative impact on the global climate change and air pollution. The document also illustrates the negative effects of several metals used in cell phone production, such as mercury and other persistent toxins that affect the air and water. Moreover, the document encourages the recycling and reusing of old cell phones, to better needy communities and effect a positive change for the environment.

### **Is produced collaboratively**

The document is published by the EPA, department of Solid Waste and Emergency Response. The organization consists of countless employees at numerous office locations around the United States. Moreover, though not specified, the document must be produced collaboratively due to the wealth of information presented. The brochure, though easy to read, presents numerous statistics, such as those featured in bright circles on the front, as well as many activities and interesting facts. Together with the unique artwork and bright layout, the production of the document must have involved graphic designers, researchers, technical writers, lawmakers, teachers, and other workers such as those who work in cell phone manufacturing plants.

### **Uses design to increase readability**

For a high school audience, the brochure must especially focus on design in order to capture the attention of teenagers. The document successfully gains the attention of the targeted audience through colors, typefaces, and page organization. The document is organized by columns, and thus it is easy to notice that the document should be folded where the columns separate in an "accordion" style. All of the headings and sub-headings of the page is differentiated from normal text by using a younger, handwriting typeface and brighter color. On the front page, large water print numbers increase readability in order to indicate the step of the cell phone life cycle. Each step is illustrated, and then followed by a star bullet point, which is sometimes followed by a dash bullet point acting as a sub-point. Interesting information and relevant statistics are enclosed by colorful circles or rectangles, separating them from the text and making it stand out. The activities on the backside of the brochure is separated by differently colored boxes. These features co-operate to engage the attention of younger audiences.

### **Consists of words or graphics or both**

The document uses both graphics and text, in order to simultaneously convey a significant amount of information without losing reader interest. On the front side of the brochure, a large image of the life cycle of a cell phone is portrayed in order to illustrate the circular nature of a life cycle. Otherwise, much of the remaining graphics used in the document appear to contain little practical value, except to "spice up" the otherwise text-heavy document. The remaining images are not irrelevant, however, such as the truck placed by the "Packaging & Transportation" section. Other than decoration, these images may serve to help readers understand the gist of a section before reading the text. Moreover, some graphics, such as the one illustrating the "Personal Digital Assistant", may help remind the reader of the identity of an unfamiliar object.