

# **Lifecycle Analysis of a Product Handout**

## **Student Handout**

In this project, you will research the lifecycle of a consumer product. That product could be something that is regularly used in your school, in your home or in your community. You will also research a possible alternative product that may be more sustainable than the one you've selected. Your team will present your findings to the class and also to concerned stakeholders, including school officials, parents and perhaps appropriate community members. You will work in teams of 4.

### References:

- [12 Principles Match-Up document](#) as a notes reference.
- Review the [Green Chemistry Rubric](#) to see what's important to focus on during this project.

**Focus: When researching the lifecycle of both your consumer product and the alternative product, be sure to consider the following questions.**

- What are the raw materials that are needed to manufacture each product?
- Where do these raw materials originate?
- How is each product manufactured? (In other words, how does it go from raw materials to finished product?)
- What happens to each product after it has been used?
- How does the lifecycle of your product align with the Twelve Principles of Green Chemistry?
- What are the pros and cons of each product?

**When answering these questions, be specific and be careful not to regurgitate facts that you don't really understand.**

**Format:** You must present your findings using a **tri-fold poster** or **powerpoint slideshow** that can answer, at a minimum, all questions presented above. Be sure to display the lifecycle diagram and include explanations for each stage of the lifecycles. You must also turn in a properly formatted works cited page with your presentation.

**Sources:** You may use books, journals, websites, in-person interviews with appropriate experts, phone call interviews with appropriate experts, and other credible online sources; however, you may only use one encyclopedia-type resource, and this includes electronic encyclopedias. You need a total of at least three resources (including one that exists in printed form, even if you access it electronically). [Note: Wikipedia is not an acceptable source but can lead to credible sources.](#)

**Assessment:** You will be graded based on the rubric. You will present your findings during the final event, and this will also be included in the project grade.

Furthermore, you must keep track of your progress with a daily journal. This journal will be turned in and graded as part of the total project grade as well.

### **Timeline:**

- Teams begin working in suggested pairs, one pair works on the current consumer product. What is the lifecycle? What are the principles of Green Chemistry associated with the product? Who uses this product? Who benefits? What are negatives with this product? Why do we currently use this product instead of another product?
- The other pair looks at an alternative product that is considered more sustainable. Why is it considered sustainable? What is the lifecycle? What are the principles of Green Chemistry associated with this product? Who currently uses this product? Who would benefit from this product that isn't yet using this product in your community? What are negatives with this product? Why don't we currently use this product?
- If possible, interview experts in this field that use or have knowledge about the alternative product. What information can they share to emphasize its importance?
- Turn in your journal, demonstrating the completion of your research.
- Turn in a draft of your presentation.
- Class presentations and peer evaluations.
- Final Event presentation

### **Optional: End Product - Providing a Written Proposal:**

The written proposal is similar to a business proposal, which is meant to provide the stakeholders logical answers to switch from their current consumer product to the sustainable alternative. This can be an option if school or community stakeholders will be involved in the Final Event.

### **What is the proposal:**

The proposal helps users to understand the need to change from their current consumer product to the proposed sustainable alternative product through a selling-point explanation. Teams explain the issues of the current product against the benefits of the alternative sustainable product. Teams give facts and reasoning in a manner that is easy for any audience to understand.

### **What does it look like:**

- State the problem at the top of the page.
- A high level overview why they should switch to the sustainable product.

### **First Column:**

- Information on the current consumer product: Provide what the product is, the ingredients, the material, benefits/damages, cost, who manufactures it, who uses it, whether it's considered sustainable.

**Second column:**

- Information on the proposed sustainable product: Provide what the product is, the ingredients, the material, benefits/damages, cost, who manufactures it, who uses it, whether it's considered sustainable.