

Product Dissection & Benchmarking Project: Lab I

Preparation:

1. Read about product dissection in the handout from Otto and Wood, *Product Design*.

Date: 1/13/2010

Team #: 5

Team Name: Ready Ready Ready!

Members: Nabeel Dahod

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Lab I Assignments:

1. Complete data sheet 1.
2. Submit your completed lab 1a and 1b on Angel. Make sure you have your product name on each sheet. The file MUST be saved as a PDF file (file/save as/pdf). The filename MUST be:



TeamN_ProductName.pdf

Example: Team3_CrestSpinBrushPro.pdf

3. Prepare a comprehensive features comparison table for features that are in your list of features to be benchmarked.

Laboratory Tools:

1. Digital scale
2. Camera.

Estimated time: 1 hour.

A. Visual Inspection:



Tasks:

1. Take digital pictures of the product, its parts and the packaging.
2. Record the following information for the product you are given for dissection on data sheet 1a.
3. Recorded information should reflect everyone's opinion in the dissection team. Therefore, if there is a difference of opinion among members, opinions and members who provided them should be noted.

DATA SHEET 1a**Team #:5****Getting Ready for Dissection: Part I****Manufacturer/Product Name: Colgate SpongeBob Powered Toothbrush****General Product Information:**

How many detachable pieces the product has?

4

| Part number: | Part name: |
|--------------|----------------|
| 1 | Toothbrush |
| 2 | Battery holder |
| 3 | Screw |
| 4 | Batteries |
| | |
| | |
| | |

Describe the pieces including their functions and their materials.

| Part number: | Material & Functional Description: |
|--------------|---|
| 1 | To clean teeth |
| 2 | To complete the circuit in the brush |
| 3 | To fasten the battery holder to the brush |
| 4 | To power the brush's mechanism |
| | |
| | |
| | |

Is it easy to detach each part?

| Part number: | Detachment (Easy, difficult, use of force etc.): |
|--------------|--|
| 3 | Easy With Screwdriver |
| 2 | Use of force |

Describe the packaging. Is it easily opened? Describe the opening procedure.

The package was easily opened as the edges were perforated. We simply pushed in the perforated edges and pulled a section of the backing off of the package, releasing the toothbrush.

DATA SHEET 1a**Team #:5****Getting Ready for Dissection: Part I (cont.)****Manufacturer/Product Name: Colgate SpongeBob Powered Toothbrush**

Product Features: Provide team's collective opinion related to features of the product using the following list as a starting point.

| | |
|--|---|
| Packaging (including information insert) | The packaging was simple and effective. The information insert comprehensively explains how the toothbrush is set up and how to use said toothbrush. |
| Aesthetics (multi-color, etc.) | We appreciated the SpongeBob theme as providing an exciting aesthetic for children that perhaps encourages using this product. We found the use of orange as a vibrant color that helps the brush to "stand out" in an aisle full of toothbrushes. |
| Cleaning – of teeth | This toothbrush is ideal for children as they are aided in brushing their teeth properly (i.e. employing the circular rotation of the brush) by the rotation of this electric toothbrush. |
| Cleaning – of brush | The brush provides little in terms of cleaning as it is simply one piece and does not contain a detachable head that can be cleaned properly. There are many small crevices that essentially cannot be cleaned. It is apparent that this brush is meant to be disposed of and not maintained over longer periods of time. |
| On/off switch location | The location and design of this brush's on/off switch is convenient and does not interfere with the cleaning process. |
| Ease of switch use | The switch is very easy to use and simplistic in design (push for on and push for off). |
| Battery location | The seclusion of the batteries helps to prevent water damage as well as increases safety for the children who use it. |
| Handle (Ergonomics) | The handle is simple and cylindrical with no real use of ergonomic design. |
| Quality | While this is a low quality power toothbrush the level of sophistication is more than satisfactory for children. |
| Safety | The lack of small, detachable pieces and the isolation of the batteries (protected both by the battery holder as well as an O-ring) both contribute to increased safety measures. The soft bristles are also ideal for delicate gums and prevent bleeding. |
| Versatility, attachments | As there is only one piece, there is no real versatility in the product. There are no attachments. |
| Weight with batteries | The toothbrush is lightweight and would not be exhaustive for use by children. |
| Environmental friendliness | This toothbrush is not biodegradable and as it's not meant to last long and must frequently be replaced it is certainly not environmentally friendly. |
| Other features | The brush mechanism works such that the top half of the brush oscillates back and forth while the bottom half remains still. |

Product Dissection & Benchmarking Project Handout I – Part b

Laboratory Tools:

1. Computers which are connected to the internet,
2. Library resources.

Estimated time: 1 hour.

B. Market Realities for the Product:



Tasks:

1. Using on-line and library resources gather and record information on the market.
2. Keep a list of websites as references. These will be needed for your report.

| DATA SHEET 1b | | Team #:5 |
|---|---|-----------------|
| Manufacturer/Product Name: Colgate SpongeBob Powered Toothbrush | | |
| Getting Ready for Dissection: Part Ib | | |
| Cost (Be prepared to record multiple values and sources) | \$6.99 – DrugStore.com \$7.02 – Amazon.com (from America Rx) | |
| How long has the product been in the market? | Since 2009 | |
| Target population | Between ages 5-8 | |
| Versions of the product (Previous versions of the product) | Older versions had different colors and button styles as well as varying graphics. | |
| What are improvements between versions of the product? | These buttons are more water resistant and give better grip. The buttons are also set “inside” the handle whereas previous version’s buttons were excrescences. | |
| How is it sold (TV infomercial, drugstores, etc.) | It is sold in drugstores and general stores. | |
| Patented Features of your toothbrush (Please include patent dates, numbers and brief description of patent). | No patented features | |
| Competitive Patent (Please include patent dates, numbers and brief description of patent). | Patent Date: August 5 1986. Patent #: 4,603,448. It is a rotary electric toothbrush. | |