## Inquiring and Analyzing

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|---|---|
| **Analyses a range of** existing products that inspire a solution to the problem in detail<br><br>*(Analyze - Break down in order to bring out the essential elements or structure. To identify parts and relationships, and to interpret information to reach conclusions.)* | Similar Product 1 (Citation needed) |
| | Similar Product 2 (Citation needed) |
| | Similar Product 3 (Citation needed) |
| | Similar Product 4 (Citation needed) |
| | Similar Product 5 (Citation needed) |

# EXAMPLES

Students will need to employ a range of strategies to analyze these products, such as:

- identification of and interaction with similar products when out shopping
- attribute listing of existing products
- SWOT analysis (strengths, weaknesses, opportunities and threats)
- functional analysis
- aesthetic analysis
- graphical disassembly analysis
- performance testing of products
- evaluation of past student projects
- secondary research through product reviews on consumer websites, buying guides or magazines
- summary of customer reviews on commercial websites.

## Analysis – Attribute listing EXAMPLE: Flash drive

| Flash drive model | | Feature/attribute | | | | | |
|---|---|---|---|---|---|---|---|
| USB model | Brand/model | Dimensions (mm) | | | Aesthetics | | |
| | | Length | Width | Height | Shape | Cap style | Colour variety |
| Standard USB port | Kingston DataTraveler101 | 55.65 | 17.3 | 9.05 | Rectangular | Swivel | 4 |
| | San disk Cruzer Mirco | 57.15 | 20.6 | 7.94 | | Retractable | 5 |
| | Kingston DataTraveler G3 | 65.68 | 22.37 | 10.66 | | External cap | 2 |
| Mini USB port | PQi i812 | 29.5 | 12.2 | 6.0 | | Swivel | 5 |
| | Apacer AH110 | 34 | 12.6 | 2.7 | | No cap | 2 |
| | Super Talent Pico-B | 31.8 | 18.8 | 4.4 | | Retractable | 1 |

| USB model | Brand/model | Form & use | | | Source of data values |
|---|---|---|---|---|---|
| | | Weight (g) | Casing material | Extra feature | The sources correlate with the brand/model of the flash drives for which data was retrieved |
| Standard USB port | Kingston DataTraveler101 | 12 | Metal & plastic | Chain slot | (kirsch) |
| | San disk Cruzer Mirco | 5 | Plastic | Chain ring | (Sandisk Cruzer Mirco U3 Smart Technology) |
| | Kingston DataTraveler G3 | 11 | Plastic | Chain slot | (DataTraveler Generation 3 (G3)) |
| Mini USB port | PQi i812 | 4.9 | Metal | Chain ring | (Intelligent Drive i812) |
| | Apacer AH110 | 2 | Plastic | Chain slot | (Handy Steno AH110) |
| | Super Talent Pico-B | Less than 6 | Metal | None | (Super Talent Pico-B Retractable 4GB USB2.0 Flash Drive) |

# Analysis – Attribute listing EXAMPLE: Flash drive

Pizza Attribute Analysis

| Pizza source: | Type of base | Pizza variety: | Size | Cost | Nutritional consideration | Storage and shelf life |
|---|---|---|---|---|---|---|
| Amigo Pizzeria | Thin crust<br>white flour yeast dough – hand made | Meat Classic: traditional sauce, mozzarella cheese, ham, bacon, salami, (chicken optional) fabulous with BBQ sauce<br>Oily appearance | Regular 9”<br>Large 12”<br>Family 16”<br>Party 18” | $9.90<br>$12.90<br>$18.90<br>$22.90 | No nutritional information provided.<br>Comes in a box – the bottom of which has a huge oil stain on it suggesting the pizza has a high fat content. | No instructions but food safety requires left-over food to be placed in the refrigerator asap for a maximum of 3 days and reheated to above 72 degrees |
| Supermarket<br>Heat and Eat Pizza | Thick crust<br>Wheat flour yeast dough<br>commercially made | Meat Feast:<br>Mozzarella and cheddar cheese, beef, bacon, tomato paste<br>Uncooked the pizza toppings look very sparse as does the use of tomato paste lots of cheese not particularly appetizing however on cooking the pizza looked quite appetizing but was lacking in flavour. The base although looks as if it would be crisp was quite doughy. Note: ingredients could be added for example vegetables to improve the nutritional balance | 10” | $3.00 | Detailed nutritional information provided –<br>Energy<br>Protein<br>Fat<br>CHO<br>Sodium<br>per 100 grams and an extensive list of additives and preservatives 19 in total listed | Detailed information provided –<br>keep refrigerated below 5 degrees C<br>freeze before the use by date below minus 18 degrees<br>consume within one month cook from frozen |
| Pizza Xpress | Classic crust<br>A range of bases available cheesy crust traditional, value, gluten free, traditional edge and puff | BBQ Meatlovers:<br>Rasher bacon, pepperoni, smoked leg ham, ground beef, Italian sausage, and mozzarella on BBQ sauce | 10” | Depends on the promotion but generally around $8-12 | Up dated detailed nutritional information available online plus allergen and additive information.<br>Good choice range 97% fat free<br>Low carbohydrate crust | Not found on the packaging nor on the website |

| Sensory Analysis of cooked pizza | | | | |
|---|---|---|---|---|
| Pizza from | Appearance (cooked) | Texture | Flavour | Value for money (1-5 poor- excellent) |
| Amigo Pizzeria | Rustic home made in appearance, colourful, well-proportioned with lots of topping ingredients, not flat – substantial looking | Moist, crisp base – firm enough to hold without the topping falling off | Wonderful smokey flavour, meaty, spicy, salty | 5 |
| Supermarket | Perfectly round shape, not very colourful, flat, toppings not well proportioned | Base was heavy and dense the pizza as a whole was soft and rubbery. | Bland – bread with tomato paste and cheese on it with a few bits of meat | 3 |
| Pizza Xpress | Perfectly round, very golden brown, colours all blending in, well-proportioned but individual topping ingredients not clearly visible as shown on-line | Moist inside crispy on top, base firm and bread like, stringy | Cheesy, sweet from the caramelized red onion, salty from the cheese and meats – trendy combination | 5 |

# Analysis – SWOT analysis EXAMPLE: Backpack

<table>
<tr><td colspan="2">SWOT analysis Backpack – Frameless</td></tr>
<tr><td>Strengths<br><br>Simple design that combines the drawstring and straps onto a single piece of cloth<br><br>One main storage compartment, suitable for the general transportation of goods<br><br>Comes in varying sizes and different colours<br><br>Lightweight – weighs almost nothing<br><br>Machine washable – easy to clean and maintain</td><td>Weaknesses<br><br>Lack of pockets on the inside and outside<br><br>Durability – looks as if seams might split when carrying a few weighty goods<br><br>Not comfortable – the drawstring straps would not take the weight off the shoulders – injury could occur from shoulder strap pressure<br><br>Small load capacity and difficult to put the loaded backpack on<br><br>Because the fabric is thin, the bag would not hold its shape and goods could easily get crushed<br><br>Fabric not completely waterproof</td></tr>
<tr><td>Opportunities<br><br>• Reflective materials added for safety at night<br>• Made into fashion accessories – designed specifically for women and no larger than a purse – maybe one strap rather than two<br>• Fabric could be waterproofed</td><td>Threats<br><br>• Safety – drawstring a safety hazard<br>• Should the fabric tear, you could end up with a hole in the bottom and lose your goods</td></tr>
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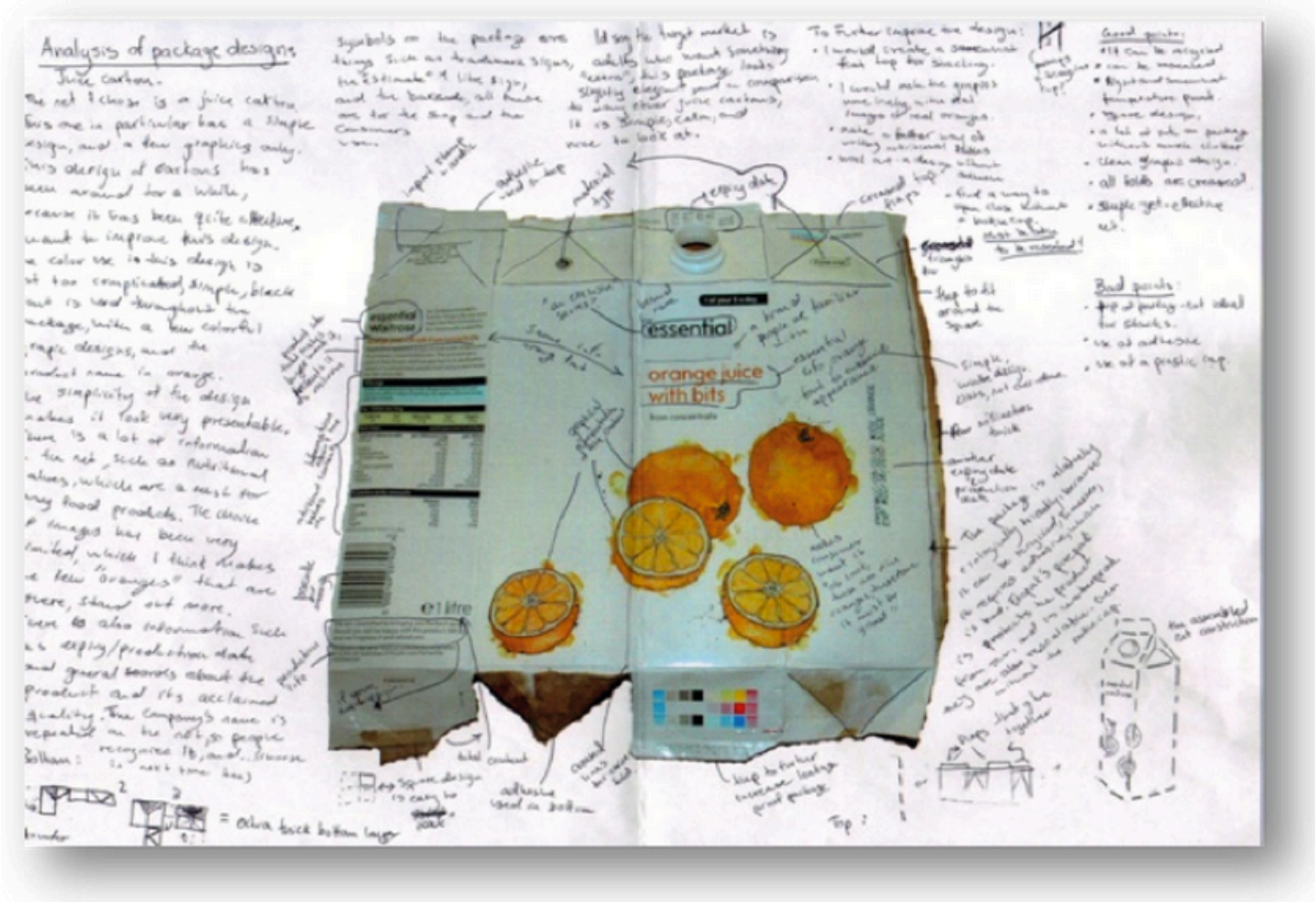
# Analysis - EXAMPLE: Fruit Juice Packaging



# Disassembly analysis EXAMPLE: Video game console controller

## Plastic controller disassembly

**'ve chosen to disassemble a controller to see how it is put together, how the electrical parts are put together, nd so I can see how the lights and electrics work inside it.**

Good points:

This controller is good because it has a grip surface on the side, which makes it less slippery to hold. t also has a light on the two joysticks, which makes it better t use in dark, as well as making the overall look more appealing. It has a camouflage pattern that suits it target market (teenagers). t has extra buttons compared to a normal gaming controller, which can satisfy specialist with ncreased speed of pushing buttons.

Bad points:

t is too thick in the hand for some people to hold. Some of the buttons are hard to push in, which makes it harder to use. The grip has a rugged surface that becomes uncomfortable to hold if it is held long enough.

Improvements:

To improve this design I would make it a bit more interesting to look at. I would firstly make the light of the control shine through more places that only from the joysticks. I would make the colour scheme a bit more "cold" by adding a few very light shades of blue into the graphics, there is a black coloured equivalent to this design which is also good, because it creates a diversity in choice. I would have made the grip less rugged, and make it smoother. This will increase comfort when using t. I would also loosen some of the buttons, and give some of them a little more space, because the current main buttons are a not as responsive as they should be.

I disassembled the controller by unscrewing the 8 screws the held it together. Tubes were connected with screws to hold the controller together. The controller had two rugged grip pieces that were slotted into the controller, between the two main pieces. Both these two "grips" were rugged. They also had excess plastic on them to make them less fragile.

The design itself is a shell for the interior, and those tubes put the shell together. It also has corresponding plastic pieces that slot together in different parts, so that more or less the whole body is in two pieces that are put together. By looking inside this controller, I saw that the lights were soldered onto the (rechargeable) battery, with a red and black wire, just like the ones I have. It also contained small plastic mechanisms for how the buttons react to being pushed, and how they bounce back into place.

There were several small metal pieces that were covered by plastic, to be buttons, and this is how many buttons are. The plastic makes the button bigger, and more comfortable to push in. From disassembling this controller I have learnt how it is put together, and how you can put plastics together without necessarily using glue. Ways I can incorporate these ideas into my own design is the idea of having the light shine through something. This will protect both the light and the child. If the lens was coloured the light would also be

coloured, which through my questionnaire was shown to be desirable. I've now seen how separate pieces can slot together to create a whole interlocked piece. Although I was originally supposed to disassemble a toy or a nightlight., disassembling something like this has shown to be equally as useful because of the amount of electronics that goes into this handheld plastic object.

# Logo analysis EXAMPLE

Logo analysis

Use a series of guiding questions to complete aesthetic and functional analysis of the work done by a peer

A. Type of logo:
    a. illustrative logo (clearly illustrates what a company/person does, likes or dislikes)
    b. graphic logo (includes a graphic, often an abstraction, of a company/person does)
    c. font-based logo (a text treatment which represents a company/person)

B. Shape:
    a. Does it have a recognizable shape?
    b. Is the outline simple?
    c. Is it simple abstract, can be discernible in small sizes?

C. Type of logo:
    a. illustrative logo (clearly illustrates what a company/person does, likes or dislikes)
    b. graphic logo (includes a graphic, often an abstraction, of a company/person does)
    c. font-based logo (a text treatment which represents a company/person)

D. Shape:
    a. Does it have a recognizable shape?
    b. Is the outline simple?
    c. Is it simple abstract, can be discernible in small sizes?

E. Contrast:
    a. Does contrast aid shape-recognition by making the edges between elements clearer?
    b. Does contrast create dynamism?
    c. Compare the brilliance/luminosity of the foreground and the background. The greater the difference, the greater the contrast

F. Effort:
    a. Does the logo evidence the use of techniques learnt in class? (use of layers, transparency, gradients, effects or filters, fancy typography, tracing complicated shapes, transforming, graphic styles)

Source: Logo Design for Websites

http://www.webdesignfromscratch.com/web-design/logos/

Example of year 3 student work

| | |
|---|---|
|  | This is a graphic logo because we can see a graphic, most probably representing something he is proud about and likes. The tango is representative of Argentina because it's a dance invented in this country, and this student is very proud about his country. We can recognize a shape of two people dancing tango, it represents pride, the colors and the shape are well used to give an impression of elegance. Here it shows the good use of vector drawing technique, so we can say he had applied the techniques learnt in class. |