

Report from St Cuthbert's College for the 2009 NZIFST Student Product Development Challenge

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This year a group of four year eleven students from St Cuthbert's College in Auckland have been participating in the NZIFST Student Product Development Challenge. Our aim was to produce an ice cream for children with an added health benefit. Throughout the process we worked with our CREST consultant Bronwyn Munro from Tip Top.

We decided to approach this task by using the Cooper's Stage Gate model because this allows us to cover all aspects of product development thoroughly and to make us aware of all of the processes we needed to go through to produce a well-researched new food product.

Step 1: Scoping

In this stage we were researching about our target market and products on the market. We also researched health benefits as this was part of our aim. We decided that our target market would be for 6 – 10 year old girls and their parents. We also looked at products that were on the market and identified a gap where we could merge two markets, the market for children's ice cream which is fun and colourful and the market for healthier ice creams. We researched health supplements for children online and visited a Health 2000 store to find out more information about health benefits for children. [We were also invited to be stewards at the Ice Cream Awards.](#) Here we picked up tips about how to make really good ice creams. This helped us later on in the production phase.



Step 2: Building a Business Case



FRUITY AND FIBROUS

ARE YOU AND YOUR CHILDREN
CLEAN ON THE INSIDE?

Icecream with added fruit and fibre. Get natural vitamins and minerals from the fruit and added fibre. Fibre keeps food moving through the body namely the digestive system and intestines healthily and added vitamins can improve overall health.

After compiling our research, we used the "Benefit Measurement Technique" to select our best ideas for health benefits. Our top ideas were combined and we ended up with three clear concepts. We outlined these ideas on three [attractive concept cards](#) for use in our focus groups.

Step 3: Development

First, we had to choose a concept. We held a focus group with science teachers, who all had children. We used various techniques to show their views and ended up with fruity and fibrous. Next, we needed to take our idea further. We held a focus group with yr 5 girls using continuums, colourful stickers and brainstorms about inclusions. The clear winner was pink with raspberries. The Pink Panther ice cream was born.

Step 4: Testing and Validating

We made four different batches of ice cream using different quantities of raspberries and [out of each batch we made six different ice creams.](#) They were:

1. raspberry only
2. chocolate chip
3. coconut ripple
4. marshmallow
5. rocky road
6. raspberry ripple



We then taste tested all 24 different ice creams and ranked them using rank sheets. These ranked flavour, inclusions, colour, smell and texture. We made the two highest ranked ice creams in larger batches, these were marshmallow and raspberry ice cream and raspberry ripple ice cream. After this we held a focus group with year eleven students and our results showed that the marshmallow and raspberry ice cream was more popular than the ripple ice cream.



Step 5: Product Specifications



We visited Tip Top and made our ice cream with our consultant Bronwyn Munro with help from her colleague Marc. This was a very valuable opportunity and we really enjoyed it. We used commercial ingredients such as glucose, emulsifiers and used commercial machinery such as a churner and -30 ° c freezers.



We produced a mock advertisement for our ice cream product which featured animated clips of the Pink Panther while also showing information about our ice cream and appealing to our target market. We also produced a lid for the ice cream, which included legal requirements, nutritional information and barcodes etc.

We created a table to calculate the price of the 2L tub that we made ourselves, not at Tip Top. After taking into consideration the prices of all raw materials, the average mark-up of products and GST, the total price came to \$30.00. We do however realise that our product was not very cost effective and if this product was to be produced commercially at Tip Top the recipe and price of the ice cream would be more cost effective. Finally the ice cream that we have created has a pale pink colour with a darker pink ripple through it. The ripple contains extra fibre from the raspberries. Mini marshmallows were also swirled through. It had a smooth consistency, a small amount of natural raspberry flavour and it is safe to eat after negative results for microbiological testing by lab tests carried out at Tip Top.



Acknowledgments and Thanks

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