Aim
To develop an innovative and tasty snack bar that New Zealand adolescents can favor, also providing nutritional benefits for the students who have high energy expenditures.

Product Attributes
- Has nutritional value
- Has a unique and creative selling point
- Contains Maltitol which prevents tooth decay
- Appealing for teenagers
- Has a great taste

Methodology
1. Market research on current energy bar products in New Zealand.
2. Identifying the gap in the market and brainstorm what product would be unique and healthy to be introduced in New Zealand market.
3. Developing prototypes using different ratios and combinations of nuts.
4. Prototypes tested by students and staff at our school (Survey).
5. Considering the opinions from the people, developing and finalizing our final energy bar.
6. Considering the estimated price and calories of the energy bar.
7. Finalizing the serving size
8. Designing the packaging

Final Outcome
- Healthy energy bar for students’ lunch boxes
- Good texture and combination of the nuts
- Overall high rating
- ‘On trend’ and unique flavor energy bar
- High protein content per 100g
- High magnesium content from the pumpkin seed

We are currently modifying our energy bar by considering the survey we obtained from both students and adults. Overall people showed positive attitude towards the unique flavor of the green tea chocolate. Also, the majority of people we surveyed wanted our energy bar to be fully coated by green tea chocolate. We need to send our prototype to the company that can measure the exact nutritional value and shelf life of our green tea energy bar.

Evaluation
We evaluated our final product based on:
- NZ Food Quality Specification
- Australia New Zealand Food Standards Code.

By researching and examining our product based on various of NZ food safety/quality specifications, we made sure that the recipe, manufacturing process, packaging and the final product was safe and eligible to be put out on the New Zealand Market.

Looking back at the project as a whole, we managed to meet all the requirements and recommended deadlines. If we had more time and better condition given to us, we would perfect our product based on the responses received, concentrate on our packaging more, so it looks attractive and fits under the NZ code/standards better.

Issue
Living in New Zealand, our group noticed that the majority of the snack bars portrayed similar attributes with the incorporation of nuts, dried fruits, or rice bubbles, which all seemed typical and lacked in innovative qualities. This led us to fill the market gap by incorporating elements of Asian aspects to the idea of NZ snack bar: the unique flavor of green tea chocolate for additional creativity and cultural qualities. Therefore we decided to create a recipe using green tea chocolate to an energy bar that is tasty, inspirational, healthy, and provides sufficient energy to New Zealand students.

Problems encountered
- Limited facilities, equipment, support. We don’t have any food technology course in our school programme, no food technology room or teacher available at school.
  - We were able to acquire the equipment and help needed by discussing it with our mentor frequently. Contacting the school boarding house and using their kitchen, borrowing equipments from people we knew.
  - Doing the competition on top of the school work.
  - As we are taking subjects that didn’t include CREST in the school programme, we had to meet in our spare time during weekends, after school and lunchtime to discuss our ideas and experimenting with the prototypes.

Nutritional value table per 100g and per serving size (60g)

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Per 100g</th>
<th>Per 60g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>416 kcal</td>
<td>259 kcal</td>
</tr>
<tr>
<td>Total Fat</td>
<td>31g</td>
<td>19g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>8g</td>
<td>5g</td>
</tr>
<tr>
<td>Carbs</td>
<td>19g</td>
<td>12g</td>
</tr>
<tr>
<td>Sugars</td>
<td>35g</td>
<td>21g</td>
</tr>
<tr>
<td>Protein</td>
<td>13g</td>
<td>8g</td>
</tr>
<tr>
<td>Fibre</td>
<td>3g</td>
<td>2g</td>
</tr>
<tr>
<td>Sodium</td>
<td>53 mg</td>
<td>32 mg</td>
</tr>
<tr>
<td>Potassium</td>
<td>283 mg</td>
<td>176 mg</td>
</tr>
<tr>
<td>Magnesium</td>
<td>163 mg</td>
<td>110 mg</td>
</tr>
</tbody>
</table>

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