

Stage 5 Food technology – Food Product Development

Summary

An ever-increasing variety of food products are available in the marketplace as a result of food product innovations. Students examine the reasons for developing food products and the impact of past and present food product innovations on society. They explore the processes in food product development and develop, produce and evaluate a food product.

Duration

10 Weeks (3 lessons per week)

Unit overview

This unit consists of Food product development, what is required in order to develop and sell, how the successfully market new products, as well as learning what is involved in making a successful product for a specific target market.

Outcomes

- › demonstrates hygienic handling of food to ensure a safe and appealing product FT5-1
- › identifies, assesses and manages the risks of injury and WHS issues associated with the handling of food FT5-2
- › applies appropriate methods of food processing, preparation and storage FT5-5
- › justifies food choices by analysing the factors that influence eating habits FT5-7
- › collects, evaluates and applies information from a variety of sources FT5-8
- › communicates ideas and information using a range of media and appropriate terminology FT5-9
- › selects and employs appropriate techniques and equipment for a variety of food-specific purposes FT5-10
- › plans, prepares, presents and evaluates food solutions for specific purposes FT5-11
- › examines the relationship between food, technology and society FT5-12
- › evaluates the impact of activities related to food on the individual, society and the environment FT5-13

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Content	Teaching and Learning	Evidence of Learning	Adjustments
Week 1			
<ul style="list-style-type: none"> • describe a range of food product developments <ul style="list-style-type: none"> - new to world - line extensions • explain reasons for food product development <ul style="list-style-type: none"> - health and environmental issues - company profitability - technological developments - increasing demand for convenience - societal changes 	<p>Teacher</p> <ul style="list-style-type: none"> - Introduce New topic “Food Product Development” - Watch video - Food product development 1 - Reasons for new products – duration 12:17 <ul style="list-style-type: none"> ○ <p>As a Class</p> <ul style="list-style-type: none"> - Brainstorm what are food product developments focusing on “new to world”(brand new products) and “line extensions”(variations of existing products, e.g. flavours, sugar free) - Brainstorm on why food products are created. <p>Small groups (3-4 people)</p> <ul style="list-style-type: none"> - Mini Case study on a new food product →type of product, who, when and where was it created, reason behind its development, do you think it is successful? <p>As a class</p> <ul style="list-style-type: none"> - Present their findings. 	<ul style="list-style-type: none"> - Student responses and case studies demonstrate understanding of what a food product development is and why it is developed. 	<div> <ul style="list-style-type: none"> - Extension questions on the case study <ul style="list-style-type: none"> ○ Target market ○ Similar products ○ PMI </div> <div> <ul style="list-style-type: none"> - Written instructions - Timer on the board - Limited computer use </div>

<ul style="list-style-type: none"> • design, produce and evaluate a food product development <ul style="list-style-type: none"> - an individual healthy breakfast box - Smoothie kit 	<p>Teacher</p> <ul style="list-style-type: none"> - Introduce Activity, requirements and expectations <p>Pairs</p> <ul style="list-style-type: none"> - In pairs students come up with a “new food product” <ul style="list-style-type: none"> ○ Must be to be cooked in 1 lesson ○ Basic ingredients - Who (target market), why, how (how does it help) <p>Teacher</p> <ul style="list-style-type: none"> - Checks and approves each pairs product, ensuring it can be made in the next lesson. 	<ul style="list-style-type: none"> - Student responses and new food product demonstrates an understanding of what a food product development is and why it is developed. 	<ul style="list-style-type: none"> - Add more parameters; must meet the certain nutritional requirement for age group (iron, calcium, magnesium) - Give student a profile and situation they need to create a recipe for.
<ul style="list-style-type: none"> • demonstrate safe and hygienic work practices • demonstrate appropriate selection of equipment and techniques used in food preparation 	<p>PRAC → Making food Product Development</p> <p>Teacher</p> <ul style="list-style-type: none"> - Remind students of PPE and safe food handling and preparation - Ensure students are being safe and on task <p>Student</p> <ul style="list-style-type: none"> - Cook the recipe they created in the last lesson <p>Teacher</p> <ul style="list-style-type: none"> - Leave last 10 mins for clean up 	<ul style="list-style-type: none"> - Students cooking demonstrates kitchen skills, safe food handling, proper PPE and proper food hygiene - Students final product demonstrates an understanding of what a food product development is and why it is developed. 	<ul style="list-style-type: none"> - Make presentation a part of their activity (food needs to be presented nicely) - Ensure student has a thorough step by step method in their recipe as well as an equipment list.
Week 2			

<ul style="list-style-type: none"> • describe elements of the marketing mix <ul style="list-style-type: none"> - product planning - price - placement & distribution - promotion 	<p>Teacher</p> <ul style="list-style-type: none"> - lead discussion on food marketing class is familiar with - “what is the most recent food ad you remember & why” - watch 3 videos of different food marketing ads <ul style="list-style-type: none"> - Cadbury - https://youtube.com/shorts/PRex1Dxa9DU?si=uPLpqkafRyCcasRm - Vegemite - https://youtu.be/q8DzjLy1YzE?si=YyLHXwgWfB75JN8E - KFC - https://youtu.be/jCKb_3jX0VE?si=0_kTjzHoDAT_NDcP - <p>As a class</p> <ul style="list-style-type: none"> - discuss the videos, (would you buy this, price, who was this aimed at) <p>Pairs</p> <ul style="list-style-type: none"> - research what brands are the most successful at marketing (how does it improve sales, reach large audiences, how would you improve their marketing strategy?) - discuss as a class 	<ul style="list-style-type: none"> - Student discussion and interaction demonstrates understanding of what a successful marketing campaign may look like 	<div data-bbox="1602 146 1995 451"> <ul style="list-style-type: none"> - research 2 brands, one that is successful and one that isn't </div> <div data-bbox="1602 451 1995 950"> <ul style="list-style-type: none"> - provide a scaffold for activity </div>
<ul style="list-style-type: none"> • evaluate the effectiveness of a range of marketing strategies in promoting new products <ul style="list-style-type: none"> - social media - promotional strategies - pricing strategies 	<p>Teacher</p> <ul style="list-style-type: none"> - give an overview on three different kinds of marketing strategies (social media, promotional strategies(discounts, dropped prices), pricing strategies(low prices to gain more customers, high prices to act luxury) - watch video - Food and the impact of social media - Counting the Cost – duration 4:49 - MarketingTips: Innovative Marketing Ideas – duration 4:27 <p>Class in 3 Groups</p>	<ul style="list-style-type: none"> - Student discussion and interaction demonstrates understanding of what a successful marketing campaign may look like 	<div data-bbox="1602 950 1995 1230"> <ul style="list-style-type: none"> - make 3 ads, each using a different medium (e.g. video, flyer, pop up) </div> <div data-bbox="1602 1230 1995 1456"> <ul style="list-style-type: none"> - Give a structured scaffold → specific questions, specific layout - Specify what kind of ad (video) </div>

	<ul style="list-style-type: none"> - each group is assigned one of the strategies - create a marketing strategy and at least 1 ad for a new product “an energy drink for teenagers” OR their own product from week one - present their strategy and ad to class - vote for the best (cant vote for their own) 		
<ul style="list-style-type: none"> • demonstrate safe and hygienic work practices • demonstrate appropriate selection of equipment and techniques used in food preparation 	<p>PRAC → Plant Based Burger (Vegetarian)</p> <p>https://www.wellplated.com/vegan-burger-recipe/</p> <p>Teacher</p> <ul style="list-style-type: none"> - Remind students of PPE and safe food handling and preparation - Ensure students are being safe and on task <p>Student</p> <ul style="list-style-type: none"> - Cook the recipe they created in the last lesson <p>Teacher</p> <p>Leave last 10 mins for clean up</p>	<ul style="list-style-type: none"> - Students cooking demonstrates kitchen skills, safe food handling, proper PPE and proper food hygiene 	<ul style="list-style-type: none"> - Make presentation a part of their activity (food needs to be presented nicely) - Ensure student has a thorough step by step method in their recipe as well as an equipment list.
Week 3			
<ul style="list-style-type: none"> • discuss the introduction of new food products and their effect on society <ul style="list-style-type: none"> - environmental - nutritional - technological 	<p>Teacher</p> <ul style="list-style-type: none"> - Lead class discussion about - Watch video (5 mins) - Connections between food and the environment – duration 21:31 <ul style="list-style-type: none"> ○ <p>Student (individual) → formative assessment</p> <ul style="list-style-type: none"> - Research a product and its impact on the <ul style="list-style-type: none"> ○ Environment (water, land, waste, sustainability, carbon footprint) 	<ul style="list-style-type: none"> - Student discussion and research demonstrates understanding of impact of new food products on society, in three different areas. 	<ul style="list-style-type: none"> - Allow for student to expand on research, other society impacts - Give a structured scaffold → specific questions, specific layout

	<ul style="list-style-type: none"> ○ Nutrition (preservatives, where are ingredients from, benefits, drawbacks) ○ Technology (what technology is used to make product, is it innovative) <ul style="list-style-type: none"> - Upload to teacher for marking 		
<ul style="list-style-type: none"> ● outline steps in food product development <ul style="list-style-type: none"> - design - produce - evaluate 	<p>Teacher</p> <ul style="list-style-type: none"> - Run through and explain 3 steps of food product development <p>Students</p> <ul style="list-style-type: none"> - Research requirements of each step and ways two different companies complete these steps, does this work for them? Compare and contrast the companies steps. 	<ul style="list-style-type: none"> - Student discussion and research demonstrates understanding different kinds of food product development 	<ul style="list-style-type: none"> - Research 3 companies
			<ul style="list-style-type: none"> - Provide the companies, and provide scaffold
<ul style="list-style-type: none"> ● demonstrate safe and hygienic work practices ● demonstrate appropriate selection of equipment and techniques used in food preparation 	<p>PRAC → Sweet Potato Spice Cake (Hidden Vegetable)</p> <p>https://www.oliveandmango.com/sweet-potato-spice-cake-with-a-caramel-frosting</p> <p>Teacher</p> <ul style="list-style-type: none"> - Remind students of PPE and safe food handling and preparation - Ensure students are being safe and on task <p>Student</p> <ul style="list-style-type: none"> - Cook the recipe they created in the last lesson <p>Teacher</p> <p>Leave last 10 mins for clean up</p>	<ul style="list-style-type: none"> - Students cooking demonstrates kitchen skills, safe food handling, proper PPE and proper food hygiene 	<ul style="list-style-type: none"> - Make presentation a part of their activity (food needs to be presented nicely)
			<ul style="list-style-type: none"> - Ensure student has a thorough step by step method in their recipe as well as an equipment list. - Visible timer
Week 4			

<ul style="list-style-type: none"> • outline the functions of food packaging <ul style="list-style-type: none"> - to contain - to preserve - to inform and persuade 	<p>Teacher</p> <ul style="list-style-type: none"> - Discuss different kinds of packaging currently on the market - Brainstorm different kinds of packaging, reasons for different kinds of packaging (accessibility, freshness, convenience, cheap) - 6 futuristic food packaging technologies that could change everything - website - <p>Students</p> <ul style="list-style-type: none"> - Make a poster discussing 3 different kinds of packaging, their positives, negatives and how they are different to other packaging. <p>Class</p> <ul style="list-style-type: none"> - Present findings to the class 	<ul style="list-style-type: none"> - Student discussion and research demonstrates understanding different kinds of food packaging and their characteristics 	<div data-bbox="1602 152 1984 480"> <ul style="list-style-type: none"> - More in depth - Find similar techniques in packaging in a completely different kind of packaging (Vacuum sealed salmon and vacuum sealed blanket → why they are used e.g benefits) </div> <div data-bbox="1602 480 1984 797"> <ul style="list-style-type: none"> - Pick only 2 kinds of packaging - Provide student with what kind of packaging they will be researching </div>
<ul style="list-style-type: none"> • outline legislative food-labelling requirements <ul style="list-style-type: none"> - ingredient list - date marking - nutrition information panel - information for allergy sufferers 	<p>Teacher</p> <ul style="list-style-type: none"> - discuss requirements of packaging, and what it means - what happens if requirements aren't followed - 10 product packaging design mistakes to avoid – website - NSW Food Authority: Food labelling and the Law - website - <p>students (pairs)</p> <ul style="list-style-type: none"> - create own label for food product they made in week 1 (minus nutritional label) <p>Class</p> <ul style="list-style-type: none"> - Share with the class - Decide whether each label follows all laws and requirement, and if the label is successful 	<ul style="list-style-type: none"> - Student discussion and research demonstrates understanding different kinds of food packaging and the requirements for labelling in NSW 	<div data-bbox="1602 797 1984 1081"> <ul style="list-style-type: none"> - Include nutritional panel - https://foodworks.online/ - </div> <div data-bbox="1602 1081 1984 1455"> <p>n/a</p> </div>

<ul style="list-style-type: none"> • demonstrate safe and hygienic work practices • demonstrate appropriate selection of equipment and techniques used in food preparation 	<p>PRAC → Healthy Burrito Bowl (Meal Prep)</p> <p>https://www.mysugarfreekitchen.com/healthy-burrito-bowls/</p> <p>Teacher</p> <ul style="list-style-type: none"> - Remind students of PPE and safe food handling and preparation - Ensure students are being safe and on task <p>Student</p> <ul style="list-style-type: none"> - Cook the recipe they created in the last lesson <p>Teacher</p> <p>Leave last 10 mins for clean up</p>	<ul style="list-style-type: none"> - Students cooking demonstrates kitchen skills, safe food handling, proper PPE and proper food hygiene 	<ul style="list-style-type: none"> - Make presentation a part of their activity (food needs to be presented nicely) - Ensure student has a thorough step by step method in their recipe as well as an equipment list.
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