



# Food & Nutrition 2025 v1.2

## IA3: Sample assessment instrument

This sample has been compiled by the QCAA to assist and support teachers in planning and developing assessment instruments for individual school settings.

<b>Student name</b>	sample only
<b>Student number</b>	sample only
<b>Teacher</b>	sample only
<b>Issued</b>	sample only
<b>Due date</b>	sample only

## Marking summary

Criterion	Marks allocated	Provisional marks
Explaining and Communicating	7	
Determining and Generating	9	
Synthesising and Evaluating	9	
<b>Overall</b>	<b>25</b>	

# Conditions

<b>Technique</b>	Food & Nutrition solution
<b>Unit</b>	Unit 4: Food solution development for nutrition consumer markets
<b>Topic/s</b>	Topic 1: Formulation and reformulation for nutrition consumer markets Topic 2: Nutrition consumer markets
<b>Duration</b>	Approximately 15 hours of class time
<b>Mode / length</b>	Written and visual: up to 10 A4 pages, up to 2000 words (including images, graphs, calculations and diagrams)
<b>Individual / group</b>	Individual
<b>Other</b>	Students may use class time and their own time to develop a response.
<b>Resources</b>	Stimulus, access to kitchen facilities

# Context

A food company produces a range of food products for sale at supermarkets. There is an opportunity to broaden their product range with the addition of a new or reformulated product to meet the needs of consumers with varied nutritional and dietary needs. The product must have low levels of high-risk components while meeting nutritional needs and maintaining desirable sensory properties.

Determine a solution for one of the following nutrition consumer markets:

- adolescents
- elderly
- consumers with food allergy or intolerance
- consumers experiencing diet-related conditions or chronic disease, such as coronary heart disease or type 2 diabetes.

# Task

Using the provided stimulus, identify a nutrition consumer market problem and develop a food formulation or reformulation solution for this market. Document the problem-solving process using written and visual communication modes.

**To complete this task, you must:**

- explain food science ideas and a problem related to food formulation for a nutrition consumer market
- determine success criteria used to evaluate the solution
- synthesise
  - food and nutrition information and data
  - experimental data of at least three prototypes about alternative solution ideas
  - alternative solution ideas to determine a final proposed solution
- generate the final proposed solution for the nutrition consumer market problem to provide data to determine the feasibility of the solution
- evaluate and refine ideas and the solution, using success criteria and generated data to recommend and justify enhancements to ideas and the solution to the nutrition consumer market problem
- communicate
  - the application of the problem-solving process in response to the nutrition consumer market problem using written or visual features, e.g. annotations, diagrams, sketches, drawings, photographs, and a final proposed solution
  - data using diagrams, tables, graphs and spreadsheets.

# Stimulus

Australians do not eat the recommended daily amount of fruit and vegetables. Unhealthy fats and refined carbohydrates are over consumed. Glycemic index is a helpful tool for assisting consumers with type 2 diabetes to make informed food choices.

Nutritional needs change throughout people's lives. 'Overall, adults aged 71 and over:

- fall short of meeting the recommended daily serves for 4 of the 5 food groups (based on average intake), excluding grain foods for women, and almost everyone does not meet the recommended serves of dairy products and alternatives
- have an intake of sodium well above the level of adequate intake
- nine in 10 men (90%) and over 9 in 10 women (94%) have inadequate calcium intakes.'

Australian Institute of Health and Welfare. (2018). *Nutrition across the Life Stages*. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports/food-nutrition/nutrition-across-the-life-stages/summary>.

'About one-third of Australians' energy is from discretionary foods. This is highest for teenagers aged 14–18, at 41 %.'

Australian Institute of Health and Welfare. (2018). *Nutrition across the Life Stages*. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports/food-nutrition/nutrition-across-the-life-stages/summary>.

Discretionary foods are often high in fat, sugar and salt and low in fibre. They are associated with greater risk of obesity, heart disease and type 2 diabetes.

Australian Institute of Health and Welfare. (2024). Diet. <https://www.aihw.gov.au/reports/food-nutrition/diet>

Common concerns for consumers experiencing food allergy or intolerance include:

- the nutritional value of available food products
- availability of suitable food products at an affordable cost

## Checkpoints

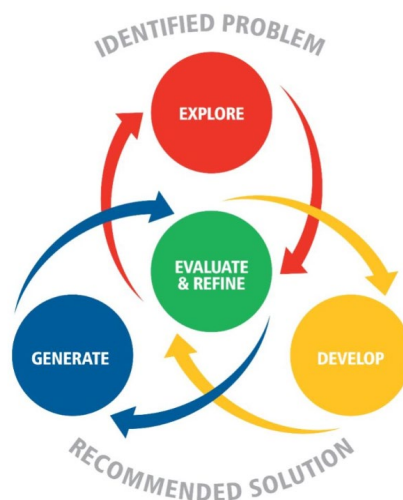
- ☐ Term 3 Week 3: Teacher check on student progress
- ☐ Term 3 Week 5: Submit completed draft

## Authentication strategies

- You will be provided class time for task completion.
- You will provide documentation of your progress at indicated checkpoints.
- Your teacher will collect and annotate a draft.
- You must acknowledge all sources.

## Scaffolding

The Food & Nutrition solution is an individual written response that documents all activities you complete as you work through the stages of the Food & Nutrition problem-solving process. You can include graphs, tables, sketches or data from experiments, as well as other supporting evidence.



Your response will include the following conventions:

- headings that organise and communicate your thinking throughout the iterative phases of the problem-solving process
- a table of contents
- a reference list and a recognised system of in-text referencing.

# Instrument-specific marking guide (IA3): Food & Nutrition solution response (25%)

Explaining and Communicating	Marks
The student response has the following characteristics:	
<ul style="list-style-type: none"> <li>discerning explanation of food science ideas and a problem related to a nutrition consumer market</li> <li>discerning decision-making about and fluent use of               <ul style="list-style-type: none"> <li>written and visual (if appropriate) features to communicate a solution</li> <li>language for a technical audience</li> <li>grammatically accurate language structures</li> <li>referencing conventions</li> </ul> </li> </ul>	6–7
<ul style="list-style-type: none"> <li>effective explanation of food science ideas and a problem related to a nutrition consumer market</li> <li>effective decision-making about and fluent use of               <ul style="list-style-type: none"> <li>written and visual (if appropriate) features to communicate a solution</li> <li>language for a technical audience</li> <li>grammatically accurate language structures</li> <li>referencing conventions</li> </ul> </li> </ul>	4–5
<ul style="list-style-type: none"> <li>appropriate explanation of food science ideas and a problem related to a nutrition consumer market</li> <li>appropriate decision-making about and use of               <ul style="list-style-type: none"> <li>written and visual (if appropriate) features to communicate a solution</li> <li>language for a technical audience</li> <li>grammatically accurate language structures</li> <li>referencing conventions</li> </ul> </li> </ul>	2–3
<ul style="list-style-type: none"> <li>superficial explanation of food science ideas and a problem related to a nutrition consumer market</li> <li>inconsistent decision-making about and use of               <ul style="list-style-type: none"> <li>written and visual (if appropriate) features</li> <li>suitable language</li> <li>grammar and language structures</li> <li>referencing conventions.</li> </ul> </li> </ul>	1
The student response does not satisfy any of the descriptors above.	0

Determining and Generating	Marks
The student response has the following characteristics:	
<ul style="list-style-type: none"> <li>• astute determination of success criteria that include the relevant impacts and implications of, and the quality and functionality indicators for, a selected problem that affects a nutrition consumer market</li> <li>• proficient generation               <ul style="list-style-type: none"> <li>– of a nutrition consumer market solution</li> <li>– to provide valid sensory profiling data to determine the feasibility of the solution</li> </ul> </li> </ul>	8–9
<ul style="list-style-type: none"> <li>• logical determination of success criteria that include the relevant impacts and implications of, and the quality and functionality indicators for, a selected problem that affects a nutrition consumer market</li> <li>• effective generation               <ul style="list-style-type: none"> <li>– of a nutrition consumer market solution</li> <li>– to provide valid sensory profiling data to determine the feasibility of the solution</li> </ul> </li> </ul>	6–7
<ul style="list-style-type: none"> <li>• reasonable determination of some success criteria that include impacts and implications of, and the quality or functionality indicators for, a selected problem that affects a nutrition consumer market</li> <li>• adequate generation               <ul style="list-style-type: none"> <li>– of a nutrition consumer market solution</li> <li>– to provide relevant sensory profiling data to determine the feasibility of the solution</li> </ul> </li> </ul>	4–5
<ul style="list-style-type: none"> <li>• vague determination of some success criteria for a selected problem that affects a nutrition consumer market</li> <li>• partial generation               <ul style="list-style-type: none"> <li>– of a nutrition consumer market solution</li> <li>– to provide some sensory profiling data to determine the feasibility of the solution</li> </ul> </li> </ul>	2–3
<ul style="list-style-type: none"> <li>• statements about success criteria for the nutrition consumer market</li> <li>• generation of parts of a solution.</li> </ul>	1
The student response does not satisfy any of the descriptors above.	0

Synthesising and Evaluating	Marks
The student response has the following characteristics:	
<ul style="list-style-type: none"> <li>coherent and logical synthesis of               <ul style="list-style-type: none"> <li>chemical, functional and nutritional information</li> <li>primary and secondary data for a solution</li> </ul> </li> <li>critical evaluation of ideas and a solution against success criteria</li> <li>discerning refinement of a solution               <ul style="list-style-type: none"> <li>against success criteria</li> <li>to make astute recommendations for enhancements, justified by data</li> </ul> </li> </ul>	8–9
<ul style="list-style-type: none"> <li>logical synthesis of               <ul style="list-style-type: none"> <li>chemical, functional and nutritional information</li> <li>primary and secondary data for a solution</li> </ul> </li> <li>reasoned evaluation of ideas and a solution against success criteria</li> <li>effective refinement of a solution               <ul style="list-style-type: none"> <li>against success criteria</li> <li>to make effective recommendations for enhancements, justified by data</li> </ul> </li> </ul>	6–7
<ul style="list-style-type: none"> <li>simple synthesis of               <ul style="list-style-type: none"> <li>chemical, functional or nutritional information</li> <li>primary or secondary data for a solution</li> </ul> </li> <li>feasible evaluation of ideas and a solution against success criteria</li> <li>adequate refinement of a solution               <ul style="list-style-type: none"> <li>against success criteria</li> <li>to make fundamental recommendations for enhancements, justified by data</li> </ul> </li> </ul>	4–5
<ul style="list-style-type: none"> <li>rudimentary synthesis of information or data for a solution</li> <li>superficial evaluation of ideas or a solution against some criteria</li> <li>superficial refinement of ideas or a solution               <ul style="list-style-type: none"> <li>against success criteria</li> <li>to make elementary recommendations for enhancements</li> </ul> </li> </ul>	2–3
<ul style="list-style-type: none"> <li>unclear combination of information or ideas about a nutrition consumer problem</li> <li>identification of a change to an idea or solution.</li> </ul>	1
The student response does not satisfy any of the descriptors above.	0



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2. *Discretionary food and drink choices*, 2021, by Commonwealth of Australia, is licensed [CC BY 4.0](https://creativecommons.org/licenses/by/4.0).