Queensland Government | QCAA Queensland Curriculum & Assessment Authority

Queensland Curriculum and Assessment Authority

Food & Nutrition 2025 v1.2

IA2: 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.

Student name	sample only
Student number	sample only
Teacher	sample only
Issued	sample only
Due date	sample only

Marking summary

Criterion	Marks allocated	Provisional marks
Explaining and Communicating	7	
Determining and Generating	9	
Synthesising and Evaluating	9	
Overall	**25**	

Conditions

Technique	Food & Nutrition solution
Unit	Unit 3: Food science of carbohydrate and fat
Topic/s	Topic 1: Carbohydrate
Duration	Approximately 15 hours of class time
Mode / length	Up to 2000 words, up to 10 A4 pages
Individual / group	Individual
Other	Students may use class time and their own time to develop a response.
Resources	Stimulus, experimental equipment, internet

Context

The company Essential Snack Foods produces a range of snack foods. Consumer research has identified a need for the company to develop a line extension of carbohydrate-based snack food. The analysis of consumer research identified a niche market for a single-serve, easily transported preparation-free snack food. The company values the ethical production of food and has various requirements around ethical production, which are outlined in its company ethos (see stimulus).

Task

Use the provided stimulus to identify a carbohydrate-based food problem and develop a solution for a snack food line extension for Essential Snack Foods. Use your knowledge of the facts and principles related to the chemical, functional and sensory properties and processing of carbohydrate-based food and document the problem-solving process using written and visual communication modes.

To complete this task, you must:

- explain food science ideas and the problems related to the processing of carbohydrate-based food
- determine success criteria used to evaluate the solution
- synthesise
  - food science and processing information and data
  - experimental data of at least three prototypes about alternative ideas
  - alternative ideas to determine a final proposed solution
- generate the final proposed solution for the carbohydrate-based food 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 carbohydrate-based food problem
- communicate
  - the application of the problem-solving process in response to the carbohydrate-based food problem using written or visual features, e.g. annotations, diagrams, sketches, drawings, photographs, and a proposed solution
  - data using diagrams, tables, graphs and spreadsheets.

Stimulus

Stimulus 1: Promotional flyer for Essential Snack Foods

Quality matters at Essential Snack Foods

At Essential Snack Foods we offer quality products that are unlike any other brands.

We're a young company with a passion for food. We value and celebrate the difference that natural products make to the quality of your life, and we only use excellent quality, natural ingredients in our range of products.

Our goal is to offer the highest quality products. We define quality by evaluating the ingredients, freshness, safety, taste and appearance of our products. Ultimately, we aim to help you reduce or eliminate refined, highly processed foods and foods lacking nutrients from your diet, which is why we use wholegrains and natural sweeteners.

Product lines for Essential Snack Foods

Bars and slices	Single-serve cakes
Raspberry and lemon muffin bar	Banana bread
Date slice	Carrot cake

Stimulus 2: Excerpt — focus group marketing report for Essential Snack Foods

Range of products

Overall, the range of products is well received; 55% of the focus group would like extension products. Of the participants:

- 52% requested muffin-like products
- 48% requested cake-like products.

All participants stated they were committed to the products and would continue to buy them.

Flavours of products

The most well-received products were the banana bread and the raspberry and lemon muffin bars. 30% of participants mentioned that they would like a chocolate or carob product and 57% stated that they enjoy the inclusion of fruit flavours.

Checkpoints

☐ Term 2 Week 3: Teacher check-in on student progress.

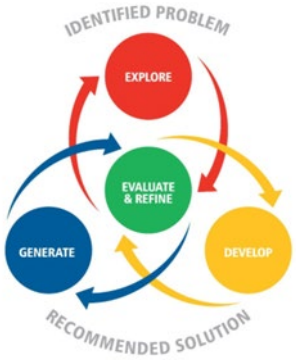
☐ Term 2 Week 5: Submit completed draft.

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.



You should include:

- a table of contents
- headings that organise and communicate your thinking through the iterative phases of the Food & Nutrition problem-solving process
- a reference list and in-text referencing, using a recognised referencing system.

Instrument-specific marking guide (IA2): Food & Nutrition solution response (25%)

Explaining and Communicating	Marks
The student response has the following characteristics:	
• discerning explanation of food science ideas and a problem related to carbohydrate- or fat-based food • discerning decision-making about and fluent use of – written and visual (if appropriate) features to communicate a solution – language for a technical audience – grammatically accurate language structures – referencing conventions	6–7
• effective explanation of food science ideas and a problem related to carbohydrate- or fat-based food • effective decision-making about and fluent use of – written and visual (if appropriate) features to communicate a solution – language for a technical audience – grammatically accurate language structures – referencing conventions	4–5
• appropriate explanation of food science ideas and a problem related to carbohydrate- or fat-based food • appropriate decision-making about and use of – written and visual (if appropriate) features to communicate a solution – language for a technical audience – grammatically accurate language structures – referencing conventions	2–3
• superficial explanation of food science ideas and a problem related to a carbohydrate- or fat-based food • inconsistent decision-making about and use of – written and visual (if appropriate) features – suitable language – grammar and language structures – referencing conventions.	1
The student response does not satisfy any of the descriptors above.	0

Determining and Generating	Marks
The student response has the following characteristics:	
• astute determination of success criteria that include the relevant impacts and implications of, and the quality and functionality indicators for, the carbohydrate- or fat-based food problem • proficient generation – of a carbohydrate- or fat-based food processing solution – to provide valid sensory profiling data to determine the feasibility of the solution	8–9
• logical determination of success criteria that include the relevant impacts and implications of, and the quality and functionality indicators for, the carbohydrate- or fat-based food problem • effective generation – of a carbohydrate- or fat-based food processing solution – to provide valid sensory profiling data to determine the feasibility of the solution	6–7
• reasonable determination of success criteria that include the relevant impacts and implications of, and the quality and functionality indicators for, the carbohydrate- or fat-based food problem • adequate generation – of a carbohydrate- or fat-based food processing solution – to provide relevant sensory profiling data to determine the feasibility of the solution	4–5
• vague determination of some success criteria for a carbohydrate- or fat-based food problem • partial generation – of a carbohydrate- or fat-based food processing solution – to provide some sensory profiling data to determine the feasibility of the solution	2–3
• statements about success criteria for a carbohydrate- or fat-based food problem • generation of parts of a solution.	1
The student response does not satisfy any of the descriptors above.	0

Synthesising and Evaluating	Marks
The student response has the following characteristics:	

• coherent and logical synthesis of
  – chemical and functional information
  – primary and secondary data for a solution
• critical evaluation of ideas and a solution against success criteria
• discerning refinement of a solution
  – against success criteria
  – to make astute recommendations for enhancements, justified by data
	8–9

• logical synthesis of
  – chemical and functional information
  – primary and secondary data for a solution
• reasoned evaluation of ideas and a solution against success criteria
• effective refinement of a solution
  – against success criteria
  – to make effective recommendations for enhancements, justified by data
	6–7

• simple synthesis of
  – chemical or functional information
  – primary or secondary data for a solution
• feasible evaluation of ideas and a solution against success criteria
• adequate refinement of a solution
  – against success criteria
  – to make fundamental recommendations for enhancements, justified by data
	4–5

• rudimentary synthesis of information or data for a solution
• superficial evaluation of ideas or a solution against some criteria
• superficial refinement of ideas or a solution
  – against success criteria
  – to make elementary recommendations for enhancements
	2–3

• unclear combination of information or ideas about a carbohydrate- or fat-based food problem • identification of a change to an idea or solution.	1
The student response does not satisfy any of the descriptors above.	0