Food & Nutrition 2019 v1.1

IA2: Sample assessment instrument

Project — folio (25%)

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

Student number

Teacher

Issued

Due date

Marking summary

Criterion	Marks allocated	Provisional marks
Recognising and explaining	5	
Analysing and determining	7	
Synthesising, generating and evaluating	9	
Communicating	4	
Overall	**25**	

Conditions

Technique	Project — folio
Unit	Unit 3: Food science of carbohydrate and fat
Topic/s	Topic 2: Carbohydrate
	Topic 4: Developing food solutions
Duration	15 hours
Mode/length	10–12 A3 pages
Individual/group	Individual
Other	Title and contents pages, reference list and appendixes are not included in the page count.
	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, shelf-stable and 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

Using the provided stimulus, identify a carbohydrate-based food problem and develop a solution for a snack food line extension for Essential Snack Foods. Document the problem-solving process using written and visual modes of communication.

To complete this task you must use your knowledge of the facts and principles related to the nutritional, chemical, functional and sensory properties and processing of carbohydrate-based food to:

- recognise and describe facts and principles related to the nutritional, chemical, functional and sensory properties of carbohydrate-based food

- explain food science ideas and the problem related to the processing of carbohydrate-based food

- analyse
    - the contextual stimulus, including stakeholder needs
    - information and data related to the properties and processing of carbohydrate-based food to identify essential characteristics and constraints
    - the relevant personal, social, ethical, economic, environmental, legal and/or sustainability impacts and implications of the solution
    - the quality, functionality and reliability indicators for the carbohydrate-based food problem

- determine
    - solution requirements to develop a brief
    - prescribed and self-determined criteria used to evaluate the solution

- synthesise
    - food and nutrition information and data
    - primary experimental data about alternative ideas
    - alternative ideas to determine a proposed solution

- generate the 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 self-determined 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 prototype

    – data using diagrams, tables, graphs and spreadsheets.

Stimulus

Stimulus 1: Promotional flyer for Essential Snack Foods

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, nutritive value and appearance of our products. Ultimately, we aim to help you reduce or eliminate from your diet refined, highly processed foods and foods lacking nutrients, which is why we use wholegrains and natural sweeteners.

To give you the best experience and products, we consider quality the highest form of value. That means we maintain strict standards — our products contain no artificial food preservatives and are made with locally sourced ingredients.

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

- 30% requested scone-based 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.

Ingredients in the range

All participants liked the different range of flavours and appreciate the use of wholegrains. 12% indicated an interest in the inclusion of vegetables.

Checkpoints

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

☐   Term 2 Week 5: Submit completed draft

Authentication strategies

- Your teacher will provide class time for task completion.

- You will produce sections of the final response under supervised conditions.

- You will provide documentation of their progress at indicated checkpoints.

- Your teacher will collect and annotate one draft.

- Your teacher will conduct interviews or consultations with each student as they develop the response.

- You must acknowledge all sources.

Scaffolding

The folio 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.
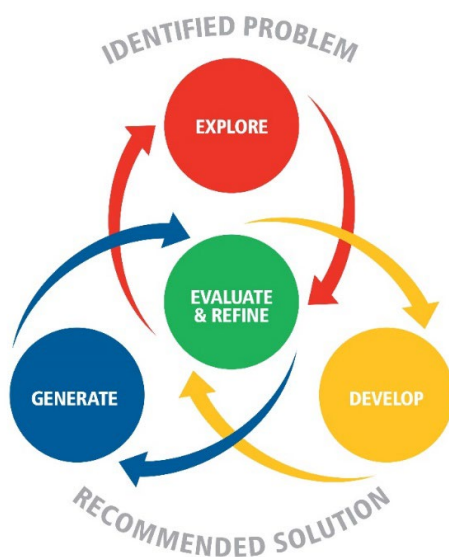
You should include:

- a table of contents page

- 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 system of referencing.

Instrument-specific marking guide (IA2): Project — folio (25%)

Criterion: Recognising and explaining

Assessment objectives

1. recognise and describe facts and principles related to the processing, and nutritional, chemical, functional and sensory properties, of carbohydrate- or fat-based food

2. explain food science ideas and a problem related to the processing of a carbohydrate- or fat-based food solution

The student work has the following characteristics:	Marks
• accurate and discriminating recognition and discerning description of facts and principles related to the processing, and nutritional, chemical, functional and sensory properties, of carbohydrate- or fat-based food • discerning explanation of food science ideas and a problem related to the processing of a carbohydrate- or fat-based food solution.	4–5
• appropriate recognition and description of some facts and principles related to the processing, and nutritional, chemical, functional and sensory properties, of carbohydrate- or fat-based food • appropriate explanation of food science ideas and a problem related to the processing of a carbohydrate- or fat-based food solution.	2–3
• variable recognition and superficial description of the processing, or nutritional, chemical, functional or sensory properties, of carbohydrate- or fat-based food • superficial explanation of food science ideas and a problem related to a carbohydrate- or fat-based food solution.	1
• does not satisfy any of the descriptors above.	0

Criterion: Analysing and determining

Assessment objectives

3. analyse a problem, information and data related to the properties and processing of carbohydrate- or fat-based food

4. determine solution requirements and criteria for a carbohydrate- or fat-based food problem

The student work has the following characteristics:	Marks
• insightful analysis of a relevant problem, information and data related to the properties and processing of carbohydrate- or fat-based food to identify essential characteristics and constraints • astute determination of – essential solution requirements from the brief • self-determined criteria that include the relevant impacts and implications, and the quality, functionality and reliability indicators for the carbohydrate- or fat-based food problem.	6–7

• considered analysis of a relevant problem, information and data related to the properties and processing of carbohydrate- or fat-based food to identify characteristics and constraints
• logical determination of
  – effective solution requirements from the brief
  – self-determined criteria that include the impacts and implications, and the quality, functionality and reliability indicators for the carbohydrate- or fat-based food problem.
	4–5

• appropriate analysis of a problem, information and data related to the properties or processing of carbohydrate- or fat-based food to identify some of the characteristics and constraints • reasonable determination of – some solution requirements from the brief • self-determined criteria that include impacts and implications, and the quality, functionality or reliability indicators for the carbohydrate- or fat-based food problem.	2–3
• description of a problem or information related to a carbohydrate- or fat-based food problem • identification of a criterion for a carbohydrate- or fat-based food problem.	1
• does not satisfy any of the descriptors above.	0

Criterion: Synthesising, generating and evaluating

Assessment objectives

5. synthesise chemical, functional and nutritional information and data to develop ideas for a carbohydrate- or fat-based food solution

6. generate a carbohydrate- or fat-based food solution to provide data to determine the feasibility of the solution

7. evaluate and refine ideas and a solution to make justified recommendations for enhancement to a carbohydrate- or fat-based food problem

The student work has the following characteristics:	Marks
• coherent and logical synthesis of chemical, functional, sensory and nutritional information, and a range of primary and secondary data to develop ideas for a chosen solution • purposeful generation of a carbohydrate- or fat-based food processing solution to provide valid sensory profiling data to determine the feasibility of the solution • critical evaluation, and discerning refinement, of ideas and the generated solution, against self-determined criteria and data, considering impacts and implications of the solution, to make astute recommendations for enhancements, justified by data.	8–9
• logical synthesis of chemical, functional, sensory and nutritional information and primary and secondary data to develop ideas for a chosen solution • effective generation of a carbohydrate- or fat-based food processing solution to provide valid sensory profiling data to determine the feasibility of the solution • reasoned evaluation and effective refinement of ideas and a solution, against self-determined criteria to make effective recommendations for enhancements, justified by data.	6–7
• simple synthesis of chemical, functional, sensory and nutritional information and primary or secondary data to develop ideas for a chosen solution • adequate generation of a carbohydrate- or fat-based food processing solution to provide relevant sensory profiling data to determine the feasibility of the solution • feasible evaluation and adequate refinement of ideas and a solution, against self-determined criteria to make fundamental recommendations for enhancements, justified by data.	4–5
• rudimentary synthesis of information and data to develop partial ideas for a chosen solution • partial generation of a carbohydrate- or fat-based food processing solution to provide some sensory profiling data to determine the feasibility of the solution • superficial evaluation and refinement of ideas and a solution against some criteria to make elementary recommendations for enhancements.	2–3
• unclear combination of information or ideas about a carbohydrate- or fat-based food problem • generation of parts of a solution • identification of a change to idea or solution.	1
• does not satisfy any of the descriptors above.	0

Criterion: Communicating

Assessment objectives

8. make decisions about and use mode-appropriate features, language and conventions for particular purposes and contexts

The student work has the following characteristics:	Marks

• 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 and folio conventions.
	3–4

• variable decision-making about and inconsistent use of
   – written and visual (if appropriate) features
   – suitable language
   – grammar and language structures
   – referencing or folio conventions.
	1–2

• does not satisfy any of the descriptors above.	0