



Government of **Western Australia**  
School Curriculum and Standards Authority

## SAMPLE ASSESSMENT TASKS

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FOOD SCIENCE AND TECHNOLOGY  
ATAR YEAR 11

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## Sample assessment task

### Food Science and Technology – ATAR Year 11

#### Task 2 – Unit 1

**Assessment type:** Production analysis

#### Conditions

Period allowed for completion of the task: two weeks

The production analysis will be prepared as a report and conducted in class under test conditions

The suggested working time for the report is 40 minutes

**Total marks:** 37

**Task weighting:** 10% of the school mark for this pair of units

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Background scenario for the task.

*Right-Fit Food* is a new food chain store, soon to open their first shop front in Perth. They are entering into the competitive ‘healthy food’ sector of the market and offer individually designed, home-style takeaway meals. The role of the *Right-Fit Food* Innovation team is to design and propose a range of new meal products for specific dietary requirements.

As a member of the Innovation team, your product proposal is a two-course meal for a customer seeking a healthier diet and lifestyle. The aim is to reduce sugar intake and incorporate a variety of foods low in saturated fats and oils, rich in Vitamin B3 (niacin) and high in calcium. The two-course meal should be quick and easy to prepare, with an interesting mix of sensory properties.

#### Part A: Technology process notes

**(11 marks)**

Before production, prepare notes and then use the technology process to:

- investigate potential key food commodities, ingredients, wet processing techniques and dry processing techniques, equipment and resources, such as time and skills required for the production of the proposed product
- devise the menu, production plan and food order, include specialised equipment, if required. Interpret and adapt recipes and, if necessary, trial recipes and food preparation techniques. Consider the impact of the choice of processing techniques on the preparation and presentation of the meal.

During production:

- produce and present a high quality two-course meal
- evaluate the meal on the day of service. Record the sensory properties and any issue with ingredients, production plan, food order, equipment use and application of the processing techniques. Outline other issues that may have impacted on the production process.

The technology process notes developed for the proposed product may be used during the writing of the production analysis report. Notes on the technology process are to be submitted at the conclusion of the production analysis report.

**Part B: Production analysis report****(26 marks)**

The technology process notes developed for the proposed product may be used during the writing of the production analysis report. Notes on the technology process are to be submitted at the conclusion of the production analysis report.

Prepare a report of your product proposal for the *Right-Fit Food* Innovation team.

The report will:

- include an introductory paragraph related to the product proposal, containing understanding of health aims and a sense of product placement in the market
- provide evidence using the following headings:
  - **Compliance** – product’s compliance with the proposal (a two-course meal, low in sugar and saturated fats and oils, high in Vitamin B3 and calcium)
  - **Sensory properties** – product’s sensory properties
  - **Wet processing techniques** – selection of wet processing techniques, such as suitability of ingredients, heat transfer, effect on nutrition
  - **Dry processing techniques** – selection of dry processing techniques, such as suitability of ingredients, heat transfer, effect on nutrition
  - **Equipment and resources** – selection of equipment and resources, including factors such as suitability for task, ease of use, cleanliness, safety, storage
  - **Time** – time requirements (refer to production plan)
- make concluding comments justifying food choices and results; suggest modifications to the proposed product. Is your proposed product a ‘good fit for *Right-Fit Food*’?

## Marking key for sample assessment task 2 – Unit 1

Description	Marks
<b>Part A: Technology process notes</b>	
<b>Investigate</b>	<b>/4</b>
Notes accurately relate to detailed investigation of the product proposal requirements	4
Notes accurately relate to investigation of the product proposal requirements	3
Notes relate to some details of investigation into some product proposal requirements	2
Notes relate briefly to product proposal requirements	1
<b>Devise</b>	<b>/4</b>
Notes accurately detail appropriate adaptations and development of processes	4
Notes detail appropriate adaptations and development of processes	3
Notes outline some adaptations and development of processes	2
Notes relate briefly to adaptations and/or development of processes	1
<b>Evaluate</b>	<b>/3</b>
Notes accurately relate to detailed evaluation of product and processes, including sensory properties	3
Notes accurately relate to evaluation of product and processes	2
Notes relate to some aspects of evaluation	1
<b>Part A total</b>	<b>/11</b>
<b>Part B: Production analysis report</b>	
<b>Introduction</b>	<b>/2</b>
Relates clearly to the product proposal; containing understanding of health aims and provides a sense of direction for the product placement with <i>Right-Fit Food</i>	2
Provides an outline of the product proposal	1
<b>Compliance</b>	<b>/4</b>
Provides a detailed, logical and valid justification in the choice of ingredients, processing techniques, equipment and resources to comply with product proposal requirements	4
Provides a valid justification in the choice of ingredients, processing techniques, equipment and resources to comply with most product proposal requirements	3
Provides a general overview in the use of ingredients, processing techniques, equipment and/or resources with some compliance with product proposal requirements	2
Provides an outline in the use of some ingredients, processing techniques, equipment or resources, with scant regard to product proposal requirements	1
<b>Sensory properties</b>	<b>/2</b>
Provides a detailed and accurate description; accounts for the variety and mix of sensory properties to enhance final product	2
Provides an accurate description of sensory properties with reference to final product	1
<b>Wet processing techniques</b>	<b>/5</b>
Provides detailed, logical and relevant evidence to support the selection of wet processing techniques including factors, such as suitability of ingredients, effect on nutrition, heat transfer and sensory properties. Uses appropriate examples to support answer and correct terminology throughout	5
Provides relevant evidence in some detail to support the selection of wet processing techniques, including most factors. Uses examples and correct terminology	4
Provides evidence including some factors and examples. Uses correct terminology most of the time	3
Provides evidence that is sometimes inaccurate or irrelevant. Some reference to some factors, examples sometimes not appropriate. Limited use of correct terminology	2
Provides incomplete evidence that is often inaccurate or irrelevant. Lists some factors with examples	1

<b>Dry processing techniques</b>		<b>/5</b>
Provides detailed, logical and relevant evidence to support the selection of dry processing techniques including factors, such as suitable food commodities, effect on nutrition, heat transfer and sensory properties. Uses appropriate examples to support answer and correct terminology throughout	5	
Provides relevant evidence in some detail to support the selection of dry processing techniques, including most factors. Uses examples and correct terminology	4	
Provides evidence including some factors and examples. Uses correct terminology most of the time	3	
Provides evidence that is sometimes inaccurate or irrelevant. Some reference to some factors, examples sometimes not appropriate. Limited use of correct terminology	2	
Provides incomplete evidence that is often inaccurate or irrelevant. Lists some factors with examples	1	
<b>Equipment and resources</b>		<b>/3</b>
Provides accurate and detailed evidence to support the selection of equipment and resources, including factors such as suitability for task, ease of use, cleanliness, safety, storage	3	
Provides evidence, in some detail to support the selection of equipment and resources, including some factors	2	
Provides limited, incomplete evidence to support the selection of equipment and resources	1	
<b>Time</b>		<b>/3</b>
Provides detailed reference to the production plan, including factors such as timing of processes, time saving practices, use of equipment. Makes valid recommendations to alter timing or sequencing of processes	3	
Provides reference, in some detail to the production plan, including most factors, and makes some recommendations to adjust timing	2	
Provides limited reference to the production plan and only a general comment on timing	1	
<b>Conclusion</b>		<b>/2</b>
Provides valid concluding statements, justifies whether the proposed product is or is not a good fit for <i>Right-Fit Food</i>	2	
Provides superficial statements, limited justification as to whether the proposed product is or is not a good fit for <i>Right-Fit Food</i>	1	
	<b>Part B total</b>	<b>/26</b>
	<b>Part A + Part B</b>	<b>/37</b>
	<b>Convert to percentage</b>	<b>/10%</b>

## Sample assessment task

### Food Science and Technology – ATAR Year 11

#### Task 6 – Unit 2

**Assessment type:** Response

**Conditions**

Time for the task: 50 minutes

In-class test, based on food spoilage and contamination, and food preservation

Answer all questions

**Total marks:** 57

**Task weighting:** 10% of the school mark for this pair of units

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#### Food spoilage, contamination and preservation

**Question 1**

Explain the term ‘food spoilage and contamination’. Provide examples to support your answer.

(4 marks)

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**Question 2**

What are ‘enzymes’? Describe how enzymatic activity causes food spoilage. Provide **one** example to support your answer.

(4 marks)

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**Question 3**

Discuss how environmental factors, such as oxygen, light, heat and water, cause food spoilage. Provide examples to support your answer. (3 marks)

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**Question 4**

(a) Describe **two** possible sources of food spoilage or contamination at a self-serve salad bar located in a supermarket, restaurant or takeaway shop. (6 marks)

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(b) For each of the **two** possible sources described in Part (a), describe a measure that could be applied to prevent food spoilage and contamination of the salads. (4 marks)

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## Marking key for sample assessment task 6 – Unit 2

### Question 1

Explain the term 'food spoilage and contamination'. Provide examples to support your answer.

(4 marks)

Description	Marks
Provides a detailed, accurate explanation of food spoilage and contamination. Uses specific, appropriate examples to support the explanation	4
Provides an accurate explanation, in some detail, of food spoilage and contamination. Uses some examples to support the answer	3
Provides a general explanation, lacks detail, of food spoilage and contamination. Provides one or two examples	2
Provides a brief, limited statement of food spoilage and contamination, with or without example	1
<b>Total</b>	<b>/4</b>

### Question 2

What are 'enzymes'? Describe how enzymatic activity causes food spoilage. Provide **one** example to support your answer.

(4 marks)

Description	Marks
<b>Definition</b>	<b>/1</b>
Provides a clear, accurate definition of enzymes	1
<b>Description of enzymatic activity</b>	<b>/3</b>
Provides a detailed and accurate description of how enzymatic activity causes food spoilage. Links appropriate example with the description	3
Provides a description, in some detail of enzymatic activity and food spoilage. Example provided	2
Provides a brief, limited description of enzymatic activity, with or without example	1
<b>Total</b>	<b>/4</b>

### Question 3

Discuss how environmental factors, such as oxygen, light, heat and water, cause food spoilage. Provide examples to support your answer.

(3 marks)

Description	Marks
Provides a detailed, accurate description of how environmental factors cause food spoilage, with appropriate supporting examples	3
Provides a description, in some detail of how environmental factors cause food spoilage, with an example	2
Provides a brief, limited description of how environmental factors affect food quality, with or without example	1
<b>Total</b>	<b>/3</b>

### Question 4

(a) Describe **two** possible sources of food spoilage or contamination at a self-serve salad bar located in a supermarket, restaurant or takeaway shop.

(6 marks)

Description	Marks
For each of two possible sources of food spoilage or contamination at self-serve salad bar:	
Provides a detailed, accurate description of possible source of food spoilage and/or contamination, relevant to specific service	3
Provides an accurate description of source, some reference to service	2
Provides a brief statement, with or without reference to service	1
<b>Total</b>	<b>/6</b>

- (b) For each of the **two** possible sources described in Part (a), describe a measure that could be applied to prevent food spoilage and contamination of the salads. (4 marks)

Description	Marks
For each of two possible sources of food spoilage and/or contamination:	
Provides a clear and detailed description of an appropriate method to prevent food spoilage and/or contamination of the salads	2
Provides a general description of an appropriate method to prevent food spoilage and/or contamination of the salads	1
<b>Total</b>	<b>/4</b>

### Question 5

Describe how each of the following micro-organisms cause food spoilage or contamination of fresh foods:

- yeasts and moulds (2 marks)
- bacteria. (4 marks)

Description	Marks
<b>For yeasts and moulds</b> /2	
Provides a detailed, accurate description of how the food is spoilt	2
Provides a brief, accurate description of how the food is spoilt	1
<b>For bacteria</b> /4	
Provides a detailed, accurate description of bacterial characteristics and conditions required for growth, how food is spoilt and contaminated, results of bacterial food poisoning, such as Listeria, Salmonella, possible death	4
Provides an accurate description of bacteria, with some supporting details	3
Provides a general description of bacteria, lacks detail	2
Provides a limited description of bacteria, incomplete and inaccurate	1
<b>Total</b>	<b>/6</b>

### Question 6

Describe how fermentation preserves food. Provide **one** example to support your answer.

(3 marks)

Description	Marks
Provides a detailed, accurate description of the fermentation process and preserving food, with appropriate supporting example	3
Provides an accurate description, with some details of the fermentation process. Provides an appropriate example	2
Provides a brief, limited statement of fermentation, with or without example	1
<b>Total</b>	<b>/3</b>

### Question 7

Select **one** variety of seafood from the list below:

- whiting
- salmon
- shrimp/prawns
- squid.

The selected variety of seafood is: \_\_\_\_\_

Describe **three** methods of preserving the seafood and explain how each method affects its sensory properties. (12 marks)

Description	Marks
<b>Methods of preserving</b>	<b>/6</b>
For each of three methods of preservation:	
Provides a detailed, accurate description, appropriate for the selected seafood	2
Provides an accurate description, appropriate for the selected seafood	1
<b>Impact of preservation method on sensory properties</b>	<b>/6</b>
For each of the three methods of preservation:	
Provides a detailed, accurate evaluation of the impact on sensory properties relevant to method and selected seafood	2
Provides an accurate evaluation, with some detail of the impact on sensory properties relevant to method and selected seafood	1
<b>Total</b>	<b>/12</b>

### Question 8

Soft fruits, such as peaches, plums and cherries, are popular food choices during summer. Develop an argument for preserving food during times of abundant supply. (15 marks)

Description	Marks
<b>Introductory paragraph</b>	<b>/2</b>
Relates clearly to the preservation of food, times of abundant food supply, provides a sense of direction of the argument	2
Provides an outline for preserving food, abundant food supply	1
<b>Identification of the reasons for food preservation</b>	<b>/3</b>
Identifies several reasons for food preservation, such as extend shelf life, preserve nutritional value, out of season availability, palatability, convenience, economic, reduces waste. Uses examples specifically relevant to soft fruits to support the answer	3
Identifies some reasons for food preservation. Provides examples	2
Provides simple reasons for food preservation, with or without examples	1
<b>Discussion of preservation impacting on food</b>	<b>/3</b>
Provides detailed, accurate discussion of preservation impacting on food, such as properties, nutritional value, palatability, costs, and time. Uses examples to support the answer	3
Provides accurate discussion, with some details of impact of preservation. Provides examples	2
Provides limited discussion of impact of preservation	1
<b>Development of argument</b>	<b>/5</b>
Develops a sustained argument, shows depth of analysis, which is logical and coherent. Uses appropriate examples to support answer and correct terminology throughout	5
Develops an argument, which is often logical and coherent. Uses examples and correct terminology	4
Provides an argument which contains a number of generalisations and lacks supporting evidence	3
Attempts to develop argument using an example	2
Provides a disjointed argument to suggest limited understanding	1
<b>The conclusion</b>	<b>/2</b>
Draws the points of view or the components of the argument together	2
Provides a superficial or vague summary	1
<b>Total</b>	<b>/15</b>
<b>Test total</b>	<b>/57</b>
<b>Convert to percentage</b>	<b>/10%</b>

## Sample assessment task

### Food Science and Technology – ATAR Year 11

#### Task 8 – Unit 2

**Assessment type:** Investigation

**Conditions**

Period allowed for completion of the task: two weeks

One week of class time and homework

Validation essay written in class at the end of the investigation

The suggested working time is 30 minutes

**Total marks:** 36

**Task weighting:** 10% of the school mark for this pair of units

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#### Investigate the influences on food choices

##### Part A: Investigation (Research notes)

(16 marks)

Prepare notes on the following investigation.

Investigate how each of these factors influences food choices. Include examples to support your explanation.

- Location: geographical – cities, towns, remote; access to transport
- Income: find statistical data of household income/expenditure to compare percentage of income spent on food and other expenses by differing income groups
- Supply and demand: consider aspects such as market forces, changing diets, place of purchase, processing, seasonal, store discounts and offers, range of products, customer service
- Environmental issues: consider the environmental impact of producing one fresh, one frozen and one processed food commodity
- Ethical issues: such as animal welfare, fair trade, resource use, country of origin
- Technologies: the impact of new technologies in developing innovative food products
- Advertising: sponsorship, tokens and free gifts, and supersizing techniques

The notes prepared and developed through your investigation of influences on food choices may be used during the in-class validation process. Notes are to be submitted at the conclusion of the validation response.

The validation essay will be written in class.

**Part B: Validation (Essay)****(20 marks)**

The validation essay will be written in class.

The notes prepared and developed through your investigation of influences on food choices may be used during the in-class validation process. Notes are to be submitted at the conclusion of the validation response.

From your investigation of influences on food choices, identify and argue what are possible key factors that influence food choice in your local community.

Your essay will:

- include an introductory paragraph related to food choices, containing understanding of your local community values and sense of community lifestyle
- describe the food outlets at your local shopping centre
- show evidence of how **each** of the following factors influences food choices:
  - location
  - supply and demand
  - environmental issues
  - ethical issues considered important by your local community
  - advertising
- develop an argument based on the evidence to clarify key factors influencing food choices in your local community
- make concluding remarks, draw argument and key factors together.



## Marking key for sample assessment task 8 – Unit 2

### Part A: Investigation (Research notes)

Description	Marks
<b>Investigation notes related to factors influencing food choices</b>	
<b>Location</b>	<b>/2</b>
Notes accurately describe location factors	2
Notes describe a location factor	1
<b>Income</b>	<b>/2</b>
Notes accurately describe income factors	2
Notes describe an income factor	1
<b>Supply and demand</b>	<b>/2</b>
Notes accurately describe supply and demand factors	2
Notes describe a supply and demand factor	1
<b>Environmental issues</b>	<b>/4</b>
Notes accurately detail, the environmental impact of producing a fresh, frozen and processed food commodity	4
Notes provide, with some detail, the environmental impact of producing a fresh, frozen and processed food commodity	3
Notes outline the environmental impact of producing a fresh, frozen and processed food commodity	2
Notes are a sketchy overview of the environmental impact of producing a fresh, frozen and processed food commodity	1
<b>Ethical issues</b>	<b>/2</b>
Notes accurately describe ethical issues	2
Notes describe an ethical issue	1
<b>New technologies</b>	<b>/2</b>
Notes accurately describe impact of new technologies	2
Notes describe an impact of a new technology	1
<b>Advertising</b>	<b>/2</b>
Notes accurately describe the effects of advertising	2
Notes describe an effect of advertising	1
<b>Part A total</b>	<b>/16</b>

## Part B: Validation (Essay)

Description	Marks
<b>Introductory paragraph</b>	<b>/2</b>
Relates clearly to food choices; containing understanding of local community values and provides a sense of community lifestyle	2
Provides an outline of influences on food choices	1
<b>Food outlets at the local shopping centre</b>	<b>/2</b>
Provides a detailed, accurate description of food outlets at local shopping centre	2
Provides a general description of food outlets	1
<b>Evidence of influence on food choices at local shopping centre</b>	<b>/10</b>
For each of the five factors influencing food choices at the local shopping centre:	
Provides detailed, appropriate evidence of factor influencing food choice	2
Provides general evidence of factor influencing food choice	1
<b>Development of argument</b>	<b>/4</b>
Develops a sustained argument, shows depth of analysis, which is logical and coherent. Uses appropriate examples to support point of view	4
Develops an argument, which is often logical and coherent. Uses examples	3
Provides an argument, which contains a number of generalisations and lacks supporting evidence	2
Provides a disjointed argument to suggest limited understanding	1
<b>The conclusion</b>	<b>/2</b>
Draws argument and key factors together	2
Summarises the essay's point of view	1
<b>Part B total</b>	<b>/20</b>
<b>Part A + Part B</b>	<b>/36</b>
<b>Convert to percentage</b>	<b>/10%</b>