**STAGE 1 NUTRITION**

**Assessment Type 2: Skills and Applications Task**

**Purpose**

To demonstrate your:

* knowledge and understanding of diet related disorders
* ability to apply your knowledge and understanding, and to analyse data to make recommendations for promoting good health
* ability to use appropriate nutrition terms, conventions and notations.

**Description of assessment**

* Complete the following multiple choice and short answer questions.

Explicit instructions support students to reach the highest possible level of achievement.

* Write a paragraph for your response to question 12.
* Communicate your knowledge and understanding of nutrition using the appropriate terms, conventions and notation.
* Provide detailed responses to both the short answer and paragraph questions.

**Assessment conditions**

* This is an individual task and you have 50 minutes to complete it.
* A calculator may be used.
* Use of other support materials is not allowed.

**Additional comments**

* There is a range of question types requiring interpretation and/or analysis of text, diagrams, tables and graphs (which support visual learners), experimental evidence, calculations and social/ethical issues.

Stage 1 Nutrition

Skills and Applications Task 1

1. Atherosclerosis occurs when

J people consume too much sugar

K people consume too much monounsaturated fat

L consume too much polyunsaturated fat

M people consume too much saturated fat.

2. Dietary fibre

J is converted into glucose in the liver

K reduces movement in the digestive tract leading to constipation

L is the undigested plant product that is eliminated from the gastro-intestinal tract

M is absorbed in the small intestine.

3. The android shape is a term used in relation to the storage of adipose tissue in the body. It refers to a figure:

J in a high-risk category for heart disease

K in a low-risk category for heart disease

L when excess adipose tissue is deposited on the hips and thighs

M common among Australian women.

4. Which of the following conditions is not a consequence of hypertension?

J Blood clot in a leg

K Cardio Vascular Disease

L Constipation

M Stroke

5. A diet modification a person should aim to make to reduce the risk of hypertension is to reduce salt intake.  
List 2 ways of reducing dietary salt intake.

6. Maintaining a *calcium balance* is extremely important.

(a) Name the disease it helps to prevent if calcium levels are maintained throughout life.

(b) Name two ways the body loses calcium daily.

**Knowledge and Application**

The assessment task begins with multiple choice and short answer questions that provide opportunities for students to:

* demonstrate their knowledge and understanding of nutrition concepts
* use this knowledge and understanding to explain the links between diet, lifestyle and health.

7. Two friends are concerned about their weight, although others think they both look OK.

(a) Work out the Body Mass Index of each (show the working out) using the following formula.

**Knowledge and Application**

Question 7 allows for assessment of the breadth of learning from students against the performance standard e.g. ‘Applies nutrition concepts to suggest solutions to complex problems’ at ‘A’ through to ‘attempts to identify a solution’.

BMI = 

**Friend 1:**   
Inactive, 18 years old. 175 cm tall, 75 kg

**Friend 2:**

Very fit and active, 18 years old. 162 cm tall, 65 kg

Refer to the table below to answer 7 (b)

**Table 1:** BMI Cut-Off Values

|  |  |
| --- | --- |
| **BMI** | **Classification** |
| Below 18.5 | Underweight |
| 18.5 - 24.9 | Normal weight |
| 25.0 - 29.9 | Overweight |
| 30.0 and above | Obese |
| 35.0 and above | Severely obese  **Investigation, Analysis and Evaluation**  Question 7(b) provides the opportunity for students to demonstrate their ability to analyse relevant data from the table and answers from (a), to formulate relevant conclusions. |
| 40.0 and above | Morbidly obese |
| 50.0 and above | Super obese |

(b) What weight rating is each person,  
according to the table above?

**Friend 1:**

**Friend 2:**

(c) Other than BMI, name one other method these friends could use to assess the extent of their body fat. Outline one advantage and one disadvantage of this method compared to BMI.

8. Treatment for obesity is extremely difficult as the success rate is low, with results after one year almost always disappointing.

(a) Outline four diet and / or lifestyle changes you would recommend for a person 17 years old to lose 15 kg. Justify each of your changes.

**Knowledge and Application**

Question 8(b) enables students to demonstrate their knowledge of nutrition to understand and explain issues related to diet, lifestyle, culture, and health.

(b) Name 2 treatments you would ***not*** suggest and explain why.

**Treatment 1:**

**Why:**

**Treatment 2:**

**Why:**

9. (a) Explain how dietary fibre helps in reducing a person’s risk of developing the following health disorders.

(i) Obesity

**Knowledge and Application**

Question 9(b) could ask the students to ‘explain’ rather than ‘suggest’ to enable students to *‘explain the links between diet, lifestyle, culture and health’* as described in the ‘A’ level performance standard.

(ii) Constipation

(b) Suggest two things a person could do to ensure they  
get enough fibre in their diet.

(1)

(2)

10. Name two factors that might cause a person to develop anaemia.

(1)

(2)

11. (a) Use the table below to construct a graph of the total fat content of the four foods listed.

**Knowledge and Application**

Question 11(a) allows for assessment of the range of evidence of learning from ‘Uses appropriate nutrition terms and conventions effectively’ at ‘A’ through to ‘uses some nutrition terms…..’.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Food | Total Fat | Saturated  fat | Mono-unsaturated fat | Poly-unsaturated fat |
| Lean Lamb | 4.2 | 1.35 | 1.41 | 1.44 |
| Canned Salmon | 12.0 | 2.21 | 2.47 | 7.32 |
| Eggs | 10.9 | 3.10 | 4.30 | 3.5 |
| Canned Baked Beans | 0.5 | 0.10 | 0.10 | 0.3 |

(b) Which food would you suggest a person aiming to  
lose weight avoid eating very often?

(c) Explain why you selected that answer in Q 11 (b).

12. Recent nutrition trends are as follows:

* surveys showing that on average Australians have become larger
* studies showing that on average 40% of the population in Australia are overweight
* increased diet related disorders that are a major cause of death.

**Investigation Analysis and Evaluation**

Question 12 allows students to make predictions about strategies.

Write a paragraph that provides the following information:

* two factors (one dietary and one lifestyle) that could account for this trend
* two major health problems that can be attributed to this trend
* one strategy that could lead to a reversal of this trend.

**Additional comments**

* The teacher would generally need to consider more than one assessment task to be able to indicate that a student *Consistently demonstrates a deep and broad knowledge and understanding of a range of nutrition concepts* (Knowledge and Understanding) and that a student *Uses appropriate nutrition terms and conventions highly effectively* (Application)
* The assessment task starts with simpler questions such as recall of knowledge and understanding but later in the task questions allow for higher order responses that require analysis and evaluation.

**Stage 1 Nutrition performance standards**

|  | Investigation, Analysis and Evaluation | Knowledge and Application |
| --- | --- | --- |
| A | Critically designs or conducts investigations using appropriate methodologies.  Obtain, record, and display findings of investigations, using appropriate conventions and formats accurately and highly effectively.  Systematically analyses and interprets data and /or information to formulate logical conclusions.  Critically and logically evaluates methodologies and/ or research processes and the effect on data or findings. | Deep and broad knowledge and understanding of a range of nutrition concepts.  Highly effective application of nutrition concepts in familiar and unfamiliar contexts.  Critically explores and understands the relationship between nutrition science and society.  Coherent and clear communication of nutrition concepts and nutrition literacy and numeracy. |
| B | Logically designs or conducts investigations using appropriate methodologies.  Obtain, record, and display findings of investigations, using appropriate conventions and formats mostly accurately and effectively.  Analyse and interpret data and /or information to formulate reasonable conclusions.  Logically evaluates methodologies and/ or research processes and the effect on data or findings. | Some depth and breadth of knowledge and understanding to a range of nutrition concepts.  Mostly effective application of nutrition concepts in familiar and unfamiliar contexts.  Logically explores and understands the relationship between nutrition science and society.  Mostly coherent and clear communication of nutrition concepts and nutrition literacy and numeracy. |
| C | Design or conduct investigations using appropriate clear methodologies  Obtain, record, and display findings of investigations, using appropriate conventions and formats, with some errors but generally accurately and effectively  Interpret data and /or information to formulate generally appropriate conclusions  Evaluates methodologies and/ or research processes and some of the effect on data or findings | Knowledge and understanding of a general range of nutrition concepts  Generally effective application of nutrition concepts in familiar and unfamiliar contexts  Explores and understands aspects of the relationship between nutrition science and society  Generally coherent and clear communication of nutrition concepts and nutrition literacy and numeracy |
| D | Prepares or conducts investigations using some appropriate methodologies.  Obtain, record, and display findings of investigations, using appropriate conventions and formats inconsistently, with occasional accuracy and effectiveness.  Describes data and /or information to formulate basic conclusions.  Attempts to evaluate methodologies and/ or research processes and suggest an effect on data or findings. | Some basic knowledge and partial understanding of nutrition concepts  Application of some nutrition concepts in familiar contexts.  Partially explores and recognises aspects of the relationship between nutrition science and society.  Some clear communication of nutrition concepts and nutrition literacy and numeracy. |
| E | Attempts to prepare or conduct investigations using simple methodologies.  Attempts to record and represent some data, with limited accuracy or effectiveness.  Attempts to describe data and /or information and formulates a simple conclusion.  Acknowledges that methodologies and/ or research processes effect data or findings | Limited recognition and awareness of nutrition concepts.  Attempted application of nutrition concepts in contexts.  Attempts to explore and identify an aspect of the relationship between nutrition science and society.  Attempted communication of nutrition concepts and nutrition literacy and numeracy. |