**Stage 2 Nutrition**

**Investigation Folio | Science as a Human Endeavour Task**

**Purpose:**

The science as a human endeavour strand highlights the development of science as a way of knowing and doing, and explores the purpose, use, and influence of nutrition science in society.

Conditions

Maximum 1,500 words or a maximum of 9 minutes oral presentation or multimodal equivalent.

**Performance Standards**

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| --- | --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** | **E** |
| **Investigation, Analysis and Evaluation 3** | Systematically analyses and interprets data and/or information to formulate logical conclusions | Analyses and interprets data and/or information to formulate reasonable conclusions | Interprets data and/or information to formulate generally appropriate conclusions | Describes data and/or information to formulate basic conclusions | Attempts to describe data and/or information and formulates a simple conclusion |
| **Knowledge and Application 1** | Demonstrates deep and broad knowledge and understand of a range of nutrition concepts | Demonstrates some depth and breadth of knowledge and understanding of a range of nutrition concepts | Demonstrates knowledge and understanding of a general range of nutrition concepts | Demonstrates some basic knowledge and partial understanding of nutrition concepts | Demonstrates limited recognition and awareness of nutrition concepts |
| **Knowledge and Application 3** | Critically explores and understands the relationship between nutrition science and society | Logically explores and understands the relationship between nutrition science and society | Explores and understands aspects of the relationship between nutrition science and society | Partially explores and recognises aspects of the relationship between nutrition science and society | Attempts to explore and identify and aspect of the relationship between nutrition science and society |
| **Knowledge and Application 4** | Coherently and clearly communicates nutrition concepts and nutrition literacy and numeracy | Mostly coherently and clearly communicates nutrition concepts and nutrition literacy and numeracy | Generally coherently and clearly  communicates nutrition concepts and nutrition literacy and numeracy | Clearly communicates some nutrition concepts and nutrition literacy and numeracy | Attempts to communicate nutrition concepts and nutrition literacy and numeracy |

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| **Criteria** | **Description** | **Teacher Comment** |
| ***Introduction*** | Identify the focus of the investigation and the key concept(s) of science as a human endeavour that it links to. |  |
| ***Nutrition Background*** | Explanation of relevant nutritional concepts. |  |
| ***Link to SHE concept(s)*** | An explanation of how the focus of the investigation illustrates the interaction between science and society, including a Discussion of the potential impact or application of the focus of the investigation |  |
| ***Conclusion*** | Concluding statement with justification |  |
| ***Communication*** | Use of nutritional terminology |  |
| ***Referencing*** | In-text and reference list |  |

Science as a Human Endeavour

*Key Concepts;*

Communication and Collaboration

* Science is a global enterprise that relies on clear communication, international conventions, and review and verification of results.
* Collaboration between scientists, governments, and other agencies is often required in scientific research and enterprise.

Development

* Development of complex scientific models and/or theories often requires a wide range of evidence from many sources and across disciplines.
* New technologies improve the efficiency of scientific procedures and data collection and analysis. This can reveal new evidence that may modify or replace models, theories, and processes.

Influence

* Advances in scientific understanding in one field can influence and be influenced by other areas of science, technology, engineering, and mathematics.
* The acceptance and use of scientific knowledge can be influenced by social, economic, cultural, and ethical considerations.

Application and Limitation

* Scientific knowledge, understanding, and inquiry can enable scientists to develop solutions, make discoveries, design action for sustainability, evaluate economic, social, cultural, and environmental impacts, offer valid explanations, and make reliable predictions.
* The use of scientific knowledge may have beneficial or unexpected consequences; this requires monitoring, assessment, and evaluation of risk, and provides opportunities for innovation.
* Science informs public debate and is in turn influenced by public debate; at times, there may be complex, unanticipated variables or insufficient data that may limit possible conclusions.

Task

Students individually investigate a contemporary example of how nutrition science interacts with society. This may focus on one or more of the key concepts of science as a human endeavour and may draw on a context suggested in the topics or relate to a new context.

Students select and explore a recent discovery, innovation, issue, or advance linked to one of the topics in Stage 2 Nutrition. They analyse and synthesise information from different sources to explain the science relevant to the focus of their investigation, show its connections to science as a human endeavour, and develop a conclusion.

**Part A: Information Search and Planning**

1. Use the internet and other sources of information to do an initial search related to a topic of Nutrition that is of interest to you.

Possible starting points for the investigation could include, for example:

* the announcement of a discovery in the field of nutrition science
* an expert’s point of view on a controversial innovation
* a TED talk based on a nutrition development
* an article from a scientific publication (e.g. *Cosmos*, *Nutridate*)
* public concern about an issue that has environmental, social, economic, or political implications
* changes in government funding for nutrition-related purposes, e.g. for scientific research into biotechnology, conservation planning, hormone use in food production, biosecurity, water quality, disease control, health
* innovative directions in research.

2. In a table, make a list of possible topics and related questions or contexts for your scientific communication.

3. Search for articles, data or other information that you could use to support your discussion. Record the resources in a reference list using Harvard Referencing, for future reference. This will assist you in your selection of your final focus.

4. Choose the focus of your work for the scientific communication.

5. Link your chosen focus to **at least one** of the key concepts of SHE.

6. Check the focus you have chosen with your teacher before you proceed.

**Focus Date Due:**

7. Choose the format of your work:

* an article in a scientific journal
* written report providing an expert’s point of view
* an analysis of a new development in a field or a concern about an issue.

You might like to formulate a question or statement that relates to your chosen focus and SHE key concept as the heading for your work.

8. Plan your article or report - this draft will be submitted to your teacher for feedback.

**Part B: Refinement of Information for your chosen focus**

9. Search for any further information that will enable you to provide a comprehensive and detailed report, with highly relevant biology as determined by your plan from Part A.

This will also assist you in being able to justify your conclusions.

Record the resources in a reference list use Harvard Referencing.

*Part A and B are not part of the final copy and are NOT included in the word count*

**Part C: Scientific Communication**

Based on their investigation, students prepare a scientific report, which must include the use of scientific terminology and:

* an introduction to identify the focus of the investigation and the key concept(s) of science as a human endeavour that it links to
* relevant nutrition concepts or background
* an explanation of how the focus of the investigation illustrates the interaction between science and society, including a discussion of the potential impact of the focus of the investigation, e.g. further development, effect on quality of life, environmental implications, economic impact, intrinsic interest
* a conclusion
* citations and referencing.

The report could take the form of, for example:

* an article for a scientific publication
* an oral or multimodal scientific presentation

The report should be a maximum of 1500 words if written, or a maximum of 9 minutes for an oral presentation, or the equivalent in multimodal form.

**Draft Date Due:**

**Assessment Conditions:**

4 weeks to complete. Class time provided for research and support.

Students may submit one draft of the final scientific communication for feedback. This does not include the checkpoints and plan.

Verification of student work will occur throughout the task.

Word Count: maximum of 1500 words for Part C or 9 minutes for an oral presentation or multimodal equivalent.