

## Stage 2 Biology Investigation Task

# *Science as a Human Endeavour*



## Stage 2 Biology: Assessment Type 1: Investigation Folio

### Science as a Human Endeavour Task

#### Introduction and Purpose of task:

To investigate a recent discovery, innovation, issue, or advance linked to one of the topics in Stage 2 Biology. Select a Science as a Human Endeavour focus concept of either:

Communication and Collaboration

Development

Influence

Also consider the potential impacts, such as economic, social, political and environmental.

You will use and acknowledge a variety of relevant sources to find data and information highly relevant to Biology to support your chosen topic.

#### 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 Biology that is of interest to you related to a recent discovery, innovation, issue, or advance.
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 investigation, and choose the **format** for your work – the report may in any suitable format; suggestions include written report, interview with an expert, newspaper article, multimedia presentation or poster.
5. Link your chosen focus to at least one of the key concepts of **SHE**. This may be in table form or concept map or any other form that makes your thinking clear.
6. Check the focus you have chosen with your teacher before you proceed.
7. A table of your rough research and a rough plan for your report should be checked with the teacher for feedback. **\*\*See exemplars 'Information search and planning' and 'plan outline'**

**Date Due:** \_\_\_\_\_ **\*see my exemplars**

## **Part B: The Report**

Your scientific report should 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 biology** concepts or background (*important, but not the focus of the report*)
- an **explanation** of how the focus of the investigation illustrates the interaction between **science and society (SHE)**
- a discussion of the **purpose, potential impact, or application of the focus of the investigation**, e.g. further development, effect on quality of life, environmental implications, economic and/or social impact, influence on human activities, etc.
- a **conclusion** that summarizes how the SHE aspects have been addressed
- citations and referencing (In text referencing and reference list using Harvard Referencing)

**Date Due:** \_\_\_\_\_ **\*see my exemplar**

### **Assessment Conditions:**

4 weeks to complete.

Students may submit one draft of the final submission for feedback.

Verification of student work will occur throughout the task.

**Word Count:** maximum of 1500 words if written (not including referencing), or 10 minutes for an oral presentation.

### **Assessment Design Criteria**

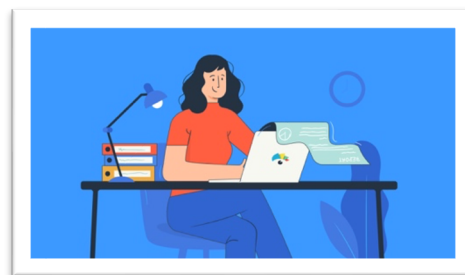
Investigation, Analysis and Evaluation: IAE 3

Knowledge and Application: KA1, 3, 4

## Stage 2 Biology

# SHE Report One-Stop-Shop

1500 Words Maximus



<b>Getting a Topic/Focus</b>	<ul style="list-style-type: none"><li>• Explore current areas of biology in news/Science Alert</li><li>• Must be a recent innovation/development, or issue related to biology</li><li>• Use SASTA guide table for ideas of topics</li><li>• Try to form the topic into a question</li><li>• Avoid being too broad (ie. "What are genetically modified foods?")</li></ul>
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<b>PART A – Research &amp; Plan</b>	
<b>Rough Research</b>	<ul style="list-style-type: none"><li>• See templates/exemplar on Haiku</li><li>• Set up a table that records your sources, and key points from articles (so you can come back to them later for referencing)</li><li>• Highlight things that relate to biology info; and any SHE elements that you might want to focus on</li></ul>
<b>Rough Plan</b>	<ul style="list-style-type: none"><li>• Give dots points for what you might cover under each of the report headings.</li></ul>

<b>PART B – La Report</b>	
<b>Introduction</b>	<ul style="list-style-type: none"><li>• Is it clear what the recent discovery, innovation, or issue is?</li><li>• Is it linked to one of the topics in Stage 2 Biology?</li><li>• Are the key concept(s) of science as a human endeavour that the topic is linked to clearly identified?</li></ul>
<b>Biology Background</b>	<ul style="list-style-type: none"><li>• Has the relevant biology been explained in sufficient depth for Stage 2 level (not just lists of facts)?</li><li>• Is it directly relate to concepts that we have covered?</li></ul>
<b>Connections to SHE</b>	<ul style="list-style-type: none"><li>• Is there an explanation of how the focus of the investigation illustrates the SHE concept(s) stated in the introduction?</li><li>• Have you discussed how society has influenced the science?</li><li>• Have you discussed how the science has influenced society?</li><li>• Have you specifically referred to the work of scientists?</li><li>• Have you shown good detail and thoughtful analysis skills?</li></ul>
<b>Purpose, Potential Impact, or Application</b>	<ul style="list-style-type: none"><li>• Has the potential impact of this current innovation, development, or issue been discussed (on society, economy, individuals, medicine, treatments, etc – whatever is relevant).</li></ul>
<b>Conclusion</b>	<ul style="list-style-type: none"><li>• Is there a clear summary of findings of the investigation?</li><li>• Is there a clear reference back to the SHE concept that this focus illustrated?</li></ul>
<b>Citations and References</b>	<ul style="list-style-type: none"><li>• Is there appropriate acknowledgement of sources using intext references?</li><li>• Use the Harvard Referencing Summary for formatting.</li><li>• Is there a clear reference list that is properly formatted?<ul style="list-style-type: none"><li>- Alphabetic listed (no dot points, or number list)</li><li>- Attention to correct formatting (Harvard Referencing is a must)</li><li>- At least 8-10 quality sources</li></ul></li></ul>

## Stage 2 Biology Performance Standards

### SHE Task - SUMMATIVE

Specific features		Grade	Comments
IAE3	<i>Analysis and interpretation of data and other evidence; formulate and justify conclusions</i>		
KA1	<i>Demonstration of knowledge and understanding of biological concepts</i>		
KA3	<i>Exploration and understanding of the interaction between science and society</i>		
KA4	<i>Communication of knowledge and understanding of biological concepts and information using appropriate terms conventions and representations</i>		

### Chief Assessor Report – Good SHE reports....

- explored, in their Science as a Human Endeavour report, a contemporary direction of scientific research or innovation related to Stage 2 Biology and clearly linked it to one of the SHE key concepts. They narrowed their discussion down to one of the elaborations to provide evidence of their depth of understanding of the interaction between science and society rather than trying to cover the key concepts too broadly (KA3, KA4)
- in both their SHE task and their investigation reports, showed biological knowledge that was relevant to the topic and was detailed enough to be at Stage 2 standard (KA1)
- providing specific sources/evidence for each main point (KA4).

### Chief Assessor Report – Poor SHE reports....

- selected a Science as a Human Endeavour key concept such as 'Development' as the focus of their investigation, then only gave a history of the technique or innovative direction rather than relating it to the interaction between science and society (KA3)
- dwelt too much on the biological background of the chosen topic in the SHE report instead of showing evidence of the interaction between science and society (KA3/KA4)
- chose to investigate a contemporary topic that had little connection to Stage 2 Biology and hence they found it difficult to explain the biological concepts involved (KA4).