

SHE TASK PREPARATION FORMATIVE ASSESMENT

RESEARCH QUESTION: How did science influence the colonisation of Indigenous Australian & Torres Strait Islander Peoples?

Background

The colonisation of IA&TSI people is an important part of their history, and therefore an understanding and recognition of the history of IA&TSI peoples is an important step in the reconciliation between non-Indigenous and IA&TSI peoples. Since the British colonisation of Australia, the Indigenous Australian & Torres Strait Islander (IA&TSI) people have suffered genocide, marginalisation, and oppression. The methods employed by the British during the invasion of the IA&TSI peoples land were justified using biological concepts. In today's world, the methods used by the British colonists would violate every human rights treaty known to man. This highlights how science can be used to influence or impact peoples' lives, and therefore, highlights the importance of evaluating the use of science and scientific knowledge and is a clear example of SHE.

In this assessment, you will critically evaluate and explain the biological justification for the colonisation and its effect on the IA&TSI peoples. You will access information from different artefacts such as articles, books, websites, documentaries and other videos. This requires you to select the relevant information, analyse the findings, and explain the connection between the colonisation of IA&TSI peoples and the SHE key concepts of: Communication and Collaboration, Development, Influence and Application and Limitation

- The SHE Task Table is provided to help you better understand how to evaluate artefacts according to the SHE concepts.

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.
- International collaboration is often required in scientific investigation.

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.

Assessment Criteria

In your groups (3-4) complete a SHE Task research investigation about how science influenced the colonisation IA&TSI peoples. The task is to be presented in digital format i.e. PowerPoint or Prezi. For your SHE Task Research Investigation Presentation you need to:

- 1) Briefly summarise the IA&TSI colonisation history

- 2) Link and briefly discuss a biological concept associated with IA&TSI colonisation history
 - Speciation/ pre-zygotic and post-zygotic
 - Darwinian theory 1: disease
 - Darwinian theory 2: dehumanisation (classification)

- 3) Discuss 1 ethical issue (Influence) and any other SHE concepts.

- 4) The presentation should be a maximum of 6 minutes and will be presented to the class (each group member must contribute to every aspect of the task). There will be up to 1 minute of teacher and peer question time.

- 5) Use Harvard style referencing.

TASK DURATION: You will have two double lessons (Thursday and Friday), part of Monday's lesson and homework time (including the weekend) to complete the task. The task must be presented to the class during Monday's double lesson.

ASSESSMENT TYPE: The assessment is formative and will not count towards your grade, however, you will be evaluated for SHE Task associated knowledge and understanding (Please see the rubric on the last page – you will be individually assessed inclusive of the starter activity). This task will help you develop the necessary knowledge and skills to complete the summative SHE Task assessment.



QUESTION	RESPONSE
<p>LIST SOME WAYS IN WHICH THE ARTICLE DEMONSTRATES APPLICATION AND LIMITATION OF SCIENCE; FOR EXAMPLE</p> <ul style="list-style-type: none"> • In what ways is the science a solution or potential solution to a problem(s)? • What has been or could be the social and/or economic impact (or benefit)of the science? • What challenges (if any) to do with the science are presented in the article? 	
<p>LIST SOME WAYS IN WHICH THE ARTICLE DEMONSTRATES COMMUNICATION AND COLLABORATION WITHIN THE SCIENTIFIC COMMUNITY</p> <ul style="list-style-type: none"> • What evidence is there in the article that suggests there has been collaboration at a local and/or global level? • What evidence is in the article that scientific findings have been communicated to the scientific and broader communities? • What evidence is there in the article that the science discussed has been or will be open to review and verification 	

Adapted from: TMC. (2019). Folio – Science As A Human Endeavour Investigation. In *Folio –Science As A Human Endeavour Investigation: Stage 1 Biology* (pp. 3). TMC.

<p>OUTLINE WAYS IN WHICH THE SCIENCE IN THE ARTICLE DEMONSTRATES DEVELOPMENT OF A SCIENTIFIC IDEA</p> <ul style="list-style-type: none">• How has the science presented in the article built on previous ideas?• What opportunities are presented in the article for further research that could arise in the future?	
<p>OUTLINE WAYS IN WHICH THE ARTICLE DEMONSTRATES INFLUENCE OF OR BY SCIENCE.</p> <ul style="list-style-type: none">• How could the adoption or use of the science presented in the article be influenced by social, economic, cultural or ethical considerations?	

Stage 1 Biology Semester 1		SHE TASK PREPARATION FORMATIVE ASSESSMENT				
		A	B	C	D	E
Investigation, Analysis and Evaluation	2	Obtains records, and represents data, using appropriate conventions and formats accurately and highly effectively.	Obtains, records, and represents data, using appropriate conventions and formats mostly accurately and effectively.	Obtains, records, and represents data, using generally appropriate conventions and formats with some errors but generally accurately and effectively.	Obtains, records, and represents data, using conventions and formats inconsistently, with occasional accuracy and effectiveness.	Attempts to record and represent some data, with limited accuracy or effectiveness.
	3	Systematically analyses and interprets data and evidence to formulate logical conclusions with detailed justification.	Logically analyses and interprets data and evidence to formulate suitable conclusions with reasonable justification.	Undertakes some analysis and interpretation of data and evidence to formulate generally appropriate conclusions with some justification.	Describes data and undertakes some basic interpretation to formulate a basic conclusion.	Attempts to describe results and/or interpret data to formulate a basic conclusion.
Knowledge and Application	1	Demonstrates deep and broad knowledge and understanding of a range of biological concepts.	Demonstrates some depth and breadth of knowledge and understanding of a range of biological concepts.	Demonstrates knowledge and understanding of a general range of biological concepts.	Demonstrates some basic knowledge and partial understanding of biological concepts.	Demonstrates some limited recognition and awareness of biological concepts.
	3	Critically explores and understands in depth the interaction between science and society.	Logically explores and understands in some depth the interaction between science and society.	Explores and understands aspects of the interaction between science and society.	Partially explores and recognises aspects of the interaction between science and society.	Attempts to explore and identify an aspect of the interaction between science and society.
	4	Communicates knowledge and understanding of biology coherently with highly effective use of appropriate terms, conventions and representations.	Communicates knowledge and understanding of biology mostly coherently with effective use of appropriate terms, conventions, and representations.	Communicates knowledge and understanding of biology generally effectively using some appropriate terms, conventions, and representations.	Communicates basic biological information, using some appropriate terms, conventions, and/or representations.	Attempts to communicate information about biology.
Presentation		Extremely well organised and planned presentation. (appearance, structure and time requirement)	Well organised and well-planned presentation. (appearance, structure and time requirement)	Sufficiently organised and planned presentation. (appearance, structure and time requirement)	Poor organisation and planning of presentation. (appearance, structure and time requirement)	No organisation and planning of presentation. (appearance, structure and time requirement)

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