JOHN EDMONDSON HIGH SCHOOL

Assessment Notification- Amended Task 2

Faculty: Science Science Course: HSC Biology Year: 12

Assessment Task: – Depth Study Written Assessment Task

Assessment Weighting: 20%
Due Date: Term 2 Week 1 A Thursday 27th April, 2023

Task Type: Hand in Task ☐ In Class Task ☒ Practical Task ☐

Outcomes assessed (NESA)

BIO11/12-1 develops and evaluates questions and hypotheses for scientific investigation
BIO11/12-4 selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media
BIO11/12-6 solves scientific problems using primary and secondary data, critical thinking skills and scientific processes
BIO11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose
BIO12-13 explains natural genetic change and the use of genetic technologies to induce genetic change

Biotechnology: *How do genetic techniques affect Earth's biodiversity?*
Students:

- Investigate the uses and applications of biotechnology (past, present, and future), including: (ACSBL087)

– analysing the social implications and ethical uses of biotechnology, including plant and animal examples.
– researching future directions of the use of biotechnology.
– evaluating the potential benefits for society of research using genetic technologies.
– evaluating the changes to the Earth's biodiversity due to genetic techniques.

Genetic Technologies: Does *artificial manipulation of DNA have the potential to change populations forever?* Students:

- Investigate the uses and advantages of current genetic technologies that induce genetic change.
- Compare the processes and outcomes of reproductive technologies, including but not limited to: – artificial insemination and artificial pollination.
- Investigate and assess the effectiveness of cloning, including but not limited to: – whole organism cloning and gene cloning.
- Describe techniques and applications used in recombinant DNA technology, for example: – the development of transgenic organisms in agricultural and medical applications. (ACSBL087)
- Evaluate the benefits of using genetic technologies in agricultural, medical, and industrial applications. (ACSBL086)
- Evaluate the effect on biodiversity of using biotechnology in agriculture.
- Interpret a range of secondary sources to assess the influence of social, economic and cultural contexts on a range of biotechnologies.

Task Description/Overview

Depth Study Written Assessment Task (in-class component)- consisting of a combination of short and long response questions.

Individually, students will complete a W**ritten Assessment Task** based on **their individual depth study research completed** on their chosen biotechnology, and the implications of genetic biotechnology on population size.

Detailed Assessment Task Description

Depth Study Written Assessment Task (In class task)

Individually you will complete **a Written Assessment Task, in class** to demonstrate and communicate, in written form, understanding and apply knowledge to questions **based on your Depth Study** research, that you completed on the ONE biotechnology (Recombinant DNA technologies, Cloning technique, or Artificial insemination).

This task will consist of a combination of short response questions, as well as extended written responses.

Total marks= 30 marks

Length of Task: 70 minutes

12 BIO 4 (Miss Luc) to D04 and 12 BIO3 (Ms Inverarity) to D03 Period 4 on Thursday 27/4/23. Length of this task (70 minutes will be during period 4 and Lunch 1).

If you are sick/late on the day of submission, an illness misadventure form MUST be submitted.

Assessment Criteria		
Grade	**Description**	**Mark Range**
Outstanding (O)	The student has an extensive knowledge and understanding of the content and can readily apply this knowledge. In addition, the student has achieved a very high level of competence in the processes and skills and can apply these skills to new situations.	**84.5-100**
High (H)	The student has a thorough knowledge and understanding of the content and a high level of competence in the processes and skills. In addition, the student can apply this knowledge and these skills to most situations	**69.5-84**
Sound (S)	The student has a sound knowledge and understanding of the content and has achieved a good level of competence in the processes and skills	**49.5-69**
Basic (B)	The student has a basic knowledge and understanding of the content and has achieved a basic level of competence in the processes and skills.	**27.5-49**
Limited (L)	The student has an elementary knowledge an understanding in a few areas of the content and still requires further work to achieve competence in the processes and skills.	**0-27**

Satisfactory completion of courses

A course has been satisfactorily completed when the student has:

- Followed the course developed/endorsed by the NSW Educational Standards Authority (NESA)
- Applied himself/herself with diligence and sustained effort to the set tasks and experiences provided in the course.
- Achieved some or all of the course outcomes