# Sample Assessment Task Year 12 Biology

## Sample for implementation for Year 12 from Term 4, 2018

### Context

Students are able to use this task as an assessment for learning to research information that will aid their response to the inquiry question ‘How does reproduction ensure the continuity of a species?’

| Task number: 1 | Weighting: 20% | Timing: Start Term 4, Week 3 |
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| Outcomes assessed:  * conducts investigations to collect valid and reliable primary and secondary data and information BIO11/12-3 * analyses and evaluates primary and secondary data and information BIO11/12-5 * solves scientific problems using primary and secondary data, critical thinking skills and scientific processes BIO11/12-6 * communicates scientific understanding using suitable language and terminology for a specific audience or purpose BIO11/12-7 * explains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species BIO12-12 | | |
| Nature of the task: Research and Report **Inquiry question:** How does reproduction ensure the continuity of a species?  Students create a video presentation, with voiceover, comparing a representative method of reproduction for each of the vertebrate groups, with consideration given to:   * Synchronised timing of gamete production and release * Conditions needed for fertilisation * Number of gametes produced * Reproductive cycles in males and females * Gamete transfer * Advantages and disadvantages of each method of fertilisation | | |

### Marking criteria

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| Knowledge and understanding **BIO11-9** explains the structure and function of multicellular organisms and describes how the coordinated activities of cells, tissues and organs contribute to macroscopic processes in organisms  Students:   * discuss advantages and disadvantages of the reproductive method for each group * justify necessary conditions of gamete transfer for each group * compare the relative number of gametes for each gender for each group  Conducting investigations **BIO11/12-3** conducts investigations to collect valid and reliable primary and secondary data and information  Students:   * select and extract information from a wide range of reliable secondary sources and acknowledge them using an accepted referencing style  Analysing data and information **BIO11/12-5** analyses and evaluates primary and secondary data and information  Students:   * derive trends, patterns and relationships in data and information  Problem solving **BIO11/12-6** solves scientific problems using primary and secondary data, critical thinking skills and scientific processes  Students:   * use scientific evidence and critical thinking skills to solve problems  Communicating **BIO11/12-7** communicates scientific understanding using suitable language and terminology for a specific audience or purpose  Students:   * select and apply appropriate scientific notations, nomenclature and scientific language to communicate in a variety of contexts * construct evidence-based arguments and engage in peer feedback to evaluate an argument or conclusion |
| Feedback provided: To inform future learning your feedback will consist of:   * an annotated marking criteria sheet * annotations on a pdf of your submitted work |

### Marking Guidelines

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| Students: | Achievement |
| * explain advantages and disadvantages of the reproductive method for five different vertebrate groups * justify necessary conditions of gamete transfer for each vertebrate group * explain reasons for the relative number of gametes for each gender for each group * explain the advantages and disadvantages of internal and/or external fertilisation for each group * use appropriate, clear and relevant biological terminology | **A** |
| * describe advantages and/or disadvantages of the reproductive method for five different vertebrate groups * explain some necessary conditions of gamete transfer for each vertebrate group * compare the relative number of gametes for each gender for each group * explain the advantages and/or disadvantages of internal and/or external fertilisation for some groups * use appropriate and relevant biological terminology | **B** |
| * identify advantages or disadvantages of the reproductive method for some vertebrate groups * describe some necessary conditions of gamete transfer for some vertebrate groups * compare the relative number of gametes for each gender for some groups * describe advantages or disadvantages of internal and/or external fertilisation for some groups * use appropriate biological terminology | **C** |
| * identify an advantage or disadvantage of the reproductive method for some vertebrate groups * identify some conditions of gamete transfer * identify that there are different numbers of gametes for each gender for some groups * identify advantages or disadvantages of internal or external fertilisation * use some appropriate terminology | **D** |
| * identifies an advantage or disadvantage of the reproductive method for one vertebrate group * states that gamete transfer does occur * identifies that there are different relative numbers of gametes for each gender * identifies the differences between internal and external fertilisation * does not use correct terminology | **E** |