VCE Biology: Performance descriptors

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| **VCE BIOLOGY****SCHOOL-ASSESSED COURSEWORK** |
| **Performance descriptors: ‘Comparison and evaluation of biological concepts, methodologies and methods, and findings from three student practical activities’** |
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| ***Unit: <insert>******Outcome: <insert no.>******<insert outcome statement>*** |  | **DESCRIPTOR: typical performance in each range** |
| **Key Science Skill**  | **Very Low** | **Low** | **Medium** | **High** | **Very high** |
| *Plan and conduct investigations* | Limited skills in designing and conducting the selected practical investigations to generate appropriate primary data, including very limited understanding and comparison of appropriate methods for each selected practical investigation. | Some skills in designing and conducting the selected practical investigations to generate appropriate primary data, including limited understanding and comparison of appropriate methods for each selected practical investigation. | Adequate skills in designing and conducting the selected practical investigations to generate appropriate primary data, including satisfactory understanding and comparison of appropriate methods for each selected practical investigation. | Competent skills in designing and conducting the selected practical investigations to generate appropriate primary data, including detailed understanding and comparison of appropriate methods for each selected practical investigation. | Proficient skills in designing and conducting the selected practical investigations to generate appropriate primary data, including sophisticated understanding and comparison of appropriate methods for each selected practical investigation. |
| *Generate, collate and record data* | Limited ability to appropriately record and summarise qualitative and quantitative data relevant to the selected practical activities in the student logbook. | Some ability to record and summarise qualitative and quantitative data relevant to the selected practical activities in the student logbook. | Sound ability to record and summarise qualitative and quantitative data relevant to the selected practical activities in the student logbook. | Competent ability to record and summarise qualitative and quantitative data relevant to the selected practical activities in the student logbook. | Highly proficient ability to record and summarise qualitative and quantitative data relevant to the selected practical activities in the student logbook. |
| Identifies some appropriate data to construct diagrams, flow charts, tables and graphs relevant to the selected practical activities, including graphs that show linear and non-linear relationships | Selects and organises some appropriate data to construct diagrams, flow charts, tables and graphs relevant to the selected practical activities, including graphs that show linear and non-linear relationships | Selects and organises appropriate data to construct useful and meaningful diagrams, flow charts, tables and graphs relevant to the selected practical activities, including graphs that show linear and non-linear relationships | Effective selection and organisation of appropriate data to construct useful and meaningful diagrams, flow charts, tables and graphs relevant to the selected practical activities, including graphs that show linear and non-linear relationships | Proficient selection and highly appropriate organisation of data to construct useful and meaningful diagrams, flow charts, tables and graphs relevant to the selected practical activities, including graphs that show linear and non-linear relationships |
| *Analyse end evaluate data and investigation methods* | Identifies some trends, patterns and relationships in qualitative and quantitative data relevant to the selected practical activities. | Some identification and comparison of trends patterns and relationships in qualitative and quantitative data relevant to the selected practical activities | Accurate analysis and comparison of trends patterns and relationships in qualitative and quantitative data relevant toto the selected practical activities with some identification of limitations in the data available. | Detailed analysis and comparison of trends patterns and relationships in qualitative and quantitative data relevant to the selected practical activities with appropriate identification of some limitations in the data available. | Highly proficient analysis and comparison of trends patterns and relationships in qualitative and quantitative data relevant to the selected practical activities with detailed identification of a range of limitations in the data available. |
| Identifies some aspects of the context and purpose of each selected practical investigation, including some elements of the investigation methodology and method for each selected practical investigation. | Some identification and comparison of the context and purpose of each selected practical investigation, including some accurate identification of the investigation methodology and method for each selected practical investigation.  | Accurate comparison of the context and purpose of each selected practical investigation, including accurate identification of the investigation methodology and method for each selected practical investigation and some ways in which the method maybe be improved.  | Detailed evaluation of the context and purpose of each selected practical investigation, including appropriate analysis of the investigation methodology and method for each selected practical investigation and detailed ways in which the methods may be improved. | Comprehensive evaluation of the context and purpose of each selected practical investigation, including detailed analysis of the investigation methodology and method for each selected practical investigation and comprehensive ways in which the methods may be improved. |
| *Construct evidence-based arguments and draw conclusions* | Very limited evaluation of qualitative and/or quantitative data and use of reasoning to construct and compare scientific arguments and draw conclusions consistent with initial prediction or hypothesis for the selected practical activities. | Some appropriate evaluation of qualitative and/or quantitative data and use of reasoning to construct and compare scientific arguments and draw conclusions consistent with initial prediction or hypothesis for the selected practical activities. | Appropriate evaluation of qualitative and/or quantitative data and use of reasoning to construct and compare scientific arguments and draw conclusions consistent with initial prediction or hypothesis for the selected practical activities. | Detailed evaluation of qualitative and/or quantitative data and use of reasoning to construct and compare scientific arguments and draw conclusions consistent with initial prediction or hypothesis for the selected practical activities. | Comprehensive evaluation of qualitative and/or quantitative data and use of reasoning to construct and compare scientific arguments and draw conclusions consistent with initial prediction or hypothesis for the selected practical activities. |
| *Analyse, evaluate and communicate scientific ideas* | Very limited use of appropriate biological terminology, representations and conventions relevant to the selected practical investigations. | Limited use of appropriate biological terminology, representations and conventions relevant to the selected practical investigations. | Mostly appropriate biological terminology, representations and conventions relevant to the selected practical investigations. | Effective and appropriate biological terminology, representations and conventions relevant to the selected practical investigations. | Proficient and highly appropriate biological terminology, representations and conventions relevant to the selected practical investigations. |
| Limited analysis and discussion of connections between relevant biological information, concepts, relationships, theories and models relevant to the selected practical investigations.  | Some appropriate analysis and discussion of connections between relevant biological information, concepts, relationships, theories and models relevant to the selected practical investigations. | Appropriate analysis and discussion of connections between relevant biological information, concepts, relationships, theories and models relevant to the selected practical investigations. | Detailed analysis and discussion of connections between relevant biological information, concepts, relationships, theories and models relevant to the selected practical investigations. | Insightful analysis and discussion of connections between relevant biological information, concepts, relationships, theories and models relevant to the selected practical investigations. |

KEY to marking scale based on the outcome contributing 40 marks

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| Very Low 1-8 | Low 9–16 | Medium 17–24 | High 25–32 | Very High 33–40 |