Year 10 STAR Science

Assessment Task 2 2023

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| **TOPIC**: Genetics – Evolution via Natural Selection | **GRADE:** A-E |
| **DUE DATE:** Term 2, Week 5 Wednesday 24th May 2023 | **WEIGHTING:** 30% |
| **SUBMISSION REQUIREMENTS:**  This task must be submitted via Canvas by 3pm on the due date. Use Google Chrome to search camden.instructure.com and login using your student DET email and password. Go to the STAR Science home page and click on “Assessment” under the Quick Access Links. Select “Science Assessment 2”, upload your file and submit the assignment. | |
| **OUTCOMES TO BE ASSESSED:**  **SC5-9WS** Presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations  **SC5-14LW Analyses** interactions between components and processes within biological systems | |
| **DIRECTIONAL VERBS:**  **Analyse**: Identify components and the relationship between them, draw out and relate implications | |
| **TASK DESCRIPTION:**  Create a Google Slides presentation on Evolution that addresses the following five topics: Evolution, Natural Selection, Evidence of Evolution, Explanation of Genetic Mutations, and a Case Study on an animal which has evolved over time. Research the topic to gain a comprehensive understanding of the key concepts and use clear and concise language to present your ideas. Each topic should have at least 2 slides dedicated to it, with a bibliography slide at the end.  Include appropriate visuals and properly cite all sources used in the presentation. The assessment will be marked using an A-E grading scale based on the overall quality of the presentation. | |
| **Assessment Criteria:**   * Research the topic of Evolution to gain a comprehensive understanding of the key concepts and ideas. * Create a Google Slides presentation that effectively communicates the key concepts of Evolution. Your presentation should include at least 10 slides, two for each of the topics listed below and a bibliography slide. * Use clear and concise language and avoid using overly technical jargon. Make sure that your presentation is well-organized and easy to follow. * Include appropriate images, graphs, and charts to support your presentation. These visuals should enhance your audience's understanding of the concepts presented. * Reference all sources used in your presentation on a bibliography slide at the end of the presentation.   **Presentation:**  Your presentation should be at least 11 slides (A bibliography and 2 slides for each of the following):   1. Evolution: Define Evolution and provide an overview of the main mechanisms that drive it. 2. Natural selection: Explain the concept of natural selection and provide examples of how it works in the natural world. 3. Evidence of Evolution: Present evidence that supports the theory of evolution, including examples of transitional fossils, comparative anatomy, and molecular biology. 4. Explanation of genetic mutations: Explain the role of genetic mutations in driving evolution, including how mutations occur and how they can lead to the development of new species. 5. A case study on an animal which has evolved over time: Select an animal species and describe how it has evolved over time, including changes to its physical features, behavior, and habitat. | |

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| **ASSESSMENT MARKING CRITERIA** | |
| **Outcomes: SC5-9 WS, SC5-14LW** | **Grade** |
| * Demonstrates a comprehensive understanding of the key concepts of Evolution. * Presentation is clear, organized, and engaging. * All five topics are covered in sufficient depth and detail. * Effective use of visuals to support the presentation. * Bibliography showing all sources used | **A** |
| * Demonstrates a good understanding of the key concepts of Evolution. * Presentation is clear and well-organized. * All five topics are covered, but may lack depth or detail in some areas. * Use of visuals to support the presentation. * Bibliography showing most sources used | **B** |
| * Demonstrates a basic understanding of the key concepts of Evolution. * Presentation is somewhat organized, but may lack clarity. * All five topics are covered, but lack depth or detail. * Use of some visuals to support the presentation. * Bibliography showing some sources used | **C** |
| * Demonstrates a basic understanding of the key concepts of Evolution. * Presentation is disorganized and lacks clarity. * Topics are covered, but lack depth or detail. * Limited use of visuals to support the presentation. * Bibliography may be in use | **D** |
| * Demonstrates a limited understanding of the key concepts of Evolution. * Presentation is disorganized and lacks clarity. * Topics are not adequately covered. * Little or no use of visuals to support the presentation. * No bibliography used | **E** |