

**UNIVERSITY OF CUMBRIA**

**REASSESSMENT REQUIREMENT**

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| **Module Code: HSOZ4004**  |
| **Module Title: Animal Form and Function** |
| **Tutor: Mary Farrell** |
| **Title of the item of work: Lab Report** |
| **Wordage: 2000 words** |
| **Details and Criteria: ( Please attach additional sheets if necessary)****Rationale:**Laboratory reports are a vital part of the scientific process. Lab reports should communicate the important work that has been completed in the lab so that someone who was not there can understand and replicate the results. They also propose future studies and experiments or suggest alterations to pre-existing methods. Lab reports should be written for an audience who is familiar with the scientific field of study but has not performed this experiment.**Brief:**You will be undertaking a range of lab practical sessions during the module. You will be expected to complete and write up **ALL** lab practical work each week. Your lab books will be checked on a regular basis. Completion and write-up of the lab practical work will form an element of your grade. For the second element of your grade, you will be required to write up in more detail **EITHER the Osmoregulation in Fish OR Urinalysis practical.**You will use the lab write up of this practical as the basis of your assessment. You will be required to write up the lab report following the scientific process from initial research idea/hypotheses generation, through to a full discussion of research findings in a broader context and drawing appropriate conclusions.**Introduction should:*** Introduce the reader to the subject background using appropriate references
* Explain the experiment and what it aims to accomplish, and highlight its importance
* State the aims of objectives
* Clearly state your hypothesis

**Method should:*** Be written in the past tense
* Include a full scientific level statement of methods used but assume your audience has basic knowledge of lab techniques
* Be detailed enough that any other scientist could repeat the lab and obtain comparable results.

 **Results should:**1. Describe the results that you have found – not why you found it
2. Present your results, using appropriate summary tables and/or graphs or labelled diagrams
3. Your tables, figures and diagrams should be able to explain your results without text, and your text should do the same without figures, tables or diagrams

 **Discussion should:*** Analyse and interpret the information presented in the results section
* State whether the results achieve the aims or prove/disprove the hypothesis previously set out, within the context of the background science. Remember to support statements with appropriate references – use only books and journals – not websites.
* Outline areas for improvement and/or future study

**Format:**You will need to structure your report to the format of a lab report. You will need to include the following sections: Introduction, Methods, Results, Discussion and Reference list. The word count includes everything in the main body of the text from the introduction to the Discussion. Use font size 12-14 in a plain font (Arial, Verdana for example). Left justify all text margins and use 1.5 line spacing.**References:**A reference list of all sources of information must be provided. This is not included in the word count. References used in the assessment must be referenced according to the Harvard System. Please see the guide on referencing for assistance <https://my.cumbria.ac.uk/Student-Life/Learning/Skills-Cumbria/Referencing-and-Avoiding-Plagiarism/>  **Learning Outcomes:**The following module learning outcomes are being assessed within this assessment: 1. Describe a range of physiological challenges faced by animal groups
2. Describe the mechanisms employed by animals to deal with physiological challenges
3. Recognise the anatomical adaptations of each major vertebrate group and describe how this relates to their lifestyles.
4. Identify the appropriate piece of laboratory equipment required for a particular task and demonstrate knowledge on how to use it safely and correctly.

 **Marking Criteria and Distribution:**This assessment will be marked anonymously. It is **ESSENTIAL** to refer to the marking rubric to help you with this work. It will be marked against this. You may wish to familiarise yourself with the generic grade descriptors for L4 which give you a greater understanding of the benchmarks required for the second year of your degree – [these can be found here within the academic regulations](https://www.cumbria.ac.uk/about/organisation/professional-services/academic-quality-and-development/academic-regulations/)

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| **Lab Write-Ups**Lab books will be reviewed on a regular basis and a grade will be allocated at the end of the module. There will be an opportunity to catch up on any lab missed at the end of the module. | 20% |
| **Introduction**Appropriate background and introduction to study topic. Identify the relevance of your chosen investigation topic to broader theories. To include informed and rationalised selection of aim and objectives or hypotheses. | 10% |
| **Method**Full scientific level procedural methodology, including, equipment used, timings, step by step account of methods used. Must be succinct but detailed enough to be repeated/replicated. | 10% |
| **Results**Appropriately presented results using scientific grade graphs and tables. Descriptive text linked to figures/tables used. | 20% |
| **Discussion**Discussion of findings in relation to scientific research and broad biological theory. Concluding remarks, study implications and limitations. | 20% |
| **Writing quality and References**Overall quality – spelling, grammar, communication & writing style; quality of graphs, figure, tables and images/photographs. Referencing and use of appropriate resources. | 20% |

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| **SUBMISSION DATE AS PER STUDENT PORTAL***(please tick as appropriate but must be completed)*xTo be submitted by **4*:00 PM*** on ***05/05/2023*** in accordance with instructions given by the course team. To be submitted through the Virtual Learning Environment (eg. Blackboard / Pebblepad etc.) in pdf format, or in person/by RECORDED DELIVERY to the Programme Administration at the **Fusehill Campus** of the University of Cumbria.x |