**GENERAL INTEGRATED SCIENCE– UNIT 1**

**TASK 3 – Factors Affecting a Body System**

**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ WEIGHTING: 9 %**

**DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MARK: \_\_\_\_\_\_ / =**

* **Part 1**: One-week to design an investigation to see how changing exercise length affects a person’s reaction to a visual stimulus
* **Part 2:** Peer-marking of Part 1. *(1 mark for draft completion)*
* **Part 3:** Carrying out experiment and analysis of data from the experiments.

|  |  |  |
| --- | --- | --- |
|  | **Marks Allocation** | **Your Total** |
| Experimental design | 20 |  |
| Draft | 1 |  |
| Conduction of Experiment | 4 |  |
| Analysis & Discussion | 21 |  |
| **TOTAL** | **46** |  |

## **Impact of Exercise Length on Reaction Time Investigation**

**Part 1: Experiment Plan**

Design an investigation to show how changing the amount of exercise a person does can affect the person’s reaction speed for a visual stimulus. (2 A4 pages max)

|  |  |
| --- | --- |
| You are to write a scientific report that covers each of the following dot points: | Marks |
| An introduction covering the following:   * What is reaction time, and why is it important? * What factors affect a person’s reaction times? * How does exercise affect the circulatory and respiratory systems? * How does exercise affect reaction time? | **4** |
| A hypothesis for your investigation. | **2** |
| The Independent and Dependent variables | **2** |
| Three controlled variables with specific details. Also include how to minimise the effect of variables that are beyond your control. | **4** |
| An equipment list. | **1** |
| A step by step method of how to carry out your investigation which would include the following:   * Type of reaction test and how it is carried out * Type and amount of exercise done. * A risk analysis if needed. * A two-sentence description of how the data would be analysed and the type of graph that would be used to present your results. | **7** |

*Some suggested examples:*

* <https://bit.ly/1m3J2rF>
* <https://bit.ly/1SRA18a>
* <https://bit.ly/2TjSsYA>
* <https://bit.ly/2UVMKxu>
* <https://bbc.in/2xZjGvG>
* <https://bit.ly/2DcmJCM>