|  |  |
| --- | --- |
| **A**  9-10 | Interprets, compares and evaluates scientific information to support various points of view  Presents clear and logical arguments that are supported by evidence |
| **B**  6-8 | Interprets and compares scientific information to support a point of view  Presents arguments or statements that are not always well supported by evidence |
| **C**  3-5 | Selects some scientific information to support a point of view but includes some irrelevant or incorrect information  Presents statements of ideas, with some development of an argument |
| **D**  1-2 | Selects inappropriate scientific information to support a point of view  Presents statements of ideas, but with limited development of an argument |
| **E-0** | Does not meet the requirements of a D grade and/or has completed insufficient assessment tasks to be assigned a higher grade. |

**No References - 3 marks**

***Independent Variable (1 mark)***

Type of exercise/time exercise

***Dependent Variable (1 mark)***

Blood pressure and heart rate

***Control Variables (6 marks)***

Any 3 appropriate variables (1 mark per variable)

Appropriate reasons (1 mark per reason)

***Hypothesis* (2 marks)**

IF someone exercises then their heart rate and blood pressure will increase

***Method (5 marks)***

|  |  |
| --- | --- |
| A-5 | Plans an investigation to collect appropriate data. Identifies controlled variables with specific detail. Organises data logically and presents it in a range of forms, including appropriate graphs and tables to show patterns and relationships |
| B-4 | Plans an investigation to collect appropriate data  Identifies some controlled variables without detail. Presents data in a range of forms, including appropriate graphs, tables and charts to show patterns and relationships |
| C- 3 | Plans an investigation to collect appropriate data  Inconsistently identifies some controlled variables. Presents data using basic tables and graphs |
| D-2 | Follows a provided experimental procedure to collect data. Confuses variables. Presents data using basic tables and graphs that are incomplete or contain errors. |
| E-1 | Does not meet the requirements of a D grade and/or has completed insufficient assessment tasks to be assigned a higher grade. |

1. (6 marks)

|  |  |
| --- | --- |
| * Title * Correct type of graph * Axes labelled | * Scale is equal * Pencil and ruler * Data plotted correctly |

1. (2 marks)

* Baseline
* Allow for comparison
* See if there is any effect by the IV

1. (3 marks)

- state which exercise increased BP and HR the most (1)

- second highest exercise (1)

- lowest rise in BP and HR exercise (1)

1. (4 marks)

* 1 mark for suggestion
* 1 mark for reasoning

1. (5 marks)

* Highly detailed link between results and science with accurate diagram (5)
* Highly detailed link between results and science BUT no diagram / Detailed link between results and science with diagram BUT minor errors (4)
* Detailed link between results and science BUT no diagram (3)
* Link between results and science attempt at a diagram but errors (1)
* Attempt to answer but errors (1)
* No attempt (0)

***CONCLUSION***

1. (2 marks)

- States support/refute of hypothesis (1)

- States results that support (1)

1. (2 marks)

* Increase- amount of blood being bumped
* Body needs more blood to supply oxygen to muscles

1. (4 marks)
   * Excellent A grade presentation = 4 marks
   * Detailed B grade = 3 marks
   * Adequate C grade = 2 marks
   * Limited D grade = 1 mark

***EVALUATION***

1. (2 marks)

- states problem (1)

- accurate way to solve (1)

1. (2 marks)

* States improvement and how to do it (2)
* States an improvement (1)