**Year 10 Marine Science IA2 – Students Monitoring**

Use this to self-evaluate IA2, and improve your task where required.

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|  | **Student Reflection 1**  **(completed before submitting)** | | | **Teacher Feedback** |
| **Features** | Complete | Incomplete | No attempt | Priority/ needs attention |
| **Rationale** | | | | |
| All theoretical content   1. Importance of coastal dunes 2. Zonation in coastal dunes 3. Biotic and abiotic variables and their effect on coastal dunes 4. Introduction of independent variable 5. Include your research question in the final paragraph | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ |
| Contextualised if possible   * Why is this important/relevant? | ☐ | ☐ | ☐ | ☐ |
| Clear links to question | ☐ | ☐ | ☐ | ☐ |
| **Research Question** | | | | |
| 1. Ensure your question has your IV and DV within it. 2. List the following:  * IV: What abiotic data is changing? * DV: What biotic data are you measuring? * Controlled Variables: what is being controlled to ensure this experiment is a fair test | ☐  ☐ | ☐  ☐ | ☐  ☐ | ☐  ☐ |
| **Original Experiment** | | | | |
| Summary of the original experiment.   1. Link to original experiment included 2. Introduce the purpose of the investigation 3. Discuss the ecological technique used 4. Introduce how the methodology reduces bias 5. Introduce the data collected at each quadrat (can be presented in a list) | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐  ☐ |
| **Management of risks** | | | | |
| Directly refer to risk assessment and ensure you include the management strategy and ethical considerations when working in an outdoor environment | ☐ | ☐ | ☐ | ☐ |
| **Research and Planning Criterion Teacher Comments** | | | | |
|  | | | | |
| **Raw data** | | | | |
| Combined raw data table in appendix 1 | ☐ | ☐ | ☐ | ☐ |
| **Processing of data** | | | | |
| A brief overview of what the processed data will calculate/show | ☐ | ☐ | ☐ | ☐ |
| Sample calculation table constructed | ☐ | ☐ | ☐ | ☐ |
| Sample calculations show formulas used to process data and sample calculations for one variance of your independent variable (mean, SE, SD and range) | ☐ | ☐ | ☐ | ☐ |
| Sample calculations show full workings | ☐ | ☐ | ☐ | ☐ |
| Processed data placed into summary table with headings | ☐ | ☐ | ☐ | ☐ |
| Processed data is used to produce graphical representations – scatterplot | ☐ | ☐ | ☐ | ☐ |
| Graphical representations have all features present:   1. X and Y axis labelled correctly 2. Units 3. Trendline with R2 value 4. Figure heading below | ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐ | ☐  ☐  ☐  ☐ |
| **Interpretation and Analysis** | | | | |
| Each graphical representation has any of its trends, patterns and relationships **identified** | ☐ | ☐ | ☐ | ☐ |
| Student uses evidence to support the trend/pattern/relationship | ☐ | ☐ | ☐ | ☐ |
| Uses R2 value to **justify** correlation and uncertainty/limitations | ☐ | ☐ | ☐ | ☐ |
| Correct links to descriptive statistics made | ☐ | ☐ | ☐ | ☐ |
| **Analysis of Evidence Criterion Teacher Comments** | | | | |
|  | | | | |
| **Evaluation** | | | | |
| Copied in the relevant limitations | ☐ | ☐ | ☐ | ☐ |
| Correct evidence has been identified - uncertainty and limitations (e.g. using Standard Error and Standard Deviation) | ☐ | ☐ | ☐ | ☐ |
| The experimental process is **evaluated** in terms of validity and/or reliability by considering uncertainty (for reliability) and both the design and the methods of your research (for validity) | ☐ | ☐ | ☐ | ☐ |
| **Suggested improvements and extensions** | | | | |
| Source of error is directly linked and match to the limitations stated | ☐ | ☐ | ☐ | ☐ |
| Accurate **description** of suggested improvements and extensions which are logically derived and improve the reliability and validity of the experimental process | ☐ | ☐ | ☐ | ☐ |
| **Conclusion** | | | | |
| A conclusion is drawn and directly linked to your research question | ☐ | ☐ | ☐ | ☐ |
| Sound reason and analysis of evidence are used from the processed data to support the conclusion | ☐ | ☐ | ☐ | ☐ |
| Accepted values (in the form of theoretical data) is used to draw to a conclusion of the accuracy of the experimental results | ☐ | ☐ | ☐ | ☐ |
| Evidence and concepts are supported by scientific literature to support the conclusion | ☐ | ☐ | ☐ | ☐ |
| **Interpretation and Evaluation Criterion Teacher Comments** | | | | |
|  | | | | |
| **Communication (and general communication)** | | | | |
| Genre conventions (past-tense and third person) no personal pronouns | ☐ | ☐ | ☐ | ☐ |
| Units and symbols used correctly | ☐ | ☐ | ☐ | ☐ |
| Correct use of species names (*Italics*) | ☐ | ☐ | ☐ | ☐ |
| Table headings above  Figure (graph) below | ☐ | ☐ | ☐ | ☐ |
| Reference list complete APA 6 & in-text references used e.g. (Risk Assess, 2021) | ☐ | ☐ | ☐ | ☐ |
| **Communication Criterion Teacher Comments** | | | | |
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