

INTERNAL ASSESSMENT MARKSCHEME

There are four core sections that must be included when developing a scientific report in IB Biology:

1. Research design
2. Data analysis
3. Conclusion
4. Evaluation

1. Research Design

This criterion assesses the extent to which the student effectively communicates the methodology (purpose and practice) used to address the research question.

Marks	Level descriptor
1 – 2	- The research question is stated without context. - Methodological considerations associated with collecting data relevant to the research question are stated. - The description of the methodology for collecting or selecting data lacks the detail to allow for the investigation to be reproduced.
3 – 4	- The research question is outlined within a broad context. - Methodological considerations associated with collecting relevant and sufficient data to answer the research question are described. - The description of the methodology for collecting or selecting data allows for the investigation to be reproduced with few ambiguities or omissions.
5 – 6	- The research question is described within a specific and appropriate context. - Methodological considerations associated with collecting relevant and sufficient data to answer the research question are explained. - The description of the methodology for collecting or selecting data allows for the investigation to be reproduced.

2. Data Analysis

This criterion assesses the extent to which the student's report provides evidence that the student has recorded, processed and presented the data in ways that are relevant to the research question.

Marks	Level descriptor
1 – 2	- Recording and processing of the data is communicated but is neither clear nor precise. - Data recording and processing shows limited evidence of consideration of uncertainty. - Some processing of data relevant to addressing the research question is carried out but with major omissions, inaccuracies or inconsistencies.
3 – 4	- Communication of the recording and processing of the data is either clear or precise. - The recording and processing of data shows evidence of a consideration of uncertainties but with some significant omissions or inaccuracies. - The processing of data relevant to addressing the research question is carried out but with some significant omissions, inaccuracies or inconsistencies.
5 – 6	- Communication of the recording and processing of the data is both clear and precise. - The recording and processing of data shows evidence of an appropriate consideration of uncertainties. - The processing of data relevant to addressing the research question is carried out appropriately and accurately.

3. Conclusion

This criterion assesses the extent to which the student successfully answers their research question with regard to their analysis and the accepted scientific context.

Marks	Level descriptor
1 – 2	- A conclusion is stated that is relevant to the research question but is not supported by the analysis presented. - The conclusion makes superficial comparison to the accepted scientific context.
3 – 4	- A conclusion is described that is relevant to the research question but is not fully consistent with the analysis presented. - A conclusion is described that makes some relevant comparison to the accepted scientific context.
5 – 6	- A conclusion is justified that is relevant to the research question and fully consistent with the analysis presented. - A conclusion is justified through relevant comparison to the accepted scientific context.

4. Evaluation

This criterion assesses the extent to which the student's report provides evidence of evaluation of the investigation methodology and has suggested improvements.

Marks	Level descriptor
1 – 2	- The report states generic methodological weaknesses or limitations. - Realistic improvements to the investigation are stated.
3 – 4	- The report describes specific methodological weaknesses or limitations. - Realistic improvements to the investigation that are relevant to the identified weaknesses or limitations, are described.
5 – 6	- The report explains the relative impact of specific methodological weaknesses or limitations. - Realistic improvements to the investigation, that are relevant to the identified weaknesses or limitations, are explained.

Important Notes:

- A candidate is assessed according to the descriptor that best conveys the level achieved (best fit).
- A score of 0 will be given for a criterion that does not meet the minimum standards of a descriptor.
- There is no differentiation between SL and AHL candidates – the assessment criteria are identical.
- Each criterion is weighted equally (25%) for a total score of 24 – this score is then scaled to 20%.
- The maximal overall word count for the scientific report is **3,000 words** – but this does not include charts or diagrams, data tables, equations and formulae, citations, referencing or headers (titles).

While the exact distributions may vary from year to year, the approximate grade boundaries for the internal assessment in Biology can be summarised by the following table:

1	2	3	4	5	6	7
0 – 3	4 – 6	7 – 10	11 – 13	14 – 16	17 – 19	20 – 24