Project Report Marking Criteria, H-level (BIO00028H, BIO00088H)

Definitions:

Analysis/analytical: Taking data or concepts and examining inter-relationships through statistical tools could include comparing and contrasting models.

Comprehension: understanding of the meaning of information demonstrated through clear explanations.

Context/contextualising: Placing the work and findings in relation to what is known using literature displaying subject-specific knowledge and showing understanding of broader implications for what is known and for future work/gaps.

Critical/criticality: judging a hypothesis or conclusion by examining the validity of the evidence presented for it, e.g. evaluating two competing models; being able to judge the relative importance of different aspects of background or findings.

Interpretation: Inferring what the analysis means

Synthesis: integrating concepts from several sources. e.g. discussing relevant outside reading, or combining material across several readings into a coherent or original whole.

Word Count: Project reports should be a maximum of 4,000 words (see below for what is included and excluded in this). The limit for the abstract is 250 words. Projects longer than 4,000 words will be penalised according to the <u>Biology rules on assessment penalties</u>. The two word counts (abstract and main text) should be clearly stated at the end of the abstract and the main text respectively.

Included: All the main body text (Introduction, Methods, Results and Discussion) including in-text citations to references and figures. Students can choose any referencing style.

What is excluded: Title, figure legends, table legends, tables, reference list and abstract.

H-level stepped marking criteria for projects

Mark (%)	Context, Content and Sources	Approach, Results and Analysis	Evaluation	Structure and Communication	Overall View
100 95 90 85 80	Concise, precise and critical coverage of relevant background using predominantly primary sources and reflecting current knowledge in the field. Project aims are precisely described and linked to the background. No irrelevant content. Limitations and gaps of prior knowledge are identified enabling the project focus to be defined in an insightful manner.	Design and approach is fully justified and aligned with the content of the introduction and project aims. Methods are clearly written with sufficient and accurate detail in an appropriate style (using scientific conventions and terminology) allowing all work to be repeated with no irrelevant content and no omissions. Data analysed thoroughly using appropriate methods. Data visualisation is the best possible to represent the findings. Findings are presented in a logical order and the main findings are communicated with exceptional clarity. All findings are linked with an insightful narrative. Clear evidence of trouble-shooting or taking alternative approaches if required.	Critical and analytical synthesis with a very strong ability to identify and focus on key findings. Able to effectively evaluate and articulate the strengths and weaknesses of their own approaches and findings, and those of others. Discusses the results in relation to the project aims and hypotheses in a creative and insightful manner that integrates with the wider literature throughout. Data not over-interpreted. Strong ability to rationalise contradictory information where relevant. Suggestions for future work would significantly advance understanding and are highly feasible, showing a deep understanding of how the project could most effectively be taken forward.	Exceptionally clear communication evidenced by a very informative and well-balanced report including abstract. Excellent narrative and organisation. No ambiguous content throughout the report. Interpretations and discussion points are judiciously focussed on the most important findings. Exceptionally high quality presentation with attention to detail throughout. Figures at or near publication standard, with very minor flaws tolerated for 80-85.	The project shows strong evidence of depth of understanding, insight and critical thinking throughout. Creative or novel aspects of the research are communicated clearly. Extensive use of relevant primary literature. No lack of understanding demonstrated. 100 (Outstanding with no room for improvement): The project is at publication quality with the highest standards of research scholarship, most effectively communicated. An outstanding level of insight and clarity of thought far beyond what is expected at this level. Conceptually innovative and original analysis and interpretation with no or the most minor improvements possible. 95, 90 (Outstanding with room for minor improvement): Almost publication quality, effectively communicated. An outstanding level of insight and clarity of thought that would be hard to improve upon, well beyond the expected standard. Original analysis with minor improvements possible. 80, 85 (Exceptional): Some improvements required for publication quality. An exceptional level of insight where key points are effectively communicated. Clearly beyond the expected standard.

Mark (%)	Context, Content and Sources	Approach, Results and Analysis	Evaluation	Structure and Communication	Overall View
	Concise and precise coverage of relevant background using mainly primary sources to very clearly introduce and define the question. Conveys depth of understanding of previous work and links the introduction to project aims, which are very well defined. The overall focus may be too narrow or slightly broader than necessary (compared with projects achieving 80+).	Design and approach is very well justified. Methods are clearly written with sufficient detail (some minor omissions tolerated) in an appropriate style (using scientific convention and terminology) and allow the work to be repeated. Data analysed thoroughly using appropriate methods. Data visualisation is very clear. Findings are well presented in a logical order and the main findings are highlighted clearly. Evidence of trouble-shooting or taking alternative approaches if required.	critical and analytical synthesis with an ability to identify and focus on key findings. Shows awareness of strengths and weaknesses of own approaches and findings, and those of others. Evaluates findings in relation to the project aims and hypotheses effectively. Data not over-interpreted. A range of appropriate suggestions for future work are included though may lack the detail and insight that would be seen in a project of 80+.	Clear communication evidenced by an informative and well-balanced report including abstract. Appropriate narrative throughout. Very little ambiguous content throughout the report; interpretations and discussion points are mostly focussed on the most important findings. Very well organised report with a logical structure. High quality presentation with attention to detail throughout. Some minor errors (e.g. typos, figure labels) are tolerated but these should be very few.	Excellent Project is of an excellent standard throughout. Shows depth of understanding in all sections and critical thought, though may lack the extent of critical thought, insight and originality that would justify a mark of 80+. No significant lack of understanding demonstrated or only in some minor details. Excellent referencing and use of primary literature. 78: Significant depth of comprehension and critical thought in almost all aspects of the project. 75: Excellent level of comprehension and critical thought in many places. 72: Critical thought may not be evident in all sections. Evidence of thorough understanding but may have slightly misplaced emphasis in a few places.

Mark (%)	Context, Content and Sources	Approach, Results and Analysis	Evaluation	Structure and Communication	Overall View
68 65 62	Relevant background sources (mainly primary) used to support a coherent introduction that defines the question being addressed. May be too narrow (e.g. only consider the species/molecule under investigation and not consider related cases) or may be broader than necessary. Project aims are clearly articulated.	Design and approach is justified. Methods have clear content written in an appropriate style. Sufficient detail to allow most work to be repeated (some omissions tolerated). Data analysed using appropriate methods. Data visualisation is mostly clear. Findings are well presented in a logical order and there is an attempt to highlight the main findings. Some evidence of trouble-shooting if required.	Good synthesis mostly focussing on main findings. Shows an understanding of own results and those of others. Evaluates findings in relation to the project aims and hypotheses. May be lacking awareness of subtle aspects or may over-interpret data in places. Sensible suggestions for future work though may be limited in scope.	Mostly clear communication as evidenced by a balanced report with a mostly clear narrative; little ambiguous content throughout the report. Abstract is clear and informative though may be somewhat unbalanced in content (eg. too many results at the expense of context). Well-presented overall though the style may be inconsistent. Some minor errors are tolerated but these should be relatively few.	Good understanding demonstrated throughout with evidence of critical thought. Well organised with a logical structure. Communicates approaches, results and main discussion points effectively though detail may be variable in places. Very good referencing. May lack the depth of critical thought and insight that would justify a mark of 70+. 68: Very good comprehension of all aspects. Clear evidence of critical thought. Slightly above the standard expected from a good student at this level. 65: Good comprehension of the majority of aspects of the project. Secure knowledge of the subject. Some evidence of critical thought. 62: Fairly good comprehension of the project. Generally sound knowledge of the subjects. Limited evidence of critical thought. Slightly below the standard expected from a good student at this level.

Mark (%)	Context, Content and Sources	Approach, Results and Analysis	Evaluation	Structure and Communication	Overall View
58 55 52	Introduces the subject area though links to the project aims may be lacking. A small amount of content may be inaccurate. May include some irrelevant content. Project aims included but may lack clarity. May have over-relied on review articles rather than primary literature.	Justification for design and experimental approach may be lacking. Methods have mostly clear content though omissions/errors may make repeating some aspects difficult. Structure/style of the methods section may be variable. Evidence that investigations have been carried out and data analysed, though analysis and/or set up may be variable (thoroughness, appropriateness, use of controls). Findings are presented but may have misplaced emphasis. Data visualisation is attempted but not always clear. Evidence of trouble-shooting (if required) or trying alternative approaches may be limited.	Adequate synthesis that demonstrates understanding of results generated but may be relatively basic or be over-interpreted. Emphasis may not be on the most important findings. Limited integration with wider literature. Suggestions for future work may be limited or unrealistic.	Report and abstract convey the main aspects of the project but may lack sufficient narrative to enable all aspects to be understood. Satisfactory abstract though may be unbalanced in content and include some irrelevant/inappropriate material. Mostly well-presented but may lack attention to detail eg. have a relatively high number of typos or poor figures.	Satisfactory Some lack of understanding may be demonstrated but not affecting core project-related concepts. May be disorganised or overly simplistic in places. Referencing may not be thorough. 58: Good comprehension of some aspects of the project, but may lack clarity. Largely descriptive with no or very little evidence of critical thought. 55: Shows comprehension of the core concepts and projects but lacks clarity with possibly some relatively minor misunderstanding evident. Descriptive with no evidence of critical thought. 52: Some comprehension of the core concepts but with a few misunderstandings. Descriptive and poorly organised.
48 45 42	Basic introduction that introduces the subject area but links to the project aims are unclear or absent. Includes some inaccurate or a large proportion of irrelevant content. Limited selection of references, mainly secondary.	Justification for approach lacking. Methods should be identifiable but are lacking in detail and/or accuracy such that repeating the work would be very difficult. Writing style of methods may be inappropriate. Analysis and data visualisation may be limited or inappropriate. Little or no evidence of trouble-shooting or trying alternative approaches.	Basic synthesis that demonstrates some understanding of the approaches and/or findings but is largely descriptive and has little or no integration with wider literature. May contain irrelevant material. Little or no suggestions for further work beyond the very basic or impractical.	Report and abstract contain some relevant content but lack clarity and are unbalanced. Narrative lacking or confused. May be significantly under the word limit. Lacks attention to detail throughout eg. style inconsistencies, typos, poorly reproduced figures.	Weak Contains significant misunderstanding and/or omissions. Descriptive rather than analytical. Disorganised with poor referencing. 48: A fair attempt to produce an adequate report, some comprehension is demonstrated. 45: A report with most of the errors listed above but with some comprehension. 42: Very limited comprehension. Report with very significant errors, omissions and other deficiencies.

Mark (%)	Context, Content and Sources	Approach, Results and Analysis	Evaluation	Structure and Communication	Overall View
38 35 30	Limited engagement with project background, has omissions, errors or irrelevant material. Aims of the project unclear. References limited or poorly selected.	Methods are not justified and are lacking detail and unclear though methods should be identifiable. High number of errors and omissions. Few findings, poorly presented with limited descriptive text and analysis. Little or no trouble-shooting where required.	Very limited synthesis that is mainly descriptive. Little or no appreciation of the implications or links to wider literature. May have errors, irrelevant material or be very short.	Report and abstract are seriously unbalanced and hard to follow. Writing style may be inappropriate. Poor presentation with no attention to detail.	Compensatable Fail Limited evidence that the purpose of the study has been understood. Contains significant misunderstanding and/or omissions. Likely disorganised, substantially under the word limit with poor referencing. 38: 1 fail indicator, but other aspects indicate a mark of 40+ 35: 1 fail indicator 30: 1 fail indicator with hints of a 2 nd
25 15 8 0	Very little engagement with project background and if presented with major errors or irrelevant material. Aims of the project lacking or unclear. Limited and poorly selected references.	Methods are inadequately described, vague and lacking key details. Would be almost impossible to repeat the work. Very few or no findings/approaches presented with very limited accompanying text that is vague or inaccurate.	Very little or no synthesis consideration of the findings or approaches. No appreciation of the implications and no links to wider literature. Likely with significant errors, irrelevant material or very short.	Report seriously unbalanced and hard to follow. Abstract may be missing or inadequate. Writing style may be inappropriate. Very poor presentation with a high number of errors and poor figures (if included). Little or no consideration given to the reader	Outright Fail Very little evidence that the purpose of the study has been understood. Contains major misunderstanding and/or omissions. Likely disorganised, substantially under the word limit with little use of appropriate literature. 25: 2 fail indicators 15 (Report with serious flaws and major omissions): 3 fail indicators 8 (Report attempted but barely): All fail indicators or less than 1000 words of unsatisfactory content. 0 (No content or just an outline with headings, or report not produced): No report produced or less than 500 words.

Fail indicators

F1: Fails to demonstrate an ability to design and undertake even the simplest experiments or investigations.

F2: Shows very little understanding of the project background.

F3: Fails to report even the simplest analysis.

F4: Exceptionally poorly written and presented.

H-level Project Report Marking

It is not required to fill in this grid but markers can make a copy and use it as a marking aid if they wish.

	Outstanding	Exceptional	Excellent	Good	Satisfactory	Weak	Compensatable Fail	Outright Fail
Abstract is clear, informative and well-balanced								
Concise and precise coverage of project background using primary sources								
Introduction links well to project aims								
Aims are clearly defined								
Methods written in an appropriate style								
Methods accurate and sufficiently detailed								
Conveys justification for chosen approach								
Results show evidence of a sustained and systematic approach								

	Outstanding	Exceptional	Excellent	Good	Satisfactory	Weak	Compensatable Fail	Outright Fail
Results are well presented highlighting the main findings								
Data are thoroughly and appropriately analysed								
Trouble-shootin g/alternative approaches if appropriate								
Results are discussed with sufficient depth								
Discussion draws out the most important findings and integrates with wider literature								
Appropriate suggestions for further work								
High attention to detail in presentation of report throughout								