

BIOL 120L Rubric W23

Criteria	Expectations	Excellent	Good	Fair	Unsatisfactory
Title Page (2 marks)	Includes the following necessary components: <ul style="list-style-type: none"> • Descriptive title • Name • ID # • TA name • Date of experiment (report) • Course and section # 	Most of the title page elements are there (2 marks)	6 of the 8 expectations are there (1 mark)	N/A	More than 3 of the title page elements are missing (0 marks)
Introduction (11 marks)	Objective/purpose of experiments is clearly stated. (1) Relevant information about all 5 experiments performed in the lab. (2 marks per experiment) For every experiment there needs to be sufficient and clear background information. Controls for each experiment are clearly stated.	Statement of purpose is present with all listed elements (1 mark) AND All of the listed elements are thoroughly and clearly described. TA does not need more than one read through to understand material. (2 marks per experiment)	Statement is missing or unclear (0.5 mark) OR All or most elements are there but some clarity missing (1 marks per experiment)	1 or more points are missing. You need to re-read sentences for clarity (0.5 marks per experiment)	Objective/purpose statement is absent. (0 mark) 2 or more points are missing. Writing is unclear (0 marks per experiment) For all intro sections - If no references are provided to back up information in your introduction – 0 marks
Materials and Methods (2 marks)	Correct reference and citation to the lab manual (proper section, course number, manual year, and page number). AND All deviations from the lab manual materials and methods are recorded.	All of the listed elements are clearly described (2 marks)	Most elements are there (1 mark)	N/A	Only mentions the lab manual but course #, year and page #s are not present (0 marks)
Results (14 marks)	<i>Text 1: Stomata Aperture</i> <ul style="list-style-type: none"> • Descriptive text clearly explaining stomata aperture results (including any controls). 	All of the elements of the description are there, clearly stated and of good quality. (1 marks)	All of the elements are there but some clarity is lacking. (0.5 marks)	NA	Incomplete results with most of the elements missing. (0 marks)

	<p><i>Table 1: Membrane Function</i></p> <ul style="list-style-type: none"> Raw data is complete with no unexplained blank cells. Title and number of table is present and found at the top of the table. Descriptive text is present and correlates to the referenced table (including any controls). 	Descriptive text is present and correlates to the referenced table (including any controls). The text allows the reader to understand the table/figure without referring to any other part of the document. (4 marks)	All of the elements are there but descriptive text is minimal. (3 marks)	No descriptive texts or tables; unclear. (2 marks)	Incomplete results with most of the elements missing. (0 marks)
	<p><i>Figure 1: Plasmolytic Method</i></p> <ul style="list-style-type: none"> Graph has every required data point. Graph is properly formatted and includes a descriptive title (not simply x vs y) Descriptive text is present and accurately describes results (including any controls). 	Descriptive text is present and correlates to the referenced table (including any controls). The text allows the reader to understand the table/figure without referring to any other part of the document. (4 marks)	All of the elements are there but descriptive text is minimal. (3 marks)	No descriptive texts or tables; unclear. (2 marks)	Incomplete results with most of the elements missing. (0 marks)
	<p><i>Figure 2: Gravimetric Method</i></p> <ul style="list-style-type: none"> Graph has every required data point. Graph is properly formatted including a descriptive title (not simply x vs y) Descriptive text is present and accurately describes results (including any controls). 	Descriptive text is present and correlates to the referenced table (including any controls). The text allows the reader to understand the table/figure without referring to any other part of the document. (4 marks)	All of the elements are there but some points may be missing or descriptive text is minimal. (3 marks)	No descriptive texts or tables; unclear. (2 marks)	Incomplete results with most of the elements missing. (0 marks)
	<p><i>Text 2: Turgor Movement</i></p> <ul style="list-style-type: none"> Response of the <i>Mimosa</i> plant is described (including any controls). 	All of the elements of the description are there, clearly stated and of good quality. (1 mark)	All of the elements are there but some clarity is lacking. (0.5 marks)	N/A	Incomplete results with most of the elements missing. (0 marks)

<p>Discussion (27 marks)</p>	<p><i>Stomata Aperture (4 marks)</i></p> <ul style="list-style-type: none"> Stomata aperture (text) results are explained and compared to each other (stomatal aperture of plants grown CO₂ rich atmosphere, and CO₂ free atmosphere). References must be provided. Results are also compared to literature. References must be provided. Compare to controls if applicable. <p><i>Membrane Function (6 pts)</i></p> <ul style="list-style-type: none"> Results from each of the temperature treatments on the membrane are described. References must be provided. Most damaging temperature is correctly identified and explained. Effect of low and high temperature on membranes are explained. References are provided. Compare to controls if applicable. <p><i>Plasmolytic Method (6 pts)</i></p> <ul style="list-style-type: none"> Results are described. Each of the 4 samples are compared to each other. References must be provided. All deviations from expected results are explained. References must be provided. Average water potential is provided from the standard curve. Compare to controls if applicable. 	<p>All of the listed elements are thoroughly and clearly described. TA does not need more than one read through to understand material. (4 marks)</p> <p>All of the listed elements are thoroughly and clearly described. TA does not need more than one read through to understand material. (6 marks)</p> <p>All of the listed elements are thoroughly and clearly described. TA does not need more than one read through to understand material. (6 marks)</p>	<p>All or most elements are there but some clarity missing. (3 marks)</p> <p>All or most elements are there but some clarity missing. (4 marks)</p> <p>All or most elements are there but some clarity missing. (4 marks)</p>	<p>More than 2 elements are missing and/or significant issues with clarity. (2 marks)</p> <p>More than 2 elements are missing and/or significant issues with clarity. (2 marks)</p> <p>More than 2 elements are missing and/or significant issues with clarity. (2 marks)</p>	<p>For all sections - If no references are provided to back up information in your discussion – 0 marks</p> <p>Insufficient attempt at description. (0 marks)</p> <p>Insufficient attempt at description. (0 marks)</p> <p>Insufficient attempt at description. (0 marks)</p>
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	<p><i>Gravimetric Method (6 pts)</i></p> <ul style="list-style-type: none"> Results are described. Each of the 7 solutions are compared. References must be provided. All deviations from the expected results are explained. References must be provided. Mannitol concentration that results in no weight loss or gain in tissue is correctly stated. Compare to controls if applicable. <p><i>Turgor Movement (2 pts)</i></p> <ul style="list-style-type: none"> A condition in which the <i>Mimosa</i> plant would demonstrate a similar response is provided. References must be provided. Compare to controls if applicable. <p><i>Conclusion (3 pts)</i></p> <ul style="list-style-type: none"> Clear conclusion on the roles of CO₂, membranes, and water derived from the results is provided. 	<p>All of the listed elements are thoroughly and clearly described. TA does not need more than one read through to understand material. (6 marks)</p> <p>All of the listed elements are thoroughly and clearly described. TA does not need more than one read through to understand material. (2 marks)</p> <p>Clear summary of results. TA does not need more than one read through to understand material. (3 marks)</p>	<p>All or most elements are there but some clarity missing. (4 marks)</p> <p>All or most elements are there but some clarity missing. (1 mark)</p> <p>All or most elements of a conclusion are there but some clarity missing. (2 marks)</p>	<p>More than 2 elements are missing and/or significant issues with clarity. (2 marks)</p> <p>N/A</p> <p>More than 2 elements are missing and/or significant issues with clarity. (1 mark)</p>	<p>Insufficient attempt at description. (0 marks)</p> <p>Insufficient attempt at description. (0 marks)</p> <p>Insufficient attempt at description. (0 marks)</p>
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References (10 marks)	<p>All relevant references are in APA format.</p> <p>References are from credible sources.</p> <p>References are provided for all information that is not considered common knowledge (would your friend who is doing their BA know it?)</p> <p>All in-text citations in the report are formatted correctly and match the references.</p> <p>Lab manual is included in the list of references and is only cited in the Materials and Methods section.</p> <p>If manual not cited: -3 marks If only not as ITC in M&M: -3 marks If only not in references: -3 marks</p>	All elements of proper referencing are present (10 marks)	Some mistakes in the APA format or some references from inappropriate sources, insufficient references for information provided.	Some mistakes in the APA format or wrong APA format used, many inappropriate references, not all information that requires citations is referenced	Minimal to no effort on referencing.
Organization, Logic and Legibility (5 marks)	<p>Report is double-spaced.</p> <p>Consistent font.</p> <p>Free of spelling and grammar errors.</p> <p>Report is organized and formatted appropriately.</p>	Clear formatting (double spaced), proper spelling and grammar, and all other elements are present	Some elements of formatting are missing, or report was unclear at times without smooth transitions between sections	Many elements of formatting are missing and/or there are many spelling and grammar mistakes.	Consistent mistakes throughout report make it hard to read