Introduction (20%)

5 (Exceeds Expectations)	4	3 (Meets Expectations)	2	1 (Does Not Meet Expectations)
☐ The intro hooks the reader by setting the stage for the question(s) of the paper		☐ Background relevance is established, but does not connect to the larger impact or importance		☐ There is little attempt at building a story for broad interest
The introduction provides in-depth and relevant context for the research, all topics to be addressed in the paper are well-covered		☐ Background context is generally complete and relevant, but some topics lack detail/include irrelevant information, or some topics are missing		☐ There is little to no background information, or background information has little to no relevance to the topic
☐ Connections between the topic(s) of the paper and the literature are well-established, relevant, and insightful		☐ Connections between the topic of the paper and literature are generally clear and well-established, but some are weak/vague/irrelevant/not well-connected		☐ Generally the connections between topic(s) of paper and literature are weak/vague/irrelevant/not well-connected
The introduction clarifies the motivation for the work by clearly and actively stating all the objectives of the paper		☐ Objectives are generally clear; however, some objectives require clarification or improved connection with the motivation for the study, or some objectives are missing		☐ Objectives of the paper are inaccurate/vague/unconnected to the topic/many of the objectives are missing
All hypotheses are present and correct, and the biological mechanisms leading to the hypothesis are fully explained		☐ Hypotheses are generally correct, but some hypotheses lack clarity/biological mechanisms are not stated, or some hypotheses are missing		☐ Hypotheses are inaccurate, or many are missing, or are so unclear that the reader is unable to interpret them
All predictions are insightful and accurate and are explicitly linked to the hypotheses		☐ Predictions are generally clear, but some require clarification, or are inconsistent with the hypotheses, or some predictions are missing		☐ Predictions are unclear/incorrect/not linked to the hypotheses, or many predictions are missing

Methods (20%)

5 (Exceeds Expectations)	4	3 (Meets Expectations)	2	1 (Does Not Meet Expectations)
☐ Concise and effective description of the study system (i.e., study organism(s), site description), with no extraneous details		☐ Description of the study system is generally clear and concise, but may contain some extraneous information, or not enough detail, or some information is missing. May cause minor difficulty in replicating the study		☐ Description of the study system is unclear and rambling, contains extraneous information, or not enough detail, or much information is missing. May cause major difficulty in replicating study
Comprehensive description of the experimental design . Reader could easily replicate the experiment because all necessary information is included (replicates, sampling method, treatment levels, etc.)		☐ The description of the experimental design is generally complete, but some of the details of the experimental design are missing. This may cause minor difficulty in replicating the study		☐ The description of the experimental design has insufficient detail for the reader to replicate (no replicates, sampling method, treatment levels)
The description of the data collection (i.e., sampling, techniques, assays, sample processing) is detailed and comprehensive. Reader could easily replicate the methods used to collect data		☐ The description of the data collection is generally clear and complete; however, some aspects of data collections are unclear or missing, which may cause minor difficulty in replicating study		☐ The description of the data collection is generally unclear and incomplete; many aspects of data collection are missing, which may cause major difficulty in replicating study
☐ Description of data analysis used (statistical test used, summary statistics, data transforms, etc.) is thorough, accurate, and appropriate to the experimental design		☐ Description of data analysis is generally accurate and appropriate; some parts are unclear, or aspects are missing or inappropriate. This may cause minor difficulty in replicating the analyses		Description of data analysis is inaccurate and/or inappropriate: many parts are unclear, or aspects are missing. This may cause major difficulty in replicating the analyses

Effective Writing (10%)

5 (Exceeds Expectations)	4	3 (Meets Expectations)	2	1 (Does Not Meet Expectations)
☐ Organization is fluent and logical, allows the reader to easily understand the content of the paper. Format style was followed.	1	☐ Organization of content (introduction/discussion) somewhat lacks structure, but does not interfere with the ability of the reader to understand the meaning. Format style mostly followed.		☐ The organization is very poor and this causes confusion for the reader. Format style mostly not followed.
The content of the introduction flows from the general to the specific and the content of the discussion flows from specific to general	1	☐ Content of the introduction flows somewhat general to specific but can be inconsistent in the flow		☐ Content of the introduction shows no discernible flow
Writing shows sophistication in language choice , only minor errors in spelling and grammar are present and these errors do not interfere with the message of the paper		☐ Writing skills are adequate; there is a moderate level of spelling and grammatical errors, but these do not interfere with the reader's ability to understand the paper		☐ Language is inappropriate, may consistent spelling and grammatical errors; theses errors make it difficult for the reader to understand the paper
Paragraphs are focused (single topic) and coherent. First sentence conveys the topic of the paragraph		☐ Paragraphs: some lack a focus/each paragraph not introduced appropriately		☐ Paragraphs lack structure/lack focus/are incoherent
☐ The student's writing is concise	1	☐ Writing somewhat concise, but includes some extraneous details		☐ Writing is not concise, uses run- on sentences, vague rambling sentences
Literature Cited correctly within text and full citations in literature cited section		☐ Literature cited: generally correct, a few mistakes in formatting in text and/or in literature cited section		☐ Literature cited: major formatting errors in text and in literature cited section