

		Needs Development (1-2)	Satisfactory (3)	Good (4)	Exemplary (5)
Title		Title is vague.	Title is not specific but is somewhat indicative of what the study was about.	Title is specific but only partially indicates what the study was about.	The title specifically and completely indicates what the study was about.
Abstract		Clearly and succinctly addresses at least one of the points listed under exemplary.	Clearly and succinctly addresses two of the points listed under exemplary, or attempts to address at least three of the four points but is too vague.	Clearly and succinctly addresses three of the points listed under exemplary.	Clearly and succinctly <ul style="list-style-type: none"> states the study's central purpose and rationale summarizes the approach taken summarizes the key results states the central conclusions
Introduction	Central purpose or hypothesis or question	Purpose is too general or is not directly related to this study.	Partially summarizes the study's goals, or is unclear	Most study goal(s) are clearly summarized or goals are stated but not near the end of the introduction.	Study goal(s) are clearly and completely summarized near the end of the introduction.
	Rationale	Some background information indirectly justifies conducting the study.	Rationale is unclear or is not specific, but the background information indirectly justifies conducting the study.	Rationale is clear and specific but provides only a partial justification for the stated purpose.	Rationale is clear and specific and provides a complete justification for the stated purpose.
	Background (key terms & concepts)	Less than half the key concepts/terms are clearly explained. More than half the information is extraneous.	Some (at least half) relevant background concepts and key terms are clearly explained.	Most relevant background concepts and key terms are explained or defined OR Includes some extraneous information.	All relevant background concepts and key terms are clearly explained or defined. All background information is relevant to the study.
	Sources	More than half of the facts/opinions are not appropriately supported.	Some facts/opinions are appropriately supported.	Most statements of fact/opinion are appropriately supported	All statements of fact/opinion are supported with appropriate references or examples.
	Study design	Study design is not clearly described but may be alluded to in the background description.	Study description is too detailed (includes method details) and/or some key aspects of the study design has not been described.	Study design is described before the purpose statement or a key aspect of the study design was missed.	Provides a brief but clear overview of the study/experiment design after the purpose statement.
Materials & Methods		Cannot follow how the study was conducted because methods are incomplete and not logically organized. Presents protocols; not methods.	Mentions most key methods but are not fully described, or are poorly organized, or includes several factors that did not influence the results.	Most methods are described (missing no more than one method) but are somewhat unorganized or includes factors that did not influence the results.	All methods are clearly described in prose with appropriate detail All factors described likely influenced results. Methods are organized with no repetition.

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Results	Analysis	Minimal analysis was completed. Presents mostly raw or inaccurate data.	Analysis addresses some of the study's purpose and/or there are several inaccuracies and/or includes method details.	Analysis addresses most of the study's purpose and/or there are some minor inaccuracies.	Analysis accurately and completely addresses the study's purpose.
	Presentation	Highlights no trends or minor trends only, or most statements are not specifically supported, or visuals are missing.	Less than half the important trends are described, or visuals do not clearly summarize the results, or visuals are not used to support specific statements).	Important trends are not always easy to follow <ul style="list-style-type: none"> • visuals are not used effectively or • descriptions are not specific or • statements are not always supported. 	The reader can easily follow all or almost all the important trends/results <ul style="list-style-type: none"> • visuals are used to clearly summarize results and • key trends/results are described using clear, specific, supported statements.
	Visuals	Visuals missing or they cannot be interpreted because they are not properly constructed or legends/titles/labels are missing.	Some visuals are missing two key aspects or Some visuals are not well constructed.	Some visuals are missing one key aspect.	Visuals are well constructed and self-contained (i.e indicates the question addressed, the major aspects of how the question was addressed, and the most important results).
Discussion	Central purpose is addressed	The central purpose is indirectly addressed, or results are repeated or presents only new analysis.	The central purpose is partially addressed or some results are inaccurately interpreted or includes new analysis	Central purpose is mostly addressed and/or some results are repeated and/or purpose is addressed but not at the start.	Discussion begins by accurately interpreting and clearly relating the summarized results to the central purpose/question/hypotheses/ expectation.
	Interesting or unexpected results.	Acknowledges and explains only minor inconsistencies and errors and/or focuses on human error.	Unexpected results are acknowledged but with no (or inaccurate) biological explanation.	Acknowledges and biologically explains only the most obvious unexpected results, or explanation is inadequate.	Interesting and/or unexpected findings are discussed logically, based on "biology not apology".
	Context	Describes some general knowledge but does not relate it to this study's results or mostly presents background information.	Describes some relevant context but does not clearly relate it to this study's results and/or includes irrelevant or background information.	Discusses at least one key relationship between this study's results and current understanding.	Critically assesses how this study's results contribute to current understanding in the relevant field.
	Suggestion	Suggestion is too vague to evaluate or would not improve or extend the study.	Suggests a minor modification or suggestion is not adequately described.	Clearly describes an alternate approach or study modifications that would improve this study.	Clearly describes a specific study that extends the current study.
	Supported	Statements of fact or opinion are not supported.	Facts are not distinguished from speculation or many statements of fact or opinion are not supported.	Most statements of fact or opinion are supported.	Statements of fact or opinion are supported with references, data or examples; facts are distinguished from speculation.
Citations		Missing several references or Significant errors in citation or reference format.	Missing references or includes references not used.	Some minor errors in citation or reference format.	All references are cited. References are complete. Citations are in correct format.

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Style	Less than half the style requirements are met, or is not presented in a professional manner.	Half the style requirements are met, or Several aspects are not professionally presented.	Most style requirements met. Meets most aspects of organized and professional.	Style requirements met. Organized & professional (tables not split, section headings clear, species names in italics, etc.).
Communication	Paragraphs are not focused or coherent. Sentences are poorly constructed.	Most paragraphs are focused but frequently are not coherent because of <ul style="list-style-type: none"> • poor grammar • poor word choices • vague or verbose statements. 	Most paragraphs are focused and coherent but <ul style="list-style-type: none"> • tense is frequently used incorrectly, or • uses quotes, or • spelling is frequently incorrect, or • information is not in a logical order. 	Most of the time <ul style="list-style-type: none"> • Information is in a logical order. • Paragraphs are focused and coherent. • Statements are specific and succinct. • Tense used correctly. • No quotations. • Spelling is correct.