

# Supplemental Material

CBE—Life Sciences Education

Wiley et al.

## Scientific Paper Grading Rubric

	5 (excellent)	4	3	2	1 (poor)
<b>Intro Statement</b>	Clear, focused, Correct information		Missing some goals of study; some unclear statements		Goals of study completely missing or misunderstood
<b>Materials/ Methods</b>	Logical organization according to activity; Complete descriptions of methods, including reagents, procedural steps, and equipment used.		Lacking some organization according to activity; Descriptions of methods lacking information on reagents, procedural steps, or equipment		No obvious organization; Descriptions of methods are lacking in substantial ways, such as information on reagents, procedural steps, or equipment.
<b>Results</b>	Logical flow that "tells the story" of your study. Questions prompting each experiment are clear; clear explanation of approach; succinct and accurate description of what the data show; Tables and Figures are cited at appropriate places in the text.		Lacking somewhat in logical organization; questions prompting each experiment are clear; explanation of approach is lacking, or description of outcomes. Tables and Figures are cited.		Lacking discernable organization; what the experiments are addressing is unclear; no summary of experimental outcomes; Tables and Figures are not cited.
<b>Discussion</b>	Data interpretation points or correlations have depth, clarity, and sophistication, and are logical (and not overcomplicated). New models or hypotheses are presented and well-rationalized. Relevance of new findings to previous knowledge, and how they advance our knowledge is convincing.		The obvious data interpretation points or correlations are made, but are lacking some depth in analysis. New models or hypotheses are presented but are not clearly rationalized. Relevance of new findings to previous knowledge is discussed, but not entirely convincing.		Results are not discussed in context of previous knowledge. Data interpretation points lack substantiation. New models or hypotheses are not proposed, or are irrelevant to what the data support.
<b>Language</b>	90% accurate, scientific; correct grammar		70% accurate, scientific; correct grammar		<50% accurate, scientific, correct grammar
<b>Tables and Figures</b>	Appropriate display of information; Easy to read; Axes labeled correctly; Appropriate title and legend (or footnotes for Table).		Some problems with display choice; Somewhat difficult to understand; Missing parts of axis labels or legend; Minor problems with layout; sig figures		Missing legends, titles, or footnotes (if necessary); Very difficult to understand, or inappropriate graph type; Major layout problems
<b>References</b>	Cited in a proper format		Some formatting		Missing

			problems		
--	--	--	----------	--	--