

Student: _____

Grade: _____ / _____

Experiment: _____

Common Abstract Errors
<i>Purpose</i> <input type="checkbox"/> Purpose refers to the lab manual or other outside information <input type="checkbox"/> Purpose is incorrect (the correct purpose is almost always “to measure ...” or “to determine...”)
<i>Equipment & Procedure</i> <input type="checkbox"/> Abstract lists the equipment rather than describing it <input type="checkbox"/> Procedure is too detailed <input type="checkbox"/> Procedure is insufficiently detailed or refers to the lab manual <input type="checkbox"/> Procedure does not reflect what you actually did <input type="checkbox"/> You accepted measurements that are not believable
<i>Analysis & Uncertainties</i> <input type="checkbox"/> Abstract doesn't state why a plot was made <input type="checkbox"/> Abstract blames or credits a plot for making a decision <input type="checkbox"/> Abstract blames or credits Excel for making a decision <input type="checkbox"/> Result is computed incorrectly <input type="checkbox"/> Uncertainty is computed incorrectly
<i>Results & Conclusions</i> <input type="checkbox"/> Numeric result has incorrect significant figures <input type="checkbox"/> Numeric result has bad units <input type="checkbox"/> Numeric result uses “E” or “^” notation (scientific notation must be in the form $(1.23 \pm 0.04) \times 10^{-2}$) <input type="checkbox"/> Conclusion blames “human error” or the equivalent <input type="checkbox"/> Conclusion doesn't state the primary source of error (what improvement would most improve the result?) <input type="checkbox"/> The stated primary source of error was already accounted for, so it can't still affect the results
<i>Mechanical</i> <input type="checkbox"/> Abstract has spelling and/or capitalization errors <input type="checkbox"/> Abstract has grammar errors (such as run-on sentences, missing verbs, missing nouns) <input type="checkbox"/> Abstract has tense errors (every part should be in past tense) <input type="checkbox"/> Abstract uses future tenses like “would” or “could” inappropriately <input type="checkbox"/> Abstract uses a pronoun inappropriately (usually, you don't say what “it” is) <input type="checkbox"/> Abstract uses an article incorrectly (“a” and “the” mean different things) <input type="checkbox"/> Abstract has poor word choice (usually, a word doesn't mean what you think it does, or is too fancy) <input type="checkbox"/> Abstract is not sufficiently concise <input type="checkbox"/> Abstract contains forbidden elements (such as pictures or equations)

Comments:

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Logbook & Excel Grading Checklist
<p style="text-align: center;"><i>Overall</i></p> <ul style="list-style-type: none"><input type="checkbox"/> The logbook is the correct quad-ruled, hard bound notebook<input type="checkbox"/> All pages are numbered, on both sides, including pages that you haven't used yet<input type="checkbox"/> Student's name and contact information are on the cover<input type="checkbox"/> Pages 1 and 2 (Not the inside cover!), at a minimum, are reserved for the table of contents<input type="checkbox"/> Table of contents is complete for all completed labs<input type="checkbox"/> Logbook has no torn-out pages
<p style="text-align: center;"><i>Preparatory Work</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Pre-Lab quiz work and ideas are recorded in the logbook<input type="checkbox"/> Addresses main ideas, not just answers to questions<input type="checkbox"/> Main ideas are summarized for easy access
<p style="text-align: center;"><i>Lab Work & Effort</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Recorded lab partner's name and contact info<input type="checkbox"/> Recorded all <i>original</i> measurements (<i>before</i> making any calculations or unit conversions)<input type="checkbox"/> Recorded all necessary quantities<input type="checkbox"/> Repeated measurements that were obviously incorrect<input type="checkbox"/> Uses appropriate symbols for each quantity (including equations on plots)
<p style="text-align: center;"><i>Analysis & Uncertainties</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Has a copy of relevant plots<input type="checkbox"/> Relates results from plots (e.g., slopes) to basic equations (i.e., understands purpose of each plot)<input type="checkbox"/> Presents algebraic representations of all uncertainties
<p style="text-align: center;"><i>Clarity & Presentation</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Mistakes, although crossed out with a single line, are still legible<input type="checkbox"/> Includes complete, clear, labeled drawing of the experiment without extraneous detail<input type="checkbox"/> Includes a summary table with all relevant quantities<input type="checkbox"/> Summary includes units and uncertainties<input type="checkbox"/> Provides sufficient description (procedure) so that someone else could repeat the experiment without the assistance of the lab manual or any other external reference<input type="checkbox"/> Data, analyses, etc. are not crammed into too small a space or in illogical order<input type="checkbox"/> All numerical information is labeled (i.e., not just floating numbers without context)<input type="checkbox"/> Includes an original copy of appropriate abstract
<p style="text-align: center;"><i>Excel</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Recorded all <i>original</i> measurements (<i>before</i> making any calculations or unit conversions)<input type="checkbox"/> Uses only Excel equations for <i>all</i> other cells (that is, you may never enter any value from a calculator)<input type="checkbox"/> Each measured value is entered only once<input type="checkbox"/> Includes labels and units<input type="checkbox"/> Worksheet includes all partners' names and the date that the experiment was performed<input type="checkbox"/> Plots are formatted properly (uses template, has proper labels, etc.)