

| AP CHEM FORMAL LAB REPORT RUBRIC | <i>Needs Improvement</i> (-3% each) | <i>Meets AP Chem Standard</i> (Earns 85%) | <i>Exceeds AP Chem Standard</i> (+1%) Includes "Meets Standard" description |
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| LAB NOTEBOOK Data | Table of Contents (TOC) page is not updated. Data pages are not dated and/or numbered. Pre-lab questions are incomplete or missing. Mistakes are crossed out with a heavy or multiple lines, OR obvious attempts at erasure or removal of data are apparent. Raw data are recorded on loose paper or lab handout. | Lab title is listed in TOC. Pages for lab data are dated and numbered. Pre-lab questions are answered. Raw data are entered into notebook using permanent ink. Errors are corrected by drawing one line through the mistake, then proceeding with the new data. | TOC is neat and well-presented. Entire lab notebook is numbered. Pre-lab questions are answered thoroughly and comprehensively. Calculations and supporting work are written out. Data tables are drawn in notebook before experiment begins. |
| TITLE | Title of experiment is missing or unclear. | Includes descriptive title of experiment. | Title is creative and clever, reflectively showing how lab fits into curriculum. Includes descriptive subtitle. |
| INTRODUCTION | Introduction is missing, too brief, or too long a statement. Restates title and/or is copied from the source. Chemical equations are missing, incomplete, unbalanced and/or incorrectly shown. | Provides a short introduction (3-8 sentences) on the purpose and background for the experiment. Shows complete chemical equations for all reactions that occur in the procedure. | Is a clear, concise, thoughtful description of experiment. Reflectively shows how lab fits into curriculum. Both molecular and net ionic equations are correctly included. All balanced chemical equations are correctly shown with states of matter and reaction conditions are noted. |
| LAB PARTNERS | Lab partner(s) names are missing, incomplete, or incorrectly spelled. | Includes a list of any people with whom you are working. | Lab partners are given clever, unique, and appropriate nicknames that coincide and with experiment. |
| METHODS SECTION Materials & Equipment Procedure | List of chemicals and equipment is missing, incomplete, or includes extraneous or incorrect chemicals and equipment used to perform experiment. Is missing, is incomplete, or describes procedure in too much or too little detail. Is confusing, misleading or incorrect. Uses present tense, numbered lists or "command" format. | Includes a neat list of chemicals by formula and equipment needed to perform the experiment. Records procedures with sufficient detail. Procedural errors are included. Procedures use past tense and passive voice in paragraph form. | Materials used are not listed separately, but underlined as they appear in the procedure, along with an explanation of why that particular material was used. Drawings or photographs of experimental setup included. Clearly and concisely describes procedure in excellent detail and is easily followed. |
| RESULTS SECTION Data/Table Observations Figures Calculations | Data are missing, incomplete, or poorly organized. Observable occurrences in reactions are missing, incomplete, or incorrectly reported Figures are missing, incomplete or incorrect. Captions, axes labels, and/or units are missing or incorrect. Graphs are drawn on notebook paper or without using a straight-edge or graphing software. Calculations are missing, incomplete, or incorrectly shown. Significant figures are disregarded or are incorrect. Units are missing or are incorrect. | Data are clearly labeled with units and/or conditions. Includes group data and class data (if applicable). Reports any observable occurrences in the experiment (color changes, precipitation, gas evolution, etc.) Graphs, charts, diagrams, and/or photos have a descriptive title or caption, and axes labels with units. Data presented graphically are also given in a table. Shows only one sample calculation of each type. Calculations are reported using significant figures and with appropriate units. Calculates average value, percentage yield, percent error, etc., as is appropriate for experiment. | Reports data in neat, clear, effective form. Data tables include descriptive titles. Reports observable occurrences in reactions accurately, clearly, thoughtfully, and concisely. Includes neat, readable, concise and appropriately sized figures. Color is used effectively. Best fit lines and linear regression analysis included when appropriate. Includes a simple title of what is being calculated. Calculations are written in a clear, easily understandable and logical fashion. Average deviation and/or standard deviation are calculated, as appropriate. |

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| DISCUSSION SECTION | Does not connect hypothesis/expectations with gathered data OR is missing, incomplete, incorrect, or repeats insufficient and/or extraneous details. | Restates overall purpose of experiment and how procedure enables meeting stated objectives. Compares group data with class (aggregate) data as appropriate. | Ties overall purpose of experiment, procedure, and curriculum in stated meeting objectives. Thoughtfully and concisely reflects on procedure. |
| Analysis | Does not draw conclusion from data and/or discuss possible trends, OR is missing, incomplete, or incorrect. | Discusses overall results in one or two sentences. Draws conclusions from data and discusses possible trends in data and/or graphs. | Clearly & concisely discusses overall results. Draws thoughtful, reflective conclusions from data and logically discusses trends in data and/or graphs. Includes statistical treatment of data. |
| Sources of Error | Sources of error are missing, incomplete, or incorrect. Human error is cited as a source of error. | Describes likely, realistic sources of error. Discusses experimental weaknesses. | Offers insight into removing or reducing these errors. |
| Analysis Questions | Answers are missing, incomplete, incorrect, or not written in complete sentences. Answers are given as numbered lists. | Correctly answers question(s) as posed in complete sentences, in paragraph form. | Detailed, sophisticated responses to questions are smoothly and logically incorporated into the discussion. |
| CONCLUSION | Conclusion is missing, too brief, or too long a statement. Does not use experimental results to answer the problem. | Uses significant, quantitative results from the experiment to answer the original problem. | Aptly demonstrates how you were able to solve the problem at the beginning of this investigation. |
| WORKS CITED | References are notably missing, incomplete, or improperly cited. | If applicable, lists references accurately and in AMA format. | Includes thoughtful, supplemental references in AMA format that support conclusions and discussions. Hard copies of web-based references are attached. |
| FURTHER INVESTIGATION | Section is missing or irrelevant. | Identifies a new problem. | Describes the changes to the existing procedure that would be necessary to solve new but relevant problem. |
| FORMAT | Report is not typed. Report is written on left and right-hand pages. Sections are out of order. Many grammatical or spelling errors. | Report is on right-hand page only and typed. Report sections are in correct order. Grammatical and spelling errors are minor and do not detract from readability. | Report reflects overall effort to be neat, orderly, readable, and organized. Carefully proofread with no apparent grammatical or spelling errors. |

STUDENT NAME:

PD:

SCORE:

/ 100