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| --- | --- | --- | --- | --- | --- |
|   | Excellent (A) | Satisfactory (B/C) | Needs Improvement (C/D) | Unsatisfactory/ Missing (F) | TOTAL POINTS  |
| Title (5)  | The title is clearly stated and includes the independent and dependent variable and specific plant type. (5 Points) | The title is clearly stated and includes the independent and dependent variable and specific plant type. The title is missing details. (4 Points) | The title is vague and does not include specific information on the dependent/ independent variable or plant type. (3 Point) | There is no title (0-2 Points)  |   |
| Introduction Paragraph 1 (10) | The introduction is clearly written and shows that the student has thoroughly and accurately investigated all five questions. (9-10 Points) | The introduction is clearly written and accurately explains all five questions. The answers may be missing details. (7-8 Points) | The introduction on biochar does not explain all five questions or is done incompletely. (6 Points) | The introduction is missing, incorrect, or poorly written. (0-5 Points)  |   |
| Introduction Paragraph2 (5)  | The introduction is clearly written and shows that the student has thoroughly and accurately investigated all background information on the plant. (5 Points)  | The introduction is clearly written and shows that the student has thoroughly and accurately investigated background information on the plant. The student may not have answered all 15 questions (4 Points)  | The introduction is missing information and/or it is not complete and accurate (3 Points) | The paragraph is missing or incomplete/inaccurate (0-2 Points). |   |
| Purpose (5) | The purpose is clearly stated and ties directly to the experiment (3 Points) | The purpose is clearly written but is not as detailed (2 Points) | The purpose is not clearly related to the experiment and has flaws (1 Point) | The purpose is missing or incomplete (0 Points) |   |
| Hypothesis (5)  | The hypothesis is formatted in an if/then/because statement. It is also testable, specific, and relates to the purpose. (5 Points) | The hypothesis is formatted in an if/then/because statement. It is also testable, relates to the purpose but may not be as specific. (4 Points) | There are flaws in the testability of the hypothesis and the format (3 Points) | The hypothesis is flawed or missing (0-2 Points) |   |
| Control/ Dependent / Independent Variables (10) | The control group, dependent variable and independent variable and accurately and specifically stated in detail (9-10 Points) | The control group, dependent variable and independent variable are accurately stated but may lack detail. (7-8 Points) | The control group, dependent variable and/or independent variable are not accurate and may lack detail. (6 Points) | The control group, dependent variable and/or independent variable are not accurate or missing. (0-5 Points) |   |
| Data Table (5)  | The original data table is included and is complete with details (5 Points) | The data table is included but may not have as many details (4 Points) | There are missing/incomplete data (2-3 Points) | The data table is missing or inaccurate (0-1 Points) |   |
| Graphs (10) | The graphs are created in Excel. The appropriate graph type is selected, and data is displayed accurately. The title and axes are specifically and accurately labeled. (9-10 Points) | The graphs are created in Excel. The appropriate graph type is selected, and data is displayed accurately. The title and axes are accurately labeled. (7-8 Points) | The graphs are created in Excel. The data is displayed accurately. The labels and titles may not be specific. (6 Points) | Graphs are missing or incomplete. (0-5 Points) |   |
| Analysis (10)  | All data is clearly represented and explained thoroughly. Trends in the data are explained. (9-10 Points) | All data is clearly represented and explained. Trends in the data are explained. (7-8 Points) | The analysis may not include important data and/or the data is not described accurately/completely. (6 Points) | The analysis in incomplete and/or missing. (0-5 Points) |   |
| Conclusion (15) | All questions on the lab sheet are clearly and complexly answered. The student demonstrates clear understanding of the experiment and ties it back to the background information. (14-15 Points) | Questions on the lab sheet are addressed but the student did not completely answer the questions. The student demonstrates understanding of the experiment and ties it back to the background information but isn't specific. (11-13 Points) | Questions on the lab are addressed but may be incomplete, missing, and/or not tie the experiment to the background information. Answers to questions are incomplete. (9-10 Points) | Conclusions are missing/inaccurate/or incomplete. (0-8 Points) |   |
| Reflection (10)  | The errors, reflection, new experiments proposed, and new questions proposed reflect synthesis of background information and the results of the lab. The student connects complex ideas and is accurate and thoughtful. (14-15 Points) | The errors, reflection, new experiments proposed, and new questions proposed reflect synthesis of background information and the results of the lab. There may be minor errors in thought process or complexity of ideas (11-13 Points) | The errors, reflection, new experiments proposed, and new questions proposed are simplistic and do not reflect synthesis of background information and the results of the lab. (9-10 Points) | The errors, reflection, new experiments proposed, and new questions are simplistic or not present. (0-8 Points) |   |
| Works Cited (5)  | The paper cites the proper number of sources. In text citations are accurate and the Works Cited page is accurate. (5 Points) | The paper cites the proper number of sources. There may be minor errors in the in-text citations or the Works Cited page. (4 Points) | The paper does not have all the required sources. The in-text citations or works cited page may have errors. (3 Points) | Sources are not included, cited, or are inaccurate. (0-2 Points) |   |
| Formatting (5)  | The paper is free of grammatical, spelling, and formatting errors (5 Points) | There may be minor errors in grammar, spelling, and/or formatting (4 Points) | There are major errors in grammar, spelling, and/or formatting. (3 Points) | The paper is not formatted or unreadable (0-2 Points)  |   |
|  |  | Biochar Lab Report  | TOTAL SCORE (100 Points Possible) |   |