

Design Your Own Biolab Holistic Rubric

| Scoring Criteria | Rating |
|--|--------|
| <ul style="list-style-type: none"> • The design of study is exemplary in its clarity and completeness and shows a clear understanding of the scientific process. • The sequence of steps is exceptionally logical, easy to follow, allowing for the collection of valid scientific data. • The student employs experimental controls, replication and strategies to minimize error where applicable. • Observations/data collection is very systematic and detailed. • Measuring tools were appropriately selected and used precisely. • If the student's original methodology prevented successful collection of data, the student successfully problem solved the procedures to improve the precision and accuracy of the data set. • Data tables are very organized include appropriate labels and units. • Answers to Analyze and Conclude questions are exceptionally logical, thoughtful and accurate, utilizing evidence collected from the investigation for support. • Student shows a thorough understanding of the relationship between evidence and explanation and does not make inferences beyond what the data set allows. • Appropriate safety precautions are planned and utilized. • Waste disposal was complete. | 4 |
| <ul style="list-style-type: none"> • The design of study is exemplary in its clarity and completeness and shows a clear understanding of the process. • The sequence of steps is exceptionally logical, easy to follow, allowing for the collection of valid scientific data. • Where applicable, student shows a thorough understanding of the need for controls, replication and strategies to minimize error. • Observations were made systematically and data charts are organized and complete. • The student uses tools and materials precisely and employs strategies to minimize error. • Analysis questions are answered completely and where applicable logical explanations are provided. • Appropriate safety precautions are planned and utilized. • Waste disposal was complete. | 3 |
| <ul style="list-style-type: none"> • Lab was completed but procedures were not written clearly or procedures were not followed systematically. • Observations were made but were not made systematically. • Data tables were poorly drawn and organized and/or lack complete data collection. • Tool and material usage was sloppy, leading to imprecise measurements. • Answers to analysis questions were not based on evidence from the lab and/or lacked explanations where required. • Safety precautions are lacking or are incomplete. • Plans to care for the workstation and dispose of wastes are lacking or incomplete. | 2 |
| <ul style="list-style-type: none"> • The work is very poorly done or has not been completed. | 1 |