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| --- | --- | --- | --- | --- |
| **Category** | **Exemplary (4 pts)** | **Proficient (3 pts)** | **Developing (2 pts)** | **Needs Revision (1 pt)** |
| **Problem / Question** | * Problem is correctly identified.
* No spelling/ grammar (s/g) errors.
 | * Problem is sufficiently identified.
* Few s/g errors.
 | * Question is partially identified.
* Some spelling/grammar errors.
 | * Question is incorrectly identified.
* Many errors.
 |
| **Introduction** | * State the goals and objectives of lab
* Describes what data will be collected
* Briefly summarizes experiment
* Describe how that data will be used to arrive at conclusions at the completion of the laboratory.
 | One key element is missing:* State the goals and objectives of lab
* Describes what data will be collected
* Briefly summarizes experiment
* Describe how that data will be used to arrive at conclusions at the completion of the laboratory.
 | Two key elements are missing:* State the goals and objectives of lab
* Describes what data will be collected
* Briefly summarizes experiment
* Describe how that data will be used to arrive at conclusions at the completion of the laboratory.
 | A confusing of misleading introduction missing more than 2 elements:* State the goals and objectives of lab
* Describes what data will be collected
* Briefly summarizes experiment
* Describe how that data will be used to arrive at conclusions at the completion of the laboratory.
 |
| **Variables** | * Independent var.
* Dependent var.
* controlled variable.
 | One variable is missing:* Independent var.
* Dependent var.
* controlled variable.
 | Two variables are missing:* Independent var.
* Dependent var.
* controlled variable.
 | * All variables are missing.
 |
| **Hypothesis** | * Link between problem and predicted results direct and relevant.
* Use if-then-because
* Ind & Dependent variable featured
* No s/g errors
 | * Reasonable link between problem and predicted results.
* Use if-then-because
* Ind./Dep var featured
* Few s/g errors
 | * Weak link between problem and predicted results.
* Missing if-then-because
* Missing ind./dep. var.
* Some s/g errors.
 | * Unreasonable link between problem and predicted results.
* Missing if-then-because
* Missing ind/dep var.
* Many s/g errors
 |
| **Materials and Procedure** | * Includes list of all materials in bullets.
* Procedure written in past tense
* Does not use I, you, or we
* Procedure in paragraph form using transition words
* Specific
* Refer to glassware instruments used
* Includes any measurements
* No s/g errors.
 | * Includes list of most materials in bullets.
* Procedure written in past tense
* Does not use I, you, or we
* Procedure in paragraph form w/ transition words
* Missing some specifics
* Refer to glassware instruments used
* Includes any measurements
* Few s/g errors.
 | * Includes list of some materials in bullets.
* Procedure written mostly in past tense
* Uses I, you, or we sometimes
* Procedure in paragraph form w/ missing transition words
* Missing specifics—not in order
* Refer to glassware instruments used
* Includes any measurements
* Some s/g errors.
 | * Includes list of a few materials in bullets.
* Procedure not written in past tense
* Uses I, you, or we
* Not paragraph form/ missing transition words
* Missing specifics—not in order
* Does not refer to glassware/ instruments
* Includes little measurements
* Many s/g errors.
 |
| Observations and Data Analysis/ Calculations | * Observations are plentiful and specific for each experiment
* Charts and graphs are recorded where necessary.
* Data is properly recorded in a coherent table
* Proper calculations are carried out.
* Proper units are used.
 | Missing one of the following:* Observations are plentiful and specific for each experiment
* Charts and graphs are recorded where necessary.
* Data is properly recorded in a coherent table
* Proper calculations are carried out.
* Proper units are used
 | Missing two of the following:* Observations are plentiful and specific for each experiment
* Charts and graphs are recorded where necessary.
* Data is properly recorded in a coherent table
* Proper calculations are carried out.
* Proper units are used
 | * No data table present.
* Observations are vague and unclear.
* Calculations unclear or incorrect.
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| **Discussion and Conclusion** | * Restates hypothesis
* States hypothesis is incorrect/correct
* Data is analyzed thoroughly and correctly. It’s used to support valid conclusions
* 2 Sources of error in experiment explained
* 2 ways to improve the experiment is explained
* Asks a new question
* Makes a connection to how experiment could be used in real life.
 | One key element of conclusion is missing or not fully expanded upon:* Restates hypothesis
* States hypothesis is incorrect/correct
* Data is analyzed thoroughly and correctly. It’s used to support valid conclusions
* 2 Sources of error in experiment explained
* 2 ways to improve the experiment is explained
* Asks a new question
* Makes connection of how experiment could be used in life
 | Two key elements of conclusion are missing:* Restates hypothesis
* States hypothesis is incorrect/correct
* Data is analyzed thoroughly and correctly. It’s used to support valid conclusions
* 2 Sources of error in experiment explained
* 2 ways to improve the experiment is explained
* Asks a new question
* Makes a connection to how experiment could be used in life
 | * Paraphrases manual with little data analysis
* Conclusions may be wrong or data misinterpreted.
* More than two key elements missing from conclusion.
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| **Category** | **Exemplary (4 pts)** | **Proficient (3 pts)** | **Developing (2 pts)** | **Needs Revision (1 pt)** |
| Student’s **transitions** are… | … varied and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. | … varied and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. | … appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. | … inappropriate and ineffective transitions in attempt to create cohesion and clarify the relationship between ideas. |
| Student’s **word choices** show… | …precise language, science-specific vocabulary to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the experiment’s context as well as to the level of knowledge of likely readers. | …precise language and science-specific vocabulary to manage the complexity of the experiment’s context as well as to the level of knowledge of likely readers. | …precise language and age-appropriate vocabulary to inform about or explain the experiment completed. | …imprecise language and age-appropriate vocabulary to inform the reader about the experiment. |
| Student’s **tone**… | …is formal, objective, and established early and maintained throughout the lab report. | …is formal and/or objective, and may occasionally become information/subjective without hindering the overall integrity. | …is provides for a formal style and objective reading. | …is established but is neither formal nor objective. |
| Student’s **illustration** | Drawing goes beyond in a significant way, e.g. drawing is particularlyclear, colorful | Drawing is neat, easy–to–read, and completely labeled. | Drawing is missing key labels; is sloppy; is misleading. | Drawing missing, illegible, or not included. |
| Student’s **presentation** | Extremely neat, organized, and presentable. | Looks OK | A really rushed job | Completely illegible |

**TOTAL SCORE ON REFLECTION: \_\_\_\_\_\_\_\_\_/48 + 2 points for heading**

**SCORE = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**