# Eutrophication Lab Rubric

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| **Criteria** | **Extending** | **Proficient** | **Developing** | **Emerging** |
| --- | --- | --- | --- | --- |
| **Questioning and Predicting**  *Purpose & Hypothesis* | The reason for doing this lab is described with *detail*  Develops an *insightful* hypothesis using cause and effect reasoning | The reason for doing this lab is *logically* described  Develops a *focused* hypothesis using cause and effect reasoning | The reason for doing this lab is described *at a basic level*  Develops a *predictable* hypothesis using *limited* cause and effect reasoning | The reason for doing this lab is *vague*  *Irrelevant* hypothesis with no cause-and-effect reasoning |
| *Rough Data & Observations* | *Skillfully* makes and records accurate and precise observations  Organizes data and observations to *purposefully* enhance understanding and clarity  Details that might affect the data and conclusions are noted | *Effectively* makes and records observations  *Systematically* organizes data and observation  Attempts are made to note details that might affect the data and conclusions | Makes and records *appropriate* observations  Organizes data and observations *simplistically* | Makes and records *ineffective* observations  *Disorganized* data and observations |
| **Processing & Analyzing Data & Information**  *Results & Summary* | Draws *compelling* conclusions consistent with data using data and calculations as evidence | Draws *meaningful* conclusions consistent with data using data and calculations as evidence | Draws *obvious* conclusions consistent with data, *lacks evidence* | Draws *trivial* conclusions inconsistent with data, *no evidence used* |
| **Evaluating**  *Discussion*  *- Results*  *- Sources of Error*  *- Improvements* | *Efficiently* summarizes and analyzes the main findings of the experiment using data, trends, and calculations as evidence  *Skillfully* evaluates experiment method and conditions for validity: sources of error and their impact on data and findings are discussed using cause and effect reasoning  Makes *significant* suggestions for future changes and adaptations for improvement or future work based on the findings in the experiment using cause and effect reasoning | *Effectively* summarizes the main findings of the experiment using data, trends, and calculations as evidence  *Systematically* evaluates experiment method and conditions for validity: sources of error and their impact on data and findings are discussed using cause and effect reasoning.  Makes *relevant* suggestions for future changes and adaptations for improvement or future work based on the findings in the experiment using cause and effect reasoning | *A workable* summary of the main findings of the experiment, evidence is lacking  *Simplistic* evaluation experiment method for sources of error attempting to use cause-and-effect reasoning  Makes *predictable* suggestions for future changes and adaptations attempting to use cause and effect reasoning | *Ineffectively* summarizes the main findings of the experiment  *Ineffectively* evaluates experiment method and conditions for validity  Makes *unrelated* suggestions for future changes and adaptations for improvement or future work |
| **Communication & Presentation**  *Cognitive task through entire lab report* | *Skillfully* communicates scientific ideas, claims, and information using  scientific language and conventions  Constructs  evidence-based arguments using cause and effect reasoning “if…, then...because”  *Persuasive* data and findings within the lab used as evidence | *Effectively* communicates scientific ideas, claims, and information using  scientific language and conventions.  Constructs  evidence-based arguments using cause and effect reasoning “if…, then…” *Credible* data and findings within the lab used as evidence | *Appropriately* communicates scientific ideas, claims, and information using  scientific language and conventions.  Constructs *simplistic*  Arguments and *attempts* to use data and findings within the lab used as evidence | *Ineffective* communicates scientific ideas, claims, and information using  Inappropriate scientific language and conventions.  *Unsupported*  evidence-based arguments |

## Feedback: