

Research Project

Grading Rubric

- 1. Components of Scientific Paper (0-10 points)**
 - a. Includes Title page, Abstract, Introduction, Materials, Methods, Results, Discussion and Bibliography
 - b. Title page includes title, author(s), date, and course
 - c. Abstract accurately summarizes significance and results of paper
 - d. Introduction provides accurate background information and hypothesis of experiment
 - e. Materials list is complete & corresponds with Methods section
 - f. Digital (computer) copy of paper complete and all in one file
 - g. Copy of Graded Proposal and Marked Grading Rubric turned in with Final Project

- 2. Experimental Design & Depth of Research (0-15 points)**
 - a. Level of rigor (difficulty) of experiment
 - b. Extent of background information in Introduction
 - c. Extensiveness of data collection
 - d. Good testable hypothesis is clearly stated
 - e. Logic of experiment is clear and easy to follow in Methods section
 - f. Appropriate controls are used
 - g. Scientific references are researched and cited

- 3. Presentation and Interpretation of Results (0-15 points)**
 - a. Tables and graphs used to present results clearly (the presentation should provide an obvious answer to the question posed in the hypothesis)
 - b. Calculations for number of microbes per milliliter are performed correctly in scientific method Presentation focuses on the appropriate results (e.g. number of bacteria per milliliter rather than number of colonies per dilution)
 - c. Graphs should be clearly and completely labeled including title, both axes and units
 - d. Appropriate form of graph (line, bar, etc.) is used
 - e. Conclusions made in Discussion should be supported by results
 - f. Unexpected results and problems should be discussed in Discussion
 - g. Alternative or follow-up hypotheses are provided, if appropriate

- 4. Writing Style and Presentation of Paper (0-10 points)**
 - a. Communicates effectively (points are clearly stated, flow of ideas is easy to follow)
 - b. Interesting and informative
 - c. APA format is followed
 - d. Correct spelling & grammar used
 - e. Typed and neat (Including tables & graphs); consistent fonts throughout
 - f. Follows proper rules of nomenclature for scientific names
 - g. References are cited properly in paper
 - h. Bibliography is complete and in proper format (Internet sources rated)

✓ Indicates a component of project that was exceptional

✗ Indicates an area that could be improved