East Troy High School Science Experiment Rubric

AREA	ADVANCED	PROFICIENT	BASIC	MINIMAL
INTRODUCTION	☐Problem is introduced and explained. ☐Hypothesis is clearly written using succinct measurable "If/then" statement. ☐Provides THREE valid references supporting hypothesis	☐Problem is introduced ☐Hypothesis is written using measurable "If/then" statement. ☐Provides TWO valid references supporting hypothesis	☐May be missing one or more required elements. Contains hypothesis with "If/then" statement	☐Fails to contain two or more required elements or poor quality and explanation of information ☐Fails to meet expectations due to inaccurate information or lack of information in multiple areas
EXPERIMENTAL DESIGN	☐Provides and clearly explains quality quantitative and optimum qualitative data. ☐Selects most appropriate materials with exact scientific identification. ☐Outlines procedures in clear succinct manner utilizing scientific vocabulary using distinct steps ☐Utilizes most appropriate three controls and compares the control group with the experimental group in multiple ways ☐Correctly identifies independent and dependent variables ☐Addresses sample size issue providing the most effective data set	☐Provides both quantitative and qualitative data when appropriate ☐Uses appropriate materials with proper identification ☐Stated procedure is clearly outlined in steps ☐Meets expectations in quality of design and explanation ☐Utilizes three controls and compares the control group with the experimental group. ☐Correctly identifies independent and dependent variables ☐Addresses sample size issue providing an adequate data set	☐Has data but may be missing some key data ☐Uses appropriate materials. ☐States procedures. ☐Meets some expectations, but not all ☐Utilizes controls but comparison is poor or missing ☐Identifies independent and dependent variables ☐Addresses sample size.	☐Missing key data or fails to utilize correct materials ☐Lack of explanation or information prevents understanding of procedures utilized
DATA	☐Graph and table are well designed utilizing the most optimum form to present data in a clearly understood format. Uses clearly labeled table with appropriate columns and rows ☐Graph contains all needed labels including title, x and y axis and units of measurement	☐Uses clearly labeled table with appropriate columns and rows ☐Graph contains all needed labels including title, x and y axis and units of measurement ☐Meets expectations in quality and quantity of data presented	☐Uses correct tables and/or graphs ☐Labeling may be poor in quality or missing in some areas	☐Fails to utilize graphs or tables to present data or data presented is inaccurate due to errors or missing information

4-28-2009

Science Experiment Rubric

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CONCLUSION /ANALYSIS	☐States final results in a clear scientific manner maximizing use of scientific vocabulary throughout ☐Draws most appropriate well thought out hypothesis/conclusion supported by accurate data ☐Provides at least of three major sources of error with complete explanation ☐Provides in depth comprehensive analysis of experiment and with critical analysis of how to improve with minimizing errors. ☐Reflects deep critical thinking and analysis	☐States final results using scientific vocabulary ☐Draws appropriate hypothesis /conclusion supported by accurate data ☐Provides a minimum of three sources of error ☐Analyzes experiment and states how to improve with minimizing errors ☐Meets expectations in quality of information presented ☐Reflects critical thinking and analysis	☐States final results but not in a clear manner utilizing scientific vocabulary ☐May be errors in conclusion or analysis ☐Reflects little critical thinking or analysis	☐May be missing conclusion/results, or conclusion and/or results are inaccurate
FORMAT /APPEARANCE	☐Well presented experiment maximizing quality layout/format for ease of reading and comprehension ☐All labeling and headings are clearly labeled with appropriate spacing ☐Few to no spelling errors ☐Quality product in appearance. Product reflects pride in work and exceeds expectations	☐Format is appropriate with clearly labeled headings, appropriate spacing ☐Few spelling and/or grammar errors that cause no distraction ☐Quality product in appearance ☐Meets expectations in quality and quantity of information	☐Format is lacking some quality due to poor layout, labeling or formatting . ☐Spelling or grammar errors may cause distraction	☐Poorly formatted with missing information ☐Poor appearance with numerous spelling or grammar mistakes ☐Fails to meet expectations

Final Grade _____