Science Fair *Experimental Projects* (9th – 12th Grade)

Rubric for School Site Science Fair

	Attempted 1	Proficient 3	Advanced Proficient 5
Problem *(Double Points)* **(x2)**	States the problem as a question that is vague, or as a statement, or addresses an issue to which the student already knows the answer. Shows limited or no connection to a valid scientific or mathematical concept.	States problem as a question, and represents a genuine learning opportunity for the student. Generally addresses a valid scientific or mathematical concept.	States problem as a question, provides evidence that it comes from the student's personal interests or experiences, and represents a genuine learning opportunity for the student. Specifically addresses a valid scientific or mathematical concept, or has a beneficial application to some aspect of society.
Preliminary Research	Uses limited sources from only one type of information resource (e.g., text, encyclopedia, businesses, magazines, catalogs, internet, or interviews), or uses some resources that are not reputable sources. Fails to connect the research to the problem, or material is copied rather than written in the student's own words.	Uses three or more reputable sources, cited correctly. Cites more than one type of information resource. Makes a general connection between the research and the problem in the student's own words.	Uses five or more reputable sources, cited correctly. Cites at least four types of information resources. Makes a clear connection between each source and the problem in the student's own words.
Hypothesis *(Double Points)* **(x2)**	Hypothesis is either not testable or does not connect to the stated problem, or shows no connection to the preliminary research.	Hypothesis is complete (in one sentence), testable, addresses the stated problem, and shows some connection to the preliminary research.	Hypothesis is complete (in one sentence), testable, and clearly addresses the stated problem. Shows a direct connection to their preliminary research.
Procedure & Materials	Experiment is not relevant to the hypothesis or is only performed once. The procedures outlined are seriously incomplete or not sequential, or materials list is missing or incomplete.	Experiment is adequate to test the hypothesis, but may leave some unanswered questions. Performs experiment one or more times. Procedures are outlined in a step-by-step fashion, but there may be 1 or 2 gaps that require explanation. Major materials are listed.	Experiment is a well-constructed test of the hypothesis and is performed several times. Procedures are outlined in a step-by-step fashion that could be followed by anyone without additional explanations. All relevant materials are listed.
Results *(Double Points)* **(x2)**	Does not summarize data clearly. The relationship between the variables is unclear or not discussed. Makes no predictions about what might happen if part of the experiment were changed to better test the hypothesis or answer a further question.	Summarizes the data in a way that clearly describes what was discovered using graphs or charts. Mentions at least one relationship between the variables and gives some analysis of trends/patterns. May attempt predictions about what might happen to the results if part of the experiment were changed to better test the hypothesis or answer a further question.	Summarizes the data in a way that clearly describes what was discovered using graphs or charts. Discusses relationships between the variables and thoroughly analyzes trends/patterns. Makes well-reasoned predictions about what might happen if part of the experiment were changed to better test the hypothesis or answer a further question.
Conclusions	Conclusion does not answer the problem, or does not refer back to the hypothesis, or contradicts the evidence collected.	Conclusion addresses the problem, states if the hypothesis was supported or rejected, and gives some explanation why.	Conclusion completely answers all aspects of the problem, states if the hypothesis was supported or rejected, and clearly cites evidence to explain why.
Visual Quality of Display	Project has limited eye appeal or is not easily readable at approximately two feet distance. The project has limited organization, or contains confusing visuals, or contains major language or spelling errors.	Project is appealing and readable at approximately 2 feet distance. It is organized and clear, uses understandable visuals and/or models, and contains few language and spelling errors.	Project is appealing and neat, and is readable at approximately 2 feet distance. It is well organized and clear, makes striking use of inventive or amusing visuals and/or models, and uses language and spelling flawlessly.

(Projects will receive between 10 and 50 points when all rubric criteria have been addressed.)

Problem *(Double Points)* **(x2)**																	
Preliminary Research																	
Hypothesis *(Double Points)* **(x2)**																	
Procedure & Materials																	
Results *(Double Points)* **(x2)**																	
Conclusions																	
Visual Quality of Display																	
Total Score																	

Science Fair
Experimental Projects
(9th – 12th Grade)
Judge's Score Sheet for School Site Science Fairs

Teacher: ***Period:***

Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:	Student(s):	Project:

NOTES TO TEACHER: For grading purposes, 5-10 pts = Not Proficient (1), 11-24 pts = Partially Proficient (2), 25-39 pts = Proficient (3), 40-50 pts = Advanced Proficient (4).
Complete grading should also include other details not included here as Judging Criteria: for instance, written report details, completion of deadline tasks, display guidelines, model quality, etc.