Elementary STEM Fair Judging Criteria

Science, Technology, Engineering, and Mathematics

Project Title:	**Judge:**
Project Number:	**Scientific Investigation *OR* Engineering Design**

Project Elements	Description of Criteria	0	1	2	3
		Low to High			
Scientific or Engineering Design Process					
Testable Question or Problem to be Solved	Asks a specific, measurable, cause & effect question OR clearly defines how a problem will be solved.				
	Identifies the project as a Scientific Investigation OR an Engineering Design.				
Background Research	Describes why this project was selected and describe research. Shows evidence of understanding the project and can explain why project is important.				
	Identifies a variety of sources that guided the research.				
Hypothesis and Specifying Requirements	Predicts a reasonable outcome as a result of a specific change OR clearly explains how prototype will solve a problem				
Identifying Variables	Identifies independent variable, dependent variable				
	Identifies conditions/controls				
Procedures	Describe the process and/or explain in detail the development of the prototype. High score would indicate that the project can be repeated after reading.				
Trials/Samples	At least 5 trials are shown or variations of the prototype are displayed.				
Data Collection	Use of photos/charts/graphs/illustrations to show data				
	Data is clearly labeled				
	Data measurements were done precisely				
	Data collected relates to the thinking around the hypothesis				
	Explains why data supports or fails to support the hypothesis				

Communication					
Conclusion	***Written*** reflection that describes what the student has learned. Were there any surprises? What would you do differently or to continue the project?				
Abstract	***Written*** summary of the entire investigation.				
Discussion	Explains what was done throughout the project.				
	Defends the connection between their results and conclusions.				
	Explains where the research can lead in the future (or not lead in the future), and why.				
	Relates their research to the real world.				
	Communicates problems and identifies potential sources of error.				
Thoroughness					
Backboard	All components are present and is visually interesting. *(question or problem, hypothesis, abstract, resources cited, title and authors, testing and planning, data and results, conclusion)*				
Research Planning Guide	Completed in its entirety including a log of scientific notes and thinking taken throughout the project.				
	TOTAL (OUT OF 69)				

Recommended Place	**1st 2nd 3rd 4th**