Project name:_____ School:_____ Group members' names:_____

Paterson Public Schools STEM Expo

Inventions: Engineering Innovations (6th-7th Grade)

	Attempted 1	Proficient 2	Well Done 3	Score (0 if missing)
Problem (Double Points) (x2)	Addresses a practical need to which there is already a common solution, or addresses an issue of little practical value.	Addresses a somewhat practical need some people have, which may have an expensive or uncommon solution.	Creatively addresses a practical need some people have, which may have an expensive or uncommon solution.	
Research	Cites one or no information resource (e.g., text, encyclopedia, businesses, magazines, catalogs, internet, or interviews). Fails to mention a known similar idea in common use or material is copied rather than written in the student's own words.	Cites few information resources. Mentions known similar ideas with some elaboration. Makes a general connection to a similar idea in the student's own words.	Cites at least four types of resources Makes a clear and well-elaborated connection with a known similar idea in the student's own words.	
Possible Solutions	Proposes three or fewer solutions, some of which may be fanciful. Solution description is limited.	Proposes at least three practical solutions with limited description.	Proposes three or more practical solutions. One or more are very creative. Provides sufficient description for reader to understand.	
How Invention Works	Provides few details, leaving the reader unclear about ho w the invention works.	Provides adequate details, giving the reader a general understanding of how the invention works.	Explains the invention, addressing all details, giving the reader a clear understanding of how the invention works.	
Chart for Evaluating Invention	Student-developed criteria may be generic and do not apply specifically to the problem. Or, criteria may not be student-developed.	Criteria are student-developed. Some criteria apply to how the invention addresses the problem.	Criteria are student-developed specifically for the project and apply directly to ho w the invention addresses the problem.	
Obstacles	Fails to analyze obstacles related to the practical design and function of the invention (i.e., may list obstacles that refer only to shopping for materials or cosmetic issues).	Provides adequate analysis of the obstacles related to the practical design and function of the invention (i.e., may discuss durability, strength, ease of use, cost/benefit for potential customers, etc.)	Demonstrates in-depth analysis of the obstacles related to the practical design and function of the invention.	
Revised Solutions	Revised solutions do not address the obstacles mentioned, or are not practical.	Revised solutions practically address the obstacles mentioned.	Revised solutions practically address the obstacles mentioned and consider durability or other future issues.	
Science Concepts	Provides limited or no explanation of science concepts. Explanation may not apply to the project.	Provides an adequate explanation of at least one science concept, which has some application to the project.	Provides in-depth explanation of at least one science concept directly applying to the project.	
Display Presentation	Project has limited eye appeal or is not easily readable at approximately t wo 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.	

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