

# Judging Rubric 2023

This rubric used at Invention Convention US Nationals. Western New York Invention also uses it. School-based events are not obligated to use the same rubric. Please use it for reference purposes.

Category	Dimension	Description	Points
<b>Invention Process (40)</b>	<b>Identifying &amp; Understanding</b>	<p>The Identifying stage occurs when inventors seek problems they want to solve. This stage involves how inventors uncover problems and discover who else might experience the same problem.</p> <p>Understanding a problem requires research to identify existing solutions that solve the identified problem and the shortcomings of those solutions. Understanding also includes researching the impact the problem may have on others.</p>	10
	<b>Ideating</b>	<p>Ideating refers to the brainstorming or imagination stage inventors go through to generate a variety of original ideas. Ideation includes developing specific criteria for a successful solution.</p> <p><i>Note: An inventor's idea/s may be updated at any time throughout the invention process.</i></p>	10
	<b>Designing &amp; Building</b>	<p>Designing an invention or a prototype requires critical-thinking skills; inventors are expected to articulate how they intend the invention to work and why they chose the materials they did for executing their invention.</p>	10
	<b>Testing &amp; Refining</b>	<p>The keys to this step are iterations, improvements and perseverance. The best inventors know the first build is often not the best and seek feedback through testing and refining their design accordingly.</p>	10
<b>Invention Impact (25)</b>	<b>Market Research</b> <i>Note: Judges look for research quality, not market size.</i>	<p>Market Research assesses the likelihood of an invention gaining users.</p> <ol style="list-style-type: none"> <li>1. How would you characterize the potential market? Who are the potential users?</li> <li>2. How likely is the identified market to adopt the solution?</li> <li>3. To what extent was the market appropriately researched? Inventors are encouraged to use both quantitative research (e.g., statistics) and qualitative research (e.g., interviewing experts or potential users).</li> </ol>	5
	<b>Environmental &amp; Societal Impact</b>	<p>Inventors are asked to consider and communicate the potential environmental and/or societal impacts of their invention, both positive and negative (pros and cons). To what extent does the invention improve environmental/societal conditions or have a minimal adverse impact?</p>	5

<b>Category</b>	<b>Dimension</b>	<b>Description</b>	<b>Points</b>
<b>Invention Impact (Continued)</b>	<b>Originality</b>	Does the inventor demonstrate that their invention is better or different from existing solutions? Do they show how it is distinguishable from prior inventions? It is important to conduct and communicate research from a variety of sources to establish and verify originality.	15
<b>Inventor Communication (35)</b>	<b>Logbook</b>	<ol style="list-style-type: none"> <li>Does the Logbook document a journey, not just a report done after the fact?</li> <li>Does the Logbook thoroughly document/explain all aspects of the Invention Process (Problem Identification, Understanding, Ideating, Designing, Building, Testing and Communicating) in a detailed manner?</li> </ol>	10
	<b>Display Board</b>	<ol style="list-style-type: none"> <li>Does the Display Board support the inventor's presentation by communicating significant aspects of the Invention Process?</li> <li>Does the display have strong visual appeal, such as eye-catching colors, pictures, graphs and variety?</li> <li>Are grammar, spelling and punctuation correct and, if hand-printed, neatly done?</li> </ol>	5
	<b>Prototype or Model</b>	<p>Does the Prototype support the inventor's presentation and clearly communicate the key characteristics that address the identified problem?</p> <p><i>Note: Outside assistance and collaboration is acceptable as long as the student is driving the process and documents outside help. Inventors should only do what they can do safely. Credit should be given where assistance was received.</i></p>	5
	<b>Video Presentation</b>	The Video Presentation should be informative, energetic and speak to the originality of the invention. Inventors should include information on the first two categories of the rubric (Invention Process and Invention Impact). Inventors should prioritize communicating the Invention Process and challenges encountered while completing that process and explain completed research relating to the originality of the invention. Maximum limit of six minutes; minimum limit varies by grade.	5
	<b>Live Presentation with Q&amp;A</b>	The Live Presentation with Q&A takes place during the event and is very similar to the online presentation video but with the addition of a judge and peer question-and-answer portion. Presentations should provide enough information so that a judge can score all aspects of the above rubric (except for the Video Presentation, as that is scored separately). Presentations should not exceed five minutes for Live Presentation, with time for Q&A afterward.	10

**TOTAL 100**

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# Display Board Criteria

Judging is based on the thoroughness and creativity of the display board. Judges should evaluate each board using the topics on this rubric and the depth of explanation provided by the inventor.

Criteria	Description	Points Possible
<b>Content</b>	<p><b>Minimal to Average:</b> Includes name of invention, inventor's name and grade, plus patent status and school/state.</p> <p>Essential design process content (in paragraphs or bullet points): problem statement, brainstorming ideas, test and revise/various iterations and improvements.</p> <p><b>Above Average to Excellent:</b> Quality of required essential criteria (explained above) is a deciding factor. Contains all essential content but also includes in-depth, thorough descriptions and details (age appropriate).</p> <p>Options for going above and beyond include but are not limited to: pictures, statistics, market potential, depth of the problem, age-appropriate research citations (beyond Google), interviews, analysis.</p>	<b>0-3</b>
<b>Visual Appeal</b>	<p><b>Minimal to average:</b> Instantly grabs viewer's attention. All items are spelled correctly, mounted and cut neatly (age appropriate). Uses color scheme. Adds visual appeal. Clean, neat, colorful, eye-catching display.</p> <p><b>Above Average to Excellent:</b> Unique aspects, original factors making display pop, full of essential content but well-organized and not crowded.</p>	<b>0-2</b>

# Invention Logbook Criteria

Judging is based on the thoroughness of the logbook. Judges should evaluate each logbook using the topics on this rubric and the depth of explanation provided by the inventor. Descriptions in bold are the most important topics in that criterion.

Criteria	Description	Points Possible
<b>Inventing Process</b>	<p>Logbook must document student initiative and the inventing process. Information should begin with brainstorming and continue through to completion of the invention (include modifications/improvements/all changes from beginning to end).</p> <p>Logbook documents how idea originated; evidence of student being the main contributor to the project (students should do all work appropriate for their grade level; adult help is encouraged regarding any safety issues, such as using power tools).</p>	0-4
<b>Research &amp; Documentation</b>	<p>Document research related to the general topic as well as the existence of similar inventions (supports originality).</p> <p>Lists all items used, including borrowed and repurposed.</p> <p>Documents expenses under \$50 for purchased materials.</p> <p>Documents help from adults.</p>	0-4
<b>Analysis</b>	<p>Provides analysis of the invention benefits/consequences: environmental, societal, market potential.</p> <p>Gives pros/cons of design process.</p>	0-2