

# Science Fair Inventions: Engineering Innovations (6<sup>th</sup>-8<sup>th</sup> Grade)

## Targets for an Excellent Science Fair Project



	Advanced Proficient 5	“TRANSLATED”
<b>Purpose &amp; Problem</b>	Creatively addresses a practical need some people have, which may have an expensive or uncommon solution.	Explain the problem you want to solve.
<b>Research</b>	Makes a clear and well-elaborated connection with a known similar idea and with the needs of potential invention users in the student's own words.	Research thoroughly. Connect the research to your question.
<b>Possible Solutions</b>	Proposes three or more practical solutions. One or more are very creative. Provides sufficient description for reader to easily understand.	Describe three ideas to solve the problem.
<b>Plan &amp; Create</b> <i>(Double Points)</i> <b>(x2)</b>	Diagrams and explains the invention, providing all labels and details needed to give the reader a clear understanding of how the invention works. Obstacles encountered in the building process are described well and solutions to the obstacles are explained.	For your best idea, make a diagram and explain how it works. Describe difficulties you ran into and how you got past them.
<b>Test &amp; Improve</b> <i>(Double Points)</i> <b>(x2)</b>	Criteria are student-developed specifically to test how well the invention addresses the problem. The student uses data from the test to improve the design. The improved design is tested using the same criteria as before.	Describe how you test your invention to make sure it works well. Explain how you use the results to improve your invention. Describe the results of re-testing after making improvements.
<b>Conclusion &amp; Applications</b>	Demonstrates in-depth analysis of the obstacles related to the practical design and function of the invention (i.e., durability, strength, ease of use, etc.). Invention is clearly connected to real world applications.	Is your invention strong, easy to use? Will it last? Would people really buy it?
<b>Science Concepts</b>	Provides in-depth explanation of at least one science concept directly applying to the project.	Explain what science makes your invention work.
<b>Display Presentation</b>	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.	Make your project fun to look at with pictures and colors. Use large, clear lettering. Check grammar and spelling.