

Project Judging Primer

Project judging in FLL can be compared to research presentations given at a scientific conference, except FLL project presentations are typically a whole lot more fun! Teams present a challenge-related problem they have researched and analyzed. They also present their innovative solution to that problem, and tell about how and with whom they shared their research. These steps parallel the scientific research process in the “real world”. All of this information is communicated in a creative presentation to the judges that takes no more than 5 minutes, including setup time.

As a Project judge, here are some overall things to consider:

- To be eligible for any Project awards, teams must demonstrate that they have completed all three components of the Project: problem identification, development of an innovative solution, and sharing of the project with others.
- Make sure that teams also complete any additional challenge-specific requirements. For example, in the Power Puzzle season, teams had to perform an energy audit as a part of the Project.
- Innovation and creativity are considerations in several of the Project rubric criteria. Try not to overly penalize a team for a solution they present as original, but that you know is already being considered or implemented. Different judges may also have very different knowledge levels of state-of-the-art science relative to the Project. If you are aware that their solution already exists, make it known to them in a respectful, gentle manner, and **MAKE SURE** you provide them that feedback.

Now let’s take a closer look at the criteria and provide some guidance about what to look for and consider:

Research

Problem Identification – For teams to rate Accomplished or higher, they must be able to clearly articulate a well-defined problem statement. Sometimes teams will present a set of issues related to the challenge but not focus on a specific problem. For example, global climate change is a very broad problem that could have many causes. A more specific and well defined problem that would make a more appropriate FLL Project might be something like reducing greenhouse gas emissions from coal burning power plants.

Sources of Information – The key things to look for here are quality, variety and number of sources. Accomplished teams should include at least one professional they have communicated with as a source. Note that books or news articles or magazines that a team reads via the internet should be considered as three different types of sources. Exemplary teams will consider a wider variety of good quality sources as well as seek out and learn from professionals. Professionals are considered to be people who have specialized knowledge about a particular area. For example, a biomedical engineer might be considered a professional when it comes to research concerning robotic arms used to replace lost limbs. Another example could be a shipping logistics manager who is consulted when researching how food is shipped long distances while still maintaining quality.

Problem Analysis – Accomplished teams will analyze a problem sufficiently to form their own conclusions. For example, a team that performs its own tests of various ice melting materials to determine their effectiveness when researching the problem of motor vehicle movement in snowy and icy climates is a good example of a team performing its own analysis.

Review Existing Solutions – Teams should perform a good faith effort to review existing solutions and determine the originality of their solution. Teams are not expected to perform an exhaustive literature search including the very latest scientific journals to determine originality.

Innovative Solution

Team Solution – Similar to the Problem Identification requirements, the team’s solution should focus directly on the problem they are trying to solve, explain how it solves that problem, and be clearly stated.

Innovation – The main issue of subjectivity here surrounds the question “What does ‘original’ mean when it comes to innovation?” A team may develop a truly innovative device to assist someone who is blind, or they may come up with the idea to apply Velcro to walls to serve as a sensory guide; both are innovative. Teams will sometimes believe their solution to be something they’ve developed on their own only to find out from an expert judge that some other group has already developed that same solution. They may also find this out days before the competition and not have time to develop a new, completely original solution. Be sensitive to these situations. A team does NOT have to develop a completely new, patented by the team idea to be considered for this award or to score high in this area. Note that FLL has a separately judged, non-event based award called the Global Innovation Award for teams that choose to pursue a patent opportunity.

Implementation – Teams should demonstrate that they have considered how their solution might be implemented. Team solutions should be more grounded than pie in the sky, but solutions need not be implementable now. For example, a team should not be penalized for a solution that may require the invention of an additional component to be workable. While not required, a team that builds a prototype of their solution should most likely be considered Exemplary, provided they consider other aspects of how to implement their solution.

Presentation

Presentation Effectiveness – Look for well-organized presentations that clearly deliver the message. Note that the presentation MUST demonstrate all three of the project aspects. It is not sufficient to cover Sharing (for example) only during the question and answer part of the judging session.

Creativity – This criterion is probably the most subjective one for Project judges. Creativity is different for different people. Look for presentations that stand out, are more entertaining, make you want to listen to the message more and serve to enhance the delivery of the message instead of distract from it.

Sharing – The two main considerations here are “Did the team consider who might benefit from their solution, and share it with them?” and “Did the team go beyond their comfort zone to share their ideas?” The first consideration focuses on encouraging teams to share with a relevant and targeted audience, for example presenting a new insulin delivery system to kids with juvenile diabetes. The second consideration focuses on encouraging teams to share their information with people they don’t know so that they can become comfortable speaking about their ideas with anyone. Note that a team does not necessarily have to share its FLL competition presentation with outside groups; they may share the information and their solution in any manner they wish.